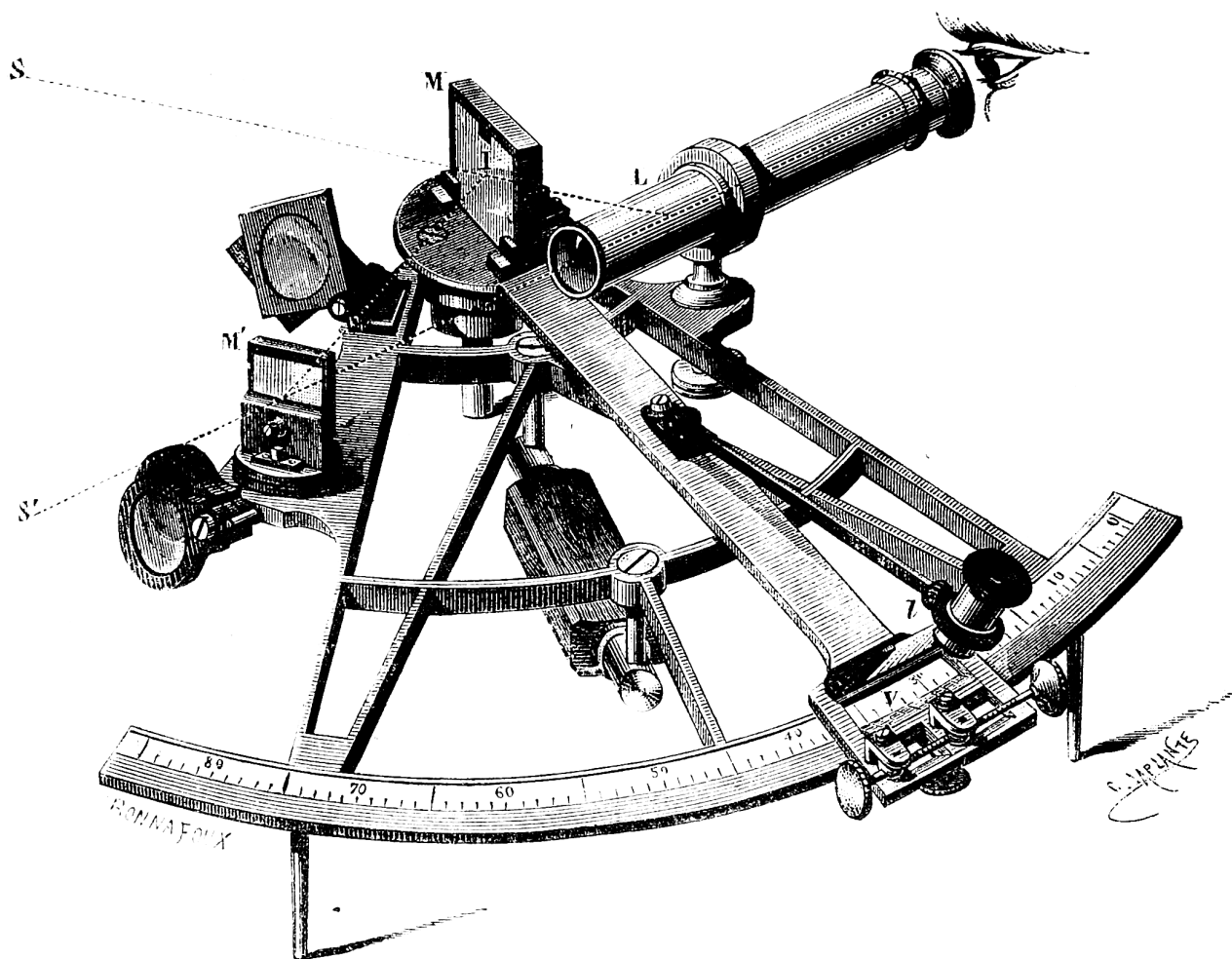




ALMANAQUE NÁUTICO PERSEIS 2013

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<http://www.xente.mundo-r.com/perseis/>

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Introducción

El Almanaque Náutico Perseis es un libro de validez anual que proporciona datos, efemérides astronómicas y tablas para la práctica de la navegación astronómica. La información se presenta en un formato similar al del Almanaque Náutico editado por el Real Observatorio de la Armada.

Su objetivo es didáctico; proporcionar información para la resolución de problemas y ejercicios de navegación astronómica así como familiarizarse con el uso del Almanaque Náutico del R.O.A.

El Almanaque está generado usando métodos matemáticos rigurosos y datos fiables, por lo que es de esperar que ofrezca una exactitud comparable a la de los almanaques oficiales.

Esta edición del Almanaque Náutico Perseis incluye páginas diarias con las efemérides tabuladas cada hora del punto Aries, el Sol, la Luna y de los cuatro planetas visibles a simple vista y útiles para la navegación astronómica: Venus, Marte, Júpiter y Saturno; además de datos útiles para la planificación de las observaciones. Incluye tablas anuales de la posición de 99 estrellas, tabuladas para el día 15 de cada mes; la hora de paso por el meridiano de Greenwich, para el día 1 de cada mes, de 50 estrellas seleccionadas; tabla anual para el cálculo de la latitud por observación de la altura de la estrella Polar; tabla del azimut de la estrella Polar y tablas de correcciones cuyos valores dependen de la fecha. Excepcionalmente se incluye una tabla de corrección por retardo y longitud, que es invariante con el año, con el único fin de mantener la numeración de las páginas como en el Almanaque Náutico del R.O.A.

Se mantiene el orden y numeración de páginas idéntico al Almanaque Náutico del R.O.A. porque, a veces, en la literatura didáctica española sobre navegación astronómica, se hace referencia a la tabla de una determinada página del Almanaque. Se recomienda la adquisición, al menos una vez, del Almanaque Náutico del Real Observatorio de la Armada, que incluye más tablas que pueden aplicarse para cualquier año, una extensa explicación de su uso, otros datos interesantes, tiene un precio asequible y además es el único permitido en los exámenes oficiales.

Advertencia: Este Almanaque se distribuye con la intención de que sea exacto y útil, pero sin ninguna garantía, por lo que no debe utilizarse en situaciones de navegación real o que pongan en riesgo vidas o bienes. Se declina cualquier responsabilidad por daños causados por el uso de este Almanaque.

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 18 ^d 6	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 55 ^m 9	SD: 15 ^h 1	PMG: 2 ^h 48 ^m	R°: 45 ^m									
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	08.5	-23	00.1	319	18.2	+9	42.5	60 N	7	09	8	06	9	02	20	39
1	194	08.2	-22	59.9	333	50.6 ¹³⁴		32.5 ¹⁰⁰	58	7	02	7	54	8	45	42	77
2	209	07.9		59.7	348	23.1 ¹³⁵		22.5 ¹⁰⁰	56	6	56	44	31		45	75	48
3	224	07.6		59.5	2	55.6 ¹³⁵		12.4 ¹⁰¹	54		50	36	19		48	72	45
4	239	07.3		59.3	17	28.1 ¹³⁵	+9	02.3 ¹⁰¹	52		44	28	8	08	50	71	42
5	254	07.0	-22	59.1	32	00.6 ¹³⁵	+8	52.1 ¹⁰²	50	6	39	7	20	7	59	20	53
6	269	06.7	-22	58.9	46	33.1 ¹³⁵	+8	41.9 ¹⁰²	45	6	28	7	05	7	38	20	57
7	284	06.4		58.7	61	05.6 ¹³⁵		31.7 ¹⁰²	40		18	6	51	22		21	01
8	299	06.1		58.5	75	38.1 ¹³⁵		21.4 ¹⁰³	35		08	40	7	08	05	59	22
9	314	05.9		58.3	90	10.6 ¹³⁵		11.0 ¹⁰⁴	30	6	00	30	6	56	08	57	18
10	329	05.6		58.1	104	43.2 ¹³⁶	+8	00.6 ¹⁰⁴	20	5	44	6	11	35	13	53	11
11	344	05.3	-22	57.8	119	15.7 ¹³⁵	+7	50.2 ¹⁰⁴	10 N	5	28	5	54	6	17	21	18
12	359	05.0	-22	57.6	133	48.3 ¹³⁶	+7	39.7 ¹⁰⁵	0	5	11	5	37	6	00	21	22
13	14	04.7		57.4	148	20.8 ¹³⁵		29.2 ¹⁰⁵	10 S	4	53	20	5	43	27	42	53
14	29	04.4		57.2	162	53.4 ¹³⁶		18.7 ¹⁰⁵	20		31	5	00	24	31	39	46
15	44	04.1		57.0	177	25.9 ¹³⁵	+7	08.1 ¹⁰⁶	30	4	02	4	35	5	03	37	34
16	59	03.8		56.8	191	58.5 ¹³⁶	+6	57.4 ¹⁰⁷	35	3	44	20	4	50	40	32	35
17	74	03.5	-22	56.6	206	31.0 ¹³⁵	+6	46.7 ¹⁰⁷	40	3	21	4	02	4	35	21	43
18	89	03.2	-22	56.3	221	03.6 ¹³⁶	+6	36.0 ¹⁰⁷	45	2	51	3	40	4	17	21	47
19	104	02.9		56.1	235	36.1 ¹³⁵		25.3 ¹⁰⁷	50	2	07	3	11	3	55	52	23
20	119	02.6		55.9	250	08.7 ¹³⁶		14.5 ¹⁰⁸	52	1	41	2	57	45	54	21	14
21	134	02.3		55.7	264	41.3 ¹³⁶	+6	03.7 ¹⁰⁸	54	1	01	39	33		56	20	11
22	149	02.1		55.4	279	13.8 ¹³⁵	+5	52.8 ¹⁰⁹	56	** ** *	2	18	19		21	59	17
23	164	01.8		55.2	293	46.4 ¹³⁶		41.9 ¹⁰⁹	58	** ** *	1	50	3	03	22	02	15
24	179	01.5	-22	55.0	308	18.9 ¹³⁵	+5	31.0 ¹⁰⁹	60 S	** ** *	1	07	2	43	22	05	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 13 ^m 9		Mag: -3.9 PMG: 10 ^h 33 ^m		Mag: +1.2 PMG: 13 ^h 46 ^m		Mag: -2.8 PMG: 21 ^h 37 ^m		Mag: +0.6 PMG: 7 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	48.7	201	53.4	153	29.8	215	14.3	242	54.4
1	115	51.1	216	52.5	168	30.2	230	17.0	257	56.7
2	130	53.6	231	51.6	183	30.6	245	19.7	272	59.0
3	145	56.0	246	50.7	198	31.1	260	22.4	288	01.2
4	160	58.5	261	49.8	213	31.5	275	25.1	303	03.5
5	176	01.0	276	48.9	228	32.0	290	27.9	318	05.8
6	191	03.4	291	47.9	243	32.4	305	30.6	333	08.1
7	206	05.9	306	47.0	258	32.8	320	33.3	348	10.3
8	221	08.4	321	46.1	273	33.3	335	36.0	3	12.6
9	236	10.8	336	45.2	288	33.7	350	38.7	18	14.9
10	251	13.3	351	44.3	303	34.1	3	41.4	56	17.2
11	266	15.8	6	43.4	318	34.6	20	44.1	71	19.4
12	281	18.2	21	42.5	333	35.0	30	46.8	86	21.7
13	296	20.7	36	41.6	348	35.4	40	49.5	101	24.0
14	311	23.1	51	40.7	3	35.9	50	52.2	116	26.3
15	326	25.6	66	39.8	18	36.3	60	54.9	131	28.5
16	341	28.1	81	38.9	33	36.8	70	57.6	146	30.8
17	356	30.5	96	38.0	48	37.2	80	60.3	161	33.1
18	11	33.0	111	37.1	63	37.6	90	62.9	176	35.4
19	26	35.5	126	36.2	78	38.1	100	65.5	191	37.6
20	41	37.9	141	35.3	93	38.5	110	68.1	206	39.9
21	56	40.4	156	34.4	108	38.9	120	70.7	221	42.2
22	71	42.9	171	33.5	123	39.4	130	73.3	236	44.5
23	86	45.3	186	32.6	138	39.8	140	75.9	251	46.7
24	101	47.8	201	31.7	153	40.3	150	78.5	266	49.0
Dif	—		-9		+4		+5		+27	
									0	
									+23	
									-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 04 ^m 1			Edad: 19 ^d 6 PHE { SD: 15/3 PMG: 3 ^h 33 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	01.5	-22 55.0	308	18.9	+5 31.0		60 N	15 07	16 03	17 00	21 58	82	10 10	12
1	194	01.2	54.8	322	51.5 ¹³⁶	20.1 ¹⁰⁹		58	24	15	07	21 59	79	08	15
2	209	00.9	54.6	337	24.0 ¹³⁵	+5 09.1 ¹¹⁰		56	38	24	13	22 00	76	06	17
3	224	00.6	54.3	351	56.6 ¹³⁶	+4 58.1 ¹¹⁰		54	15 50	33	19	00 74	05	19	
4	239	00.3	54.1	6	29.1 ¹³⁵	47.0 ¹¹¹		52	16 01	41	24	01 72	03	21	
5	254	00.0	-22 53.9	21	01.6 ¹³⁵	+4 35.9 ¹¹¹		50	16 10	16 48	17 29	22 01	71	10 02	23
6	268	59.7	-22 53.6	35	34.2 ¹³⁶	+4 24.8 ¹¹¹		45	16 30	17 04	17 41	22 02	67	9 59	27
7	283	59.4	53.4	50	06.7 ¹³⁵	13.7 ¹¹¹		40	16 46	17	17 51	03 63		57	29
8	298	59.1	53.2	64	39.2 ¹³⁵	+4 02.5 ¹¹²		35	17 00	28	18 00	04 60		55	32
9	313	58.9	53.0	79	11.7 ¹³⁵	+3 51.3 ¹¹²		30	12	38	08	05 58		53	34
10	328	58.6	52.7	93	44.2 ¹³⁵	40.1 ¹¹²		20	33	17 57	24	06 53		50	38
11	343	58.3	-22 52.5	108	16.6 ¹³⁴	+3 28.9 ¹¹²		10 N	17 51	18 14	18 40	22 07	50	9 47	42
12	358	58.0	-22 52.3	122	49.1 ¹³⁵	+3 17.6 ¹¹³		0	18 08	18 30	18 56	22 08	46	9 44	46
13	13	57.7	52.0	137	21.5 ¹³⁴	+3 06.3 ¹¹³		10 S	25	18 48	19 15	09 43		41	50
14	28	57.4	51.8	151	54.0 ¹³⁵	+2 55.0 ¹¹³		20	18 43	19 08	19 37	10 39		38	53
15	43	57.1	51.6	166	26.4 ¹³⁴	43.7 ¹¹³		30	19 05	32	20 05	11 35		35	57
16	58	56.8	51.3	180	58.8 ¹³⁴	32.3 ¹¹⁴		35	18	19 47	23	12 33		33	60
17	73	56.5	-22 51.1	195	31.2 ¹³⁴	+2 20.9 ¹¹⁴		40	19 32	20 05	20 46	22 13	30	9 31	62
18	88	56.3	-22 50.8	210	03.6 ¹³⁴	+2 09.5 ¹¹⁴		45	19 50	20 27	21 15	22 14	27	9 28	66
19	103	56.0	50.6	224	35.9 ¹³³	+1 58.1 ¹¹⁴		50	20 11	20 55	21 58	15 23		25	70
20	118	55.7	50.4	239	08.3 ¹³⁴	46.7 ¹¹⁴		52	22	21 10	22 24	15 22		24	71
21	133	55.4	50.1	253	40.6 ¹³³	35.2 ¹¹⁵		54	34	27	23 02	16 19		22	73
22	148	55.1	49.9	268	12.9 ¹³³	23.8 ¹¹⁴		56	20 47	21 47	** **	16 18		20	76
23	163	54.8	49.6	282	45.2 ¹³³	12.3 ¹¹⁵		58	21 03	22 15	** **	17 16		19	77
24	178	54.5	-22 49.4	297	17.4 ¹³²	+1 00.8 ¹¹⁵		60 S	21 22	22 56	** **	22 18	13	9 16	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 10 ^m 0		Mag: -3.9 PMG: 10 ^h 35 ^m		Mag: +1.2 PMG: 13 ^h 45 ^m		Mag: -2.7 PMG: 21 ^h 33 ^m		Mag: +0.6 PMG: 7 ^h 44 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	101	47.8	201	31.7	-22 28.6	153	40.3	-20 00.9	35	46.8	+20 53.6	243	49.0	-12 28.2	
1	116	50.3	216	30.7	28.9	168	40.7	-20 00.4	50	49.5	53.6	258	51.3	28.2	
2	131	52.7	231	29.8	29.2	183	41.1	-19 59.9	65	52.2	53.6	273	53.6	28.3	
3	146	55.2	246	28.9	29.5	198	41.6	59.4	80	54.9	53.5	288	55.8	28.3	
4	161	57.6	261	28.0	29.8	213	42.0	59.0	95	57.6	53.5	303	58.1	28.4	
5	177	00.1	276	27.1	-22 30.1	228	42.5	-19 58.5	111	00.4	+20 53.5	319	00.4	-12 28.4	
6	192	02.6	291	26.2	-22 30.4	243	42.9	-19 58.0	126	03.1	+20 53.5	334	02.7	-12 28.5	
7	207	05.0	306	25.3	30.7	258	43.3	57.5	141	05.8	53.4	349	04.9	28.6	
8	222	07.5	321	24.4	31.0	273	43.8	57.0	156	08.5	53.4	4	07.2	28.6	
9	237	10.0	336	23.5	31.3	288	44.2	56.5	171	11.2	53.4	19	09.5	28.7	
10	252	12.4	351	22.6	31.6	303	44.7	56.0	186	13.9	53.4	34	11.8	28.7	
11	267	14.9	6	21.7	-22 31.9	318	45.1	-19 55.5	201	16.6	+20 53.3	49	14.1	-12 28.8	
12	282	17.4	21	20.7	-22 32.2	333	45.5	-19 55.0	216	19.3	+20 53.3	64	16.3	-12 28.8	
13	297	19.8	36	19.8	32.5	348	46.0	54.5	231	22.0	53.3	79	18.6	28.9	
14	312	22.3	51	18.9	32.8	3	46.4	54.0	246	24.7	53.2	94	20.9	28.9	
15	327	24.8	66	18.0	33.1	18	46.9	53.6	261	27.4	53.2	109	23.2	29.0	
16	342	27.2	81	17.1	33.4	33	47.3	53.1	276	30.1	53.2	124	25.5	29.0	
17	357	29.7	96	16.2	-22 33.7	48	47.7	-19 52.6	291	32.8	+20 53.2	139	27.7	-12 29.1	
18	12	32.1	111	15.3	-22 34.0	63	48.2	-19 52.1	306	35.5	+20 53.1	154	30.0	-12 29.1	
19	27	34.6	126	14.4	34.3	78	48.6	51.6	321	38.2	53.1	169	32.3	29.2	
20	42	37.1	141	13.4	34.6	93	49.1	51.1	336	40.9	53.1	184	34.6	29.2	
21	57	39.5	156	12.5	34.9	108	49.5	50.6	351	43.6	53.1	199	36.8	29.3	
22	72	42.0	171	11.6	35.2	123	50.0	50.1	6	46.3	53.0	214	39.1	29.3	
23	87	44.5	186	10.7	35.5	138	50.4	49.6	21	49.0	53.0	229	41.4	29.4	
24	102	46.9	201	09.8	-22 35.8	153	50.8	-19 49.1	36	51.7	+20 53.0	244	43.7	-12 29.4	
Dif	—		-9	-3		+4	+5		+27	0		+23		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 20 ^d 6	PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /9 20 ^h : 57 ^m /2	SD: 15 ^h 4		PMG: 4 ^h 19 ^m	R°: 47 ^m		Hora	R°	Hora	R°	
	hG ☉	Dec	Dif												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	54.5	-22	49.4	297	17.4	+1 00.8	60 N	7 09	8 05	9 01	23 20	84	10 22	13
1	193	54.2		49.2	311	49.7 ¹³³	+0 49.3 ¹¹⁵	58	7 02	7 54	8 44	18 81		23 16	
2	208	54.0		48.9	326	21.9 ¹³²	37.7 ¹¹⁶	56	6 55	44	30	16 79		23 18	
3	223	53.7		48.7	340	54.1 ¹³²	26.2 ¹¹⁵	54	49	35	18	14 77		24 20	
4	238	53.4		48.4	355	26.2 ¹³¹	14.6 ¹¹⁶	52	44	27	8 08	13 74		24 22	
5	253	53.1	-22	48.2	9	58.4 ¹³²	+0 03.1 ¹¹⁵	50	6 39	7 20	7 58	23 12	72	10 25	23
6	268	52.8	-22	47.9	24	30.5 ¹³¹	-0 08.5 ¹¹⁶	45	6 28	7 05	7 38	23 09	68	10 26	27
7	283	52.5		47.7	39	02.6 ¹³¹	20.1 ¹¹⁶	40	18	6 52	22	06 65		26 31	
8	298	52.2		47.4	53	34.6 ¹³⁰	31.7 ¹¹⁶	35	09	40	7 08	04 63		27 33	
9	313	51.9		47.2	68	06.7 ¹³¹	43.3 ¹¹⁶	30	6 00	30	6 56	23 03	59	27 36	
10	328	51.7		46.9	82	38.7 ¹³⁰	-0 54.9 ¹¹⁶	20	5 45	6 12	36	22 59	56	28 40	
11	343	51.4	-22	46.7	97	10.6 ¹²⁹	-1 06.5 ¹¹⁶	10 N	5 29	5 55	6 18	22 57	51	10 29	44
12	358	51.1	-22	46.4	111	42.6 ¹³⁰	-1 18.1 ¹¹⁶	0	5 12	5 38	6 01	22 54	48	10 30	47
13	13	50.8		46.2	126	14.5 ¹²⁹	29.7 ¹¹⁶	10 S	4 54	21	5 44	52 44		31 50	
14	28	50.5		45.9	140	46.3 ¹²⁸	41.4 ¹¹⁷	20	32	5 01	25	49 41		31 55	
15	43	50.2		45.7	155	18.2 ¹²⁹	-1 53.0 ¹¹⁶	30	4 04	4 37	5 04	46 37		32 59	
16	58	49.9		45.4	169	50.0 ¹²⁸	-2 04.6 ¹¹⁶	35	3 45	22	4 51	45 34		33 61	
17	73	49.7	-22	45.2	184	21.7 ¹²⁷	-2 16.3 ¹¹⁷	40	3 23	4 04	4 37	22 43	31	10 33	64
18	88	49.4	-22	44.9	198	53.5 ¹²⁸	-2 27.9 ¹¹⁶	45	2 54	3 42	4 19	22 41	28	10 34	67
19	103	49.1		44.6	213	25.2 ¹²⁷	39.5 ¹¹⁶	50	2 11	3 14	3 58	38 25		35 71	
20	118	48.8		44.4	227	56.8 ¹²⁶	-2 51.1 ¹¹⁶	52	1 45	2 59	47	37 23		35 73	
21	133	48.5		44.1	242	28.4 ¹²⁶	-3 02.8 ¹¹⁷	54	1 07	42	35	35 22		35 75	
22	148	48.2		43.9	257	00.0 ¹²⁶	14.4 ¹¹⁶	56	** **	2 21	22	34 19		36 77	
23	163	48.0		43.6	271	31.5 ¹²⁵	26.0 ¹¹⁶	58	** **	1 54	3 06	33 16		36 80	
24	178	47.7	-22	43.3	286	03.0 ¹²⁵	-3 37.6 ¹¹⁶	60 S	** **	1 13	2 47	22 31	14	10 37	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 06 ^m 1		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +1.2 PMG: 13 ^h 44 ^m		Mag: -2.7 PMG: 21 ^h 29 ^m		Mag: +0.6 PMG: 7 ^h 40 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	102	46.9	201	09.8	-22 35.8	153	50.8	-19 49.1	244	43.7	-12 29.4				
1	117	49.4	216	08.9	36.0	168	51.3	48.6	259	46.0	29.5				
2	132	51.9	231	08.0	36.3	183	51.7	48.1	274	48.2	29.5				
3	147	54.3	246	07.1	36.6	198	52.2	47.6	289	50.5	29.6				
4	162	56.8	261	06.1	36.9	213	52.6	47.1	304	52.8	29.6				
5	177	59.2	276	05.2	-22 37.2	228	53.1	-19 46.6	319	55.1	-12 29.7				
6	193	01.7	291	04.3	-22 37.4	243	53.5	-19 46.1	334	57.4	-12 29.7				
7	208	04.2	306	03.4	37.7	258	53.9	45.6	349	59.6	29.8				
8	223	06.6	321	02.5	38.0	273	54.4	45.1	5	01.9	29.8				
9	238	09.1	336	01.6	38.3	288	54.8	44.6	20	04.2	29.9				
10	253	11.6	351	00.6	38.6	303	55.3	44.1	35	06.5	29.9				
11	268	14.0	5	59.7	-22 38.8	318	55.7	-19 43.6	50	08.8	-12 30.0				
12	283	16.5	20	58.8	-22 39.1	333	56.2	-19 43.1	65	11.0	-12 30.0				
13	298	19.0	35	57.9	39.4	348	56.6	42.6	80	13.3	30.1				
14	313	21.4	50	57.0	39.6	3	57.1	42.1	95	15.6	30.1				
15	328	23.9	65	56.1	39.9	18	57.5	41.6	110	17.9	30.2				
16	343	26.4	80	55.1	40.2	33	57.9	41.1	125	20.2	30.2				
17	358	28.8	95	54.2	-22 40.4	48	58.4	-19 40.6	140	22.5	-12 30.3				
18	13	31.3	110	53.3	-22 40.7	63	58.8	-19 40.1	155	24.7	-12 30.3				
19	28	33.7	125	52.4	41.0	78	59.3	39.6	170	27.0	30.4				
20	43	36.2	140	51.5	41.2	93	59.7	39.1	185	29.3	30.4				
21	58	38.7	155	50.5	41.5	109	00.2	38.6	200	31.6	30.5				
22	73	41.1	170	49.6	41.8	124	00.6	38.1	215	33.9	30.5				
23	88	43.6	185	48.7	42.0	139	01.1	37.6	230	36.2	30.6				
24	103	46.1	200	47.8	-22 42.3	154	01.5	-19 37.1	245	38.4	-12 30.6				
Dif	—		-9		-3	+4		+5	+27		0	+23		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 05 ^m 0			Edad: 21 ^d 6 PHE { SD: 15:6 PMG: 5 ^h 06 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	47.7	-22 43.3	286	03.0	-3 37.6		60 N	15 10	16 06	17 02	** ** *		10 35	16
1	193	47.4	43.1	300	34.4 ¹²⁴	-3 49.2 ¹¹⁶		58	26	17	09	** ** *		39	17
2	208	47.1	42.8	315	05.8 ¹²⁴	-4 00.8 ¹¹⁶		56	40	27	15	** ** *		41	21
3	223	46.8	42.6	329	37.2 ¹²⁴	12.4 ¹¹⁶		54	15 52	35	21	** ** *		44	22
4	238	46.5	42.3	344	08.5 ¹²³	24.0 ¹¹⁶		52	16 03	43	26	** ** *		46	24
5	253	46.3	-22 42.0	358	39.8 ¹²³	-4 35.6 ¹¹⁶		50	16 12	16 50	17 31	** ** *		10 48	26
6	268	46.0	-22 41.8	13	11.0 ¹²²	-4 47.1 ¹¹⁵		45	16 32	17 06	17 43	** ** *		10 53	30
7	283	45.7	41.5	27	42.1 ¹²¹	-4 58.7 ¹¹⁶		40	16 48	18	17 52	** ** *		10 57	33
8	298	45.4	41.2	42	13.3 ¹²²	-5 10.2 ¹¹⁵		35	17 02	30	18 01	** ** *		11 00	36
9	313	45.1	41.0	56	44.3 ¹²⁰	21.7 ¹¹⁵		30	14	40	10	** ** *		03	38
10	328	44.8	40.7	71	15.3 ¹²⁰	33.2 ¹¹⁵		20	34	17 58	25	23 55	58	08	42
11	343	44.6	-22 40.4	85	46.3 ¹²⁰	-5 44.7 ¹¹⁵		10 N	17 52	18 15	18 41	23 48	55	11 13	46
12	358	44.3	-22 40.1	100	17.2 ¹¹⁹	-5 56.2 ¹¹⁵		0	18 09	18 31	18 57	23 42	51	11 17	49
13	13	44.0	39.9	114	48.1 ¹¹⁹	-6 07.6 ¹¹⁴		10 S	26	18 49	19 16	36 48		21	53
14	28	43.7	39.6	129	18.8 ¹¹⁷	19.1 ¹¹⁵		20	18 44	19 08	19 37	30 44		26	56
15	43	43.4	39.3	143	49.6 ¹¹⁸	30.5 ¹¹⁴		30	19 05	32	20 05	23 40		31	61
16	58	43.2	39.0	158	20.3 ¹¹⁷	41.9 ¹¹⁴		35	18	19 47	23	19 38		34	63
17	73	42.9	-22 38.8	172	50.9 ¹¹⁶	-6 53.2 ¹¹³		40	19 32	20 05	20 46	23 14	35	11 37	66
18	88	42.6	-22 38.5	187	21.5 ¹¹⁶	-7 04.6 ¹¹⁴		45	19 49	20 26	21 15	23 09	32	11 41	69
19	103	42.3	38.2	201	52.0 ¹¹⁵	15.9 ¹¹³		50	20 11	20 54	21 57	03 28		46	73
20	118	42.0	37.9	216	22.4 ¹¹⁴	27.2 ¹¹³		52	21	21 09	22 21	23 00	26	48	75
21	133	41.8	37.7	230	52.8 ¹¹⁴	38.4 ¹¹²		54	33	25	22 58	22 57	24	50	78
22	148	41.5	37.4	245	23.2 ¹¹⁴	-7 49.7 ¹¹³		56	20 46	21 46	** ** *	53 22		53	79
23	163	41.2	37.1	259	53.4 ¹¹²	-8 00.9 ¹¹²		58	21 02	22 12	** ** *	49 20		56	82
24	178	40.9	-22 36.8	274	23.6 ¹¹²	-8 12.1 ¹¹²		60 S	21 21	22 51	** ** *	22 45	17	11 59	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 02 ^m 1		Mag: -3.9 PMG: 10 ^h 37 ^m		Mag: +1.2 PMG: 13 ^h 43 ^m		Mag: -2.7 PMG: 21 ^h 24 ^m		Mag: +0.6 PMG: 7 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	103	46.1	200	47.8	154	01.5	37	56.5	245	38.4
1	118	48.5	215	46.9	169	02.0	52	59.1	260	40.7
2	133	51.0	230	45.9	184	02.4	68	01.8	275	43.0
3	148	53.5	245	45.0	199	02.9	83	04.5	290	45.3
4	163	55.9	260	44.1	214	03.3	98	07.2	305	47.6
5	178	58.4	275	43.2	229	03.7	113	09.9	320	49.8
6	194	00.9	290	42.3	244	04.2	128	12.6	335	52.1
7	209	03.3	305	41.3	259	04.6	143	15.3	350	54.4
8	224	05.8	320	40.4	274	05.1	158	18.0	5	56.7
9	239	08.2	335	39.5	289	05.5	173	20.7	20	59.0
10	254	10.7	350	38.6	304	06.0	188	23.4	36	01.3
11	269	13.2	5	37.6	319	06.4	203	26.1	51	03.6
12	284	15.6	20	36.7	334	06.9	218	28.8	66	05.8
13	299	18.1	35	35.8	349	07.3	233	31.4	81	08.1
14	314	20.6	50	34.9	4	07.8	248	34.1	96	10.4
15	329	23.0	65	34.0	19	08.2	263	36.8	111	12.7
16	344	25.5	80	33.0	34	08.7	278	39.5	126	15.0
17	359	28.0	95	32.1	49	09.1	293	42.2	141	17.3
18	14	30.4	110	31.2	64	09.6	308	44.9	156	19.5
19	29	32.9	125	30.3	79	10.0	323	47.6	171	21.8
20	44	35.3	140	29.3	94	10.5	338	50.3	186	24.1
21	59	37.8	155	28.4	109	10.9	353	52.9	201	26.4
22	74	40.3	170	27.5	124	11.4	8	55.6	216	28.7
23	89	42.7	185	26.6	139	11.8	23	58.3	231	31.0
24	104	45.2	200	25.6	154	12.3	39	01.0	246	33.3
Dif	—		-9	-2	+4	+5	+27	0	+23	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 05 ^m 5				Edad: 22 ^d 6 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'6 PMG: 5 ^h 54 ^m R°: 52 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	40.9	-22	36.8	274	23.6	-8	12.1	60 N	7 08	8 04	8 59	0 44	86	10 51	18		
1	193	40.6		36.5	288	53.8 ¹¹²		23.2 ¹¹¹	58	7 01	7 53	43	39	83	10 56	22		
2	208	40.4		36.3	303	23.8 ¹¹⁰		34.3 ¹¹¹	56	6 55	43	30	35	80	11 02	24		
3	223	40.1		36.0	317	53.8 ¹¹⁰		45.4 ¹¹¹	54	49	35	18	31	78	06	26		
4	238	39.8		35.7	332	23.8 ¹¹⁰	-8	56.5 ¹¹¹	52	44	27	8 07	27	77	10	29		
5	253	39.5	-22	35.4	346	53.6 ¹⁰⁸	-9	07.5 ¹¹⁰	50	6 39	7 20	7 58	0 24	75	11 14	30		
6	268	39.2	-22	35.1	1	23.4 ¹⁰⁸	-9	18.5 ¹¹⁰	45	6 28	7 05	7 38	0 17	71	11 23	34		
7	283	39.0		34.8	15	53.2 ¹⁰⁸		29.4 ¹⁰⁹	40	18	6 52	22	11	68	30	37		
8	298	38.7		34.6	30	22.8 ¹⁰⁶		40.3 ¹⁰⁹	35	09	41	7 09	07	64	36	39		
9	313	38.4		34.3	44	52.4 ¹⁰⁶	-9	51.2 ¹⁰⁹	30	6 01	31	6 57	0 02	62	41	42		
10	328	38.1		34.0	59	22.0 ¹⁰⁶	-10	02.0 ¹⁰⁸	20	5 45	6 12	36	** ** *	**	50	46		
11	343	37.9	-22	33.7	73	51.4 ¹⁰⁴	-10	12.8 ¹⁰⁸	10 N	5 30	5 56	6 19	** ** *	**	11 59	49		
12	358	37.6	-22	33.4	88	20.8 ¹⁰⁴	-10	23.5 ¹⁰⁷	0	5 13	5 39	6 02	** ** *	**	12 06	53		
13	13	37.3		33.1	102	50.1 ¹⁰³		34.2 ¹⁰⁷	10 S	4 55	22	5 45	** ** *	**	14	56		
14	28	37.0		32.8	117	19.3 ¹⁰²		44.8 ¹⁰⁶	20	33	5 02	27	** ** *	**	22	59		
15	43	36.7		32.5	131	48.5 ¹⁰²	-10	55.4 ¹⁰⁶	30	4 05	4 38	5 05	** ** *	**	32	63		
16	58	36.5		32.2	146	17.5 ¹⁰⁰	-11	06.0 ¹⁰⁶	35	3 47	24	4 53	23	57 42	37	65		
17	73	36.2	-22	31.9	160	46.5 ¹⁰⁰	-11	16.5 ¹⁰⁵	40	3 25	4 06	4 39	23	49 40	12	43 68		
18	88	35.9	-22	31.7	175	15.5 ¹⁰⁰	-11	26.9 ¹⁰⁴	45	2 56	3 45	4 21	23	41 37	12	50 72		
19	103	35.6		31.4	189	44.3 ⁹⁸		37.3 ¹⁰⁴	50	2 14	16	4 00	31	33	12	59 75		
20	118	35.4		31.1	204	13.1 ⁹⁸		47.7 ¹⁰⁴	52	1 49	3 02	3 50	26	32	13	03 77		
21	133	35.1		30.8	218	41.8 ⁹⁷	-11	57.9 ¹⁰²	54	1 13	2 45	38	21	30	08	79		
22	148	34.8		30.5	233	10.4 ⁹⁶	-12	08.2 ¹⁰³	56	** ** *	2 25	25	15	28	12	82		
23	163	34.5		30.2	247	38.9 ⁹⁵		18.3 ¹⁰¹	58	** ** *	1 59	3 09	09	25	18	84		
24	178	34.3	-22	29.9	262	07.4 ⁹⁵	-12	28.4 ¹⁰¹	60 S	** ** *	1 20	2 50	23	02 22	13	24 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 58 ^m 2		Mag: -3.9 PMG: 10 ^h 39 ^m			Mag: +1.2 PMG: 13 ^h 43 ^m			Mag: -2.7 PMG: 21 ^h 20 ^m			Mag: +0.6 PMG: 7 ^h 33 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	104	45.2	200	25.6	-22	48.1	154	12.3	-19	24.8	39	01.0	+20	51.7	246	33.3	-12	31.8
1	119	47.7	215	24.7		48.3	169	12.7		24.3	54	03.7		51.7	261	35.5		31.9
2	134	50.1	230	23.8		48.6	184	13.2		23.8	69	06.4		51.7	276	37.8		31.9
3	149	52.6	245	22.9		48.8	199	13.6		23.3	84	09.1		51.6	291	40.1		32.0
4	164	55.1	260	21.9		49.0	214	14.1		22.8	99	11.7		51.6	306	42.4		32.0
5	179	57.5	275	21.0	-22	49.2	229	14.5	-19	22.3	114	14.4	+20	51.6	321	44.7	-12	32.1
6	195	00.0	290	20.1	-22	49.5	244	15.0	-19	21.7	129	17.1	+20	51.6	336	47.0	-12	32.1
7	210	02.5	305	19.2		49.7	259	15.4		21.2	144	19.8		51.5	351	49.3		32.2
8	225	04.9	320	18.2		49.9	274	15.9		20.7	159	22.5		51.5	6	51.6		32.2
9	240	07.4	335	17.3		50.1	289	16.3		20.2	174	25.2		51.5	21	53.8		32.2
10	255	09.8	350	16.4		50.3	304	16.8		19.7	189	27.8		51.5	36	56.1		32.3
11	270	12.3	5	15.4	-22	50.5	319	17.3	-19	19.1	204	30.5	+20	51.5	51	58.4	-12	32.3
12	285	14.8	20	14.5	-22	50.8	334	17.7	-19	18.6	219	33.2	+20	51.4	67	00.7	-12	32.4
13	300	17.2	35	13.6		51.0	349	18.2		18.1	234	35.9		51.4	82	03.0		32.4
14	315	19.7	50	12.7		51.2	4	18.6		17.6	249	38.6		51.4	97	05.3		32.5
15	330	22.2	65	11.7		51.4	19	19.1		17.1	264	41.3		51.4	112	07.6		32.5
16	345	24.6	80	10.8		51.6	34	19.5		16.6	279	43.9		51.3	127	09.9		32.6
17	0	27.1	95	09.9	-22	51.8	49	20.0	-19	16.0	294	46.6	+20	51.3	142	12.1	-12	32.6
18	15	29.6	110	09.0	-22	52.0	64	20.4	-19	15.5	309	49.3	+20	51.3	157	14.4	-12	32.7
19	30	32.0	125	08.0		52.2	79	20.9		15.0	324	52.0		51.3	172	16.7		32.7
20	45	34.5	140	07.1		52.4	94	21.3		14.5	339	54.7		51.2	187	19.0		32.8
21	60	37.0	155	06.2		52.6	109	21.8		13.9	354	57.3		51.2	202	21.3		32.8
22	75	39.4	170	05.2		52.8	124	22.2		13.4	10	00.0		51.2	217	23.6		32.9
23	90	41.9	185	04.3		53.0	139	22.7		12.9	25	02.7		51.2	232	25.9		32.9
24	105	44.3	200	03.4	-22	53.2	154	23.2	-19	12.4	40	05.4	+20	51.1	247	28.2	-12	33.0
Dif	—		-9			-2	+5			+5	+27		0	+23			0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 05 ^m 9				Edad: 23 ^d 6 PHE { 4 ^h : 58/9 12 ^h : 59/1 20 ^h : 59/4 SD: 16/0 PMG: 6 ^h 46 ^m R°: 55 ^m																	
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico		Hora	R°		Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	m	
0	178	34.3	-22	29.9	262	07.4	-12	28.4	60 N	15	14	16	09	17	05	2	10	88	11	09	26	
1	193	34.0		29.6	276	35.7 93		38.5 101	58	30	20	12	2	02	85		18	28				
2	208	33.7		29.3	291	04.0 93		48.5 100	56	43	29	18	1	55	82		26	31				
3	223	33.4		29.0	305	32.2 92	-12	58.4 99	54	15	55	38	23	49	80		33	33				
4	238	33.2		28.7	320	00.3 91	-13	08.3 99	52	16	05	45	29	44	77		39	35				
5	253	32.9	-22	28.4	334	28.4 91	-13	18.1 98	50	16	15	16	52	17	33	1	39	75	11	44	37	
6	268	32.6	-22	28.1	348	56.3 89	-13	27.8 97	45	16	34	17	08	17	44	1	28	72	11	57	40	
7	283	32.3		27.8	3	24.2 89		37.5 96	40	16	50	20	17	54	19	69	12	07	43			
8	298	32.1		27.5	17	52.0 88		47.1 97	35	17	03	31	18	03	11	66		15	45			
9	313	31.8		27.1	32	19.7 87	-13	56.6 95	30	15	41	11	1	04	65		23	47				
10	328	31.5		26.8	46	47.3 86	-14	06.0 94	20	35	17	59	27	0	53	60		36	51			
11	343	31.3	-22	26.5	61	14.8 85	-14	15.4 94	10 N	17	53	18	16	18	42	0	43	57	12	48	53	
12	358	31.0	-22	26.2	75	42.3 85	-14	24.7 93	0	18	10	18	32	18	58	0	33	55	12	59	56	
13	13	30.7		25.9	90	09.6 83		33.9 92	10 S	26	18	49	19	16	24	51	13	10	58			
14	28	30.4		25.6	104	36.9 83		43.1 92	20	18	44	19	09	19	38	14	48		21	62		
15	43	30.2		25.3	119	04.1 82	-14	52.2 91	30	19	05	33	20	05	0	03	44		35	65		
16	58	29.9		25.0	133	31.2 81	-15	01.1 89	35	18	19	47	23	**	**	**		42	67			
17	73	29.6	-22	24.7	147	58.2 80	-15	10.1 90	40	19	32	20	04	20	45	**	**	**	13	51	70	
18	88	29.3	-22	24.4	162	25.1 79	-15	18.9 88	45	19	49	20	26	21	14	**	**	**	14	02	72	
19	103	29.1		24.0	176	51.9 78		27.6 87	50	20	10	20	53	21	55	**	**	**	14	76		
20	118	28.8		23.7	191	18.7 78		36.3 87	52	20	21	07	22	19	23	58	39		20	77		
21	133	28.5		23.4	205	45.3 76		44.8 85	54	32	24	22	53	51	37		27	79				
22	148	28.3		23.1	220	11.9 76	-15	53.3 85	56	20	45	21	44	**	**		43	36		34	81	
23	163	28.0		22.8	234	38.4 75	-16	01.7 84	58	21	00	22	09	**	**		34	33		42	84	
24	178	27.7	-22	22.5	249	04.8 74	-16	10.0 83	60 S	21	19	22	46	**	**		23	24	31	14	51	87
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 16 ^h 54 ^m 3		Mag: -3.9 PMG: 10 ^h 40 ^m				Mag: +1.2 PMG: 13 ^h 42 ^m				Mag: -2.7 PMG: 21 ^h 16 ^m				Mag: +0.6 PMG: 7 ^h 29 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	105	44.3	200	03.4	-22	53.2	154	23.2	-19	12.4	40	05.4	+20	51.1	247	28.2	-12	33.0				
1	120	46.8	215	02.4		53.4	169	23.6		11.9	55	08.1		51.1	262	30.4		33.0				
2	135	49.3	230	01.5		53.6	184	24.1		11.3	70	10.7		51.1	277	32.7		33.1				
3	150	51.7	245	00.6		53.8	199	24.5		10.8	85	13.4		51.1	292	35.0		33.1				
4	165	54.2	259	59.7		54.0	214	25.0		10.3	100	16.1		51.0	307	37.3		33.2				
5	180	56.7	274	58.7	-22	54.2	229	25.4	-19	09.8	115	18.8	+20	51.0	322	39.6	-12	33.2				
6	195	59.1	289	57.8	-22	54.4	244	25.9	-19	09.2	130	21.4	+20	51.0	337	41.9	-12	33.2				
7	211	01.6	304	56.9		54.6	259	26.3		08.7	145	24.1		51.0	352	44.2		33.3				
8	226	04.1	319	55.9		54.8	274	26.8		08.2	160	26.8		50.9	7	46.5		33.3				
9	241	06.5	334	55.0		55.0	289	27.3		07.7	175	29.5		50.9	22	48.8		33.4				
10	256	09.0	349	54.1		55.2	304	27.7		07.1	190	32.1		50.9	37	51.1		33.4				
11	271	11.4	4	53.1	-22	55.4	319	28.2	-19	06.6	205	34.8	+20	50.9	52	53.3	-12	33.5				
12	286	13.9	19	52.2	-22	55.6	334	28.6	-19	06.1	220	37.5	+20	50.9	67	55.6	-12	33.5				
13	301	16.4	34	51.3		55.7	349	29.1		05.5	235	40.2		50.8	82	57.9		33.6				
14	316	18.8	49	50.3		55.9	4	29.5		05.0	250	42.8		50.8	98	00.2		33.6				
15	331	21.3	64	49.4		56.1	19	30.0		04.5	265	45.5		50.8	113	02.5		33.7				
16	346	23.8	79	48.5		56.3	34	30.5		04.0	280	48.2		50.8	128	04.8		33.7				
17	1	26.2	94	47.5	-22	56.5	49	30.9	-19	03.4	295	50.9	+20	50.7	143	07.1	-12	33.8				
18	16	28.7	109	46.6	-22	56.6	64	31.4	-19	02.9	310	53.5	+20	50.7	158	09.4	-12	33.8				
19	31	31.2	124	45.7		56.8	79	31.8		02.4	325	56.2		50.7	173	11.7		33.9				
20	46	33.6	139	44.7		57.0	94	32.3		01.8	340	58.9		50.7	188	14.0		33.9				
21	61	36.1	154	43.8		57.2	109	32.7		01.3	356	01.5		50.6	203	16.3		33.9				
22	76	38.6	169	42.9		57.4	124	33.2		00.8	11	04.2		50.6	218	18.6		34.0				
23	91	41.0	184	41.9		57.5	139	33.7	-19	00.2	26	06.9		50.6	233	20.8		34.0				
24	106	43.5	199	41.0	-22	57.7	154	34.1	-18	59.7	41	09.6	+20	50.6	248	23.1	-12	34.1				
Dif	—		-9		-2		+5		+5		+27		0		+23		0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 06 ^m .4				Edad: 24 ^d 6 PHE { 4 ^h : 59/6 12 ^h : 59/8 20 ^h : 60/0 PMG: 7 ^h 41 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	27.7	-22	22.5	249	04.8	-16	10.0	60 N	7 07	8 02	8 58	3 38	86	11 35	36		
1	193	27.5		22.1	263	31.1	73	18.2	58	7 00	7 52	42	27	82	46	39		
2	208	27.2		21.8	277	57.3	72	26.3	56	6 54	42	28	17	80	11 57	41		
3	223	26.9		21.5	292	23.4	71	34.3	54	48	34	17	09	78	12 06	42		
4	238	26.6		21.2	306	49.5	71	42.3	52	43	26	8 06	3 01	77	14	44		
5	253	26.4	-22	20.9	321	15.5	70	-16	50	6 38	7 19	7 57	2 54	75	12 21	46		
6	268	26.1	-22	20.5	335	41.3	68	-16	57.8	77	45	6 28	7 04	7 38	2 40	71	12 37	48
7	283	25.8		20.2	350	07.1	68	-17	05.4	76	40	18	6 52	22	28	69	12 50	50
8	298	25.6		19.9	4	32.8	67	12.9	35	09	41	7 09	17	68	13 00	52		
9	313	25.3		19.6	18	58.4	66	20.3	30	6 01	31	6 57	2 09	65	10	53		
10	328	25.0		19.2	33	23.9	65	27.7	20	5 46	6 13	37	1 53	63	27	55		
11	343	24.8	-22	18.9	47	49.4	65	-17	34.9	72	10 N	5 30	5 57	6 19	1 40	60	13 41	58
12	358	24.5	-22	18.6	62	14.7	63	-17	41.9	70	0	5 14	5 40	6 03	1 28	58	13 55	59
13	13	24.2		18.3	76	40.0	63	48.9	10 S	4 56	23	5 46	15	56	14 08	62		
14	28	24.0		17.9	91	05.2	62	-17	55.8	69	20	35	5 04	28	1 02	53	23	63
15	43	23.7		17.6	105	30.3	61	-18	02.6	68	30	4 07	4 40	5 07	0 47	51	40	65
16	58	23.4		17.3	119	55.3	60	09.2	35	3 49	25	4 55	39	48	14 49	67		
17	73	23.2	-22	17.0	134	20.3	60	-18	15.7	65	40	3 27	4 08	4 40	0 29	47	15 01	68
18	88	22.9	-22	16.6	148	45.1	58	-18	22.2	65	45	2 59	3 47	4 23	0 18	44	15 14	70
19	103	22.6		16.3	163	09.9	58	28.5	50	2 18	19	4 02	0 04	41	30	73		
20	118	22.4		16.0	177	34.6	57	34.6	61	52	1 54	3 05	3 52	** ** *	37	74		
21	133	22.1		15.6	191	59.2	56	40.7	61	54	1 20	2 49	41	** ** *	46	75		
22	148	21.8		15.3	206	23.8	56	46.7	60	56	** ** *	29	28	** ** *	15 55	77		
23	163	21.6		15.0	220	48.2	54	52.5	58	58	** ** *	2 04	3 12	** ** *	16 06	79		
24	178	21.3	-22	14.6	235	12.6	54	-18	58.2	57	60 S	** ** *	1 27	2 54	23 55	43	16 18	81
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 50 ^m 3		Mag: -3.9 PMG: 10 ^h 42 ^m				Mag: +1.2 PMG: 13 ^h 41 ^m				Mag: -2.7 PMG: 21 ^h 12 ^m				Mag: +0.6 PMG: 7 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	106	43.5	199	41.0	-22	57.7	154	34.1	-18	59.7	41	09.6	+20	50.6	248	23.1	-12	34.1
1	121	45.9	214	40.1		57.9	169	34.6		59.2	56	12.2		50.6	263	25.4		34.1
2	136	48.4	229	39.1		58.0	184	35.0		58.6	71	14.9		50.5	278	27.7		34.2
3	151	50.9	244	38.2		58.2	199	35.5		58.1	86	17.6		50.5	293	30.0		34.2
4	166	53.3	259	37.3		58.4	214	36.0		57.6	101	20.2		50.5	308	32.3		34.3
5	181	55.8	274	36.3	-22	58.5	229	36.4	-18	57.0	116	22.9	+20	50.5	323	34.6	-12	34.3
6	196	58.3	289	35.4	-22	58.7	244	36.9	-18	56.5	131	25.6	+20	50.4	338	36.9	-12	34.4
7	212	00.7	304	34.5		58.9	259	37.3		56.0	146	28.2		50.4	353	39.2		34.4
8	227	03.2	319	33.5		59.0	274	37.8		55.4	161	30.9		50.4	8	41.5		34.5
9	242	05.7	334	32.6		59.2	289	38.3		54.9	176	33.6		50.4	23	43.8		34.5
10	257	08.1	349	31.7		59.3	304	38.7		54.4	191	36.2		50.4	38	46.1		34.5
11	272	10.6	4	30.7	-22	59.5	319	39.2	-18	53.8	206	38.9	+20	50.3	53	48.4	-12	34.6
12	287	13.1	19	29.8	-22	59.7	334	39.6	-18	53.3	221	41.6	+20	50.3	68	50.7	-12	34.6
13	302	15.5	34	28.8	-22	59.8	349	40.1		52.8	236	44.2		50.3	83	53.0		34.7
14	317	18.0	49	27.9	-23	00.0	4	40.6		52.2	251	46.9		50.3	98	55.2		34.7
15	332	20.4	64	27.0	-23	00.1	19	41.0		51.7	266	49.6		50.2	113	57.5		34.8
16	347	22.9	79	26.0		00.3	34	41.5		51.2	281	52.2		50.2	128	59.8		34.8
17	2	25.4	94	25.1	-23	00.4	49	42.0	-18	50.6	296	54.9	+20	50.2	144	02.1	-12	34.9
18	17	27.8	109	24.2	-23	00.6	64	42.4	-18	50.1	311	57.6	+20	50.2	159	04.4	-12	34.9
19	32	30.3	124	23.2		00.7	79	42.9		49.5	327	00.2		50.2	174	06.7		35.0
20	47	32.8	139	22.3		00.9	94	43.3		49.0	342	02.9		50.1	189	09.0		35.0
21	62	35.2	154	21.4		01.0	109	43.8		48.5	357	05.6		50.1	204	11.3		35.0
22	77	37.7	169	20.4		01.2	124	44.3		47.9	12	08.2		50.1	219	13.6		35.1
23	92	40.2	184	19.5		01.3	139	44.7		47.4	27	10.9		50.1	234	15.9		35.1
24	107	42.6	199	18.5	-23	01.4	154	45.2	-18	46.8	42	13.6	+20	50.1	249	18.2	-12	35.2
Dif	—		-9		-2		+5		+5		+27		0		+23		0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 06 ^m 8				Edad: 25 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'5 R°: 62 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	178	21.3	-22	14.6	235	12.6	-18	58.2	60 N	15 17	16 12	17 08	5 04 75		12 11 52					
1	193	21.0		14.3	249	36.9	53	-19 03.7	58	33	23	14	4 49 75		25 53					
2	208	20.8		13.9	264	01.1	52	09.2	56	46	32	20	37 73		38 54					
3	223	20.5		13.6	278	25.3	52	14.5	54	15 58	40	26	27 72		48 56					
4	238	20.2		13.3	292	49.4	51	19.7	52	16 08	48	31	18 71		12 58 56					
5	253	20.0	-22	12.9	307	13.4	50	-19 24.7	50	16 17	16 55	17 36	4 09 70		13 07 56					
6	268	19.7	-22	12.6	321	37.3	49	-19 29.7	45	16 36	17 10	17 46	3 51 69		13 25 58					
7	283	19.4		12.2	336	01.2	49	34.5	48	16 52	22	17 56	37 67		40 58					
8	298	19.2		11.9	350	25.0	48	39.1	46	17 05	33	18 04	25 66		13 52 60					
9	313	18.9		11.6	4	48.7	47	43.7	46	17	17 43	12	3 14 66		14 03 60					
10	328	18.7		11.2	19	12.4	47	48.1	44	37	18 00	28	2 56 64		22 61					
11	343	18.4	-22	10.9	33	36.0	46	-19 52.3	42	10 N	17 54	18 43	2 40 63		14 39 61					
12	358	18.1	-22	10.5	47	59.5	45	-19 56.4	41	0	18 10	18 33	18 59	2 26 61		14 54 63				
13	13	17.9		10.2	62	23.0	45	-20 00.4	40	10 S	27	18 50	19 17	2 11 60		15 10 63				
14	28	17.6		09.8	76	46.4	44	04.3	39	20	18 45	19 09	19 38	1 55 59		26 64				
15	43	17.3		09.5	91	09.8	44	08.0	37	30	19 06	33	20 05	38 56		45 64				
16	58	17.1		09.1	105	33.1	43	11.5	35	35	18	19 47	23	27 56		15 56 65				
17	73	16.8	-22	08.8	119	56.3	42	-20 15.0	35	40	19 32	20 04	20 44	1 16 54		16 09 65				
18	88	16.6	-22	08.4	134	19.5	42	-20 18.2	32	45	19 49	20 25	21 12	1 02 53		16 24 66				
19	103	16.3		08.1	148	42.6	41	21.4	32	50	20 09	20 52	21 53	0 45 51		43 66				
20	118	16.0		07.7	163	05.7	41	24.4	30	52	19	21 06	22 16	37 50		16 51 67				
21	133	15.8		07.4	177	28.7	40	27.2	28	54	31	22	22 48	28 49		17 01 67				
22	148	15.5		07.0	191	51.7	40	29.9	27	56	43	21 41	** ** *	19 47		12 67				
23	163	15.3		06.7	206	14.6	39	32.5	26	58	20 58	22 06	** ** *	0 07 46		25 67				
24	178	15.0	-22	06.3	220	37.5	39	-20 34.9	24	60 S	21 16	22 40	** ** *	** ** *		17 39 69				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 46 ^m 4				Mag: -3.9 PMG: 10 ^h 43 ^m				Mag: +1.2 PMG: 13 ^h 41 ^m				Mag: -2.7 PMG: 21 ^h 07 ^m				Mag: +0.6 PMG: 7 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	42.6	199	18.5	-23	01.4	154	45.2	-18	46.8	42	13.6	+20	50.1	249	18.2	-12	35.2		
1	122	45.1	214	17.6		01.6	169	45.7		46.3	57	16.2		50.0	264	20.5		35.2		
2	137	47.6	229	16.7		01.7	184	46.1		45.8	72	18.9		50.0	279	22.8		35.3		
3	152	50.0	244	15.7		01.9	199	46.6		45.2	87	21.5		50.0	294	25.1		35.3		
4	167	52.5	259	14.8		02.0	214	47.0		44.7	102	24.2		50.0	309	27.4		35.4		
5	182	54.9	274	13.8	-23	02.1	229	47.5	-18	44.1	117	26.9	+20	49.9	324	29.7	-12	35.4		
6	197	57.4	289	12.9	-23	02.3	244	48.0	-18	43.6	132	29.5	+20	49.9	339	32.0	-12	35.4		
7	212	59.9	304	12.0		02.4	259	48.4		43.0	147	32.2		49.9	354	34.3		35.5		
8	228	02.3	319	11.0		02.5	274	48.9		42.5	162	34.8		49.9	9	36.6		35.5		
9	243	04.8	334	10.1		02.7	289	49.4		42.0	177	37.5		49.9	24	38.9		35.6		
10	258	07.3	349	09.2		02.8	304	49.8		41.4	192	40.2		49.8	39	41.2		35.6		
11	273	09.7	4	08.2	-23	02.9	319	50.3	-18	40.9	207	42.8	+20	49.8	54	43.5	-12	35.7		
12	288	12.2	19	07.3	-23	03.1	334	50.8	-18	40.3	222	45.5	+20	49.8	69	45.8	-12	35.7		
13	303	14.7	34	06.3		03.2	349	51.2		39.8	237	48.1		49.8	84	48.1		35.8		
14	318	17.1	49	05.4		03.3	4	51.7		39.2	252	50.8		49.8	99	50.4		35.8		
15	333	19.6	64	04.5		03.4	19	52.2		38.7	267	53.5		49.7	114	52.6		35.8		
16	348	22.0	79	03.5		03.6	34	52.6		38.1	282	56.1		49.7	129	54.9		35.9		
17	3	24.5	94	02.6	-23	03.7	49	53.1	-18	37.6	297	58.8	+20	49.7	144	57.2	-12	35.9		
18	18	27.0	109	01.6	-23	03.8	64	53.6	-18	37.1	313	01.4	+20	49.7	159	59.5	-12	36.0		
19	33	29.4	124	00.7		03.9	79	54.0		36.5	328	04.1		49.7	175	01.8		36.0		
20	48	31.9	138	59.8		04.0	94	54.5		36.0	343	06.7		49.6	190	04.1		36.1		
21	63	34.4	153	58.8		04.1	109	55.0		35.4	358	09.4		49.6	205	06.4		36.1		
22	78	36.8	168	57.9		04.3	124	55.4		34.9	13	12.1		49.6	220	08.7		36.2		
23	93	39.3	183	56.9		04.4	139	55.9		34.3	28	14.7		49.6	235	11.0		36.2		
24	108	41.8	198	56.0	-23	04.5	154	56.4	-18	33.8	43	17.4	+20	49.6	250	13.3	-12	36.2		
Dif	—		-9		-1		+5		+5		+27		0		+23		0			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 07 ^m 2				Edad: 26 ^d 6 PHE { SD: 16:5 PMG: 9 ^h 42 ^m R°: 62 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	15.0	-22	06.3	220	37.5	-20	34.9	60 N	7 06	8 01	8 56	6 19	61	13 03	70		
1	193	14.7		06.0	235	00.3	38	37.1	58	6 59	7 50	40	6 04	60	18	70		
2	208	14.5		05.6	249	23.1	38	39.2	56	53	41	27	5 50	61	32	66		
3	223	14.2		05.3	263	45.9	38	41.2	54	48	33	15	39	61	44	68		
4	238	14.0		04.9	278	08.6	37	43.0	52	43	26	8 05	29	61	13 54	68		
5	253	13.7	-22	04.6	292	31.3	37	-20 44.6	50	6 38	7 19	7 56	5 19	62	14 03	68		
6	268	13.4	-22	04.2	306	53.9	36	-20 46.1	45	6 27	7 04	7 37	5 00	62	14 23	66		
7	283	13.2		03.8	321	16.5	36	47.5	40	18	6 52	22	4 44	63	38	66		
8	298	12.9		03.5	335	39.1	36	48.7	35	09	41	7 09	31	62	14 52	65		
9	313	12.7		03.1	350	01.7	36	49.7	30	6 01	31	6 57	20	62	15 03	65		
10	328	12.4		02.8	4 24.2	50.6	35	9	20	5 46	6 13	37	4 00	62	23	64		
11	343	12.1	-22	02.4	18 46.7	-20 51.4	35	8	10 N	5 31	5 57	6 20	3 43	62	15 40	64		
12	358	11.9	-22	02.0	33 09.2	-20 51.9	35	5	0	5 15	5 41	6 04	3 27	62	15 57	62		
13	13	11.6		01.7	47 31.6	52.4	34	5	10 S	4 57	24	5 47	3 11	63	16 13	62		
14	28	11.4		01.3	61 54.1	52.7	35	3	20	36	5 05	29	2 54	63	30	61		
15	43	11.1		00.9	76 16.5	52.8	34	1	30	4 09	4 42	5 09	34	63	16 49	61		
16	58	10.9		00.6	90 38.9	52.7	34	1	35	3 51	27	4 56	23	63	17 01	60		
17	73	10.6	-22	00.2	105 01.3	-20 52.6	34	1	40	3 30	4 10	4 42	2 10	63	17 14	59		
18	88	10.4	-21	59.8	119 23.7	-20 52.2	34	4	45	3 02	3 49	4 26	1 55	62	17 30	58		
19	103	10.1		59.5	133 46.0	51.7	33	5	50	2 21	22	4 05	36	62	49	56		
20	118	09.8		59.1	148 08.4	51.1	34	6	52	1 59	3 09	3 55	27	62	17 58	56		
21	133	09.6		58.7	162 30.7	50.2	33	9	54	1 26	2 53	44	17	62	18 08	55		
22	148	09.3		58.4	176 53.1	49.3	34	9	56	** ** *	33	31	1 06	62	19	55		
23	163	09.1		58.0	191 15.4	48.2	33	11	58	** ** *	2 09	3 16	0 53	62	32	54		
24	178	08.8	-21	57.6	205 37.8	-20 46.9	34	13	60 S	** ** *	1 34	2 58	0 38	62	18 48	52		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 42 ^m 5		Mag: -3.9 PMG: 10 ^h 45 ^m				Mag: +1.2 PMG: 13 ^h 40 ^m				Mag: -2.7 PMG: 21 ^h 03 ^m				Mag: +0.6 PMG: 7 ^h 18 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	41.8	198	56.0	-23	04.5	154	56.4	-18	33.8	43	17.4	+20	49.6	250	13.3	-12	36.2
1	123	44.2	213	55.1		04.6	169	56.8		33.2	58	20.0		49.5	265	15.6		36.3
2	138	46.7	228	54.1		04.7	184	57.3		32.7	73	22.7		49.5	280	17.9		36.3
3	153	49.2	243	53.2		04.8	199	57.8		32.1	88	25.3		49.5	295	20.2		36.4
4	168	51.6	258	52.2		04.9	214	58.2		31.6	103	28.0		49.5	310	22.5		36.4
5	183	54.1	273	51.3	-23	05.0	229	58.7	-18	31.0	118	30.6	+20	49.5	325	24.8	-12	36.5
6	198	56.5	288	50.4	-23	05.1	244	59.2	-18	30.5	133	33.3	+20	49.4	340	27.1	-12	36.5
7	213	59.0	303	49.4		05.2	259	59.6		29.9	148	35.9		49.4	355	29.4		36.5
8	229	01.5	318	48.5		05.4	275	00.1		29.4	163	38.6		49.4	10	31.7		36.6
9	244	03.9	333	47.5		05.5	290	00.6		28.8	178	41.2		49.4	25	34.0		36.6
10	259	06.4	348	46.6		05.6	305	01.1		28.3	193	43.9		49.4	40	36.3		36.7
11	274	08.9	3 45.6	-23	05.7	320	01.5	-18	27.7	208	46.5	+20	49.3	55	38.6	-12	36.7	
12	289	11.3	18 44.7	-23	05.8	335	02.0	-18	27.1	223	49.2	+20	49.3	70	40.9	-12	36.8	
13	304	13.8	33 43.8		05.8	350	02.5		26.6	238	51.8		49.3	85	43.2		36.8	
14	319	16.3	48 42.8		05.9	5 02.9	26.0		26.0	253	54.5		49.3	100	45.5		36.9	
15	334	18.7	63 41.9		06.0	20 03.4	25.5		25.5	268	57.1		49.3	115	47.8		36.9	
16	349	21.2	78 40.9		06.1	35 03.9	24.9		24.9	283	59.8		49.2	130	50.1		36.9	
17	4 23.7	93 40.0	-23	06.2	50 04.3	-18	24.4		24.4	299	02.4	+20	49.2	145	52.4	-12	37.0	
18	19 26.1	108 39.0	-23	06.3	65 04.8	-18	23.8		23.8	314	05.1	+20	49.2	160	54.7	-12	37.0	
19	34 28.6	123 38.1		06.4	80 05.3		23.3		23.3	329	07.7		49.2	175	57.0		37.1	
20	49 31.0	138 37.2		06.5	95 05.8		22.7		22.7	344	10.4		49.2	190	59.3		37.1	
21	64 33.5	153 36.2		06.6	110 06.2		22.2		22.2	359	13.0		49.1	206	01.6		37.2	
22	79 36.0	168 35.3		06.7	125 06.7		21.6		21.6	14 15.7		49.1		221	04.0		37.2	
23	94 38.4	183 34.3		06.8	140 07.2		21.0		21.0	29 18.3		49.1		236	06.3		37.2	
24	109 40.9	198 33.4	-23	06.8	155 07.6	-18	20.5		20.5	44 21.0	+20	49.1		251	08.6	-12	37.3	
Dif	—		-9 -1		+5 +6						+27 0				+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 07 ^m 6			Edad: 27 ^d 6 PHE { 4 ^h : 60'9 12 ^h : 60'9 20 ^h : 60'9 PMG: 10 ^h 44 ^m R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	08.8	-21 57.6	205	37.8	-20 46.9	15	60 N	15 21	16 16	17 11	7 20 43	14 13 84	
1	193	08.6	57.2	220	00.1	45.4	15	58	37	26	17	7 04 46	28 82	
2	208	08.3	56.9	234	22.5	43.9	18	56	15 50	35	23	6 51 48	41 80	
3	223	08.1	56.5	248	44.9	42.1	18	54	16 01	43	28	40 49	14 52 78	
4	238	07.8	56.1	263	07.2	40.2	19	52	11	51	33	30 50	15 02 76	
5	253	07.6	-21 55.7	277	29.6	-20 38.2	20	50	16 20	16 57	17 38	6 21 51	15 11 75	
6	268	07.3	-21 55.4	291	52.0	-20 36.0	22	45	16 39	17 12	17 48	6 02 53	15 29 73	
7	283	07.0	55.0	306	14.4	33.6	24	40	16 54	24	17 58	5 47 55	44 71	
8	298	06.8	54.6	320	36.9	31.1	25	35	17 07	35	18 06	33 57	15 57 69	
9	313	06.5	54.2	334	59.3	28.4	27	30	18	17 44	14	22 57	16 08 68	
10	328	06.3	53.9	349	21.8	25.6	28	20	38	18 02	29	5 02 60	27 66	
11	343	06.0	-21 53.5	3	44.3	-20 22.6	30	10 N	17 55	18 18	18 44	4 45 61	16 44 63	
12	358	05.8	-21 53.1	18	06.8	-20 19.5	31	0	18 11	18 34	19 00	4 29 63	16 59 61	
13	13	05.5	52.7	32	29.3	16.2	33	10 S	28	18 50	17	4 14 63	17 15 59	
14	28	05.3	52.3	46	51.9	12.8	34	20	18 45	19 09	19 38	3 57 65	31 57	
15	43	05.0	52.0	61	14.5	09.3	35	30	19 06	32	20 05	37 67	17 50 54	
16	58	04.8	51.6	75	37.2	05.5	38	35	17	19 47	22	26 67	18 01 53	
17	73	04.5	-21 51.2	89	59.8	-20 01.7	38	40	19 31	20 03	20 44	3 13 68	18 13 51	
18	88	04.3	-21 50.8	104	22.5	-19 57.7	40	45	19 48	20 24	21 11	2 57 70	18 28 49	
19	103	04.0	50.4	118	45.3	53.5	42	50	20 08	20 51	21 50	38 72	45 47	
20	118	03.8	50.0	133	08.1	49.2	43	52	18	21 04	22 13	29 73	18 54 45	
21	133	03.5	49.6	147	30.9	44.7	45	54	29	20	22 43	19 74	19 03 44	
22	148	03.3	49.3	161	53.8	40.1	46	56	42	21 38	** **	2 08 75	14 41	
23	163	03.0	48.9	176	16.7	35.4	47	58	20 56	22 02	** **	1 55 76	26 39	
24	178	02.8	-21 48.5	190	39.6	-19 30.5	49	60 S	21 14	22 35	** **	1 40 78	19 40 36	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 38 ^m 5		Mag: -3.9 PMG: 10 ^h 46 ^m		Mag: +1.2 PMG: 13 ^h 39 ^m		Mag: -2.7 PMG: 20 ^h 59 ^m		Mag: +0.6 PMG: 7 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	109	40.9	198 33.4	-23 06.8	155 07.6	-18 20.5	44 21.0	+20 49.1	251 08.6	-12 37.3
1	124	43.4	213 32.5	06.9	170 08.1	19.9	59 23.6	49.1	266 10.9	37.3
2	139	45.8	228 31.5	07.0	185 08.6	19.4	74 26.3	49.0	281 13.2	37.4
3	154	48.3	243 30.6	07.1	200 09.1	18.8	89 28.9	49.0	296 15.5	37.4
4	169	50.8	258 29.6	07.2	215 09.5	18.3	104 31.6	49.0	311 17.8	37.5
5	184	53.2	273 28.7	-23 07.2	230 10.0	-18 17.7	119 34.2	+20 49.0	326 20.1	-12 37.5
6	199	55.7	288 27.7	-23 07.3	245 10.5	-18 17.1	134 36.8	+20 49.0	341 22.4	-12 37.5
7	214	58.2	303 26.8	07.4	260 10.9	16.6	149 39.5	48.9	356 24.7	37.6
8	230	00.6	318 25.8	07.5	275 11.4	16.0	164 42.1	48.9	11 27.0	37.6
9	245	03.1	333 24.9	07.5	290 11.9	15.5	179 44.8	48.9	26 29.3	37.7
10	260	05.5	348 24.0	07.6	305 12.4	14.9	194 47.4	48.9	41 31.6	37.7
11	275	08.0	3 23.0	-23 07.7	320 12.8	-18 14.3	209 50.1	+20 48.9	56 33.9	-12 37.7
12	290	10.5	18 22.1	-23 07.7	335 13.3	-18 13.8	224 52.7	+20 48.9	71 36.2	-12 37.8
13	305	12.9	33 21.1	07.8	350 13.8	13.2	239 55.3	48.8	86 38.5	37.8
14	320	15.4	48 20.2	07.9	5 14.3	12.6	254 58.0	48.8	101 40.8	37.9
15	335	17.9	63 19.2	07.9	20 14.7	12.1	270 00.6	48.8	116 43.1	37.9
16	350	20.3	78 18.3	08.0	35 15.2	11.5	285 03.3	48.8	131 45.4	38.0
17	5 22.8	93 17.4	-23 08.1	50 15.7	-18 11.0	300 05.9	+20 48.8	146 47.7	-12 38.0	
18	20 25.3	108 16.4	-23 08.1	65 16.2	-18 10.4	315 08.5	+20 48.7	161 50.0	-12 38.0	
19	35 27.7	123 15.5	08.2	80 16.6	09.8	330 11.2	48.7	176 52.3	38.1	
20	50 30.2	138 14.5	08.2	95 17.1	09.3	345 13.8	48.7	191 54.6	38.1	
21	65 32.7	153 13.6	08.3	110 17.6	08.7	0 16.5	48.7	206 56.9	38.2	
22	80 35.1	168 12.6	08.4	125 18.1	08.1	15 19.1	48.7	221 59.2	38.2	
23	95 37.6	183 11.7	08.4	140 18.5	07.6	30 21.7	48.7	237 01.6	38.2	
24	110 40.0	198 10.7	-23 08.5	155 19.0	-18 07.0	45 24.4	+20 48.6	252 03.9	-12 38.3	
Dif	—		-9 -1		+5 +6		+26 0		+23 0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 08 ^m 0			Edad: 28 ^d 6 PHE { SD: 16'6 PMG: 11 ^h 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	02.8	-21	48.5	190	39.6	-19	30.5	60 N	7 04	7 59	8 53	8 03	30	15	37	91	
1	193	02.5		48.1	205	02.6	40	25.5	50	6 58	49	38	7 50	34	15	50	88	
2	208	02.3		47.7	219	25.7	41	20.3	52	52	40	25	39	36	16	01	85	
3	223	02.0		47.3	233	48.8	41	15.0	53	54	47	32	14	29	38	10	83	
4	238	01.8		46.9	248	12.0	42	09.6	54	52	42	25	8 04	20	40	18	81	
5	253	01.5	-21	46.5	262	35.2	42	-19	04.0	56	6 37	7 18	7 55	7 12	42	16	26	79
6	268	01.3	-21	46.1	276	58.5	43	-18	58.3	57	6 27	7 03	7 37	6 55	45	16	42	75
7	283	01.1		45.7	291	21.8	43	52.4	59	40	18	6 51	21	42	47	16	55	72
8	298	00.8		45.3	305	45.2	44	46.5	59	35	09	41	7 08	30	49	17	06	70
9	313	00.6		44.9	320	08.6	44	40.3	62	30	6 02	31	6 57	19	52	16	68	
10	328	00.3		44.5	334	32.1	45	34.1	62	20	5 47	6 14	37	6 02	54	33	64	
11	343	00.1	-21	44.1	348	55.7	46	-18	27.7	64	5 32	5 58	6 20	5 46	57	17	47	61
12	357	59.8	-21	43.7	3	19.3	46	-18	21.2	65	5 16	5 42	6 04	5 32	59	18	00	59
13	12	59.6		43.3	17	43.0	47	14.6	66	10 S	4 59	25	5 48	17	62	14	55	
14	27	59.3		42.9	32	06.8	48	07.8	68	20	38	5 06	31	5 02	64	28	52	
15	42	59.1		42.5	46	30.6	48	-18	00.9	69	4 11	4 43	5 10	4 44	68	44	49	
16	57	58.8		42.1	60	54.6	50	-17	53.9	70	3 54	29	4 58	33	70	18	54	46
17	72	58.6	-21	41.7	75	18.5	49	-17	46.8	71	3 32	4 13	4 45	4 21	72	19	04	44
18	87	58.4	-21	41.3	89	42.6	51	-17	39.5	73	3 05	3 52	4 28	4 07	75	19	17	41
19	102	58.1		40.9	104	06.7	51	32.2	73	50	2 26	25	4 08	3 50	78	32	37	
20	117	57.9		40.5	118	30.9	52	24.7	75	52	2 03	3 12	3 58	42	79	39	36	
21	132	57.6		40.1	132	55.2	53	17.1	76	54	1 33	2 56	47	33	81	47	33	
22	147	57.4		39.7	147	19.5	53	09.3	78	56	0 34	38	34	23	83	19	55	32
23	162	57.1		39.3	161	43.9	54	-17	01.5	78	** **	2 14	20	3 11	85	20	05	29
24	177	56.9	-21	38.9	176	08.4	55	-16	53.6	79	** **	1 41	3 02	2 58	88	20	16	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 34 ^m 6		Mag: -3.9 PMG: 10 ^h 48 ^m		Mag: +1.2 PMG: 13 ^h 38 ^m		Mag: -2.7 PMG: 20 ^h 55 ^m		Mag: +0.6 PMG: 7 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	110	40.0	198	10.7	-23	08.5	155	19.0	-18	07.0	45	24.4	+20	48.6	252	03.9	-12	38.3
1	125	42.5	213	09.8		08.5	170	19.5		06.4	60	27.0		48.6	267	06.2		38.3
2	140	45.0	228	08.9		08.6	185	20.0		05.9	75	29.7		48.6	282	08.5		38.4
3	155	47.4	243	07.9		08.6	200	20.5		05.3	90	32.3		48.6	297	10.8		38.4
4	170	49.9	258	07.0		08.7	215	20.9		04.7	105	34.9		48.6	312	13.1		38.5
5	185	52.4	273	06.0	-23	08.7	230	21.4	-18	04.2	120	37.6	+20	48.6	327	15.4	-12	38.5
6	200	54.8	288	05.1	-23	08.8	245	21.9	-18	03.6	135	40.2	+20	48.5	342	17.7	-12	38.5
7	215	57.3	303	04.1		08.8	260	22.4		03.0	150	42.8		48.5	357	20.0		38.6
8	230	59.8	318	03.2		08.9	275	22.8		02.5	165	45.5		48.5	12	22.3		38.6
9	246	02.2	333	02.2		08.9	290	23.3		01.9	180	48.1		48.5	27	24.6		38.7
10	261	04.7	348	01.3		08.9	305	23.8		01.3	195	50.7		48.5	42	26.9		38.7
11	276	07.2	3	00.4	-23	09.0	320	24.3	-18	00.8	210	53.4	+20	48.5	57	29.2	-12	38.7
12	291	09.6	17	59.4	-23	09.0	335	24.7	-18	00.2	225	56.0	+20	48.4	72	31.5	-12	38.8
13	306	12.1	32	58.5		09.1	350	25.2	-17	59.6	240	58.6		48.4	87	33.8		38.8
14	321	14.5	47	57.5		09.1	5	25.7		59.1	256	01.3		48.4	102	36.2		38.9
15	336	17.0	62	56.6		09.1	20	26.2		58.5	271	03.9		48.4	117	38.5		38.9
16	351	19.5	77	55.6		09.2	35	26.7		57.9	286	06.5		48.4	132	40.8		38.9
17	6	21.9	92	54.7	-23	09.2	50	27.1	-17	57.3	301	09.2	+20	48.3	147	43.1	-12	39.0
18	21	24.4	107	53.7	-23	09.2	65	27.6	-17	56.8	316	11.8	+20	48.3	162	45.4	-12	39.0
19	36	26.9	122	52.8		09.3	80	28.1		56.2	331	14.4		48.3	177	47.7		39.1
20	51	29.3	137	51.8		09.3	95	28.6		55.6	346	17.1		48.3	192	50.0		39.1
21	66	31.8	152	50.9		09.3	110	29.1		55.1	1	19.7		48.3	207	52.3		39.1
22	81	34.3	167	50.0		09.3	125	29.5		54.5	16	22.3		48.3	222	54.6		39.2
23	96	36.7	182	49.0		09.4	140	30.0		53.9	31	25.0		48.2	237	56.9		39.2
24	111	39.2	197	48.1	-23	09.4	155	30.5	-17	53.3	46	27.6	+20	48.2	252	59.2	-12	39.3
Dif	—		-9		0		+5		+6		+26		0		+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 08 ^m 4			Edad: 29 ^d 6 PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'1 R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	56.9	-21	38.9	176	08.4	-16 53.6	60 N	15 26	16 19	17 14	8 33 22	17 08 92		
1	192	56.7		38.5	190	33.0	45.5 81	58	40	29	20	24 25	18 88		
2	207	56.4		38.1	204	57.6	37.3 82	56	15 53	38	26	15 27	26 85		
3	222	56.2		37.7	219	22.4	29.0 83	54	16 04	46	31	07 30	33 83		
4	237	55.9		37.3	233	47.2	20.7 83	52	14	16 53	36	8 00 32	39 81		
5	252	55.7	-21	36.9	248	12.1	-16 12.2 85	50	16 23	17 00	17 40	7 54 34	17 45 79		
6	267	55.5	-21	36.4	262	37.0	-16 03.6 86	45	16 41	17 14	17 51	7 40 38	17 57 75		
7	282	55.2		36.0	277	02.1	-15 54.9 87	40	16 56	26	18 00	29 41	18 07 72		
8	297	55.0		35.6	291	27.2	46.1 88	35	17 09	37	08	19 44	16 69		
9	312	54.7		35.2	305	52.4	37.2 89	30	20	17 46	15	7 11 46	24 66		
10	327	54.5		34.8	320	17.7	28.2 90	20	39	18 03	30	6 56 50	37 61		
11	342	54.3	-21	34.4	334	43.1	-15 19.1 91	10 N	17 56	18 19	18 45	6 43 54	18 48 58		
12	357	54.0	-21	34.0	349	08.6	-15 09.9 92	0	18 12	18 34	19 00	6 31 57	18 59 54		
13	12	53.8		33.5	3	34.1	-15 00.7 92	10 S	28	18 51	17	19 60	19 09 51		
14	27	53.5		33.1	17	59.8	-14 51.3 94	20	18 45	19 10	19 38	6 06 63	20 48		
15	42	53.3		32.7	32	25.5	41.9 94	30	19 05	32	20 05	5 52 67	33 43		
16	57	53.1		32.3	46	51.3	32.3 96	35	17	19 46	22	43 69	40 41		
17	72	52.8	-21	31.9	61	17.2	-14 22.7 96	40	19 31	20 03	20 42	5 33 72	19 48 39		
18	87	52.6	-21	31.5	75	43.1	-14 13.0 97	45	19 47	20 23	21 09	5 22 75	19 58 35		
19	102	52.3		31.0	90	09.2	-14 03.2 98	50	20 07	20 49	21 48	08 79	20 09 31		
20	117	52.1		30.6	104	35.4	-13 53.3 99	52	16	21 02	22 09	5 01 81	15 29		
21	132	51.9		30.2	119	01.6	43.4 99	54	27	17	22 37	4 54 83	20 28		
22	147	51.6		29.8	133	27.9	33.3 101	56	40	35	23 26	46 85	27 25		
23	162	51.4		29.3	147	54.3	23.2 101	58	20 54	21 58	** **	36 89	34 23		
24	177	51.2	-21	28.9	162	20.8	-13 13.1 101	60 S	21 11	22 29	** **	4 26 91	20 42 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 30 ^m 7		Mag: -3.9 PMG: 10 ^h 49 ^m		Mag: +1.2 PMG: 13 ^h 38 ^m		Mag: -2.7 PMG: 20 ^h 51 ^m		Mag: +0.6 PMG: 7 ^h 07 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	111	39.2	197	48.1	-23 09.4	155	30.5	-17 53.3	46	27.6	+20 48.2	252	59.2	-12 39.3
1	126	41.7	212	47.1	09.4	170	31.0	52.8	61	30.2	48.2	268	01.6	39.3
2	141	44.1	227	46.2	09.4	185	31.5	52.2	76	32.9	48.2	283	03.9	39.3
3	156	46.6	242	45.2	09.5	200	31.9	51.6	91	35.5	48.2	298	06.2	39.4
4	171	49.0	257	44.3	09.5	215	32.4	51.0	106	38.1	48.2	313	08.5	39.4
5	186	51.5	272	43.3	-23 09.5	230	32.9	-17 50.5	121	40.7	+20 48.2	328	10.8	-12 39.5
6	201	54.0	287	42.4	-23 09.5	245	33.4	-17 49.9	136	43.4	+20 48.1	343	13.1	-12 39.5
7	216	56.4	302	41.4	09.5	260	33.9	49.3	151	46.0	48.1	358	15.4	39.5
8	231	58.9	317	40.5	09.5	275	34.4	48.7	166	48.6	48.1	13	17.7	39.6
9	247	01.4	332	39.6	09.6	290	34.8	48.2	181	51.2	48.1	28	20.0	39.6
10	262	03.8	347	38.6	09.6	305	35.3	47.6	196	53.9	48.1	43	22.3	39.7
11	277	06.3	2	37.7	-23 09.6	320	35.8	-17 47.0	211	56.5	+20 48.1	58	24.7	-12 39.7
12	292	08.8	17	36.7	-23 09.6	335	36.3	-17 46.4	226	59.1	+20 48.0	73	27.0	-12 39.7
13	307	11.2	32	35.8	09.6	350	36.8	45.9	242	01.8	48.0	88	29.3	39.8
14	322	13.7	47	34.8	09.6	5	37.3	45.3	257	04.4	48.0	103	31.6	39.8
15	337	16.1	62	33.9	09.6	20	37.7	44.7	272	07.0	48.0	118	33.9	39.9
16	352	18.6	77	32.9	09.6	35	38.2	44.1	287	09.6	48.0	133	36.2	39.9
17	7	21.1	92	32.0	-23 09.6	50	38.7	-17 43.5	302	12.2	+20 48.0	148	38.5	-12 39.9
18	22	23.5	107	31.0	-23 09.6	65	39.2	-17 43.0	317	14.9	+20 47.9	163	40.8	-12 40.0
19	37	26.0	122	30.1	09.6	80	39.7	42.4	332	17.5	47.9	178	43.2	40.0
20	52	28.5	137	29.2	09.6	95	40.2	41.8	347	20.1	47.9	193	45.5	40.1
21	67	30.9	152	28.2	09.6	110	40.6	41.2	2	22.7	47.9	208	47.8	40.1
22	82	33.4	167	27.3	09.6	125	41.1	40.6	17	25.4	47.9	223	50.1	40.1
23	97	35.9	182	26.3	09.6	140	41.6	40.1	32	28.0	47.9	238	52.4	40.2
24	112	38.3	197	25.4	-23 09.6	155	42.1	-17 39.5	47	30.6	+20 47.9	253	54.7	-12 40.2
Dif	—		-9		0	+5		+6	+26		0	+23		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 08 ^m 8			Edad: 1 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'3 R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	177	51.2	-21	28.9	162	20.8	-13	13.1	60 N	7 03	7 57	8 50	8 55	17	18	40	89
1	192	50.9		28.5	176	47.4	76	-13 02.8	58	6 56	47	36	49	19		46	85
2	207	50.7		28.1	191	14.0	76	-12 52.5	56	51	38	23	42	23		51	83
3	222	50.5		27.6	205	40.8	78	42.1	54	46	30	12	37	25	18	56	80
4	237	50.2		27.2	220	07.6	78	31.6	52	41	23	8 03	32	27	19	00	78
5	252	50.0	-21	26.8	234	34.5	79	-12 21.1	50	6 36	7 17	7 54	8 28	28	19	04	76
6	267	49.8	-21	26.4	249	01.6	81	-12 10.5	45	6 26	7 03	7 36	8 18	32	19	12	72
7	282	49.5		25.9	263	28.6	80	-11 59.9	40	17	6 51	21	10	36		19	68
8	297	49.3		25.5	277	55.8	82	49.1	35	09	40	7 08	8 03	38		25	65
9	312	49.1		25.1	292	23.1	83	38.4	30	6 02	31	6 57	7 57	41		30	63
10	327	48.8		24.6	306	50.4	83	27.5	20	5 47	6 14	38	46	45		38	59
11	342	48.6	-21	24.2	321	17.9	85	-11 16.6	10 N	5 32	5 58	6 21	7 37	49	19	46	55
12	357	48.4	-21	23.8	335	45.4	85	-11 05.7	0	5 17	5 43	6 05	7 28	52	19	53	51
13	12	48.1		23.3	350	13.0	86	-10 54.7	10 S	5 00	26	5 49	19	56	20	00	48
14	27	47.9		22.9	4	40.7	87	43.6	20	4 39	5 08	32	7 09	60		08	44
15	42	47.7		22.5	19	08.4	87	32.5	30	4 13	4 45	12	6 59	64		16	40
16	57	47.4		22.0	33	36.3	89	21.3	35	3 56	31	5 00	52	67		21	37
17	72	47.2	-21	21.6	48	04.2	89	-10 10.1	40	3 35	4 15	4 47	6 45	70	20	27	34
18	87	47.0	-21	21.2	62	32.2	90	-9 58.9	45	3 08	3 55	4 31	6 37	73	20	33	31
19	102	46.7		20.7	77	00.3	91	47.6	50	2 30	29	11	27	77		40	27
20	117	46.5		20.3	91	28.5	92	36.3	52	2 09	16	4 01	22	79		44	25
21	132	46.3		19.8	105	56.7	92	24.9	54	1 40	3 00	3 50	17	81		48	23
22	147	46.1		19.4	120	25.1	94	13.5	56	0 51	2 42	38	11	84		52	21
23	162	45.8		19.0	134	53.5	94	-9 02.0	58	** **	2 20	24	6 05	86	20	57	18
24	177	45.6	-21	18.5	149	22.0	95	-8 50.5	60 S	** **	1 49	3 07	5 57	90	21	02	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 26 ^m 7		Mag: -3.9 PMG: 10 ^h 51 ^m		Mag: +1.2 PMG: 13 ^h 37 ^m		Mag: -2.7 PMG: 20 ^h 46 ^m		Mag: +0.6 PMG: 7 ^h 03 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	112	38.3	197	25.4	-23	09.6	155	42.1	-17	39.5	47	30.6	+20	47.9	253	54.7	-12	40.2
1	127	40.8	212	24.4		09.6	170	42.6		38.9	62	33.2		47.8	268	57.0		40.2
2	142	43.3	227	23.5		09.6	185	43.1		38.3	77	35.8		47.8	283	59.3		40.3
3	157	45.7	242	22.5		09.6	200	43.6		37.7	92	38.5		47.8	299	01.7		40.3
4	172	48.2	257	21.6		09.6	215	44.0		37.2	107	41.1		47.8	314	04.0		40.4
5	187	50.6	272	20.6	-23	09.6	230	44.5	-17	36.6	122	43.7	+20	47.8	329	06.3	-12	40.4
6	202	53.1	287	19.7	-23	09.6	245	45.0	-17	36.0	137	46.3	+20	47.8	344	08.6	-12	40.4
7	217	55.6	302	18.8		09.5	260	45.5		35.4	152	48.9		47.8	359	10.9		40.5
8	232	58.0	317	17.8		09.5	275	46.0		34.8	167	51.6		47.7	14	13.2		40.5
9	248	00.5	332	16.9		09.5	290	46.5		34.2	182	54.2		47.7	29	15.5		40.6
10	263	03.0	347	15.9		09.5	305	47.0		33.7	197	56.8		47.7	44	17.9		40.6
11	278	05.4	2	15.0	-23	09.5	320	47.4	-17	33.1	212	59.4	+20	47.7	59	20.2	-12	40.6
12	293	07.9	17	14.0	-23	09.5	335	47.9	-17	32.5	228	02.0	+20	47.7	74	22.5	-12	40.7
13	308	10.4	32	13.1		09.4	350	48.4		31.9	243	04.7		47.7	89	24.8		40.7
14	323	12.8	47	12.1		09.4	5	48.9		31.3	258	07.3		47.6	104	27.1		40.7
15	338	15.3	62	11.2		09.4	20	49.4		30.7	273	09.9		47.6	119	29.4		40.8
16	353	17.8	77	10.2		09.4	35	49.9		30.1	288	12.5		47.6	134	31.7		40.8
17	8	20.2	92	09.3	-23	09.3	50	50.4	-17	29.6	303	15.1	+20	47.6	149	34.1	-12	40.9
18	23	22.7	107	08.4	-23	09.3	65	50.9	-17	29.0	318	17.7	+20	47.6	164	36.4	-12	40.9
19	38	25.1	122	07.4		09.3	80	51.4		28.4	333	20.3		47.6	179	38.7		40.9
20	53	27.6	137	06.5		09.2	95	51.8		27.8	348	23.0		47.6	194	41.0		41.0
21	68	30.1	152	05.5		09.2	110	52.3		27.2	3	25.6		47.5	209	43.3		41.0
22	83	32.5	167	04.6		09.2	125	52.8		26.6	18	28.2		47.5	224	45.6		41.0
23	98	35.0	182	03.6		09.1	140	53.3		26.0	33	30.8		47.5	239	48.0		41.1
24	113	37.5	197	02.7	-23	09.1	155	53.8	-17	25.4	48	33.4	+20	47.5	254	50.3	-12	41.1
Dif	—		-9		0		+5		+6		+26		0		+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 09 ^m 1			Edad: 2 ^d 2 PHE { 4 ^h : 59/0 12 ^h : 58/7 20 ^h : 58/4 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	177	45.6	-21	18.5	149	22.0	-8	50.5	60 N	15 30	16 23	17 17	9 12 15	20 09 85				
1	192	45.4		18.1	163	50.6 ⁹⁶		39.0 ¹¹⁵	58		44	33	23	08 17	11 83			
2	207	45.1		17.6	178	19.2 ⁹⁶		27.4 ¹¹⁶	56	15 57	41	29	05 19	14 80				
3	222	44.9		17.2	192	47.9 ⁹⁷		15.8 ¹¹⁶	54	16 07	49	34	9 02 21	16 78				
4	237	44.7		16.7	207	16.7 ⁹⁸	-8	04.2 ¹¹⁶	52		17	16 56	38	8 59 23	18 75			
5	252	44.5	-21	16.3	221	45.6 ⁹⁹	-7	52.5 ¹¹⁷	50	16 25	17 02	17 43	8 56 25	20 20 73				
6	267	44.2	-21	15.8	236	14.6 ¹⁰⁰	-7	40.8 ¹¹⁷	45	16 43	17 16	17 53	8 50 30	20 24 69				
7	282	44.0		15.4	250	43.6 ¹⁰⁰		29.1 ¹¹⁷	40	16 58	28	18 01	46 32	27 66				
8	297	43.8		15.0	265	12.7 ¹⁰¹		17.4 ¹¹⁷	35	17 11	38	09	41 36	30 63				
9	312	43.5		14.5	279	41.9 ¹⁰²	-7	05.6 ¹¹⁸	30		22	17 48	17	38 38	33 60			
10	327	43.3		14.1	294	11.1 ¹⁰²	-6	53.8 ¹¹⁸	20	41	18 04	31	31 43	37 56				
11	342	43.1	-21	13.6	308	40.4 ¹⁰³	-6	42.0 ¹¹⁸	10 N	17 57	18 20	18 46	8 26 46	20 41 52				
12	357	42.9	-21	13.2	323	09.8 ¹⁰⁴	-6	30.1 ¹¹⁹	0	18 13	18 35	19 01	8 20 50	20 44 49				
13	12	42.6		12.7	337	39.3 ¹⁰⁵		18.3 ¹¹⁸	10 S	29	18 51	18	15 53	48 45				
14	27	42.4		12.3	352	08.8 ¹⁰⁵	-6	06.4 ¹¹⁹	20	18 45	19 10	19 38	09 58	52 41				
15	42	42.2		11.8	6	38.4 ¹⁰⁶	-5	54.5 ¹¹⁹	30	19 05	32	20 04	8 03 62	56 36				
16	57	42.0		11.4	21	08.1 ¹⁰⁷		42.6 ¹¹⁹	35	17	19 46	21	7 59 65	20 58 34				
17	72	41.7	-21	10.9	35	37.8 ¹⁰⁷	-5	30.7 ¹¹⁹	40	19 30	20 02	20 41	7 55 67	21 01 31				
18	87	41.5	-21	10.4	50	07.7 ¹⁰⁹	-5	18.8 ¹¹⁹	45	19 46	20 21	21 08	7 50 71	21 04 28				
19	102	41.3		10.0	64	37.5 ¹⁰⁸	-5	06.8 ¹²⁰	50	20 05	20 47	21 45	44 75	07 25				
20	117	41.1		09.5	79	07.5 ¹¹⁰	-4	54.9 ¹¹⁹	52	15	21 00	22 05	41 77	09 23				
21	132	40.9		09.1	93	37.5 ¹¹⁰		42.9 ¹²⁰	54	25	15	22 32	38 79	11 21				
22	147	40.6		08.6	108	07.5 ¹¹⁰		30.9 ¹²⁰	56	37	32	23 15	35 81	13 18				
23	162	40.4		08.2	122	37.7 ¹¹²		19.0 ¹¹⁹	58	20 51	21 54	** ** *	31 84	15 16				
24	177	40.2	-21	07.7	137	07.8 ¹¹¹	-4	07.0 ¹²⁰	60 S	21 07	22 23	** ** *	7 27 87	21 17 14				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 22 ^m 8			Mag: -3.9 PMG: 10 ^h 53 ^m			Mag: +1.2 PMG: 13 ^h 36 ^m			Mag: -2.7 PMG: 20 ^h 42 ^m			Mag: +0.6 PMG: 7 ^h 00 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	113	37.5	197	02.7	-23	09.1	155	53.8	-17	25.4	48	33.4	+20	47.5	254	50.3	-12	41.1
1	128	39.9	212	01.7		09.1	170	54.3		24.8	63	36.0		47.5	269	52.6		41.2
2	143	42.4	227	00.8		09.0	185	54.8		24.3	78	38.6		47.5	284	54.9		41.2
3	158	44.9	241	59.8		09.0	200	55.3		23.7	93	41.2		47.5	299	57.2		41.2
4	173	47.3	256	58.9		09.0	215	55.8		23.1	108	43.9		47.5	314	59.5		41.3
5	188	49.8	271	58.0	-23	08.9	230	56.3	-17	22.5	123	46.5	+20	47.4	330	01.9	-12	41.3
6	203	52.3	286	57.0	-23	08.9	245	56.7	-17	21.9	138	49.1	+20	47.4	345	04.2	-12	41.3
7	218	54.7	301	56.1		08.8	260	57.2		21.3	153	51.7		47.4	0	06.5		41.4
8	233	57.2	316	55.1		08.8	275	57.7		20.7	168	54.3		47.4	15	08.8		41.4
9	248	59.6	331	54.2		08.7	290	58.2		20.1	183	56.9		47.4	30	11.1		41.5
10	264	02.1	346	53.2		08.7	305	58.7		19.5	198	59.5		47.4	45	13.4		41.5
11	279	04.6	1	52.3	-23	08.6	320	59.2	-17	18.9	214	02.1	+20	47.4	60	15.8	-12	41.5
12	294	07.0	16	51.3	-23	08.6	335	59.7	-17	18.3	229	04.7	+20	47.3	75	18.1	-12	41.6
13	309	09.5	31	50.4		08.5	351	00.2		17.8	244	07.3		47.3	90	20.4		41.6
14	324	12.0	46	49.5		08.5	6	00.7		17.2	259	10.0		47.3	105	22.7		41.6
15	339	14.4	61	48.5		08.4	21	01.2		16.6	274	12.6		47.3	120	25.0		41.7
16	354	16.9	76	47.6		08.4	36	01.7		16.0	289	15.2		47.3	135	27.4		41.7
17	9	19.4	91	46.6	-23	08.3	51	02.2	-17	15.4	304	17.8	+20	47.3	150	29.7	-12	41.8
18	24	21.8	106	45.7	-23	08.3	66	02.6	-17	14.8	319	20.4	+20	47.3	165	32.0	-12	41.8
19	39	24.3	121	44.7		08.2	81	03.1		14.2	334	23.0		47.3	180	34.3		41.8
20	54	26.7	136	43.8		08.2	96	03.6		13.6	349	25.6		47.2	195	36.6		41.9
21	69	29.2	151	42.8		08.1	111	04.1		13.0	4	28.2		47.2	210	39.0		41.9
22	84	31.7	166	41.9		08.0	126	04.6		12.4	19	30.8		47.2	225	41.3		41.9
23	99	34.1	181	41.0		08.0	141	05.1		11.8	34	33.4		47.2	240	43.6		42.0
24	114	36.6	196	40.0	-23	07.9	156	05.6	-17	11.2	49	36.0	+20	47.2	255	45.9	-12	42.0
Dif	—			-9 +1			+5 +6			+26 0			+23 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 09 ^m 5			Edad: 3 ^d 2 PHE { SD: 15:9 PMG: 15 ^h 22 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	177	40.2	-21	07.7	137	07.8	-4	07.0	60 N	7 01	7 55	8 47	9 27	13	21	34	81
1	192	40.0		07.2	151	38.1 ¹¹³	-3	55.0 ¹²⁰	58	6 55	45	33	25	16	34	79	
2	207	39.7		06.8	166	08.4 ¹¹³		43.0 ¹²⁰	56	49	37	21	24	18	34	76	
3	222	39.5		06.3	180	38.8 ¹¹⁴		31.0 ¹²⁰	54	44	29	10	23	20	34	74	
4	237	39.3		05.9	195	09.2 ¹¹⁴		19.0 ¹²⁰	52	40	22	8 01	22	22	33	73	
5	252	39.1	-21	05.4	209	39.7 ¹¹⁵	-3	07.0 ¹²⁰	50	6 35	7 16	7 53	9 21	24	21	33	71
6	267	38.9	-21	04.9	224	10.2 ¹¹⁵	-2	55.0 ¹²⁰	45	6 26	7 02	7 35	9 20	27	21	33	67
7	282	38.6		04.5	238	40.8 ¹¹⁶		43.0 ¹²⁰	40	17	6 50	20	18	31	33	64	
8	297	38.4		04.0	253	11.5 ¹¹⁷		31.0 ¹²⁰	35	09	40	7 08	17	33	33	61	
9	312	38.2		03.5	267	42.2 ¹¹⁷		19.1 ¹¹⁹	30	6 01	31	6 57	16	35	33	58	
10	327	38.0		03.1	282	13.0 ¹¹⁸	-2	07.1 ¹²⁰	20	5 47	6 14	38	14	40	33	54	
11	342	37.8	-21	02.6	296	43.8 ¹¹⁸	-1	55.1 ¹²⁰	10 N	5 33	5 59	6 21	9 12	44	21	33	50
12	357	37.5	-21	02.1	311	14.7 ¹¹⁹	-1	43.1 ¹²⁰	0	5 18	5 44	6 06	9 10	47	21	33	46
13	12	37.3		01.7	325	45.6 ¹¹⁹		31.2 ¹¹⁹	10 S	5 01	28	5 50	08	51	33	43	
14	27	37.1		01.2	340	16.6 ¹²⁰		19.2 ¹²⁰	20	4 41	5 09	33	07	54	33	39	
15	42	36.9		00.7	354	47.6 ¹²⁰	-1	07.3 ¹¹⁹	30	4 15	4 47	14	05	59	32	36	
16	57	36.7	-21	00.3	9	18.7 ¹²¹	-0	55.4 ¹¹⁹	35	3 58	33	5 02	04	61	32	33	
17	72	36.5	-20	59.8	23	49.8 ¹²¹	-0	43.5 ¹¹⁹	40	3 38	4 17	4 49	9 02	65	21	32	30
18	87	36.2	-20	59.3	38	21.0 ¹²²	-0	31.6 ¹¹⁹	45	3 11	3 57	4 33	9 01	67	21	32	27
19	102	36.0		58.9	52	52.2 ¹²²		19.7 ¹¹⁹	50	2 34	32	14	8 59	72	32	23	
20	117	35.8		58.4	67	23.4 ¹²²	-0	07.8 ¹¹⁹	52	2 14	19	4 04	58	74	32	21	
21	132	35.6		57.9	81	54.8 ¹²⁴	+0	04.0 ¹¹⁸	54	1 47	3 05	3 54	57	76	32	19	
22	147	35.4		57.4	96	26.1 ¹²³		15.9 ¹¹⁹	56	1 04	2 47	42	56	78	31	18	
23	162	35.2		57.0	110	57.5 ¹²⁴		27.7 ¹¹⁸	58	** **	2 25	28	55	80	31	16	
24	177	34.9	-20	56.5	125	28.9 ¹²⁴	+0	39.5 ¹¹⁸	60 S	** **	1 56	3 12	8 54	83	21	31	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 18 ^m 9		Mag: -3.9 PMG: 10 ^h 54 ^m		Mag: +1.2 PMG: 13 ^h 35 ^m		Mag: -2.7 PMG: 20 ^h 38 ^m		Mag: +0.6 PMG: 6 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	114	36.6	196	40.0	-23	07.9	156	05.6	-17	11.2	49	36.0	+20	47.2	255	45.9	-12	42.0
1	129	39.1	211	39.1		07.8	171	06.1		10.6	64	38.6		47.2	270	48.2		42.0
2	144	41.5	226	38.1		07.8	186	06.6		10.0	79	41.2		47.2	285	50.6		42.1
3	159	44.0	241	37.2		07.7	201	07.1		09.4	94	43.8		47.2	300	52.9		42.1
4	174	46.5	256	36.2		07.6	216	07.6		08.8	109	46.4		47.1	315	55.2		42.2
5	189	48.9	271	35.3	-23	07.6	231	08.1	-17	08.2	124	49.0	+20	47.1	330	57.5	-12	42.2
6	204	51.4	286	34.3	-23	07.5	246	08.6	-17	07.6	139	51.6	+20	47.1	345	59.8	-12	42.2
7	219	53.9	301	33.4		07.4	261	09.1		07.0	154	54.2		47.1	1	02.2		42.3
8	234	56.3	316	32.5		07.3	276	09.6		06.4	169	56.8		47.1	16	04.5		42.3
9	249	58.8	331	31.5		07.3	291	10.1		05.8	184	59.4		47.1	31	06.8		42.3
10	265	01.2	346	30.6		07.2	306	10.6		05.2	200	02.0		47.1	46	09.1		42.4
11	280	03.7	1	29.6	-23	07.1	321	11.1	-17	04.6	215	04.6	+20	47.1	61	11.4	-12	42.4
12	295	06.2	16	28.7	-23	07.0	336	11.6	-17	04.0	230	07.2	+20	47.0	76	13.8	-12	42.4
13	310	08.6	31	27.7		07.0	351	12.1		03.4	245	09.8		47.0	91	16.1		42.5
14	325	11.1	46	26.8		06.9	6	12.6		02.8	260	12.4		47.0	106	18.4		42.5
15	340	13.6	61	25.9		06.8	21	13.0		02.2	275	15.0		47.0	121	20.7		42.5
16	355	16.0	76	24.9		06.7	36	13.5		01.6	290	17.6		47.0	136	23.1		42.6
17	10	18.5	91	24.0	-23	06.6	51	14.0	-17	01.0	305	20.2	+20	47.0	151	25.4	-12	42.6
18	25	21.0	106	23.0	-23	06.5	66	14.5	-17	00.4	320	22.8	+20	47.0	166	27.7	-12	42.7
19	40	23.4	121	22.1		06.4	81	15.0	-16	59.8	335	25.4		47.0	181	30.0		42.7
20	55	25.9	136	21.1		06.4	96	15.5		59.2	350	28.0		47.0	196	32.4		42.7
21	70	28.3	151	20.2		06.3	111	16.0		58.6	5	30.6		46.9	211	34.7		42.8
22	85	30.8	166	19.3		06.2	126	16.5		58.0	20	33.2		46.9	226	37.0		42.8
23	100	33.3	181	18.3		06.1	141	17.0		57.4	35	35.8		46.9	241	39.3		42.8
24	115	35.7	196	17.4	-23	06.0	156	17.5	-16	56.8	50	38.4	+20	46.9	256	41.6	-12	42.9
Dif	—		-9		+1		+5		+6		+26		0		+23		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna								
	SD: 16/3 PMG: 12 ^h 09 ^m 8			Edad: 4 ^d 2 SD: 15/6 PMG: 16 ^h 08 ^m	PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6 R°: 46 ^m																	
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m						
0	177	34.9	-20	56.5	125	28.9	+0	39.5	60 N	15	34	16	27	17	21	9	40					
1	192	34.7		56.0	140	00.4 ¹²⁵	+0	51.2 ¹¹⁷	58	15	48		36		27	41	16					
2	207	34.5		55.5	154	31.9 ¹²⁵	+1	03.0 ¹¹⁸	56	16	00		45		32	42	18					
3	222	34.3		55.1	169	03.5 ¹²⁶		14.7 ¹¹⁷	54	11		52		37	43	20	48	71				
4	237	34.1		54.6	183	35.1 ¹²⁶		26.4 ¹¹⁷	52	20	16	59		41	44	22	46	70				
5	252	33.9	-20	54.1	198	06.7 ¹²⁶	+1	38.1 ¹¹⁷	50	16	28	17	05	17	45	9	45	23				
6	267	33.7	-20	53.6	212	38.4 ¹²⁷	+1	49.8 ¹¹⁷	45	16	46	17	19	17	55	9	47	27				
7	282	33.5		53.1	227	10.1 ¹²⁷	+2	01.4 ¹¹⁶	40	17	00		30	18	03	49	30	37	61			
8	297	33.2		52.7	241	41.8 ¹²⁷		13.0 ¹¹⁶	35	13		40		11	50	33	34	58				
9	312	33.0		52.2	256	13.6 ¹²⁸		24.6 ¹¹⁶	30	23	17	49		19	51	35	31	57				
10	327	32.8		51.7	270	45.4 ¹²⁸		36.2 ¹¹⁶	20	42	18	06		33	54	39	27	52				
11	342	32.6	-20	51.2	285	17.2 ¹²⁸	+2	47.7 ¹¹⁵	10 N	17	58	18	21	18	46	9	56	42	22	23	49	
12	357	32.4	-20	50.7	299	49.1 ¹²⁹	+2	59.2 ¹¹⁵	0	18	13	18	36	19	01	9	57	46	22	19	46	
13	12	32.2		50.2	314	21.0 ¹²⁹	+3	10.7 ¹¹⁵	10 S		29	18	52		18	9	59	50		16	42	
14	27	32.0		49.8	328	53.0 ¹³⁰		22.1 ¹¹⁴	20	18	46	19	10	19	38	10	01	53		12	39	
15	42	31.8		49.3	343	24.9 ¹²⁹		33.5 ¹¹⁴	30	19	05		31	20	04		04	57		08	35	
16	57	31.6		48.8	357	56.9 ¹³⁰		44.9 ¹¹⁴	35		16	19	45		20		05	60		05	33	
17	72	31.3	-20	48.3	12	28.9 ¹³⁰	+3	56.2 ¹¹³	40	19	29	20	01	20	40	10	07	62	22	02	31	
18	87	31.1	-20	47.8	27	01.0 ¹³¹	+4	07.5 ¹¹³	45	19	45	20	20	21	06	10	08	66	21	59	27	
19	102	30.9		47.3	41	33.1 ¹³¹		18.8 ¹¹³	50	20	04		45	21	42		11	69		55	24	
20	117	30.7		46.8	56	05.2 ¹³¹		30.0 ¹¹²	52		13	20	57	22	01		12	71		53	23	
21	132	30.5		46.3	70	37.3 ¹³¹		41.2 ¹¹²	54		23	21	12	22	27		13	73		51	21	
22	147	30.3		45.9	85	09.4 ¹³¹	+4	52.4 ¹¹²	56		35		29	23	05		14	75		49	19	
23	162	30.1		45.4	99	41.6 ¹³²	+5	03.5 ¹¹¹	58	20	48	21	49	**	**		15	78		47	16	
24	177	29.9	-20	44.9	114	13.8 ¹³²	+5	14.6 ¹¹¹	60 S	21	04	22	17	**	**		10	17	80	21	44	14

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 14 ^m 9		Mag: -3.9 PMG: 10 ^h 56 ^m			Mag: +1.2 PMG: 13 ^h 34 ^m			Mag: -2.7 PMG: 20 ^h 34 ^m			Mag: +0.6 PMG: 6 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	115	35.7	196	17.4	-23	06.0	156	17.5	-16	56.8	50	38.4	+20	46.9	256	41.6	-12	42.9
1	130	38.2	211	16.4		05.9	171	18.0		56.2	65	41.0		46.9	271	44.0		42.9
2	145	40.7	226	15.5		05.8	186	18.5		55.6	80	43.6		46.9	286	46.3		42.9
3	160	43.1	241	14.5		05.7	201	19.0		55.0	95	46.2		46.9	301	48.6		43.0
4	175	45.6	256	13.6		05.6	216	19.5		54.4	110	48.8		46.9	316	50.9		43.0
5	190	48.1	271	12.7	-23	05.5	231	20.0	-16	53.8	125	51.4	+20	46.9	331	53.3	-12	43.0
6	205	50.5	286	11.7	-23	05.4	246	20.5	-16	53.2	140	54.0	+20	46.8	346	55.6	-12	43.1
7	220	53.0	301	10.8		05.3	261	21.0		52.6	155	56.6		46.8	1	57.9		43.1
8	235	55.5	316	09.8		05.2	276	21.5		52.0	170	59.2		46.8	17	00.2		43.1
9	250	57.9	331	08.9		05.1	291	22.0		51.3	186	01.7		46.8	32	02.6		43.2
10	266	00.4	346	07.9		05.0	306	22.5		50.7	201	04.3		46.8	47	04.9		43.2
11	281	02.8	1	07.0	-23	04.9	321	23.0	-16	50.1	216	06.9	+20	46.8	62	07.2	-12	43.2
12	296	05.3	16	06.1	-23	04.8	336	23.5	-16	49.5	231	09.5	+20	46.8	77	09.5	-12	43.3
13	311	07.8	31	05.1		04.6	351	24.0		48.9	246	12.1		46.8	92	11.9		43.3
14	326	10.2	46	04.2		04.5	6	24.5		48.3	261	14.7		46.8	107	14.2		43.3
15	341	12.7	61	03.2		04.4	21	25.0		47.7	276	17.3		46.8	122	16.5		43.4
16	356	15.2	76	02.3		04.3	36	25.5		47.1	291	19.9		46.7	137	18.8		43.4
17	11	17.6	91	01.4	-23	04.2	51	26.0	-16	46.5	306	22.5	+20	46.7	152	21.2	-12	43.5
18	26	20.1	106	00.4	-23	04.1	66	26.5	-16	45.9	321	25.1	+20	46.7	167	23.5	-12	43.5
19	41	22.6	120	59.5		04.0	81	27.0		45.3	336	27.6		46.7	182	25.8		43.5
20	56	25.0	135	58.5		03.8	96	27.6		44.7	351	30.2		46.7	197	28.2		43.6
21	71	27.5	150	57.6		03.7	111	28.1		44.0	6	32.8		46.7	212	30.5		43.6
22	86	30.0	165	56.7		03.6	126	28.6		43.4	21	35.4		46.7	227	32.8		43.6
23	101	32.4	180	55.7		03.5	141	29.1		42.8	36	38.0		46.7	242	35.1		43.7
24	116	34.9	195	54.8	-23	03.4	156	29.6	-16	42.2	51	40.6	+20	46.7	257	37.5	-12	43.7
Dif	—		-9		+1		+5		+6		+26		0		+23			0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 5 ^d 2	PHE {										
	PMG: 12 ^h 10 ^m 2					SD: 15 ^h 4		SD: 15 ^h 4							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	29.9	-20 44.9	114	13.8	+5 14.6	60 N	6 59	7 52	8 44	9 53	14	***	***	***
1	192	29.7	44.4	128	46.0 ¹³²	25.7 ¹¹¹	58	53	43	30	9 57	17	***	***	***
2	207	29.5	43.9	143	18.3 ¹³³	36.7 ¹¹⁰	56	48	35	19	10 00	19	***	***	***
3	222	29.3	43.4	157	50.5 ¹³²	47.6 ¹⁰⁹	54	43	27	8 08	03	21	23	59	70
4	237	29.1	42.9	172	22.8 ¹³³	+5 58.6 ¹¹⁰	52	38	20	7 59	06	23	56	67	
5	252	28.9	-20 42.4	186	55.1 ¹³³	+6 09.5 ¹⁰⁹	50	6 34	7 14	7 51	10 08	25	23	52	66
6	267	28.6	-20 41.9	201	27.4 ¹³³	+6 20.3 ¹⁰⁸	45	6 25	7 01	7 33	10 14	28	23	44	63
7	282	28.4	41.4	215	59.7 ¹³³	31.1 ¹⁰⁸	40	16	6 50	19	19	30	38	59	
8	297	28.2	40.9	230	32.1 ¹³⁴	41.9 ¹⁰⁸	35	09	40	7 07	23	33	32	58	
9	312	28.0	40.4	245	04.4 ¹³³	+6 52.6 ¹⁰⁷	30	6 01	31	6 56	26	36	28	55	
10	327	27.8	39.9	259	36.8 ¹³⁴	+7 03.2 ¹⁰⁶	20	5 47	6 14	38	33	39	19	52	
11	342	27.6	-20 39.4	274	09.2 ¹³⁴	+7 13.9 ¹⁰⁷	10 N	5 33	5 59	6 22	10 38	42	23	12	48
12	357	27.4	-20 38.9	288	41.6 ¹³⁴	+7 24.5 ¹⁰⁶	0	5 19	5 44	6 07	10 43	46	23	05	46
13	12	27.2	38.4	303	14.0 ¹³⁴	35.0 ¹⁰⁵	10 S	5 02	29	5 51	49	48	22	58	43
14	27	27.0	37.9	317	46.4 ¹³⁴	45.5 ¹⁰⁵	20	4 42	5 11	35	10 54	52	51	39	
15	42	26.8	37.4	332	18.9 ¹³⁵	+7 55.9 ¹⁰⁴	30	17	4 49	15	11 01	55	43	36	
16	57	26.6	36.9	346	51.3 ¹³⁴	+8 06.3 ¹⁰⁴	35	4 00	35	5 04	05	57	38	34	
17	72	26.4	-20 36.4	1	23.8 ¹³⁵	+8 16.6 ¹⁰³	40	3 40	4 20	4 51	11 09	60	22	33	31
18	87	26.2	-20 35.9	15	56.3 ¹³⁵	+8 26.9 ¹⁰³	45	3 15	4 00	4 36	11 14	63	22	26	29
19	102	26.0	35.4	30	28.7 ¹³⁴	37.2 ¹⁰³	50	2 39	3 35	17	20	67	19	25	
20	117	25.8	34.9	45	01.2 ¹³⁵	47.4 ¹⁰²	52	2 19	23	4 08	23	68	16	23	
21	132	25.6	34.4	59	33.7 ¹³⁵	+8 57.5 ¹⁰¹	54	1 54	3 09	3 57	26	70	12	22	
22	147	25.4	33.9	74	06.2 ¹³⁵	+9 07.6 ¹⁰¹	56	1 16	2 52	46	29	72	08	20	
23	162	25.2	33.4	88	38.7 ¹³⁵	17.6 ¹⁰⁰	58	***	31	32	33	75	22	03	18
24	177	25.0	-20 32.9	103	11.2 ¹³⁵	+9 27.6 ¹⁰⁰	60 S	***	2 04	3 17	11 37	78	21	58	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 11 ^m 0		Mag: -3.9 PMG: 10 ^h 57 ^m		Mag: +1.2 PMG: 13 ^h 34 ^m		Mag: -2.7 PMG: 20 ^h 30 ^m		Mag: +0.6 PMG: 6 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	116	34.9	195	54.8	-23	03.4	156	29.6	-16	42.2	51	40.6	+20	46.7	257	37.5	-12	43.7
1	131	37.3	210	53.8		03.2	171	30.1		41.6	66	43.2		46.7	272	39.8		43.7
2	146	39.8	225	52.9		03.1	186	30.6		41.0	81	45.8		46.6	287	42.1		43.8
3	161	42.3	240	52.0		03.0	201	31.1		40.4	96	48.3		46.6	302	44.4		43.8
4	176	44.7	255	51.0		02.8	216	31.6		39.8	111	50.9		46.6	317	46.8		43.8
5	191	47.2	270	50.1	-23	02.7	231	32.1	-16	39.1	126	53.5	+20	46.6	332	49.1	-12	43.9
6	206	49.7	285	49.1	-23	02.6	246	32.6	-16	38.5	141	56.1	+20	46.6	347	51.4	-12	43.9
7	221	52.1	300	48.2		02.5	261	33.1		37.9	156	58.7		46.6	2	53.8		43.9
8	236	54.6	315	47.3		02.3	276	33.6		37.3	172	01.3		46.6	17	56.1		44.0
9	251	57.1	330	46.3		02.2	291	34.1		36.7	187	03.8		46.6	32	58.4		44.0
10	266	59.5	345	45.4		02.1	306	34.6		36.1	202	06.4		46.6	48	00.7		44.0
11	282	02.0	0	44.4	-23	01.9	321	35.1	-16	35.5	217	09.0	+20	46.6	63	03.1	-12	44.1
12	297	04.4	15	43.5	-23	01.8	336	35.6	-16	34.8	232	11.6	+20	46.5	78	05.4	-12	44.1
13	312	06.9	30	42.6		01.6	351	36.1		34.2	247	14.2		46.5	93	07.7		44.1
14	327	09.4	45	41.6		01.5	6	36.6		33.6	262	16.8		46.5	108	10.1		44.2
15	342	11.8	60	40.7		01.4	21	37.1		33.0	277	19.3		46.5	123	12.4		44.2
16	357	14.3	75	39.7		01.2	36	37.6		32.4	292	21.9		46.5	138	14.7		44.2
17	12	16.8	90	38.8	-23	01.1	51	38.2	-16	31.8	307	24.5	+20	46.5	153	17.1	-12	44.3
18	27	19.2	105	37.9	-23	00.9	66	38.7	-16	31.2	322	27.1	+20	46.5	168	19.4	-12	44.3
19	42	21.7	120	36.9		00.8	81	39.2		30.5	337	29.7		46.5	183	21.7		44.3
20	57	24.2	135	36.0		00.6	96	39.7		29.9	352	32.2		46.5	198	24.0		44.3
21	72	26.6	150	35.1		00.5	111	40.2		29.3	7	34.8		46.5	213	26.4		44.4
22	87	29.1	165	34.1		00.3	126	40.7		28.7	22	37.4		46.5	228	28.7		44.4
23	102	31.6	180	33.2	-23	00.2	141	41.2		28.1	37	40.0		46.5	243	31.0		44.4
24	117	34.0	195	32.2	-23	00.0	156	41.7	-16	27.4	52	42.6	+20	46.4	258	33.4	-12	44.5
Dif	—		-9		+1		+5		+6		+26		0		+23			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna								
	SD: 16:3				Edad: 6 ^d 2 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /3 20 ^h : 55 ^m /1 R°: 45 ^m																				
	PMG: 12 ^h 10 ^m 5				PMG: 17 ^h 40 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil		Náutico		Hora		R°		Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m		h	m	m		
0	177	25.0	-20	32.9	103	11.2	+9	27.6	60 N	15	39	16	31	17	24	10	07	17		0	14	76			
1	192	24.8		32.4	117	43.7 ¹³⁵		37.5 ⁹⁹	58	15	53		40	30	14	19		09	73						
2	207	24.6		31.8	132	16.2 ¹³⁵		47.4 ⁹⁹	56	16	04		48	35	19	22		0	04	71					
3	222	24.4		31.3	146	48.7 ¹³⁵	+9	57.2 ⁹⁸	54	14	16	55		40	24	24		**	**	**					
4	237	24.2		30.8	161	21.3 ¹³⁶	+10	07.0 ⁹⁸	52	23	17	02		44	29	25		**	**	**					
5	252	24.0	-20	30.3	175	53.8 ¹³⁵	+10	16.7 ⁹⁷	50	16	31	17	08	17	48	10	33	26		**	**	**			
6	267	23.8	-20	29.8	190	26.3 ¹³⁵	+10	26.4 ⁹⁷	45	16	49	17	21	17	57	10	42	30		**	**	**			
7	282	23.6		29.3	204	58.8 ¹³⁵		35.9 ⁹⁵	40	17	03		32	18	05	49	33		**	**	**				
8	297	23.4		28.8	219	31.3 ¹³⁵		45.5 ⁹⁵	35	15		42	13	10	56	35		**	**	**					
9	312	23.2		28.3	234	03.9 ¹³⁶	+10	55.0 ⁹⁵	30	25	17	51	20	11	02	36		**	**	**					
10	327	23.0		27.7	248	36.4 ¹³⁵	+11	04.4 ⁹⁴	20	43	18	07	34	12	39		**	**	**						
11	342	22.8	-20	27.2	263	08.9 ¹³⁵	+11	13.8 ⁹⁴	10 N	17	59	18	22	18	47	11	20	43		**	**	**			
12	357	22.6	-20	26.7	277	41.4 ¹³⁵	+11	23.1 ⁹³	0	18	14	18	36	19	02	11	29	45		23	51	45			
13	12	22.4		26.2	292	13.9 ¹³⁵		32.3 ⁹²	10 S	29		18	52	18		37	48		41	43					
14	27	22.2		25.7	306	46.4 ¹³⁵		41.5 ⁹²	20	18	45	19	09	19	38	46	51	30	41						
15	42	22.0		25.2	321	18.9 ¹³⁵		50.6 ⁹¹	30	19	04		31	20	03	11	56	55		19	37				
16	57	21.9		24.6	335	51.4 ¹³⁵	+11	59.7 ⁹¹	35	15		44	19	12	02	57		12	36						
17	72	21.7	-20	24.1	350	23.9 ¹³⁵	+12	08.7 ⁹⁰	40	19	28	19	59	20	38	12	09	59		23	04	34			
18	87	21.5	-20	23.6	4	56.4 ¹³⁵	+12	17.6 ⁸⁹	45	19	43	20	18	21	04	12	17	61		22	55	32			
19	102	21.3		23.1	19	28.9 ¹³⁵		26.5 ⁸⁹	50	20	02		43	38		27	64		44	29					
20	117	21.1		22.6	34	01.4 ¹³⁵		35.3 ⁸⁸	52	11		20	55	21	57	31	66		39	27					
21	132	20.9		22.0	48	33.8 ¹³⁴		44.1 ⁸⁸	54	21		21	09	22	21	36	68		34	25					
22	147	20.7		21.5	63	06.3 ¹³⁵	+12	52.8 ⁸⁷	56	32		25	22	55		41	70		28	23					
23	162	20.5		21.0	77	38.7 ¹³⁴	+13	01.4 ⁸⁶	58	20	45	21	45	**	**	48	72		21	21					
24	177	20.3	-20	20.5	92	11.2 ¹³⁵	+13	09.9 ⁸⁵	60 S	21	00	22	10	**	**	12	55	74		22	14	18			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 07 ^m 1		Mag: -3.9 PMG: 10 ^h 59 ^m		Mag: +1.2 PMG: 13 ^h 33 ^m		Mag: -2.7 PMG: 20 ^h 26 ^m		Mag: +0.6 PMG: 6 ^h 45 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	117	34.0	195	32.2	-23	00.0	156	41.7	-16	27.4	52	42.6	+20	46.4	258	33.4	-12	44.5
1	132	36.5	210	31.3	-22	59.9	171	42.2		26.8	67	45.1		46.4	273	35.7		44.5
2	147	38.9	225	30.4		59.7	186	42.7		26.2	82	47.7		46.4	288	38.0		44.5
3	162	41.4	240	29.4		59.6	201	43.2		25.6	97	50.3		46.4	303	40.4		44.6
4	177	43.9	255	28.5		59.4	216	43.7		25.0	112	52.9		46.4	318	42.7		44.6
5	192	46.3	270	27.6	-22	59.2	231	44.3	-16	24.4	127	55.4	+20	46.4	333	45.0	-12	44.6
6	207	48.8	285	26.6	-22	59.1	246	44.8	-16	23.7	142	58.0	+20	46.4	348	47.4	-12	44.7
7	222	51.3	300	25.7		58.9	261	45.3		23.1	158	00.6		46.4	3	49.7		44.7
8	237	53.7	315	24.7		58.7	276	45.8		22.5	173	03.2		46.4	18	52.0		44.7
9	252	56.2	330	23.8		58.6	291	46.3		21.9	188	05.7		46.4	33	54.4		44.8
10	267	58.7	345	22.9		58.4	306	46.8		21.2	203	08.3		46.4	48	56.7		44.8
11	283	01.1	0	21.9	-22	58.3	321	47.3	-16	20.6	218	10.9	+20	46.4	63	59.0	-12	44.8
12	298	03.6	15	21.0	-22	58.1	336	47.8	-16	20.0	233	13.5	+20	46.3	79	01.4	-12	44.9
13	313	06.1	30	20.1		57.9	351	48.3		19.4	248	16.0		46.3	94	03.7		44.9
14	328	08.5	45	19.1		57.7	6	48.8		18.8	263	18.6		46.3	109	06.0		44.9
15	343	11.0	60	18.2		57.6	21	49.4		18.1	278	21.2		46.3	124	08.4		45.0
16	358	13.4	75	17.3		57.4	36	49.9		17.5	293	23.7		46.3	139	10.7		45.0
17	13	15.9	90	16.3	-22	57.2	51	50.4	-16	16.9	308	26.3	+20	46.3	154	13.0	-12	45.0
18	28	18.4	105	15.4	-22	57.0	66	50.9	-16	16.3	323	28.9	+20	46.3	169	15.4	-12	45.1
19	43	20.8	120	14.5		56.9	81	51.4		15.6	338	31.5		46.3	184	17.7		45.1
20	58	23.3	135	13.5		56.7	96	51.9		15.0	353	34.0		46.3	199	20.0		45.1
21	73	25.8	150	12.6		56.5	111	52.4		14.4	8	36.6		46.3	214	22.4		45.1
22	88	28.2	165	11.7		56.3	126	52.9		13.8	23	39.2		46.3	229	24.7		45.2
23	103	30.7	180	10.7		56.2	141	53.4		13.1	38	41.7		46.3	244	27.0		45.2
24	118	33.2	195	09.8	-22	56.0	156	54.0	-16	12.5	53	44.3	+20	46.3	259	29.4	-12	45.2
Dif	—		-9		+2		+5		+6		+26		0		+23			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 7 ^d 2	PHE { 4 ^h : 55:0 12 ^h : 54:8 20 ^h : 54:6	R°: 47 ^m									
	PMG: 12 ^h 10 ^m 8														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	20.3	-20 20.5	92	11.2	+13 09.9	85	60 N	6 56	7 49	8 41	10 24 21	1 30 74		
1	192	20.1	19.9	106	43.6 ¹³⁴	18.4	85	58	51	40	27	33 23	22 71		
2	207	19.9	19.4	121	16.0 ¹³⁴	26.9	85	56	46	32	16	41 25	15 69		
3	222	19.7	18.9	135	48.4 ¹³⁴	35.2	83	54	41	25	8 06	48 27	09 66		
4	237	19.5	18.4	150	20.8 ¹³⁴	43.5	83	52	37	19	7 57	54 29	1 03 65		
5	252	19.4	-20 17.8	164	53.2 ¹³⁴	+13 51.7	82	50	6 33	7 13	7 49	10 59 31	0 58 63		
6	267	19.2	-20 17.3	179	25.6 ¹³⁴	+13 59.9	82	45	6 24	7 00	7 32	11 12 33	0 47 60		
7	282	19.0	16.8	193	58.0 ¹³⁴	+14 08.0	81	40	15	6 49	18	22 35	37 58		
8	297	18.8	16.3	208	30.3 ¹³³	16.0	80	35	08	39	7 06	31 37	30 55		
9	312	18.6	15.7	223	02.7 ¹³⁴	24.0	80	30	6 01	30	6 56	38 39	23 54		
10	327	18.4	15.2	237	35.0 ¹³³	31.9	79	20	5 47	14	38	11 51 42	11 51		
11	342	18.2	-20 14.7	252	07.3 ¹³³	+14 39.7	78	10 N	5 34	6 00	6 22	12 03 44	0 00 49		
12	357	18.0	-20 14.1	266	39.6 ¹³³	+14 47.4	77	0	5 19	5 45	6 07	12 14 46	*** ** *		
13	12	17.8	13.6	281	11.9 ¹³³	+14 55.1	77	10 S	5 03	30	5 52	25 49	*** ** *		
14	27	17.7	13.1	295	44.2 ¹³³	+15 02.7	76	20	4 44	5 12	36	37 51	*** ** *		
15	42	17.5	12.5	310	16.4 ¹³²	10.2	75	30	19	4 51	17	51 53	23 56 40		
16	57	17.3	12.0	324	48.7 ¹³³	17.7	75	35	4 03	38	5 06	12 59 55	48 38		
17	72	17.1	-20 11.5	339	20.9 ¹³²	+15 25.1	74	40	3 43	4 22	4 53	13 08 57	23 38 37		
18	87	16.9	-20 10.9	353	53.1 ¹³²	+15 32.4	73	45	3 18	4 03	4 38	13 18 60	23 27 34		
19	102	16.7	10.4	8	25.3 ¹³²	39.6	72	50	2 43	3 39	20	31 62	13 32		
20	117	16.5	09.8	22	57.5 ¹³²	46.8	72	52	25	27	11	37 64	23 06 31		
21	132	16.4	09.3	37	29.6 ¹³¹	+15 53.9	71	54	2 01	3 13	4 01	44 65	22 59 30		
22	147	16.2	08.8	52	01.8 ¹³²	+16 00.9	70	56	1 26	2 57	3 50	13 51 67	51 28		
23	162	16.0	08.2	66	33.9 ¹³¹	07.8	69	58	*** ** *	37	37	14 00 69	42 26		
24	177	15.8	-20 07.7	81	06.0 ¹³¹	+16 14.7	69	60 S	** ** *	2 11	3 22	14 09 72	22 32 24		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 16 ^h 03 ^m 2		Mag: -3.9 PMG: 11 ^h 00 ^m		Mag: +1.2 PMG: 13 ^h 32 ^m		Mag: -2.6 PMG: 20 ^h 22 ^m		Mag: +0.6 PMG: 6 ^h 41 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	118	33.2	195	09.8	-22 56.0	156	54.0	-16 12.5	53	44.3	+20 46.3	259	29.4	-12 45.2	
1	133	35.6	210	08.9	55.8	171	54.5	11.9	68	46.9	46.3	274	31.7	45.3	
2	148	38.1	225	07.9	55.6	186	55.0	11.3	83	49.4	46.2	289	34.0	45.3	
3	163	40.5	240	07.0	55.4	201	55.5	10.6	98	52.0	46.2	304	36.4	45.3	
4	178	43.0	255	06.1	55.2	216	56.0	10.0	113	54.6	46.2	319	38.7	45.4	
5	193	45.5	270	05.1	-22 55.0	231	56.5	-16 09.4	128	57.1	+20 46.2	334	41.0	-12 45.4	
6	208	47.9	285	04.2	-22 54.9	246	57.0	-16 08.8	143	59.7	+20 46.2	349	43.4	-12 45.4	
7	223	50.4	300	03.3	54.7	261	57.6	08.1	159	02.3	46.2	4	45.7	45.5	
8	238	52.9	315	02.3	54.5	276	58.1	07.5	174	04.8	46.2	19	48.1	45.5	
9	253	55.3	330	01.4	54.3	291	58.6	06.9	189	07.4	46.2	34	50.4	45.5	
10	268	57.8	345	00.5	54.1	306	59.1	06.2	204	10.0	46.2	49	52.7	45.5	
11	284	00.3	359	59.5	-22 53.9	321	59.6	-16 05.6	219	12.5	+20 46.2	64	55.1	-12 45.6	
12	299	02.7	14	58.6	-22 53.7	337	00.1	-16 05.0	234	15.1	+20 46.2	79	57.4	-12 45.6	
13	314	05.2	29	57.7	53.5	352	00.6	04.4	249	17.7	46.2	94	59.7	45.6	
14	329	07.7	44	56.7	53.3	7	01.2	03.7	264	20.2	46.2	110	02.1	45.7	
15	344	10.1	59	55.8	53.1	22	01.7	03.1	279	22.8	46.2	125	04.4	45.7	
16	359	12.6	74	54.9	52.9	37	02.2	02.5	294	25.4	46.2	140	06.7	45.7	
17	14	15.0	89	53.9	-22 52.7	52	02.7	-16 01.8	309	27.9	+20 46.2	155	09.1	-12 45.8	
18	29	17.5	104	53.0	-22 52.5	67	03.2	-16 01.2	324	30.5	+20 46.1	170	11.4	-12 45.8	
19	44	20.0	119	52.1	52.3	82	03.7	-16 00.6	339	33.1	46.1	185	13.8	45.8	
20	59	22.4	134	51.1	52.1	97	04.3	-15 59.9	354	35.6	46.1	200	16.1	45.9	
21	74	24.9	149	50.2	51.9	112	04.8	59.3	9	38.2	46.1	215	18.4	45.9	
22	89	27.4	164	49.3	51.6	127	05.3	58.7	24	40.7	46.1	230	20.8	45.9	
23	104	29.8	179	48.4	51.4	142	05.8	58.0	39	43.3	46.1	245	23.1	45.9	
24	119	32.3	194	47.4	-22 51.2	157	06.3	-15 57.4	54	45.9	+20 46.1	260	25.5	-12 46.0	
Dif	—		-9	+2		+5	+6		+26		0	+23		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 8 ^d 2	PHE { 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3 R°: 47 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 11 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	15.8	-20 07.7	81	06.0	+16 14.7	68	60 N	15 44	16 35	17 28	10 45	27	2 44	69
1	192	15.6	07.2	95	38.1 ¹³¹	21.5	68	58	15 57	44	33	10 56	30	33	66
2	207	15.4	06.6	110	10.2 ¹³¹	28.2	67	56	16 08	52	38	11 06	31	24	64
3	222	15.2	06.1	124	42.2 ¹³⁰	34.8	66	54	18	16 59	43	15	32	15	63
4	237	15.1	05.5	139	14.3 ¹³¹	41.4	66	52	27	17 05	47	23	33	08	62
5	252	14.9	-20 05.0	153	46.3 ¹³⁰	+16 47.9	65	50	16 35	17 11	17 51	11 30	34	2 01	61
6	267	14.7	-20 04.4	168	18.3 ¹³⁰	+16 54.3	64	45	16 51	17 24	18 00	11 45	37	1 47	58
7	282	14.5	03.9	182	50.3 ¹³⁰	+17 00.6	63	40	17 05	34	07	11 57	39	35	56
8	297	14.3	03.3	197	22.2 ¹²⁹	06.9	63	35	17	44	15	12 08	40	25	55
9	312	14.2	02.8	211	54.2 ¹³⁰	13.0	61	30	27	17 52	22	17	41	17	53
10	327	14.0	02.3	226	26.1 ¹²⁹	19.1	61	20	17 45	18 08	35	33	44	1 02	50
11	342	13.8	-20 01.7	240	58.0 ¹²⁹	+17 25.1	60	10 N	18 00	18 22	18 48	12 47	45	0 49	48
12	357	13.6	-20 01.2	255	29.9 ¹²⁹	+17 31.1	60	0	18 15	18 37	19 02	13 00	47	0 36	47
13	12	13.4	00.6	270	01.7 ¹²⁸	36.9	58	10 S	29	18 52	18	14	48	24	45
14	27	13.3	-20 00.1	284	33.6 ¹²⁹	42.7	58	20	18 45	19 09	19 37	28	50	0 11	43
15	42	13.1	-19 59.5	299	05.4 ¹²⁸	48.4	57	30	19 04	30	20 02	44	52	***	***
16	57	12.9	59.0	313	37.2 ¹²⁸	54.0	56	35	15	43	18	13 54	53	***	***
17	72	12.7	-19 58.4	328	09.0 ¹²⁸	+17 59.5	55	40	19 27	19 58	20 37	14 05	54	***	***
18	87	12.5	-19 57.9	342	40.7 ¹²⁷	+18 04.9	54	45	19 42	20 17	21 01	14 18	56	***	***
19	102	12.4	57.3	357	12.5 ¹²⁸	10.3	54	50	20 00	40	35	33	59	23	45
20	117	12.2	56.8	11	44.2 ¹²⁷	15.6	53	52	08	20 52	21 53	41	59	37	37
21	132	12.0	56.2	26	15.9 ¹²⁷	20.8	52	54	18	21 05	22 15	49	61	29	36
22	147	11.8	55.6	40	47.5 ¹²⁶	25.9	51	56	29	21	22 47	14 58	62	19	35
23	162	11.7	55.1	55	19.2 ¹²⁷	30.9	50	58	41	21 40	***	15 09	63	23	08
24	177	11.5	-19 54.5	69	50.8 ¹²⁶	+18 35.8	49	60 S	20 56	22 04	***	15 21	66	22	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 59 ^m 2		Mag: -3.9 PMG: 11 ^h 02 ^m		Mag: +1.2 PMG: 13 ^h 31 ^m		Mag: -2.6 PMG: 20 ^h 17 ^m		Mag: +0.6 PMG: 6 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	119	32.3	194 47.4	-22 51.2	157 06.3	-15 57.4	54 45.9	+20 46.1	260 25.5	-12 46.0
1	134	34.8	209 46.5	51.0	172 06.8	56.8	69 48.4	46.1	275 27.8	46.0
2	149	37.2	224 45.6	50.8	187 07.4	56.1	84 51.0	46.1	290 30.1	46.0
3	164	39.7	239 44.6	50.6	202 07.9	55.5	99 53.5	46.1	305 32.5	46.1
4	179	42.2	254 43.7	50.4	217 08.4	54.9	114 56.1	46.1	320 34.8	46.1
5	194	44.6	269 42.8	-22 50.1	232 08.9	-15 54.2	129 58.6	+20 46.1	335 37.2	-12 46.1
6	209	47.1	284 41.9	-22 49.9	247 09.4	-15 53.6	145 01.2	+20 46.1	350 39.5	-12 46.1
7	224	49.5	299 40.9	49.7	262 10.0	53.0	160 03.8	46.1	5 41.8	46.2
8	239	52.0	314 40.0	49.5	277 10.5	52.3	175 06.3	46.1	20 44.2	46.2
9	254	54.5	329 39.1	49.3	292 11.0	51.7	190 08.9	46.1	35 46.5	46.2
10	269	56.9	344 38.1	49.0	307 11.5	51.1	205 11.4	46.1	50 48.9	46.3
11	284	59.4	359 37.2	-22 48.8	322 12.0	-15 50.4	220 14.0	+20 46.1	65 51.2	-12 46.3
12	300	01.9	14 36.3	-22 48.6	337 12.6	-15 49.8	235 16.5	+20 46.0	80 53.5	-12 46.3
13	315	04.3	29 35.4	48.4	352 13.1	49.2	250 19.1	46.0	95 55.9	46.4
14	330	06.8	44 34.4	48.1	7 13.6	48.5	265 21.7	46.0	110 58.2	46.4
15	345	09.3	59 33.5	47.9	22 14.1	47.9	280 24.2	46.0	126 00.6	46.4
16	0	11.7	74 32.6	47.7	37 14.6	47.3	295 26.8	46.0	141 02.9	46.4
17	15	14.2	89 31.6	-22 47.4	52 15.2	-15 46.6	310 29.3	+20 46.0	156 05.2	-12 46.5
18	30	16.6	104 30.7	-22 47.2	67 15.7	-15 46.0	325 31.9	+20 46.0	171 07.6	-12 46.5
19	45	19.1	119 29.8	47.0	82 16.2	45.3	340 34.4	46.0	186 09.9	46.5
20	60	21.6	134 28.9	46.7	97 16.7	44.7	355 37.0	46.0	201 12.3	46.6
21	75	24.0	149 27.9	46.5	112 17.2	44.1	10 39.5	46.0	216 14.6	46.6
22	90	26.5	164 27.0	46.3	127 17.8	43.4	25 42.1	46.0	231 16.9	46.6
23	105	29.0	179 26.1	46.0	142 18.3	42.8	40 44.6	46.0	246 19.3	46.6
24	120	31.4	194 25.2	-22 45.8	157 18.8	-15 42.2	55 47.2	+20 46.0	261 21.6	-12 46.7
Dif	—		-9	+2	+5	+6	+26		0	+23

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16:3 PMG: 12 ^h 11 ^m 4			Edad: 9 ^d 2 PHE { SD: 14:8 PMG: 19 ^h 59 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m					
0	177	11.5	-19	54.5	69	50.8	+18	35.8	60 N	6	54	7	46	8	37	11	12	36	3	53	62		
1	192	11.3		54.0	84	22.4 ¹²⁶		40.7 ⁴⁹	58	48	38	24		26	37		39	61					
2	207	11.1		53.4	98	54.0 ¹²⁶		45.4 ⁴⁷	56	43	30	13		37	39		28	59					
3	222	11.0		52.9	113	25.6 ¹²⁶		50.1 ⁴⁷	54	39	23	8	04	47	40		18	58					
4	237	10.8		52.3	127	57.1 ¹²⁵		54.7 ⁴⁶	52	35	17	7	55	11	56	40		10	57				
5	252	10.6	-19	51.8	142	28.7 ¹²⁶	+18	59.2 ⁴⁵	50	6	31	7	11	7	47	12	04	41	3	02	56		
6	267	10.4	-19	51.2	157	00.2 ¹²⁵	+19	03.7 ⁴⁵	45	6	22	6	58	7	31	12	22	42	2	45	55		
7	282	10.3		50.6	171	31.7 ¹²⁵		08.0 ⁴³	40	15		48	17		36	43		31	54				
8	297	10.1		50.1	186	03.1 ¹²⁴		12.3 ⁴³	35	07		38	7	05	48	44		20	52				
9	312	09.9		49.5	200	34.6 ¹²⁵		16.4 ⁴¹	30	6	01	30	6	55	12	58	45	2	10	51			
10	327	09.7		48.9	215	06.0 ¹²⁴		20.5 ⁴¹	20	5	47	14		38	13	17	45	1	52	50			
11	342	09.6	-19	48.4	229	37.4 ¹²⁴	+19	24.5 ⁴⁰	10 N	5	34	6	00	6	22	13	32	47	1	37	49		
12	357	09.4	-19	47.8	244	08.8 ¹²⁴	+19	28.4 ³⁸	0	5	20	5	46	6	08	13	47	48	1	23	47		
13	12	09.2		47.3	258	40.2 ¹²⁴		32.2 ³⁸	10 S	5	04	31	5	53	14	02	49	1	09	46			
14	27	09.1		46.7	273	11.5 ¹²³		35.9 ³⁷	20	4	45	5	13	37		18	50		0	54	44		
15	42	08.9		46.1	287	42.8 ¹²³		39.6 ³⁷	30	21	4	53		19		36	51		36	43			
16	57	08.7		45.6	302	14.1 ¹²³		43.1 ³⁵	35	4	05	40	5	08		47	51		26	42			
17	72	08.5	-19	45.0	316	45.4 ¹²³	+19	46.5 ³⁴	40	3	46	4	25	4	56	14	59	52	0	15	41		
18	87	08.4	-19	44.4	331	16.7 ¹²³	+19	49.9 ³⁴	45	3	22	4	06	4	41	15	14	53	0	01	40		
19	102	08.2		43.9	345	47.9 ¹²²		53.2 ³³	50	2	48	3	43	23		32	54		**	**	**		
20	117	08.0		43.3	0	19.2 ¹²³		56.4 ³²	52	30		31		15		40	55		**	**	**		
21	132	07.9		42.7	14	50.4 ¹²²	+19	59.5 ³¹	54	2	08	18	4	05	15	50	55		**	**	**		
22	147	07.7		42.2	29	21.6 ¹²²	+20	02.5 ³⁰	56	1	36	3	02	3	54	16	00	56	23	54	42		
23	162	07.5		41.6	43	52.8 ¹²²		05.4 ²⁹	58	0	30	2	43	42		12	57		41	42			
24	177	07.4	-19	41.0	58	23.9 ¹²¹	+20	08.2 ²⁸	60 S	**	**	2	19	3	27	16	27	58	23	27	41		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 55 ^m 3		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: +1.2 PMG: 13 ^h 30 ^m		Mag: -2.6 PMG: 20 ^h 13 ^m		Mag: +0.6 PMG: 6 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	120	31.4	194	25.2	-22	45.8	157	18.8	-15	42.2	55	47.2	+20	46.0	261	21.6	-12	46.7
1	135	33.9	209	24.2		45.5	172	19.3		41.5	70	49.7		46.0	276	24.0		46.7
2	150	36.4	224	23.3		45.3	187	19.9		40.9	85	52.3		46.0	291	26.3		46.7
3	165	38.8	239	22.4		45.0	202	20.4		40.2	100	54.8		46.0	306	28.7		46.8
4	180	41.3	254	21.5		44.8	217	20.9		39.6	115	57.4		46.0	321	31.0		46.8
5	195	43.8	269	20.5	-22	44.5	232	21.4	-15	39.0	130	59.9	+20	46.0	336	33.3	-12	46.8
6	210	46.2	284	19.6	-22	44.3	247	21.9	-15	38.3	146	02.5	+20	46.0	351	35.7	-12	46.8
7	225	48.7	299	18.7		44.0	262	22.5		37.7	161	05.0		46.0	6	38.0		46.9
8	240	51.1	314	17.8		43.8	277	23.0		37.0	176	07.6		46.0	21	40.4		46.9
9	255	53.6	329	16.9		43.5	292	23.5		36.4	191	10.1		46.0	36	42.7		46.9
10	270	56.1	344	15.9		43.3	307	24.0		35.7	206	12.7		46.0	51	45.1		47.0
11	285	58.5	359	15.0	-22	43.0	322	24.6	-15	35.1	221	15.2	+20	46.0	66	47.4	-12	47.0
12	301	01.0	14	14.1	-22	42.8	337	25.1	-15	34.5	236	17.8	+20	46.0	81	49.8	-12	47.0
13	316	03.5	29	13.2		42.5	352	25.6		33.8	251	20.3		45.9	96	52.1		47.0
14	331	05.9	44	12.2		42.3	7	26.1		33.2	266	22.9		45.9	111	54.4		47.1
15	346	08.4	59	11.3		42.0	22	26.7		32.5	281	25.4		45.9	126	56.8		47.1
16	1	10.9	74	10.4		41.7	37	27.2		31.9	296	28.0		45.9	141	59.1		47.1
17	16	13.3	89	09.5	-22	41.5	52	27.7	-15	31.2	311	30.5	+20	45.9	157	01.5	-12	47.1
18	31	15.8	104	08.6	-22	41.2	67	28.2	-15	30.6	326	33.0	+20	45.9	172	03.8	-12	47.2
19	46	18.3	119	07.6		41.0	82	28.8		30.0	341	35.6		45.9	187	06.2		47.2
20	61	20.7	134	06.7		40.7	97	29.3		29.3	356	38.1		45.9	202	08.5		47.2
21	76	23.2	149	05.8		40.4	112	29.8		28.7	11	40.7		45.9	217	10.9		47.3
22	91	25.6	164	04.9		40.2	127	30.3		28.0	26	43.2		45.9	232	13.2		47.3
23	106	28.1	179	04.0		39.9	142	30.9		27.4	41	45.8		45.9	247	15.6		47.3
24	121	30.6	194	03.0	-22	39.6	157	31.4	-15	26.7	56	48.3	+20	45.9	262	17.9	-12	47.3
Dif	—		-9		+3		+5		+6		+25		0		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3			Edad: 10 ^d 2 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 R°: 48 ^m														
	PMG: 12 ^h 11 ^m 6			PMG: 20 ^h 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m				
0	177	07.4	-19 41.0	58	23.9	+20 08.2	27	60 N	15 49	16 39	17 32	11 48 46	4 55 53					
1	192	07.2	40.4	72	55.0 ¹²¹	10.9	27	58	16 01	48	37	12 03 46	40 53					
2	207	07.0	39.9	87	26.2 ¹²²	13.5	26	56	12	16 55	42	16 46	27 53					
3	222	06.9	39.3	101	57.3 ¹²¹	16.1	26	54	22	17 02	46	27 47	16 5					
4	237	06.7	38.7	116	28.3 ¹²⁰	18.5	24	52	30	08	50	36 48	4 07 51					
5	252	06.5	-19 38.1	130	59.4 ¹²¹	+20 20.9	24	50	16 38	17 14	17 54	12 45 48	3 58 51					
6	267	06.4	-19 37.6	145	30.5 ¹²¹	+20 23.1	22	45	16 54	17 26	18 02	13 04 47	3 40 50					
7	282	06.2	37.0	160	01.5 ¹²⁰	25.3	22	40	17 07	37	10	19 48	25 50					
8	297	06.0	36.4	174	32.5 ¹²⁰	27.4	21	35	19	46	17	32 48	12 50					
9	312	05.9	35.8	189	03.5 ¹²⁰	29.4	20	30	29	17 54	23	13 43 48	3 01 50					
10	327	05.7	35.3	203	34.5 ¹²⁰	31.2	18	20	17 46	18 09	36	14 02 49	2 42 49					
11	342	05.5	-19 34.7	218	05.5 ¹²⁰	+20 33.0	17	10 N	18 01	18 23	18 49	14 19 48	2 26 48					
12	357	05.4	-19 34.1	232	36.4 ¹¹⁹	+20 34.7	18	0	18 15	18 37	19 03	14 35 48	2 10 48					
13	12	05.2	33.5	247	07.4 ¹²⁰	36.3	16	10 S	30	18 52	18	14 51 48	1 55 47					
14	27	05.0	33.0	261	38.3 ¹¹⁹	37.8	15	20	18 45	19 09	19 37	15 08 48	38 47					
15	42	04.9	32.4	276	09.2 ¹¹⁹	39.3	15	30	19 03	29	20 01	27 49	19 47					
16	57	04.7	31.8	290	40.1 ¹¹⁹	40.6	13	35	14	42	16	38 49	1 08 46					
17	72	04.6	-19 31.2	305	11.0 ¹¹⁹	+20 41.8	12	40	19 26	19 57	20 35	15 51 49	0 56 45					
18	87	04.4	-19 30.6	319	41.9 ¹¹⁹	+20 42.9	11	45	19 40	20 15	20 59	16 07 48	0 41 45					
19	102	04.2	30.0	334	12.8 ¹¹⁹	43.9	10	50	19 58	38	21 31	26 48	23 44					
20	117	04.1	29.5	348	43.6 ¹¹⁸	44.9	10	52	20 06	20 49	21 48	35 48	14 44					
21	132	03.9	28.9	3	14.4 ¹¹⁸	45.7	8	54	15	21 02	22 10	45 48	0 05 43					
22	147	03.7	28.3	17	45.3 ¹¹⁹	46.5	8	56	26	17	22 38	16 56 49	** ** *					
23	162	03.6	27.7	32	16.1 ¹¹⁸	47.1	6	58	38	35	23 28	17 09 49	** ** *					
24	177	03.4	-19 27.1	46	46.9 ¹¹⁸	+20 47.7	6	60 S	20 52	21 58	** **	17 25 48	** ** *					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 51 ^m 4		Mag: -3.9 PMG: 11 ^h 04 ^m			Mag: +1.2 PMG: 13 ^h 29 ^m			Mag: -2.6 PMG: 20 ^h 09 ^m			Mag: +0.6 PMG: 6 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	121	30.6	194	03.0	-22	39.6	157	31.4	-15	26.7	56	48.3	+20	45.9	262	17.9	-12	47.3
1	136	33.0	209	02.1		39.3	172	31.9		26.1	71	50.8		45.9	277	20.2		47.4
2	151	35.5	224	01.2		39.1	187	32.5		25.4	86	53.4		45.9	292	22.6		47.4
3	166	38.0	239	00.3		38.8	202	33.0		24.8	101	55.9		45.9	307	24.9		47.4
4	181	40.4	253	59.4		38.5	217	33.5		24.1	116	58.5		45.9	322	27.3		47.4
5	196	42.9	268	58.4	-22	38.3	232	34.0	-15	23.5	132	01.0	+20	45.9	337	29.6	-12	47.5
6	211	45.4	283	57.5	-22	38.0	247	34.6	-15	22.8	147	03.5	+20	45.9	352	32.0	-12	47.5
7	226	47.8	298	56.6		37.7	262	35.1		22.2	162	06.1		45.9	7	34.3		47.5
8	241	50.3	313	55.7		37.4	277	35.6		21.6	177	08.6		45.9	22	36.7		47.6
9	256	52.8	328	54.8		37.1	292	36.1		20.9	192	11.2		45.9	37	39.0		47.6
10	271	55.2	343	53.8		36.9	307	36.7		20.3	207	13.7		45.9	52	41.4		47.6
11	286	57.7	358	52.9	-22	36.6	322	37.2	-15	19.6	222	16.2	+20	45.9	67	43.7	-12	47.6
12	302	00.1	13	52.0	-22	36.3	337	37.7	-15	19.0	237	18.8	+20	45.9	82	46.1	-12	47.7
13	317	02.6	28	51.1		36.0	352	38.3		18.3	252	21.3		45.9	97	48.4		47.7
14	332	05.1	43	50.2		35.7	7	38.8		17.7	267	23.9		45.9	112	50.8		47.7
15	347	07.5	58	49.3		35.4	22	39.3		17.0	282	26.4		45.9	127	53.1		47.7
16	2	10.0	73	48.3		35.1	37	39.9		16.4	297	28.9		45.9	142	55.5		47.8
17	17	12.5	88	47.4	-22	34.8	52	40.4	-15	15.7	312	31.5	+20	45.9	157	57.8	-12	47.8
18	32	14.9	103	46.5	-22	34.6	67	40.9	-15	15.1	327	34.0	+20	45.9	173	00.2	-12	47.8
19	47	17.4	118	45.6		34.3	82	41.4		14.4	342	36.5		45.9	188	02.5		47.8
20	62	19.9	133	44.7		34.0	97	42.0		13.8	357	39.1		45.9	203	04.9		47.9
21	77	22.3	148	43.8		33.7	112	42.5		13.1	12	41.6		45.9	218	07.2		47.9
22	92	24.8	163	42.9		33.4	127	43.0		12.5	27	44.1		45.9	233	09.6		47.9
23	107	27.2	178	41.9		33.1	142	43.6		11.8	42	46.7		45.9	248	11.9		48.0
24	122	29.7	193	41.0	-22	32.8	157	44.1	-15	11.1	57	49.2	+20	45.9	263	14.3	-12	48.0
Dif	—		-9		+3		+5		+6		+25		0		+23			

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 11 ^m 9			Edad: 11 ^d 2 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2 R°: 48 ^m SD: 14:7 PMG: 21 ^h 35 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	03.4	-19 27.1	46	46.9	+20 47.7	4	60 N	6 51	7 43	8 33	12 34	57		5 48	43	
1	192	03.3		61	17.7 ¹¹⁸		48.1	4	58	46	35	21	12 49	56		33	43
2	207	03.1		75	48.5 ¹¹⁸		48.5	4	56	41	27	10	13 02	56		20	44
3	222	03.0		90	19.3 ¹¹⁸		48.7	2	54	37	21	8 01	14 54			5 08	45
4	237	02.8		104	50.0 ¹¹⁷		48.9	2	52	33	15	7 52	24 54			4 58	45
5	252	02.6	-19 24.2	119	20.8 ¹¹⁸	+20 49.0	1	50	6 29	7 09	7 45	13 33	53		4 49	46	
6	267	02.5	-19 23.6	133	51.5 ¹¹⁷	+20 48.9	1	45	6 21	6 57	7 29	13 51	53		4 30	47	
7	282	02.3		148	22.3 ¹¹⁸		48.8	1	40	14	46	16	14 07	52		15	47
8	297	02.2		162	53.0 ¹¹⁷		48.6	2	35	07	37	7 04	20 51			4 02	47
9	312	02.0		177	23.7 ¹¹⁷		48.3	3	30	6 00	29	6 55	31 51			3 51	47
10	327	01.9		191	54.5 ¹¹⁸		47.9	4	20	5 47	14	37	14 51	50		31	48
11	342	01.7	-19 20.6	206	25.2 ¹¹⁷	+20 47.3	6	10 N	5 35	6 00	6 22	15 07	50		3 14	48	
12	357	01.5	-19 20.0	220	55.9 ¹¹⁷	+20 46.7	7	0	5 21	5 46	6 08	15 23	49		2 58	49	
13	12	01.4		235	26.6 ¹¹⁷		46.0	6	10 S	5 05	32	5 54	39 48			42	49
14	27	01.2		249	57.3 ¹¹⁷		45.2	8	20	4 47	5 15	39	15 56	47		25	49
15	42	01.1		264	28.0 ¹¹⁷		44.3	9	30	23	4 54	21	16 16	45		2 06	49
16	57	00.9		278	58.7 ¹¹⁷		43.3	10	35	4 08	42	5 10	27 45			1 54	50
17	72	00.8	-19 17.1	293	29.4 ¹¹⁷	+20 42.2	11	40	3 49	4 27	4 58	16 40	44		1 41	50	
18	87	00.6	-19 16.5	308	00.1 ¹¹⁷	+20 41.0	12	45	3 25	4 09	4 44	16 55	44		1 26	50	
19	102	00.5		322	30.8 ¹¹⁷		39.7	13	50	2 53	3 46	26	17 14	43		1 07	50
20	117	00.3		337	01.5 ¹¹⁷		38.4	13	52	36	35	18	23 42			0 58	50
21	132	00.2		351	32.1 ¹¹⁶		36.9	15	54	2 14	22	4 09	33 41			48	50
22	147	00.0		6	02.8 ¹¹⁷		35.3	16	56	1 46	3 07	3 58	45 40			36	51
23	161	59.9		20	33.5 ¹¹⁷		33.6	17	58	0 57	2 49	46	17 58	39		23	51
24	176	59.7	-19 12.9	35	04.2 ¹¹⁷	+20 31.8	18	60 S	** **	2 26	3 32	18 13	38		0 08	51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 47 ^m 4		Mag: -3.9 PMG: 11 ^h 06 ^m		Mag: +1.2 PMG: 13 ^h 29 ^m		Mag: -2.6 PMG: 20 ^h 05 ^m		Mag: +0.6 PMG: 6 ^h 26 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	122	29.7	193	41.0	-22 32.8	157	44.1	-15 11.1	57	49.2	+20 45.9	263	14.3	-12 48.0
1	137	32.2	208	40.1	32.5	172	44.6	10.5	72	51.7	45.9	278	16.6	48.0
2	152	34.6	223	39.2	32.2	187	45.2	09.8	87	54.3	45.9	293	19.0	48.0
3	167	37.1	238	38.3	31.9	202	45.7	09.2	102	56.8	45.9	308	21.3	48.1
4	182	39.6	253	37.4	31.6	217	46.2	08.5	117	59.3	45.9	323	23.7	48.1
5	197	42.0	268	36.5	-22 31.3	232	46.8	-15 07.9	133	01.9	+20 45.9	338	26.0	-12 48.1
6	212	44.5	283	35.5	-22 31.0	247	47.3	-15 07.2	148	04.4	+20 45.9	353	28.4	-12 48.1
7	227	47.0	298	34.6	30.7	262	47.8	06.6	163	06.9	45.9	8	30.7	48.2
8	242	49.4	313	33.7	30.3	277	48.4	05.9	178	09.5	45.9	23	33.1	48.2
9	257	51.9	328	32.8	30.0	292	48.9	05.3	193	12.0	45.9	38	35.4	48.2
10	272	54.4	343	31.9	29.7	307	49.4	04.6	208	14.5	45.9	53	37.8	48.2
11	287	56.8	358	31.0	-22 29.4	322	50.0	-15 04.0	223	17.0	+20 45.9	68	40.1	-12 48.3
12	302	59.3	13	30.1	-22 29.1	337	50.5	-15 03.3	238	19.6	+20 45.9	83	42.5	-12 48.3
13	318	01.7	28	29.2	28.8	352	51.0	02.6	253	22.1	45.9	98	44.8	48.3
14	333	04.2	43	28.3	28.5	7	51.6	02.0	268	24.6	45.9	113	47.2	48.3
15	348	06.7	58	27.3	28.2	22	52.1	01.3	283	27.2	45.9	128	49.5	48.4
16	3	09.1	73	26.4	27.8	37	52.6	-15 00.7	298	29.7	45.9	143	51.9	48.4
17	18	11.6	88	25.5	-22 27.5	52	53.2	-15 00.0	313	32.2	+20 45.9	158	54.2	-12 48.4
18	33	14.1	103	24.6	-22 27.2	67	53.7	-14 59.4	328	34.7	+20 45.9	173	56.6	-12 48.4
19	48	16.5	118	23.7	26.9	82	54.2	58.7	343	37.3	45.9	188	58.9	48.5
20	63	19.0	133	22.8	26.5	97	54.8	58.0	358	39.8	45.9	204	01.3	48.5
21	78	21.5	148	21.9	26.2	112	55.3	57.4	13	42.3	45.9	219	03.7	48.5
22	93	23.9	163	21.0	25.9	127	55.8	56.7	28	44.8	45.9	234	06.0	48.5
23	108	26.4	178	20.1	25.6	142	56.4	56.1	43	47.4	45.9	249	08.4	48.6
24	123	28.9	193	19.2	-22 25.2	157	56.9	-14 55.4	58	49.9	+20 45.9	264	10.7	-12 48.6
Dif	—		-9 +3		+5 +7		+25 0		+24 0					

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 12 ^m 1				Edad: 12 ^d 2 PHE { SD: 14/8 PMG: 22 ^h 23 ^m R°: 48 ^m 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5																
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora		R°		Hora		R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m
0	176	59.7	-19	12.9	35	04.2	+20	31.8	60 N	15	54	16	44	17	36	13	31	66	6	31	33
1	191	59.5		12.3	49	34.9 ¹¹⁷		30.0 ¹⁸	58	16	06		52	41		45	65		16	35	
2	206	59.4		11.7	64	05.5 ¹¹⁶		28.0 ²⁰	56	16		16	59	45		13	58	62	6	04	36
3	221	59.2		11.1	78	36.2 ¹¹⁷		25.9 ²¹	54	25		17	05	49		14	08	62	5	53	38
4	236	59.1		10.5	93	06.9 ¹¹⁷		23.8 ²¹	52	34		11		53		18	60		43	39	
5	251	58.9	-19	09.9	107	37.6 ¹¹⁷	+20	21.5 ²³	50	16	41	17	17	17	56	14	26	59	5	35	39
6	266	58.8	-19	09.3	122	08.3 ¹¹⁷	+20	19.1 ²⁴	45	16	57	17	29	18	04	14	44	57	5	17	41
7	281	58.6		08.7	136	39.0 ¹¹⁷		16.7 ²⁴	40	17	10		39	12		14	59	55	5	02	42
8	296	58.5		08.0	151	09.7 ¹¹⁷		14.1 ²⁶	35	21		48	18			15	11	55	4	49	43
9	311	58.4		07.4	165	40.4 ¹¹⁷		11.5 ²⁶	30	30		17	56	25		22	53		38	44	
10	326	58.2		06.8	180	11.1 ¹¹⁷		08.8 ²⁷	20	17	47		18	10	37	41	51		19	46	
11	341	58.1	-19	06.2	194	41.8 ¹¹⁷	+20	05.9 ²⁹	10 N	18	02	18	24	18	50	15	57	49	4	02	47
12	356	57.9	-19	05.6	209	12.5 ¹¹⁷	+20	03.0 ²⁹	0	18	16	18	38	19	03	16	12	48	3	47	48
13	11	57.8		05.0	223	43.2 ¹¹⁷	+20	00.0 ³⁰	10 S		30	18	52	18		27	46		31	50	
14	26	57.6		04.4	238	13.9 ¹¹⁷	+19	56.8 ³²	20	18	45	19	08	19	36	16	43	45	3	14	51
15	41	57.5		03.8	252	44.7 ¹¹⁸		53.6 ³²	30	19	02		28	20	00	17	01	43	2	55	52
16	56	57.3		03.2	267	15.4 ¹¹⁷		50.3 ³³	35		13		41	15		12	42		44	53	
17	71	57.2	-19	02.6	281	46.1 ¹¹⁷	+19	46.9 ³⁴	40	19	24	19	55	20	33	17	24	41	2	31	54
18	86	57.0	-19	02.0	296	16.9 ¹¹⁸	+19	43.4 ³⁵	45	19	38	20	12	20	56	17	39	39	2	16	55
19	101	56.9		01.3	310	47.6 ¹¹⁷		39.8 ³⁶	50	19	55		35	21	27	17	57	36	1	57	57
20	116	56.7		00.7	325	18.4 ¹¹⁸		36.1 ³⁷	52	20	03		46	21	44	18	05	36		48	58
21	131	56.6	-19	00.1	339	49.2 ¹¹⁸		32.3 ³⁸	54	12		20	58	22	04	14	35		38	59	
22	146	56.5	-18	59.5	354	20.0 ¹¹⁸		28.5 ³⁸	56	22		21	13	22	31	25	33		27	59	
23	161	56.3		58.9	8	50.8 ¹¹⁸		24.5 ⁴⁰	58		34		30	23	12	37	31		1	14	61
24	176	56.2	-18	58.3	23	21.6 ¹¹⁸	+19	20.4 ⁴¹	60 S	20	48	21	51	** **		18	51	29	0	59	62
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG 15 ^h 43 ^m 5				Mag: -3.9 PMG: 11 ^h 07 ^m				Mag: +1.2 PMG: 13 ^h 28 ^m				Mag: -2.6 PMG: 20 ^h 01 ^m				Mag: +0.6 PMG: 6 ^h 22 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	123	28.9	193	19.2	-22	25.2	157	56.9	-14	55.4	58	49.9	+20	45.9	264	10.7	-12	48.6			
1	138	31.3	208	18.3		24.9	172	57.5		54.8	73	52.4		45.9	279	13.1		48.6			
2	153	33.8	223	17.4		24.6	187	58.0		54.1	88	54.9		45.9	294	15.4		48.6			
3	168	36.2	238	16.4		24.3	202	58.5		53.4	103	57.5		45.9	309	17.8		48.7			
4	183	38.7	253	15.5		23.9	217	59.1		52.8	119	00.0		45.9	324	20.1		48.7			
5	198	41.2	268	14.6	-22	23.6	232	59.6	-14	52.1	134	02.5	+20	45.9	339	22.5	-12	48.7			
6	213	43.6	283	13.7	-22	23.3	248	00.1	-14	51.5	149	05.0	+20	45.9	354	24.8	-12	48.7			
7	228	46.1	298	12.8		22.9	263	00.7		50.8	164	07.5		45.9	9	27.2		48.8			
8	243	48.6	313	11.9		22.6	278	01.2		50.1	179	10.1		45.9	24	29.6		48.8			
9	258	51.0	328	11.0		22.2	293	01.7		49.5	194	12.6		45.9	39	31.9		48.8			
10	273	53.5	343	10.1		21.9	308	02.3		48.8	209	15.1		45.9	54	34.3		48.8			
11	288	56.0	358	09.2	-22	21.6	323	02.8	-14	48.2	224	17.6	+20	45.9	69	36.6	-12	48.9			
12	303	58.4	13	08.3	-22	21.2	338	03.4	-14	47.5	239	20.1	+20	45.9	84	39.0	-12	48.9			
13	319	00.9	28	07.4		20.9	353	03.9		46.8	254	22.7		45.9	99	41.3		48.9			
14	334	03.4	43	06.5		20.5	8	04.4		46.2	269	25.2		45.9	114	43.7		48.9			
15	349	05.8	58	05.6		20.2	23	05.0		45.5	284	27.7		45.9	129	46.0		48.9			
16	4	08.3	73	04.7		19.8	38	05.5		44.8	299	30.2		45.9	144	48.4		49.0			
17	19	10.7	88	03.8	-22	19.5	53	06.1	-14	44.2	314	32.7	+20	45.9	159	50.8	-12	49.0			
18	34	13.2	103	02.9	-22	19.1	68	06.6	-14	43.5	329	35.3	+20	45.9	174	53.1	-12	49.0			
19	49	15.7	118	02.0		18.8	83	07.1		42.9	344	37.8		45.9	189	55.5		49.0			
20	64	18.1	133	01.1		18.4	98	07.7		42.2	359	40.3		45.9	204	57.8		49.1			
21	79	20.6	148	00.2		18.1	113	08.2		41.5	14	42.8		45.9	220	00.2		49.1			
22	94	23.1	162	59.3		17.7	128	08.8		40.9	29	45.3		45.9	235	02.5		49.1			
23	109	25.5	177	58.4		17.4	143	09.3		40.2	44	47.8		45.9	250	04.9		49.1			
24	124	28.0	192	57.5	-22	17.0	158	09.8	-14	39.5	59	50.4	+20	45.9	265	07.3	-12	49.2			
Dif	—		-9		+3		+5		+7		+25		0		+24		0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 4			Edad: 13 ^d 2 PHE { SD: 14'8 PMG: 23 ^h 11 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	56.2	-18 58.3	23	21.6	+19 20.4	60 N	6 48	7 40	8 29	14 37	73	7 04	25	
1	191	56.0		37	52.4 ¹¹⁸	16.3 41	58	43	32	17	14 50	70	6 51	28	
2	206	55.9		52	23.2 ¹¹⁸	12.0 43	56	39	25	8 07	15 00	68	40	30	
3	221	55.7		66	54.0 ¹¹⁸	07.7 43	54	35	18	7 58	10 66		31	31	
4	236	55.6		81	24.9 ¹¹⁹	+19 03.2 45	52	31	12	50	18 65		22	33	
5	251	55.5	-18 55.2	95	55.7 ¹¹⁸	+18 58.7 45	50	6 28	7 07	7 43	15 25	64	6 14	34	
6	266	55.3	-18 54.6	110	26.6 ¹¹⁹	+18 54.1 46	45	6 20	6 55	7 27	15 41	61	5 58	36	
7	281	55.2		124	57.5 ¹¹⁹	49.4 47	40	12	45	14	15 54	59	44	39	
8	296	55.0		139	28.4 ¹¹⁹	44.6 48	35	6 06	36	7 03	16 06	56	32	41	
9	311	54.9		153	59.3 ¹¹⁹	39.7 49	30	5 59	28	6 54	15 55		22	42	
10	326	54.8		168	30.2 ¹¹⁹	34.7 50	20	47	14	37	32 52		5 05	44	
11	341	54.6	-18 51.5	183	01.1 ¹¹⁹	+18 29.7 50	10 N	5 35	6 00	6 23	16 46	50	4 49	46	
12	356	54.5	-18 50.8	197	32.1 ¹²⁰	+18 24.5 52	0	5 22	5 47	6 09	17 00	48	4 35	48	
13	11	54.3		212	03.0 ¹¹⁹	19.3 52	10 S	5 06	33	5 55	13 46		21	49	
14	26	54.2		226	34.0 ¹²⁰	13.9 54	20	4 48	5 16	40	28 43		4 05	52	
15	41	54.1		241	05.0 ¹²⁰	08.5 54	30	25	4 56	23	44 41		3 47	55	
16	56	53.9		255	36.0 ¹²⁰	+18 03.0 55	35	4 10	44	12	17 54	39	37	55	
17	71	53.8	-18 47.7	270	07.0 ¹²⁰	+17 57.4 56	40	3 52	4 30	5 01	18 05	37	3 25	57	
18	86	53.7	-18 47.1	284	38.1 ¹²¹	+17 51.7 57	45	3 29	4 13	4 47	18 18	34	3 11	59	
19	101	53.5		299	09.1 ¹²⁰	45.9 58	50	2 58	3 50	30	33 32		2 54	61	
20	116	53.4		313	40.2 ¹²¹	40.1 58	52	41	39	22	41 30		46	62	
21	131	53.2		328	11.2 ¹²⁰	34.1 60	54	2 21	27	13	49 28		37	64	
22	146	53.1		342	42.3 ¹²¹	28.1 60	56	1 54	3 13	4 03	18 58	27	26	66	
23	161	53.0		357	13.5 ¹²²	22.0 61	58	1 13	2 55	3 51	19 08	25	15	67	
24	176	52.8	-18 43.3	11	44.6 ¹²¹	+17 15.8 62	60 S	** **	2 34	3 38	19 20	22	2 01	70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 39 ^m 6		Mag: -3.9 PMG: 11 ^h 09 ^m			Mag: +1.2 PMG: 13 ^h 27 ^m			Mag: -2.6 PMG: 19 ^h 57 ^m			Mag: +0.6 PMG: 6 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	124	28.0	192	57.5	-22 17.0	158	09.8	-14 39.5	59	50.4	+20 45.9	265	07.3	-12 49.2	
1	139	30.5	207	56.6	16.7	173	10.4	38.9	74	52.9	45.9	280	09.6	49.2	
2	154	32.9	222	55.7	16.3	188	10.9	38.2	89	55.4	45.9	295	12.0	49.2	
3	169	35.4	237	54.8	16.0	203	11.5	37.5	104	57.9	45.9	310	14.3	49.2	
4	184	37.8	252	53.9	15.6	218	12.0	36.9	120	00.4	45.9	325	16.7	49.3	
5	199	40.3	267	53.0	-22 15.2	233	12.5	-14 36.2	135	02.9	+20 45.9	340	19.1	-12 49.3	
6	214	42.8	282	52.1	-22 14.9	248	13.1	-14 35.5	150	05.4	+20 45.9	355	21.4	-12 49.3	
7	229	45.2	297	51.2	14.5	263	13.6	34.9	165	08.0	45.9	10	23.8	49.3	
8	244	47.7	312	50.3	14.1	278	14.2	34.2	180	10.5	45.9	25	26.1	49.3	
9	259	50.2	327	49.4	13.8	293	14.7	33.5	195	13.0	45.9	40	28.5	49.4	
10	274	52.6	342	48.5	13.4	308	15.3	32.9	210	15.5	45.9	55	30.9	49.4	
11	289	55.1	357	47.6	-22 13.0	323	15.8	-14 32.2	225	18.0	+20 45.9	70	33.2	-12 49.4	
12	304	57.6	12	46.7	-22 12.7	338	16.3	-14 31.5	240	20.5	+20 45.9	85	35.6	-12 49.4	
13	320	00.0	27	45.8	12.3	353	16.9	30.9	255	23.0	45.9	100	37.9	49.5	
14	335	02.5	42	44.9	11.9	8	17.4	30.2	270	25.5	45.9	115	40.3	49.5	
15	350	05.0	57	44.0	11.6	23	18.0	29.5	285	28.0	45.9	130	42.7	49.5	
16	5	07.4	72	43.1	11.2	38	18.5	28.9	300	30.6	45.9	145	45.0	49.5	
17	20	09.9	87	42.2	-22 10.8	53	19.1	-14 28.2	315	33.1	+20 45.9	160	47.4	-12 49.5	
18	35	12.3	102	41.3	-22 10.4	68	19.6	-14 27.5	330	35.6	+20 45.9	175	49.7	-12 49.6	
19	50	14.8	117	40.4	10.0	83	20.1	26.9	345	38.1	45.9	190	52.1	49.6	
20	65	17.3	132	39.5	09.7	98	20.7	26.2	0	40.6	45.9	205	54.5	49.6	
21	80	19.7	147	38.6	09.3	113	21.2	25.5	15	43.1	45.9	220	56.8	49.6	
22	95	22.2	162	37.7	08.9	128	21.8	24.8	30	45.6	45.9	235	59.2	49.7	
23	110	24.7	177	36.8	08.5	143	22.3	24.2	45	48.1	45.9	251	01.5	49.7	
24	125	27.1	192	35.9	-22 08.1	158	22.9	-14 23.5	60	50.6	+20 45.9	266	03.9	-12 49.7	
Dif	—		-9	+4		+5	+7		+25	0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 12 ^h 12 ^m 6			Edad: 14 ^d 2 PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/2 PMG: 23 ^h 59 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	176	52.8	-18	43.3	11	44.6	+17	15.8	60 N	15 59	16 48	17 40	15 50 76	7 29 20				
1	191	52.7		42.7	26	15.7 ¹²¹		09.5 ⁶³	58	16 10	16 56	44	16 00 74	19 23				
2	206	52.6		42.1	40	46.9 ¹²²	+17	03.1 ⁶⁴	56	20	17 03	49	08 72	10 25				
3	221	52.4		41.4	55	18.1 ¹²²	+16	56.7 ⁶⁴	54	29	09	52	16 69	7 02 26				
4	236	52.3		40.8	69	49.3 ¹²²		50.1 ⁶⁶	52	37	15	56	23 67	6 55 28				
5	251	52.2	-18	40.2	84	20.5 ¹²²	+16	43.5 ⁶⁶	50	16 44	17 20	17 59	16 29 66	6 48 30				
6	266	52.0	-18	39.5	98	51.7 ¹²²	+16	36.8 ⁶⁷	45	16 59	17 31	18 07	16 42 63	6 34 33				
7	281	51.9		38.9	113	22.9 ¹²²		30.0 ⁶⁸	40	17 12	41	14	16 53 60	23 35				
8	296	51.8		38.3	127	54.2 ¹²³		23.2 ⁶⁸	35	23	50	20	17 02 58	13 37				
9	311	51.6		37.6	142	25.5 ¹²³		16.2 ⁷⁰	30	32	17 57	26	10 56	6 04 39				
10	326	51.5		37.0	156	56.8 ¹²³		09.2 ⁷⁰	20	17 48	18 12	38	24 52	5 49 42				
11	341	51.4	-18	36.4	171	28.1 ¹²³	+16	02.1 ⁷¹	10 N	18 03	18 25	18 50	17 36 50	5 35 45				
12	356	51.3	-18	35.7	185	59.4 ¹²³	+15	54.9 ⁷²	0	18 16	18 38	19 03	17 48 46	5 23 47				
13	11	51.1		35.1	200	30.8 ¹²⁴		47.7 ⁷²	10 S	30	18 52	18	17 59 44	5 10 50				
14	26	51.0		34.5	215	02.2 ¹²⁴		40.3 ⁷⁴	20	18 44	19 08	36	18 11 41	4 57 52				
15	41	50.9		33.8	229	33.5 ¹²³		32.9 ⁷⁴	30	19 01	27	19 59	25 38	42 55				
16	56	50.7		33.2	244	05.0 ¹²⁵		25.4 ⁷⁵	35	11	39	20 13	33 36	32 58				
17	71	50.6	-18	32.5	258	36.4 ¹²⁴	+15	17.9 ⁷⁵	40	19 23	19 53	20 31	18 42 33	4 22 59				
18	86	50.5	-18	31.9	273	07.8 ¹²⁴	+15	10.2 ⁷⁷	45	19 36	20 10	20 53	18 52 31	4 10 62				
19	101	50.3		31.3	287	39.3 ¹²⁵	+15	02.5 ⁷⁷	50	19 53	32	21 23	19 05 28	3 55 65				
20	116	50.2		30.6	302	10.8 ¹²⁵	+14	54.7 ⁷⁸	52	20 01	42	39	11 26	48 67				
21	131	50.1		30.0	316	42.2 ¹²⁴		46.9 ⁷⁸	54	09	20 54	21 58	17 25	41 68				
22	146	50.0		29.3	331	13.8 ¹²⁶		38.9 ⁸⁰	56	19	21 08	22 23	25 22	32 70				
23	161	49.8		28.7	345	45.3 ¹²⁵		30.9 ⁸⁰	58	30	25	22 59	33 20	22 72				
24	176	49.7	-18	28.0	0	16.8 ¹²⁵	+14	22.8 ⁸¹	60 S	20 43	21 45	** **	19 42 18	3 11 75				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 35 ^m 6		Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +1.2 PMG: 13 ^h 26 ^m			Mag: -2.6 PMG: 19 ^h 53 ^m			Mag: +0.6 PMG: 6 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	125	27.1	192	35.9	-22	08.1	158	22.9	-14	23.5	60	50.6	+20	45.9	266	03.9	-12	49.7
1	140	29.6	207	35.0		07.8	173	23.4		22.8	75	53.1		45.9	281	06.3		49.7
2	155	32.1	222	34.1		07.4	188	24.0		22.2	90	55.6		45.9	296	08.6		49.7
3	170	34.5	237	33.3		07.0	203	24.5		21.5	105	58.1		45.9	311	11.0		49.8
4	185	37.0	252	32.4		06.6	218	25.1		20.8	121	00.6		45.9	326	13.4		49.8
5	200	39.5	267	31.5	-22	06.2	233	25.6	-14	20.1	136	03.1	+20	46.0	341	15.7	-12	49.8
6	215	41.9	282	30.6	-22	05.8	248	26.1	-14	19.5	151	05.6	+20	46.0	356	18.1	-12	49.8
7	230	44.4	297	29.7		05.4	263	26.7		18.8	166	08.1		46.0	11	20.4		49.9
8	245	46.8	312	28.8		05.0	278	27.2		18.1	181	10.6		46.0	26	22.8		49.9
9	260	49.3	327	27.9		04.6	293	27.8		17.5	196	13.2		46.0	41	25.2		49.9
10	275	51.8	342	27.0		04.2	308	28.3		16.8	211	15.7		46.0	56	27.5		49.9
11	290	54.2	357	26.1	-22	03.8	323	28.9	-14	16.1	226	18.2	+20	46.0	71	29.9	-12	49.9
12	305	56.7	12	25.2	-22	03.4	338	29.4	-14	15.4	241	20.7	+20	46.0	86	32.3	-12	50.0
13	320	59.2	27	24.3		03.0	353	30.0		14.8	256	23.2		46.0	101	34.6		50.0
14	336	01.6	42	23.5		02.6	8	30.5		14.1	271	25.7		46.0	116	37.0		50.0
15	351	04.1	57	22.6		02.2	23	31.1		13.4	286	28.2		46.0	131	39.4		50.0
16	6	06.6	72	21.7		01.8	38	31.6		12.7	301	30.7		46.0	146	41.7		50.1
17	21	09.0	87	20.8	-22	01.4	53	32.2	-14	12.1	316	33.2	+20	46.0	161	44.1	-12	50.1
18	36	11.5	102	19.9	-22	01.0	68	32.7	-14	11.4	331	35.7	+20	46.0	176	46.4	-12	50.1
19	51	14.0	117	19.0		00.6	83	33.3		10.7	346	38.2		46.0	191	48.8		50.1
20	66	16.4	132	18.1	-22	00.2	98	33.8		10.0	1	40.7		46.0	206	51.2		50.1
21	81	18.9	147	17.2	-21	59.8	113	34.4		09.4	16	43.2		46.0	221	53.5		50.2
22	96	21.3	162	16.4		59.4	128	34.9		08.7	31	45.7		46.0	236	55.9		50.2
23	111	23.8	177	15.5		59.0	143	35.5		08.0	46	48.2		46.0	251	58.3		50.2
24	126	26.3	192	14.6	-21	58.6	158	36.0	-14	07.3	61	50.6	+20	46.0	267	00.6	-12	50.2
Dif	—		-9			+4	+5			+7	+25		0	+24				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 8			Edad: 15 ^d 2	PHE { 4 ^h : 55:3 12 ^h : 55:4 20 ^h : 55:6	R°: ***		Náutico	Civil		Hora	R°	Hora	R°
	hG ☉	Dec												
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m
0	176	49.7	-18 28.0	0	16.8	+14 22.8	81	60 N	6 44	7 36	8 25	17 06	79	7 49 17
1	191	49.6	27.4	14	48.4 ¹²⁶	14.7	81	58	40	28	13	14	76	42 18
2	206	49.5	26.8	29	20.0 ¹²⁶	+14 06.4	83	56	36	22	8 04	20	73	35 21
3	221	49.3	26.1	43	51.6 ¹²⁶	+13 58.2	82	54	32	15	7 55	25	72	28 23
4	236	49.2	25.5	58	23.2 ¹²⁶	49.8	84	52	29	10	47	30	70	23 25
5	251	49.1	-18 24.8	72	54.8 ¹²⁶	+13 41.4	84	50	6 25	7 05	7 40	17 35	68	7 18 26
6	266	49.0	-18 24.2	87	26.5 ¹²⁷	+13 32.8	86	45	6 18	6 53	7 25	17 45	64	7 07 29
7	281	48.8	23.5	101	58.2 ¹²⁷	24.3	85	40	11	44	13	17 53	61	6 58 32
8	296	48.7	22.9	116	29.8 ¹²⁶	15.6	87	35	6 05	35	7 02	18 00	59	50 35
9	311	48.6	22.2	131	01.5 ¹²⁷	+13 06.9	87	30	5 59	28	6 53	06	56	43 37
10	326	48.5	21.6	145	33.3 ¹²⁸	+12 58.2	87	20	47	14	37	16	53	31 40
11	341	48.3	-18 20.9	160	05.0 ¹²⁷	+12 49.3	89	10 N	5 35	6 01	6 23	18 26	49	6 20 44
12	356	48.2	-18 20.3	174	36.7 ¹²⁷	+12 40.4	89	0	5 22	5 47	6 09	18 34	47	6 10 47
13	11	48.1	19.6	189	08.5 ¹²⁸	31.5	89	10 S	5 07	33	5 56	43	43	6 00 49
14	26	48.0	19.0	203	40.3 ¹²⁸	22.4	91	20	4 50	5 18	41	18 52	40	5 49 53
15	41	47.9	18.3	218	12.1 ¹²⁸	13.3	91	30	27	4 58	24	19 03	36	37 56
16	56	47.7	17.7	232	43.9 ¹²⁸	+12 04.2	91	35	4 13	46	14	09	33	30 58
17	71	47.6	-18 17.0	247	15.7 ¹²⁸	+11 55.0	92	40	3 55	4 33	5 03	19 15	32	5 21 61
18	86	47.5	-18 16.4	261	47.6 ¹²⁹	+11 45.7	93	45	3 33	4 16	4 50	19 23	29	5 12 63
19	101	47.4	15.7	276	19.4 ¹²⁸	36.3	94	50	3 02	3 54	33	33	25	5 00 67
20	116	47.3	15.0	290	51.3 ¹²⁹	27.0	93	52	2 47	44	25	37	24	4 55 68
21	131	47.1	14.4	305	23.2 ¹²⁹	17.5	95	54	28	32	17	42	22	49 70
22	146	47.0	13.7	319	55.1 ¹²⁹	+11 08.0	95	56	2 03	18	4 07	47	20	42 73
23	161	46.9	13.1	334	27.0 ¹²⁹	+10 58.4	96	58	1 27	3 01	3 56	19 53	18	34 75
24	176	46.8	-18 12.4	348	58.9 ¹²⁹	+10 48.8	96	60 S	** **	2 41	3 43	20 00	15	4 26 78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 31 ^m 7		Mag: -3.9 PMG: 11 ^h 12 ^m		Mag: +1.2 PMG: 13 ^h 25 ^m		Mag: -2.6 PMG: 19 ^h 49 ^m		Mag: +0.6 PMG: 6 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	126	26.3	192 14.6	-21 58.6	158 36.0	-14 07.3	61 50.6	+20 46.0	267 00.6	-12 50.2
1	141	28.7	207 13.7	58.2	173 36.6	06.7	76 53.1	46.0	282 03.0	50.2
2	156	31.2	222 12.8	57.7	188 37.1	06.0	91 55.6	46.0	297 05.4	50.3
3	171	33.7	237 11.9	57.3	203 37.7	05.3	106 58.1	46.0	312 07.7	50.3
4	186	36.1	252 11.0	56.9	218 38.2	04.6	122 00.6	46.0	327 10.1	50.3
5	201	38.6	267 10.2	-21 56.5	233 38.8	-14 03.9	137 03.1	+20 46.1	342 12.5	-12 50.3
6	216	41.1	282 09.3	-21 56.1	248 39.3	-14 03.3	152 05.6	+20 46.1	357 14.8	-12 50.3
7	231	43.5	297 08.4	55.7	263 39.9	02.6	167 08.1	46.1	12 17.2	50.4
8	246	46.0	312 07.5	55.2	278 40.4	01.9	182 10.6	46.1	27 19.6	50.4
9	261	48.4	327 06.6	54.8	293 41.0	01.2	197 13.1	46.1	42 21.9	50.4
10	276	50.9	342 05.7	54.4	308 41.5	-14 00.5	212 15.6	46.1	57 24.3	50.4
11	291	53.4	357 04.9	-21 54.0	323 42.1	-13 59.9	227 18.1	+20 46.1	72 26.7	-12 50.4
12	306	55.8	12 04.0	-21 53.5	338 42.6	-13 59.2	242 20.6	+20 46.1	87 29.0	-12 50.5
13	321	58.3	27 03.1	53.1	353 43.2	58.5	257 23.1	46.1	102 31.4	50.5
14	337	00.8	42 02.2	52.7	8 43.7	57.8	272 25.6	46.1	117 33.8	50.5
15	352	03.2	57 01.3	52.3	23 44.3	57.1	287 28.1	46.1	132 36.1	50.5
16	7	05.7	72 00.4	51.8	38 44.8	56.5	302 30.6	46.1	147 38.5	50.5
17	22	08.2	86 59.6	-21 51.4	53 45.4	-13 55.8	317 33.0	+20 46.1	162 40.9	-12 50.6
18	37	10.6	101 58.7	-21 51.0	68 45.9	-13 55.1	332 35.5	+20 46.1	177 43.3	-12 50.6
19	52	13.1	116 57.8	50.5	83 46.5	54.4	347 38.0	46.1	192 45.6	50.6
20	67	15.6	131 56.9	50.1	98 47.0	53.7	2 40.5	46.1	207 48.0	50.6
21	82	18.0	146 56.1	49.7	113 47.6	53.1	17 43.0	46.1	222 50.4	50.6
22	97	20.5	161 55.2	49.2	128 48.2	52.4	32 45.5	46.1	237 52.7	50.7
23	112	22.9	176 54.3	48.8	143 48.7	51.7	47 48.0	46.1	252 55.1	50.7
24	127	25.4	191 53.4	-21 48.3	158 49.3	-13 51.0	62 50.5	+20 46.2	267 57.5	-12 50.7
Dif	—		-9	+4	+6	+7	+25	0	+24	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 0			Edad: 16 ^d 2 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:1 PMG: 0 ^h 45 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	176	46.8	-18	12.4	348	58.9	+10	48.8	60 N	16 04	16 53	17 44	18 25 80	8 06 14				
1	191	46.7		11.8	3	30.9 ¹³⁰		39.1 ⁹⁷	58	15	17 00	48	30 77	8 00 17				
2	206	46.6		11.1	18	02.8 ¹²⁹		29.4 ⁹⁷	56	25	07	52	33 75	7 56 18				
3	221	46.4		10.4	32	34.8 ¹³⁰		19.6 ⁹⁸	54	33	13	56	37 73	51 21				
4	236	46.3		09.8	47	06.8 ¹³⁰	+10	09.7 ⁹⁹	52	41	18	17 59	40 71	48 22				
5	251	46.2	-18	09.1	61	38.7 ¹²⁹	+9	59.8 ⁹⁹	50	16 48	17 23	18 02	18 43 69	7 44 24				
6	266	46.1	-18	08.5	76	10.7 ¹³⁰	+9	49.9 ⁹⁹	45	17 02	17 34	18 09	18 49 65	7 36 28				
7	281	46.0		07.8	90	42.7 ¹³⁰		39.9 ¹⁰⁰	40	14	43	16	54 62	30 31				
8	296	45.9		07.1	105	14.8 ¹³¹		29.8 ¹⁰¹	35	25	52	22	18 59 59	25 33				
9	311	45.7		06.5	119	46.8 ¹³⁰		19.7 ¹⁰¹	30	34	17 59	28	19 02 58	20 35				
10	326	45.6		05.8	134	18.8 ¹³⁰	+9	09.6 ¹⁰¹	20	17 50	18 13	39	09 53	11 40				
11	341	45.5	-18	05.1	148	50.9 ¹³¹	+8	59.4 ¹⁰²	10 N	18 03	18 25	18 51	19 15 49	7 04 43				
12	356	45.4	-18	04.5	163	22.9 ¹³⁰	+8	49.1 ¹⁰³	0	18 17	18 38	19 04	19 21 46	6 57 46				
13	11	45.3		03.8	177	55.0 ¹³¹		38.8 ¹⁰³	10 S	30	18 52	18	26 43	49 50				
14	26	45.2		03.2	192	27.1 ¹³¹		28.5 ¹⁰³	20	18 44	19 07	35	32 39	42 53				
15	41	45.1		02.5	206	59.1 ¹³⁰		18.1 ¹⁰⁴	30	19 00	26	19 57	39 35	33 57				
16	56	44.9		01.8	221	31.2 ¹³¹	+8	07.7 ¹⁰⁴	35	10	38	20 11	42 33	28 59				
17	71	44.8	-18	01.2	236	03.3 ¹³¹	+7	57.2 ¹⁰⁵	40	19 21	19 51	20 29	19 47 30	6 22 62				
18	86	44.7	-18	00.5	250	35.4 ¹³¹	+7	46.7 ¹⁰⁵	45	19 34	20 08	20 50	19 52 27	6 15 65				
19	101	44.6	-17	59.8	265	07.5 ¹³¹		36.1 ¹⁰⁶	50	50	29	21 19	19 58 23	07 69				
20	116	44.5		59.2	279	39.6 ¹³¹		25.5 ¹⁰⁶	52	19 58	39	34	20 01 22	6 03 71				
21	131	44.4		58.5	294	11.8 ¹³²		14.9 ¹⁰⁶	54	20 06	20 50	21 53	04 20	5 59 72				
22	146	44.3		57.8	308	43.9 ¹³¹	+7	04.2 ¹⁰⁷	56	15	21 04	22 16	07 18	55 74				
23	161	44.2		57.1	323	16.0 ¹³¹	+6	53.5 ¹⁰⁷	58	26	19	22 47	11 15	49 77				
24	176	44.1	-17	56.5	337	48.1 ¹³¹	+6	42.7 ¹⁰⁸	60 S	20 38	21 39	** **	20 15 13	5 44 79				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 27 ^m 8		Mag: -3.9 PMG: 11 ^h 13 ^m				Mag: +1.2 PMG: 13 ^h 24 ^m				Mag: -2.6 PMG: 19 ^h 45 ^m				Mag: +0.6 PMG: 6 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	25.4	191	53.4	-21	48.3	158	49.3	-13	51.0	62	50.5	+20	46.2	267	57.5	-12	50.7
1	142	27.9	206	52.5		47.9	173	49.8		50.3	77	53.0		46.2	282	59.8		50.7
2	157	30.3	221	51.7		47.5	188	50.4		49.6	92	55.4		46.2	298	02.2		50.7
3	172	32.8	236	50.8		47.0	203	50.9		49.0	107	57.9		46.2	313	04.6		50.8
4	187	35.3	251	49.9		46.6	218	51.5		48.3	123	00.4		46.2	328	07.0		50.8
5	202	37.7	266	49.0	-21	46.1	233	52.0	-13	47.6	138	02.9	+20	46.2	343	09.3	-12	50.8
6	217	40.2	281	48.2	-21	45.7	248	52.6	-13	46.9	153	05.4	+20	46.2	358	11.7	-12	50.8
7	232	42.7	296	47.3		45.2	263	53.1		46.2	168	07.9		46.2	13	14.1		50.8
8	247	45.1	311	46.4		44.8	278	53.7		45.5	183	10.4		46.2	28	16.4		50.9
9	262	47.6	326	45.5		44.3	293	54.3		44.9	198	12.9		46.2	43	18.8		50.9
10	277	50.1	341	44.7		43.9	308	54.8		44.2	213	15.3		46.2	58	21.2		50.9
11	292	52.5	356	43.8	-21	43.4	323	55.4	-13	43.5	228	17.8	+20	46.2	73	23.5	-12	50.9
12	307	55.0	11	42.9	-21	43.0	338	55.9	-13	42.8	243	20.3	+20	46.2	88	25.9	-12	50.9
13	322	57.4	26	42.0		42.5	353	56.5		42.1	258	22.8		46.2	103	28.3		50.9
14	337	59.9	41	41.2		42.1	8	57.0		41.4	273	25.3		46.2	118	30.7		51.0
15	353	02.4	56	40.3		41.6	23	57.6		40.8	288	27.8		46.3	133	33.0		51.0
16	8	04.8	71	39.4		41.1	38	58.2		40.1	303	30.2		46.3	148	35.4		51.0
17	23	07.3	86	38.6	-21	40.7	53	58.7	-13	39.4	318	32.7	+20	46.3	163	37.8	-12	51.0
18	38	09.8	101	37.7	-21	40.2	68	59.3	-13	38.7	333	35.2	+20	46.3	178	40.2	-12	51.0
19	53	12.2	116	36.8		39.8	83	59.8		38.0	348	37.7		46.3	193	42.5		51.1
20	68	14.7	131	35.9		39.3	99	00.4		37.3	3	40.2		46.3	208	44.9		51.1
21	83	17.2	146	35.1		38.8	114	00.9		36.6	18	42.6		46.3	223	47.3		51.1
22	98	19.6	161	34.2		38.4	129	01.5		35.9	33	45.1		46.3	238	49.6		51.1
23	113	22.1	176	33.3		37.9	144	02.1		35.3	48	47.6		46.3	253	52.0		51.1
24	128	24.5	191	32.5	-21	37.4	159	02.6	-13	34.6	63	50.1	+20	46.3	268	54.4	-12	51.1
Dif	—		-9		+5		+6		+7		+25		0		+24			

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 17 ^d 2 PHE { 4 ^h : 56:2 12 ^h : 56:4 20 ^h : 56:5 SD: 15:3 PMG: 1 ^h 32 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	44.1	-17	56.5	337	48.1	+6	42.7	60 N	6 41	7 32	8 20	19 45	82	8 20	13
1	191	44.0		55.8	352	20.3 ¹³²		31.9 ¹⁰⁸	58	37	25	10	47	79	17	15
2	206	43.8		55.1	6	52.4 ¹³¹		21.1 ¹⁰⁸	56	33	18	8 00	48	77	14	18
3	221	43.7		54.5	21	24.5 ¹³¹	+6	10.2 ¹⁰⁹	54	30	13	7 52	50	74	12	20
4	236	43.6		53.8	35	56.6 ¹³¹	+5	59.3 ¹⁰⁹	52	26	07	44	51	72	10	22
5	251	43.5	-17	53.1	50	28.8 ¹³²	+5	48.4 ¹⁰⁹	50	6 23	7 02	7 38	19 52	70	8 08	24
6	266	43.4	-17	52.4	65	00.9 ¹³¹	+5	37.4 ¹¹⁰	45	6 16	6 52	7 23	19 54	67	8 04	27
7	281	43.3		51.8	79	33.0 ¹³¹		26.4 ¹¹⁰	40	10	42	11	56	63	8 01	30
8	296	43.2		51.1	94	05.2 ¹³²		15.4 ¹¹⁰	35	6 04	34	7 01	19 58	60	7 58	32
9	311	43.1		50.4	108	37.3 ¹³¹	+5	04.3 ¹¹¹	30	5 58	27	6 52	20 00	57	55	35
10	326	43.0		49.7	123	09.4 ¹³¹	+4	53.2 ¹¹¹	20	47	13	36	02	54	51	39
11	341	42.9	-17	49.1	137	41.6 ¹³²	+4	42.1 ¹¹¹	10 N	5 35	6 01	6 23	20 04	50	7 47	42
12	356	42.8	-17	48.4	152	13.7 ¹³¹	+4	30.9 ¹¹²	0	5 23	5 48	6 10	20 07	46	7 43	46
13	11	42.7		47.7	166	45.8 ¹³¹		19.7 ¹¹²	10 S	5 08	34	5 57	09	43	39	49
14	26	42.6		47.0	181	17.9 ¹³¹	+4	08.5 ¹¹²	20	4 51	19	42	11	39	35	53
15	41	42.5		46.3	195	50.0 ¹³¹	+3	57.3 ¹¹²	30	29	5 00	26	14	35	30	57
16	56	42.4		45.7	210	22.1 ¹³¹		46.0 ¹¹³	35	4 15	4 49	16	15	33	27	60
17	71	42.3	-17	45.0	224	54.2 ¹³¹	+3	34.7 ¹¹³	40	3 58	4 35	5 05	20 17	30	7 24	62
18	86	42.2	-17	44.3	239	26.3 ¹³¹	+3	23.4 ¹¹³	45	3 36	4 19	4 53	20 19	27	7 20	66
19	101	42.0		43.6	253	58.4 ¹³¹		12.1 ¹¹³	50	3 07	3 58	37	21	24	16	69
20	116	41.9		42.9	268	30.5 ¹³¹	+3	00.7 ¹¹⁴	52	2 52	48	29	23	21	14	71
21	131	41.8		42.2	283	02.5 ¹³⁰	+2	49.3 ¹¹⁴	54	34	36	21	24	20	11	74
22	146	41.7		41.6	297	34.6 ¹³¹		37.9 ¹¹⁴	56	2 11	23	11	25	18	09	75
23	161	41.6		40.9	312	06.6 ¹³⁰		26.5 ¹¹⁴	58	1 39	3 07	4 01	26	16	06	78
24	176	41.5	-17	40.2	326	38.7 ¹³¹	+2	15.1 ¹¹⁴	60 S	** **	2 48	3 48	20 28	13	7 03	81

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 23 ^m 8		Mag: -3.9 PMG: 11 ^h 14 ^m			Mag: +1.2 PMG: 13 ^h 23 ^m			Mag: -2.6 PMG: 19 ^h 41 ^m			Mag: +0.6 PMG: 6 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	128	24.5	191	32.5	-21	37.4	159	02.6	-13	34.6	63	50.1	+20	46.3	268	54.4	-12	51.1
1	143	27.0	206	31.6		37.0	174	03.2		33.9	78	52.6		46.3	283	56.8		51.2
2	158	29.5	221	30.7		36.5	189	03.7		33.2	93	55.0		46.3	298	59.1		51.2
3	173	31.9	236	29.9		36.0	204	04.3		32.5	108	57.5		46.3	314	01.5		51.2
4	188	34.4	251	29.0		35.6	219	04.9		31.8	124	00.0		46.3	329	03.9		51.2
5	203	36.9	266	28.1	-21	35.1	234	05.4	-13	31.1	139	02.5	+20	46.4	344	06.3	-12	51.2
6	218	39.3	281	27.3	-21	34.6	249	06.0	-13	30.4	154	04.9	+20	46.4	359	08.6	-12	51.3
7	233	41.8	296	26.4		34.1	264	06.5		29.7	169	07.4		46.4	14	11.0		51.3
8	248	44.3	311	25.5		33.7	279	07.1		29.1	184	09.9		46.4	29	13.4		51.3
9	263	46.7	326	24.7		33.2	294	07.7		28.4	199	12.4		46.4	44	15.8		51.3
10	278	49.2	341	23.8		32.7	309	08.2		27.7	214	14.9		46.4	59	18.1		51.3
11	293	51.7	356	22.9	-21	32.2	324	08.8	-13	27.0	229	17.3	+20	46.4	74	20.5	-12	51.3
12	308	54.1	11	22.1	-21	31.8	339	09.3	-13	26.3	244	19.8	+20	46.4	89	22.9	-12	51.4
13	323	56.6	26	21.2		31.3	354	09.9		25.6	259	22.3		46.4	104	25.3		51.4
14	338	59.0	41	20.3		30.8	9	10.5		24.9	274	24.8		46.4	119	27.6		51.4
15	354	01.5	56	19.5		30.3	24	11.0		24.2	289	27.2		46.4	134	30.0		51.4
16	9	04.0	71	18.6		29.8	39	11.6		23.5	304	29.7		46.4	149	32.4		51.4
17	24	06.4	86	17.7	-21	29.3	54	12.1	-13	22.8	319	32.2	+20	46.5	164	34.8	-12	51.4
18	39	08.9	101	16.9	-21	28.8	69	12.7	-13	22.1	334	34.6	+20	46.5	179	37.2	-12	51.5
19	54	11.4	116	16.0		28.4	84	13.3		21.4	349	37.1		46.5	194	39.5		51.5
20	69	13.8	131	15.2		27.9	99	13.8		20.8	4	39.6		46.5	209	41.9		51.5
21	84	16.3	146	14.3		27.4	114	14.4		20.1	19	42.1		46.5	224	44.3		51.5
22	99	18.8	161	13.4		26.9	129	15.0		19.4	34	44.5		46.5	239	46.7		51.5
23	114	21.2	176	12.6		26.4	144	15.5		18.7	49	47.0		46.5	254	49.0		51.5
24	129	23.7	191	11.7	-21	25.9	159	16.1	-13	18.0	64	49.5	+20	46.5	269	51.4	-12	51.6
Dif	—		-9		+5		+6		+7		+25		0		+24			0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 13 ^m 3				Edad: 18 ^d 2 PHE { SD: 15/4 PMG: 2 ^h 18 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m		
0	176	41.5	-17	40.2	326	38.7	+2	15.1	60 N	16 09	16 57	17 48	21 07 83		8 33 13			
1	191	41.4		39.5	341	10.7 ¹³⁰	+2	03.6 ¹¹⁵	58	20	17 04	52	06 80		32 16			
2	206	41.3		38.8	355	42.7 ¹³⁰	+1	52.2 ¹¹⁴	56	29	11	56	05 77		32 18			
3	221	41.2		38.1	10	14.7 ¹³⁰		40.7 ¹¹⁵	54	37	16	17 59	04 75		32 20			
4	236	41.1		37.5	24	46.7 ¹³⁰		29.2 ¹¹⁵	52	44	21	18 02	03 73		32 22			
5	251	41.0	-17	36.8	39	18.6 ¹²⁹	+1	17.7 ¹¹⁵	50	16 51	17 26	18 05	21 02 72		8 32 23			
6	266	40.9	-17	36.1	53	50.6 ¹³⁰	+1	06.1 ¹¹⁶	45	17 05	17 37	18 12	21 01 67		8 31 27			
7	281	40.8		35.4	68	22.5 ¹²⁹	+0	54.6 ¹¹⁵	40	17	46	18	20 59 65		31 30			
8	296	40.7		34.7	82	54.4 ¹²⁹		43.0 ¹¹⁶	35	27	17 53	24	58 62		30 34			
9	311	40.6		34.0	97	26.3 ¹²⁹		31.5 ¹¹⁵	30	36	18 01	29	57 60		30 36			
10	326	40.5		33.3	111	58.2 ¹²⁹		19.9 ¹¹⁶	20	17 51	14	40	56 55		30 39			
11	341	40.5	-17	32.6	126	30.1 ¹²⁹	+0	08.3 ¹¹⁶	10 N	18 04	18 26	18 52	20 54 51		8 29 44			
12	356	40.4	-17	31.9	141	02.0 ¹²⁹	-0	03.3 ¹¹⁶	0	18 17	18 39	19 04	20 53 48		8 29 47			
13	11	40.3		31.3	155	33.8 ¹²⁸		14.8 ¹¹⁵	10 S	30	18 52	18	52 44		28 51			
14	26	40.2		30.6	170	05.6 ¹²⁸		26.4 ¹¹⁶	20	43	19 07	34	50 41		28 54			
15	41	40.1		29.9	184	37.4 ¹²⁸		38.1 ¹¹⁷	30	18 59	25	19 56	49 36		27 59			
16	56	40.0		29.2	199	09.1 ¹²⁷	-0	49.7 ¹¹⁶	35	19 09	36	20 10	48 34		27 61			
17	71	39.9	-17	28.5	213	40.9 ¹²⁸	-1	01.3 ¹¹⁶	40	19 19	19 49	20 26	20 47 31		8 26 64			
18	86	39.8	-17	27.8	228	12.6 ¹²⁷	-1	12.9 ¹¹⁶	45	19 32	20 05	20 47	20 46 28		8 26 67			
19	101	39.7		27.1	242	44.3 ¹²⁷		24.5 ¹¹⁶	50	47	25	21 15	45 24		25 71			
20	116	39.6		26.4	257	16.0 ¹²⁷		36.1 ¹¹⁶	52	19 54	35	30	44 23		25 73			
21	131	39.5		25.7	271	47.6 ¹²⁶		47.7 ¹¹⁶	54	20 02	46	21 47	44 20		25 74			
22	146	39.4		25.0	286	19.2 ¹²⁶	-1	59.3 ¹¹⁶	56	11	20 59	22 08	43 19		24 77			
23	161	39.3		24.3	300	50.8 ¹²⁶	-2	11.0 ¹¹⁷	58	22	21 14	22 37	42 16		24 79			
24	176	39.2	-17	23.6	315	22.4 ¹²⁶	-2	22.6 ¹¹⁶	60 S	20 34	21 32	23 26	20 41 14		8 24 82			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 19 ^m 9		Mag: -3.9 PMG: 11 ^h 16 ^m				Mag: +1.2 PMG: 13 ^h 22 ^m				Mag: -2.6 PMG: 19 ^h 37 ^m				Mag: +0.6 PMG: 6 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	129	23.7	191	11.7	-21	25.9	159	16.1	-13	18.0	64	49.5	+20	46.5	269	51.4	-12	51.6
1	144	26.2	206	10.9		25.4	174	16.6		17.3	79	51.9		46.5	284	53.8		51.6
2	159	28.6	221	10.0		24.9	189	17.2		16.6	94	54.4		46.5	299	56.2		51.6
3	174	31.1	236	09.1		24.4	204	17.8		15.9	109	56.9		46.5	314	58.6		51.6
4	189	33.5	251	08.3		23.9	219	18.3		15.2	124	59.3		46.5	330	00.9		51.6
5	204	36.0	266	07.4	-21	23.4	234	18.9	-13	14.5	140	01.8	+20	46.6	345	03.3	-12	51.6
6	219	38.5	281	06.6	-21	22.9	249	19.5	-13	13.8	155	04.3	+20	46.6	0	05.7	-12	51.7
7	234	40.9	296	05.7		22.4	264	20.0		13.1	170	06.8		46.6	15	08.1		51.7
8	249	43.4	311	04.8		21.9	279	20.6		12.4	185	09.2		46.6	30	10.4		51.7
9	264	45.9	326	04.0		21.4	294	21.2		11.7	200	11.7		46.6	45	12.8		51.7
10	279	48.3	341	03.1		20.9	309	21.7		11.0	215	14.2		46.6	60	15.2		51.7
11	294	50.8	356	02.3	-21	20.4	324	22.3	-13	10.3	230	16.6	+20	46.6	75	17.6	-12	51.7
12	309	53.3	11	01.4	-21	19.9	339	22.8	-13	09.6	245	19.1	+20	46.6	90	20.0	-12	51.8
13	324	55.7	26	00.6		19.4	354	23.4		08.9	260	21.6		46.6	105	22.3		51.8
14	339	58.2	40	59.7		18.9	9	24.0		08.3	275	24.0		46.6	120	24.7		51.8
15	355	00.6	55	58.9		18.4	24	24.5		07.6	290	26.5		46.7	135	27.1		51.8
16	10	03.1	70	58.0		17.8	39	25.1		06.9	305	28.9		46.7	150	29.5		51.8
17	25	05.6	85	57.2	-21	17.3	54	25.7	-13	06.2	320	31.4	+20	46.7	165	31.9	-12	51.8
18	40	08.0	100	56.3	-21	16.8	69	26.2	-13	05.5	335	33.9	+20	46.7	180	34.3	-12	51.9
19	55	10.5	115	55.4		16.3	84	26.8		04.8	350	36.3		46.7	195	36.6		51.9
20	70	13.0	130	54.6		15.8	99	27.4		04.1	5	38.8		46.7	210	39.0		51.9
21	85	15.4	145	53.7		15.3	114	27.9		03.4	20	41.3		46.7	225	41.4		51.9
22	100	17.9	160	52.9		14.7	129	28.5		02.7	35	43.7		46.7	240	43.8		51.9
23	115	20.4	175	52.0		14.2	144	29.1		02.0	50	46.2		46.7	255	46.2		51.9
24	130	22.8	190	51.2	-21	13.7	159	29.6	-13	01.3	65	48.6	+20	46.7	270	48.5	-12	51.9
Dif	—		-9		+5		+6		+7		+25		0		+24		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 5				Edad: 19 ^d 2 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/5 SD: 15:6 PMG: 3 ^h 04 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	39.2	-17	23.6	315	22.4	-2	22.6	60 N	6	37	7	28	8	16	22	30
1	191	39.1		22.9	329	53.9		34.2	58		34	21	8	05	26	81	
2	206	39.0		22.2	344	25.4		45.8	56		30	15	7	56	22	79	
3	221	38.9		21.5	358	56.9		-2 57.4	54		27	10	48	19	77	52	22
4	236	38.9		20.8	13	28.3		-3 08.9	52		24	05	41	16	75	54	23
5	251	38.8	-17	20.1	27	59.7		-3 20.5	50	6	21	7	00	7	35	22	14
6	266	38.7	-17	19.4	42	31.1		-3 32.1	45	6	14	6	50	7	21	22	08
7	281	38.6		18.7	57	02.5		43.6	40		08	41	7	09	04	66	9
8	296	38.5		18.0	71	33.8		-3 55.2	35	6	03	33	6	59	22	00	63
9	311	38.4		17.3	86	05.1		-4 06.7	30	5	57	26	51	21	57	60	06
10	326	38.3		16.6	100	36.3		18.2	20		46	13	36	51	56	09	42
11	341	38.2	-17	15.9	115	07.5		-4 29.7	10 N	5	35	6	01	6	22	21	45
12	356	38.1	-17	15.2	129	38.7		-4 41.2	0	5	23	5	48	6	10	21	41
13	11	38.0		14.5	144	09.8		-4 52.7	10 S	5	09		35	5	57	36	46
14	26	38.0		13.8	158	40.9		-5 04.2	20	4	53		20	44	31	42	22
15	41	37.9		13.1	173	12.0		15.6	30		31	5	02	28	25	39	26
16	56	37.8		12.4	187	43.0		27.0	35		17	4	51	19	22	36	28
17	71	37.7	-17	11.7	202	14.0		-5 38.4	40	4	01	4	38	5	08	21	18
18	86	37.6	-17	11.0	216	44.9		-5 49.8	45	3	40	4	22	4	55	21	14
19	101	37.5		10.3	231	15.8		-6 01.2	50	3	12	4	02	40	09	27	36
20	116	37.4		09.6	245	46.6		12.5	52	2	58	3	52	33	07	25	38
21	131	37.4		08.8	260	17.5		23.8	54		41	41	25	04	23	39	77
22	146	37.3		08.1	274	48.2		35.1	56	2	19	28	16	21	02	20	41
23	161	37.2		07.4	289	18.9		46.3	58	1	50	3	13	4	06	20	58
24	176	37.1	-17	06.7	303	49.6		-6 57.6	60 S	1	02	2	55	3	54	20	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 16 ^m 0		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.2 PMG: 13 ^h 22 ^m		Mag: -2.6 PMG: 19 ^h 34 ^m		Mag: +0.6 PMG: 5 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	130	22.8	190	51.2	-21	13.7	159	29.6	-13	01.3	65	48.6	+20	46.7	270	48.5	-12	51.9
1	145	25.3	205	50.3		13.2	174	30.2	-13	00.6	80	51.1		46.8	285	50.9		52.0
2	160	27.8	220	49.5		12.7	189	30.8	-12	59.9	95	53.6		46.8	300	53.3		52.0
3	175	30.2	235	48.6		12.1	204	31.3		59.2	110	56.0		46.8	315	55.7		52.0
4	190	32.7	250	47.8		11.6	219	31.9		58.5	125	58.5		46.8	330	58.1		52.0
5	205	35.1	265	46.9	-21	11.1	234	32.5	-12	57.8	141	00.9	+20	46.8	346	00.5	-12	52.0
6	220	37.6	280	46.1	-21	10.6	249	33.1	-12	57.1	156	03.4	+20	46.8	1	02.8	-12	52.0
7	235	40.1	295	45.2		10.0	264	33.6		56.4	171	05.9		46.8	16	05.2		52.1
8	250	42.5	310	44.4		09.5	279	34.2		55.7	186	08.3		46.8	31	07.6		52.1
9	265	45.0	325	43.6		09.0	294	34.8		55.0	201	10.8		46.8	46	10.0		52.1
10	280	47.5	340	42.7		08.4	309	35.3		54.3	216	13.2		46.8	61	12.4		52.1
11	295	49.9	355	41.9	-21	07.9	324	35.9	-12	53.6	231	15.7	+20	46.9	76	14.8	-12	52.1
12	310	52.4	10	41.0	-21	07.4	339	36.5	-12	52.9	246	18.2	+20	46.9	91	17.1	-12	52.1
13	325	54.9	25	40.2		06.8	354	37.0		52.2	261	20.6		46.9	106	19.5		52.1
14	340	57.3	40	39.3		06.3	9	37.6		51.5	276	23.1		46.9	121	21.9		52.2
15	355	59.8	55	38.5		05.8	24	38.2		50.8	291	25.5		46.9	136	24.3		52.2
16	11	02.2	70	37.6		05.2	39	38.7		50.1	306	28.0		46.9	151	26.7		52.2
17	26	04.7	85	36.8	-21	04.7	54	39.3	-12	49.4	321	30.4	+20	46.9	166	29.1	-12	52.2
18	41	07.2	100	35.9	-21	04.1	69	39.9	-12	48.7	336	32.9	+20	46.9	181	31.4	-12	52.2
19	56	09.6	115	35.1		03.6	84	40.5		48.0	351	35.3		46.9	196	33.8		52.2
20	71	12.1	130	34.3		03.1	99	41.0		47.2	6	37.8		47.0	211	36.2		52.2
21	86	14.6	145	33.4		02.5	114	41.6		46.5	21	40.3		47.0	226	38.6		52.3
22	101	17.0	160	32.6		02.0	129	42.2		45.8	36	42.7		47.0	241	41.0		52.3
23	116	19.5	175	31.7		01.4	144	42.7		45.1	51	45.2		47.0	256	43.4		52.3
24	131	22.0	190	30.9	-21	00.9	159	43.3	-12	44.4	66	47.6	+20	47.0	271	45.8	-12	52.3
Dif	—		-8		+5		+6		+7		+25		0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 20 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:0 PMG: 3 ^h 52 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	37.1	-17 06.7	303	49.6	-6 57.6		60 N	16 15	17 02	17 53	23 54 86	9 00 18	
1	191	37.0	06.0	318	20.2 ¹¹⁶	-7 08.8 ¹¹²		58	25	09	56	47 83	05 20	
2	206	36.9	05.3	332	50.8 ¹¹⁶	20.0 ¹¹²		56	33	14	17 59	41 80	10 22	
3	221	36.8	04.6	347	21.4 ¹¹⁶	31.1 ¹¹¹		54	41	20	18 03	36 78	14 22	
4	236	36.8	03.9	1	51.8 ¹¹⁴	42.2 ¹¹¹		52	48	25	05	31 76	17 27	
5	251	36.7	-17 03.2	16	22.3 ¹¹⁵	-7 53.3 ¹¹¹		50	16 54	17 29	18 08	23 27 74	9 20 29	
6	266	36.6	-17 02.4	30	52.7 ¹¹⁴	-8 04.3 ¹¹⁰		45	17 08	17 39	18 14	23 17 70	9 27 32	
7	281	36.5	01.7	45	23.0 ¹¹³	15.3 ¹¹⁰		40	19	48	20	10 67	33 35	
8	296	36.4	01.0	59	53.3 ¹¹³	26.3 ¹¹⁰		35	29	17 55	26	23 03 64	38 38	
9	311	36.4	-17 00.3	74	23.5 ¹¹²	37.3 ¹¹⁰		30	37	18 02	31	22 57 62	43 40	
10	326	36.3	-16 59.6	88	53.7 ¹¹²	48.2 ¹⁰⁹		20	17 52	15	41	47 58	51 44	
11	341	36.2	-16 58.9	103	23.8 ¹¹¹	-8 59.0 ¹⁰⁸		10 N	18 05	18 27	18 52	22 38 55	9 58 47	
12	356	36.1	-16 58.2	117	53.9 ¹¹¹	-9 09.8 ¹⁰⁸		0	18 17	18 39	19 04	22 30 52	10 04 51	
13	11	36.0	57.4	132	23.9 ¹¹⁰	20.6 ¹⁰⁸		10 S	29	18 51	17	22 49	10 54	
14	26	36.0	56.7	146	53.9 ¹¹⁰	31.3 ¹⁰⁷		20	43	19 06	34	13 46	17 58	
15	41	35.9	56.0	161	23.8 ¹⁰⁹	42.0 ¹⁰⁷		30	18 58	24	19 54	22 04 42	25 62	
16	56	35.8	55.3	175	53.6 ¹⁰⁸	-9 52.7 ¹⁰⁷		35	19 07	35	20 08	21 58 40	30 64	
17	71	35.7	-16 54.6	190	23.4 ¹⁰⁸	-10 03.3 ¹⁰⁶		40	19 17	19 47	20 24	21 52 37	10 35 66	
18	86	35.6	-16 53.8	204	53.2 ¹⁰⁸	-10 13.9 ¹⁰⁶		45	19 29	20 03	20 44	21 45 34	10 41 70	
19	101	35.6	53.1	219	22.9 ¹⁰⁷	24.4 ¹⁰⁵		50	44	22	21 11	36 31	48 74	
20	116	35.5	52.4	233	52.5 ¹⁰⁶	34.8 ¹⁰⁴		52	51	31	25	32 29	52 75	
21	131	35.4	51.7	248	22.0 ¹⁰⁵	45.2 ¹⁰⁴		54	19 59	42	21 41	27 28	10 56 77	
22	146	35.3	51.0	262	51.5 ¹⁰⁵	-10 55.6 ¹⁰⁴		56	20 08	20 54	22 01	22 26	11 00 79	
23	161	35.3	50.2	277	21.0 ¹⁰⁵	-11 05.9 ¹⁰³		58	17	21 09	22 27	17 23	04 82	
24	176	35.2	-16 49.5	291	50.4 ¹⁰⁴	-11 16.2 ¹⁰³		60 S	20 29	21 26	23 07	21 11 20	11 09 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 12 ^m 0		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +1.2 PMG: 13 ^h 21 ^m		Mag: -2.6 PMG: 19 ^h 30 ^m		Mag: +0.5 PMG: 5 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	131	22.0	190 30.9	-21 00.9	159 43.3	-12 44.4	66 47.6	+20 47.0	271 45.8	-12 52.3
1	146	24.4	205 30.1	-21 00.3	174 43.9	43.7	81 50.1	47.0	286 48.1	52.3
2	161	26.9	220 29.2	-20 59.8	189 44.5	43.0	96 52.5	47.0	301 50.5	52.3
3	176	29.4	235 28.4	59.2	204 45.0	42.3	111 55.0	47.0	316 52.9	52.3
4	191	31.8	250 27.5	58.7	219 45.6	41.6	126 57.4	47.1	331 55.3	52.4
5	206	34.3	265 26.7	-20 58.1	234 46.2	-12 40.9	141 59.9	+20 47.1	346 57.7	-12 52.4
6	221	36.7	280 25.9	-20 57.6	249 46.7	-12 40.2	157 02.3	+20 47.1	2 00.1	-12 52.4
7	236	39.2	295 25.0	57.0	264 47.3	39.5	172 04.8	47.1	17 02.5	52.4
8	251	41.7	310 24.2	56.5	279 47.9	38.8	187 07.2	47.1	32 04.9	52.4
9	266	44.1	325 23.3	55.9	294 48.5	38.1	202 09.7	47.1	47 07.2	52.4
10	281	46.6	340 22.5	55.4	309 49.0	37.4	217 12.1	47.1	62 09.6	52.4
11	296	49.1	355 21.7	-20 54.8	324 49.6	-12 36.7	232 14.6	+20 47.1	77 12.0	-12 52.5
12	311	51.5	10 20.8	-20 54.2	339 50.2	-12 36.0	247 17.0	+20 47.2	92 14.4	-12 52.5
13	326	54.0	25 20.0	53.7	354 50.8	35.3	262 19.5	47.2	107 16.8	52.5
14	341	56.5	40 19.2	53.1	9 51.3	34.6	277 21.9	47.2	122 19.2	52.5
15	356	58.9	55 18.3	52.5	24 51.9	33.8	292 24.4	47.2	137 21.6	52.5
16	12	01.4	70 17.5	52.0	39 52.5	33.1	307 26.8	47.2	152 24.0	52.5
17	27	03.9	85 16.7	-20 51.4	54 53.1	-12 32.4	322 29.2	+20 47.2	167 26.3	-12 52.5
18	42	06.3	100 15.8	-20 50.8	69 53.6	-12 31.7	337 31.7	+20 47.2	182 28.7	-12 52.5
19	57	08.8	115 15.0	50.3	84 54.2	31.0	352 34.1	47.2	197 31.1	52.6
20	72	11.2	130 14.2	49.7	99 54.8	30.3	7 36.6	47.3	212 33.5	52.6
21	87	13.7	145 13.3	49.1	114 55.4	29.6	22 39.0	47.3	227 35.9	52.6
22	102	16.2	160 12.5	48.6	129 55.9	28.9	37 41.5	47.3	242 38.3	52.6
23	117	18.6	175 11.7	48.0	144 56.5	28.2	52 43.9	47.3	257 40.7	52.6
24	132	21.1	190 10.8	-20 47.4	159 57.1	-12 27.5	67 46.4	+20 47.3	272 43.1	-12 52.6
Dif	—		-8 +6		+6 +7		+24 0		+24 0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 21 ^d 2	PHE { 4 ^h : 58 ^m /2 12 ^h : 58 ^m /4 20 ^h : 58 ^m /5									
	PMG: 12 ^h 13 ^m 7					PMG: 4 ^h 42 ^m		R ^o : 53 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	h m	h m	h m	h m m		h m m	
0	176	35.2	-16 49.5	291	50.4	-11 16.2	60 N	6 34	7 24	8 11	** ** *		9 18 22	
1	191	35.1	48.8	306	19.7 ¹⁰³	26.4 ¹⁰²	58	30	18	8 01	** ** *		25 26	
2	206	35.0	48.1	320	48.9 ¹⁰²	36.5 ¹⁰¹	56	27	12	7 53	** ** *		32 28	
3	221	35.0	47.3	335	18.1 ¹⁰²	46.6 ¹⁰¹	54	24	06	45	** ** *		38 30	
4	236	34.9	46.6	349	47.3 ¹⁰²	-11 56.6 ¹⁰⁰	52	21	7 02	38	** ** *		44 31	
5	251	34.8	-16 45.9	4	16.3 ¹⁰⁰	-12 06.6 ¹⁰⁰	50	6 18	6 57	7 32	** ** *		9 49 33	
6	266	34.7	-16 45.2	18	45.3 ¹⁰⁰	-12 16.5 ⁹⁹	45	6 12	6 47	7 19	** ** *		9 59 37	
7	281	34.7	44.4	33	14.3 ¹⁰⁰	26.3 ⁹⁸	40	07	39	7 07	** ** *		10 08 40	
8	296	34.6	43.7	47	43.2 ⁹⁹	36.1 ⁹⁸	35	6 01	31	6 58	** ** *		16 42	
9	311	34.5	43.0	62	12.0 ⁹⁸	45.9 ⁹⁸	30	5 56	25	50	23 59	64	23 44	
10	326	34.4	42.3	76	40.7 ⁹⁷	-12 55.5 ⁹⁶	20	46	12	35	45 61		35 47	
11	341	34.4	-16 41.5	91	09.4 ⁹⁷	-13 05.1 ⁹⁶	10 N	5 35	6 00	6 22	23 33	58	10 45 50	
12	356	34.3	-16 40.8	105	38.0 ⁹⁶	-13 14.6 ⁹⁵	0	5 24	5 49	6 10	23 22	55	10 55 53	
13	11	34.2	40.1	120	06.6 ⁹⁶	24.1 ⁹⁵	10 S	5 10	36	5 58	23 11	52	11 04 57	
14	26	34.2	39.3	134	35.0 ⁹⁴	33.5 ⁹⁴	20	4 54	21	45	22 59	50	15 59	
15	41	34.1	38.6	149	03.4 ⁹⁴	42.8 ⁹³	30	33	5 04	30	46 46		27 62	
16	56	34.0	37.9	163	31.8 ⁹⁴	-13 52.0 ⁹²	35	20	4 53	21	38 45		34 64	
17	71	33.9	-16 37.2	178	00.1 ⁹³	-14 01.2 ⁹²	40	4 04	4 41	5 10	22 29	43	11 41 68	
18	86	33.9	-16 36.4	192	28.3 ⁹²	-14 10.3 ⁹¹	45	3 44	4 25	4 58	22 19	40	11 51 70	
19	101	33.8	35.7	206	56.4 ⁹¹	19.3 ⁹⁰	50	17	4 06	44	07 36		12 02 73	
20	116	33.7	35.0	221	24.5 ⁹¹	28.3 ⁹⁰	52	3 03	3 57	37	22 01	35	07 75	
21	131	33.7	34.2	235	52.5 ⁹⁰	37.2 ⁸⁹	54	2 47	46	29	21 55	33	13 77	
22	146	33.6	33.5	250	20.4 ⁸⁹	45.9 ⁸⁷	56	27	34	20	48 31		19 79	
23	161	33.5	32.8	264	48.3 ⁸⁹	-14 54.7 ⁸⁸	58	2 01	20	11	40 29		26 82	
24	176	33.5	-16 32.0	279	16.1 ⁸⁸	-15 03.3 ⁸⁶	60 S	1 21	3 02	4 00	21 31	26	12 34 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 15 ^h 08 ^m 1		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: +1.2 PMG: 13 ^h 20 ^m		Mag: -2.5 PMG: 19 ^h 26 ^m		Mag: +0.5 PMG: 5 ^h 48 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	132	21.1	190	10.8	-20 47.4	159 57.1	-12 27.5	67 46.4	+20 47.3	272 43.1	-12 52.6
1	147	23.6	205	10.0	46.9	174 57.7	26.8	82 48.8	47.3	287 45.5	52.6
2	162	26.0	220	09.2	46.3	189 58.2	26.1	97 51.2	47.3	302 47.9	52.6
3	177	28.5	235	08.3	45.7	204 58.8	25.3	112 53.7	47.3	317 50.2	52.7
4	192	31.0	250	07.5	45.1	219 59.4	24.6	127 56.1	47.4	332 52.6	52.7
5	207	33.4	265	06.7	-20 44.5	235 00.0	-12 23.9	142 58.6	+20 47.4	347 55.0	-12 52.7
6	222	35.9	280	05.9	-20 44.0	250 00.5	-12 23.2	158 01.0	+20 47.4	2 57.4	-12 52.7
7	237	38.3	295	05.0	43.4	265 01.1	22.5	173 03.5	47.4	17 59.8	52.7
8	252	40.8	310	04.2	42.8	280 01.7	21.8	188 05.9	47.4	33 02.2	52.7
9	267	43.3	325	03.4	42.2	295 02.3	21.1	203 08.3	47.4	48 04.6	52.7
10	282	45.7	340	02.6	41.6	310 02.9	20.4	218 10.8	47.4	63 07.0	52.7
11	297	48.2	355	01.7	-20 41.1	325 03.4	-12 19.7	233 13.2	+20 47.5	78 09.4	-12 52.8
12	312	50.7	10 00.9	-20 40.5	340 04.0	-12 18.9	248 15.6	+20 47.5	93 11.8	-12 52.8	
13	327	53.1	25 00.1	39.9	355 04.6	18.2	263 18.1	47.5	108 14.2	52.8	
14	342	55.6	39 59.3	39.3	10 05.2	17.5	278 20.5	47.5	123 16.6	52.8	
15	357	58.1	54 58.4	38.7	25 05.7	16.8	293 23.0	47.5	138 18.9	52.8	
16	13	00.5	69 57.6	38.1	40 06.3	16.1	308 25.4	47.5	153 21.3	52.8	
17	28	03.0	84 56.8	-20 37.5	55 06.9	-12 15.4	323 27.8	+20 47.5	168 23.7	-12 52.8	
18	43	05.5	99 56.0	-20 36.9	70 07.5	-12 14.7	338 30.3	+20 47.6	183 26.1	-12 52.8	
19	58	07.9	114 55.1	36.3	85 08.1	14.0	353 32.7	47.6	198 28.5	52.9	
20	73	10.4	129 54.3	35.7	100 08.6	13.2	8 35.1	47.6	213 30.9	52.9	
21	88	12.8	144 53.5	35.1	115 09.2	12.5	23 37.6	47.6	228 33.3	52.9	
22	103	15.3	159 52.7	34.5	130 09.8	11.8	38 40.0	47.6	243 35.7	52.9	
23	118	17.8	174 51.9	33.9	145 10.4	11.1	53 42.5	47.6	258 38.1	52.9	
24	133	20.2	189 51.0	-20 33.4	160 11.0	-12 10.4	68 44.9	+20 47.6	273 40.5	-12 52.9	
Dif	—		-8 +6		+6 +7		+24 0		+24 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 22 ^d 2 PHE { 4 ^h : 58:7 12 ^h : 58:8 20 ^h : 59:0 PMG: 5 ^h 35 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	33.5	-16	32.0	279	16.1	-15	03.3	60 N	16 20	17 07	17 57	1 20	84	9 40	31		
1	191	33.4		31.3	293	43.8	87	11.8	58	29	13	18 00	10 81	9 51	33			
2	206	33.3		30.5	308	11.4	86	20.3	56	38	18	03	1 01	79	10 00	35		
3	221	33.3		29.8	322	39.0	86	28.7	54	45	24	06	0 54	76	08 38			
4	236	33.2		29.1	337	06.5	85	37.0	52	52	28	09	47	75	15	39		
5	251	33.1	-16	28.3	351	34.0	85	-15 45.2	50	16 58	17 32	18 11	0 41	73	10 22	41		
6	266	33.1	-16	27.6	6	01.3	83	-15 53.3	45	17 11	17 42	18 17	0 27	70	10 36	44		
7	281	33.0		26.9	20	28.6	83	-16 01.3	40	22	50	22	17	67	48	46		
8	296	32.9		26.1	34	55.8	82	09.3	35	31	17 57	28	0 07	66	10 58	48		
9	311	32.9		25.4	49	23.0	82	17.1	30	39	18 04	32	** ** *	**	11 07	49		
10	326	32.8		24.6	63	50.1	81	24.9	20	17 53	16	42	** ** *	**	22	52		
11	341	32.7	-16	23.9	78	17.1	80	-16 32.5	10 N	18 06	18 27	18 53	** ** *	**	11 35	55		
12	356	32.7	-16	23.2	92	44.0	79	-16 40.1	0	18 17	18 39	19 04	** ** *	**	11 48	56		
13	11	32.6		22.4	107	10.9	79	47.6	10 S	29	18 51	17	** ** *	**	12 01	58		
14	26	32.5		21.7	121	37.7	78	-16 55.0	20	42	19 05	33	23	49	54	61		
15	41	32.5		20.9	136	04.5	78	-17 02.2	30	18 57	22	19 53	32	52	29	64		
16	56	32.4		20.2	150	31.1	76	09.4	35	19 05	33	20 06	23	51	38	65		
17	71	32.4	-16	19.4	164	57.7	76	-17 16.5	40	19 15	19 45	20 21	23	12	49	66		
18	86	32.3	-16	18.7	179	24.2	75	-17 23.5	45	19 27	20 00	20 41	22	59	47			
19	101	32.2		18.0	193	50.7	75	30.3	50	41	19	21 07	43	46	15	69		
20	116	32.2		17.2	208	17.1	74	37.1	52	48	28	20	36	44	22	73		
21	131	32.1		16.5	222	43.4	73	43.8	54	19 55	38	35	28	43	30	74		
22	146	32.1		15.7	237	09.7	73	50.3	56	20 03	20 49	21 54	19	41	38	77		
23	161	32.0		15.0	251	35.8	71	-17 56.8	58	13	21 03	22 18	22	09	39	48		
24	176	31.9	-16	14.2	266	02.0	72	-18 03.1	60 S	20 24	21 19	22 53	21	57	37	81		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 04 ^m 2		Mag: -3.9 PMG: 11 ^h 21 ^m				Mag: +1.2 PMG: 13 ^h 19 ^m				Mag: -2.5 PMG: 19 ^h 22 ^m				Mag: +0.5 PMG: 5 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	20.2	189	51.0	-20	33.4	160	11.0	-12	10.4	68	44.9	+20	47.6	273	40.5	-12	52.9
1	148	22.7	204	50.2		32.8	175	11.5		09.7	83	47.3		47.7	288	42.9		52.9
2	163	25.2	219	49.4		32.2	190	12.1		09.0	98	49.8		47.7	303	45.3		52.9
3	178	27.6	234	48.6		31.5	205	12.7		08.2	113	52.2		47.7	318	47.7		52.9
4	193	30.1	249	47.8		30.9	220	13.3		07.5	128	54.6		47.7	333	50.1		53.0
5	208	32.6	264	46.9	-20	30.3	235	13.9	-12	06.8	143	57.1	+20	47.7	348	52.5	-12	53.0
6	223	35.0	279	46.1	-20	29.7	250	14.4	-12	06.1	158	59.5	+20	47.7	3	54.9	-12	53.0
7	238	37.5	294	45.3		29.1	265	15.0		05.4	174	01.9		47.7	18	57.3		53.0
8	253	40.0	309	44.5		28.5	280	15.6		04.7	189	04.4		47.8	33	59.7		53.0
9	268	42.4	324	43.7		27.9	295	16.2		04.0	204	06.8		47.8	49	02.0		53.0
10	283	44.9	339	42.9		27.3	310	16.8		03.2	219	09.2		47.8	64	04.4		53.0
11	298	47.3	354	42.0	-20	26.7	325	17.3	-12	02.5	234	11.6	+20	47.8	79	06.8	-12	53.0
12	313	49.8	9	41.2	-20	26.1	340	17.9	-12	01.8	249	14.1	+20	47.8	94	09.2	-12	53.0
13	328	52.3	24	40.4		25.5	355	18.5		01.1	264	16.5		47.8	109	11.6		53.1
14	343	54.7	39	39.6		24.9	10	19.1	-12	00.4	279	18.9		47.8	124	14.0		53.1
15	358	57.2	54	38.8		24.2	25	19.7	-11	59.7	294	21.4		47.9	139	16.4		53.1
16	13	59.7	69	38.0		23.6	40	20.3		58.9	309	23.8		47.9	154	18.8		53.1
17	29	02.1	84	37.2	-20	23.0	55	20.8	-11	58.2	324	26.2	+20	47.9	169	21.2	-12	53.1
18	44	04.6	99	36.3	-20	22.4	70	21.4	-11	57.5	339	28.6	+20	47.9	184	23.6	-12	53.1
19	59	07.1	114	35.5		21.8	85	22.0		56.8	354	31.1		47.9	199	26.0		53.1
20	74	09.5	129	34.7		21.2	100	22.6		56.1	9	33.5		47.9	214	28.4		53.1
21	89	12.0	144	33.9		20.5	115	23.2		55.3	24	35.9		48.0	229	30.8		53.1
22	104	14.4	159	33.1		19.9	130	23.8		54.6	39	38.4		48.0	244	33.2		53.1
23	119	16.9	174	32.3		19.3	145	24.3		53.9	54	40.8		48.0	259	35.6		53.2
24	134	19.4	189	31.5	-20	18.7	160	24.9	-11	53.2	69	43.2	+20	48.0	274	38.0	-12	53.2
Dif	—		-8		+6		+6		+7		+24		0		+24			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9				Edad: 23 ^d 2 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 3 20 ^h : 59 ^m 4 PMG: 6 ^h 31 ^m R°: 58 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	31.9	-16	14.2	266	02.0	-18	03.1	60 N	6 30	7 20	8 06	2 44	77	10 11	43	
1	191	31.9		13.5	280	28.0	70	09.3	58	27	14	7 57	31	75	24	45	
2	206	31.8		12.7	294	54.0	70	15.5	56	24	08	49	20	73	35	47	
3	221	31.8		12.0	309	19.9	69	21.5	54	21	7 03	41	10	72	46	47	
4	236	31.7		11.2	323	45.8	69	27.4	52	18	6 59	35	2 02	70	10 54	49	
5	251	31.6	-16	10.5	338	11.5	67	-18 33.2	50	6 16	6 54	7 29	1 54	70	11 03	49	
6	266	31.6	-16	09.7	352	37.3	68	-18 38.8	45	6 10	6 45	7 16	1 37	68	11 20	51	
7	281	31.5		09.0	7	02.9	66	44.4	40	05	37	7 05	24	66	34	53	
8	296	31.5		08.2	21	28.5	66	49.8	35	6 00	30	6 56	13	64	46	54	
9	311	31.4		07.5	35	54.1	66	-18 55.1	30	5 55	23	48	1 03	63	11 56	55	
10	326	31.4		06.7	50	19.5	64	-19 00.3	20	45	12	34	0 46	61	12 14	57	
11	341	31.3	-16	06.0	64	44.9	64	-19 05.4	10 N	5 35	6 00	6 22	0 31	59	12 30	57	
12	356	31.3	-16	05.2	79	10.3	64	-19 10.4	0	5 24	5 49	6 10	0 17	58	12 44	59	
13	11	31.2		04.5	93	35.6	63	15.2	10 S	5 11	37	5 59	0 03	57	12 59	60	
14	26	31.1		03.7	108	00.8	62	19.9	20	4 55	23	46	** ** *	**	13 15	61	
15	41	31.1		03.0	122	26.0	62	24.5	30	35	5 06	31	** ** *	**	33	62	
16	56	31.0		02.2	136	51.1	61	29.0	35	22	4 55	23	** ** *	**	43	64	
17	71	31.0	-16	01.5	151	16.1	60	-19 33.4	40	4 07	4 43	5 13	** ** *	**	13 55	65	
18	86	30.9	-16	00.7	165	41.1	60	-19 37.6	45	3 47	4 28	5 01	23 46	57	14 10	65	
19	101	30.9	-16	00.0	180	06.1	60	41.7	50	22	10	4 47	29	55	27	67	
20	116	30.8	-15	59.2	194	31.0	59	45.6	52	3 09	4 01	41	20	55	35	68	
21	131	30.8		58.4	208	55.8	58	49.5	54	2 53	3 51	33	11	54	44	68	
22	146	30.7		57.7	223	20.6	58	53.2	56	34	39	25	23 00	54	14 55	69	
23	161	30.7		56.9	237	45.3	57	-19 56.8	58	2 10	26	16	22 48	53	15 06	71	
24	176	30.6	-15	56.2	252	10.0	57	-20 00.2	60 S	1 36	3 09	4 05	22 34	52	15 20	72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 00 ^m 2		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +1.2 PMG: 13 ^h 18 ^m		Mag: -2.5 PMG: 19 ^h 18 ^m		Mag: +0.5 PMG: 5 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	134	19.4	189	31.5	-20	18.7	160	24.9	-11	53.2	69	43.2	+20	48.0	274	38.0	-12	53.2
1	149	21.8	204	30.7		18.0	175	25.5		52.5	84	45.6		48.0	289	40.4		53.2
2	164	24.3	219	29.9		17.4	190	26.1		51.8	99	48.1		48.0	304	42.8		53.2
3	179	26.8	234	29.0		16.8	205	26.7		51.0	114	50.5		48.1	319	45.2		53.2
4	194	29.2	249	28.2		16.2	220	27.3		50.3	129	52.9		48.1	334	47.6		53.2
5	209	31.7	264	27.4	-20	15.5	235	27.8	-11	49.6	144	55.3	+20	48.1	349	50.0	-12	53.2
6	224	34.2	279	26.6	-20	14.9	250	28.4	-11	48.9	159	57.8	+20	48.1	4	52.4	-12	53.2
7	239	36.6	294	25.8		14.3	265	29.0		48.2	175	00.2		48.1	19	54.8		53.2
8	254	39.1	309	25.0		13.6	280	29.6		47.4	190	02.6		48.1	34	57.2		53.2
9	269	41.6	324	24.2		13.0	295	30.2		46.7	205	05.0		48.2	49	59.6		53.3
10	284	44.0	339	23.4		12.4	310	30.8		46.0	220	07.4		48.2	65	02.0		53.3
11	299	46.5	354	22.6	-20	11.7	325	31.4	-11	45.3	235	09.9	+20	48.2	80	04.4	-12	53.3
12	314	48.9	9	21.8	-20	11.1	340	31.9	-11	44.5	250	12.3	+20	48.2	95	06.8	-12	53.3
13	329	51.4	24	21.0		10.5	355	32.5		43.8	265	14.7		48.2	110	09.2		53.3
14	344	53.9	39	20.2		09.8	10	33.1		43.1	280	17.1		48.2	125	11.6		53.3
15	359	56.3	54	19.4		09.2	25	33.7		42.4	295	19.5		48.3	140	14.0		53.3
16	14	58.8	69	18.6		08.5	40	34.3		41.7	310	22.0		48.3	155	16.4		53.3
17	30	01.3	84	17.8	-20	07.9	55	34.9	-11	40.9	325	24.4	+20	48.3	170	18.8	-12	53.3
18	45	03.7	99	17.0	-20	07.3	70	35.5	-11	40.2	340	26.8	+20	48.3	185	21.2	-12	53.3
19	60	06.2	114	16.2		06.6	85	36.1		39.5	355	29.2		48.3	200	23.6		53.3
20	75	08.7	129	15.4		06.0	100	36.6		38.8	10	31.6		48.3	215	26.0		53.4
21	90	11.1	144	14.6		05.3	115	37.2		38.0	25	34.1		48.4	230	28.4		53.4
22	105	13.6	159	13.8		04.7	130	37.8		37.3	40	36.5		48.4	245	30.8		53.4
23	120	16.1	174	13.0		04.0	145	38.4		36.6	55	38.9		48.4	260	33.2		53.4
24	135	18.5	189	12.2	-20	03.4	160	39.0	-11	35.9	70	41.3	+20	48.4	275	35.6	-12	53.4
Dif	—		-8 +6		+6 +7		+24 0		+24 0									

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 24 ^d 2 PHE { 4 ^h : 59'6 SD: 16'2 12 ^h : 59'7 PMG: 7 ^h 29 ^m R°: 60 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m				
0	176	30.6	-15	56.2	252	10.0	-20	00.2	60 N	16 25	17 11	18 01	4 01 65	10 54 60					
1	191	30.6		55.4	266	34.7	57	03.5	58	34	17	04	3 46 65	11 09 60					
2	206	30.5		54.6	280	59.2	55	06.7	56	42	22	07	33 64	22 60					
3	221	30.5		53.9	295	23.8	56	09.8	54	49	27	10	22 64	33 61					
4	236	30.4		53.1	309	48.3	55	12.7	52	16 56	32	12	12 64	43 61					
5	251	30.4	-15	52.4	324	12.7	54	-20 15.5	50	17 01	17 36	18 14	3 04 63	11 52 61					
6	266	30.3	-15	51.6	338	37.2	55	-20 18.1	45	17 14	17 45	18 20	2 45 63	12 11 61					
7	281	30.3		50.8	353	01.5	53	20.6	40	24	52	25	30 62	27 60					
8	296	30.2		50.1	7	25.9	54	23.0	35	33	17 59	29	17 62	40 60					
9	311	30.2		49.3	21	50.1	52	25.2	30	41	18 06	34	2 06 61	12 51 60					
10	326	30.1		48.6	36	14.4	53	27.3	20	17 54	17	43	1 47 61	13 11 60					
11	341	30.1	-15	47.8	50	38.6	52	-20 29.3	10 N	18 06	18 28	18 53	1 30 61	13 27 61					
12	356	30.0	-15	47.0	65	02.8	52	-20 31.1	0	18 17	18 39	19 04	1 15 60	13 43 60					
13	11	30.0		46.3	79	26.9	51	32.8	10 S	29	18 51	16	1 00 59	13 59 60					
14	26	29.9		45.5	93	51.0	51	34.4	20	41	19 04	32	0 43 59	14 16 60					
15	41	29.9		44.7	108	15.1	51	35.8	30	18 55	21	19 51	24 58	35 60					
16	56	29.8		44.0	122	39.2	51	37.0	35	19 04	31	20 04	14 57	14 47 59					
17	71	29.8	-15	43.2	137	03.2	50	-20 38.1	40	19 13	19 43	20 19	0 01 57	15 00 59					
18	86	29.7	-15	42.4	151	27.2	50	-20 39.1	45	19 24	19 57	20 38	*** ** *	15 15 59					
19	101	29.7		41.7	165	51.2	50	40.0	50	38	20 15	21 02	*** ** *	34 59					
20	116	29.7		40.9	180	15.1	49	40.7	52	44	24	15	*** ** *	43 58					
21	131	29.6		40.1	194	39.0	49	41.2	54	51	33	30	*** ** *	15 52 59					
22	146	29.6		39.4	209	02.9	49	41.7	56	19 59	44	21 47	23 54 66	16 04 58					
23	161	29.5		38.6	223	26.8	49	41.9	58	20 08	20 57	22 09	41 67	17 57					
24	176	29.5	-15	37.8	237	50.7	49	-20 42.1	60 S	20 18	21 13	22 40	23 26 67	16 32 57					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 56 ^m 3		Mag: -3.9 PMG: 11 ^h 24 ^m			Mag: +1.2 PMG: 13 ^h 17 ^m			Mag: -2.5 PMG: 19 ^h 14 ^m			Mag: +0.5 PMG: 5 ^h 37 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	135	18.5	189	12.2	-20	03.4	160	39.0	-11	35.9	70	41.3	+20	48.4	275	35.6	-12	53.4	
1	150	21.0	204	11.4		02.7	175	39.6		35.2	85	43.7		48.4	290	38.0		53.4	
2	165	23.4	219	10.6		02.1	190	40.2		34.4	100	46.1		48.4	305	40.4		53.4	
3	180	25.9	234	09.8		01.4	205	40.8		33.7	115	48.6		48.5	320	42.8		53.4	
4	195	28.4	249	09.0		00.8	220	41.3		33.0	130	51.0		48.5	335	45.2		53.4	
5	210	30.8	264	08.2	-20	00.1	235	41.9	-11	32.3	145	53.4	+20	48.5	350	47.6	-12	53.4	
6	225	33.3	279	07.4	-19	59.5	250	42.5	-11	31.5	160	55.8	+20	48.5	5	50.0	-12	53.4	
7	240	35.8	294	06.6		58.8	265	43.1		30.8	175	58.2		48.5	20	52.4		53.5	
8	255	38.2	309	05.8		58.2	280	43.7		30.1	191	00.6		48.5	35	54.8		53.5	
9	270	40.7	324	05.0		57.5	295	44.3		29.4	206	03.0		48.6	50	57.2		53.5	
10	285	43.2	339	04.2		56.8	310	44.9		28.6	221	05.5		48.6	65	59.7		53.5	
11	300	45.6	354	03.4	-19	56.2	325	45.5	-11	27.9	236	07.9	+20	48.6	81	02.1	-12	53.5	
12	315	48.1	9	02.6	-19	55.5	340	46.1	-11	27.2	251	10.3	+20	48.6	96	04.5	-12	53.5	
13	330	50.6	24	01.8		54.9	355	46.7		26.5	266	12.7		48.6	111	06.9		53.5	
14	345	53.0	39	01.0		54.2	10	47.2		25.7	281	15.1		48.7	126	09.3		53.5	
15	0	55.5	54	00.3		53.5	25	47.8		25.0	296	17.5		48.7	141	11.7		53.5	
16	15	57.9	68	59.5		52.9	40	48.4		24.3	311	19.9		48.7	156	14.1		53.5	
17	31	00.4	83	58.7	-19	52.2	55	49.0	-11	23.6	326	22.3	+20	48.7	171	16.5	-12	53.5	
18	46	02.9	98	57.9	-19	51.5	70	49.6	-11	22.8	341	24.7	+20	48.7	186	18.9	-12	53.5	
19	61	05.3	113	57.1		50.9	85	50.2		22.1	356	27.2		48.7	201	21.3		53.5	
20	76	07.8	128	56.3		50.2	100	50.8		21.4	11	29.6		48.8	216	23.7		53.6	
21	91	10.3	143	55.5		49.5	115	51.4		20.6	26	32.0		48.8	231	26.1		53.6	
22	106	12.7	158	54.7		48.8	130	52.0		19.9	41	34.4		48.8	246	28.5		53.6	
23	121	15.2	173	53.9		48.2	145	52.6		19.2	56	36.8		48.8	261	30.9		53.6	
24	136	17.7	188	53.1	-19	47.5	160	53.2	-11	18.5	71	39.2	+20	48.8	276	33.3	-12	53.6	
Dif	—		-8			+7	+6		+7		+24		0		+24				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 25 ^d 2 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 60'0 SD: 16'3 PMG: 8 ^h 29 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	29.5	-15	37.8	237	50.7	-20	42.1	60 N	6 26	7 15	8 01	5 06	49	11 54 75
1	191	29.4		37.1	252	14.5	48	42.0	58	23	10	7 52	4 51	50	12 09 74
2	206	29.4		36.3	266	38.3	48	41.9	56	20	04	45	37	52	22 72
3	221	29.4		35.5	281	02.2	49	41.6	54	18	7 00	38	26	53	34 7
4	236	29.3		34.7	295	26.0	48	41.1	52	15	6 55	31	16	53	44 70
5	251	29.3	-15	34.0	309	49.7	47	-20	50	6 13	6 51	7 26	4 07	54	12 53 69
6	266	29.2	-15	33.2	324	13.5	48	-20	45	6 08	6 43	7 14	3 48	55	13 12 67
7	281	29.2		32.4	338	37.3	48	39.0	40	6 03	35	7 03	32	56	27 66
8	296	29.2		31.6	353	01.1	48	37.9	35	5 58	28	6 55	19	57	40 65
9	311	29.1		30.9	7	24.8	47	36.8	30	54	22	47	3 07	58	13 51 65
10	326	29.1		30.1	21	48.6	48	35.5	20	45	11	34	2 48	58	14 11 63
11	341	29.0	-15	29.3	36	12.3	47	-20	10 N	5 35	6 00	6 22	2 31	59	14 28 61
12	356	29.0	-15	28.5	50	36.1	48	-20	0	5 24	5 49	6 11	2 15	60	14 43 61
13	11	29.0		27.8	64	59.9	48	30.7	10 S	5 12	37	5 59	1 59	61	14 59 59
14	26	28.9		27.0	79	23.6	47	28.8	20	4 57	24	47	42	62	15 16 57
15	41	28.9		26.2	93	47.4	48	26.8	30	37	5 08	33	22	63	35 56
16	56	28.8		25.4	108	11.2	48	24.6	35	25	4 58	25	1 11	63	46 55
17	71	28.8	-15	24.7	122	34.9	47	-20	40	4 10	4 46	5 15	0 58	64	15 59 53
18	86	28.8	-15	23.9	136	58.7	48	-20	45	3 51	4 32	5 04	0 43	64	16 14 52
19	101	28.7		23.1	151	22.5	48	17.3	50	26	14	4 51	24	65	33 49
20	116	28.7		22.3	165	46.3	48	14.5	52	3 14	4 05	44	15	65	41 49
21	131	28.7		21.6	180	10.1	48	11.7	54	2 59	3 55	37	0 05	66	16 51 47
22	146	28.6		20.8	194	34.0	49	08.6	56	42	44	30	** ** *	**	17 02 46
23	161	28.6		20.0	208	57.8	48	05.5	58	2 19	32	21	** ** *	**	14 45
24	176	28.6	-15	19.2	223	21.7	49	-20	60 S	1 49	3 16	4 11	** ** *	**	17 29 42
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 52 ^m 4		Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +1.2 PMG: 13 ^h 16 ^m			Mag: -2.5 PMG: 19 ^h 10 ^m			Mag: +0.5 PMG: 5 ^h 33 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	136	17.7	188	53.1	-19	47.5	160	53.2	-11	18.5	71	39.2	+20	48.8	
1	151	20.1	203	52.4		46.8	175	53.7		17.7	86	41.6		48.9	
2	166	22.6	218	51.6		46.2	190	54.3		17.0	101	44.0		48.9	
3	181	25.0	233	50.8		45.5	205	54.9		16.3	116	46.4		48.9	
4	196	27.5	248	50.0		44.8	220	55.5		15.5	131	48.8		48.9	
5	211	30.0	263	49.2	-19	44.1	235	56.1	-11	14.8	146	51.2	+20	48.9	
6	226	32.4	278	48.4	-19	43.4	250	56.7	-11	14.1	161	53.6	+20	49.0	
7	241	34.9	293	47.7		42.8	265	57.3		13.4	176	56.0		49.0	
8	256	37.4	308	46.9		42.1	280	57.9		12.6	191	58.4		49.0	
9	271	39.8	323	46.1		41.4	295	58.5		11.9	207	00.9		49.0	
10	286	42.3	338	45.3		40.7	310	59.1		11.2	222	03.3		49.0	
11	301	44.8	353	44.5	-19	40.0	325	59.7	-11	10.4	237	05.7	+20	49.1	
12	316	47.2	8	43.7	-19	39.3	341	00.3	-11	09.7	252	08.1	+20	49.1	
13	331	49.7	23	43.0		38.7	356	00.9		09.0	267	10.5		49.1	
14	346	52.2	38	42.2		38.0	11	01.5		08.2	282	12.9		49.1	
15	1	54.6	53	41.4		37.3	26	02.1		07.5	297	15.3		49.1	
16	16	57.1	68	40.6		36.6	41	02.7		06.8	312	17.7		49.1	
17	31	59.5	83	39.8	-19	35.9	56	03.2	-11	06.1	327	20.1	+20	49.2	
18	47	02.0	98	39.1	-19	35.2	71	03.8	-11	05.3	342	22.5	+20	49.2	
19	62	04.5	113	38.3		34.5	86	04.4		04.6	357	24.9		49.2	
20	77	06.9	128	37.5		33.8	101	05.0		03.9	12	27.3		49.2	
21	92	09.4	143	36.7		33.1	116	05.6		03.1	27	29.7		49.2	
22	107	11.9	158	35.9		32.4	131	06.2		02.4	42	32.1		49.3	
23	122	14.3	173	35.2		31.7	146	06.8		01.7	57	34.5		49.3	
24	137	16.8	188	34.4	-19	31.0	161	07.4	-11	00.9	72	36.9	+20	49.3	
Dif	—		-8		+7		+6		+7		+24		0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna								
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 26 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 60'0 SD: 16:3 20 ^h : 60'0 PMG: 9 ^h 29 ^m R°: 59 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m							
0	176	28.6	-15	19.2	223	21.7	-20	02.2	60 N	16 30	17 16	18 06	5 55 36	13 09 86								
1	191	28.5		18.4	237	45.6	49	-19 58.8	58	39	22	08	41 39	23 83								
2	206	28.5		17.6	252	09.5	49	55.2	56	46	27	11	29 41	34 81								
3	221	28.4		16.9	266	33.5	50	51.5	54	53	31	13	19 42	45 77								
4	236	28.4		16.1	280	57.4	49	47.6	52	16 59	35	15	09 44	13 54 78								
5	251	28.4	-15	15.3	295	21.4	50	-19 43.6	50	17 05	17 39	18 17	5 01 45	14 02 75								
6	266	28.3	-15	14.5	309	45.4	50	-19 39.5	45	17 17	17 47	18 22	4 43 48	14 19 73								
7	281	28.3		13.7	324	09.4	50	35.2	40	26	17 55	27	28 50	33 70								
8	296	28.3		12.9	338	33.5	51	30.8	35	35	18 01	31	16 51	45 68								
9	311	28.3		12.2	352	57.6	51	26.3	30	42	07	36	4 05 53	14 56 66								
10	326	28.2		11.4	7	21.7	51	21.6	20	17 55	18	44	3 46 56	15 14 63								
11	341	28.2	-15	10.6	21	45.9	52	-19 16.8	10 N	18 07	18 28	18 54	3 30 58	15 29 61								
12	356	28.2	-15	09.8	36	10.1	52	-19 11.9	0	18 18	18 39	19 04	3 15 59	15 44 58								
13	11	28.1		09.0	50	34.3	52	06.8	10 S	29	18 50	16	3 00 61	15 58 56								
14	26	28.1		08.2	64	58.6	53	-19 01.6	20	40	19 03	31	2 44 63	16 13 54								
15	41	28.1		07.4	79	22.9	53	-18 56.3	30	18 54	19	19 49	25 65	31 50								
16	56	28.0		06.7	93	47.3	54	50.8	35	19 02	29	20 01	14 67	41 48								
17	71	28.0	-15	05.9	108	11.7	54	-18 45.2	40	19 11	19 40	20 16	2 02 68	16 52 47								
18	86	28.0	-15	05.1	122	36.1	54	-18 39.5	45	19 22	19 54	20 34	1 47 70	17 06 44								
19	101	28.0		04.3	137	00.6	55	33.7	50	35	20 11	20 58	29 73	22 41								
20	116	27.9		03.5	151	25.1	55	27.7	52	41	19	21 10	20 74	30 39								
21	131	27.9		02.7	165	49.7	56	21.6	54	47	29	24	11 75	38 38								
22	146	27.9		01.9	180	14.3	56	15.4	56	19 55	39	21 40	1 00 77	48 36								
23	161	27.8		01.1	194	38.9	56	09.1	58	20 03	20 52	22 01	0 48 78	17 59 33								
24	176	27.8	-15	00.3	209	03.6	57	-18 02.6	60 S	20 13	21 06	22 28	0 33 81	18 11 31								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 14 ^h 48 ^m 4		Mag: -3.9 PMG: 11 ^h 26 ^m				Mag: +1.2 PMG: 13 ^h 15 ^m				Mag: -2.5 PMG: 19 ^h 06 ^m				Mag: +0.5 PMG: 5 ^h 29 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	137	16.8	188	34.4	-19	31.0	161	07.4	-11	00.9	72	36.9	+20	49.3	277	31.1	-12	53.7				
1	152	19.3	203	33.6		30.3	176	08.0	-11	00.2	87	39.3		49.3	292	33.6		53.8				
2	167	21.7	218	32.8		29.6	191	08.6	-10	59.5	102	41.7		49.4	307	36.0		53.8				
3	182	24.2	233	32.1		28.9	206	09.2		58.7	117	44.1		49.4	322	38.4		53.8				
4	197	26.7	248	31.3		28.2	221	09.8		58.0	132	46.5		49.4	337	40.8		53.8				
5	212	29.1	263	30.5	-19	27.5	236	10.4	-10	57.3	147	48.9	+20	49.4	352	43.2	-12	53.8				
6	227	31.6	278	29.7	-19	26.8	251	11.0	-10	56.5	162	51.3	+20	49.4	7	45.6	-12	53.8				
7	242	34.0	293	29.0		26.1	266	11.6		55.8	177	53.7		49.5	22	48.0		53.8				
8	257	36.5	308	28.2		25.4	281	12.2		55.1	192	56.1		49.5	37	50.4		53.8				
9	272	39.0	323	27.4		24.7	296	12.8		54.3	207	58.4		49.5	52	52.9		53.8				
10	287	41.4	338	26.7		24.0	311	13.4		53.6	223	00.8		49.5	67	55.3		53.8				
11	302	43.9	353	25.9	-19	23.3	326	14.0	-10	52.9	238	03.2	+20	49.5	82	57.7	-12	53.8				
12	317	46.4	8	25.1	-19	22.6	341	14.6	-10	52.1	253	05.6	+20	49.6	98	00.1	-12	53.8				
13	332	48.8	23	24.4		21.9	356	15.2		51.4	268	08.0		49.6	113	02.5		53.8				
14	347	51.3	38	23.6		21.2	11	15.8		50.7	283	10.4		49.6	128	04.9		53.8				
15	2	53.8	53	22.8		20.5	26	16.4		49.9	298	12.8		49.6	143	07.3		53.8				
16	17	56.2	68	22.0		19.8	41	17.0		49.2	313	15.2		49.6	158	09.7		53.8				
17	32	58.7	83	21.3	-19	19.0	56	17.6	-10	48.5	328	17.6	+20	49.7	173	12.2	-12	53.8				
18	48	01.2	98	20.5	-19	18.3	71	18.2	-10	47.7	343	20.0	+20	49.7	188	14.6	-12	53.8				
19	63	03.6	113	19.7		17.6	86	18.8		47.0	358	22.4		49.7	203	17.0		53.9				
20	78	06.1	128	19.0		16.9	101	19.4		46.3	13	24.8		49.7	218	19.4		53.9				
21	93	08.5	143	18.2		16.2	116	20.0		45.5	28	27.2		49.7	233	21.8		53.9				
22	108	11.0	158	17.4		15.5	131	20.6		44.8	43	29.6		49.8	248	24.2		53.9				
23	123	13.5	173	16.7		14.7	146	21.2		44.0	58	31.9		49.8	263	26.7		53.9				
24	138	15.9	188	15.9	-19	14.0	161	21.8	-10	43.3	73	34.3	+20	49.8	278	29.1	-12	53.9				
Dif	—		-8				+7				+24				0				+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 27 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8 Rº: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	27.8	-15 00.3	209	03.6	-18 02.6	60 N	6 21	7 11	7 56	6 31	26	14 35	90	
1	191	27.8	-14 59.5	223	28.4 58	-17 56.0 66	58	19	05	48	20 29	46	86		
2	206	27.8	58.8	237	53.2 58	49.3 67	56	17	7 01	40	10 31	14 55	84		
3	221	27.7	58.0	252	18.0 58	42.5 68	54	14	6 56	34	6 01 34	15 03	82		
4	236	27.7	57.2	266	42.9 59	35.5 70	52	12	52	28	5 53 36	11 79			
5	251	27.7	-14 56.4	281	07.9 60	-17 28.5 70	50	6 10	6 48	7 23	5 46 37	15 17	78		
6	266	27.7	-14 55.6	295	32.9 60	-17 21.3 72	45	6 06	6 40	7 11	5 31 40	15 32	74		
7	281	27.6	54.8	309	58.0 61	14.0 73	40	6 01	33	7 01	18 44	43	71		
8	296	27.6	54.0	324	23.1 61	-17 06.6 74	35	5 57	27	6 53	5 07 46	15 53	69		
9	311	27.6	53.2	338	48.3 62	-16 59.1 75	30	52	21	46	4 58 48	16 02	66		
10	326	27.6	52.4	353	13.5 62	51.5 76	20	44	10	33	42 51	17	62		
11	341	27.5	-14 51.6	7	38.8 63	-16 43.7 78	10 N	5 35	6 00	6 21	4 28 54	16 30	59		
12	356	27.5	-14 50.8	22	04.2 64	-16 35.9 78	0	5 24	5 49	6 11	4 14 57	16 42	56		
13	11	27.5	50.0	36	29.6 64	27.9 80	10 S	5 13	38	6 00	4 01 60	16 54	52		
14	26	27.5	49.2	50	55.1 65	19.9 80	20	4 58	25	5 48	3 47 63	17 07	49		
15	41	27.5	48.4	65	20.6 65	11.7 82	30	39	09	35	30 67	21	46		
16	56	27.4	47.6	79	46.2 66	-16 03.4 83	35	27	5 00	27	21 68	29	44		
17	71	27.4	-14 46.8	94	11.9 67	-15 55.1 83	40	4 13	4 48	5 18	3 10 71	17 39	41		
18	86	27.4	-14 46.0	108	37.6 67	-15 46.6 85	45	3 55	4 35	5 07	2 57 74	17 50	38		
19	101	27.4	45.2	123	03.4 68	38.0 86	50	31	18	4 54	42 76	18 03	34		
20	116	27.3	44.4	137	29.2 68	29.4 86	52	19	09	48	34 79	09	33		
21	131	27.3	43.6	151	55.1 69	20.6 88	54	3 05	4 00	42	26 81	16	30		
22	146	27.3	42.8	166	21.1 70	11.8 88	56	2 49	3 50	34	17 83	24	28		
23	161	27.3	42.0	180	47.1 70	-15 02.8 90	58	28	37	26	2 06 86	32	26		
24	176	27.3	-14 41.2	195	13.2 71	-14 53.8 90	60 S	2 01	3 23	4 16	1 54 89	18 42	23		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 44 ^m 5		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: +1.2 PMG: 13 ^h 14 ^m			Mag: -2.5 PMG: 19 ^h 03 ^m			Mag: +0.5 PMG: 5 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	138	15.9	188	15.9	-19 14.0	161	21.8	-10 43.3	73	34.3	+20 49.8	278	29.1	-12 53.9
1	153	18.4	203	15.2	13.3	176	22.4	42.6	88	36.7	49.8	293	31.5	53.9
2	168	20.9	218	14.4	12.6	191	23.0	41.8	103	39.1	49.9	308	33.9	53.9
3	183	23.3	233	13.6	11.8	206	23.6	41.1	118	41.5	49.9	323	36.3	53.9
4	198	25.8	248	12.9	11.1	221	24.2	40.4	133	43.9	49.9	338	38.7	53.9
5	213	28.3	263	12.1	-19 10.4	236	24.8	-10 39.6	148	46.3	+20 49.9	353	41.1	-12 53.9
6	228	30.7	278	11.3	-19 09.7	251	25.4	-10 38.9	163	48.7	+20 49.9	8	43.6	-12 53.9
7	243	33.2	293	10.6	08.9	266	26.0	38.1	178	51.1	50.0	23	46.0	53.9
8	258	35.7	308	09.8	08.2	281	26.6	37.4	193	53.4	50.0	38	48.4	53.9
9	273	38.1	323	09.1	07.5	296	27.2	36.7	208	55.8	50.0	53	50.8	53.9
10	288	40.6	338	08.3	06.8	311	27.8	35.9	223	58.2	50.0	68	53.2	53.9
11	303	43.0	353	07.5	-19 06.0	326	28.4	-10 35.2	239	00.6	+20 50.1	83	55.6	-12 53.9
12	318	45.5	8	06.8	-19 05.3	341	29.0	-10 34.5	254	03.0	+20 50.1	98	58.1	-12 53.9
13	333	48.0	23	06.0	04.6	356	29.6	33.7	269	05.4	50.1	114	00.5	53.9
14	348	50.4	38	05.3	03.8	11	30.2	33.0	284	07.8	50.1	129	02.9	53.9
15	3	52.9	53	04.5	03.1	26	30.8	32.2	299	10.1	50.1	144	05.3	53.9
16	18	55.4	68	03.8	02.4	41	31.4	31.5	314	12.5	50.2	159	07.7	53.9
17	33	57.8	83	03.0	-19 01.6	56	32.0	-10 30.8	329	14.9	+20 50.2	174	10.2	-12 54.0
18	49	00.3	98	02.2	-19 00.9	71	32.6	-10 30.0	344	17.3	+20 50.2	189	12.6	-12 54.0
19	64	02.8	113	01.5	-19 00.1	86	33.2	29.3	359	19.7	50.2	204	15.0	54.0
20	79	05.2	128	00.7	-18 59.4	101	33.8	28.5	14	22.1	50.3	219	17.4	54.0
21	94	07.7	143	00.0	58.7	116	34.4	27.8	29	24.4	50.3	234	19.8	54.0
22	109	10.1	157	59.2	57.9	131	35.0	27.1	44	26.8	50.3	249	22.2	54.0
23	124	12.6	172	58.5	57.2	146	35.6	26.3	59	29.2	50.3	264	24.7	54.0
24	139	15.1	187	57.7	-18 56.4	161	36.2	-10 25.6	74	31.6	+20 50.3	279	27.1	-12 54.0
Dif	—		-8 +7			+6 +7			+24 0			+24 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 28 ^d 2 PHE { 4 ^h : 59:7 12 ^h : 59:6 20 ^h : 59:5 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	27.3	-14	41.2	195	13.2	-14	53.8	60 N	16 36	17 21	18 10	6 57 19	16 05 90	
1	191	27.3		40.4	209	39.4		44.6	58	44	26	13	49 22	12 87	
2	206	27.2		39.6	224	05.6		35.4	56	51	31	15	41 25	19 84	
3	221	27.2		38.8	238	31.9		26.1	54	16 57	35	17	35 27	25 82	
4	236	27.2		38.0	252	58.3		16.7	52	17 03	39	19	29 29	30 80	
5	251	27.2	-14	37.2	267	24.7	-14	07.2	50	17 08	17 42	18 20	6 23 31	16 35 78	
6	266	27.2	-14	36.4	281	51.2	-13	57.6	45	17 19	17 50	18 25	6 11 35	16 46 73	
7	281	27.2		35.6	296	17.8		48.0	40	29	17 57	29	6 02 38	16 54 70	
8	296	27.1		34.8	310	44.4		38.2	35	37	18 03	33	5 53 41	17 02 67	
9	311	27.1		34.0	325	11.1		28.4	30	44	09	37	46 43	08 64	
10	326	27.1		33.2	339	37.9		18.5	20	17 56	19	45	33 48	19 60	
11	341	27.1	-14	32.4	354	04.7	-13	08.5	10 N	18 07	18 29	18 54	5 22 51	17 29 56	
12	356	27.1	-14	31.6	8	31.6	-12	58.5	0	18 18	18 39	19 04	5 11 55	17 38 52	
13	11	27.1		30.7	22	58.6		48.4	10 S	28	18 50	15	5 01 57	46 50	
14	26	27.0		29.9	37	25.6		38.2	20	39	19 02	29	4 50 61	17 56 46	
15	41	27.0		29.1	51	52.7		27.9	30	18 52	18	48	37 65	18 07 41	
16	56	27.0		28.3	66	19.9		17.6	35	19 00	27	19 59	29 68	13 39	
17	71	27.0	-14	27.5	80	47.1	-12	07.2	40	19 09	19 38	20 13	4 21 70	18 20 36	
18	86	27.0	-14	26.7	95	14.4	-11	56.7	45	19 19	19 51	20 31	4 11 73	18 28 33	
19	101	27.0		25.9	109	41.8		46.1	50	31	20 07	20 53	3 58 78	37 29	
20	116	27.0		25.1	124	09.2		35.5	52	37	15	21 05	53 79	42 27	
21	131	27.0		24.3	138	36.8		24.9	54	43	24	18	47 81	46 26	
22	146	26.9		23.5	153	04.3		14.2	56	51	34	34	40 84	52 23	
23	161	26.9		22.7	167	32.0	-11	03.4	58	19 59	20 46	21 53	32 87	18 58 20	
24	176	26.9	-14	21.8	181	59.7	-10	52.5	60 S	20 08	21 00	22 18	3 23 90	19 05 17	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 40 ^m 6		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: +1.2 PMG: 13 ^h 13 ^m		Mag: -2.5 PMG: 18 ^h 59 ^m		Mag: +0.5 PMG: 5 ^h 21 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	139	15.1	187	57.7	161	36.2	74	31.6	279	27.1					
1	154	17.5	202	57.0	176	36.8	89	34.0	294	29.5					
2	169	20.0	217	56.2	191	37.4	104	36.4	309	31.9					
3	184	22.5	232	55.5	206	38.0	119	38.7	324	34.3					
4	199	24.9	247	54.7	221	38.6	134	41.1	339	36.8					
5	214	27.4	262	54.0	236	39.2	149	43.5	354	39.2					
6	229	29.9	277	53.2	251	39.8	164	45.9	9	41.6					
7	244	32.3	292	52.5	266	40.4	179	48.3	24	44.0					
8	259	34.8	307	51.7	281	41.0	194	50.6	39	46.4					
9	274	37.3	322	51.0	296	41.6	209	53.0	54	48.9					
10	289	39.7	337	50.2	311	42.3	224	55.4	69	51.3					
11	304	42.2	352	49.5	326	42.9	239	57.8	84	53.7					
12	319	44.6	7	48.7	341	43.5	255	00.1	99	56.1					
13	334	47.1	22	48.0	356	44.1	270	02.5	114	58.6					
14	349	49.6	37	47.2	11	44.7	285	04.9	130	01.0					
15	4	52.0	52	46.5	26	45.3	300	07.3	145	03.4					
16	19	54.5	67	45.8	41	45.9	315	09.6	160	05.8					
17	34	57.0	82	45.0	56	46.5	330	12.0	175	08.2					
18	49	59.4	97	44.3	71	47.1	345	14.4	190	10.7					
19	65	01.9	112	43.5	86	47.7	0	16.8	205	13.1					
20	80	04.4	127	42.8	101	48.3	15	19.1	220	15.5					
21	95	06.8	142	42.0	116	48.9	30	21.5	235	17.9					
22	110	09.3	157	41.3	131	49.5	45	23.9	250	20.4					
23	125	11.8	172	40.6	146	50.1	60	26.3	265	22.8					
24	140	14.2	187	39.8	161	50.7	75	28.6	280	25.2					
Dif	—		-7		+8		+24		0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 29 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/9 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.9	-14	21.8	181	59.7	-10	52.5	60 N	6 17	7 06	7 51	7 16	16	17 35	87
1	191	26.9		21.0	196	27.4	87	41.6	58	15	7 01	43	11 19		39	85
2	206	26.9		20.2	210	55.3	89	30.7	56	13	6 57	36	06 21		43	82
3	221	26.9		19.4	225	23.2	89	19.7	54	11	53	30	7 02 23		47	79
4	236	26.9		18.6	239	51.2	90	-10 08.6	52	09	49	24	6 58 25		50	77
5	251	26.9	-14	17.8	254	19.2	90	-9 57.5	50	6 07	6 45	7 19	6 54 28		17 53	75
6	266	26.9	-14	17.0	268	47.3	91	-9 46.3	45	6 03	6 38	7 08	6 46 32		17 59	71
7	281	26.9		16.1	283	15.5	92	35.1	40	5 59	31	6 59	40 34		18 04	68
8	296	26.9		15.3	297	43.7	92	23.8	35	55	25	51	34 37		09	65
9	311	26.8		14.5	312	12.0	93	12.5	30	51	19	44	29 40		12	63
10	326	26.8		13.7	326	40.4	94	-9 01.2	20	43	6 09	32	21 44		19	58
11	341	26.8	-14	12.9	341	08.8	94	-8 49.8	10 N	5 34	5 59	6 21	6 13 48		18 25	54
12	356	26.8	-14	12.1	355	37.3	95	-8 38.4	0	5 25	5 49	6 11	6 06 51		18 30	51
13	11	26.8		11.2	10	05.8	95	26.9	10 S	5 13	39	6 00	5 58 56		36	47
14	26	26.8		10.4	24	34.4	96	15.4	20	4 59	26	5 49	51 59		42	42
15	41	26.8		09.6	39	03.1	97	-8 03.8	30	41	11	36	42 63		48	39
16	56	26.8		08.8	53	31.8	97	-7 52.2	35	30	5 02	29	37 66		52	36
17	71	26.8	-14	08.0	68	00.6	98	-7 40.6	40	4 16	4 51	5 20	5 31 69		18 56	33
18	86	26.8	-14	07.2	82	29.5	99	-7 29.0	45	3 58	4 38	5 10	5 24 73		19 01	30
19	101	26.8		06.3	96	58.4	99	17.3	50	36	22	4 58	16 77		06	26
20	116	26.8		05.5	111	27.4	100	-7 05.6	52	24	14	52	12 79		09	24
21	131	26.8		04.7	125	56.4	100	-6 53.9	54	3 11	4 05	46	08 81		12	22
22	146	26.8		03.9	140	25.5	101	42.1	56	2 56	3 55	39	5 04 83		15	20
23	161	26.8		03.0	154	54.7	102	30.3	58	36	43	31	4 59 85		18	18
24	176	26.8	-14	02.2	169	23.9	102	-6 18.5	60 S	2 12	3 30	4 22	4 53 88		19 22	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 36 ^m 7		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: +1.2 PMG: 13 ^h 12 ^m		Mag: -2.5 PMG: 18 ^h 55 ^m		Mag: +0.5 PMG: 5 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	140	14.2	187	39.8	-18	38.3	161	50.7	-10	07.8	75	28.6	+20	50.9	280	25.2	-12	54.0
1	155	16.7	202	39.1		37.5	176	51.4		07.0	90	31.0		50.9	295	27.6		54.0
2	170	19.1	217	38.3		36.8	191	52.0		06.3	105	33.4		51.0	310	30.1		54.0
3	185	21.6	232	37.6		36.0	206	52.6		05.5	120	35.7		51.0	325	32.5		54.0
4	200	24.1	247	36.9		35.2	221	53.2		04.8	135	38.1		51.0	340	34.9		54.0
5	215	26.5	262	36.1	-18	34.4	236	53.8	-10	04.0	150	40.5	+20	51.0	355	37.3	-12	54.1
6	230	29.0	277	35.4	-18	33.7	251	54.4	-10	03.3	165	42.9	+20	51.1	10	39.8	-12	54.1
7	245	31.5	292	34.6		32.9	266	55.0		02.5	180	45.2		51.1	25	42.2		54.1
8	260	33.9	307	33.9		32.1	281	55.6		01.8	195	47.6		51.1	40	44.6		54.1
9	275	36.4	322	33.2		31.4	296	56.2		01.1	210	50.0		51.1	55	47.0		54.1
10	290	38.9	337	32.4		30.6	311	56.8	-10	00.3	225	52.3		51.2	70	49.5		54.1
11	305	41.3	352	31.7	-18	29.8	326	57.4	-9	59.6	240	54.7	+20	51.2	85	51.9	-12	54.1
12	320	43.8	7	31.0	-18	29.0	341	58.0	-9	58.8	255	57.1	+20	51.2	100	54.3	-12	54.1
13	335	46.2	22	30.2		28.2	356	58.7		58.1	270	59.4		51.2	115	56.7		54.1
14	350	48.7	37	29.5		27.5	11	59.3		57.3	286	01.8		51.3	130	59.2		54.1
15	5	51.2	52	28.8		26.7	26	59.9		56.6	301	04.2		51.3	146	01.6		54.1
16	20	53.6	67	28.0		25.9	42	00.5		55.8	316	06.5		51.3	161	04.0		54.1
17	35	56.1	82	27.3	-18	25.1	57	01.1	-9	55.1	331	08.9	+20	51.3	176	06.4	-12	54.1
18	50	58.6	97	26.6	-18	24.3	72	01.7	-9	54.3	346	11.3	+20	51.4	191	08.9	-12	54.1
19	66	01.0	112	25.8		23.6	87	02.3		53.6	1	13.6		51.4	206	11.3		54.1
20	81	03.5	127	25.1		22.8	102	02.9		52.8	16	16.0		51.4	221	13.7		54.1
21	96	06.0	142	24.4		22.0	117	03.5		52.1	31	18.4		51.4	236	16.1		54.1
22	111	08.4	157	23.7		21.2	132	04.1		51.3	46	20.7		51.5	251	18.6		54.1
23	126	10.9	172	22.9		20.4	147	04.8		50.6	61	23.1		51.5	266	21.0		54.1
24	141	13.4	187	22.2	-18	19.6	162	05.4	-9	49.9	76	25.5	+20	51.5	281	23.4	-12	54.1
Dif	—		-7		+8		+6		+7		+24		0		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 12 ^h 14 ^m 2			Edad: 30 ^d 2 PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'2 R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	26.8	-14	02.2	169	23.9	-6 18.5	60 N	16 41	17 26	18 15	7 32 15	19 02 85	
1	191	26.8		01.4	183	53.2 ¹⁰³	-6 06.6 ¹¹⁹	58	49	30	17	30 17	04 82	
2	206	26.8	-14	00.6	198	22.5 ¹⁰³	-5 54.8 ¹¹⁸	56	16 55	35	19	27 20	05 79	
3	221	26.8	-13	59.8	212	51.9 ¹⁰⁴	42.9 ¹¹⁹	54	17 01	39	20	25 22	06 77	
4	236	26.8		58.9	227	21.3 ¹⁰⁴	31.0 ¹¹⁹	52	07	42	22	23 24	07 75	
5	251	26.8	-13	58.1	241	50.8 ¹⁰⁵	-5 19.1 ¹¹⁹	50	17 12	17 45	18 24	7 22 24	19 08 73	
6	266	26.8	-13	57.3	256	20.4 ¹⁰⁶	-5 07.1 ¹²⁰	45	17 22	17 53	18 27	7 18 28	19 10 69	
7	281	26.8		56.5	270	50.0 ¹⁰⁶	-4 55.2 ¹¹⁹	40	31	17 59	31	14 32	12 66	
8	296	26.8		55.6	285	19.6 ¹⁰⁶	43.2 ¹²⁰	35	39	18 05	35	11 35	14 62	
9	311	26.8		54.8	299	49.3 ¹⁰⁷	31.3 ¹¹⁹	30	46	10	38	09 37	15 60	
10	326	26.8		54.0	314	19.1 ¹⁰⁸	19.3 ¹²⁰	20	17 57	20	46	05 41	17 56	
11	341	26.8	-13	53.2	328	48.9 ¹⁰⁸	-4 07.3 ¹²⁰	10 N	18 08	18 29	18 54	7 01 45	19 19 52	
12	356	26.8	-13	52.3	343	18.8 ¹⁰⁹	-3 55.3 ¹²⁰	0	18 18	18 39	19 04	6 57 49	19 21 48	
13	11	26.8		51.5	357	48.7 ¹⁰⁹	43.2 ¹²¹	10 S	28	18 49	15	54 52	23 44	
14	26	26.8		50.7	12	18.7 ¹¹⁰	31.2 ¹²⁰	20	38	19 01	28	50 56	24 42	
15	41	26.8		49.9	26	48.7 ¹¹⁰	19.2 ¹²⁰	30	51	16	46	45 62	27 36	
16	56	26.8		49.0	41	18.7 ¹¹⁰	-3 07.2 ¹²⁰	35	18 58	25	19 57	43 64	28 34	
17	71	26.8	-13	48.2	55	48.9 ¹¹²	-2 55.1 ¹²¹	40	19 06	19 35	20 10	6 40 67	19 29 32	
18	86	26.8	-13	47.4	70	19.0 ¹¹¹	-2 43.1 ¹²⁰	45	19 16	19 48	20 27	6 37 70	19 31 28	
19	101	26.8		46.5	84	49.2 ¹¹²	31.1 ¹²⁰	50	28	20 04	20 49	33 74	32 25	
20	116	26.8		45.7	99	19.5 ¹¹³	19.0 ¹²¹	52	33	11	21 00	31 76	33 23	
21	131	26.8		44.9	113	49.8 ¹¹³	-2 07.0 ¹²⁰	54	39	20	12	29 78	34 21	
22	146	26.8		44.0	128	20.1 ¹¹³	-1 55.0 ¹²⁰	56	46	29	27	27 80	35 19	
23	161	26.8		43.2	142	50.5 ¹¹⁴	42.9 ¹²¹	58	19 54	40	21 45	24 83	36 17	
24	176	26.8	-13	42.4	157	20.9 ¹¹⁴	-1 30.9 ¹²⁰	60 S	20 02	20 53	22 08	6 21 86	19 37 14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 32 ^m 7		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: +1.2 PMG: 13 ^h 11 ^m		Mag: -2.5 PMG: 18 ^h 51 ^m		Mag: +0.5 PMG: 5 ^h 14 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	141	13.4	187	22.2	162	05.4	76	25.5	281	23.4				
1	156	15.8	202	21.5	177	06.0	91	27.8	296	25.9				
2	171	18.3	217	20.7	192	06.6	106	30.2	311	28.3				
3	186	20.7	232	20.0	207	07.2	121	32.6	326	30.7				
4	201	23.2	247	19.3	222	07.8	136	34.9	341	33.1				
5	216	25.7	262	18.6	237	08.4	151	37.3	356	35.6				
6	231	28.1	277	17.8	252	09.0	166	39.6	11	38.0				
7	246	30.6	292	17.1	267	09.7	181	42.0	26	40.4				
8	261	33.1	307	16.4	282	10.3	196	44.4	41	42.9				
9	276	35.5	322	15.7	297	10.9	211	46.7	56	45.3				
10	291	38.0	337	14.9	312	11.5	226	49.1	71	47.7				
11	306	40.5	352	14.2	327	12.1	241	51.4	86	50.1				
12	321	42.9	7	13.5	342	12.7	256	53.8	101	52.6				
13	336	45.4	22	12.8	357	13.3	271	56.2	116	55.0				
14	351	47.9	37	12.1	12	13.9	286	58.5	131	57.4				
15	6	50.3	52	11.3	27	14.6	302	00.9	146	59.9				
16	21	52.8	67	10.6	42	15.2	317	03.2	162	02.3				
17	36	55.2	82	09.9	57	15.8	332	05.6	177	04.7				
18	51	57.7	97	09.2	72	16.4	347	08.0	192	07.2				
19	67	00.2	112	08.5	87	17.0	2	10.3	207	09.6				
20	82	02.6	127	07.7	102	17.6	17	12.7	222	12.0				
21	97	05.1	142	07.0	117	18.2	32	15.0	237	14.5				
22	112	07.6	157	06.3	132	18.9	47	17.4	252	16.9				
23	127	10.0	172	05.6	147	19.5	62	19.7	267	19.3				
24	142	12.5	187	04.9	162	20.1	77	22.1	282	21.8				
Dif	—		-7		+8		+24		0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 1 ^d 7 PHE { SD: 15'8 PMG: 13 ^h 58 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m		
0	176	26.8	-13	42.4	157	20.9	-1	30.9	60 N	6	12	7	01	7	46	7	47	13	20	
1	191	26.8		41.6	171	51.4 ¹¹⁵		18.9 ¹²⁰	58	11	6	57	38		47	16		26	79	
2	206	26.8		40.7	186	21.9 ¹¹⁵	-1	06.9 ¹²⁰	56	09	53	32		47	18		24	77		
3	221	26.8		39.9	200	52.5 ¹¹⁶	-0	54.9 ¹²⁰	54	07	49	26		47	20		23	75		
4	236	26.8		39.1	215	23.1 ¹¹⁶		42.9 ¹²⁰	52	06	45	21		47	22		22	73		
5	251	26.8	-13	38.2	229	53.7 ¹¹⁶	-0	30.9 ¹²⁰	50	6	04	6	42	7	16	7	46	25	20	
6	266	26.8	-13	37.4	244	24.4 ¹¹⁷	-0	19.0 ¹¹⁹	45	6	00	6	35	7	05	7	46	28	20	
7	281	26.9		36.6	258	55.1 ¹¹⁷	-0	07.0 ¹²⁰	40	5	57	29	6	57	46	31		18	63	
8	296	26.9		35.7	273	25.9 ¹¹⁸	+0	04.9 ¹¹⁹	35	53	23	49		46	34		16	61		
9	311	26.9		34.9	287	56.6 ¹¹⁷		16.9 ¹²⁰	30	50	18	42		46	37		15	59		
10	326	26.9		34.1	302	27.5 ¹¹⁹		28.8 ¹¹⁹	20	42	6	08	31		46	41		13	54	
11	341	26.9	-13	33.2	316	58.3 ¹¹⁸	+0	40.6 ¹¹⁸	10 N	5	34	5	59	6	21	7	46	44	20	
12	356	26.9	-13	32.4	331	29.2 ¹¹⁹	+0	52.5 ¹¹⁹	0	5	25	5	50	6	11	7	46	48	20	
13	11	26.9		31.5	346	00.2 ¹²⁰	+1	04.4 ¹¹⁹	10 S	14		39	6	01	46	52		07	44	
14	26	26.9		30.7	0	31.1 ¹¹⁹		16.2 ¹¹⁸	20	5	01	27	5	50	46	55		06	40	
15	41	26.9		29.9	15	02.1 ¹²⁰		28.0 ¹¹⁸	30	4	43	13	38		47	59		03	36	
16	56	26.9		29.0	29	33.2 ¹²¹		39.8 ¹¹⁸	35	32	5	04	31		47	61		02	34	
17	71	27.0	-13	28.2	44	04.2 ¹²⁰	+1	51.6 ¹¹⁸	40	4	19	4	54	5	23	7	47	64	20	
18	86	27.0	-13	27.4	58	35.3 ¹²¹	+2	03.3 ¹¹⁷	45	4	02	4	41	5	13	7	47	68	19	
19	101	27.0		26.5	73	06.5 ¹²²		15.0 ¹¹⁷	50	3	40	26	5	01	47	72		57	28	
20	116	27.0		25.7	87	37.6 ¹²¹		26.7 ¹¹⁷	52	29	18	4	56		47	74		56	23	
21	131	27.0		24.8	102	08.8 ¹²²		38.4 ¹¹⁷	54	17	10	50		47	76		55	21		
22	146	27.0		24.0	116	40.0 ¹²²	+2	50.0 ¹¹⁶	56	3	02	4	00	43		47	78		54	19
23	161	27.0		23.2	131	11.3 ¹²³	+3	01.6 ¹¹⁶	58	2	44	3	49	36		47	80		53	16
24	176	27.0	-13	22.3	145	42.6 ¹²³	+3	13.2 ¹¹⁶	60 S	2	22	3	36	4	27	7	47	83	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 28 ^m 8		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: +1.2 PMG: 13 ^h 10 ^m		Mag: -2.5 PMG: 18 ^h 48 ^m		Mag: +0.5 PMG: 5 ^h 10 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	142	12.5	187	04.9	-18	00.4	162	20.1	-9	31.9	77	22.1	+20	52.1	282	21.8	-12	54.1
1	157	15.0	202	04.2	-17	59.6	177	20.7		31.1	92	24.4		52.2	297	24.2		54.1
2	172	17.4	217	03.4		58.8	192	21.3		30.4	107	26.8		52.2	312	26.6		54.1
3	187	19.9	232	02.7		58.0	207	21.9		29.6	122	29.2		52.2	327	29.1		54.1
4	202	22.3	247	02.0		57.2	222	22.5		28.8	137	31.5		52.3	342	31.5		54.1
5	217	24.8	262	01.3	-17	56.4	237	23.2	-9	28.1	152	33.9	+20	52.3	357	33.9	-12	54.1
6	232	27.3	277	00.6	-17	55.5	252	23.8	-9	27.3	167	36.2	+20	52.3	12	36.4	-12	54.1
7	247	29.7	291	59.9		54.7	267	24.4		26.6	182	38.6		52.3	27	38.8		54.1
8	262	32.2	306	59.2		53.9	282	25.0		25.8	197	40.9		52.4	42	41.2		54.1
9	277	34.7	321	58.5		53.1	297	25.6		25.1	212	43.3		52.4	57	43.7		54.1
10	292	37.1	336	57.7		52.3	312	26.2		24.3	227	45.6		52.4	72	46.1		54.1
11	307	39.6	351	57.0	-17	51.5	327	26.9	-9	23.6	242	48.0	+20	52.4	87	48.5	-12	54.1
12	322	42.1	6	56.3	-17	50.6	342	27.5	-9	22.8	257	50.3	+20	52.5	102	51.0	-12	54.1
13	337	44.5	21	55.6		49.8	357	28.1		22.1	272	52.7		52.5	117	53.4		54.1
14	352	47.0	36	54.9		49.0	12	28.7		21.3	287	55.0		52.5	132	55.8		54.1
15	7	49.5	51	54.2		48.2	27	29.3		20.6	302	57.4		52.6	147	58.3		54.1
16	22	51.9	66	53.5		47.3	42	29.9		19.8	317	59.7		52.6	163	00.7		54.1
17	37	54.4	81	52.8	-17	46.5	57	30.6	-9	19.1	333	02.1	+20	52.6	178	03.1	-12	54.1
18	52	56.8	96	52.1	-17	45.7	72	31.2	-9	18.3	348	04.4	+20	52.6	193	05.6	-12	54.1
19	67	59.3	111	51.4		44.9	87	31.8		17.5	3	06.8		52.7	208	08.0		54.1
20	83	01.8	126	50.7		44.0	102	32.4		16.8	18	09.1		52.7	223	10.4		54.0
21	98	04.2	141	50.0		43.2	117	33.0		16.0	33	11.5		52.7	238	12.9		54.0
22	113	06.7	156	49.3		42.4	132	33.7		15.3	48	13.8		52.7	253	15.3		54.0
23	128	09.2	171	48.6		41.5	147	34.3		14.5	63	16.2		52.8	268	17.7		54.0
24	143	11.6	186	47.9	-17	40.7	162	34.9	-9	13.8	78	18.5	+20	52.8	283	20.2	-12	54.0
Dif	—		-7		+8		+6		+8		+24		0		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 2 ^d 7 SD: 15:6 PMG: 14 ^h 45 ^m	PHE { 4 ^h : 57:1 12 ^h : 56:9 20 ^h : 56:6 R°: 47 ^m													
	hG ☉	Dec	hG ☾			Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	176	27.0	-13 22.3	145	42.6	+3 13.2		60 N	16 46	17 31	18 20	8 00 15	21 49 79					
1	191	27.1		160	13.9 ¹²³	24.7 ¹¹⁵		58	16 53	35	21	03 17	45 76					
2	206	27.1		174	45.2 ¹²³	36.3 ¹¹⁶		56	17 00	39	23	05 19	41 74					
3	221	27.1		189	16.5 ¹²³	47.7 ¹¹⁴		54	05	42	24	07 21	38 72					
4	236	27.1		203	47.9 ¹²⁴	+3 59.2 ¹¹⁵		52	10	46	25	09 23	35 70					
5	251	27.1	-13 18.1	218	19.3 ¹²⁴	+4 10.6 ¹¹⁴		50	17 15	17 49	18 27	8 11 24	21 32 68					
6	266	27.1	-13 17.3	232	50.7 ¹²⁴	+4 22.0 ¹¹⁴		45	17 25	17 56	18 30	8 14 29	21 26 65					
7	281	27.1		247	22.2 ¹²⁵	33.3 ¹¹³		40	34	18 01	33	17 32	21 62					
8	296	27.2		261	53.7 ¹²⁵	44.6 ¹¹³		35	41	07	37	20 34	17 59					
9	311	27.2		276	25.1 ¹²⁴	+4 55.9 ¹¹³		30	47	12	40	23 36	14 56					
10	326	27.2		290	56.7 ¹²⁶	+5 07.1 ¹¹²		20	17 58	21	47	27 40	07 53					
11	341	27.2	-13 13.0	305	28.2 ¹²⁵	+5 18.3 ¹¹²		10 N	18 08	18 30	18 55	8 30 44	21 02 49					
12	356	27.2	-13 12.2	319	59.7 ¹²⁵	+5 29.5 ¹¹²		0	18 18	18 39	19 03	8 34 47	20 56 47					
13	11	27.2		334	31.3 ¹²⁶	40.6 ¹¹¹		10 S	27	18 49	14	38 50	51 44					
14	26	27.3		349	02.9 ¹²⁶	+5 51.7 ¹¹¹		20	37	19 00	27	41 54	46 40					
15	41	27.3		3	34.5 ¹²⁶	+6 02.7 ¹¹⁰		30	49	14	44	46 57	39 37					
16	56	27.3		18	06.1 ¹²⁶	13.7 ¹¹⁰		35	18 56	23	19 54	48 60	36 34					
17	71	27.3	-13 08.0	32	37.8 ¹²⁷	+6 24.6 ¹⁰⁹		40	19 04	19 33	20 07	8 51 63	20 32 31					
18	86	27.3	-13 07.1	47	09.4 ¹²⁶	+6 35.5 ¹⁰⁹		45	19 13	19 45	20 23	8 55 65	20 27 29					
19	101	27.4		61	41.1 ¹²⁷	46.4 ¹⁰⁹		50	24	20 00	44	8 59 69	21 26					
20	116	27.4		76	12.8 ¹²⁷	+6 57.2 ¹⁰⁸		52	29	07	20 55	9 01 71	19 23					
21	131	27.4		90	44.5 ¹²⁷	+7 08.0 ¹⁰⁸		54	35	15	21 06	03 73	16 22					
22	146	27.4		105	16.2 ¹²⁷	18.7 ¹⁰⁷		56	41	24	20	05 75	13 20					
23	161	27.4		119	47.9 ¹²⁷	29.3 ¹⁰⁶		58	49	34	37	07 78	09 18					
24	176	27.5	-13 02.0	134	19.7 ¹²⁸	+7 39.9 ¹⁰⁶		60 S	19 57	20 47	21 58	9 10 81	20 05 16					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 24 ^m 9		Mag: -3.9 PMG: 11 ^h 33 ^m			Mag: +1.2 PMG: 13 ^h 09 ^m			Mag: -2.5 PMG: 18 ^h 44 ^m			Mag: +0.5 PMG: 5 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	143	11.6	186	47.9	-17	40.7	162	34.9	-9	13.8	78	18.5	+20	52.8	283	20.2	-12	54.0
1	158	14.1	201	47.2		39.9	177	35.5		13.0	93	20.9		52.8	298	22.6		54.0
2	173	16.6	216	46.4		39.1	192	36.1		12.3	108	23.2		52.9	313	25.1		54.0
3	188	19.0	231	45.7		38.2	207	36.7		11.5	123	25.5		52.9	328	27.5		54.0
4	203	21.5	246	45.0		37.4	222	37.4		10.8	138	27.9		52.9	343	29.9		54.0
5	218	23.9	261	44.3	-17	36.5	237	38.0	-9	10.0	153	30.2	+20	52.9	358	32.4	-12	54.0
6	233	26.4	276	43.6	-17	35.7	252	38.6	-9	09.2	168	32.6	+20	53.0	13	34.8	-12	54.0
7	248	28.9	291	42.9		34.9	267	39.2		08.5	183	34.9		53.0	28	37.2		54.0
8	263	31.3	306	42.2		34.0	282	39.8		07.7	198	37.3		53.0	43	39.7		54.0
9	278	33.8	321	41.5		33.2	297	40.5		07.0	213	39.6		53.1	58	42.1		54.0
10	293	36.3	336	40.8		32.4	312	41.1		06.2	228	41.9		53.1	73	44.6		54.0
11	308	38.7	351	40.1	-17	31.5	327	41.7	-9	05.5	243	44.3	+20	53.1	88	47.0	-12	54.0
12	323	41.2	6	39.5	-17	30.7	342	42.3	-9	04.7	258	46.6	+20	53.1	103	49.4	-12	54.0
13	338	43.7	21	38.8		29.8	357	42.9		03.9	273	49.0		53.2	118	51.9		54.0
14	353	46.1	36	38.1		29.0	12	43.6		03.2	288	51.3		53.2	133	54.3		54.0
15	8	48.6	51	37.4		28.1	27	44.2		02.4	303	53.7		53.2	148	56.8		54.0
16	23	51.1	66	36.7		27.3	42	44.8		01.7	318	56.0		53.3	163	59.2		54.0
17	38	53.5	81	36.0	-17	26.5	57	45.4	-9	00.9	333	58.3	+20	53.3	179	01.6	-12	54.0
18	53	56.0	96	35.3	-17	25.6	72	46.1	-9	00.2	349	00.7	+20	53.3	194	04.1	-12	54.0
19	68	58.4	111	34.6		24.8	87	46.7	-8	59.4	4	03.0		53.4	209	06.5		54.0
20	84	00.9	126	33.9		23.9	102	47.3		58.6	19	05.4		53.4	224	09.0		54.0
21	99	03.4	141	33.2		23.1	117	47.9		57.9	34	07.7		53.4	239	11.4		54.0
22	114	05.8	156	32.5		22.2	132	48.5		57.1	49	10.0		53.4	254	13.8		54.0
23	129	08.3	171	31.8		21.4	147	49.2		56.4	64	12.4		53.5	269	16.3		54.0
24	144	10.8	186	31.1	-17	20.5	162	49.8	-8	55.6	79	14.7	+20	53.5	284	18.7	-12	54.0
Dif	—		-7 +8		+6 +8		+23 0		+24 0									

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 3 ^d 7 PHE { 4 ^h : 56'4 12 ^h : 56'1 20 ^h : 55'9 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.5	-13	02.0	134	19.7	+7 39.9	60 N	6 08	6 56	7 40	8 15	16	23 08	76
1	191	27.5		01.2	148	51.4 ¹²⁷	+7 50.5 ¹⁰⁶	58	06	52	33	20	19	23 01	73
2	206	27.5	-13	00.3	163	23.2 ¹²⁸	+8 01.0 ¹⁰⁵	56	05	48	27	24	21	22 55	71
3	221	27.5	-12	59.5	177	55.0 ¹²⁸	11.5 ¹⁰⁵	54	03	45	22	28	23	50	69
4	236	27.5		58.6	192	26.8 ¹²⁸	21.9 ¹⁰⁴	52	02	42	17	32	25	45	67
5	251	27.6	-12	57.8	206	58.5 ¹²⁷	+8 32.3 ¹⁰⁴	50	6 01	6 39	7 12	8 35	27	22 40	66
6	266	27.6	-12	56.9	221	30.3 ¹²⁸	+8 42.6 ¹⁰³	45	5 58	6 32	7 02	8 43	29	22 31	62
7	281	27.6		56.1	236	02.2 ¹²⁹	+8 52.8 ¹⁰²	40	55	26	6 54	49	32	23	60
8	296	27.6		55.2	250	34.0 ¹²⁸	+9 03.0 ¹⁰²	35	51	21	47	54	35	16	58
9	311	27.7		54.4	265	05.8 ¹²⁸	13.2 ¹⁰²	30	48	16	41	8 59	36	10	56
10	326	27.7		53.5	279	37.6 ¹²⁸	23.3 ¹⁰¹	20	41	6 07	30	9 07	40	22 00	52
11	341	27.7	-12	52.7	294	09.5 ¹²⁹	+9 33.3 ¹⁰⁰	10 N	5 34	5 58	6 20	9 14	43	21 51	50
12	356	27.7	-12	51.8	308	41.3 ¹²⁸	+9 43.3 ¹⁰⁰	0	5 25	5 50	6 11	9 21	46	21 43	47
13	11	27.8		51.0	323	13.2 ¹²⁹	+9 53.2 ⁹⁹	10 S	15	40	6 01	28	49	35	44
14	26	27.8		50.1	337	45.0 ¹²⁸	+10 03.1 ⁹⁹	20	5 02	29	5 51	35	52	26	41
15	41	27.8		49.2	352	16.9 ¹²⁹	12.9 ⁹⁸	30	4 45	15	40	43	56	16	37
16	56	27.8		48.4	6	48.8 ¹²⁹	22.6 ⁹⁷	35	34	5 06	33	48	58	10	36
17	71	27.9	-12	47.5	21	20.6 ¹²⁸	+10 32.3 ⁹⁷	40	4 22	4 56	5 25	9 54	60	21 03	34
18	86	27.9	-12	46.7	35	52.5 ¹²⁹	+10 41.9 ⁹⁶	45	4 06	4 44	5 16	10 00	64	20 56	31
19	101	27.9		45.8	50	24.4 ¹²⁹	+10 51.5 ⁹⁶	50	3 45	29	05	08	67	47	27
20	116	27.9		45.0	64	56.2 ¹²⁸	+11 01.0 ⁹⁵	52	34	22	5 00	12	68	42	27
21	131	28.0		44.1	79	28.1 ¹²⁹	10.4 ⁹⁴	54	23	14	4 54	16	70	38	24
22	146	28.0		43.3	94	00.0 ¹²⁹	19.8 ⁹⁴	56	3 09	4 05	48	20	73	33	22
23	161	28.0		42.4	108	31.9 ¹²⁹	29.1 ⁹³	58	2 52	3 55	41	25	75	27	20
24	176	28.1	-12	41.5	123	03.8 ¹²⁹	+11 38.4 ⁹³	60 S	2 31	3 43	4 33	10 31	77	20 21	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 20 ^m 9		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +1.2 PMG: 13 ^h 08 ^m		Mag: -2.5 PMG: 18 ^h 40 ^m		Mag: +0.5 PMG: 5 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	144	10.8	186	31.1	-17 20.5	162	49.8	-8 55.6	79	14.7	+20 53.5	284	18.7	-12 54.0
1	159	13.2	201	30.4	19.7	177	50.4	54.9	94	17.1	53.5	299	21.2	54.0
2	174	15.7	216	29.7	18.8	192	51.0	54.1	109	19.4	53.6	314	23.6	54.0
3	189	18.2	231	29.1	17.9	207	51.7	53.3	124	21.7	53.6	329	26.0	54.0
4	204	20.6	246	28.4	17.1	222	52.3	52.6	139	24.1	53.6	344	28.5	54.0
5	219	23.1	261	27.7	-17 16.2	237	52.9	-8 51.8	154	26.4	+20 53.6	359	30.9	-12 54.0
6	234	25.6	276	27.0	-17 15.4	252	53.5	-8 51.1	169	28.7	+20 53.7	14	33.4	-12 54.0
7	249	28.0	291	26.3	14.5	267	54.1	50.3	184	31.1	53.7	29	35.8	54.0
8	264	30.5	306	25.6	13.7	282	54.8	49.5	199	33.4	53.7	44	38.2	53.9
9	279	32.9	321	24.9	12.8	297	55.4	48.8	214	35.7	53.8	59	40.7	53.9
10	294	35.4	336	24.2	11.9	312	56.0	48.0	229	38.1	53.8	74	43.1	53.9
11	309	37.9	351	23.6	-17 11.1	327	56.6	-8 47.3	244	40.4	+20 53.8	89	45.6	-12 53.9
12	324	40.3	6	22.9	-17 10.2	342	57.3	-8 46.5	259	42.7	+20 53.9	104	48.0	-12 53.9
13	339	42.8	21	22.2	09.3	357	57.9	45.7	274	45.1	53.9	119	50.5	53.9
14	354	45.3	36	21.5	08.5	12	58.5	45.0	289	47.4	53.9	134	52.9	53.9
15	9	47.7	51	20.8	07.6	27	59.1	44.2	304	49.7	53.9	149	55.4	53.9
16	24	50.2	66	20.1	06.8	42	59.8	43.5	319	52.1	54.0	164	57.8	53.9
17	39	52.7	81	19.5	-17 05.9	58	00.4	-8 42.7	334	54.4	+20 54.0	180	00.2	-12 53.9
18	54	55.1	96	18.8	-17 05.0	73	01.0	-8 41.9	349	56.7	+20 54.0	195	02.7	-12 53.9
19	69	57.6	111	18.1	04.2	88	01.6	41.2	4	59.1	54.1	210	05.1	53.9
20	85	00.0	126	17.4	03.3	103	02.3	40.4	20	01.4	54.1	225	07.6	53.9
21	100	02.5	141	16.7	02.4	118	02.9	39.7	35	03.7	54.1	240	10.0	53.9
22	115	05.0	156	16.1	01.5	133	03.5	38.9	50	06.1	54.2	255	12.5	53.9
23	130	07.4	171	15.4	-17 00.7	148	04.1	38.1	65	08.4	54.2	270	14.9	53.9
24	145	09.9	186	14.7	-16 59.8	163	04.8	-8 37.4	80	10.7	+20 54.2	285	17.3	-12 53.9
Dif	—		-7		+9	+6		+8	+23		0	+24		0

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2				Edad: 4 ^d 7	PHE {	4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2											
	PMG: 12 ^h 14 ^m 1																	
	PMG: 16 ^h 18 ^m							R°: 47 ^m										
hG ☉		Dec		hG ☾		Dif			Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°		'	°	'	°	'	h m	h m	h m	h m	h m
0	176	28.1	-12	41.5	123	03.8		+11	38.4	60 N	16 51	17 35	18 24	8 31	20	***	***	***
1	191	28.1		40.7	137	35.6 ¹²⁸			47.6	58	16 58	39	25	39	22	***	***	***
2	206	28.1		39.8	152	07.5 ¹²⁹	+11	56.7	91	56	17 04	43	26	45	25	***	***	***
3	221	28.2		39.0	166	39.4 ¹²⁹	+12	05.8	91	54	09	46	28	51	26	23	59	65
4	236	28.2		38.1	181	11.3 ¹²⁹		14.7	89	52	14	49	29	8 57	27	52	64	
5	251	28.2	-12	37.2	195	43.1 ¹²⁸	+12	23.7	90	50	17 19	17 52	18 30	9 02	29	23	46	63
6	266	28.2	-12	36.4	210	15.0 ¹²⁹	+12	32.5	88	45	17 28	17 58	18 33	9 12	32	23	33	60
7	281	28.3		35.5	224	46.9 ¹²⁹		41.3	87	40	36	18 04	35	21	35	23	57	
8	296	28.3		34.7	239	18.7 ¹²⁸		50.0	88	35	43	09	38	29	36	14	55	
9	311	28.3		33.8	253	50.6 ¹²⁹	+12	58.7	87	30	49	13	41	35	39	23	06	54
10	326	28.4		32.9	268	22.5 ¹²⁹	+13	07.3	86	20	17 59	22	48	47	42	22	52	52
11	341	28.4	-12	32.1	282	54.3 ¹²⁸	+13	15.8	85	10 N	18 09	18 30	18 55	9 57	45	22	41	49
12	356	28.4	-12	31.2	297	26.2 ¹²⁹	+13	24.3	85	0	18 17	18 39	19 03	10 07	47	22	30	46
13	11	28.5		30.3	311	58.0 ¹²⁸		32.6	83	10 S	26	48	13	17	49	19	44	
14	26	28.5		29.5	326	29.8 ¹²⁸		40.9	83	20	36	18 59	26	27	52	22	07	42
15	41	28.5		28.6	341	01.7 ¹²⁹		49.2	83	30	47	19 12	42	39	55	21	53	40
16	56	28.6		27.8	355	33.5 ¹²⁸	+13	57.3	81	35	18 54	20	19 52	46	57	46	38	
17	71	28.6	-12	26.9	10	05.3 ¹²⁸	+14	05.4	81	40	19 01	19 30	20 04	10 54	59	21	37	36
18	86	28.6	-12	26.0	24	37.1 ¹²⁸	+14	13.5	81	45	19 10	19 41	20 20	11 04	61	21	27	34
19	101	28.7		25.2	39	08.9 ¹²⁸		21.4	79	50	20	19 56	40	15	64	14	31	
20	116	28.7		24.3	53	40.7 ¹²⁸		29.3	79	52	25	20 02	20 49	20	66	09	29	
21	131	28.7		23.4	68	12.5 ¹²⁸		37.1	78	54	31	10	21 01	26	67	21	02	28
22	146	28.8		22.6	82	44.3 ¹²⁸		44.8	77	56	37	19	14	33	69	20	55	27
23	161	28.8		21.7	97	16.1 ¹²⁸	+14	52.5	77	58	43	29	30	40	71	47	25	
24	176	28.9	-12	20.8	111	47.8 ¹²⁷	+15	00.0	75	60 S	19 51	20 40	21 49	11 48	74	20	38	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +1.2		Mag: -2.5		Mag: +0.5	
	14 ^h 17 ^m 0		PMG: 11 ^h 36 ^m		PMG: 13 ^h 07 ^m		PMG: 18 ^h 36 ^m		PMG: 4 ^h 58 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	145	09.9	186	14.7	163	04.8	80	10.7	285	17.3
1	160	12.4	201	14.0	178	05.4	95	13.0	300	19.8
2	175	14.8	216	13.3	193	06.0	110	15.4	315	22.2
3	190	17.3	231	12.7	208	06.6	125	17.7	330	24.7
4	205	19.8	246	12.0	223	07.3	140	20.0	345	27.1
5	220	22.2	261	11.3	238	07.9	155	22.4	0	29.6
6	235	24.7	276	10.6	253	08.5	170	24.7	15	32.0
7	250	27.2	291	10.0	268	09.1	185	27.0	30	34.5
8	265	29.6	306	09.3	283	09.8	200	29.3	45	36.9
9	280	32.1	321	08.6	298	10.4	215	31.7	60	39.4
10	295	34.5	336	07.9	313	11.0	230	34.0	75	41.8
11	310	37.0	351	07.3	328	11.7	245	36.3	90	44.3
12	325	39.5	6	06.6	343	12.3	260	38.6	105	46.7
13	340	41.9	21	05.9	358	12.9	275	41.0	120	49.2
14	355	44.4	36	05.3	13	13.5	290	43.3	135	51.6
15	10	46.9	51	04.6	28	14.2	305	45.6	150	54.0
16	25	49.3	66	03.9	43	14.8	320	47.9	165	56.5
17	40	51.8	81	03.2	58	15.4	335	50.3	180	58.9
18	55	54.3	96	02.6	73	16.1	350	52.6	196	01.4
19	70	56.7	111	01.9	88	16.7	5	54.9	211	03.8
20	85	59.2	126	01.2	103	17.3	20	57.2	226	06.3
21	101	01.6	141	00.6	118	17.9	35	59.6	241	08.7
22	116	04.1	155	59.9	133	18.6	51	01.9	256	11.2
23	131	06.6	170	59.2	148	19.2	66	04.2	271	13.6
24	146	09.0	185	58.6	163	19.8	81	06.5	286	16.1
Dif	—		-7		+9		+23		+24	
							0		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 12 ^h 14 ^m 0			Edad: 5 ^d 7 PHE { 4 ^h : 55/0 12 ^h : 54/9 20 ^h : 54/7 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	28.9	-12	20.8	111	47.8	+15	00.0	60 N	6 03	6 51	7 35	8 51	25	0 24	71		
1	191	28.9		20.0	126	19.6 ¹²⁸	+15	07.5 ⁷⁵	58	02	48	28	9 01	27	14	69		
2	206	28.9		19.1	140	51.3 ¹²⁷		15.0 ⁷⁵	56	01	44	23	10 29		0 06	67		
3	221	29.0		18.2	155	23.1 ¹²⁸		22.3 ⁷³	54	6 00	41	18	17 31		** ** *			
4	236	29.0		17.4	169	54.8 ¹²⁷		29.6 ⁷³	52	5 59	38	13	24 32		** ** *			
5	251	29.0	-12	16.5	184	26.5 ¹²⁷	+15	36.8 ⁷²	50	5 58	6 35	7 09	9 31	33	** ** *			
6	266	29.1	-12	15.6	198	58.2 ¹²⁷	+15	43.9 ⁷¹	45	5 55	6 29	6 59	9 44	36	** ** *			
7	281	29.1		14.8	213	29.9 ¹²⁷		50.9 ⁷⁰	40	52	24	52	9 56	37	** ** *			
8	296	29.2		13.9	228	01.6 ¹²⁷	+15	57.9 ⁷⁰	35	49	19	45	10 05	40	** ** *			
9	311	29.2		13.0	242	33.3 ¹²⁷	+16	04.8 ⁶⁹	30	46	14	39	14 41		** ** *			
10	326	29.2		12.2	257	05.0 ¹²⁷		11.6 ⁶⁸	20	40	6 06	29	29 43		23 44	50		
11	341	29.3	-12	11.3	271	36.6 ¹²⁶	+16	18.3 ⁶⁷	10 N	5 33	5 58	6 19	10 42	45	23 30	49		
12	356	29.3	-12	10.4	286	08.3 ¹²⁷	+16	25.0 ⁶⁷	0	5 25	5 49	6 11	10 54	47	23 16	48		
13	11	29.4		09.5	300	39.9 ¹²⁶		31.5 ⁶⁵	10 S	15	40	6 02	11 06	49	23 03	46		
14	26	29.4		08.7	315	11.5 ¹²⁶		38.0 ⁶⁵	20	5 03	30	5 52	19 51		22 49	44		
15	41	29.4		07.8	329	43.1 ¹²⁶		44.4 ⁶⁴	30	4 47	16	41	34 53		33	42		
16	56	29.5		06.9	344	14.7 ¹²⁶		50.7 ⁶³	35	37	5 08	35	43 55		24	41		
17	71	29.5	-12	06.1	358	46.3 ¹²⁶	+16	57.0 ⁶³	40	4 24	4 59	5 27	11 53	56	22 13	40		
18	86	29.6	-12	05.2	13	17.9 ¹²⁶	+17	03.1 ⁶¹	45	4 09	4 47	5 19	12 05	58	22 01	37		
19	101	29.6		04.3	27	49.5 ¹²⁶		09.2 ⁶¹	50	3 49	33	08	19 61		21 45	36		
20	116	29.7		03.4	42	21.0 ¹²⁵		15.2 ⁶⁰	52	39	26	5 04	26 62		38	35		
21	131	29.7		02.6	56	52.5 ¹²⁵		21.1 ⁵⁹	54	28	19	4 58	33 64		30	34		
22	146	29.7		01.7	71	24.1 ¹²⁶		27.0 ⁵⁹	56	3 15	10	52	42 64		22	32		
23	161	29.8	-12	00.8	85	55.6 ¹²⁵		32.7 ⁵⁷	58	2 59	4 00	46	12 51	67	12	30		
24	176	29.8	-11	59.9	100	27.1 ¹²⁵	+17	38.4 ⁵⁷	60 S	2 40	3 49	4 38	13 02	69	21 00	29		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 13 ^m 1		Mag: -3.9 PMG: 11 ^h 37 ^m				Mag: +1.2 PMG: 13 ^h 06 ^m				Mag: -2.4 PMG: 18 ^h 33 ^m				Mag: +0.5 PMG: 4 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	146	09.0	185	58.6	-16	38.6	163	19.8	-8	19.1	81	06.5	+20	55.0	286	16.1	-12	53.8
1	161	11.5	200	57.9		37.7	178	20.5		18.3	96	08.8		55.0	301	18.5		53.7
2	176	14.0	215	57.2		36.8	193	21.1		17.5	111	11.2		55.0	316	21.0		53.7
3	191	16.4	230	56.6		35.9	208	21.7		16.8	126	13.5		55.1	331	23.4		53.7
4	206	18.9	245	55.9		35.0	223	22.3		16.0	141	15.8		55.1	346	25.9		53.7
5	221	21.4	260	55.2	-16	34.1	238	23.0	-8	15.2	156	18.1	+20	55.1	1	28.3	-12	53.7
6	236	23.8	275	54.6	-16	33.2	253	23.6	-8	14.5	171	20.4	+20	55.2	16	30.8	-12	53.7
7	251	26.3	290	53.9		32.4	268	24.2		13.7	186	22.8		55.2	31	33.2		53.7
8	266	28.8	305	53.3		31.5	283	24.9		13.0	201	25.1		55.2	46	35.7		53.7
9	281	31.2	320	52.6		30.6	298	25.5		12.2	216	27.4		55.3	61	38.1		53.7
10	296	33.7	335	51.9		29.7	313	26.1		11.4	231	29.7		55.3	76	40.6		53.7
11	311	36.1	350	51.3	-16	28.8	328	26.8	-8	10.7	246	32.0	+20	55.3	91	43.0	-12	53.7
12	326	38.6	5	50.6	-16	27.9	343	27.4	-8	09.9	261	34.3	+20	55.4	106	45.5	-12	53.7
13	341	41.1	20	50.0		26.9	358	28.0		09.1	276	36.7		55.4	121	47.9		53.7
14	356	43.5	35	49.3		26.0	13	28.7		08.4	291	39.0		55.4	136	50.4		53.7
15	11	46.0	50	48.6		25.1	28	29.3		07.6	306	41.3		55.5	151	52.8		53.7
16	26	48.5	65	48.0		24.2	43	29.9		06.8	321	43.6		55.5	166	55.3		53.7
17	41	50.9	80	47.3	-16	23.3	58	30.5	-8	06.1	336	45.9	+20	55.5	181	57.8	-12	53.6
18	56	53.4	95	46.7	-16	22.4	73	31.2	-8	05.3	351	48.2	+20	55.6	197	00.2	-12	53.6
19	71	55.9	110	46.0		21.5	88	31.8		04.5	6	50.5		55.6	212	02.7		53.6
20	86	58.3	125	45.4		20.6	103	32.4		03.8	21	52.9		55.6	227	05.1		53.6
21	102	00.8	140	44.7		19.7	118	33.1		03.0	36	55.2		55.7	242	07.6		53.6
22	117	03.3	155	44.0		18.8	133	33.7		02.2	51	57.5		55.7	257	10.0		53.6
23	132	05.7	170	43.4		17.9	148	34.3		01.5	66	59.8		55.7	272	12.5		53.6
24	147	08.2	185	42.7	-16	17.0	163	35.0	-8	00.7	82	02.1	+20	55.8	287	14.9	-12	53.6
Dif	—		-7		+9		+6		+8		+23		0		+25			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 6 ^d 7	PHE { 4 ^h : 54:6 12 ^h : 54:5 20 ^h : 54:4 R°: 48 ^m										
	PMG: 12 ^h 14 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	29.8	-11 59.9	100	27.1	+17 38.4	55	60 N	16 57	17 40	18 29	9 16 32		1 35 66	
1	191	29.9	59.1	114	58.6 ¹²⁵	43.9	55	58	17 03	44	30	28 34		23 64	
2	206	29.9	58.2	129	30.0 ¹²⁴	49.4	55	56	08	47	30	39 35		13 62	
3	221	30.0	57.3	144	01.5 ¹²⁵	+17 54.8	54	54	13	50	31	48 37		1 04 61	
4	236	30.0	56.4	158	33.0 ¹²⁵	+18 00.2	54	52	18	53	32	9 56 38		0 56 59	
5	251	30.1	-11 55.6	173	04.4 ¹²⁴	+18 05.4	52	50	17 22	17 55	18 33	10 04 38		0 49 58	
6	266	30.1	-11 54.7	187	35.8 ¹²⁴	+18 10.6	52	45	17 31	18 01	18 35	10 20 40		0 33 57	
7	281	30.1	53.8	202	07.2 ¹²⁴	15.6	50	40	38	06	38	33 42		20 55	
8	296	30.2	52.9	216	38.6 ¹²⁴	20.6	50	35	45	10	40	45 42		09 54	
9	311	30.2	52.1	231	10.0 ¹²⁴	25.5	49	30	17 50	15	43	10 55 43		0 00 53	
10	326	30.3	51.2	245	41.4 ¹²⁴	30.3	48	20	18 00	23	49	11 12 45		** ** *	
11	341	30.3	-11 50.3	260	12.7 ¹²³	+18 35.0	47	10 N	18 09	18 30	18 55	11 27 46		** ** *	
12	356	30.4	-11 49.4	274	44.1 ¹²⁴	+18 39.6	46	0	18 17	18 38	19 03	11 41 47		** ** *	
13	11	30.4	48.5	289	15.4 ¹²³	44.2	46	10 S	26	47	12	11 55 49		23 49 47	
14	26	30.5	47.7	303	46.7 ¹²³	48.6	44	20	35	18 58	24	12 10 50		33 46	
15	41	30.5	46.8	318	18.0 ¹²³	53.0	44	30	45	19 10	40	27 52		15 45	
16	56	30.6	45.9	332	49.3 ¹²³	+18 57.3	43	35	52	18	19 49	38 52		23 05 44	
17	71	30.6	-11 45.0	347	20.6 ¹²³	+19 01.5	42	40	18 59	19 27	20 01	12 49 54		22 53 43	
18	86	30.7	-11 44.1	1	51.9 ¹²³	+19 05.6	41	45	19 07	19 38	20 16	13 03 55		22 38 43	
19	101	30.7	43.3	16	23.1 ¹²²	09.6	40	50	17	52	35	20 56		21 42	
20	116	30.8	42.4	30	54.4 ¹²³	13.5	39	52	21	19 58	44	28 57		13 41	
21	131	30.8	41.5	45	25.6 ¹²²	17.3	38	54	26	20 05	20 55	37 57		22 04 40	
22	146	30.9	40.6	59	56.8 ¹²²	21.1	38	56	32	13	21 07	46 59		21 54 39	
23	161	30.9	39.7	74	28.0 ¹²²	24.7	36	58	38	23	22	13 58 60		42 38	
24	176	31.0	-11 38.9	88	59.2 ¹²²	+19 28.3	36	60 S	19 45	20 34	21 40	14 11 62		21 29 36	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 09 ^m 1		Mag: -3.9 PMG: 11 ^h 38 ^m		Mag: +1.2 PMG: 13 ^h 05 ^m		Mag: -2.4 PMG: 18 ^h 29 ^m		Mag: +0.5 PMG: 4 ^h 50 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	147	08.2	185	42.7	-16	17.0	163	35.0	-8	00.7	82	02.1	+20	55.8	287	14.9	-12	53.6
1	162	10.6	200	42.1		16.1	178	35.6	-7	59.9	97	04.4		55.8	302	17.4		53.6
2	177	13.1	215	41.4		15.1	193	36.2		59.2	112	06.7		55.8	317	19.8		53.6
3	192	15.6	230	40.8		14.2	208	36.9		58.4	127	09.1		55.9	332	22.3		53.6
4	207	18.0	245	40.1		13.3	223	37.5		57.6	142	11.4		55.9	347	24.7		53.6
5	222	20.5	260	39.5	-16	12.4	238	38.1	-7	56.9	157	13.7	+20	55.9	2	27.2	-12	53.6
6	237	23.0	275	38.8	-16	11.5	253	38.8	-7	56.1	172	16.0	+20	56.0	17	29.7	-12	53.6
7	252	25.4	290	38.2		10.6	268	39.4		55.3	187	18.3		56.0	32	32.1		53.5
8	267	27.9	305	37.5		09.7	283	40.0		54.6	202	20.6		56.0	47	34.6		53.5
9	282	30.4	320	36.9		08.7	298	40.7		53.8	217	22.9		56.1	62	37.0		53.5
10	297	32.8	335	36.2		07.8	313	41.3		53.0	232	25.2		56.1	77	39.5		53.5
11	312	35.3	350	35.6	-16	06.9	328	41.9	-7	52.2	247	27.5	+20	56.1	92	41.9	-12	53.5
12	327	37.7	5	34.9	-16	06.0	343	42.6	-7	51.5	262	29.8	+20	56.2	107	44.4	-12	53.5
13	342	40.2	20	34.3		05.1	358	43.2		50.7	277	32.1		56.2	122	46.8		53.5
14	357	42.7	35	33.6		04.1	13	43.8		49.9	292	34.5		56.2	137	49.3		53.5
15	12	45.1	50	33.0		03.2	28	44.5		49.2	307	36.8		56.3	152	51.8		53.5
16	27	47.6	65	32.3		02.3	43	45.1		48.4	322	39.1		56.3	167	54.2		53.5
17	42	50.1	80	31.7	-16	01.4	58	45.8	-7	47.6	337	41.4	+20	56.3	182	56.7	-12	53.5
18	57	52.5	95	31.1	-16	00.4	73	46.4	-7	46.9	352	43.7	+20	56.4	197	59.1	-12	53.5
19	72	55.0	110	30.4	-15	59.5	88	47.0		46.1	7	46.0		56.4	213	01.6		53.4
20	87	57.5	125	29.8		58.6	103	47.7		45.3	22	48.3		56.4	228	04.0		53.4
21	102	59.9	140	29.1		57.7	118	48.3		44.6	37	50.6		56.5	243	06.5		53.4
22	118	02.4	155	28.5		56.7	133	48.9		43.8	52	52.9		56.5	258	09.0		53.4
23	133	04.9	170	27.8		55.8	148	49.6		43.0	67	55.2		56.5	273	11.4		53.4
24	148	07.3	185	27.2	-15	54.9	163	50.2	-7	42.3	82	57.5	+20	56.6	288	13.9	-12	53.4
Dif	—		-6	+9		+6	+8		+23		0				+25			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 9			Edad: 7 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	31.0	-11	38.9	88	59.2	+19	28.3	60 N	5 58	6 46	7 29	9 48	42	2 41	57
1	191	31.0		38.0	103	30.4 ¹²²		31.8 ³⁵	58	57	43	23	10 02	42	27	56
2	206	31.1		37.1	118	01.6 ¹²²		35.2 ³⁴	56	56	40	18	14	43	15	55
3	221	31.1		36.2	132	32.7 ¹²¹		38.4 ³²	54	56	37	13	25	43	2 05	54
4	236	31.2		35.3	147	03.9 ¹²²		41.6 ³²	52	55	34	09	34	44	1 55	54
5	251	31.2	-11	34.4	161	35.0 ¹²¹	+19	44.8 ³²	50	5 54	6 32	7 05	10 42	45	1 47	54
6	266	31.3	-11	33.6	176	06.1 ¹²¹	+19	47.8 ³⁰	45	5 52	6 26	6 56	11 00	46	1 30	52
7	281	31.3		32.7	190	37.3 ¹²²		50.7 ²⁹	40	50	21	49	15	46	15	52
8	296	31.4		31.8	205	08.4 ¹²¹		53.5 ²⁸	35	47	17	43	27	47	1 03	51
9	311	31.5		30.9	219	39.4 ¹²⁰		56.3 ²⁸	30	45	13	37	38	47	0 53	50
10	326	31.5		30.0	234	10.5 ¹²¹	+19	58.9 ²⁶	20	39	6 05	27	11 57	47	34	50
11	341	31.6	-11	29.1	248	41.6 ¹²¹	+20	01.5 ²⁶	10 N	5 33	5 57	6 19	12 13	48	0 19	48
12	356	31.6	-11	28.2	263	12.6 ¹²⁰	+20	03.9 ²⁴	0	5 25	5 49	6 11	12 28	49	0 04	48
13	11	31.7		27.4	277	43.7 ¹²¹		06.3 ²⁴	10 S	16	41	6 02	12 44	48	*** **	***
14	26	31.7		26.5	292	14.7 ¹²⁰		08.6 ²³	20	5 04	31	5 53	13 00	49	*** **	***
15	41	31.8		25.6	306	45.8 ¹²¹		10.8 ²²	30	4 49	18	43	19	49	*** **	***
16	56	31.8		24.7	321	16.8 ¹²⁰		12.8 ²⁰	35	39	10	37	30	50	23 49	48
17	71	31.9	-11	23.8	335	47.8 ¹²⁰	+20	14.8 ²⁰	40	4 27	5 01	5 30	13 43	50	23 36	48
18	86	32.0	-11	22.9	350	18.8 ¹²⁰	+20	16.7 ¹⁹	45	4 13	4 51	5 22	13 58	50	23 21	48
19	101	32.0		22.0	4	49.8 ¹²⁰		18.6 ¹⁹	50	3 54	37	12	14 16	51	23 03	47
20	116	32.1		21.1	19	20.7 ¹¹⁹		20.3 ¹⁷	52	44	31	07	25	51	22 54	47
21	131	32.1		20.3	33	51.7 ¹²⁰		21.9 ¹⁶	54	34	23	5 02	34	52	44	47
22	146	32.2		19.4	48	22.7 ¹²⁰		23.4 ¹⁵	56	21	15	4 57	45	52	33	47
23	161	32.2		18.5	62	53.6 ¹¹⁹		24.9 ¹⁵	58	3 07	4 06	51	14 58	52	20	47
24	176	32.3	-11	17.6	77	24.6 ¹²⁰	+20	26.2 ¹³	60 S	2 49	3 55	4 43	15 13	52	22 05	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 05 ^m 2		Mag: -3.9 PMG: 11 ^h 39 ^m		Mag: +1.2 PMG: 13 ^h 04 ^m		Mag: -2.4 PMG: 18 ^h 25 ^m		Mag: +0.5 PMG: 4 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	148	07.3	185	27.2	-15	54.9	163	50.2	-7	42.3	82	57.5	+20	56.6	288	13.9	-12	53.4
1	163	09.8	200	26.6		53.9	178	50.8		41.5	97	59.8		56.6	303	16.3		53.4
2	178	12.2	215	25.9		53.0	193	51.5		40.7	113	02.1		56.6	318	18.8		53.4
3	193	14.7	230	25.3		52.1	208	52.1		39.9	128	04.4		56.7	333	21.2		53.4
4	208	17.2	245	24.6		51.1	223	52.8		39.2	143	06.7		56.7	348	23.7		53.4
5	223	19.6	260	24.0	-15	50.2	238	53.4	-7	38.4	158	09.0	+20	56.7	3	26.2	-12	53.4
6	238	22.1	275	23.4	-15	49.3	253	54.0	-7	37.6	173	11.3	+20	56.8	18	28.6	-12	53.4
7	253	24.6	290	22.7		48.3	268	54.7		36.9	188	13.6		56.8	33	31.1		53.3
8	268	27.0	305	22.1		47.4	283	55.3		36.1	203	15.9		56.8	48	33.5		53.3
9	283	29.5	320	21.5		46.5	298	55.9		35.3	218	18.2		56.9	63	36.0		53.3
10	298	32.0	335	20.8		45.5	313	56.6		34.5	233	20.5		56.9	78	38.5		53.3
11	313	34.4	350	20.2	-15	44.6	328	57.2	-7	33.8	248	22.8	+20	57.0	93	40.9	-12	53.3
12	328	36.9	5	19.5	-15	43.6	343	57.8	-7	33.0	263	25.1	+20	57.0	108	43.4	-12	53.3
13	343	39.4	20	18.9		42.7	358	58.5		32.2	278	27.4		57.0	123	45.8		53.3
14	358	41.8	35	18.3		41.8	13	59.1		31.5	293	29.7		57.1	138	48.3		53.3
15	13	44.3	50	17.6		40.8	28	59.8		30.7	308	32.0		57.1	153	50.8		53.3
16	28	46.7	65	17.0		39.9	44	00.4		29.9	323	34.3		57.1	168	53.2		53.3
17	43	49.2	80	16.4	-15	38.9	59	01.0	-7	29.1	338	36.6	+20	57.2	183	55.7	-12	53.3
18	58	51.7	95	15.7	-15	38.0	74	01.7	-7	28.4	353	38.9	+20	57.2	198	58.1	-12	53.2
19	73	54.1	110	15.1		37.1	89	02.3		27.6	8	41.2		57.2	214	00.6		53.2
20	88	56.6	125	14.5		36.1	104	03.0		26.8	23	43.5		57.3	229	03.1		53.2
21	103	59.1	140	13.8		35.2	119	03.6		26.1	38	45.8		57.3	244	05.5		53.2
22	119	01.5	155	13.2		34.2	134	04.2		25.3	53	48.1		57.3	259	08.0		53.2
23	134	04.0	170	12.6		33.3	149	04.9		24.5	68	50.4		57.4	274	10.4		53.2
24	149	06.5	185	12.0	-15	32.3	164	05.5	-7	23.7	83	52.7	+20	57.4	289	12.9	-12	53.2
Dif	—		-6		+9		+6		+8		+23		0		+25			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2		Edad: 8 ^d 7 PHE { 4 ^h : 54 ² / 12 ^h : 54 ² / 20 ^h : 54 ² / R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	176	32.3	-11	17.6	77	24.6	+20	26.2	60 N	17 02	17 45	18 34	10 30	52	3 38	47
1	191	32.4		16.7	91	55.5 ¹¹⁹		27.4	58	08	48	34	44	52	23	47
2	206	32.4		15.8	106	26.4 ¹¹⁹		28.6	56	13	51	34	10 57	52	3 10	48
3	221	32.5		14.9	120	57.4 ¹²⁰		29.6	54	17	54	35	11 08	51	2 59	48
4	236	32.5		14.0	135	28.3 ¹¹⁹		30.6	52	22	56	36	18	51	49	48
5	251	32.6	-11	13.1	149	59.2 ¹¹⁹	+20	31.5	50	17 25	17 59	18 36	11 27	51	2 41	47
6	266	32.7	-11	12.2	164	30.1 ¹¹⁹	+20	32.2	45	17 34	18 04	18 38	11 46	50	2 22	48
7	281	32.7		11.4	179	01.0 ¹¹⁹		32.9	40	41	08	40	12 01	50	2 07	48
8	296	32.8		10.5	193	31.9 ¹¹⁹		33.5	35	47	12	42	14	49	1 54	48
9	311	32.8		09.6	208	02.8 ¹¹⁹		34.0	30	17 52	16	44	25	49	43	48
10	326	32.9		08.7	222	33.6 ¹¹⁸		34.4	20	18 01	23	49	12 44	49	24	48
11	341	33.0	-11	07.8	237	04.5 ¹¹⁹	+20	34.6	10 N	18 09	18 31	18 55	13 01	48	1 07	48
12	356	33.0	-11	06.9	251	35.4 ¹¹⁹	+20	34.8	0	18 17	18 38	19 03	13 17	48	0 52	48
13	11	33.1		06.0	266	06.3 ¹¹⁹		34.9	10 S	25	47	12	32	48	36	48
14	26	33.2		05.1	280	37.1 ¹¹⁸		35.0	20	34	18 56	23	13 49	47	19	48
15	41	33.2		04.2	295	08.0 ¹¹⁹		34.9	30	44	19 08	37	14 08	47	0 00	48
16	56	33.3		03.3	309	38.8 ¹¹⁸		34.7	35	49	16	47	20	46	** ** *	**
17	71	33.4	-11	02.4	324	09.7 ¹¹⁹	+20	34.4	40	18 56	19 24	19 58	14 33	46	** ** *	**
18	86	33.4	-11	01.5	338	40.5 ¹¹⁸	+20	34.0	45	19 04	19 34	20 12	14 48	45	** ** *	**
19	101	33.5	-11	00.6	353	11.4 ¹¹⁹		33.6	50	13	47	30	15 07	45	23 50	54
20	116	33.5	-10	59.7	7	42.2 ¹¹⁸		33.0	52	17	19 54	39	16	44	41	55
21	131	33.6		58.8	22	13.0 ¹¹⁸		32.3	54	22	20 00	20 49	26	44	31	55
22	146	33.7		57.9	36	43.9 ¹¹⁹		31.6	56	27	08	21 01	37	43	20	56
23	161	33.7		57.0	51	14.7 ¹¹⁸		30.7	58	33	17	15	15 50	43	23 07	57
24	176	33.8	-10	56.1	65	45.5 ¹¹⁸	+20	29.8	60 S	19 40	20 27	21 31	16 05	42	22 52	57
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 01 ^m 3		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: +1.2 PMG: 13 ^h 03 ^m		Mag: -2.4 PMG: 18 ^h 22 ^m		Mag: +0.5 PMG: 4 ^h 42 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	149	06.5	185	12.0	164	05.5	83	52.7	289	12.9						
1	164	08.9	200	11.3	179	06.2	98	55.0	304	15.4						
2	179	11.4	215	10.7	194	06.8	113	57.3	319	17.8						
3	194	13.8	230	10.1	209	07.4	128	59.6	334	20.3						
4	209	16.3	245	09.4	224	08.1	144	01.9	349	22.8						
5	224	18.8	260	08.8	239	08.7	159	04.2	4	25.2						
6	239	21.2	275	08.2	254	09.4	174	06.5	19	27.7						
7	254	23.7	290	07.6	269	10.0	189	08.8	34	30.1						
8	269	26.2	305	06.9	284	10.6	204	11.1	49	32.6						
9	284	28.6	320	06.3	299	11.3	219	13.4	64	35.1						
10	299	31.1	335	05.7	314	11.9	234	15.7	79	37.5						
11	314	33.6	350	05.1	329	12.6	249	17.9	94	40.0						
12	329	36.0	5	04.5	344	13.2	264	20.2	109	42.5						
13	344	38.5	20	03.8	359	13.8	279	22.5	124	44.9						
14	359	41.0	35	03.2	14	14.5	294	24.8	139	47.4						
15	14	43.4	50	02.6	29	15.1	309	27.1	154	49.9						
16	29	45.9	65	02.0	44	15.8	324	29.4	169	52.3						
17	44	48.3	80	01.3	59	16.4	339	31.7	184	54.8						
18	59	50.8	95	00.7	74	17.0	354	34.0	199	57.3						
19	74	53.3	110	00.1	89	17.7	9	36.3	214	59.7						
20	89	55.7	124	59.5	104	18.3	24	38.6	230	02.2						
21	104	58.2	139	58.9	119	19.0	39	40.9	245	04.7						
22	120	00.7	154	58.2	134	19.6	54	43.1	260	07.1						
23	135	03.1	169	57.6	149	20.3	69	45.4	275	09.6						
24	150	05.6	184	57.0	164	20.9	84	47.7	290	12.1						
Dif	—		-6		+10		+23		+25							
							0		0							

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 9 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	33.8	-10 56.1	65	45.5	+20 29.8	60 N	5 53	6 41	7 24	11 22	62	4 25	37	
1	191	33.9		80	16.4 ¹¹⁹	28.7 ¹¹	58	52	38	18	36	61	4 10	39	
2	206	33.9		94	47.2 ¹¹⁸	27.6 ¹¹	56	52	35	13	49	59	3 58	39	
3	221	34.0		109	18.0 ¹¹⁸	26.4 ¹²	54	52	33	09	11 59	59		47	40
4	236	34.1		123	48.9 ¹¹⁹	25.0 ¹⁴	52	51	30	05	12 09	57		37	41
5	251	34.1	-10 51.7	138	19.7 ¹¹⁸	+20 23.6 ¹⁴	50	5 51	6 28	7 01	12 18	56	3 28	42	
6	266	34.2	-10 50.8	152	50.5 ¹¹⁸	+20 22.1 ¹⁵	45	5 49	6 23	6 53	12 36	55	3 10	43	
7	281	34.3		167	21.4 ¹¹⁹	20.5 ¹⁶	40	47	19	46	12 51	54	2 55	44	
8	296	34.3		181	52.2 ¹¹⁸	18.7 ¹⁸	35	45	15	40	13 03	53		42	45
9	311	34.4		196	23.0 ¹¹⁸	16.9 ¹⁸	30	43	11	35	14	52		31	46
10	326	34.5		210	53.8 ¹¹⁸	15.0 ¹⁹	20	38	6 04	26	33	51	2 12	47	
11	341	34.6	-10 46.3	225	24.7 ¹¹⁹	+20 13.0 ²⁰	10 N	5 32	5 57	6 18	13 49	50	1 55	48	
12	356	34.6	-10 45.4	239	55.5 ¹¹⁸	+20 10.9 ²¹	0	5 25	5 49	6 10	14 05	48	1 40	48	
13	11	34.7		254	26.4 ¹¹⁹	08.8 ²¹	10 S	16	41	6 03	20	47		24	49
14	26	34.8		268	57.2 ¹¹⁸	06.5 ²³	20	5 05	32	5 54	36	46	1 07	50	
15	41	34.8		283	28.1 ¹¹⁹	04.1 ²⁴	30	4 50	20	44	14 55	44	0 48	51	
16	56	34.9		297	58.9 ¹¹⁸	+20 01.6 ²⁵	35	41	12	39	15 06	43		37	51
17	71	35.0	-10 40.9	312	29.8 ¹¹⁹	+19 59.1 ²⁵	40	4 30	5 04	5 32	15 19	42	0 24	52	
18	86	35.0	-10 40.0	327	00.6 ¹¹⁸	+19 56.4 ²⁷	45	4 16	4 54	5 25	15 33	41	0 09	53	
19	101	35.1		341	31.5 ¹¹⁹	53.7 ²⁷	50	3 58	41	15	15 52	38	** ** *	**	
20	116	35.2		356	02.3 ¹¹⁸	50.8 ²⁹	52	49	35	11	16 00	38	** ** *	**	
21	131	35.3		10	33.2 ¹¹⁹	47.9 ²⁹	54	39	28	06	10	37	** ** *	**	
22	146	35.3		25	04.1 ¹¹⁹	44.8 ³¹	56	27	20	5 01	20	36	** ** *	**	
23	161	35.4		39	35.0 ¹¹⁹	41.7 ³¹	58	3 14	12	4 55	33	34	** ** *	**	
24	176	35.5	-10 34.5	54	05.8 ¹¹⁸	+19 38.5 ³²	60 S	2 57	4 01	4 49	16 47	33	23 49	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 57 ^m 3		Mag: -3.9 PMG: 11 ^h 41 ^m		Mag: +1.2 PMG: 13 ^h 02 ^m		Mag: -2.4 PMG: 18 ^h 18 ^m		Mag: +0.5 PMG: 4 ^h 38 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	°	°	°	°	°					
0	150	05.6	184	57.0	-15 09.3	164	20.9	-7 05.2	84	47.7	+20 58.3	290	12.1	-12 52.9	
1	165	08.1	199	56.4		179	21.5	04.4	99	50.0		305	14.5		52.9
2	180	10.5	214	55.8		194	22.2	03.6	114	52.3		320	17.0		52.9
3	195	13.0	229	55.2		209	22.8	02.9	129	54.6		335	19.5		52.9
4	210	15.5	244	54.5		224	23.5	02.1	144	56.9		350	21.9		52.9
5	225	17.9	259	53.9	-15 04.5	239	24.1	-7 01.3	159	59.2	+20 58.5	5	24.4	-12 52.9	
6	240	20.4	274	53.3	-15 03.5	254	24.8	-7 00.5	175	01.4	+20 58.5	20	26.9	-12 52.9	
7	255	22.8	289	52.7		269	25.4	-6 59.8	190	03.7		35	29.3		52.9
8	270	25.3	304	52.1		284	26.0	59.0	205	06.0		50	31.8		52.8
9	285	27.8	319	51.5	-15 00.6	299	26.7	58.2	220	08.3		65	34.3		52.8
10	300	30.2	334	50.9	-14 59.6	314	27.3	57.4	235	10.6		80	36.7		52.8
11	315	32.7	349	50.3	-14 58.7	329	28.0	-6 56.7	250	12.9	+20 58.7	95	39.2	-12 52.8	
12	330	35.2	4	49.6	-14 57.7	344	28.6	-6 55.9	265	15.1	+20 58.7	110	41.7	-12 52.8	
13	345	37.6	19	49.0		359	29.3	55.1	280	17.4		125	44.1		52.8
14	0	40.1	34	48.4		14	29.9	54.3	295	19.7		140	46.6		52.8
15	15	42.6	49	47.8		29	30.6	53.6	310	22.0		155	49.1		52.8
16	30	45.0	64	47.2		44	31.2	52.8	325	24.3		170	51.5		52.8
17	45	47.5	79	46.6	-14 52.8	59	31.8	-6 52.0	340	26.6	+20 58.9	185	54.0	-12 52.7	
18	60	50.0	94	46.0	-14 51.8	74	32.5	-6 51.2	355	28.8	+20 59.0	200	56.5	-12 52.7	
19	75	52.4	109	45.4		89	33.1	50.4	10	31.1		215	58.9		52.7
20	90	54.9	124	44.8		104	33.8	49.7	25	33.4		231	01.4		52.7
21	105	57.3	139	44.2		119	34.4	48.9	40	35.7		246	03.9		52.7
22	120	59.8	154	43.6		134	35.1	48.1	55	38.0		261	06.4		52.7
23	136	02.3	169	43.0		149	35.7	47.3	70	40.2		276	08.8		52.7
24	151	04.7	184	42.4	-14 45.9	164	36.4	-6 46.6	85	42.5	+20 59.2	291	11.3	-12 52.7	
Dif	—		-6	+10		+6	+8		+23		0	+25		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 6				Edad: 10 ^d 7 PHE { SD: 14 ^h 8 PMG: 21 ^h 04 ^m 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7 R°: 48 ^m																
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	35.5	-10	34.5	54	05.8	+19	38.5	60 N	17	07	17	50	18	38	12	24	69	5	02	29
1	191	35.5		33.6	68	36.7 ¹¹⁹		35.2 ³³	58	12		53	38		37	67		4	49	31	
2	206	35.6		32.7	83	07.6 ¹¹⁹		31.8 ³⁴	56	17		55	38		48	65		37	33		
3	221	35.7		31.8	97	38.5 ¹¹⁹		28.3 ³⁵	54	21		58	39		12	58	64		27	34	
4	236	35.8		30.9	112	09.4 ¹¹⁹		24.7 ³⁶	52	25		00	39		13	06	63		18	36	
5	251	35.8	-10	30.0	126	40.3 ¹¹⁹	+19	21.0 ³⁷	50	17	29	18	02	18	39	13	14	62	4	10	37
6	266	35.9	-10	29.1	141	11.3 ¹²⁰	+19	17.2 ³⁸	45	17	36	18	06	18	40	13	31	59	3	53	39
7	281	36.0		28.2	155	42.2 ¹¹⁹		13.3 ³⁹	40	43		10	42		45	57		39	40		
8	296	36.1		27.3	170	13.1 ¹¹⁹		09.4 ³⁹	35	48		14	44		13	56	56		27	42	
9	311	36.1		26.4	184	44.1 ¹²⁰		05.3 ⁴¹	30	17	53	18	46		14	06	54	3	17	42	
10	326	36.2		25.5	199	15.0 ¹¹⁹	+19	01.2 ⁴¹	20	18	02	24	50		24	51		2	59	44	
11	341	36.3	-10	24.6	213	46.0 ¹²⁰	+18	56.9 ⁴³	10 N	18	10	18	31	18	56	14	39	49	2	43	46
12	356	36.4	-10	23.7	228	17.0 ¹²⁰	+18	52.6 ⁴³	0	18	17	18	38	19	02	14	53	48	2	28	48
13	11	36.4		22.8	242	47.9 ¹¹⁹		48.2 ⁴⁴	10 S	24		46	11		15	07	46	2	13	50	
14	26	36.5		21.9	257	18.9 ¹²⁰		43.7 ⁴⁵	20	32		55	21		22	44		1	57	51	
15	41	36.6		20.9	271	49.9 ¹²⁰		39.1 ⁴⁶	30	42		06	35		39	42			39	53	
16	56	36.7		20.0	286	20.9 ¹²⁰		34.4 ⁴⁷	35	47		13	44		15	49	40		28	55	
17	71	36.8	-10	19.1	300	51.9 ¹²⁰	+18	29.6 ⁴⁸	40	18	53	19	21	19	55	16	01	38	1	16	56
18	86	36.8	-10	18.2	315	22.9 ¹²⁰	+18	24.8 ⁴⁸	45	19	00	19	31	20	08	16	14	36	1	02	57
19	101	36.9		17.3	329	54.0 ¹²¹		19.8 ⁵⁰	50	09		43	26		30	34		0	44	59	
20	116	37.0		16.4	344	25.0 ¹²⁰		14.8 ⁵⁰	52	13		49	34		38	33			36	60	
21	131	37.1		15.5	358	56.0 ¹²⁰		09.6 ⁵²	54	17		55	43		47	31			26	61	
22	146	37.1		14.6	13	27.1 ¹²¹	+18	04.4 ⁵²	56	22		03	20	55	16	56	30			16	62
23	161	37.2		13.7	27	58.2 ¹²¹	+17	59.1 ⁵³	58	28		11	21	08	17	07	28	0	04	64	
24	176	37.3	-10	12.8	42	29.2 ¹²⁰	+17	53.7 ⁵⁴	60 S	19	34	20	21	21	23	17	20	25	**	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 53 ^m 4		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: +1.2 PMG: 13 ^h 01 ^m		Mag: -2.4 PMG: 18 ^h 14 ^m		Mag: +0.5 PMG: 4 ^h 34 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	151	04.7	184	42.4	-14	45.9	164	36.4	-6	46.6
1	166	07.2	199	41.8		45.0	179	37.0		45.8
2	181	09.7	214	41.1		44.0	194	37.7		45.0
3	196	12.1	229	40.5		43.0	209	38.3		44.2
4	211	14.6	244	39.9		42.0	224	38.9		43.5
5	226	17.1	259	39.3	-14	41.0	239	39.6	-6	42.7
6	241	19.5	274	38.7	-14	40.0	254	40.2	-6	41.9
7	256	22.0	289	38.1		39.0	269	40.9		41.1
8	271	24.4	304	37.5		38.1	284	41.5		40.3
9	286	26.9	319	36.9		37.1	299	42.2		39.6
10	301	29.4	334	36.3		36.1	314	42.8		38.8
11	316	31.8	349	35.7	-14	35.1	329	43.5	-6	38.0
12	331	34.3	4	35.1	-14	34.1	344	44.1	-6	37.2
13	346	36.8	19	34.5		33.1	359	44.8		36.5
14	1	39.2	34	33.9		32.1	14	45.4		35.7
15	16	41.7	49	33.3		31.1	29	46.1		34.9
16	31	44.2	64	32.7		30.1	44	46.7		34.1
17	46	46.6	79	32.1	-14	29.1	59	47.4	-6	33.3
18	61	49.1	94	31.5	-14	28.1	74	48.0	-6	32.6
19	76	51.6	109	31.0		27.1	89	48.7		31.8
20	91	54.0	124	30.4		26.1	104	49.3		31.0
21	106	56.5	139	29.8		25.1	119	50.0		30.2
22	121	58.9	154	29.2		24.1	134	50.6		29.4
23	137	01.4	169	28.6		23.1	149	51.3		28.7
24	152	03.9	184	28.0	-14	22.1	164	51.9	-6	27.9
Dif	—		-6		+10		+6		+8	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 11 ^d 7 PHE { 4 ^h : 54:9 12 ^h : 55:0 20 ^h : 55:2 Rº: 47 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m					
0	176	37.3	-10	12.8	42	29.2	+17	53.7	55	60 N	5	48	6	36	7	18	13	33	75	5	31	22	
1	191	37.4		11.9	57	00.3	121	48.2	55	58	48	33	13			44	72			20	25		
2	206	37.5		10.9	71	31.4	121	42.6	56	56	48	31	08			13	53	71		10	27		
3	221	37.5		10.0	86	02.5	121	37.0	56	54	47	28	04			14	02	68		5	01	27	
4	236	37.6		09.1	100	33.6	121	31.2	58	52	47	26	7	01		09	67		4	54	30		
5	251	37.7	-10	08.2	115	04.8	122	+17	25.4	58	50	5	47	6	24	6	57	14	16	65	4	47	31
6	266	37.8	-10	07.3	129	35.9	121	+17	19.5	59	45	5	46	6	20	6	50	14	30	62	4	32	34
7	281	37.9		06.4	144	07.1	122		13.5	60	40	45	16	43		42	59			19	37		
8	296	38.0		05.5	158	38.2	121		07.4	61	35	43	12	38		14	52	57		4	09	38	
9	311	38.0		04.6	173	09.4	122	+17	01.2	62	30	41	09	33		15	00	56		3	59	40	
10	326	38.1		03.6	187	40.6	122	+16	55.0	62	20	37	6	02	25	15	53			43	43		
11	341	38.2	-10	02.7	202	11.8	122	+16	48.6	64	10 N	5	31	5	56	6	17	15	28	50	3	29	45
12	356	38.3	-10	01.8	216	43.0	122	+16	42.2	64	0	5	25	5	49	6	10	15	41	47	3	16	47
13	11	38.4	-10	00.9	231	14.2	122		35.7	65	10 S	17	41	6	03	15	53	45			3	03	49
14	26	38.4	-10	00.0	245	45.4	122		29.1	66	20	5	06	32	5	55	16	06	42		2	48	53
15	41	38.5	-9	59.1	260	16.7	123		22.5	66	30	4	52	21	46	21	39			32	55		
16	56	38.6		58.2	274	47.9	122		15.7	68	35	43	14	41		29	37			23	56		
17	71	38.7	-9	57.2	289	19.2	123	+16	08.9	68	40	4	33	5	06	5	35	16	39	35	2	12	58
18	86	38.8	-9	56.3	303	50.4	122	+16	02.0	69	45	4	19	4	57	5	27	16	50	33	1	59	60
19	101	38.9		55.4	318	21.7	123	+15	55.0	70	50	4	02	45	19	17	04	30		43	63		
20	116	39.0		54.5	332	53.0	123		47.9	71	52	3	54	39	15	11	28			36	64		
21	131	39.0		53.6	347	24.3	123		40.8	71	54	44	32	11		18	26			27	67		
22	146	39.1		52.7	1	55.6	123		33.5	73	56	33	25	06		26	24			18	68		
23	161	39.2		51.8	16	27.0	124		26.2	73	58	20	17	5	00	35	22			1	08	70	
24	176	39.3	-9	50.8	30	58.3	123	+15	18.8	74	60 S	3	05	4	07	4	54	17	45	20	0	56	72

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 49 ^m 5		Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: +1.2 PMG: 13 ^h 00 ^m			Mag: -2.4 PMG: 18 ^h 11 ^m			Mag: +0.5 PMG: 4 ^h 31 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	152	03.9	184	28.0	-14	22.1	164	51.9	-6	27.9	86	37.1	+21	00.1	292	10.6	-12	52.3
1	167	06.3	199	27.4		21.1	179	52.6		27.1	101	39.4		00.1	307	13.1		52.3
2	182	08.8	214	26.8		20.1	194	53.2		26.3	116	41.7		00.2	322	15.6		52.3
3	197	11.3	229	26.2		19.1	209	53.8		25.6	131	44.0		00.2	337	18.1		52.3
4	212	13.7	244	25.6		18.1	224	54.5		24.8	146	46.2		00.3	352	20.5		52.3
5	227	16.2	259	25.0	-14	17.1	239	55.1	-6	24.0	161	48.5	+21	00.3	7	23.0	-12	52.3
6	242	18.7	274	24.4	-14	16.1	254	55.8	-6	23.2	176	50.8	+21	00.3	22	25.5	-12	52.3
7	257	21.1	289	23.8		15.1	269	56.4		22.4	191	53.0		00.4	37	28.0		52.2
8	272	23.6	304	23.3		14.1	284	57.1		21.7	206	55.3		00.4	52	30.5		52.2
9	287	26.1	319	22.7		13.1	299	57.7		20.9	221	57.6		00.5	67	32.9		52.2
10	302	28.5	334	22.1		12.1	314	58.4		20.1	236	59.8		00.5	82	35.4		52.2
11	317	31.0	349	21.5	-14	11.1	329	59.0	-6	19.3	252	02.1	+21	00.5	97	37.9	-12	52.2
12	332	33.4	4	20.9	-14	10.1	344	59.7	-6	18.5	267	04.4	+21	00.6	112	40.4	-12	52.2
13	347	35.9	19	20.3		09.1	0	00.3		17.8	282	06.6		00.6	127	42.8		52.2
14	2	38.4	34	19.7		08.1	15	01.0		17.0	297	08.9		00.7	142	45.3		52.1
15	17	40.8	49	19.1		07.1	30	01.7		16.2	312	11.2		00.7	157	47.8		52.1
16	32	43.3	64	18.6		06.1	45	02.3		15.4	327	13.5		00.7	172	50.3		52.1
17	47	45.8	79	18.0	-14	05.1	60	03.0	-6	14.6	342	15.7	+21	00.8	187	52.7	-12	52.1
18	62	48.2	94	17.4	-14	04.0	75	03.6	-6	13.9	357	18.0	+21	00.8	202	55.2	-12	52.1
19	77	50.7	109	16.8		03.0	90	04.3		13.1	12	20.2		00.9	217	57.7		52.1
20	92	53.2	124	16.2		02.0	105	04.9		12.3	27	22.5		00.9	233	00.2		52.1
21	107	55.6	139	15.6	-14	01.0	120	05.6		11.5	42	24.8		00.9	248	02.7		52.0
22	122	58.1	154	15.1	-14	00.0	135	06.2		10.7	57	27.0		01.0	263	05.1		52.0
23	138	00.5	169	14.5	-13	59.0	150	06.9		10.0	72	29.3		01.0	278	07.6		52.0
24	153	03.0	184	13.9	-13	58.0	165	07.5	-6	09.2	87	31.6	+21	01.1	293	10.1	-12	52.0
Dif	—		-6			+10	+7		+8	+23		0		+25				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 3			Edad: 12 ^d 7 PHE { SD: 15/0 PMG: 22 ^h 39 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	39.3	-9 50.8	30	58.3	+15 18.8	74	60 N	17 12	17 55	18 43	14 48	78	5 53	18
1	191	39.4	49.9	45	29.6 ¹²³	11.4	74	58	17	57	43	14 56	76	45	20
2	206	39.5	49.0	60	01.0 ¹²⁴	+15 03.8	76	56	22	17 59	43	15 04	73	37	23
3	221	39.6	48.1	74	32.4 ¹²⁴	+14 56.2	76	54	25	18 01	42	10 71	30	25	
4	236	39.6	47.2	89	03.8 ¹²⁴	48.5	77	52	29	03	42	16 69	24	26	
5	251	39.7	-9 46.2	103	35.1 ¹²³	+14 40.7	78	50	17 32	18 05	18 43	15 21	67	5 18	28
6	266	39.8	-9 45.3	118	06.5 ¹²⁴	+14 32.9	79	45	17 39	18 09	18 43	15 32	64	5 06	31
7	281	39.9	44.4	132	38.0 ¹²⁵	25.0	78	40	45	13	44	41 61		4 56	34
8	296	40.0	43.5	147	09.4 ¹²⁴	17.0	80	35	50	16	45	49 59		47	36
9	311	40.1	42.6	161	40.8 ¹²⁴	08.9	81	30	17 55	19	47	15 56	57	39	38
10	326	40.2	41.7	176	12.3 ¹²⁵	+14 00.8	81	20	18 03	25	51	16 08	53	26	42
11	341	40.3	-9 40.7	190	43.7 ¹²⁴	+13 52.6	82	10 N	18 10	18 31	18 56	16 18	50	4 14	45
12	356	40.4	-9 39.8	205	15.2 ¹²⁵	+13 44.3	83	0	18 17	18 38	19 02	16 28	47	4 03	47
13	11	40.4	38.9	219	46.7 ¹²⁵	35.9	84	10 S	24	45	10	38 44		3 52	50
14	26	40.5	38.0	234	18.1 ¹²⁴	27.5	84	20	31	18 53	20	16 48	41	41	52
15	41	40.6	37.1	248	49.6 ¹²⁵	19.0	85	30	40	19 04	33	17 00	37	27	56
16	56	40.7	36.1	263	21.1 ¹²⁵	10.4	86	35	45	11	41	06 36		19	58
17	71	40.8	-9 35.2	277	52.6 ¹²⁵	+13 01.8	86	40	18 50	19 18	19 52	17 14	33	3 10	60
18	86	40.9	-9 34.3	292	24.2 ¹²⁶	+12 53.1	87	45	18 57	19 27	20 04	17 23	30	2 59	63
19	101	41.0	33.4	306	55.7 ¹²⁵	44.3	88	50	19 05	39	21	34 27		46	67
20	116	41.1	32.4	321	27.2 ¹²⁵	35.5	88	52	09	44	29	39 25		40	68
21	131	41.2	31.5	335	58.8 ¹²⁶	26.6	89	54	13	51	38	44 24		34	69
22	146	41.3	30.6	350	30.3 ¹²⁵	17.6	90	56	17	19 57	20 48	50 22		26	72
23	161	41.4	29.7	5	01.9 ¹²⁶	+12 08.6	90	58	22	20 05	21 00	17 57	19	18	74
24	176	41.4	-9 28.8	19	33.4 ¹²⁵	+11 59.5	91	60 S	19 28	20 14	21 15	18 05	16	2 08	77
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 45 ^m 5			Mag: -3.9 PMG: 11 ^h 44 ^m			Mag: +1.2 PMG: 12 ^h 59 ^m			Mag: -2.4 PMG: 18 ^h 07 ^m			Mag: +0.4 PMG: 4 ^h 27 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	153	03.0	184 13.9	-13 58.0	165 07.5	-6 09.2	87 31.6	+21 01.1	293 10.1	-12 52.0					
1	168	05.5	199 13.3	56.9	180 08.2	08.4	102 33.8	01.1	308 12.6	52.0					
2	183	07.9	214 12.7	55.9	195 08.8	07.6	117 36.1	01.1	323 15.1	52.0					
3	198	10.4	229 12.2	54.9	210 09.5	06.8	132 38.4	01.2	338 17.5	52.0					
4	213	12.9	244 11.6	53.9	225 10.1	06.0	147 40.6	01.2	353 20.0	51.9					
5	228	15.3	259 11.0	-13 52.9	240 10.8	-6 05.3	162 42.9	+21 01.3	8 22.5	-12 51.9					
6	243	17.8	274 10.4	-13 51.8	255 11.4	-6 04.5	177 45.1	+21 01.3	23 25.0	-12 51.9					
7	258	20.3	289 09.8	50.8	270 12.1	03.7	192 47.4	01.3	38 27.5	51.9					
8	273	22.7	304 09.3	49.8	285 12.7	02.9	207 49.7	01.4	53 29.9	51.9					
9	288	25.2	319 08.7	48.8	300 13.4	02.1	222 51.9	01.4	68 32.4	51.9					
10	303	27.7	334 08.1	47.8	315 14.0	01.4	237 54.2	01.5	83 34.9	51.8					
11	318	30.1	349 07.5	-13 46.7	330 14.7	-6 00.6	252 56.5	+21 01.5	98 37.4	-12 51.8					
12	333	32.6	4 07.0	-13 45.7	345 15.3	-5 59.8	267 58.7	+21 01.5	113 39.9	-12 51.8					
13	348	35.0	19 06.4	44.7	0 16.0	59.0	283 01.0	01.6	128 42.3	51.8					
14	3 37.5	34 05.8	43.7	15 16.7	58.2	298 03.2	01.6	143 44.8	51.8						
15	18 40.0	49 05.2	42.6	30 17.3	57.4	313 05.5	01.7	158 47.3	51.8						
16	33 42.4	64 04.7	41.6	45 18.0	56.7	328 07.7	01.7	173 49.8	51.8						
17	48 44.9	79 04.1	-13 40.6	60 18.6	-5 55.9	343 10.0	+21 01.7	188 52.3	-12 51.7						
18	63 47.4	94 03.5	-13 39.6	75 19.3	-5 55.1	358 12.3	+21 01.8	203 54.8	-12 51.7						
19	78 49.8	109 02.9	38.5	90 19.9	54.3	13 14.5	01.8	218 57.2	51.7						
20	93 52.3	124 02.4	37.5	105 20.6	53.5	28 16.8	01.9	233 59.7	51.7						
21	108 54.8	139 01.8	36.5	120 21.2	52.8	43 19.0	01.9	249 02.2	51.7						
22	123 57.2	154 01.2	35.4	135 21.9	52.0	58 21.3	01.9	264 04.7	51.7						
23	138 59.7	169 00.6	34.4	150 22.5	51.2	73 23.6	02.0	279 07.2	51.6						
24	154 02.2	184 00.1	-13 33.4	165 23.2	-5 50.4	88 25.8	+21 02.0	294 09.6	-12 51.6						
Dif	—		-6 +10		+7 +8		+23 0		+25 0						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 2			Edad: 13 ^d 7 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/2 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	41.4	-9 28.8	19	33.4	+11 59.5	60 N	5	42	6	30	7	13	16	06
1	191	41.5	27.8	34	05.0 ¹²⁶	50.3 ⁹²	58	43	28	08		12	78	05	18
2	206	41.6	26.9	48	36.6 ¹²⁶	41.1 ⁹²	56	43	26	04		17	75	6	00
3	221	41.7	26.0	63	08.2 ¹²⁶	31.8 ⁹³	54	43	24	7	00	21	73	5	55
4	236	41.8	25.1	77	39.8 ¹²⁶	22.5 ⁹³	52	43	22	6	56	25	71	50	24
5	251	41.9	-9 24.1	92	11.4 ¹²⁶	+11 13.0 ⁹⁵	50	5	43	6	21	6	53	16	28
6	266	42.0	-9 23.2	106	43.0 ¹²⁶	+11 03.6 ⁹⁴	45	5	43	6	17	6	46	16	36
7	281	42.1	22.3	121	14.6 ¹²⁶	+10 54.0 ⁹⁶	40	42	13	41		42	63	30	32
8	296	42.2	21.4	135	46.2 ¹²⁶	44.4 ⁹⁶	35	41	10	36		48	60	23	35
9	311	42.3	20.4	150	17.9 ¹²⁷	34.8 ⁹⁶	30	39	07	31		16	53	57	17
10	326	42.4	19.5	164	49.5 ¹²⁶	25.1 ⁹⁷	20	35	6	01	23	17	01	54	5
11	341	42.5	-9 18.6	179	21.1 ¹²⁶	+10 15.3 ⁹⁸	10 N	5	31	5	55	6	16	17	08
12	356	42.6	-9 17.7	193	52.8 ¹²⁷	+10 05.5 ⁹⁸	0	5	25	5	49	6	10	17	15
13	11	42.7	16.7	208	24.4 ¹²⁶	+9 55.6 ⁹⁹	10 S	17	42	6	03	22	43	42	50
14	26	42.8	15.8	222	56.0 ¹²⁶	45.7 ⁹⁹	20	5	07	33	5	56	29	40	33
15	41	42.9	14.9	237	27.7 ¹²⁷	35.7 ¹⁰⁰	30	4	54	23	47	37	36	23	57
16	56	43.0	14.0	251	59.3 ¹²⁶	25.6 ¹⁰¹	35	46	16	42		42	34	17	59
17	71	43.1	-9 13.0	266	31.0 ¹²⁷	+9 15.5 ¹⁰¹	40	4	35	5	09	5	37	17	47
18	86	43.2	-9 12.1	281	02.7 ¹²⁷	+9 05.4 ¹⁰¹	45	4	23	5	00	5	30	17	53
19	101	43.3	11.2	295	34.3 ¹²⁶	+8 55.2 ¹⁰²	50	4	06	4	48	22		18	01
20	116	43.4	10.3	310	06.0 ¹²⁷	44.9 ¹⁰³	52	3	58	43	19	04	23	48	71
21	131	43.4	09.3	324	37.6 ¹²⁶	34.6 ¹⁰³	54	49	37	15		08	21	43	73
22	146	43.5	08.4	339	09.3 ¹²⁷	24.2 ¹⁰⁴	56	39	30	10		12	19	38	74
23	161	43.6	07.5	353	41.0 ¹²⁷	13.8 ¹⁰⁴	58	27	22	5	05	16	17	32	77
24	176	43.7	-9 06.5	8	12.6 ¹²⁶	+8 03.4 ¹⁰⁴	60 S	3	13	4	13	4	59	18	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 41 ^m 6		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: +1.2 PMG: 12 ^h 58 ^m		Mag: -2.4 PMG: 18 ^h 04 ^m		Mag: +0.4 PMG: 4 ^h 23 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	154	02.2	184	00.1	-13 33.4	165 23.2	-5 50.4	88 25.8	+21 02.0	294 09.6	-12 51.6				
1	169	04.6	198	59.5	32.4	180 23.8	49.6	103 28.1	02.1	309 12.1	51.6				
2	184	07.1	213	58.9	31.3	195 24.5	48.8	118 30.3	02.1	324 14.6	51.6				
3	199	09.5	228	58.4	30.3	210 25.2	48.1	133 32.6	02.2	339 17.1	51.6				
4	214	12.0	243	57.8	29.3	225 25.8	47.3	148 34.8	02.2	354 19.6	51.6				
5	229	14.5	258	57.2	-13 28.2	240 26.5	-5 46.5	163 37.1	+21 02.2	9 22.1	-12 51.5				
6	244	16.9	273	56.7	-13 27.2	255 27.1	-5 45.7	178 39.3	+21 02.3	24 24.6	-12 51.5				
7	259	19.4	288	56.1	26.1	270 27.8	44.9	193 41.6	02.3	39 27.0	51.5				
8	274	21.9	303	55.5	25.1	285 28.4	44.1	208 43.8	02.4	54 29.5	51.5				
9	289	24.3	318	55.0	24.1	300 29.1	43.4	223 46.1	02.4	69 32.0	51.5				
10	304	26.8	333	54.4	23.0	315 29.7	42.6	238 48.4	02.4	84 34.5	51.5				
11	319	29.3	348	53.8	-13 22.0	330 30.4	-5 41.8	253 50.6	+21 02.5	99 37.0	-12 51.4				
12	334	31.7	3 53.3	-13 21.0	345 31.1	-5 41.0	268 52.9	+21 02.5	114 39.5	-12 51.4					
13	349	34.2	18 52.7	19.9	0 31.7	40.2	283 55.1	02.6	129 41.9	51.4					
14	4	36.6	33 52.1	18.9	15 32.4	39.4	298 57.4	02.6	144 44.4	51.4					
15	19	39.1	48 51.6	17.8	30 33.0	38.7	313 59.6	02.7	159 46.9	51.4					
16	34	41.6	63 51.0	16.8	45 33.7	37.9	329 01.9	02.7	174 49.4	51.4					
17	49	44.0	78 50.5	-13 15.8	60 34.3	-5 37.1	344 04.1	+21 02.7	189 51.9	-12 51.3					
18	64	46.5	93 49.9	-13 14.7	75 35.0	-5 36.3	359 06.4	+21 02.8	204 54.4	-12 51.3					
19	79	49.0	108 49.3	13.7	90 35.7	35.5	14 08.6	02.8	219 56.9	51.3					
20	94	51.4	123 48.8	12.6	105 36.3	34.7	29 10.9	02.9	234 59.3	51.3					
21	109	53.9	138 48.2	11.6	120 37.0	34.0	44 13.1	02.9	250 01.8	51.3					
22	124	56.4	153 47.7	10.5	135 37.6	33.2	59 15.4	02.9	265 04.3	51.3					
23	139	58.8	168 47.1	09.5	150 38.3	32.4	74 17.6	03.0	280 06.8	51.2					
24	155	01.3	183 46.5	-13 08.4	165 38.9	-5 31.6	89 19.9	+21 03.0	295 09.3	-12 51.2					
Dif	—		-6	+10		+7	+8		+23	0		+25			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2		Edad: 14 ^d 7 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 R°: ***m	SD: 15'3		Civil			Náutico	Hora	R°	Hora	R°					
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	176	43.7	-9	06.5	8	12.6	+8 03.4	60 N	17 17	18 00	18 48	17 27	82	6 27	14			
1	191	43.8		05.6	22	44.3 ¹²⁷	+7 52.9 ¹⁰⁵	58	22	02	47	30	79	23	17			
2	206	43.9		04.7	37	15.9 ¹²⁶	42.3 ¹⁰⁶	56	26	04	47	32	77	20	19			
3	221	44.0		03.8	51	47.6 ¹²⁷	31.8 ¹⁰⁵	54	29	05	46	34	75	17	21			
4	236	44.1		02.8	66	19.2 ¹²⁶	21.1 ¹⁰⁷	52	33	07	46	36	73	14	23			
5	251	44.2	-9	01.9	80	50.9 ¹²⁷	+7 10.4 ¹⁰⁷	50	17 36	18 08	18 46	17 38	71	6 12	24			
6	266	44.3	-9	01.0	95	22.5 ¹²⁶	+6 59.7 ¹⁰⁷	45	17 42	18 12	18 46	17 42	67	6 06	28			
7	281	44.4	-9	00.0	109	54.2 ¹²⁷	49.0 ¹⁰⁷	40	47	15	46	45	64	6 02	31			
8	296	44.5	-8	59.1	124	25.8 ¹²⁶	38.2 ¹⁰⁸	35	52	18	47	48	61	5 58	33			
9	311	44.6		58.2	138	57.5 ¹²⁷	27.3 ¹⁰⁹	30	17 56	20	48	50	59	54	36			
10	326	44.7		57.2	153	29.1 ¹²⁶	16.4 ¹⁰⁹	20	18 04	26	52	55	54	48	40			
11	341	44.8	-8	56.3	168	00.7 ¹²⁶	+6 05.5 ¹⁰⁹	10 N	18 10	18 31	18 56	17 58	51	5 42	44			
12	356	44.9	-8	55.4	182	32.4 ¹²⁷	+5 54.5 ¹¹⁰	0	18 16	18 37	19 02	18 02	47	5 37	47			
13	11	45.0		54.4	197	04.0 ¹²⁶	43.5 ¹¹⁰	10 S	23	44	09	05	44	32	50			
14	26	45.2		53.5	211	35.6 ¹²⁶	32.5 ¹¹⁰	20	30	18 52	18	09	40	27	54			
15	41	45.3		52.6	226	07.2 ¹²⁶	21.4 ¹¹¹	30	37	19 02	31	13	36	20	58			
16	56	45.4		51.6	240	38.8 ¹²⁶	+5 10.3 ¹¹¹	35	42	08	39	16	33	16	61			
17	71	45.5	-8	50.7	255	10.4 ¹²⁶	+4 59.2 ¹¹¹	40	18 47	19 15	19 48	18 18	31	5 12	64			
18	86	45.6	-8	49.8	269	41.9 ¹²⁵	+4 48.0 ¹¹²	45	18 53	19 24	20 01	18 22	27	5 07	67			
19	101	45.7		48.9	284	13.5 ¹²⁶	36.8 ¹¹²	50	19 01	35	16	25	25	5 01	71			
20	116	45.8		47.9	298	45.1 ¹²⁶	25.6 ¹¹²	52	04	40	24	27	23	4 59	72			
21	131	45.9		47.0	313	16.6 ¹²⁵	14.3 ¹¹³	54	08	46	32	29	21	56	74			
22	146	46.0		46.0	327	48.2 ¹²⁶	+4 03.0 ¹¹³	56	12	52	42	31	19	52	77			
23	161	46.1		45.1	342	19.7 ¹²⁵	+3 51.7 ¹¹³	58	17	19 59	20 53	33	17	49	78			
24	176	46.2	-8	44.2	356	51.2 ¹²⁵	+3 40.3 ¹¹⁴	60 S	19 22	20 08	21 07	18 36	14	4 44	82			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 37 ^m 7		Mag: -3.9 PMG: 11 ^h 45 ^m			Mag: +1.2 PMG: 12 ^h 57 ^m			Mag: -2.4 PMG: 18 ^h 00 ^m			Mag: +0.4 PMG: 4 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	155	01.3	183	46.5	-13	08.4	165	38.9	-5	31.6	89	19.9	+21	03.0	295	09.3	-12	51.2
1	170	03.8	198	46.0		07.4	180	39.6		30.8	104	22.1		03.1	310	11.8		51.2
2	185	06.2	213	45.4		06.3	195	40.3		30.0	119	24.4		03.1	325	14.3		51.2
3	200	08.7	228	44.9		05.3	210	40.9		29.2	134	26.6		03.2	340	16.8		51.2
4	215	11.1	243	44.3		04.2	225	41.6		28.5	149	28.8		03.2	355	19.3		51.1
5	230	13.6	258	43.8	-13	03.2	240	42.2	-5	27.7	164	31.1	+21	03.2	10	21.7	-12	51.1
6	245	16.1	273	43.2	-13	02.1	255	42.9	-5	26.9	179	33.3	+21	03.3	25	24.2	-12	51.1
7	260	18.5	288	42.6	-13	01.1	270	43.5		26.1	194	35.6		03.3	40	26.7		51.1
8	275	21.0	303	42.1	-13	00.0	285	44.2		25.3	209	37.8		03.4	55	29.2		51.1
9	290	23.5	318	41.5	-12	59.0	300	44.9		24.5	224	40.1		03.4	70	31.7		51.1
10	305	25.9	333	41.0		57.9	315	45.5		23.8	239	42.3		03.5	85	34.2		51.0
11	320	28.4	348	40.4	-12	56.9	330	46.2	-5	23.0	254	44.6	+21	03.5	100	36.7	-12	51.0
12	335	30.9	3	39.9	-12	55.8	345	46.8	-5	22.2	269	46.8	+21	03.5	115	39.2	-12	51.0
13	350	33.3	18	39.3		54.8	0	47.5		21.4	284	49.1		03.6	130	41.7		51.0
14	5	35.8	33	38.8		53.7	15	48.2		20.6	299	51.3		03.6	145	44.1		51.0
15	20	38.3	48	38.2		52.7	30	48.8		19.8	314	53.5		03.7	160	46.6		51.0
16	35	40.7	63	37.7		51.6	45	49.5		19.0	329	55.8		03.7	175	49.1		50.9
17	50	43.2	78	37.1	-12	50.6	60	50.1	-5	18.3	344	58.0	+21	03.8	190	51.6	-12	50.9
18	65	45.6	93	36.6	-12	49.5	75	50.8	-5	17.5	0	00.3	+21	03.8	205	54.1	-12	50.9
19	80	48.1	108	36.0		48.4	90	51.5		16.7	15	02.5		03.8	220	56.6		50.9
20	95	50.6	123	35.5		47.4	105	52.1		15.9	30	04.8		03.9	235	59.1		50.9
21	110	53.0	138	34.9		46.3	120	52.8		15.1	45	07.0		03.9	251	01.6		50.8
22	125	55.5	153	34.4		45.3	135	53.4		14.3	60	09.2		04.0	266	04.1		50.8
23	140	58.0	168	33.8		44.2	150	54.1		13.5	75	11.5		04.0	281	06.6		50.8
24	156	00.4	183	33.3	-12	43.1	165	54.8	-5	12.8	90	13.7	+21	04.1	296	09.0	-12	50.8
Dif	—		-6 +11			+7 +8			+22 0			+25 0						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 12 ^m 8			Edad: 15 ^d 7 PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/4 SD: 15:5 PMG: 0 ^h 13 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	46.2	-8	44.2	356	51.2	+3	40.3	60 N	5 37	6 25	7 07	18 49	84	6 41 14
1	191	46.3		43.2	11	22.7 ¹²⁵		28.9 ¹¹⁴	58	38	23	7 03	49	81	40 16
2	206	46.4		42.3	25	54.2 ¹²⁵		17.5 ¹¹⁴	56	38	21	6 59	49	79	39 18
3	221	46.5		41.4	40	25.7 ¹²⁵	+3	06.1 ¹¹⁴	54	39	20	55	49	77	38 20
4	236	46.6		40.4	54	57.1 ¹²⁴	+2	54.7 ¹¹⁴	52	39	18	52	49	75	37 22
5	251	46.7	-8	39.5	69	28.6 ¹²⁵	+2	43.2 ¹¹⁵	50	5 39	6 17	6 49	18 49	73	6 36 24
6	266	46.8	-8	38.6	84	00.0 ¹²⁴	+2	31.7 ¹¹⁵	45	5 39	6 13	6 43	18 49	69	6 34 28
7	281	46.9		37.6	98	31.5 ¹²⁵		20.2 ¹¹⁵	40	39	10	38	49	65	33 31
8	296	47.0		36.7	113	02.9 ¹²⁴	+2	08.6 ¹¹⁶	35	38	08	33	49	62	31 34
9	311	47.1		35.8	127	34.2 ¹²³	+1	57.1 ¹¹⁵	30	37	05	29	49	60	30 36
10	326	47.2		34.8	142	05.6 ¹²⁴		45.5 ¹¹⁶	20	34	6 00	22	49	56	28 40
11	341	47.4	-8	33.9	156	37.0 ¹²⁴	+1	33.9 ¹¹⁶	10 N	5 30	5 54	6 16	18 49	52	6 26 44
12	356	47.5	-8	33.0	171	08.3 ¹²³	+1	22.3 ¹¹⁶	0	5 24	5 49	6 10	18 49	48	6 24 48
13	11	47.6		32.0	185	39.6 ¹²³	+1	10.7 ¹¹⁶	10 S	17	42	6 03	49	45	22 52
14	26	47.7		31.1	200	10.9 ¹²³	+0	59.0 ¹¹⁷	20	5 08	34	5 57	49	41	21 54
15	41	47.8		30.1	214	42.2 ¹²³		47.4 ¹¹⁶	30	4 56	24	49	49	37	18 60
16	56	47.9		29.2	229	13.4 ¹²²		35.7 ¹¹⁷	35	48	18	44	49	35	17 62
17	71	48.0	-8	28.3	243	44.7 ¹²³	+0	24.0 ¹¹⁷	40	4 38	5 11	5 39	18 49	32	6 16 64
18	86	48.1	-8	27.3	258	15.9 ¹²²	+0	12.3 ¹¹⁷	45	4 26	5 03	5 33	18 49	29	6 14 68
19	101	48.2		26.4	272	47.1 ¹²²	+0	00.6 ¹¹⁷	50	11	4 52	26	50	24	12 71
20	116	48.3		25.5	287	18.2 ¹²¹	-0	11.1 ¹¹⁷	52	4 03	47	22	50	23	11 73
21	131	48.4		24.5	301	49.4 ¹²²		22.8 ¹¹⁷	54	3 54	41	19	50	21	10 75
22	146	48.6		23.6	316	20.5 ¹²¹		34.5 ¹¹⁷	56	45	35	15	50	19	09 77
23	161	48.7		22.6	330	51.6 ¹²¹		46.2 ¹¹⁷	58	33	28	10	50	17	07 80
24	176	48.8	-8	21.7	345	22.6 ¹²⁰	-0	57.9 ¹¹⁷	60 S	3 20	4 19	5 05	18 50	14	6 06 83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 33 ^m 7		Mag: -3.9 PMG: 11 ^h 46 ^m		Mag: +1.2 PMG: 12 ^h 56 ^m		Mag: -2.4 PMG: 17 ^h 56 ^m		Mag: +0.4 PMG: 4 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	00.4	183	33.3	-12	43.1	165	54.8	-5	12.8
1	171	02.9	198	32.7		42.1	180	55.4		12.0
2	186	05.4	213	32.2		41.0	195	56.1		11.2
3	201	07.8	228	31.6		40.0	210	56.7		10.4
4	216	10.3	243	31.1		38.9	225	57.4		09.6
5	231	12.7	258	30.5	-12	37.8	240	58.1	-5	08.8
6	246	15.2	273	30.0	-12	36.8	255	58.7	-5	08.0
7	261	17.7	288	29.4		35.7	270	59.4		07.3
8	276	20.1	303	28.9		34.6	286	00.0		06.5
9	291	22.6	318	28.4		33.6	301	00.7		05.7
10	306	25.1	333	27.8		32.5	316	01.4		04.9
11	321	27.5	348	27.3	-12	31.4	331	02.0	-5	04.1
12	336	30.0	3	26.7	-12	30.4	346	02.7	-5	03.3
13	351	32.5	18	26.2		29.3	1	03.4		02.5
14	6	34.9	33	25.6		28.2	16	04.0		01.7
15	21	37.4	48	25.1		27.2	31	04.7		01.0
16	36	39.9	63	24.6		26.1	46	05.3	-5	00.2
17	51	42.3	78	24.0	-12	25.0	61	06.0	-4	59.4
18	66	44.8	93	23.5	-12	23.9	76	06.7	-4	58.6
19	81	47.2	108	22.9		22.9	91	07.3		57.8
20	96	49.7	123	22.4		21.8	106	08.0		57.0
21	111	52.2	138	21.9		20.7	121	08.6		56.2
22	126	54.6	153	21.3		19.6	136	09.3		55.4
23	141	57.1	168	20.8		18.6	151	10.0		54.7
24	156	59.6	183	20.3	-12	17.5	166	10.6	-4	53.9
Dif	—		-5	+11		+7	+8	+22	0	+25

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 7 PHE { 4 ^h : 57 ^m 5 12 ^h : 57 ^m 7 20 ^h : 57 ^m 9					Civil			Hora		Hora	
	PMG: 12 ^h 12 ^m 7			SD: 15 ^h 6 PMG: 1 ^h 00 ^m R°: 49 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾ Dif	Dec	Dif									
h	°	'	°	'	'	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	48.8	-8 21.7	345	22.6	-0 57.9	60 N	17 23	18 05	18 53	20 13	86	6 55	14	
1	191	48.9	20.8	359	53.7 ¹²¹	-1 09.7 ¹¹⁸	58	27	06	52	10 83		56	17	
2	206	49.0	19.8	14	24.7 ¹²⁰	21.4 ¹¹⁷	56	30	08	51	08 80		57	20	
3	221	49.1	18.9	28	55.7 ¹²⁰	33.1 ¹¹⁷	54	33	09	50	06 77		58	22	
4	236	49.2	17.9	43	26.6 ¹¹⁹	44.9 ¹¹⁸	52	36	10	49	04 75		6 59	24	
5	251	49.3	-8 17.0	57	57.6 ¹²⁰	-1 56.6 ¹¹⁷	50	17 39	18 11	18 49	20 02	74	7 00	25	
6	266	49.4	-8 16.1	72	28.5 ¹¹⁹	-2 08.3 ¹¹⁷	45	17 45	18 14	18 48	19 58	70	7 02	29	
7	281	49.5	15.1	86	59.3 ¹¹⁸	20.1 ¹¹⁸	40	50	17	48	54 67		04	32	
8	296	49.7	14.2	101	30.2 ¹¹⁹	31.8 ¹¹⁷	35	54	19	49	51 64		05	35	
9	311	49.8	13.2	116	01.0 ¹¹⁸	43.5 ¹¹⁷	30	17 58	22	50	49 61		06	38	
10	326	49.9	12.3	130	31.8 ¹¹⁸	-2 55.2 ¹¹⁷	20	18 04	27	52	45 57		08	42	
11	341	50.0	-8 11.3	145	02.5 ¹¹⁷	-3 06.9 ¹¹⁷	10 N	18 10	18 31	18 56	19 41	53	7 10	46	
12	356	50.1	-8 10.4	159	33.2 ¹¹⁷	-3 18.6 ¹¹⁷	0	18 16	18 37	19 01	19 37	50	7 12	49	
13	11	50.2	09.5	174	03.9 ¹¹⁷	30.3 ¹¹⁷	10 S	22	43	08	34 46		14	52	
14	26	50.3	08.5	188	34.6 ¹¹⁷	42.0 ¹¹⁷	20	28	18 50	16	30 43		15	57	
15	41	50.5	07.6	203	05.2 ¹¹⁶	-3 53.6 ¹¹⁶	30	35	19 00	28	26 39		18	60	
16	56	50.6	06.6	217	35.7 ¹¹⁵	-4 05.3 ¹¹⁷	35	40	05	36	24 36		19	63	
17	71	50.7	-8 05.7	232	06.3 ¹¹⁶	-4 16.9 ¹¹⁶	40	18 44	19 12	19 45	19 21	33	7 20	66	
18	86	50.8	-8 04.7	246	36.8 ¹¹⁵	-4 28.5 ¹¹⁶	45	18 50	19 20	19 57	19 18	30	7 22	69	
19	101	50.9	03.8	261	07.3 ¹¹⁵	40.1 ¹¹⁶	50	18 57	30	20 11	14 27		23	74	
20	116	51.0	02.9	275	37.7 ¹¹⁴	-4 51.7 ¹¹⁶	52	19 00	35	18	13 24		24	75	
21	131	51.1	01.9	290	08.1 ¹¹⁴	-5 03.3 ¹¹⁶	54	03	41	27	11 23		25	77	
22	146	51.3	-8 01.0	304	38.4 ¹¹³	14.8 ¹¹⁵	56	07	47	36	09 21		26	80	
23	161	51.4	-8 00.0	319	08.8 ¹¹⁴	26.4 ¹¹⁶	58	12	19 53	46	07 18		27	82	
24	176	51.5	-7 59.1	333	39.0 ¹¹²	-5 37.9 ¹¹⁵	60 S	19 16	20 01	20 59	19 04	16	7 29	84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 29 ^m 8		Mag: -3.9 PMG: 11 ^h 47 ^m			Mag: +1.2 PMG: 12 ^h 55 ^m			Mag: -2.4 PMG: 17 ^h 53 ^m			Mag: +0.4 PMG: 4 ^h 11 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	156	59.6	183 20.3	-12 17.5	166 10.6	-4 53.9	91 07.4	+21 05.1	297 08.9	-12 50.3			297 08.9	-12 50.3	
1	172	02.0	198 19.7	16.4	181 11.3	53.1	106 09.6	05.2	312 11.4	50.3			312 11.4	50.3	
2	187	04.5	213 19.2	15.3	196 12.0	52.3	121 11.9	05.2	327 13.9	50.3			327 13.9	50.3	
3	202	07.0	228 18.6	14.3	211 12.6	51.5	136 14.1	05.2	342 16.4	50.3			342 16.4	50.3	
4	217	09.4	243 18.1	13.2	226 13.3	50.7	151 16.3	05.3	357 18.9	50.2			357 18.9	50.2	
5	232	11.9	258 17.6	-12 12.1	241 14.0	-4 49.9	166 18.6	+21 05.3	12 21.4	-12 50.2			12 21.4	-12 50.2	
6	247	14.3	273 17.0	-12 11.0	256 14.6	-4 49.2	181 20.8	+21 05.4	27 23.9	-12 50.2			27 23.9	-12 50.2	
7	262	16.8	288 16.5	10.0	271 15.3	48.4	196 23.0	05.4	42 26.4	50.2			42 26.4	50.2	
8	277	19.3	303 16.0	08.9	286 15.9	47.6	211 25.3	05.5	57 28.9	50.2			57 28.9	50.2	
9	292	21.7	318 15.4	07.8	301 16.6	46.8	226 27.5	05.5	72 31.4	50.1			72 31.4	50.1	
10	307	24.2	333 14.9	06.7	316 17.3	46.0	241 29.7	05.6	87 33.9	50.1			87 33.9	50.1	
11	322	26.7	348 14.4	-12 05.6	331 17.9	-4 45.2	256 31.9	+21 05.6	102 36.4	-12 50.1			102 36.4	-12 50.1	
12	337	29.1	3 13.8	-12 04.6	346 18.6	-4 44.4	271 34.2	+21 05.6	117 38.9	-12 50.1			117 38.9	-12 50.1	
13	352	31.6	18 13.3	03.5	1 19.3	43.6	286 36.4	05.7	132 41.4	50.1			132 41.4	50.1	
14	7 34.1	33 12.8	02.4	16 19.9	42.8	301 38.6	05.7	147 43.9	50.0				147 43.9	50.0	
15	22 36.5	48 12.2	01.3	31 20.6	42.1	316 40.9	05.8	162 46.4	50.0				162 46.4	50.0	
16	37 39.0	63 11.7	-12 00.2	46 21.3	41.3	331 43.1	05.8	177 48.9	50.0				177 48.9	50.0	
17	52 41.5	78 11.2	-11 59.1	61 21.9	-4 40.5	346 45.3	+21 05.9	192 51.4	-12 50.0				192 51.4	-12 50.0	
18	67 43.9	93 10.7	-11 58.1	76 22.6	-4 39.7	1 47.5	+21 05.9	207 53.9	-12 50.0				207 53.9	-12 50.0	
19	82 46.4	108 10.1	57.0	91 23.3	38.9	16 49.8	06.0	222 56.4	49.9				222 56.4	49.9	
20	97 48.8	123 09.6	55.9	106 23.9	38.1	31 52.0	06.0	237 58.9	49.9				237 58.9	49.9	
21	112 51.3	138 09.1	54.8	121 24.6	37.3	46 54.2	06.0	253 01.4	49.9				253 01.4	49.9	
22	127 53.8	153 08.5	53.7	136 25.2	36.5	61 56.4	06.1	268 03.8	49.9				268 03.8	49.9	
23	142 56.2	168 08.0	52.6	151 25.9	35.8	76 58.7	06.1	283 06.3	49.8				283 06.3	49.8	
24	157 58.7	183 07.5	-11 51.5	166 26.6	-4 35.0	92 00.9	+21 06.2	298 08.8	-12 49.8				298 08.8	-12 49.8	
Dif	—	-5	+11	+7	+8	+22	0	+25	0						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 12 ^m 5			Edad: 17 ^d 7 PHE { 4 ^h : 58 ^h 0 12 ^h : 58 ^h 1 20 ^h : 58 ^h 3 SD: 15 ^h 8 PMG: 1 ^h 49 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	51.5	-7 59.1	333	39.0	-5 37.9	114	60 N	5 31	6 19	7 01	21 39	86	7 09	18
1	191	51.6	58.1	348	09.3	-5 49.3	114	58	32	18	6 57	33	83	13	20
2	206	51.7	57.2	2	39.5	-6 00.8	115	56	33	16	54	28	81	17	22
3	221	51.8	56.3	17	09.6	12.2	114	54	34	15	51	23	79	20	24
4	236	52.0	55.3	31	39.7	23.6	114	52	35	14	48	19	77	23	26
5	251	52.1	-7 54.4	46	09.8	-6 35.0	114	50	5 35	6 13	6 45	21 16	74	7 25	28
6	266	52.2	-7 53.4	60	39.8	-6 46.4	114	45	5 36	6 10	6 40	21 08	70	7 31	32
7	281	52.3	52.5	75	09.8	-6 57.7	113	40	36	08	35	21 01	67	36	35
8	296	52.4	51.5	89	39.8	-7 09.0	113	35	36	05	31	20 55	65	40	38
9	311	52.5	50.6	104	09.7	20.2	112	30	35	6 03	27	50	63	44	40
10	326	52.7	49.6	118	39.5	31.4	112	20	33	5 58	20	42	58	50	44
11	341	52.8	-7 48.7	133	09.3	-7 42.6	112	10 N	5 29	5 54	6 15	20 34	55	7 56	47
12	356	52.9	-7 47.7	147	39.1	-7 53.8	112	0	5 24	5 48	6 09	20 27	52	8 01	51
13	11	53.0	46.8	162	08.8	-8 04.9	111	10 S	18	42	6 04	20 49		06	54
14	26	53.1	45.8	176	38.5	16.0	111	20	5 09	35	5 57	13 45		12	57
15	41	53.3	44.9	191	08.1	27.0	110	30	4 57	26	50	05 41		18	62
16	56	53.4	43.9	205	37.6	38.0	110	35	50	20	46	20 00	39	22	64
17	71	53.5	-7 43.0	220	07.2	-8 49.0	110	40	4 41	5 14	5 41	19 54	37	8 26	67
18	86	53.6	-7 42.1	234	36.6	-8 59.9	109	45	4 29	5 06	5 36	19 48	34	8 31	70
19	101	53.7	41.1	249	06.1	-9 10.7	108	50	15	4 56	29	41	30	37	74
20	116	53.9	40.2	263	35.4	21.6	109	52	4 07	51	26	37	29	39	76
21	131	54.0	39.2	278	04.8	32.3	107	54	3 59	45	23	34	26	42	78
22	146	54.1	38.3	292	34.0	43.1	108	56	50	40	19	30	24	46	80
23	161	54.2	37.3	307	03.3	-9 53.7	106	58	40	33	15	25	22	49	83
24	176	54.3	-7 36.4	321	32.4	-10 04.4	107	60 S	3 27	4 25	5 10	19 20	19	8 53	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 25 ^m 9		Mag: -3.9 PMG: 11 ^h 48 ^m		Mag: +1.2 PMG: 12 ^h 54 ^m		Mag: -2.4 PMG: 17 ^h 49 ^m		Mag: +0.4 PMG: 4 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	157	58.7	183	07.5	-11 51.5	166	26.6	-4 35.0	92	00.9	+21 06.2	298	08.8	-12 49.8	
1	173	01.2	198	07.0	50.4	181	27.2	34.2	107	03.1	06.2	313	11.3	49.8	
2	188	03.6	213	06.4	49.3	196	27.9	33.4	122	05.4	06.3	328	13.8	49.8	
3	203	06.1	228	05.9	48.3	211	28.6	32.6	137	07.6	06.3	343	16.3	49.8	
4	218	08.6	243	05.4	47.2	226	29.2	31.8	152	09.8	06.4	358	18.9	49.7	
5	233	11.0	258	04.9	-11 46.1	241	29.9	-4 31.0	167	12.0	+21 06.4	13	21.4	-12 49.7	
6	248	13.5	273	04.3	-11 45.0	256	30.6	-4 30.2	182	14.2	+21 06.5	28	23.9	-12 49.7	
7	263	15.9	288	03.8	43.9	271	31.2	29.4	197	16.5	06.5	43	26.4	49.7	
8	278	18.4	303	03.3	42.8	286	31.9	28.7	212	18.7	06.5	58	28.9	49.7	
9	293	20.9	318	02.8	41.7	301	32.6	27.9	227	20.9	06.6	73	31.4	49.6	
10	308	23.3	333	02.3	40.6	316	33.2	27.1	242	23.1	06.6	88	33.9	49.6	
11	323	25.8	348	01.7	-11 39.5	331	33.9	-4 26.3	257	25.4	+21 06.7	103	36.4	-12 49.6	
12	338	28.3	3	01.2	-11 38.4	346	34.6	-4 25.5	272	27.6	+21 06.7	118	38.9	-12 49.6	
13	353	30.7	18	00.7	37.3	1	35.2	24.7	287	29.8	06.8	133	41.4	49.5	
14	8	33.2	33	00.2	36.2	16	35.9	23.9	302	32.0	06.8	148	43.9	49.5	
15	23	35.7	47	59.6	35.1	31	36.6	23.1	317	34.2	06.9	163	46.4	49.5	
16	38	38.1	62	59.1	34.0	46	37.2	22.3	332	36.5	06.9	178	48.9	49.5	
17	53	40.6	77	58.6	-11 32.9	61	37.9	-4 21.5	347	38.7	+21 07.0	193	51.4	-12 49.5	
18	68	43.1	92	58.1	-11 31.8	76	38.6	-4 20.8	2	40.9	+21 07.0	208	53.9	-12 49.4	
19	83	45.5	107	57.6	30.7	91	39.2	20.0	17	43.1	07.0	223	56.4	49.4	
20	98	48.0	122	57.1	29.6	106	39.9	19.2	32	45.3	07.1	238	58.9	49.4	
21	113	50.4	137	56.5	28.5	121	40.6	18.4	47	47.6	07.1	254	01.4	49.4	
22	128	52.9	152	56.0	27.4	136	41.2	17.6	62	49.8	07.2	269	03.9	49.3	
23	143	55.4	167	55.5	26.3	151	41.9	16.8	77	52.0	07.2	284	06.4	49.3	
24	158	57.8	182	55.0	-11 25.2	166	42.6	-4 16.0	92	54.2	+21 07.3	299	08.9	-12 49.3	
Dif	—		-5 +11		+7 +8		+22		0		+25				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 12 ^m 3			Edad: 18 ^d 7 PHE { 4 ^h : 58' ⁴ 12 ^h : 58' ⁵ 20 ^h : 58' ⁶ SD: 15:9 PMG: 2 ^h 39 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	54.3	-7 36.4	321	32.4	-10 04.4	60 N	17 28	18 10	18 58	23 05 85	7 27 21			
1	191	54.5	35.4	336	01.5 ¹⁰¹	14.9 ¹⁰⁵	58	31	11	56	22 56 82	33 24			
2	206	54.6	34.5	350	30.6 ¹⁰¹	25.5 ¹⁰⁶	56	34	12	55	49 79	39 27			
3	221	54.7	33.5	4	59.6 ¹⁰⁰	35.9 ¹⁰⁴	54	37	13	54	42 77	44 29			
4	236	54.8	32.6	19	28.6 ¹⁰⁰	46.4 ¹⁰⁵	52	40	14	53	36 75	49 31			
5	251	54.9	-7 31.6	33	57.5 ⁹⁹	-10 56.7 ¹⁰³	50	17 42	18 15	18 52	22 30 74	7 53 33			
6	266	55.1	-7 30.7	48	26.4 ⁹⁹	-11 07.0 ¹⁰³	45	17 47	18 17	18 51	22 18 71	8 03 36			
7	281	55.2	29.7	62	55.2 ⁹⁸	17.3 ¹⁰³	40	52	19	50	08 68	11 38			
8	296	55.3	28.8	77	23.9 ⁹⁷	27.5 ¹⁰²	35	56	21	50	22 00 65	18 41			
9	311	55.4	27.8	91	52.6 ⁹⁷	37.6 ¹⁰¹	30	17 59	23	51	21 53 63	24 43			
10	326	55.6	26.9	106	21.2 ⁹⁶	47.7 ¹⁰¹	20	18 05	27	53	40 60	34 47			
11	341	55.7	-7 25.9	120	49.8 ⁹⁶	-11 57.7 ¹⁰⁰	10 N	18 10	18 32	18 56	21 29 57	8 43 50			
12	356	55.8	-7 25.0	135	18.3 ⁹⁵	-12 07.6 ⁹⁹	0	18 16	18 36	19 01	21 19 54	8 52 53			
13	11	55.9	24.0	149	46.8 ⁹⁵	17.5 ⁹⁹	10 S	21	42	07	21 09 52	9 00 56			
14	26	56.1	23.0	164	15.2 ⁹⁴	27.3 ⁹⁸	20	27	49	15	20 58 49	09 60			
15	41	56.2	22.1	178	43.6 ⁹⁴	37.0 ⁹⁷	30	33	18 57	26	46 46	20 63			
16	56	56.3	21.1	193	11.9 ⁹³	46.7 ⁹⁷	35	37	19 03	33	39 44	26 65			
17	71	56.4	-7 20.2	207	40.1 ⁹²	-12 56.3 ⁹⁶	40	18 41	19 09	19 42	20 31 41	9 33 68			
18	86	56.6	-7 19.2	222	08.3 ⁹²	-13 05.8 ⁹⁵	45	18 46	19 17	19 53	20 22 38	9 41 71			
19	101	56.7	18.3	236	36.4 ⁹¹	15.3 ⁹⁵	50	53	26	20 07	11 35	51 74			
20	116	56.8	17.3	251	04.5 ⁹¹	24.7 ⁹⁴	52	56	31	13	06 33	9 55 76			
21	131	56.9	16.4	265	32.5 ⁹⁰	34.0 ⁹³	54	18 59	36	21	20 00 32	10 00 78			
22	146	57.1	15.4	280	00.5 ⁹⁰	43.2 ⁹²	56	19 02	41	30	19 54 30	06 80			
23	161	57.2	14.5	294	28.4 ⁸⁹	-13 52.4 ⁹²	58	06	47	40	47 27	12 83			
24	176	57.3	-7 13.5	308	56.2 ⁸⁸	-14 01.4 ⁹⁰	60 S	19 10	19 55	20 51	19 39 25	10 19 86			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 21 ^m 9		Mag: -3.9 PMG: 11 ^h 49 ^m		Mag: +1.2 PMG: 12 ^h 53 ^m		Mag: -2.4 PMG: 17 ^h 46 ^m		Mag: +0.4 PMG: 4 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	158	57.8	182	55.0	-11	25.2	166	42.6	-4	16.0
1	174	00.3	197	54.5		24.1	181	43.2		15.2
2	189	02.8	212	54.0		23.0	196	43.9		14.4
3	204	05.2	227	53.4		21.9	211	44.6		13.7
4	219	07.7	242	52.9		20.8	226	45.2		12.9
5	234	10.2	257	52.4	-11	19.7	241	45.9	-4	12.1
6	249	12.6	272	51.9	-11	18.6	256	46.6	-4	11.3
7	264	15.1	287	51.4		17.5	271	47.3		10.5
8	279	17.6	302	50.9		16.4	286	47.9		09.7
9	294	20.0	317	50.4		15.3	301	48.6		08.9
10	309	22.5	332	49.8		14.2	316	49.3		08.1
11	324	24.9	347	49.3	-11	13.1	331	49.9	-4	07.3
12	339	27.4	2	48.8	-11	12.0	346	50.6	-4	06.5
13	354	29.9	17	48.3		10.9	1	51.3		05.7
14	9	32.3	32	47.8		09.8	16	51.9		05.0
15	24	34.8	47	47.3		08.6	31	52.6		04.2
16	39	37.3	62	46.8		07.5	46	53.3		03.4
17	54	39.7	77	46.3	-11	06.4	61	53.9	-4	02.6
18	69	42.2	92	45.8	-11	05.3	76	54.6	-4	01.8
19	84	44.7	107	45.2		04.2	91	55.3		01.0
20	99	47.1	122	44.7		03.1	106	56.0	-4	00.2
21	114	49.6	137	44.2		02.0	121	56.6	-3	59.4
22	129	52.0	152	43.7	-11	00.9	136	57.3		58.6
23	144	54.5	167	43.2	-10	59.7	151	58.0		57.8
24	159	57.0	182	42.7	-10	58.6	166	58.6	-3	57.1
Dif	—		-5	+11		+7	+8		+22	0
										+25

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ¹ PMG: 12 ^h 12 ^m 1			Edad: 19 ^d 7 PHE { 4 ^h : 58 ⁷ / ₈ 12 ^h : 58 ⁸ / ₈ 20 ^h : 58 ⁹ / ₉ PMG: 3 ^h 32 ^m R ^o : 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	176	57.3	-7	13.5	308	56.2	-14	01.4	60 N	5 25	6 13	6 55	**	**	**	7 48	28
1	191	57.4		12.6	323	24.0	88	10.4	58	27	12	52	**	**	**	7 57	31
2	206	57.6		11.6	337	51.8	88	19.3	56	29	11	49	**	**	**	8 06	33
3	221	57.7		10.7	352	19.4	86	28.2	54	30	10	46	23	59	73	13	35
4	236	57.8		09.7	6	47.1	87	36.9	52	31	10	43	51	72	20	37	
5	251	57.9	-7	08.7	21	14.6	85	-14	50	5 31	6 09	6 41	23	44	70	8 26	38
6	266	58.1	-7	07.8	35	42.1	85	-14	45	5 33	6 07	6 36	23	29	67	8 39	41
7	281	58.2		06.8	50	09.6	85	-15	40	33	05	32	16	66		49	44
8	296	58.3		05.9	64	36.9	83	11.1	35	33	03	28	23	05	65	8 59	46
9	311	58.5		04.9	79	04.3	84	19.4	30	33	6 01	25	22	56	63	9 07	48
10	326	58.6		04.0	93	31.5	82	27.7	20	31	5 57	19	40	61		21	51
11	341	58.7	-7	03.0	107	58.8	83	-15	10 N	5 28	5 53	6 14	22	26	59	9 33	53
12	356	58.8	-7	02.1	122	25.9	81	-15	0	5 24	5 48	6 09	22	13	57	9 45	55
13	11	59.0		01.1	136	53.0	81	51.8	10 S	18	42	6 04	22	01	54	9 56	58
14	26	59.1	-7	00.1	151	20.1	81	-15	20	5 10	36	5 58	21	47	53	10 09	60
15	41	59.2	-6	59.2	165	47.1	80	-16	30	4 59	27	52	32	50		23	63
16	56	59.4		58.2	180	14.0	79	15.1	35	52	22	48	23	48		31	65
17	71	59.5	-6	57.3	194	40.9	79	-16	40	4 43	5 16	5 44	21	12	47	10 41	67
18	86	59.6	-6	56.3	209	07.7	78	-16	45	4 32	5 08	5 39	21	00	45	10 52	69
19	101	59.7		55.4	223	34.4	77	37.6	50	19	4 59	33	20	46	42	11 05	72
20	116	59.9		54.4	238	01.1	77	44.8	52	12	55	30	39	41		11	74
21	132	00.0		53.4	252	27.8	77	52.0	54	4 04	50	27	32	40		18	76
22	147	00.1		52.5	266	54.4	76	-16	56	3 56	44	23	24	38		26	77
23	162	00.3		51.5	281	20.9	75	-17	58	46	38	19	14	36		35	79
24	177	00.4	-6	50.6	295	47.4	75	-17	60 S	3 34	4 31	5 15	20	04	33	11 45	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 18 ^m 0		Mag: -3.9 PMG: 11 ^h 50 ^m		Mag: +1.2 PMG: 12 ^h 52 ^m		Mag: -2.3 PMG: 17 ^h 42 ^m		Mag: +0.4 PMG: 3 ^h 59 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	159	57.0	182	42.7	-10	58.6	166	58.6	-3	57.1	93	47.4	+21	08.4	300	09.0	-12	48.7
1	174	59.4	197	42.2		57.5	181	59.3		56.3	108	49.6		08.4	315	11.6		48.7
2	190	01.9	212	41.7		56.4	197	00.0		55.5	123	51.8		08.5	330	14.1		48.7
3	205	04.4	227	41.2		55.3	212	00.6		54.7	138	54.0		08.5	345	16.6		48.7
4	220	06.8	242	40.7		54.2	227	01.3		53.9	153	56.2		08.6	0	19.1		48.7
5	235	09.3	257	40.2	-10	53.1	242	02.0	-3	53.1	168	58.4	+21	08.6	15	21.6	-12	48.6
6	250	11.8	272	39.7	-10	51.9	257	02.7	-3	52.3	184	00.6	+21	08.7	30	24.1	-12	48.6
7	265	14.2	287	39.2		50.8	272	03.3		51.5	199	02.8		08.7	45	26.6		48.6
8	280	16.7	302	38.7		49.7	287	04.0		50.7	214	05.0		08.8	60	29.1		48.6
9	295	19.2	317	38.2		48.6	302	04.7		49.9	229	07.2		08.8	75	31.6		48.5
10	310	21.6	332	37.7		47.5	317	05.3		49.1	244	09.4		08.9	90	34.1		48.5
11	325	24.1	347	37.2	-10	46.3	332	06.0	-3	48.4	259	11.7	+21	08.9	105	36.6	-12	48.5
12	340	26.5	2	36.7	-10	45.2	347	06.7	-3	47.6	274	13.9	+21	09.0	120	39.2	-12	48.5
13	355	29.0	17	36.2		44.1	2	07.3		46.8	289	16.1		09.0	135	41.7		48.4
14	10	31.5	32	35.7		43.0	17	08.0		46.0	304	18.3		09.1	150	44.2		48.4
15	25	33.9	47	35.2		41.9	32	08.7		45.2	319	20.5		09.1	165	46.7		48.4
16	40	36.4	62	34.7		40.7	47	09.4		44.4	334	22.7		09.2	180	49.2		48.4
17	55	38.9	77	34.2	-10	39.6	62	10.0	-3	43.6	349	24.9	+21	09.2	195	51.7	-12	48.3
18	70	41.3	92	33.7	-10	38.5	77	10.7	-3	42.8	4	27.1	+21	09.2	210	54.2	-12	48.3
19	85	43.8	107	33.2		37.4	92	11.4		42.0	19	29.3		09.3	225	56.7		48.3
20	100	46.3	122	32.7		36.2	107	12.1		41.2	34	31.5		09.3	240	59.2		48.3
21	115	48.7	137	32.2		35.1	122	12.7		40.4	49	33.7		09.4	256	01.8		48.2
22	130	51.2	152	31.7		34.0	137	13.4		39.6	64	35.9		09.4	271	04.3		48.2
23	145	53.6	167	31.2		32.9	152	14.1		38.9	79	38.1		09.5	286	06.8		48.2
24	160	56.1	182	30.7	-10	31.7	167	14.7	-3	38.1	94	40.3	+21	09.5	301	09.3	-12	48.2
Dif	—		-5	+11		+7	+8		+22	0		+25						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 20 ^d 7 PHE	SD: 16'1				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 9				PMG: 4 ^h 27 ^m				R°: 57 ^m			Hora		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	00.4	-6 50.6	295	47.4	-17 13.0	67	60 N	17 33	18 14	19 03	0 30 79		8 16 39	
1	192	00.5	49.6	310	13.9	19.7	67	58	36	15	19 01	18 77		28 41	
2	207	00.7	48.7	324	40.3	26.4	67	56	39	16	18 59	0 08 75		39 43	
3	222	00.8	47.7	339	06.6	32.9	65	54	41	17	58	** ** *		48 44	
4	237	00.9	46.7	353	32.9	39.4	65	52	43	17	56	** ** *		8 57 45	
5	252	01.1	-6 45.8	7	59.1	-17 45.7	63	50	17 46	18 18	18 55	** ** *		9 04 47	
6	267	01.2	-6 44.8	22	25.3	-17 51.9	62	45	17 50	18 20	18 54	** ** *		9 20 49	
7	282	01.3	43.9	36	51.4	-17 58.1	62	40	54	21	53	** ** *		33 51	
8	297	01.5	42.9	51	17.5	-18 04.1	60	35	17 57	23	52	** ** *		45 51	
9	312	01.6	41.9	65	43.5	09.9	58	30	18 00	24	52	23 59 61		9 55 52	
10	327	01.7	41.0	80	09.5	15.7	58	20	06	28	54	41 60		10 12 54	
11	342	01.9	-6 40.0	94	35.4	-18 21.4	57	10 N	18 11	18 32	18 56	23 25 59		10 26 56	
12	357	02.0	-6 39.1	109	01.3	-18 26.9	55	0	18 15	18 36	19 00	23 10 58		10 40 58	
13	12	02.1	38.1	123	27.2	32.4	55	10 S	20	41	06	22 55 58		10 54 59	
14	27	02.3	37.1	137	52.9	37.7	53	20	25	47	13	40 56		11 09 61	
15	42	02.4	36.2	152	18.7	42.9	52	30	31	18 55	23	22 55		26 62	
16	57	02.5	35.2	166	44.4	48.0	51	35	34	19 00	30	22 11 55		36 63	
17	72	02.7	-6 34.3	181	10.0	-18 52.9	49	40	18 38	19 06	19 38	21 59 54		11 48 64	
18	87	02.8	-6 33.3	195	35.7	-18 57.8	49	45	18 43	19 13	19 49	21 45 53		12 01 66	
19	102	02.9	32.3	210	01.2	-19 02.5	47	50	49	22	20 02	28 52		17 68	
20	117	03.1	31.4	224	26.8	07.1	46	52	51	26	08	20 51		25 69	
21	132	03.2	30.4	238	52.3	11.6	45	54	54	30	15	12 49		34 69	
22	147	03.3	29.5	253	17.7	15.9	43	56	18 57	36	24	21 02 48		43 71	
23	162	03.5	28.5	267	43.1	20.1	42	58	19 01	42	33	20 50 48		12 54 73	
24	177	03.6	-6 27.5	282	08.5	-19 24.3	42	60 S	19 04	19 48	20 44	20 37 46		13 07 74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 14 ^m 1		Mag: -3.9 PMG: 11 ^h 50 ^m			Mag: +1.2 PMG: 12 ^h 50 ^m			Mag: -2.3 PMG: 17 ^h 39 ^m			Mag: +0.4 PMG: 3 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	160	56.1	182	30.7	-10 31.7	167	14.7	-3 38.1	94	40.3	+21 09.5	301	09.3	-12 48.2	
1	175	58.6	197	30.2	30.6	182	15.4	37.3	109	42.5	09.6	316	11.8	48.1	
2	191	01.0	212	29.7	29.5	197	16.1	36.5	124	44.7	09.6	331	14.3	48.1	
3	206	03.5	227	29.2	28.4	212	16.8	35.7	139	46.9	09.7	346	16.8	48.1	
4	221	06.0	242	28.7	27.2	227	17.4	34.9	154	49.1	09.7	1	19.3	48.1	
5	236	08.4	257	28.2	-10 26.1	242	18.1	-3 34.1	169	51.3	+21 09.8	16	21.9	-12 48.0	
6	251	10.9	272	27.7	-10 25.0	257	18.8	-3 33.3	184	53.5	+21 09.8	31	24.4	-12 48.0	
7	266	13.4	287	27.2	23.8	272	19.4	32.5	199	55.7	09.9	46	26.9	48.0	
8	281	15.8	302	26.7	22.7	287	20.1	31.7	214	57.9	09.9	61	29.4	48.0	
9	296	18.3	317	26.2	21.6	302	20.8	30.9	230	00.1	10.0	76	31.9	47.9	
10	311	20.8	332	25.7	20.4	317	21.5	30.1	245	02.3	10.0	91	34.4	47.9	
11	326	23.2	347	25.2	-10 19.3	332	22.1	-3 29.3	260	04.5	+21 10.1	106	36.9	-12 47.9	
12	341	25.7	2	24.7	-10 18.2	347	22.8	-3 28.6	275	06.7	+21 10.1	121	39.4	-12 47.9	
13	356	28.1	17	24.2	17.1	2	23.5	27.8	290	08.9	10.2	136	42.0	47.8	
14	11	30.6	32	23.8	15.9	17	24.2	27.0	305	11.1	10.2	151	44.5	47.8	
15	26	33.1	47	23.3	14.8	32	24.8	26.2	320	13.3	10.3	166	47.0	47.8	
16	41	35.5	62	22.8	13.7	47	25.5	25.4	335	15.5	10.3	181	49.5	47.8	
17	56	38.0	77	22.3	-10 12.5	62	26.2	-3 24.6	350	17.7	+21 10.4	196	52.0	-12 47.7	
18	71	40.5	92	21.8	-10 11.4	77	26.9	-3 23.8	5	19.9	+21 10.4	211	54.5	-12 47.7	
19	86	42.9	107	21.3	10.2	92	27.5	23.0	20	22.1	10.5	226	57.1	47.7	
20	101	45.4	122	20.8	09.1	107	28.2	22.2	35	24.3	10.5	241	59.6	47.7	
21	116	47.9	137	20.3	08.0	122	28.9	21.4	50	26.5	10.6	257	02.1	47.6	
22	131	50.3	152	19.8	06.8	137	29.5	20.6	65	28.7	10.6	272	04.6	47.6	
23	146	52.8	167	19.4	05.7	152	30.2	19.8	80	30.9	10.6	287	07.1	47.6	
24	161	55.3	182	18.9	-10 04.6	167	30.9	-3 19.0	95	33.1	+21 10.7	302	09.6	-12 47.6	
Dif	—		-5		+11	+7		+8	+22		0	+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 21 ^d 7	PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 2 20 ^h : 59 ^m 2	SD: 16 ^h 1		R ^o : 58 ^m	Náutico		Civil	Hora	R°	Hora	R°	
	PMG: 12 ^h 11 ^m 6					PMG: 5 ^h 24 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	03.6	-6 27.5	282	08.5	-19 24.3		60 N	5 20	6 08	6 49	1 49	68	8 55	53	
1	192	03.7	26.6	296	33.8 63	28.2 39		58	22	07	46	35	67	9 09	54	
2	207	03.9	25.6	310	59.1 63	32.1 39		56	24	06	44	23	66	22	54	
3	222	04.0	24.6	325	24.4 63	35.8 37		54	25	06	41	12	65	32	55	
4	237	04.2	23.7	339	49.6 62	39.4 36		52	26	05	39	1 03	65	42	55	
5	252	04.3	-6 22.7	354	14.8 62	-19 42.9 35		50	5 27	6 05	6 37	0 54	65	9 51	55	
6	267	04.4	-6 21.8	8	40.0 62	-19 46.2 33		45	5 29	6 03	6 33	0 36	64	10 09	56	
7	282	04.6	20.8	23	05.1 61	49.5 30		40	30	02	29	22	62	24	56	
8	297	04.7	19.8	37	30.2 61	52.5 30		35	31	6 00	25	0 10	61	36	57	
9	312	04.8	18.9	51	55.3 61	55.5 30		30	31	5 59	23	** ** *	**	10 47	58	
10	327	05.0	17.9	66	20.3 60	-19 58.3 28		20	30	55	17	** ** *	**	11 06	58	
11	342	05.1	-6 16.9	80	45.3 60	-20 01.0 27		10 N	5 27	5 52	6 13	** ** *	**	11 22	59	
12	357	05.2	-6 16.0	95	10.3 60	-20 03.6 26		0	5 23	5 48	6 08	** ** *	**	11 38	58	
13	12	05.4	15.0	109	35.3 60	06.0 24		10 S	18	43	6 04	23 53	59	11 53	59	
14	27	05.5	14.0	124	00.2 59	08.3 23		20	11	37	5 59	36	59	12 10	59	
15	42	05.7	13.1	138	25.1 59	10.5 22		30	5 00	29	53	17	59	28	60	
16	57	05.8	12.1	152	50.0 59	12.6 19		35	4 54	24	50	23 06	59	39	60	
17	72	05.9	-6 11.2	167	14.9 59	-20 14.5 21		40	4 46	5 18	5 46	22 53	60	12 52	60	
18	87	06.1	-6 10.2	181	39.7 58	-20 16.2 17		45	4 35	5 11	5 41	22 38	60	13 07	60	
19	102	06.2	09.2	196	04.6 59	17.9 17		50	22	5 03	36	20	60	25	60	
20	117	06.4	08.3	210	29.4 58	19.4 15		52	16	4 59	33	11	60	34	60	
21	132	06.5	07.3	224	54.2 58	20.8 12		54	09	54	31	22 01	61	43	61	
22	147	06.6	06.3	239	19.0 58	22.0 14		56	4 01	49	27	21 50	61	13 54	61	
23	162	06.8	05.4	253	43.7 57	23.1 11		58	3 52	43	24	38	60	14 07	60	
24	177	06.9	-6 04.4	268	08.5 58	-20 24.1 10		60 S	3 41	4 36	5 20	21 23	61	14 21	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 10 ^m 2		Mag: -3.9 PMG: 11 ^h 51 ^m		Mag: +1.2 PMG: 12 ^h 49 ^m		Mag: -2.3 PMG: 17 ^h 35 ^m		Mag: +0.4 PMG: 3 ^h 51 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	161	55.3	182	18.9	-10	04.6	167	30.9	-3	19.0	95	33.1	+21	10.7	302	09.6	-12	47.6
1	176	57.7	197	18.4		03.4	182	31.6		18.3	110	35.3		10.7	317	12.1		47.5
2	192	00.2	212	17.9		02.3	197	32.2		17.5	125	37.5		10.8	332	14.7		47.5
3	207	02.6	227	17.4	-10	01.1	212	32.9		16.7	140	39.7		10.8	347	17.2		47.5
4	222	05.1	242	16.9	-10	00.0	227	33.6		15.9	155	41.9		10.9	2	19.7		47.5
5	237	07.6	257	16.4	-9	58.9	242	34.3	-3	15.1	170	44.1	+21	10.9	17	22.2	-12	47.4
6	252	10.0	272	15.9	-9	57.7	257	34.9	-3	14.3	185	46.3	+21	11.0	32	24.7	-12	47.4
7	267	12.5	287	15.5		56.6	272	35.6		13.5	200	48.5		11.0	47	27.3		47.4
8	282	15.0	302	15.0		55.4	287	36.3		12.7	215	50.7		11.1	62	29.8		47.3
9	297	17.4	317	14.5		54.3	302	37.0		11.9	230	52.9		11.1	77	32.3		47.3
10	312	19.9	332	14.0		53.2	317	37.6		11.1	245	55.1		11.2	92	34.8		47.3
11	327	22.4	347	13.5	-9	52.0	332	38.3	-3	10.3	260	57.2	+21	11.2	107	37.3	-12	47.3
12	342	24.8	2	13.0	-9	50.9	347	39.0	-3	09.5	275	59.4	+21	11.3	122	39.8	-12	47.2
13	357	27.3	17	12.6		49.7	2	39.7		08.7	291	01.6		11.3	137	42.4		47.2
14	12	29.8	32	12.1		48.6	17	40.3		08.0	306	03.8		11.4	152	44.9		47.2
15	27	32.2	47	11.6		47.4	32	41.0		07.2	321	06.0		11.4	167	47.4		47.2
16	42	34.7	62	11.1		46.3	47	41.7		06.4	336	08.2		11.5	182	49.9		47.1
17	57	37.1	77	10.6	-9	45.1	62	42.4	-3	05.6	351	10.4	+21	11.5	197	52.4	-12	47.1
18	72	39.6	92	10.1	-9	44.0	77	43.1	-3	04.8	6	12.6	+21	11.6	212	55.0	-12	47.1
19	87	42.1	107	09.7		42.9	92	43.7		04.0	21	14.8		11.6	227	57.5		47.1
20	102	44.5	122	09.2		41.7	107	44.4		03.2	36	17.0		11.7	243	00.0		47.0
21	117	47.0	137	08.7		40.6	122	45.1		02.4	51	19.2		11.7	258	02.5		47.0
22	132	49.5	152	08.2		39.4	137	45.8		01.6	66	21.3		11.8	273	05.0		47.0
23	147	51.9	167	07.7		38.3	152	46.4	-3	00.8	81	23.5		11.8	288	07.6		46.9
24	162	54.4	182	07.3	-9	37.1	167	47.1	-3	00.0	96	25.7	+21	11.9	303	10.1	-12	46.9
Dif	—		-5	+11			+7	+8			+22	0			+25	0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 11 ^m 4			Edad: 22 ^d 7 PHE { SD: 16'1 PMG: 6 ^h 22 ^m R°: 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	06.9	-6 04.4	268	08.5	-20 24.1		60 N	17 38	18 19	19 08	2 57 53	9 48 68	
1	192	07.1	03.4	282	33.2	24.9	8	58	40	20	05	42 54	10 03 67	
2	207	07.2	02.5	296	58.0	25.6	7	56	43	20	03	29 55	16 66	
3	222	07.3	01.5	311	22.7	26.2	6	54	45	20	01	17 56	27 66	
4	237	07.5	-6 00.5	325	47.4	26.6	4	52	47	21	19 00	2 08 55	37 65	
5	252	07.6	-5 59.6	340	12.1	26.9	3	50	17 49	18 21	18 59	1 59 56	10 46 65	
6	267	07.8	-5 58.6	354	36.8	27.0	1	45	17 53	18 22	18 56	1 40 56	11 05 63	
7	282	07.9	57.6	9	01.6	27.1	1	40	56	23	55	24 57	20 63	
8	297	08.0	56.7	23	26.3	26.9	2	35	17 59	25	54	11 58	33 62	
9	312	08.2	55.7	37	50.9	26.7	2	30	18 02	26	54	1 00 58	11 45 61	
10	327	08.3	54.7	52	15.6	26.3	4	20	06	29	54	0 41 58	12 04 60	
11	342	08.5	-5 53.8	66	40.3	25.8	5	10 N	18 11	18 32	18 56	0 24 59	12 21 59	
12	357	08.6	-5 52.8	81	05.0	25.1	7	0	18 15	18 35	19 00	0 08 59	12 36 59	
13	12	08.8	51.8	95	29.8	24.3	8	10 S	19	40	05	** ** *	12 52 58	
14	27	08.9	50.9	109	54.5	23.4	9	20	23	46	11	** ** *	13 09 56	
15	42	09.0	49.9	124	19.2	22.3	11	30	29	53	21	** ** *	28 55	
16	57	09.2	48.9	138	43.9	21.1	12	35	32	18 57	27	** ** *	39 55	
17	72	09.3	-5 48.0	153	08.6	19.8	13	40	18 35	19 03	19 35	23 53 65	13 52 54	
18	87	09.5	-5 47.0	167	33.4	18.3	15	45	18 39	19 09	19 45	23 38 66	14 07 53	
19	102	09.6	46.0	181	58.1	16.7	16	50	44	17	19 57	20 68	25 52	
20	117	09.8	45.1	196	22.9	15.0	17	52	47	21	20 03	11 69	34 51	
21	132	09.9	44.1	210	47.6	13.1	19	54	49	25	10	23 02 69	44 50	
22	147	10.0	43.1	225	12.4	11.1	20	56	52	30	17	22 51 71	14 55 49	
23	162	10.2	42.1	239	37.2	09.0	21	58	55	36	26	38 73	15 07 48	
24	177	10.3	-5 41.2	254	02.0	06.7	23	60 S	18 58	19 42	20 37	22 24 74	15 22 46	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 06 ^m 2		Mag: -3.9 PMG: 11 ^h 52 ^m			Mag: +1.2 PMG: 12 ^h 48 ^m			Mag: -2.3 PMG: 17 ^h 32 ^m			Mag: +0.4 PMG: 3 ^h 47 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	162	54.4	182	07.3	-9 37.1		167	47.1	-3 00.0		96 25.7	+21 11.9	303 10.1	-12 46.9
1	177	56.9	197	06.8	36.0		182	47.8	-2 59.2		111 27.9	11.9	318 12.6	46.9
2	192	59.3	212	06.3	34.8		197	48.5	58.4		126 30.1	12.0	333 15.1	46.9
3	208	01.8	227	05.8	33.7		212	49.1	57.6		141 32.3	12.0	348 17.6	46.8
4	223	04.2	242	05.4	32.5		227	49.8	56.8		156 34.5	12.1	3 20.2	46.8
5	238	06.7	257	04.9	-9 31.4		242	50.5	-2 56.1		171 36.7	+21 12.1	18 22.7	-12 46.8
6	253	09.2	272	04.4	-9 30.2		257	51.2	-2 55.3		186 38.9	+21 12.2	33 25.2	-12 46.8
7	268	11.6	287	03.9	29.1		272	51.8	54.5		201 41.0	12.2	48 27.7	46.7
8	283	14.1	302	03.5	27.9		287	52.5	53.7		216 43.2	12.3	63 30.2	46.7
9	298	16.6	317	03.0	26.8		302	53.2	52.9		231 45.4	12.3	78 32.8	46.7
10	313	19.0	332	02.5	25.6		317	53.9	52.1		246 47.6	12.4	93 35.3	46.6
11	328	21.5	347	02.0	-9 24.5		332	54.6	-2 51.3		261 49.8	+21 12.4	108 37.8	-12 46.6
12	343	24.0	2 01.6	-9 23.3			347	55.2	-2 50.5		276 52.0	+21 12.5	123 40.3	-12 46.6
13	358	26.4	17 01.1	22.1			2 55.9	49.7			291 54.2	12.5	138 42.9	46.6
14	13	28.9	32 00.6	21.0			17 56.6	48.9			306 56.3	12.6	153 45.4	46.5
15	28	31.4	47 00.1	19.8			32 57.3	48.1			321 58.5	12.6	168 47.9	46.5
16	43	33.8	61 59.7	18.7			47 57.9	47.3			337 00.7	12.7	183 50.4	46.5
17	58	36.3	76 59.2	-9 17.5			62 58.6	-2 46.5			352 02.9	+21 12.7	198 52.9	-12 46.4
18	73	38.7	91 58.7	-9 16.4			77 59.3	-2 45.7			7 05.1	+21 12.8	213 55.5	-12 46.4
19	88	41.2	106 58.2	15.2			93 00.0	44.9			22 07.3	12.8	228 58.0	46.4
20	103	43.7	121 57.8	14.0			108 00.7	44.2			37 09.4	12.9	244 00.5	46.4
21	118	46.1	136 57.3	12.9			123 01.3	43.4			52 11.6	12.9	259 03.0	46.3
22	133	48.6	151 56.8	11.7			138 02.0	42.6			67 13.8	13.0	274 05.6	46.3
23	148	51.1	166 56.4	10.6			153 02.7	41.8			82 16.0	13.0	289 08.1	46.3
24	163	53.5	181 55.9	-9 09.4			168 03.4	-2 41.0			97 18.2	+21 13.1	304 10.6	-12 46.3
Dif	—		-5 +12				+7 +8		+22		+1		+25 0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16:1 PMG: 12 ^h 11 ^m 2			Edad: 23 ^d 7 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2 PMG: 7 ^h 21 ^m R°: 58 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m								
0	177	10.3	-5	41.2	254	02.0	-20	06.7	58	5	14	6	43	3	50	40	10	56	79				
1	192	10.5		40.2	268	26.9	59	04.3	24	58	16	02	41	36	41	11	10	77					
2	207	10.6		39.2	282	51.7	58	-20	01.7	26	56	18	01	39	24	43		22	75				
3	222	10.8		38.3	297	16.6	59	-19	59.1	26	54	20	01	36	13	44		33	73				
4	237	10.9		37.3	311	41.5	59		56.3	28	52	22	01	35	3	03	46		42	72			
5	252	11.1	-5	36.3	326	06.4	59	-19	53.3	30	50	5	23	6	01	2	55	47	11	51	71		
6	267	11.2	-5	35.4	340	31.4	60	-19	50.3	30	45	5	26	6	00	2	36	49	12	08	69		
7	282	11.3		34.4	354	56.3	59		47.1	32	40	27	5	59	26	21	51		23	66			
8	297	11.5		33.4	9	21.3	60		43.7	34	35	28		58	23	2	09	52		35	65		
9	312	11.6		32.5	23	46.3	60		40.3	34	30	29		56	20	1	58	53	12	46	63		
10	327	11.8		31.5	38	11.4	61		36.7	36	20	28		54	16	39	55	13	04	61			
11	342	11.9	-5	30.5	52	36.5	61	-19	33.0	37	10	5	26	5	51	6	12	1	23	56	13	20	59
12	357	12.1	-5	29.5	67	01.6	61	-19	29.1	39	0	5	23	5	47	6	08	1	07	58	13	35	57
13	12	12.2		28.6	81	26.7	61		25.2	39	10	18		43	04	0	52	59	13	50	55		
14	27	12.4		27.6	95	51.9	62		21.1	41	20	11		37	6	00		35	61	14	05	54	
15	42	12.5		26.6	110	17.0	61		16.9	42	30	5	02	30	5	54		16	63		23	51	
16	57	12.7		25.7	124	42.3	63		12.5	44	35	4	56	26	51	0	05	64		34	49		
17	72	12.8	-5	24.7	139	07.5	62	-19	08.0	45	40	4	48	5	21	5	48	**	**	**	14	46	47
18	87	13.0	-5	23.7	153	32.8	63	-19	03.4	46	45	4	39	5	14	5	44	**	**	**	15	00	45
19	102	13.1		22.7	167	58.2	64	-18	58.7	47	50		26	06	39	**	**	**	**	17	43		
20	117	13.3		21.8	182	23.6	64		53.9	48	52	20		5	02	37	**	**	**		25	41	
21	132	13.4		20.8	196	49.0	64		48.9	50	54	14		4	58	34	**	**	**		34	40	
22	147	13.6		19.8	211	14.4	64		43.8	51	56	4	06	53	32	**	**	**	**	44	38		
23	162	13.7		18.9	225	39.9	65		38.6	52	58	3	57	48	29	23	51	80	15	55	36		
24	177	13.8	-5	17.9	240	05.4	65	-18	33.3	53	60	3	47	4	42	5	25	23	38	83	16	08	34
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 13 ^h 02 ^m 3			Mag: -3.9 PMG: 11 ^h 53 ^m			Mag: +1.2 PMG: 12 ^h 47 ^m			Mag: -2.3 PMG: 17 ^h 28 ^m			Mag: +0.4 PMG: 3 ^h 43 ^m										
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	163	53.5	181	55.9	-9	09.4	168	03.4	-2	41.0	97	18.2	+21	13.1	304	10.6	-12	46.3					
1	178	56.0	196	55.4		08.3	183	04.0		40.2	112	20.3		13.1	319	13.1		46.2					
2	193	58.5	211	54.9		07.1	198	04.7		39.4	127	22.5		13.2	334	15.7		46.2					
3	209	00.9	226	54.5		05.9	213	05.4		38.6	142	24.7		13.2	349	18.2		46.2					
4	224	03.4	241	54.0		04.8	228	06.1		37.8	157	26.9		13.3	4	20.7		46.1					
5	239	05.9	256	53.5	-9	03.6	243	06.8	-2	37.0	172	29.1	+21	13.3	19	23.2	-12	46.1					
6	254	08.3	271	53.1	-9	02.4	258	07.4	-2	36.2	187	31.2	+21	13.4	34	25.8	-12	46.1					
7	269	10.8	286	52.6		01.3	273	08.1		35.4	202	33.4		13.4	49	28.3		46.1					
8	284	13.2	301	52.1	-9	00.1	288	08.8		34.6	217	35.6		13.5	64	30.8		46.0					
9	299	15.7	316	51.7	-8	59.0	303	09.5		33.8	232	37.8		13.5	79	33.3		46.0					
10	314	18.2	331	51.2		57.8	318	10.2		33.0	247	40.0		13.6	94	35.9		46.0					
11	329	20.6	346	50.7	-8	56.6	333	10.8	-2	32.2	262	42.1	+21	13.6	109	38.4	-12	45.9					
12	344	23.1	1	50.3	-8	55.5	348	11.5	-2	31.5	277	44.3	+21	13.7	124	40.9	-12	45.9					
13	359	25.6	16	49.8		54.3	3	12.2		30.7	292	46.5		13.7	139	43.4		45.9					
14	14	28.0	31	49.3		53.1	18	12.9		29.9	307	48.7		13.8	154	46.0		45.8					
15	29	30.5	46	48.9		52.0	33	13.5		29.1	322	50.9		13.8	169	48.5		45.8					
16	44	33.0	61	48.4		50.8	48	14.2		28.3	337	53.0		13.9	184	51.0		45.8					
17	59	35.4	76	47.9	-8	49.6	63	14.9	-2	27.5	352	55.2	+21	13.9	199	53.5	-12	45.8					
18	74	37.9	91	47.5	-8	48.5	78	15.6	-2	26.7	7	57.4	+21	14.0	214	56.1	-12	45.7					
19	89	40.4	106	47.0		47.3	93	16.3		25.9	22	59.6		14.0	229	58.6		45.7					
20	104	42.8	121	46.6		46.1	108	16.9		25.1	38	01.7		14.1	245	01.1		45.7					
21	119	45.3	136	46.1		45.0	123	17.6		24.3	53	03.9		14.1	260	03.7		45.6					
22	134	47.7	151	45.6		43.8	138	18.3		23.5	68	06.1		14.2	275	06.2		45.6					
23	149	50.2	166	45.2		42.6	153	19.0		22.7	83	08.3		14.2	290	08.7		45.6					
24	164	52.7	181	44.7	-8	41.5	168	19.7	-2	21.9	98	10.4	+21	14.3	305	11.2	-12	45.6					
Dif	—			-5			+12			+7			+22			+1			+25				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 24 ^d 7	PHE {	4 ^h : 59'2			12 ^h : 59'2	20 ^h : 59'1	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 0										Civil			Náutico			Hora
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	177	13.8	-5 17.9	240	05.4	-18 33.3		60 N	17 43	18 24	19 13	4 30 28	12 15 86				
1	192	14.0		254	31.0	66 27.8	55	58	45	24	10	17 32	27 83				
2	207	14.1		268	56.6	66 22.3	55	56	47	24	07	4 07 34	37 80				
3	222	14.3		283	22.3	67 16.6	57	54	49	24	05	3 57 36	46 78				
4	237	14.4		297	48.0	67 10.8	58	52	51	24	03	49 37	12 54 76				
5	252	14.6	-5 13.0	312	13.7	67 -18 04.9	59	50	17 52	18 24	19 02	3 42 38	13 02 74				
6	267	14.7	-5 12.0	326	39.5	68 -17 58.8	61	45	17 56	18 25	18 59	3 25 42	13 17 71				
7	282	14.9		341	05.3	68 52.7	63	40	17 58	25	57	12 45	29 69				
8	297	15.0		355	31.2	69 46.4	63	35	18 01	26	56	3 01 46	40 66				
9	312	15.2		9	57.1	69 40.1	63	30	03	27	55	2 51 48	13 49 64				
10	327	15.3		24	23.1	70 33.6	65	20	07	29	55	34 51	14 05 61				
11	342	15.5	-5 07.2	38	49.1	70 -17 27.0	66	10 N	18 11	18 32	18 56	2 19 54	14 19 58				
12	357	15.6	-5 06.2	53	15.2	71 -17 20.3	67	0	18 14	18 35	18 59	2 05 56	14 32 55				
13	12	15.8		67	41.3	71 13.5	68	10 S	18	39	19 03	1 51 59	45 52				
14	27	15.9		82	07.5	72 -17 06.6	69	20	22	44	10	36 61	14 59 49				
15	42	16.1		96	33.7	72 -16 59.6	70	30	26	50	19	19 64	15 14 46				
16	57	16.2		111	00.0	73 52.4	72	35	29	55	25	1 09 66	23 44				
17	72	16.4	-5 01.3	125	26.3	73 -16 45.2	72	40	18 32	18 59	19 32	0 58 67	15 33 42				
18	87	16.5	-5 00.4	139	52.7	74 -16 37.9	73	45	18 36	19 05	19 41	0 44 70	15 45 39				
19	102	16.7	-4 59.4	154	19.1	74 30.4	75	50	40	13	52	28 73	16 00 35				
20	117	16.8		168	45.6	75 22.9	75	52	42	16	19 58	20 74	06 35				
21	132	17.0		183	12.2	76 15.3	76	54	44	20	20 04	11 76	14 32				
22	147	17.2		197	38.7	75 -16 07.5	76	56	47	25	11	0 02 78	22 30				
23	162	17.3		212	05.4	77 -15 59.7	78	58	49	30	20	** ** *	31 28				
24	177	17.5	-4 54.5	226	32.1	77 -15 51.8	79	60 S	18 52	19 35	20 29	** ** *	16 42 25				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 58 ^m 4		Mag: -3.9 PMG: 11 ^h 53 ^m		Mag: +1.2 PMG: 12 ^h 46 ^m		Mag: -2.3 PMG: 17 ^h 25 ^m		Mag: +0.4 PMG: 3 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	164	52.7	181	44.7	168	19.7	98	10.4	305	11.2
1	179	55.1	196	44.2		40.3	113	12.6	320	13.8
2	194	57.6	211	43.8	198	21.0	128	14.8	335	16.3
3	210	00.1	226	43.3	213	21.7	143	17.0	350	18.8
4	225	02.5	241	42.9	228	22.4	158	19.1	5	21.4
5	240	05.0	256	42.4	243	23.1	173	21.3	20	23.9
6	255	07.5	271	41.9	258	23.7	188	23.5	35	26.4
7	270	09.9	286	41.5	273	24.4	203	25.7	50	28.9
8	285	12.4	301	41.0	288	25.1	218	27.8	65	31.5
9	300	14.8	316	40.6	303	25.8	233	30.0	80	34.0
10	315	17.3	331	40.1	318	26.5	248	32.2	95	36.5
11	330	19.8	346	39.6	333	27.1	263	34.3	110	39.1
12	345	22.2	1	39.2	348	27.8	278	36.5	125	41.6
13	0	24.7	16	38.7	3	28.5	293	38.7	140	44.1
14	15	27.2	31	38.3	18	29.2	308	40.9	155	46.7
15	30	29.6	46	37.8	33	29.9	323	43.0	170	49.2
16	45	32.1	61	37.4	48	30.6	338	45.2	185	51.7
17	60	34.6	76	36.9	63	31.2	353	47.4	200	54.2
18	75	37.0	91	36.4	78	31.9	8	49.5	215	56.8
19	90	39.5	106	36.0	93	32.6	23	51.7	230	59.3
20	105	42.0	121	35.5	108	33.3	38	53.9	246	01.8
21	120	44.4	136	35.1	123	34.0	53	56.0	261	04.4
22	135	46.9	151	34.6	138	34.6	68	58.2	276	06.9
23	150	49.3	166	34.2	153	35.3	84	00.4	291	09.4
24	165	51.8	181	33.7	168	36.0	99	02.5	306	12.0
Dif	—		-5 +12		+7 +8		+22 +1		+25 0	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 25 ^d 7 PHE { 4 ^h : 59 ^m 0 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9														
	PMG: 12 ^h 10 ^m 7			SD: 16 ^h 1 PMG: 9 ^h 14 ^m R°: 53 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m
0	177	17.5	-4	54.5	226	32.1	-15	51.8	60 N	5	08	5	56	6	37	4	58	22
1	192	17.6		53.5	240	58.8	77	43.7	58	11	56		56	35		49	24	50
2	207	17.8		52.6	255	25.6	78	35.6	56	13	56		56	33		41	27	13
3	222	17.9		51.6	269	52.5	79	27.4	54	16	56		56	32		33	29	14
4	237	18.1		50.6	284	19.4	79	19.1	52	17	56		56	30		26	31	10
5	252	18.2	-4	49.6	298	46.4	80	-15	50	5	19	5	56	6	29	4	20	33
6	267	18.4	-4	48.7	313	13.4	80	-15	45	5	22	5	56	6	25	4	07	37
7	282	18.5		47.7	327	40.5	81	-14	40	24	56		56	23		3	57	39
8	297	18.7		46.7	342	07.6	81	44.9	35	26	55		55	20		47	42	46
9	312	18.8		45.7	356	34.8	82	36.2	30	26	54		54	18		39	44	14
10	327	19.0		44.8	11	02.0	82	27.3	20	27	52		52	14		25	48	15
11	342	19.1	-4	43.8	25	29.3	83	-14	10 N	5	25	5	50	6	11	3	13	51
12	357	19.3	-4	42.8	39	56.7	84	-14	0	5	23	5	47	6	07	3	01	54
13	12	19.5		41.8	54	24.1	84	-14	10 S	18	43		43	04		2	50	56
14	27	19.6		40.9	68	51.6	85	-13	20	12	38		38	6	00	37	60	15
15	42	19.8		39.9	83	19.1	85	41.9	30	5	03	32	5	56	23	64	16	00
16	57	19.9		38.9	97	46.7	86	32.6	35	4	58	28	53		15	66	07	40
17	72	20.1	-4	37.9	112	14.4	87	-13	40	4	50	5	23	5	50	2	05	69
18	87	20.2	-4	36.9	126	42.0	86	-13	45	4	42	5	17	5	47	1	54	72
19	102	20.4		36.0	141	09.8	88	-13	50	30	10		10	42		41	75	35
20	117	20.5		35.0	155	37.6	88	-12	52	25	06		06	41		34	77	41
21	132	20.7		34.0	170	05.5	89	44.8	54	18	5	02	38		27	79	46	27
22	147	20.8		33.0	184	33.4	89	35.0	56	11	4	58	36		20	81	52	25
23	162	21.0		32.1	199	01.4	90	25.2	58	4	03	53	33		11	83	16	59
24	177	21.2	-4	31.1	213	29.4	90	-12	60 S	3	53	4	47	5	30	1	01	86

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 54 ^m 4		Mag: -3.9 PMG: 11 ^h 54 ^m			Mag: +1.2 PMG: 12 ^h 45 ^m			Mag: -2.3 PMG: 17 ^h 21 ^m			Mag: +0.4 PMG: 3 ^h 35 ^m		
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	165	51.8	181	33.7	-8	13.3	168	36.0	-2	02.9	99	02.5	+21	15.5
1	180	54.3	196	33.3		12.1	183	36.7		02.1	114	04.7		15.6
2	195	56.7	211	32.8		10.9	198	37.4		01.3	129	06.9		15.6
3	210	59.2	226	32.4		09.8	213	38.1	-2	00.5	144	09.0		15.7
4	226	01.7	241	31.9		08.6	228	38.7	-1	59.7	159	11.2		15.7
5	241	04.1	256	31.5	-8	07.4	243	39.4	-1	58.9	174	13.4	+21	15.8
6	256	06.6	271	31.0	-8	06.2	258	40.1	-1	58.1	189	15.5	+21	15.9
7	271	09.1	286	30.5		05.0	273	40.8		57.3	204	17.7		15.9
8	286	11.5	301	30.1		03.8	288	41.5		56.5	219	19.9		16.0
9	301	14.0	316	29.6		02.7	303	42.1		55.7	234	22.0		16.0
10	316	16.5	331	29.2		01.5	318	42.8		54.9	249	24.2		16.1
11	331	18.9	346	28.7	-8	00.3	333	43.5	-1	54.1	264	26.4	+21	16.1
12	346	21.4	1	28.3	-7	59.1	348	44.2	-1	53.3	279	28.5	+21	16.2
13	1	23.8	16	27.8		57.9	3	44.9		52.5	294	30.7		16.2
14	16	26.3	31	27.4		56.8	18	45.6		51.7	309	32.9		16.3
15	31	28.8	46	26.9		55.6	33	46.2		51.0	324	35.0		16.3
16	46	31.2	61	26.5		54.4	48	46.9		50.2	339	37.2		16.4
17	61	33.7	76	26.0	-7	53.2	63	47.6	-1	49.4	354	39.3	+21	16.4
18	76	36.2	91	25.6	-7	52.0	78	48.3	-1	48.6	9	41.5	+21	16.5
19	91	38.6	106	25.2		50.8	93	49.0		47.8	24	43.7		16.5
20	106	41.1	121	24.7		49.6	108	49.7		47.0	39	45.8		16.6
21	121	43.6	136	24.3		48.5	123	50.3		46.2	54	48.0		16.6
22	136	46.0	151	23.8		47.3	138	51.0		45.4	69	50.2		16.7
23	151	48.5	166	23.4		46.1	153	51.7		44.6	84	52.3		16.7
24	166	50.9	181	22.9	-7	44.9	168	52.4	-1	43.8	99	54.5	+21	16.8

Dif	—	-5	+12	+7	+8	+22	+1	+25

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 26 ^d 7 PHE	SD: 16 ^h 0										
	PMG: 12 ^h 10 ^m 5				PMG: 10 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	21.2	-4	213	29.4	-12	15.3	60 N	17 48	18 29	19 18	5 20	17	15 08	87
1	192	21.3		227	57.5	-12	05.3 ¹⁰⁰	58	50	29	14	13	21	14	84
2	207	21.5		242	25.7	-11	55.2 ¹⁰¹	56	51	28	12	08	22	19	81
3	222	21.6		256	53.9	92	45.1 ¹⁰¹	54	53	28	09	5 02	25	24	78
4	237	21.8		271	22.1	92	35.0 ¹⁰¹	52	54	28	07	4 57	27	28	76
5	252	21.9	-4	285	50.4	-11	24.7 ¹⁰³	50	17 55	18 28	19 05	4 53	29	15 31	75
6	267	22.1	-4	300	18.8	-11	14.4 ¹⁰³	45	17 58	18 27	19 02	4 44	32	15 39	71
7	282	22.3		314	47.2	-11	04.1 ¹⁰³	40	18 01	28	18 59	36	35	46	67
8	297	22.4		329	15.7	-10	53.7 ¹⁰⁴	35	03	28	57	29	38	52	64
9	312	22.6		343	44.2	95	43.2 ¹⁰⁵	30	04	28	56	23	40	15 57	62
10	327	22.7		358	12.8	96	32.6 ¹⁰⁶	20	08	30	55	13	44	16 05	58
11	342	22.9	-4	12	41.4	-10	22.1 ¹⁰⁵	10 N	18 11	18 32	18 56	4 04	48	16 13	54
12	357	23.0	-4	27	10.1	-10	11.4 ¹⁰⁷	0	18 14	18 34	18 59	3 55	51	16 20	50
13	12	23.2		41	38.9	-10	00.7 ¹⁰⁷	10 S	17	38	19 02	46	55	27	47
14	27	23.4		56	07.7	-9	50.0 ¹⁰⁷	20	20	42	08	37	59	34	43
15	42	23.5		70	36.5	98	39.2 ¹⁰⁸	30	24	48	16	27	62	42	39
16	57	23.7		85	05.4	99	28.4 ¹⁰⁸	35	26	52	22	21	65	47	37
17	72	23.8	-4	99	34.4	-9	17.5 ¹⁰⁹	40	18 29	18 56	19 28	3 14	67	16 52	34
18	87	24.0	-4	114	03.4	-9	06.5 ¹¹⁰	45	18 32	19 02	19 37	3 06	71	16 59	30
19	102	24.1		128	32.4	-8	55.5 ¹¹⁰	50	36	08	48	2 56	75	17 06	27
20	117	24.3		143	01.5		44.5 ¹¹⁰	52	37	12	53	51	77	09	26
21	132	24.5		157	30.7		33.5 ¹¹⁰	54	39	15	19 59	46	79	13	23
22	147	24.6		171	59.9		22.3 ¹¹²	56	41	19	20 05	41	81	17	21
23	162	24.8		186	29.1	-8	11.2 ¹¹¹	58	44	24	13	34	84	22	18
24	177	24.9	-4	200	58.4	-8	00.0 ¹¹²	60 S	18 46	19 29	20 22	2 27	87	17 27	16
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 50 ^m 5		Mag: -3.9 PMG: 11 ^h 55 ^m			Mag: +1.2 PMG: 12 ^h 44 ^m			Mag: -2.3 PMG: 17 ^h 18 ^m			Mag: +0.4 PMG: 3 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	166	50.9	181	22.9	-7	168	52.4	-1	99	54.5	+21	307	12.8	-12	44.1
1	181	53.4	196	22.5		183	53.1		114	56.6		322	15.3		44.1
2	196	55.9	211	22.0		198	53.8		129	58.8		337	17.9		44.0
3	211	58.3	226	21.6		213	54.4		145	01.0		352	20.4		44.0
4	227	00.8	241	21.1		228	55.1		160	03.1		7	22.9		44.0
5	242	03.3	256	20.7	-7	243	55.8	-1	175	05.3	+21	22	25.5	-12	43.9
6	257	05.7	271	20.2	-7	258	56.5	-1	190	07.4	+21	37	28.0	-12	43.9
7	272	08.2	286	19.8		273	57.2		205	09.6		52	30.6		43.9
8	287	10.7	301	19.4		288	57.9		220	11.8		67	33.1		43.8
9	302	13.1	316	18.9		303	58.5		235	13.9		82	35.6		43.8
10	317	15.6	331	18.5		318	59.2		250	16.1		97	38.2		43.8
11	332	18.1	346	18.0	-7	333	59.9	-1	265	18.2	+21	112	40.7	-12	43.7
12	347	20.5	1	17.6	-7	349	00.6	-1	280	20.4	+21	127	43.2	-12	43.7
13	2	23.0	16	17.1		4	01.3		295	22.5		142	45.8		43.7
14	17	25.4	31	16.7		19	02.0		310	24.7		157	48.3		43.6
15	32	27.9	46	16.3		34	02.7		325	26.9		172	50.9		43.6
16	47	30.4	61	15.8		49	03.3		340	29.0		187	53.4		43.6
17	62	32.8	76	15.4	-7	64	04.0	-1	355	31.2	+21	202	55.9	-12	43.5
18	77	35.3	91	14.9	-7	79	04.7	-1	10	33.3	+21	217	58.5	-12	43.5
19	92	37.8	106	14.5		94	05.4		25	35.5		233	01.0		43.5
20	107	40.2	121	14.1		109	06.1		40	37.6		248	03.6		43.4
21	122	42.7	136	13.6		124	06.8		55	39.8		263	06.1		43.4
22	137	45.2	151	13.2		139	07.4		70	41.9		278	08.6		43.4
23	152	47.6	166	12.7		154	08.1		85	44.1		293	11.2		43.3
24	167	50.1	181	12.3	-7	169	08.8	-1	100	46.2	+21	308	13.7	-12	43.3
Dif	—		-4	+12		+7	+8		+22	+1		+25			0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 27 ^d 7 PHE { 4 ^h : 58' ⁴ 12 ^h : 58' ² 20 ^h : 58' ¹ R°: 49 ^m										
	PMG: 12 ^h 10 ^m 2			PMG: 10 ^h 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	24.9	-4	07.6	200	58.4	-8	00.0	60 N	5 02	5 50	6 32	5 37	15
1	192	25.1		06.6	215	27.8 ¹⁰⁴	-7	48.8 ¹¹²	58	05	51	30	34	17
2	207	25.3		05.6	229	57.2 ¹⁰⁴		37.5 ¹¹³	56	08	51	28	30	20
3	222	25.4		04.6	244	26.6 ¹⁰⁴		26.2 ¹¹³	54	11	52	27	27	22
4	237	25.6		03.7	258	56.1 ¹⁰⁵		14.9 ¹¹³	52	13	52	25	24	24
5	252	25.7	-4	02.7	273	25.6 ¹⁰⁵	-7	03.5 ¹¹⁴	50	5 15	5 52	6 24	5 22	25
6	267	25.9	-4	01.7	287	55.2 ¹⁰⁶	-6	52.1 ¹¹⁴	45	5 18	5 52	6 22	5 16	29
7	282	26.1	-4	00.7	302	24.8 ¹⁰⁶		40.7 ¹¹⁴	40	21	52	19	11	33
8	297	26.2	-3	59.7	316	54.5 ¹⁰⁷		29.3 ¹¹⁴	35	23	52	17	07	36
9	312	26.4		58.8	331	24.2 ¹⁰⁷		17.8 ¹¹⁵	30	24	52	16	5 03	38
10	327	26.5		57.8	345	54.0 ¹⁰⁸	-6	06.3 ¹¹⁵	20	25	51	13	4 57	42
11	342	26.7	-3	56.8	0	23.8 ¹⁰⁸	-5	54.7 ¹¹⁶	10 N	5 24	5 49	6 10	4 52	46
12	357	26.9	-3	55.8	14	53.7 ¹⁰⁹	-5	43.2 ¹¹⁵	0	5 22	5 46	6 07	4 46	50
13	12	27.0		54.8	29	23.6 ¹⁰⁹		31.6 ¹¹⁶	10 S	18	43	04	41	53
14	27	27.2		53.9	43	53.5 ¹⁰⁹		20.0 ¹¹⁶	20	13	39	6 01	36	56
15	42	27.3		52.9	58	23.5 ¹¹⁰	-5	08.4 ¹¹⁶	30	05	33	5 57	29	61
16	57	27.5		51.9	72	53.5 ¹¹⁰	-4	56.7 ¹¹⁷	35	5 00	29	55	26	63
17	72	27.7	-3	50.9	87	23.5 ¹¹⁰	-4	45.1 ¹¹⁶	40	4 53	5 25	5 52	4 21	67
18	87	27.8	-3	49.9	101	53.6 ¹¹¹	-4	33.4 ¹¹⁷	45	4 45	5 20	5 49	4 17	70
19	102	28.0		49.0	116	23.8 ¹¹²		21.7 ¹¹⁷	50	34	13	46	11	74
20	117	28.2		48.0	130	54.0 ¹¹²	-4	10.0 ¹¹⁷	52	29	10	44	08	76
21	132	28.3		47.0	145	24.2 ¹¹²	-3	58.3 ¹¹⁷	54	23	06	42	05	78
22	147	28.5		46.0	159	54.4 ¹¹²		46.6 ¹¹⁷	56	16	5 02	40	4 02	80
23	162	28.6		45.0	174	24.7 ¹¹³		34.8 ¹¹⁸	58	08	4 58	38	3 58	83
24	177	28.8	-3	44.0	188	55.0 ¹¹³	-3	23.1 ¹¹⁷	60 S	4 00	4 53	5 35	3 54	86

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 46 ^m 6		Mag: -3.9 PMG: 11 ^h 56 ^m			Mag: +1.2 PMG: 12 ^h 43 ^m			Mag: -2.3 PMG: 17 ^h 14 ^m			Mag: +0.4 PMG: 3 ^h 27 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	167	50.1	181	12.3	-7	16.3	169	08.8	-1	24.7	100	46.2	+21	18.1
1	182	52.6	196	11.9		15.1	184	09.5		24.0	115	48.4		18.1
2	197	55.0	211	11.4		13.9	199	10.2		23.2	130	50.6		18.2
3	212	57.5	226	11.0		12.7	214	10.9		22.4	145	52.7		18.2
4	227	59.9	241	10.5		11.5	229	11.6		21.6	160	54.9		18.3
5	243	02.4	256	10.1	-7	10.3	244	12.2	-1	20.8	175	57.0	+21	18.3
6	258	04.9	271	09.7	-7	09.1	259	12.9	-1	20.0	190	59.2	+21	18.4
7	273	07.3	286	09.2		07.9	274	13.6		19.2	206	01.3		18.4
8	288	09.8	301	08.8		06.7	289	14.3		18.4	221	03.5		18.5
9	303	12.3	316	08.4		05.5	304	15.0		17.6	236	05.6		18.6
10	318	14.7	331	07.9		04.3	319	15.7		16.8	251	07.8		18.6
11	333	17.2	346	07.5	-7	03.1	334	16.4	-1	16.0	266	09.9	+21	18.7
12	348	19.7	1	07.0	-7	01.9	349	17.0	-1	15.2	281	12.1	+21	18.7
13	3	22.1	16	06.6	-7	00.7	4	17.7		14.4	296	14.2		18.8
14	18	24.6	31	06.2	-6	59.5	19	18.4		13.6	311	16.4		18.8
15	33	27.0	46	05.7		58.3	34	19.1		12.8	326	18.5		18.9
16	48	29.5	61	05.3		57.1	49	19.8		12.0	341	20.7		18.9
17	63	32.0	76	04.9	-6	55.9	64	20.5	-1	11.2	356	22.8	+21	19.0
18	78	34.4	91	04.4	-6	54.7	79	21.2	-1	10.5	11	25.0	+21	19.0
19	93	36.9	106	04.0		53.5	94	21.8		09.7	26	27.1		19.1
20	108	39.4	121	03.6		52.3	109	22.5		08.9	41	29.3		19.1
21	123	41.8	136	03.1		51.1	124	23.2		08.1	56	31.4		19.2
22	138	44.3	151	02.7		49.9	139	23.9		07.3	71	33.6		19.3
23	153	46.8	166	02.3		48.7	154	24.6		06.5	86	35.7		19.3
24	168	49.2	181	01.8	-6	47.5	169	25.3	-1	05.7	101	37.9	+21	19.4
Dif	—		-4		+12		+7		+8		+22		+1	
													+25	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 28 ^d 7		PHE { 4 ^h : 57 ^m /9 12 ^h : 57 ^m /7 20 ^h : 57 ^m /5 Rº: 48 ^m										
	PMG: 12 ^h 09 ^m 9		SD: 15 ^h 8			PMG: 11 ^h 47 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	28.8	-3	44.0	188	55.0	-3 23.1	60 N	17 53	18 34	19 23	5 52 15	18 00 82		
1	192	29.0		43.1	203	25.4 ¹¹⁴	-3 11.3 ¹¹⁸	58	54	33	19	51 17	17 59 80		
2	207	29.1		42.1	217	55.8 ¹¹⁴	-2 59.5 ¹¹⁸	56	55	32	16	50 19	59 78		
3	222	29.3		41.1	232	26.2 ¹¹⁴	47.8 ¹¹⁷	54	57	32	13	49 21	59 76		
4	237	29.5		40.1	246	56.7 ¹¹⁵	36.0 ¹¹⁸	52	58	31	11	48 23	59 74		
5	252	29.6	-3	39.1	261	27.2 ¹¹⁵	-2 24.2 ¹¹⁸	50	17 59	18 31	19 08	5 47 25	17 59 72		
6	267	29.8	-3	38.1	275	57.7 ¹¹⁵	-2 12.4 ¹¹⁸	45	18 01	18 30	19 04	5 45 29	17 59 68		
7	282	30.0		37.2	290	28.3 ¹¹⁶	-2 00.6 ¹¹⁸	40	03	30	19 01	44 31	59 65		
8	297	30.1		36.2	304	58.9 ¹¹⁶	-1 48.8 ¹¹⁸	35	04	30	18 59	43 34	59 62		
9	312	30.3		35.2	319	29.5 ¹¹⁶	37.0 ¹¹⁸	30	06	30	57	41 37	59 59		
10	327	30.4		34.2	334	00.2 ¹¹⁷	25.2 ¹¹⁸	20	08	30	56	39 41	59 55		
11	342	30.6	-3	33.2	348	30.9 ¹¹⁷	-1 13.4 ¹¹⁸	10 N	18 11	18 32	18 56	5 38 44	17 59 51		
12	357	30.8	-3	32.3	3	01.6 ¹¹⁷	-1 01.7 ¹¹⁷	0	18 13	18 34	18 58	5 36 48	17 59 48		
13	12	30.9		31.3	17	32.4 ¹¹⁸	-0 49.9 ¹¹⁸	10 S	16	37	19 01	34 52	59 44		
14	27	31.1		30.3	32	03.1 ¹¹⁷	38.1 ¹¹⁸	20	18	41	06	32 56	59 40		
15	42	31.3		29.3	46	34.0 ¹¹⁹	26.3 ¹¹⁸	30	22	46	14	30 60	59 36		
16	57	31.4		28.3	61	04.8 ¹¹⁸	14.6 ¹¹⁷	35	24	49	19	29 63	58 35		
17	72	31.6	-3	27.3	75	35.7 ¹¹⁹	-0 02.8 ¹¹⁸	40	18 26	18 53	19 25	5 28 65	17 58 32		
18	87	31.8	-3	26.4	90	06.5 ¹¹⁸	+0 08.9 ¹¹⁷	45	18 28	18 58	19 33	5 27 68	17 58 28		
19	102	31.9		25.4	104	37.5 ¹²⁰	20.6 ¹¹⁷	50	31	19 04	43	25 72	58 25		
20	117	32.1		24.4	119	08.4 ¹¹⁹	32.4 ¹¹⁸	52	33	07	48	24 74	58 23		
21	132	32.3		23.4	133	39.4 ¹²⁰	44.1 ¹¹⁷	54	35	10	19 53	23 76	58 21		
22	147	32.4		22.4	148	10.4 ¹²⁰	+0 55.7 ¹¹⁶	56	36	14	20 00	22 78	58 19		
23	162	32.6		21.4	162	41.4 ¹²⁰	+1 07.4 ¹¹⁷	58	38	18	07	21 81	58 16		
24	177	32.8	-3	20.5	177	12.4 ¹²⁰	+1 19.1 ¹¹⁷	60 S	18 40	19 23	20 15	5 20 83	17 57 15		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 12 ^h 42 ^m 6		Mag: -3.9 PMG: 11 ^h 56 ^m		Mag: +1.2 PMG: 12 ^h 42 ^m		Mag: -2.3 PMG: 17 ^h 11 ^m			Mag: +0.4 PMG: 3 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	'	'	°	'	
0	168	49.2	181	01.8	-6	47.5	169	25.3	-1 05.7	101	37.9	+21 19.4	309	14.7	-12 42.5
1	183	51.7	196	01.4		46.3	184	26.0	04.9	116	40.0	19.4	324	17.3	42.5
2	198	54.2	211	01.0		45.1	199	26.7	04.1	131	42.1	19.5	339	19.8	42.4
3	213	56.6	226	00.5		43.9	214	27.3	03.3	146	44.3	19.5	354	22.4	42.4
4	228	59.1	241	00.1		42.7	229	28.0	02.5	161	46.4	19.6	9	24.9	42.4
5	244	01.5	255	59.7	-6	41.5	244	28.7	-1 01.7	176	48.6	+21 19.6	24	27.4	-12 42.3
6	259	04.0	270	59.2	-6	40.3	259	29.4	-1 00.9	191	50.7	+21 19.7	39	30.0	-12 42.3
7	274	06.5	285	58.8		39.1	274	30.1	-1 00.1	206	52.9	19.7	54	32.5	42.3
8	289	08.9	300	58.4		37.9	289	30.8	-0 59.3	221	55.0	19.8	69	35.1	42.2
9	304	11.4	315	58.0		36.7	304	31.5	58.5	236	57.2	19.9	84	37.6	42.2
10	319	13.9	330	57.5		35.4	319	32.1	57.8	251	59.3	19.9	99	40.2	42.2
11	334	16.3	345	57.1	-6	34.2	334	32.8	-0 57.0	267	01.5	+21 20.0	114	42.7	-12 42.1
12	349	18.8	0	56.7	-6	33.0	349	33.5	-0 56.2	282	03.6	+21 20.0	129	45.3	-12 42.1
13	4	21.3	15	56.2		31.8	4	34.2	55.4	297	05.7	20.1	144	47.8	42.1
14	19	23.7	30	55.8		30.6	19	34.9	54.6	312	07.9	20.1	159	50.3	42.0
15	34	26.2	45	55.4		29.4	34	35.6	53.8	327	10.0	20.2	174	52.9	42.0
16	49	28.6	60	55.0		28.2	49	36.3	53.0	342	12.2	20.2	189	55.4	42.0
17	64	31.1	75	54.5	-6	27.0	64	37.0	-0 52.2	357	14.3	+21 20.3	204	58.0	-12 41.9
18	79	33.6	90	54.1	-6	25.8	79	37.6	-0 51.4	12	16.5	+21 20.3	220	00.5	-12 41.9
19	94	36.0	105	53.7		24.6	94	38.3	50.6	27	18.6	20.4	235	03.1	41.8
20	109	38.5	120	53.2		23.4	109	39.0	49.8	42	20.7	20.5	250	05.6	41.8
21	124	41.0	135	52.8		22.2	124	39.7	49.0	57	22.9	20.5	265	08.2	41.8
22	139	43.4	150	52.4		20.9	139	40.4	48.2	72	25.0	20.6	280	10.7	41.7
23	154	45.9	165	52.0		19.7	154	41.1	47.4	87	27.2	20.6	295	13.3	41.7
24	169	48.4	180	51.5	-6	18.5	169	41.8	-0 46.6	102	29.3	+21 20.7	310	15.8	-12 41.7
Dif	—		-4	+12		+7	+8		+21	+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 09 ^m 7			Edad: 0 ^d 2 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 PMG: 12 ^h 35 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.8	-3	20.5	177	12.4	+1 19.1	60 N	4 56	5 44	6 26	6 07	14	19 22	81
1	192	32.9		19.5	191	43.5 ¹²¹	30.7 ¹¹⁶	58	4 59	45	24	08	17	19	78
2	207	33.1		18.5	206	14.5 ¹²⁰	42.3 ¹¹⁶	56	5 03	46	23	09	19	17	75
3	222	33.3		17.5	220	45.6 ¹²¹	+1 54.0 ¹¹⁷	54	06	47	22	10	21	15	75
4	237	33.4		16.5	235	16.8 ¹²²	+2 05.5 ¹¹⁵	52	08	47	21	11	23	13	71
5	252	33.6	-3	15.5	249	47.9 ¹²¹	+2 17.1 ¹¹⁶	50	5 10	5 48	6 20	6 12	25	19 11	70
6	267	33.7	-3	14.6	264	19.1 ¹²²	+2 28.6 ¹¹⁵	45	5 15	5 49	6 18	6 14	28	19 07	66
7	282	33.9		13.6	278	50.3 ¹²²	40.2 ¹¹⁶	40	18	49	16	15	32	04	63
8	297	34.1		12.6	293	21.5 ¹²²	+2 51.7 ¹¹⁵	35	20	50	15	17	34	19 01	60
9	312	34.3		11.6	307	52.7 ¹²²	+3 03.1 ¹¹⁴	30	22	50	13	18	36	18 58	58
10	327	34.4		10.6	322	23.9 ¹²²	14.6 ¹¹⁵	20	23	49	11	20	41	54	54
11	342	34.6	-3	09.6	336	55.2 ¹²³	+3 26.0 ¹¹⁴	10 N	5 23	5 48	6 09	6 22	44	18 50	51
12	357	34.8	-3	08.6	351	26.4 ¹²²	+3 37.4 ¹¹⁴	0	5 22	5 46	6 06	6 24	47	18 47	47
13	12	34.9		07.7	5	57.7 ¹²³	+3 48.7 ¹¹³	10 S	19	43	04	26	51	43	44
14	27	35.1		06.7	20	29.0 ¹²³	+4 00.1 ¹¹⁴	20	14	39	6 01	28	54	39	41
15	42	35.3		05.7	35	00.3 ¹²³	11.4 ¹¹³	30	06	34	5 58	30	59	35	37
16	57	35.4		04.7	49	31.6 ¹²³	22.6 ¹¹²	35	5 01	31	57	32	60	33	34
17	72	35.6	-3	03.7	64	03.0 ¹²⁴	+4 33.9 ¹¹³	40	4 55	5 27	5 54	6 33	64	18 30	31
18	87	35.8	-3	02.7	78	34.3 ¹²³	+4 45.1 ¹¹²	45	4 47	5 22	5 52	6 35	67	18 26	29
19	102	35.9		01.8	93	05.7 ¹²⁴	+4 56.2 ¹¹¹	50	37	16	49	37	71	23	25
20	117	36.1	-3	00.8	107	37.1 ¹²⁴	+5 07.4 ¹¹²	52	33	14	48	38	72	21	23
21	132	36.3	-2	59.8	122	08.5 ¹²⁴	18.5 ¹¹¹	54	27	10	46	39	75	19	22
22	147	36.4		58.8	136	39.9 ¹²⁴	29.5 ¹¹⁰	56	21	07	44	40	77	17	20
23	162	36.6		57.8	151	11.3 ¹²⁴	40.5 ¹¹⁰	58	14	5 03	43	42	79	14	18
24	177	36.8	-2	56.8	165	42.7 ¹²⁴	+5 51.5 ¹¹⁰	60 S	4 06	4 58	5 40	6 43	82	18 12	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 38 ^m 7		Mag: -3.9 PMG: 11 ^h 57 ^m		Mag: +1.2 PMG: 12 ^h 41 ^m		Mag: -2.3 PMG: 17 ^h 08 ^m		Mag: +0.4 PMG: 3 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	169	48.4	180	51.5	169	41.8	102	29.3	310	15.8
1	184	50.8	195	51.1	184	42.5	117	31.4	325	18.4
2	199	53.3	210	50.7	199	43.2	132	33.6	340	20.9
3	214	55.8	225	50.3	214	43.8	147	35.7	355	23.5
4	229	58.2	240	49.8	229	44.5	162	37.9	10	26.0
5	245	00.7	255	49.4	244	45.2	177	40.0	25	28.6
6	260	03.1	270	49.0	259	45.9	192	42.1	40	31.1
7	275	05.6	285	48.6	274	46.6	207	44.3	55	33.7
8	290	08.1	300	48.1	289	47.3	222	46.4	70	36.2
9	305	10.5	315	47.7	304	48.0	237	48.5	85	38.8
10	320	13.0	330	47.3	319	48.7	252	50.7	100	41.3
11	335	15.5	345	46.9	334	49.3	267	52.8	115	43.9
12	350	17.9	0	46.5	349	50.0	282	55.0	130	46.4
13	5	20.4	15	46.0	4	50.7	297	57.1	145	49.0
14	20	22.9	30	45.6	19	51.4	312	59.2	160	51.5
15	35	25.3	45	45.2	-6	00.3	328	01.4	175	54.1
16	50	27.8	60	44.8	-5	59.1	343	03.5	190	56.6
17	65	30.2	75	44.3	-5	57.9	358	05.6	205	59.2
18	80	32.7	90	43.9	-5	56.7	13	07.8	221	01.7
19	95	35.2	105	43.5	55.5	94	28	09.9	236	04.3
20	110	37.6	120	43.1	54.2	109	43	12.0	251	06.8
21	125	40.1	135	42.7	53.0	124	58	14.2	266	09.4
22	140	42.6	150	42.2	51.8	139	73	16.3	281	11.9
23	155	45.0	165	41.8	50.6	154	88	18.5	296	14.5
24	170	47.5	180	41.4	-5	49.4	103	20.6	311	17.0
Dif	—		-4	+12	+7	+8	+21	+1	+25	0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 1 ^d 2	PHE { 4 ^h : 56 ^h /7 12 ^h : 56 ^h /5 20 ^h : 56 ^h /3	SD: 15 ^h 5				R°: 47 ^m						
	PMG: 12 ^h 09 ^m 4				PMG: 13 ^h 23 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	177	36.8	-2	56.8	165	42.7	+5 51.5	60 N	17 58	18 39	19 28	6 21 16	20 43 78		
1	192	36.9		55.8	180	14.2 ¹²⁵	+6 02.5 ¹¹⁰	58	17 59	38	24	25 18	37 76		
2	207	37.1		54.9	194	45.6 ¹²⁴	13.4 ¹⁰⁹	56	18 00	37	20	28 21	32 73		
3	222	37.3		53.9	209	17.1 ¹²⁵	24.2 ¹⁰⁸	54	00	36	17	31 23	28 7		
4	237	37.4		52.9	223	48.5 ¹²⁴	35.0 ¹⁰⁸	52	01	35	14	34 24	24 69		
5	252	37.6	-2	51.9	238	20.0 ¹²⁵	+6 45.8 ¹⁰⁸	50	18 02	18 34	19 12	6 37 26	20 21 67		
6	267	37.8	-2	50.9	252	51.5 ¹²⁵	+6 56.6 ¹⁰⁸	45	18 03	18 33	19 07	6 42 30	20 13 64		
7	282	38.0		49.9	267	22.9 ¹²⁴	+7 07.2 ¹⁰⁶	40	05	32	03	47 32	07 61		
8	297	38.1		48.9	281	54.4 ¹²⁵	17.9 ¹⁰⁷	35	06	31	19 01	51 35	20 01 59		
9	312	38.3		48.0	296	25.9 ¹²⁵	28.5 ¹⁰⁶	30	07	31	18 59	6 54 37	19 56 57		
10	327	38.5		47.0	310	57.4 ¹²⁵	39.0 ¹⁰⁵	20	09	31	57	7 01 40	48 53		
11	342	38.6	-2	46.0	325	28.9 ¹²⁵	+7 49.5 ¹⁰⁵	10 N	18 11	18 32	18 56	7 06 44	19 41 50		
12	357	38.8	-2	45.0	340	00.4 ¹²⁵	+8 00.0 ¹⁰⁵	0	18 13	18 33	18 57	7 11 47	19 34 47		
13	12	39.0		44.0	354	31.9 ¹²⁵	+8 10.4 ¹⁰⁴	10 S	15	36	19 00	17 50	27 44		
14	27	39.1		43.0	9	03.5 ¹²⁶	20.8 ¹⁰⁴	20	17	39	04	22 54	20 41		
15	42	39.3		42.0	23	35.0 ¹²⁵	31.1 ¹⁰³	30	19	43	11	29 57	12 37		
16	57	39.5		41.1	38	06.5 ¹²⁵	41.3 ¹⁰²	35	21	46	16	32 60	07 35		
17	72	39.7	-2	40.1	52	38.0 ¹²⁵	+8 51.5 ¹⁰²	40	18 23	18 50	19 22	7 37 62	19 01 34		
18	87	39.8	-2	39.1	67	09.6 ¹²⁶	+9 01.7 ¹⁰²	45	18 25	18 54	19 29	7 42 65	18 55 31		
19	102	40.0		38.1	81	41.1 ¹²⁵	11.8 ¹⁰¹	50	27	19 00	38	48 68	48 27		
20	117	40.2		37.1	96	12.6 ¹²⁵	21.8 ¹⁰⁰	52	28	02	43	50 71	44 26		
21	132	40.3		36.1	110	44.1 ¹²⁵	31.8 ¹⁰⁰	54	30	05	48	54 72	41 23		
22	147	40.5		35.1	125	15.7 ¹²⁶	41.7 ⁹⁹	56	31	08	19 54	7 57 74	37 21		
23	162	40.7		34.2	139	47.2 ¹²⁵	+9 51.6 ⁹⁹	58	33	12	20 00	8 01 76	32 20		
24	177	40.9	-2	33.2	154	18.7 ¹²⁵	+10 01.4 ⁹⁸	60 S	18 34	19 16	20 08	8 05 79	18 27 17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 34 ^m 8		Mag: -3.9 PMG: 11 ^h 58 ^m			Mag: +1.2 PMG: 12 ^h 40 ^m			Mag: -2.3 PMG: 17 ^h 04 ^m			Mag: +0.4 PMG: 3 ^h 14 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	
0	170	47.5	180	41.4	-5 49.4	169	58.3	-0 27.6	103	20.6	+21 22.0	311	17.0	-12 40.8	
1	185	50.0	195	41.0	48.2	184	59.0	26.8	118	22.7	22.0	326	19.6	40.8	
2	200	52.4	210	40.6	46.9	199	59.7	26.0	133	24.9	22.1	341	22.1	40.7	
3	215	54.9	225	40.1	45.7	215	00.4	25.2	148	27.0	22.2	356	24.7	40.7	
4	230	57.4	240	39.7	44.5	230	01.1	24.4	163	29.1	22.2	11	27.2	40.7	
5	245	59.8	255	39.3	-5 43.3	245	01.8	-0 23.6	178	31.2	+21 22.3	26	29.8	-12 40.6	
6	261	02.3	270	38.9	-5 42.1	260	02.4	-0 22.8	193	33.4	+21 22.3	41	32.3	-12 40.6	
7	276	04.7	285	38.5	40.8	275	03.1	22.0	208	35.5	22.4	56	34.9	40.6	
8	291	07.2	300	38.1	39.6	290	03.8	21.3	223	37.6	22.4	71	37.4	40.5	
9	306	09.7	315	37.6	38.4	305	04.5	20.5	238	39.8	22.5	86	40.0	40.5	
10	321	12.1	330	37.2	37.2	320	05.2	19.7	253	41.9	22.5	101	42.5	40.5	
11	336	14.6	345	36.8	-5 36.0	335	05.9	-0 18.9	268	44.0	+21 22.6	116	45.1	-12 40.4	
12	351	17.1	0	36.4	-5 34.7	350	06.6	-0 18.1	283	46.2	+21 22.7	131	47.6	-12 40.4	
13	6	19.5	15	36.0	33.5	5	07.3	17.3	298	48.3	22.7	146	50.2	40.3	
14	21	22.0	30	35.6	32.3	20	08.0	16.5	313	50.4	22.8	161	52.7	40.3	
15	36	24.5	45	35.1	31.1	35	08.7	15.7	328	52.6	22.8	176	55.3	40.3	
16	51	26.9	60	34.7	29.9	50	09.3	14.9	343	54.7	22.9	191	57.9	40.2	
17	66	29.4	75	34.3	-5 28.6	65	10.0	-0 14.1	358	56.8	+21 22.9	207	00.4	-12 40.2	
18	81	31.9	90	33.9	-5 27.4	80	10.7	-0 13.3	13	58.9	+21 23.0	222	03.0	-12 40.2	
19	96	34.3	105	33.5	26.2	95	11.4	12.5	29	01.1	23.0	237	05.5	40.1	
20	111	36.8	120	33.1	25.0	110	12.1	11.7	44	03.2	23.1	252	08.1	40.1	
21	126	39.2	135	32.6	23.7	125	12.8	10.9	59	05.3	23.2	267	10.6	40.0	
22	141	41.7	150	32.2	22.5	140	13.5	10.2	74	07.5	23.2	282	13.2	40.0	
23	156	44.2	165	31.8	21.3	155	14.2	09.4	89	09.6	23.3	297	15.7	40.0	
24	171	46.6	180	31.4	-5 20.1	170	14.9	-0 08.6	104	11.7	+21 23.3	312	18.3	-12 39.9	
Dif	—		-4	+12		+7	+8		+21	+1		+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 09 ^m 1			Edad: 2 ^d 2 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	m
0	177	40.9	-2 33.2	154	18.7	+10 01.4	60 N	4 49	5 38	6 20		6 37	19	22 01	74
1	192	41.0		168	50.3 ¹²⁶	11.2 ⁹⁸	58		54	40	19	43	21	21 53	71
2	207	41.2		183	21.8 ¹²⁵	20.9 ⁹⁷	56	4 57	41	18		49	23	45	70
3	222	41.4		197	53.3 ¹²⁵	30.5 ⁹⁶	54	5 01	42	17		54	25	39	68
4	237	41.5		212	24.9 ¹²⁶	40.1 ⁹⁶	52		04	43	16	6 58	27	33	67
5	252	41.7	-2 28.2	226	56.4 ¹²⁵	+10 49.6 ⁹⁵	50	5 06	5 44	6 16		7 03	28	21 28	65
6	267	41.9	-2 27.2	241	27.9 ¹²⁵	+10 59.1 ⁹⁵	45	5 11	5 45	6 14		7 12	31	21 17	62
7	282	42.1		255	59.4 ¹²⁵	+11 08.5 ⁹⁴	40		15	46	13	19	34	08	59
8	297	42.2		270	31.0 ¹²⁶	17.8 ⁹³	35		17	47	12	26	36	21 00	57
9	312	42.4		285	02.5 ¹²⁵	27.1 ⁹³	30		19	47	11	31	39	20 53	55
10	327	42.6		299	34.0 ¹²⁵	36.3 ⁹²	20		22	47	09	41	42	41	53
11	342	42.8	-2 22.3	314	05.5 ¹²⁵	+11 45.5 ⁹²	10 N	5 22	5 47	6 08		7 50	44	20 31	49
12	357	42.9	-2 21.3	328	37.0 ¹²⁵	+11 54.5 ⁹⁰	0	5 21	5 45	6 06		7 58	47	20 21	47
13	12	43.1		343	08.5 ¹²⁵	+12 03.6 ⁹¹	10 S		19	43	04	8 07	50	11	45
14	27	43.3		357	40.0 ¹²⁵	12.5 ⁸⁹	20		14	40	02	16	52	20 01	42
15	42	43.4		12	11.5 ¹²⁵	21.4 ⁸⁹	30		08	36	6 00	26	56	19 49	39
16	57	43.6		26	43.0 ¹²⁵	30.2 ⁸⁸	35	5 03	33	5 58		32	58	42	38
17	72	43.8	-2 16.4	41	14.5 ¹²⁵	+12 39.0 ⁸⁸	40	4 57	5 29	5 57		8 39	60	19 35	35
18	87	44.0	-2 15.4	55	45.9 ¹²⁴	+12 47.6 ⁸⁶	45	4 50	5 25	5 55		8 47	63	19 26	33
19	102	44.1		70	17.4 ¹²⁵	+12 56.2 ⁸⁶	50		41	20	52	8 56	66	15	30
20	117	44.3		84	48.9 ¹²⁵	+13 04.8 ⁸⁶	52		37	17	51	9 01	67	10	28
21	132	44.5		99	20.3 ¹²⁴	13.3 ⁸⁵	54		31	14	50	06	69	19 04	27
22	147	44.7		113	51.8 ¹²⁵	21.7 ⁸⁴	56		26	11	49	11	72	18 58	25
23	162	44.8		128	23.2 ¹²⁴	30.0 ⁸³	58		19	07	47	17	74	52	23
24	177	45.0	-2 09.5	142	54.7 ¹²⁵	+13 38.2 ⁸²	60 S	4 12	5 03	5 45		9 24	77	18 44	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 30 ^m 8		Mag: -3.9 PMG: 11 ^h 58 ^m			Mag: +1.2 PMG: 12 ^h 38 ^m			Mag: -2.3 PMG: 17 ^h 01 ^m			Mag: +0.3 PMG: 3 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	171	46.6	180	31.4	-5 20.1	170	14.9	-0 08.6	104	11.7	+21 23.3	312	18.3	-12 39.9	
1	186	49.1	195	31.0	18.9	185	15.6	07.8	119	13.8	23.4	327	20.8	39.9	
2	201	51.6	210	30.6	17.6	200	16.3	07.0	134	16.0	23.4	342	23.4	39.9	
3	216	54.0	225	30.2	16.4	215	16.9	06.2	149	18.1	23.5	357	26.0	39.8	
4	231	56.5	240	29.8	15.2	230	17.6	05.4	164	20.2	23.5	12	28.5	39.8	
5	246	59.0	255	29.3	-5 14.0	245	18.3	-0 04.6	179	22.3	+21 23.6	27	31.1	-12 39.7	
6	262	01.4	270	28.9	-5 12.7	260	19.0	-0 03.8	194	24.5	+21 23.7	42	33.6	-12 39.7	
7	277	03.9	285	28.5	11.5	275	19.7	03.0	209	26.6	23.7	57	36.2	39.7	
8	292	06.3	300	28.1	10.3	290	20.4	02.2	224	28.7	23.8	72	38.7	39.6	
9	307	08.8	315	27.7	09.0	305	21.1	01.4	239	30.8	23.8	87	41.3	39.6	
10	322	11.3	330	27.3	07.8	320	21.8	-0 00.6	254	33.0	23.9	102	43.9	39.6	
11	337	13.7	345	26.9	-5 06.6	335	22.5	+0 00.1	269	35.1	+21 23.9	117	46.4	-12 39.5	
12	352	16.2	0	26.5	-5 05.4	350	23.2	+0 00.9	284	37.2	+21 24.0	132	49.0	-12 39.5	
13	7	18.7	15	26.0	04.1	5	23.9	01.7	299	39.3	24.1	147	51.5	39.4	
14	22	21.1	30	25.6	02.9	20	24.5	02.5	314	41.5	24.1	162	54.1	39.4	
15	37	23.6	45	25.2	01.7	35	25.2	03.3	329	43.6	24.2	177	56.6	39.4	
16	52	26.1	60	24.8	-5 00.5	50	25.9	04.1	344	45.7	24.2	192	59.2	39.3	
17	67	28.5	75	24.4	-4 59.2	65	26.6	+0 04.9	359	47.8	+21 24.3	208	01.8	-12 39.3	
18	82	31.0	90	24.0	-4 58.0	80	27.3	+0 05.7	14	50.0	+21 24.3	223	04.3	-12 39.3	
19	97	33.5	105	23.6	56.8	95	28.0	06.5	29	52.1	24.4	238	06.9	39.2	
20	112	35.9	120	23.2	55.5	110	28.7	07.3	44	54.2	24.4	253	09.4	39.2	
21	127	38.4	135	22.8	54.3	125	29.4	08.1	59	56.3	24.5	268	12.0	39.1	
22	142	40.8	150	22.4	53.1	140	30.1	08.9	74	58.4	24.6	283	14.5	39.1	
23	157	43.3	165	21.9	51.9	155	30.8	09.6	90	00.6	24.6	298	17.1	39.1	
24	172	45.8	180	21.5	-4 50.6	170	31.5	+0 10.4	105	02.7	+21 24.7	313	19.7	-12 39.0	
Dif	—		-4 +12		+7 +8		+21		+1		+26		0		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 9		Edad: 3 ^d 2 PHE { 4 ^h : 55 ^h /5 12 ^h : 55 ^h /3 20 ^h : 55 ^h /1 PMG: 14 ^h 57 ^m R°: 47 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	177	45.0	-2	09.5	142	54.7	+13 38.2	60 N	18 03	18 44	19 33	6 56 23	23 15 69					
1	192	45.2		08.5	157	26.1 ¹²⁴	46.4 ⁸²	58	03	42	29	7 04 26	23 04 67					
2	207	45.4		07.5	171	57.5 ¹²⁴	+13 54.5 ⁸¹	56	04	41	24	12 28	22 55 65					
3	222	45.5		06.5	186	28.9 ¹²⁴	+14 02.6 ⁸¹	54	04	39	21	19 29	47 63					
4	237	45.7		05.5	201	00.3 ¹²⁴	10.5 ⁷⁹	52	05	38	18	25 31	40 62					
5	252	45.9	-2	04.5	215	31.7 ¹²⁴	+14 18.4 ⁷⁹	50	18 05	18 37	19 15	7 31 32	22 33 61					
6	267	46.1	-2	03.6	230	03.1 ¹²⁴	+14 26.3 ⁷⁹	45	18 06	18 35	19 10	7 43 35	22 19 58					
7	282	46.2		02.6	244	34.5 ¹²⁴	34.0 ⁷⁷	40	07	34	05	7 53 37	22 07 57					
8	297	46.4		01.6	259	05.9 ¹²⁴	41.7 ⁷⁷	35	08	33	02	8 02 39	21 57 55					
9	312	46.6	-2	00.6	273	37.3 ¹²⁴	49.3 ⁷⁶	30	08	32	19 00	10 40	48 54					
10	327	46.8	-1	59.6	288	08.6 ¹²³	+14 56.8 ⁷⁵	20	10	32	18 57	23 43	34 51					
11	342	46.9	-1	58.6	302	40.0 ¹²⁴	+15 04.2 ⁷⁴	10 N	18 11	18 32	18 56	8 34 46	21 20 50					
12	357	47.1	-1	57.6	317	11.3 ¹²³	+15 11.6 ⁷⁴	0	18 12	18 33	18 57	8 45 48	21 08 48					
13	12	47.3		56.6	331	42.7 ¹²⁴	18.8 ⁷²	10 S	13	34	18 59	8 57 49	20 56 46					
14	27	47.5		55.7	346	14.0 ¹²³	26.0 ⁷²	20	15	37	19 03	9 08 52	43 44					
15	42	47.6		54.7	0	45.3 ¹²³	33.2 ⁷²	30	17	41	09	22 55	28 42					
16	57	47.8		53.7	15	16.6 ¹²³	40.2 ⁷⁰	35	18	43	13	30 56	20 40					
17	72	48.0	-1	52.7	29	47.9 ¹²³	+15 47.2 ⁷⁰	40	18 19	18 46	19 18	9 39 58	20 10 39					
18	87	48.2	-1	51.7	44	19.2 ¹²³	+15 54.1 ⁶⁹	45	18 21	18 50	19 25	9 50 60	19 59 36					
19	102	48.3		50.7	58	50.5 ¹²³	+16 00.9 ⁶⁸	50	23	55	34	10 02 63	45 34					
20	117	48.5		49.7	73	21.8 ¹²³	07.6 ⁶⁷	52	24	18 58	38	08 65	38 33					
21	132	48.7		48.7	87	53.1 ¹²³	14.2 ⁶⁶	54	25	19 00	43	15 66	31 32					
22	147	48.9		47.8	102	24.3 ¹²²	20.8 ⁶⁶	56	26	03	48	23 67	23 31					
23	162	49.1		46.8	116	55.6 ¹²³	27.3 ⁶⁵	58	27	06	19 54	31 69	15 28					
24	177	49.2	-1	45.8	131	26.8 ¹²²	+16 33.7 ⁶⁴	60 S	18 28	19 10	20 01	10 41 71	19 04 26					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 26 ^m 9		Mag: -3.9 PMG: 11 ^h 59 ^m			Mag: +1.2 PMG: 12 ^h 37 ^m			Mag: -2.3 PMG: 16 ^h 57 ^m			Mag: +0.3 PMG: 3 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	172	45.8	180	21.5	-4	50.6	170	31.5	+0	10.4	105	02.7	+21	24.7	313	19.7	-12	39.0
1	187	48.2	195	21.1		49.4	185	32.2		11.2	120	04.8		24.7	328	22.2		39.0
2	202	50.7	210	20.7		48.2	200	32.8		12.0	135	06.9		24.8	343	24.8		39.0
3	217	53.2	225	20.3		46.9	215	33.5		12.8	150	09.0		24.8	358	27.3		38.9
4	232	55.6	240	19.9		45.7	230	34.2		13.6	165	11.2		24.9	13	29.9		38.9
5	247	58.1	255	19.5	-4	44.5	245	34.9	+0	14.4	180	13.3	+21	25.0	28	32.5	-12	38.8
6	263	00.6	270	19.1	-4	43.2	260	35.6	+0	15.2	195	15.4	+21	25.0	43	35.0	-12	38.8
7	278	03.0	285	18.7		42.0	275	36.3		16.0	210	17.5		25.1	58	37.6		38.8
8	293	05.5	300	18.3		40.8	290	37.0		16.8	225	19.6		25.1	73	40.1		38.7
9	308	07.9	315	17.9		39.6	305	37.7		17.6	240	21.8		25.2	88	42.7		38.7
10	323	10.4	330	17.5		38.3	320	38.4		18.4	255	23.9		25.2	103	45.3		38.6
11	338	12.9	345	17.1	-4	37.1	335	39.1	+0	19.1	270	26.0	+21	25.3	118	47.8	-12	38.6
12	353	15.3	0	16.7	-4	35.9	350	39.8	+0	19.9	285	28.1	+21	25.4	133	50.4	-12	38.6
13	8	17.8	15	16.3		34.6	5	40.5		20.7	300	30.2		25.4	148	52.9		38.5
14	23	20.3	30	15.8		33.4	20	41.2		21.5	315	32.3		25.5	163	55.5		38.5
15	38	22.7	45	15.4		32.2	35	41.9		22.3	330	34.5		25.5	178	58.1		38.4
16	53	25.2	60	15.0		30.9	50	42.5		23.1	345	36.6		25.6	194	00.6		38.4
17	68	27.7	75	14.6	-4	29.7	65	43.2	+0	23.9	0	38.7	+21	25.6	209	03.2	-12	38.4
18	83	30.1	90	14.2	-4	28.5	80	43.9	+0	24.7	15	40.8	+21	25.7	224	05.7	-12	38.3
19	98	32.6	105	13.8		27.2	95	44.6		25.5	30	42.9		25.8	239	08.3		38.3
20	113	35.1	120	13.4		26.0	110	45.3		26.3	45	45.0		25.8	254	10.9		38.3
21	128	37.5	135	13.0		24.8	125	46.0		27.1	60	47.2		25.9	269	13.4		38.2
22	143	40.0	150	12.6		23.5	140	46.7		27.8	75	49.3		25.9	284	16.0		38.2
23	158	42.4	165	12.2		22.3	155	47.4		28.6	90	51.4		26.0	299	18.6		38.1
24	173	44.9	180	11.8	-4	21.1	170	48.1	+0	29.4	105	53.5	+21	26.0	314	21.1	-12	38.1
Dif	—		-4		+12		+7		+8		+21		+1		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 4 ^d 2	PHE {	4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7												
	PMG: 12 ^h 08 ^m 6							PMG: 15 ^h 44 ^m			R°: 48 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	177	49.2	-1	45.8	131	26.8	+16	33.7	60 N	4	43	5	32	6	13	7	19	
1	192	49.4		44.8	145	58.0 ¹²²		40.0 ⁶³	58	48	34	13		30	31	***	***	
2	207	49.6		43.8	160	29.3 ¹²³		46.2 ⁶²	56	52	36	13		40	33	***	***	
3	222	49.8		42.8	175	00.5 ¹²²		52.3 ⁶¹	54	56	37	12		48	35	23	50	
4	237	49.9		41.8	189	31.7 ¹²²	+16	58.4 ⁶¹	52	4	59	38	12	7	56	35	42	56
5	252	50.1	-1	40.8	204	02.9 ¹²²	+17	04.4 ⁶⁰	50	5	02	5	39	6	11	8	03	36
6	267	50.3	-1	39.9	218	34.1 ¹²²	+17	10.3 ⁵⁹	45	5	07	5	41	6	11	8	18	38
7	282	50.5		38.9	233	05.2 ¹²¹		16.1 ⁵⁸	40	11	43	10		30	40	23	04	53
8	297	50.6		37.9	247	36.4 ¹²²		21.8 ⁵⁷	35	15	44	09		41	41	22	52	53
9	312	50.8		36.9	262	07.6 ¹²²		27.4 ⁵⁶	30	17	45	09		8	50	43	42	52
10	327	51.0		35.9	276	38.7 ¹²¹		33.0 ⁵⁶	20	20	46	08		9	06	45	25	50
11	342	51.2	-1	34.9	291	09.8 ¹²¹	+17	38.4 ⁵⁴	10 N	5	21	5	45	6	06	9	20	46
12	357	51.4	-1	33.9	305	41.0 ¹²²	+17	43.8 ⁵³	0	5	21	5	45	6	05	9	33	48
13	12	51.5		32.9	320	12.1 ¹²¹		49.1 ⁵²	10 S	19	43	04		9	46	50	42	47
14	27	51.7		31.9	334	43.2 ¹²¹		54.3 ⁵²	20	15	41	03		10	00	51	27	46
15	42	51.9		31.0	349	14.3 ¹²¹	+17	59.4 ⁵¹	30	09	37	01		17	52	10	44	
16	57	52.1		30.0	3	45.4 ¹²¹	+18	04.5 ⁵¹	35	05	35	00		26	54	21	00	43
17	72	52.2	-1	29.0	18	16.5 ¹²¹	+18	09.4 ⁴⁹	40	5	00	5	32	5	59	10	37	55
18	87	52.4	-1	28.0	32	47.6 ¹²¹	+18	14.3 ⁴⁹	45	4	53	5	28	5	57	10	50	56
19	102	52.6		27.0	47	18.7 ¹²¹		19.0 ⁴⁷	50	45	23	56		11	05	59	19	39
20	117	52.8		26.0	61	49.7 ¹²⁰		23.7 ⁴⁷	52	40	21	55		13	59	11	39	
21	132	53.0		25.0	76	20.8 ¹²¹		28.3 ⁴⁶	54	36	18	54		21	60	20	03	38
22	147	53.1		24.0	90	51.8 ¹²⁰		32.8 ⁴⁵	56	30	15	53		30	62	19	54	36
23	162	53.3		23.1	105	22.9 ¹²¹		37.2 ⁴⁴	58	24	12	52		40	64	43	35	
24	177	53.5	-1	22.1	119	53.9 ¹²⁰	+18	41.5 ⁴³	60 S	4	17	5	08	5	50	11	52	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 23 ^m 0		Mag: -3.9 PMG: 12 ^h 00 ^m		Mag: +1.2 PMG: 12 ^h 36 ^m		Mag: -2.2 PMG: 16 ^h 54 ^m		Mag: +0.3 PMG: 3 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	173	44.9	180	11.8	-4	21.1	170	48.1	+0	29.4	105	53.5	+21	26.0	314	21.1	-12	38.1
1	188	47.4	195	11.4		19.8	185	48.8		30.2	120	55.6		26.1	329	23.7		38.1
2	203	49.8	210	11.0		18.6	200	49.5		31.0	135	57.7		26.2	344	26.2		38.0
3	218	52.3	225	10.6		17.3	215	50.2		31.8	150	59.8		26.2	359	28.8		38.0
4	233	54.8	240	10.2		16.1	230	50.9		32.6	166	02.0		26.3	14	31.4		37.9
5	248	57.2	255	09.8	-4	14.9	245	51.6	+0	33.4	181	04.1	+21	26.3	29	33.9	-12	37.9
6	263	59.7	270	09.4	-4	13.6	260	52.3	+0	34.2	196	06.2	+21	26.4	44	36.5	-12	37.9
7	279	02.2	285	09.0		12.4	275	52.9		35.0	211	08.3		26.4	59	39.1		37.8
8	294	04.6	300	08.6		11.2	290	53.6		35.8	226	10.4		26.5	74	41.6		37.8
9	309	07.1	315	08.2		09.9	305	54.3		36.5	241	12.5		26.6	89	44.2		37.7
10	324	09.6	330	07.8		08.7	320	55.0		37.3	256	14.6		26.6	104	46.7		37.7
11	339	12.0	345	07.4	-4	07.5	335	55.7	+0	38.1	271	16.7	+21	26.7	119	49.3	-12	37.7
12	354	14.5	0	07.0	-4	06.2	350	56.4	+0	38.9	286	18.9	+21	26.7	134	51.9	-12	37.6
13	9	16.9	15	06.6		05.0	5	57.1		39.7	301	21.0		26.8	149	54.4		37.6
14	24	19.4	30	06.2		03.7	20	57.8		40.5	316	23.1		26.8	164	57.0		37.5
15	39	21.9	45	05.8		02.5	35	58.5		41.3	331	25.2		26.9	179	59.6		37.5
16	54	24.3	60	05.4	-4	01.3	50	59.2		42.1	346	27.3		27.0	195	02.1		37.5
17	69	26.8	75	05.0	-4	00.0	65	59.9	+0	42.9	1	29.4	+21	27.0	210	04.7	-12	37.4
18	84	29.3	90	04.6	-3	58.8	81	00.6	+0	43.7	16	31.5	+21	27.1	225	07.3	-12	37.4
19	99	31.7	105	04.2		57.6	96	01.3		44.5	31	33.6		27.1	240	09.8		37.3
20	114	34.2	120	03.8		56.3	111	02.0		45.2	46	35.7		27.2	255	12.4		37.3
21	129	36.7	135	03.4		55.1	126	02.7		46.0	61	37.8		27.2	270	15.0		37.3
22	144	39.1	150	03.0		53.8	141	03.4		46.8	76	40.0		27.3	285	17.5		37.2
23	159	41.6	165	02.6		52.6	156	04.0		47.6	91	42.1		27.4	300	20.1		37.2
24	174	44.0	180	02.2	-3	51.4	171	04.7	+0	48.4	106	44.2	+21	27.4	315	22.7	-12	37.1
Dif	—		-4	+12			+7	+8			+21	+1			+26			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 5 ^d 2	PHE { 4 ^h : 54 ^h /6 12 ^h : 54 ^h /5 20 ^h : 54 ^h /4													
	PMG: 12 ^h 08 ^m 3					SD: 14 ^h 9			PMG: 16 ^h 32 ^m		R°: 49 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m					
0	177	53.5	-1	22.1	119	53.9	+18 41.5	60 N	18 07	18 49	19 39	7 48 38	0 24 61					
1	192	53.7		21.1	134	24.9 ¹²⁰	45.7 42	58	08	47	33	8 01 39	11 60					
2	207	53.9		20.1	148	55.9 ¹²⁰	49.9 40	56	08	45	29	13 40	0 00 59					
3	222	54.0		19.1	163	27.0 ¹²¹	53.9 40	54	08	43	25	23 40	** ** *					
4	237	54.2		18.1	177	58.0 ¹²⁰	+18 57.9 40	52	08	42	21	31 42	** ** *					
5	252	54.4	-1	17.1	192	29.0 ¹²⁰	+19 01.7 38	50	18 08	18 41	19 18	8 39 43	** ** *					
6	267	54.6	-1	16.1	207	00.0 ¹²⁰	+19 05.5 37	45	18 09	18 38	19 12	8 56 44	** ** *					
7	282	54.8		15.1	221	30.9 ¹¹⁹	09.2 36	40	09	36	08	9 10 45	23 57 50					
8	297	54.9		14.2	236	01.9 ¹²⁰	12.8 36	35	09	35	04	22 45	45 49					
9	312	55.1		13.2	250	32.9 ¹²⁰	16.3 35	30	10	33	19 01	33 45	34 49					
10	327	55.3		12.2	265	03.9 ¹²⁰	19.7 34	20	10	32	18 58	9 51 46	23 15 49					
11	342	55.5	-1	11.2	279	34.8 ¹¹⁹	+19 23.0 33	10 N	18 11	18 32	18 56	10 06 47	22 59 49					
12	357	55.7	-1	10.2	294	05.8 ¹²⁰	+19 26.2 32	0	18 12	18 32	18 56	10 21 48	22 44 48					
13	12	55.8		09.2	308	36.7 ¹¹⁹	29.3 31	10 S	12	33	18 58	36 48	29 48					
14	27	56.0		08.2	323	07.7 ¹²⁰	32.4 31	20	13	35	19 01	10 51 50	22 13 47					
15	42	56.2		07.2	337	38.6 ¹¹⁹	35.3 29	30	15	38	06	11 09 51	21 54 47					
16	57	56.4		06.2	352	09.5 ¹¹⁹	38.2 29	35	15	41	10	20 51	43 47					
17	72	56.6	-1	05.3	6	40.5 ¹²⁰	+19 40.9 27	40	18 16	18 43	19 15	11 32 52	21 31 46					
18	87	56.7	-1	04.3	21	11.4 ¹¹⁹	+19 43.6 27	45	18 17	18 47	19 21	11 46 53	21 16 46					
19	102	56.9		03.3	35	42.3 ¹¹⁹	46.2 26	50	18	51	29	12 04 53	20 58 46					
20	117	57.1		02.3	50	13.2 ¹¹⁹	48.6 24	52	19	53	33	12 54	50 45					
21	132	57.3		01.3	64	44.2 ¹²⁰	51.0 24	54	20	55	37	21 55	41 44					
22	147	57.5	-1	00.3	79	15.1 ¹¹⁹	53.3 23	56	20	18 58	42	32 55	30 44					
23	162	57.6	-0	59.3	93	46.0 ¹¹⁹	55.5 22	58	21	19 01	48	44 55	18 43					
24	177	57.8	-0	58.3	108	16.9 ¹¹⁹	+19 57.6 21	60 S	18 22	19 04	19 54	12 58 56	20 04 42					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 19 ^m 0		Mag: -3.9 PMG: 12 ^h 00 ^m			Mag: +1.2 PMG: 12 ^h 35 ^m			Mag: -2.2 PMG: 16 ^h 51 ^m			Mag: +0.3 PMG: 2 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	174	44.0	180	02.2	-3	51.4	171	04.7	+0	48.4	106	44.2	+21	27.4	315	22.7	-12	37.1
1	189	46.5	195	01.8		50.1	186	05.4		49.2	121	46.3		27.5	330	25.2		37.1
2	204	49.0	210	01.4		48.9	201	06.1		50.0	136	48.4		27.5	345	27.8		37.1
3	219	51.4	225	01.0		47.6	216	06.8		50.8	151	50.5		27.6	0	30.4		37.0
4	234	53.9	240	00.6		46.4	231	07.5		51.6	166	52.6		27.6	15	32.9		37.0
5	249	56.4	255	00.2	-3	45.2	246	08.2	+0	52.3	181	54.7	+21	27.7	30	35.5	-12	36.9
6	264	58.8	269	59.8	-3	43.9	261	08.9	+0	53.1	196	56.8	+21	27.8	45	38.1	-12	36.9
7	280	01.3	284	59.4		42.7	276	09.6		53.9	211	58.9		27.8	60	40.6		36.9
8	295	03.8	299	59.0		41.4	291	10.3		54.7	227	01.0		27.9	75	43.2		36.8
9	310	06.2	314	58.6		40.2	306	11.0		55.5	242	03.1		27.9	90	45.8		36.8
10	325	08.7	329	58.2		39.0	321	11.7		56.3	257	05.2		28.0	105	48.3		36.7
11	340	11.2	344	57.8	-3	37.7	336	12.4	+0	57.1	272	07.3	+21	28.0	120	50.9	-12	36.7
12	355	13.6	359	57.4	-3	36.5	351	13.1	+0	57.9	287	09.5	+21	28.1	135	53.5	-12	36.7
13	10	16.1	14	57.0		35.2	6	13.8		58.7	302	11.6		28.2	150	56.0		36.6
14	25	18.5	29	56.6		34.0	21	14.5	+0	59.5	317	13.7		28.2	165	58.6		36.6
15	40	21.0	44	56.2		32.7	36	15.2	+1	00.2	332	15.8		28.3	181	01.2		36.5
16	55	23.5	59	55.8		31.5	51	15.9		01.0	347	17.9		28.3	196	03.7		36.5
17	70	25.9	74	55.4	-3	30.3	66	16.6	+1	01.8	2	20.0	+21	28.4	211	06.3	-12	36.4
18	85	28.4	89	55.0	-3	29.0	81	17.2	+1	02.6	17	22.1	+21	28.5	226	08.9	-12	36.4
19	100	30.9	104	54.6		27.8	96	17.9		03.4	32	24.2		28.5	241	11.4		36.4
20	115	33.3	119	54.2		26.5	111	18.6		04.2	47	26.3		28.6	256	14.0		36.3
21	130	35.8	134	53.8		25.3	126	19.3		05.0	62	28.4		28.6	271	16.6		36.3
22	145	38.3	149	53.4		24.0	141	20.0		05.8	77	30.5		28.7	286	19.1		36.2
23	160	40.7	164	53.1		22.8	156	20.7		06.6	92	32.6		28.7	301	21.7		36.2
24	175	43.2	179	52.7	-3	21.6	171	21.4	+1	07.3	107	34.7	+21	28.8	316	24.3	-12	36.2
Dif	—		-4		+12		+7		+8		+21		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 6 ^d 2	PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /3 20 ^h : 54 ^h /2	PMG: 17 ^h 21 ^m R ^o : 48 ^m		Náutico Civil			Hora R°		Hora R°		
	PMG: 12 ^h 08 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	57.8	-0	58.3	108	16.9	+19 57.6	60 N	4	37	5	26	6	07	8 26 48 1 25 51
1	192	58.0		57.4	122	47.8 ¹¹⁹	+19 59.6	20 58	42	28		07		40 48	1 11 51
2	207	58.2		56.4	137	18.7 ¹¹⁹	+20 01.6	20 56	46	30		07		8 53 48	0 59 50
3	222	58.4		55.4	151	49.6 ¹¹⁹	03.4	18 54	50	32		07		9 03 48	48 50
4	237	58.5		54.4	166	20.5 ¹¹⁹	05.1	17 52	54	34		07		13 48	38 51
5	252	58.7	-0	53.4	180	51.4 ¹¹⁹	+20 06.7	16 50	4	57	5	35	6	07	9 22 48 0 30 50
6	267	58.9	-0	52.4	195	22.3 ¹¹⁹	+20 08.3	16 45	5	03	5	38	6	07	9 40 48 0 12 50
7	282	59.1		51.4	209	53.2 ¹¹⁹	09.7	14 40	08	40		07		9 55 48	** ** *
8	297	59.3		50.4	224	24.1 ¹¹⁹	11.1	14 35	12	41		06		10 07 48	** ** *
9	312	59.5		49.4	238	54.9 ¹¹⁸	12.3	12 30	15	42		06		18 48	** ** *
10	327	59.6		48.5	253	25.8 ¹¹⁹	13.5	12 20	18	44		06		37 48	** ** *
11	342	59.8	-0	47.5	267	56.7 ¹¹⁹	+20 14.6	11 10 N	5	20	5	44	6	05	10 53 49 23 48 47
12	358	00.0	-0	46.5	282	27.6 ¹¹⁹	+20 15.6	10 0	5	20	5	44	6	05	11 09 48 23 32 48
13	13	00.2		45.5	296	58.5 ¹¹⁹	16.4	8 10 S	19	43		04		24 48	17 48
14	28	00.4		44.5	311	29.4 ¹¹⁹	17.2	8 20	16	41		03		11 41 48	23 00 49
15	43	00.5		43.5	326	00.3 ¹¹⁹	17.9	7 30	10	38		02		12 00 48	22 41 49
16	58	00.7		42.5	340	31.2 ¹¹⁹	18.5	6 35	07	36		02		11 48	30 50
17	73	00.9	-0	41.5	355	02.1 ¹¹⁹	+20 19.0	5 40	5	02	5	34	6	01	12 24 47 22 17 50
18	88	01.1	-0	40.5	9	33.0 ¹¹⁹	+20 19.4	4 45	4	56	5	31	6	00	12 39 47 22 02 51
19	103	01.3		39.6	24	03.9 ¹¹⁹	19.7	3 50	48	26		5	59	12 57 47	21 44 50
20	118	01.5		38.6	38	34.8 ¹¹⁹	20.0	3 52	44	24		58		13 06 47	35 51
21	133	01.6		37.6	53	05.7 ¹¹⁹	20.1	1 54	40	22		58		16 47	25 51
22	148	01.8		36.6	67	36.6 ¹¹⁹	20.1	0 56	35	20		57		27 46	14 52
23	163	02.0		35.6	82	07.5 ¹¹⁹	20.0	1 58	29	17		56		39 47	21 01 52
24	178	02.2	-0	34.6	96	38.4 ¹¹⁹	+20 19.9	1 60 S	4	23	5	14	5	55	13 54 46 20 46 53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 12 ^h 15 ^m 1		Mag: -3.9 PMG: 12 ^h 01 ^m		Mag: +1.2 PMG: 12 ^h 34 ^m		Mag: -2.2 PMG: 16 ^h 47 ^m		Mag: +0.3 PMG: 2 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	175	43.2	179	52.7	-3	21.6	171	21.4	+1	07.3	107	34.7	+21	28.8	316	24.3	-12	36.2
1	190	45.7	194	52.3		20.3	186	22.1		08.1	122	36.8		28.9	331	26.9		36.1
2	205	48.1	209	51.9		19.1	201	22.8		08.9	137	38.9		28.9	346	29.4		36.1
3	220	50.6	224	51.5		17.8	216	23.5		09.7	152	41.0		29.0	1	32.0		36.0
4	235	53.0	239	51.1		16.6	231	24.2		10.5	167	43.1		29.0	16	34.6		36.0
5	250	55.5	254	50.7	-3	15.3	246	24.9	+1	11.3	182	45.2	+21	29.1	31	37.1	-12	36.0
6	265	58.0	269	50.3	-3	14.1	261	25.6	+1	12.1	197	47.3	+21	29.1	46	39.7	-12	35.9
7	281	00.4	284	49.9		12.8	276	26.3		12.9	212	49.4		29.2	61	42.3		35.9
8	296	02.9	299	49.5		11.6	291	27.0		13.7	227	51.5		29.3	76	44.8		35.8
9	311	05.4	314	49.1		10.4	306	27.7		14.4	242	53.6		29.3	91	47.4		35.8
10	326	07.8	329	48.7		09.1	321	28.4		15.2	257	55.7		29.4	106	50.0		35.7
11	341	10.3	344	48.3	-3	07.9	336	29.1	+1	16.0	272	57.8	+21	29.4	121	52.6	-12	35.7
12	356	12.8	359	47.9	-3	06.6	351	29.8	+1	16.8	287	59.9	+21	29.5	136	55.1	-12	35.7
13	11	15.2	14	47.5		05.4	6	30.5		17.6	303	02.0		29.6	151	57.7		35.6
14	26	17.7	29	47.1		04.1	21	31.2		18.4	318	04.1		29.6	167	00.3		35.6
15	41	20.1	44	46.8		02.9	36	31.9		19.2	333	06.2		29.7	182	02.8		35.5
16	56	22.6	59	46.4		01.6	51	32.6		20.0	348	08.3		29.7	197	05.4		35.5
17	71	25.1	74	46.0	-3	00.4	66	33.2	+1	20.7	3	10.4	+21	29.8	212	08.0	-12	35.5
18	86	27.5	89	45.6	-2	59.1	81	33.9	+1	21.5	18	12.5	+21	29.8	227	10.6	-12	35.4
19	101	30.0	104	45.2		57.9	96	34.6		22.3	33	14.6		29.9	242	13.1		35.4
20	116	32.5	119	44.8		56.7	111	35.3		23.1	48	16.7		30.0	257	15.7		35.3
21	131	34.9	134	44.4		55.4	126	36.0		23.9	63	18.8		30.0	272	18.3		35.3
22	146	37.4	149	44.0		54.2	141	36.7		24.7	78	20.9		30.1	287	20.8		35.2
23	161	39.9	164	43.6		52.9	156	37.4		25.5	93	23.0		30.1	302	23.4		35.2
24	176	42.3	179	43.2	-2	51.7	171	38.1	+1	26.3	108	25.1	+21	30.2	317	26.0	-12	35.2
Dif	—		-4		+12		+7		+8		+21		+1		+26			

0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 7			Edad: 7 ^d 2 PHE { SD: 14 ^h 8 PMG: 18 ^h 09 ^m 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	02.2	-0 34.6	96	38.4	+20 19.9	3	60 N	18 12	18 54	19 44	9 14 57	2 16 42	
1	193	02.4	33.6	111	09.3 ¹¹⁹	19.6	3	58	12	51	38	28 57	2 02 42	
2	208	02.6	32.6	125	40.2 ¹¹⁹	19.3	3	56	12	49	33	41 55	1 49 43	
3	223	02.7	31.7	140	11.2 ¹²⁰	18.8	5	54	12	47	29	9 51 55	38 44	
4	238	02.9	30.7	154	42.1 ¹¹⁹	18.3	5	52	12	45	25	10 01 54	29 44	
5	253	03.1	-0 29.7	169	13.0 ¹¹⁹	+20 17.7	6	50	18 11	18 44	19 22	10 10 53	1 20 44	
6	268	03.3	-0 28.7	183	43.9 ¹¹⁹	+20 17.0	7	45	18 11	18 41	19 15	10 28 53	1 02 45	
7	283	03.5	27.7	198	14.9 ¹²⁰	16.1	9	40	11	38	10	43 52	0 47 45	
8	298	03.7	26.7	212	45.8 ¹¹⁹	15.2	9	35	11	36	06	10 55 52	34 46	
9	313	03.8	25.7	227	16.8 ¹²⁰	14.2	10	30	11	35	19 03	11 06 51	23 47	
10	328	04.0	24.7	241	47.7 ¹¹⁹	13.1	11	20	11	33	18 58	25 50	0 04 47	
11	343	04.2	-0 23.7	256	18.7 ¹²⁰	+20 11.9	12	10 N	18 11	18 32	18 56	11 42 48	** ** *	
12	358	04.4	-0 22.8	270	49.6 ¹¹⁹	+20 10.6	13	0	18 11	18 32	18 56	11 57 48	** ** *	
13	13	04.6	21.8	285	20.6 ¹²⁰	09.3	13	10 S	11	32	57	12 12 47	** ** *	
14	28	04.8	20.8	299	51.6 ¹²⁰	07.8	15	20	12	34	18 59	29 46	23 49 50	
15	43	04.9	19.8	314	22.6 ¹²⁰	06.2	16	30	12	36	19 04	48 45	30 52	
16	58	05.1	18.8	328	53.6 ¹²⁰	04.6	16	35	12	38	07	12 59 44	20 52	
17	73	05.3	-0 17.8	343	24.6 ¹²⁰	+20 02.8	18	40	18 13	18 40	19 12	13 11 44	23 07 54	
18	88	05.5	-0 16.8	357	55.6 ¹²⁰	+20 01.0	18	45	18 13	18 43	19 17	13 26 43	22 53 54	
19	103	05.7	15.8	12	26.6 ¹²⁰	+19 59.0	20	50	14	46	24	44 42	34 57	
20	118	05.9	14.9	26	57.6 ¹²⁰	57.0	20	52	14	48	28	13 53 41	26 57	
21	133	06.1	13.9	41	28.6 ¹²⁰	54.9	21	54	15	50	32	14 03 39	16 59	
22	148	06.2	12.9	55	59.7 ¹²¹	52.6	23	56	15	52	37	13 39	22 06 59	
23	163	06.4	11.9	70	30.7 ¹²⁰	50.3	23	58	16	55	42	26 38	21 53 61	
24	178	06.6	-0 10.9	85	01.8 ¹²¹	+19 47.9	24	60 S	18 16	18 58	19 48	14 40 37	21 39 62	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 11 ^m 2		Mag: -3.9 PMG: 12 ^h 01 ^m			Mag: +1.2 PMG: 12 ^h 33 ^m			Mag: -2.2 PMG: 16 ^h 44 ^m			Mag: +0.3 PMG: 2 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	176	42.3	179	43.2	-2 51.7	171	38.1	+1 26.3	108	25.1	+21 30.2	317	26.0	-12 35.2
1	191	44.8	194	42.8	50.4	186	38.8	27.0	123	27.2	30.3	332	28.6	35.1
2	206	47.3	209	42.4	49.2	201	39.5	27.8	138	29.3	30.3	347	31.1	35.1
3	221	49.7	224	42.1	47.9	216	40.2	28.6	153	31.4	30.4	2	33.7	35.0
4	236	52.2	239	41.7	46.7	231	40.9	29.4	168	33.4	30.4	17	36.3	35.0
5	251	54.6	254	41.3	-2 45.4	246	41.6	+1 30.2	183	35.5	+21 30.5	32	38.9	-12 34.9
6	266	57.1	269	40.9	-2 44.2	261	42.3	+1 31.0	198	37.6	+21 30.5	47	41.4	-12 34.9
7	281	59.6	284	40.5	42.9	276	43.0	31.8	213	39.7	30.6	62	44.0	34.9
8	297	02.0	299	40.1	41.7	291	43.7	32.6	228	41.8	30.7	77	46.6	34.8
9	312	04.5	314	39.7	40.4	306	44.4	33.3	243	43.9	30.7	92	49.2	34.8
10	327	07.0	329	39.3	39.2	321	45.1	34.1	258	46.0	30.8	107	51.7	34.7
11	342	09.4	344	38.9	-2 37.9	336	45.8	+1 34.9	273	48.1	+21 30.8	122	54.3	-12 34.7
12	357	11.9	359	38.6	-2 36.7	351	46.5	+1 35.7	288	50.2	+21 30.9	137	56.9	-12 34.7
13	12	14.4	14	38.2	35.4	6	47.2	36.5	303	52.3	31.0	152	59.4	34.6
14	27	16.8	29	37.8	34.2	21	47.9	37.3	318	54.4	31.0	168	02.0	34.6
15	42	19.3	44	37.4	32.9	36	48.6	38.1	333	56.5	31.1	183	04.6	34.5
16	57	21.8	59	37.0	31.7	51	49.3	38.8	348	58.6	31.1	198	07.2	34.5
17	72	24.2	74	36.6	-2 30.4	66	50.0	+1 39.6	4	00.7	+21 31.2	213	09.7	-12 34.4
18	87	26.7	89	36.2	-2 29.2	81	50.7	+1 40.4	19	02.8	+21 31.3	228	12.3	-12 34.4
19	102	29.1	104	35.8	27.9	96	51.4	41.2	34	04.8	31.3	243	14.9	34.4
20	117	31.6	119	35.4	26.7	111	52.1	42.0	49	06.9	31.4	258	17.5	34.3
21	132	34.1	134	35.1	25.4	126	52.8	42.8	64	09.0	31.4	273	20.1	34.3
22	147	36.5	149	34.7	24.2	141	53.5	43.6	79	11.1	31.5	288	22.6	34.2
23	162	39.0	164	34.3	22.9	156	54.1	44.4	94	13.2	31.5	303	25.2	34.2
24	177	41.5	179	33.9	-2 21.7	171	54.8	+1 45.1	109	15.3	+21 31.6	318	27.8	-12 34.1
Dif	—		-4 +12			+7 +8			+21 +1		+26 0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 07 ^m 4			Edad: 8 ^d 2 PHE { SD: 14'8 PMG: 18 ^h 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	06.6	-0 10.9	85	01.8	+19 47.9	60 N	4 30	5 20	6 01	10 11	66	2 58	32	
1	193	06.8	09.9	99	32.8 ¹²⁰	45.4 ²⁵	58	36	23	02	25	63	44	34	
2	208	07.0	08.9	114	03.9 ¹²¹	42.8 ²⁶	56	41	25	02	36	62	32	35	
3	223	07.2	07.9	128	35.0 ¹²¹	40.2 ²⁶	54	45	27	02	46	61	22	36	
4	238	07.3	06.9	143	06.1 ¹²¹	37.4 ²⁸	52	49	29	02	10 55	60	13	37	
5	253	07.5	-0 06.0	157	37.2 ¹²¹	+19 34.5 ²⁹	50	4 53	5 30	6 03	11 03	59	2 04	39	
6	268	07.7	-0 05.0	172	08.3 ¹²¹	+19 31.6 ²⁹	45	5 00	5 34	6 03	11 21	56	1 47	40	
7	283	07.9	04.0	186	39.4 ¹²¹	28.5 ³¹	40	05	36	03	35	55	32	42	
8	298	08.1	03.0	201	10.5 ¹²¹	25.4 ³¹	35	09	38	04	47	53	20	43	
9	313	08.3	02.0	215	41.7 ¹²²	22.2 ³²	30	12	40	04	11 57	53	1 10	43	
10	328	08.5	-0 01.0	230	12.8 ¹²¹	18.9 ³³	20	17	42	04	12 15	50	0 51	45	
11	343	08.6	+0 00.0	244	43.9 ¹²¹	+19 15.5 ³⁴	10 N	5 19	5 43	6 04	12 30	49	0 35	47	
12	358	08.8	+0 01.0	259	15.1 ¹²²	+19 12.0 ³⁵	0	5 19	5 43	6 04	12 45	47	0 20	48	
13	13	09.0	01.9	273	46.3 ¹²²	08.4 ³⁶	10 S	19	43	04	12 59	46	0 05	49	
14	28	09.2	02.9	288	17.5 ¹²²	04.7 ³⁷	20	16	42	04	13 15	44	** ** *	**	
15	43	09.4	03.9	302	48.7 ¹²²	+19 00.9 ³⁸	30	12	40	03	33	42	** ** *	**	
16	58	09.6	04.9	317	19.9 ¹²²	+18 57.1 ³⁸	35	08	38	03	43	41	** ** *	**	
17	73	09.8	+0 05.9	331	51.1 ¹²²	+18 53.1 ⁴⁰	40	5 04	5 36	6 03	13 55	39	** ** *	**	
18	88	09.9	+0 06.9	346	22.3 ¹²²	+18 49.1 ⁴⁰	45	4 59	5 33	6 02	14 09	37	23 47	59	
19	103	10.1	07.9	0	53.6 ¹²³	45.0 ⁴¹	50	51	30	02	26	35	31	61	
20	118	10.3	08.9	15	24.8 ¹²²	40.8 ⁴²	52	48	28	02	34	34	23	62	
21	133	10.5	09.8	29	56.1 ¹²³	36.5 ⁴³	54	44	26	01	42	34	15	63	
22	148	10.7	10.8	44	27.3 ¹²²	32.1 ⁴⁴	56	40	24	01	14 52	32	23 05	65	
23	163	10.9	11.8	58	58.6 ¹²³	27.6 ⁴⁵	58	34	21	01	15 04	30	22 54	67	
24	178	11.1	+0 12.8	73	29.9 ¹²³	+18 23.1 ⁴⁵	60 S	4 28	5 19	6 00	15 17	28	22 41	69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 07 ^m 2		Mag: -3.9 PMG: 12 ^h 02 ^m		Mag: +1.2 PMG: 12 ^h 32 ^m		Mag: -2.2 PMG: 16 ^h 41 ^m		Mag: +0.3 PMG: 2 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	177	41.5	179	33.9	-2	21.7	171	54.8	+1	45.1
1	192	43.9	194	33.5		20.4	186	55.5		45.9
2	207	46.4	209	33.1		19.2	201	56.2		46.7
3	222	48.9	224	32.7		17.9	216	56.9		47.5
4	237	51.3	239	32.3		16.7	231	57.6		48.3
5	252	53.8	254	32.0	-2	15.4	246	58.3	+1	49.1
6	267	56.2	269	31.6	-2	14.2	261	59.0	+1	49.9
7	282	58.7	284	31.2		12.9	276	59.7		50.6
8	298	01.2	299	30.8		11.7	292	00.4		51.4
9	313	03.6	314	30.4		10.4	307	01.1		52.2
10	328	06.1	329	30.0		09.2	322	01.8		53.0
11	343	08.6	344	29.6	-2	07.9	337	02.5	+1	53.8
12	358	11.0	359	29.2	-2	06.7	352	03.2	+1	54.6
13	13	13.5	14	28.9		05.4	7	03.9		55.4
14	28	16.0	29	28.5		04.2	22	04.6		56.1
15	43	18.4	44	28.1		02.9	37	05.3		56.9
16	58	20.9	59	27.7		01.7	52	06.0		57.7
17	73	23.4	74	27.3	-2	00.4	67	06.7	+1	58.5
18	88	25.8	89	26.9	-1	59.2	82	07.4	+1	59.3
19	103	28.3	104	26.6		57.9	97	08.1	+2	00.1
20	118	30.7	119	26.2		56.6	112	08.8		00.8
21	133	33.2	134	25.8		55.4	127	09.5		01.6
22	148	35.7	149	25.4		54.1	142	10.2		02.4
23	163	38.1	164	25.0		52.9	157	10.9		03.2
24	178	40.6	179	24.6	-1	51.6	172	11.6	+2	04.0
Dif	—		-4	+13			+7	+8		
									+21	+1
										+26

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 9 ^d 2	PHE { 4 ^h : 54 ^h /6 12 ^h : 54 ^h /7 20 ^h : 54 ^h /9 R°: 46 ^m									
	PMG: 12 ^h 07 ^m 1													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	11.1	+0 12.8	73	29.9	+18 23.1	47	60 N	18 17	18 59	19 49	11 17 71	3 30 25	
1	193	11.2	13.8	88	01.2 ¹²³	18.4	47	58	17	56	43	28 70	18 27	
2	208	11.4	14.8	102	32.5 ¹²³	13.7	48	56	16	53	38	38 68	3 07 29	
3	223	11.6	15.8	117	03.9 ¹²⁴	08.9	49	54	16	51	33	47 66	2 58 31	
4	238	11.8	16.8	131	35.2 ¹²³	+18 04.0	49	52	15	49	29	11 55 64	50 32	
5	253	12.0	+0 17.7	146	06.5 ¹²³	+17 59.0	50	50	18 15	18 47	19 25	12 02 63	2 43 33	
6	268	12.2	+0 18.7	160	37.9 ¹²⁴	+17 53.9	51	45	18 14	18 43	19 18	12 17 60	2 27 36	
7	283	12.4	19.7	175	09.3 ¹²⁴	48.8	51	40	13	40	12	30 57	14 38	
8	298	12.5	20.7	189	40.6 ¹²³	43.5	53	35	13	38	07	40 56	2 03 39	
9	313	12.7	21.7	204	12.0 ¹²⁴	38.2	53	30	12	36	19 04	12 50 54	1 53 41	
10	328	12.9	22.7	218	43.4 ¹²⁴	32.8	54	20	11	33	18 59	13 05 52	36 43	
11	343	13.1	+0 23.7	233	14.9 ¹²⁵	+17 27.3	55	10 N	18 11	18 32	18 56	13 19 49	1 22 45	
12	358	13.3	+0 24.7	247	46.3 ¹²⁴	+17 21.7	56	0	18 10	18 31	18 55	13 32 47	1 08 47	
13	13	13.5	25.6	262	17.7 ¹²⁴	16.0	57	10 S	10	31	55	45 45	0 54 49	
14	28	13.7	26.6	276	49.2 ¹²⁵	10.3	57	20	10	32	18 57	13 59 42	39 51	
15	43	13.9	27.6	291	20.6 ¹²⁴	+17 04.4	59	30	10	34	19 01	14 15 39	22 54	
16	58	14.0	28.6	305	52.1 ¹²⁵	+16 58.5	59	35	10	35	04	24 38	12 55	
17	73	14.2	+0 29.6	320	23.6 ¹²⁵	+16 52.5	60	40	18 10	18 37	19 08	14 34 36	0 01 56	
18	88	14.4	+0 30.6	334	55.1 ¹²⁵	+16 46.5	60	45	18 10	18 39	19 13	14 46 34	*** ** **	
19	103	14.6	31.6	349	26.6 ¹²⁵	40.3	62	50	10	42	20	15 01 31	*** ** **	
20	118	14.8	32.5	3	58.1 ¹²⁵	34.1	62	52	10	43	23	08 30	*** ** **	
21	133	15.0	33.5	18	29.6 ¹²⁵	27.7	64	54	10	45	27	16 28	*** ** **	
22	148	15.2	34.5	33	01.1 ¹²⁵	21.3	64	56	10	47	31	24 27	*** ** **	
23	163	15.4	35.5	47	32.7 ¹²⁶	14.9	64	58	10	49	36	34 24	*** ** **	
24	178	15.5	+0 36.5	62	04.2 ¹²⁵	+16 08.3	66	60 S	18 10	18 52	19 41	15 45 22	23 50 74	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 03 ^m 3		Mag: -4.0 PMG: 12 ^h 03 ^m		Mag: +1.2 PMG: 12 ^h 31 ^m		Mag: -2.2 PMG: 16 ^h 37 ^m		Mag: +0.3 PMG: 2 ^h 42 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	178	40.6	179	24.6	-1 51.6	172	11.6	+2 04.0	110 05.4	+21 33.0
1	193	43.1	194	24.2	50.4	187	12.3	04.8	125 07.5	33.1
2	208	45.5	209	23.9	49.1	202	13.0	05.6	140 09.5	33.1
3	223	48.0	224	23.5	47.9	217	13.7	06.3	155 11.6	33.2
4	238	50.5	239	23.1	46.6	232	14.4	07.1	170 13.7	33.3
5	253	52.9	254	22.7	-1 45.4	247	15.1	+2 07.9	185 15.8	+21 33.3
6	268	55.4	269	22.3	-1 44.1	262	15.8	+2 08.7	200 17.9	+21 33.4
7	283	57.9	284	21.9	42.9	277	16.5	09.5	215 20.0	33.4
8	299	00.3	299	21.6	41.6	292	17.2	10.3	230 22.0	33.5
9	314	02.8	314	21.2	40.3	307	17.9	11.0	245 24.1	33.6
10	329	05.2	329	20.8	39.1	322	18.6	11.8	260 26.2	33.6
11	344	07.7	344	20.4	-1 37.8	337	19.3	+2 12.6	275 28.3	+21 33.7
12	359	10.2	359	20.0	-1 36.6	352	20.0	+2 13.4	290 30.4	+21 33.7
13	14	12.6	14	19.6	35.3	7	20.7	14.2	305 32.5	33.8
14	29	15.1	29	19.3	34.1	22	21.4	15.0	320 34.5	33.9
15	44	17.6	44	18.9	32.8	37	22.1	15.7	335 36.6	33.9
16	59	20.0	59	18.5	31.6	52	22.8	16.5	350 38.7	34.0
17	74	22.5	74	18.1	-1 30.3	67	23.5	+2 17.3	5 40.8	+21 34.0
18	89	25.0	89	17.7	-1 29.1	82	24.2	+2 18.1	20 42.9	+21 34.1
19	104	27.4	104	17.3	27.8	97	24.9	18.9	35 44.9	34.2
20	119	29.9	119	17.0	26.5	112	25.6	19.7	50 47.0	34.2
21	134	32.3	134	16.6	25.3	127	26.3	20.4	65 49.1	34.3
22	149	34.8	149	16.2	24.0	142	27.0	21.2	80 51.2	34.3
23	164	37.3	164	15.8	22.8	157	27.7	22.0	95 53.2	34.4
24	179	39.7	179	15.4	-1 21.5	172	28.3	+2 22.8	110 55.3	+21 34.5
Dif	—		-4	+13	+7	+8			+21	+1
										+26

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 2	PHE { 4 ^h : 55 ^o 0 12 ^h : 55 ^o 2 20 ^h : 55 ^o 4	SD: 15 ^o 0	PMG: 20 ^h 30 ^m	R ^o : 47 ^m								
	PMG: 12 ^h 06 ^m 8															
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	15.5	+0 36.5	62	04.2	+16 08.3	66	60 N	4 23	5 14	5 55	12 28	76	3 55	20	
1	193	15.7		76	35.8 ¹²⁶	+16 01.7	66	58	30	17	56	38	73	45	22	
2	208	15.9		91	07.4 ¹²⁶	+15 54.9	68	56	35	20	57	46	71	36	25	
3	223	16.1		105	38.9 ¹²⁵		68	54	40	22	57	53	69	29	26	
4	238	16.3		120	10.5 ¹²⁶		68	52	44	24	58	12 59	67	22	28	
5	253	16.5	+0 41.4	134	42.1 ¹²⁶	+15 34.3	70	50	4 48	5 26	5 58	13 05	66	3 16	29	
6	268	16.7	+0 42.4	149	13.7 ¹²⁶	+15 27.3	70	45	4 56	5 30	5 59	13 17	63	3 03	32	
7	283	16.9		163	45.4 ¹²⁷		71	40	5 01	33	6 00	27	60	2 52	34	
8	298	17.0		178	17.0 ¹²⁶		72	35		06	36	01	36	58	42	37
9	313	17.2		192	48.6 ¹²⁶	+15 05.7	73	30		10	38	01	44	55	34	38
10	328	17.4		207	20.3 ¹²⁷	+14 58.4	73	20		15	40	02	13 57	52	19	42
11	343	17.6	+0 47.3	221	51.9 ¹²⁶	+14 51.0	74	10 N	5 18	5 42	6 03	14 08	50	2 07	44	
12	358	17.8	+0 48.3	236	23.6 ¹²⁷	+14 43.5	75	0	5 19	5 43	6 04	14 19	47	1 55	47	
13	13	18.0		250	55.2 ¹²⁶	35.9	76	10 S	19	43	04	30	44	43	49	
14	28	18.2		265	26.9 ¹²⁷	28.3	76	20	17	42	04	41	42	30	52	
15	43	18.4		279	58.6 ¹²⁷	20.6	77	30	13	41	05	14 54	38	16	54	
16	58	18.5		294	30.3 ¹²⁷	12.8	78	35	10	40	05	15 02	36	1 07	57	
17	73	18.7	+0 53.3	309	02.0 ¹²⁷	+14 04.9	79	40	5 06	5 38	6 05	15 10	34	0 57	59	
18	88	18.9	+0 54.2	323	33.7 ¹²⁷	+13 57.0	79	45	5 01	5 36	6 05	15 20	31	0 46	61	
19	103	19.1		338	05.4 ¹²⁷	49.0	80	50	4 55	33	05	32	28	32	64	
20	118	19.3		352	37.1 ¹²⁷	41.0	80	52	52	31	05	38	26	25	66	
21	133	19.5		7	08.8 ¹²⁷	32.8	82	54	48	30	05	44	25	18	67	
22	148	19.7		21	40.6 ¹²⁸	24.6	82	56	44	28	05	51	23	10	69	
23	163	19.9	+0 59.2	36	12.3 ¹²⁷	16.3	83	58	39	26	05	15 58	21	0 01	71	
24	178	20.0	+1 00.2	50	44.0 ¹²⁷	+13 08.0	83	60 S	4 34	5 24	6 05	16 07	18	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 59 ^m 4		Mag: -4.0 PMG: 12 ^h 03 ^m		Mag: +1.2 PMG: 12 ^h 30 ^m		Mag: -2.2 PMG: 16 ^h 34 ^m		Mag: +0.3 PMG: 2 ^h 37 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	179	39.7	179	15.4	-1	21.5	172	28.3	+2	22.8
1	194	42.2	194	15.0		20.3	187	29.0		23.6
2	209	44.7	209	14.7		19.0	202	29.7		24.4
3	224	47.1	224	14.3		17.8	217	30.4		25.1
4	239	49.6	239	13.9		16.5	232	31.1		25.9
5	254	52.1	254	13.5	-1	15.2	247	31.8	+2	26.7
6	269	54.5	269	13.1	-1	14.0	262	32.5	+2	27.5
7	284	57.0	284	12.8		12.7	277	33.2		28.3
8	299	59.5	299	12.4		11.5	292	33.9		29.1
9	315	01.9	314	12.0		10.2	307	34.6		29.8
10	330	04.4	329	11.6		09.0	322	35.3		30.6
11	345	06.8	344	11.2	-1	07.7	337	36.0	+2	31.4
12	0	09.3	359	10.8	-1	06.5	352	36.7	+2	32.2
13	15	11.8	14	10.5		05.2	7	37.4		33.0
14	30	14.2	29	10.1		03.9	22	38.1		33.7
15	45	16.7	44	09.7		02.7	37	38.8		34.5
16	60	19.2	59	09.3		01.4	52	39.5		35.3
17	75	21.6	74	08.9	-1	00.2	67	40.2	+2	36.1
18	90	24.1	89	08.6	-0	58.9	82	40.9	+2	36.9
19	105	26.6	104	08.2		57.7	97	41.6		37.7
20	120	29.0	119	07.8		56.4	112	42.3		38.4
21	135	31.5	134	07.4		55.1	127	43.0		39.2
22	150	34.0	149	07.0		53.9	142	43.7		40.0
23	165	36.4	164	06.7		52.6	157	44.4		40.8
24	180	38.9	179	06.3	-0	51.4	172	45.1	+2	41.6
Dif	—		-4		+13		+7		+8	
							+21		+1	
									+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 06 ^m 5			Edad: 11 ^d 2 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0 PMG: 21 ^h 17 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	20.0	+1 00.2	50	44.0	+13 08.0	60 N	18 22	19 04	19 55	13 44 79	4 15 16			
1	193	20.2		65	15.8 ¹²⁸	+12 59.6 ⁸⁴	58	21	19 01	48	51 76	07 20			
2	208	20.4		79	47.5 ¹²⁷	51.1 ⁸⁵	56	20	18 57	42	13 57 74	4 01 21			
3	223	20.6		94	19.3 ¹²⁸	42.5 ⁸⁶	54	19	55	37	14 02 72	3 55 22			
4	238	20.8		108	51.0 ¹²⁷	33.9 ⁸⁶	52	19	52	33	06 70	50 25			
5	253	21.0	+1 05.1	123	22.8 ¹²⁸	+12 25.2 ⁸⁷	50	18 18	18 50	19 29	14 11 68	3 45 27			
6	268	21.2	+1 06.1	137	54.5 ¹²⁷	+12 16.4 ⁸⁸	45	18 16	18 46	19 20	14 20 65	3 35 30			
7	283	21.4		152	26.3 ¹²⁸	+12 07.6 ⁸⁸	40	15	42	14	27 62	26 33			
8	298	21.6		166	58.0 ¹²⁷	+11 58.7 ⁸⁹	35	14	39	09	34 59	19 35			
9	313	21.7		181	29.8 ¹²⁸	49.8 ⁸⁹	30	13	37	05	39 57	12 38			
10	328	21.9		196	01.6 ¹²⁸	40.8 ⁹⁰	20	12	34	19 00	49 54	3 01 41			
11	343	22.1	+1 11.0	210	33.3 ¹²⁷	+11 31.7 ⁹¹	10 N	18 11	18 32	18 56	14 58 50	2 51 44			
12	358	22.3	+1 12.0	225	05.1 ¹²⁸	+11 22.5 ⁹²	0	18 10	18 30	18 54	15 06 47	2 42 46			
13	13	22.5	13.0	239	36.9 ¹²⁸	13.3 ⁹²	10 S	09	30	54	14 44	32 50			
14	28	22.7	13.9	254	08.6 ¹²⁷	+11 04.1 ⁹²	20	08	30	56	23 40	22 53			
15	43	22.9	14.9	268	40.4 ¹²⁸	+10 54.7 ⁹⁴	30	07	31	18 59	32 37	10 57			
16	58	23.1	15.9	283	12.2 ¹²⁸	45.4 ⁹³	35	07	32	19 01	38 34	2 04 58			
17	73	23.3	+1 16.9	297	43.9 ¹²⁷	+10 35.9 ⁹⁵	40	18 06	18 33	19 05	15 44 32	1 56 61			
18	88	23.4	+1 17.9	312	15.7 ¹²⁸	+10 26.4 ⁹⁵	45	18 06	18 35	19 09	15 51 30	1 47 63			
19	103	23.6	18.9	326	47.5 ¹²⁸	16.8 ⁹⁶	50	05	38	15	16 00 26	36 67			
20	118	23.8	19.9	341	19.2 ¹²⁷	+10 07.2 ⁹⁶	52	05	39	18	04 24	31 69			
21	133	24.0	20.8	355	51.0 ¹²⁸	+9 57.5 ⁹⁷	54	05	40	22	09 22	25 71			
22	148	24.2	21.8	10	22.7 ¹²⁷	47.8 ⁹⁷	56	05	42	25	14 20	19 73			
23	163	24.4	22.8	24	54.5 ¹²⁸	38.0 ⁹⁸	58	04	43	30	19 18	12 75			
24	178	24.6	+1 23.8	39	26.2 ¹²⁷	+9 28.1 ⁹⁹	60 S	18 04	18 45	19 35	16 25 16	1 04 77			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 55 ^m 4		Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: +1.2 PMG: 12 ^h 28 ^m			Mag: -2.2 PMG: 16 ^h 31 ^m			Mag: +0.3 PMG: 2 ^h 33 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	180	38.9	179	06.3	-0 51.4	172	45.1	+2 41.6	111	45.1	+21 35.9	321	33.6	-12 30.9	
1	195	41.3	194	05.9	50.1	187	45.8	42.3	126	47.2	35.9	336	36.2	30.9	
2	210	43.8	209	05.5	48.9	202	46.5	43.1	141	49.3	36.0	351	38.8	30.8	
3	225	46.3	224	05.1	47.6	217	47.2	43.9	156	51.4	36.1	6	41.4	30.8	
4	240	48.7	239	04.8	46.3	232	47.9	44.7	171	53.4	36.1	21	44.0	30.7	
5	255	51.2	254	04.4	-0 45.1	247	48.6	+2 45.5	186	55.5	+21 36.2	36	46.6	-12 30.7	
6	270	53.7	269	04.0	-0 43.8	262	49.3	+2 46.2	201	57.6	+21 36.2	51	49.1	-12 30.7	
7	285	56.1	284	03.6	42.6	277	50.0	47.0	216	59.6	36.3	66	51.7	30.6	
8	300	58.6	299	03.2	41.3	292	50.7	47.8	232	01.7	36.4	81	54.3	30.6	
9	316	01.1	314	02.9	40.1	307	51.4	48.6	247	03.8	36.4	96	56.9	30.5	
10	331	03.5	329	02.5	38.8	322	52.1	49.4	262	05.8	36.5	111	59.5	30.5	
11	346	06.0	344	02.1	-0 37.5	337	52.8	+2 50.1	277	07.9	+21 36.6	127	02.1	-12 30.4	
12	1	08.4	359	01.7	-0 36.3	352	53.5	+2 50.9	292	10.0	+21 36.6	142	04.7	-12 30.4	
13	16	10.9	14	01.3	35.0	7	54.2	51.7	307	12.1	36.7	157	07.3	30.3	
14	31	13.4	29	01.0	33.8	22	54.9	52.5	322	14.1	36.7	172	09.8	30.3	
15	46	15.8	44	00.6	32.5	37	55.6	53.3	337	16.2	36.8	187	12.4	30.2	
16	61	18.3	59	00.2	31.3	52	56.3	54.1	352	18.3	36.9	202	15.0	30.2	
17	76	20.8	73	59.8	-0 30.0	67	57.0	+2 54.8	7	20.3	+21 36.9	217	17.6	-12 30.1	
18	91	23.2	88	59.4	-0 28.7	82	57.7	+2 55.6	22	22.4	+21 37.0	232	20.2	-12 30.1	
19	106	25.7	103	59.1	27.5	97	58.4	56.4	37	24.5	37.0	247	22.8	30.1	
20	121	28.2	118	58.7	26.2	112	59.1	57.2	52	26.5	37.1	262	25.4	30.0	
21	136	30.6	133	58.3	25.0	127	59.8	57.9	67	28.6	37.2	277	28.0	30.0	
22	151	33.1	148	57.9	23.7	143	00.5	58.7	82	30.7	37.2	292	30.5	29.9	
23	166	35.6	163	57.6	22.4	158	01.2	+2 59.5	97	32.7	37.3	307	33.1	29.9	
24	181	38.0	178	57.2	-0 21.2	173	01.9	+3 00.3	112	34.8	+21 37.3	322	35.7	-12 29.8	
Dif	—		-4 +13		+7 +8		+8		+21 +1		+26				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 06 ^m 2			Edad: 12 ^d 2 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'7 R°: 47 ^m							Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	24.6	+1	23.8	39	26.2	+9	28.1	99	60 N	4	17	5	07	5	49		
1	193	24.8		24.8	53	58.0		18.2	99	58	24	11	50	07	79	4	31	
2	208	25.0		25.8	68	29.7	+9	08.3	99	56	29	14	51	11	76	27	17	
3	223	25.1		26.7	83	01.4	+8	58.2	101	54	35	17	52	14	74	22	20	
4	238	25.3		27.7	97	33.2	+8	48.2	100	52	39	19	53	16	73	18	22	
5	253	25.5	+1	28.7	112	04.9	+8	38.0	102	50	4	43	5	22	5	54	15	23
6	268	25.7	+1	29.7	126	36.6	+8	27.9	101	45	4	52	5	26	5	56	4	12
7	283	25.9		30.7	141	08.3	+8	17.6	103	40	4	58	30	57	29	64	4	05
8	298	26.1		31.7	155	40.0	+8	07.4	102	35	5	03	33	58	33	61	3	59
9	313	26.3		32.6	170	11.7	+7	57.0	104	30	07	35	5	59	36	59	54	34
10	328	26.5		33.6	184	43.3		46.7	103	20	13	39	6	01	43	54	50	36
11	343	26.7	+1	34.6	199	15.0	+7	36.2	105	10 N	5	16	5	41	6	02	42	40
12	358	26.9	+1	35.6	213	46.7	+7	25.8	104	0	5	18	5	42	6	03	3	35
13	13	27.0		36.6	228	18.3		15.2	106	10 S	19	43	04	15	58	47	2	28
14	28	27.2		37.6	242	49.9	+7	04.7	105	20	17	43	05	16	03	40	22	50
15	43	27.4		38.5	257	21.6	+6	54.1	106	30	14	42	06	09	36		15	53
16	58	27.6		39.5	271	53.2		43.4	107	35	12	41	06	12	34	07	57	
17	73	27.8	+1	40.5	286	24.8	+6	32.7	107	40	5	08	5	40	6	07	3	02
18	88	28.0	+1	41.5	300	56.4	+6	22.0	107	45	5	04	5	38	6	08	2	57
19	103	28.2		42.5	315	27.9		11.2	108	50	4	58	36	08	26	25	2	50
20	118	28.4		43.5	329	59.5	+6	00.3	109	52	55	35	09	28	24		43	69
21	133	28.6		44.4	344	31.0	+5	49.5	108	54	52	34	09	31	21		40	71
22	148	28.7		45.4	359	02.5		38.6	109	56	48	32	09	34	19		36	73
23	163	28.9		46.4	13	34.1		27.6	110	58	44	30	10	37	17		32	75
24	178	29.1	+1	47.4	28	05.5	+5	16.6	110	60 S	4	39	5	28	6	10	27	77
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 51 ^m 5			Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: +1.2 PMG: 12 ^h 27 ^m			Mag: -2.2 PMG: 16 ^h 27 ^m			Mag: +0.3 PMG: 2 ^h 29 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	181	38.0	178	57.2	-0	21.2	173	01.9	+3	00.3	112	34.8	+21	37.3	322	35.7		
1	196	40.5	193	56.8		19.9	188	02.6		01.1	127	36.9		37.4	337	38.3		
2	211	42.9	208	56.4		18.7	203	03.3		01.8	142	38.9		37.5	352	40.9		
3	226	45.4	223	56.0		17.4	218	04.0		02.6	157	41.0		37.5	7	43.5		
4	241	47.9	238	55.7		16.2	233	04.7		03.4	172	43.1		37.6	22	46.1		
5	256	50.3	253	55.3	-0	14.9	248	05.4	+3	04.2	187	45.1	+21	37.6	37	48.7		
6	271	52.8	268	54.9	-0	13.6	263	06.1	+3	05.0	202	47.2	+21	37.7	52	51.3		
7	286	55.3	283	54.5		12.4	278	06.8		05.7	217	49.3		37.8	67	53.8		
8	301	57.7	298	54.1		11.1	293	07.5		06.5	232	51.3		37.8	82	56.4		
9	317	00.2	313	53.8		09.9	308	08.2		07.3	247	53.4		37.9	97	59.0		
10	332	02.7	328	53.4		08.6	323	08.9		08.1	262	55.5		37.9	113	01.6		
11	347	05.1	343	53.0	-0	07.3	338	09.6	+3	08.9	277	57.5	+21	38.0	128	04.2		
12	2	07.6	358	52.6	-0	06.1	353	10.3	+3	09.6	292	59.6	+21	38.1	143	06.8		
13	17	10.1	13	52.3		04.8	8	11.0		10.4	308	01.7		38.1	158	09.4		
14	32	12.5	28	51.9		03.6	23	11.7		11.2	323	03.7		38.2	173	12.0		
15	47	15.0	43	51.5		02.3	38	12.4		12.0	338	05.8		38.2	188	14.6		
16	62	17.4	58	51.1	-0	01.0	53	13.1		12.7	353	07.8		38.3	203	17.2		
17	77	19.9	73	50.7	+0	00.2	68	13.8	+3	13.5	8	09.9	+21	38.4	218	19.8		
18	92	22.4	88	50.4	+0	01.5	83	14.5	+3	14.3	23	12.0	+21	38.4	233	22.3		
19	107	24.8	103	50.0		02.7	98	15.2		15.1	38	14.0		38.5	248	24.9		
20	122	27.3	118	49.6		04.0	113	15.9		15.9	53	16.1		38.5	263	27.5		
21	137	29.8	133	49.2		05.2	128	16.6		16.6	68	18.2		38.6	278	30.1		
22	152	32.2	148	48.9		06.5	143	17.3		17.4	83	20.2		38.7	293	32.7		
23	167	34.7	163	48.5		07.8	158	18.0		18.2	98	22.3		38.7	308	35.3		
24	182	37.2	178	48.1	+0	09.0	173	18.7	+3	19.0	113	24.3	+21	38.8	323	37.9		
Dif	—		-4	+13	+7		+8				+21		+1	+26				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 05 ^m 9			Edad: 13 ^d 2 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'5 R°: 49 ^m PMG: 22 ^h 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	29.1	+1	47.4	28	05.5	+5 16.6	60 N	18 27	19 09	20 01	16 25	84	4 46	15			
1	193	29.3		48.4	42	37.0 ¹²⁵	+5 05.6 ¹¹⁰	58	26	05	19 53	26	81	44	17			
2	208	29.5		49.3	57	08.5 ¹²⁵	+4 54.5 ¹¹¹	56	24	19 02	47	27	79	42	19			
3	223	29.7		50.3	71	39.9 ¹²⁴	43.4 ¹¹¹	54	23	18 59	41	28	77	40	21			
4	238	29.9		51.3	86	11.3 ¹²⁴	32.3 ¹¹¹	52	22	56	36	29	74	38	23			
5	253	30.1	+1	52.3	100	42.7 ¹²⁴	+4 21.1 ¹¹²	50	18 21	18 53	19 32	16 30	72	4 37	24			
6	268	30.3	+1	53.3	115	14.1 ¹²⁴	+4 09.9 ¹¹²	45	18 19	18 48	19 23	16 31	69	4 33	29			
7	283	30.5		54.3	129	45.5 ¹²⁴	+3 58.7 ¹¹²	40	17	44	16	33	65	31	31			
8	298	30.6		55.2	144	16.8 ¹²³	47.4 ¹¹³	35	16	41	11	34	62	28	34			
9	313	30.8		56.2	158	48.1 ¹²³	36.1 ¹¹³	30	15	38	06	35	60	26	36			
10	328	31.0		57.2	173	19.4 ¹²³	24.8 ¹¹³	20	12	34	19 00	37	56	22	41			
11	343	31.2	+1	58.2	187	50.7 ¹²³	+3 13.4 ¹¹⁴	10 N	18 11	18 32	18 56	16 38	52	4 18	45			
12	358	31.4	+1	59.2	202	22.0 ¹²³	+3 02.1 ¹¹³	0	18 09	18 30	18 54	16 40	48	4 15	48			
13	13	31.6	+2	00.2	216	53.2 ¹²²	+2 50.6 ¹¹⁵	10 S	08	29	53	42	45	12	51			
14	28	31.8		01.1	231	24.4 ¹²²	39.2 ¹¹⁴	20	06	28	54	43	41	08	55			
15	43	32.0		02.1	245	55.6 ¹²²	27.7 ¹¹⁵	30	05	29	56	45	37	04	59			
16	58	32.2		03.1	260	26.7 ¹²¹	16.2 ¹¹⁵	35	04	29	18 59	46	35	4 02	62			
17	73	32.4	+2	04.1	274	57.8 ¹²¹	+2 04.7 ¹¹⁵	40	18 03	18 30	19 02	16 48	31	3 59	65			
18	88	32.5	+2	05.1	289	28.9 ¹²¹	+1 53.2 ¹¹⁵	45	18 02	18 31	19 06	16 49	29	3 56	68			
19	103	32.7		06.0	304	00.0 ¹²¹	41.6 ¹¹⁶	50	01	33	11	51	25	52	72			
20	118	32.9		07.0	318	31.0 ¹²⁰	30.0 ¹¹⁶	52	01	34	13	52	23	51	73			
21	133	33.1		08.0	333	02.0 ¹²⁰	18.4 ¹¹⁶	54	18 00	35	16	52	22	49	75			
22	148	33.3		09.0	347	33.0 ¹²⁰	+1 06.8 ¹¹⁶	56	17 59	36	20	53	20	47	77			
23	163	33.5		10.0	2	04.0 ¹²⁰	+0 55.2 ¹¹⁶	58	59	38	24	54	17	44	80			
24	178	33.7	+2	10.9	16	34.9 ¹¹⁹	+0 43.5 ¹¹⁷	60 S	17 58	18 39	19 28	16 56	14	3 42	82			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 47 ^m 6		Mag: -4.0 PMG: 12 ^h 05 ^m			Mag: +1.2 PMG: 12 ^h 26 ^m			Mag: -2.2 PMG: 16 ^h 24 ^m			Mag: +0.3 PMG: 2 ^h 25 ^m						
h	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	182	37.2	178	48.1	+0	09.0	173	18.7	+3	19.0	113	24.3	+21	38.8	323	37.9	-12	28.7
1	197	39.6	193	47.7		10.3	188	19.4		19.7	128	26.4		38.8	338	40.5		28.6
2	212	42.1	208	47.3		11.5	203	20.1		20.5	143	28.5		38.9	353	43.1		28.6
3	227	44.5	223	47.0		12.8	218	20.8		21.3	158	30.5		39.0	8	45.7		28.5
4	242	47.0	238	46.6		14.1	233	21.5		22.1	173	32.6		39.0	23	48.3		28.5
5	257	49.5	253	46.2	+0	15.3	248	22.2	+3	22.8	188	34.6	+21	39.1	38	50.9	-12	28.5
6	272	51.9	268	45.8	+0	16.6	263	22.9	+3	23.6	203	36.7	+21	39.1	53	53.5	-12	28.4
7	287	54.4	283	45.5		17.8	278	23.6		24.4	218	38.8		39.2	68	56.0		28.4
8	302	56.9	298	45.1		19.1	293	24.3		25.2	233	40.8		39.3	83	58.6		28.3
9	317	59.3	313	44.7		20.4	308	25.0		26.0	248	42.9		39.3	99	01.2		28.3
10	333	01.8	328	44.3		21.6	323	25.7		26.7	263	44.9		39.4	114	03.8		28.2
11	348	04.3	343	44.0	+0	22.9	338	26.4	+3	27.5	278	47.0	+21	39.5	129	06.4	-12	28.2
12	3	06.7	358	43.6	+0	24.1	353	27.1	+3	28.3	293	49.1	+21	39.5	144	09.0	-12	28.1
13	18	09.2	13	43.2		25.4	8	27.8		29.1	308	51.1		39.6	159	11.6		28.1
14	33	11.7	28	42.8		26.7	23	28.5		29.8	323	53.2		39.6	174	14.2		28.0
15	48	14.1	43	42.4		27.9	38	29.2		30.6	338	55.2		39.7	189	16.8		28.0
16	63	16.6	58	42.1		29.2	53	29.9		31.4	353	57.3		39.8	204	19.4		27.9
17	78	19.0	73	41.7	+0	30.4	68	30.6	+3	32.2	8	59.4	+21	39.8	219	22.0	-12	27.9
18	93	21.5	88	41.3	+0	31.7	83	31.3	+3	32.9	24	01.4	+21	39.9	234	24.6	-12	27.8
19	108	24.0	103	40.9		32.9	98	32.0		33.7	39	03.5		39.9	249	27.2		27.8
20	123	26.4	118	40.6		34.2	113	32.7		34.5	54	05.5		40.0	264	29.8		27.7
21	138	28.9	133	40.2		35.5	128	33.4		35.3	69	07.6		40.1	279	32.4		27.7
22	153	31.4	148	39.8		36.7	143	34.1		36.0	84	09.6		40.1	294	35.0		27.6
23	168	33.8	163	39.4		38.0	158	34.8		36.8	99	11.7		40.2	309	37.5		27.6
24	183	36.3	178	39.0	+0	39.2	173	35.5	+3	37.6	114	13.7	+21	40.2	324	40.1	-12	27.5
Dif	—		-4		+13		+7		+8		+21		+1		+26		0	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 05 ^m 6			Edad: 14 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:2 PMG: 23 ^h 40 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	33.7	+2	10.9	16	34.9	+0	43.5	60 N	4 10	5 01	5 43	17 49	86	5 01	14
1	193	33.9		11.9	31	05.8 ¹¹⁹		31.9 ¹¹⁶	58	17	05	45	47	84	01	17
2	208	34.1		12.9	45	36.6 ¹¹⁸		20.2 ¹¹⁷	56	24	09	46	46	81	01	20
3	223	34.3		13.9	60	07.5 ¹¹⁹	+0	08.5 ¹¹⁷	54	29	12	47	45	78	01	22
4	238	34.4		14.9	74	38.3 ¹¹⁸	-0	03.2 ¹¹⁷	52	34	15	49	43	77	01	24
5	253	34.6	+2	15.8	89	09.0 ¹¹⁷	-0	15.0 ¹¹⁸	50	4 39	5 17	5 50	17 42	75	5 01	26
6	268	34.8	+2	16.8	103	39.7 ¹¹⁷	-0	26.7 ¹¹⁷	45	4 48	5 22	5 52	17 40	71	5 02	29
7	283	35.0		17.8	118	10.4 ¹¹⁷		38.4 ¹¹⁷	40	4 55	27	54	38	68	02	32
8	298	35.2		18.8	132	41.1 ¹¹⁷	-0	50.2 ¹¹⁸	35	5 00	30	55	36	65	02	35
9	313	35.4		19.8	147	11.7 ¹¹⁶	-1	02.0 ¹¹⁸	30	05	33	57	35	62	02	38
10	328	35.6		20.7	161	42.3 ¹¹⁶		13.7 ¹¹⁷	20	11	37	5 59	33	57	03	41
11	343	35.8	+2	21.7	176	12.8 ¹¹⁵	-1	25.5 ¹¹⁸	10 N	5 15	5 40	6 01	17 30	54	5 03	45
12	358	36.0	+2	22.7	190	43.3 ¹¹⁵	-1	37.3 ¹¹⁸	0	5 18	5 42	6 02	17 28	51	5 03	49
13	13	36.2		23.7	205	13.8 ¹¹⁵	-1	49.1 ¹¹⁸	10 S	19	43	04	27	46	03	53
14	28	36.3		24.7	219	44.2 ¹¹⁴	-2	00.8 ¹¹⁷	20	18	43	05	24	43	03	57
15	43	36.5		25.6	234	14.6 ¹¹⁴		12.6 ¹¹⁸	30	15	43	07	22	39	03	61
16	58	36.7		26.6	248	44.9 ¹¹³		24.4 ¹¹⁸	35	13	43	08	21	36	04	63
17	73	36.9	+2	27.6	263	15.2 ¹¹³	-2	36.2 ¹¹⁸	40	5 11	5 42	6 09	17 19	34	5 04	66
18	88	37.1	+2	28.6	277	45.5 ¹¹³	-2	48.0 ¹¹⁸	45	5 07	5 41	6 10	17 18	30	5 04	69
19	103	37.3		29.6	292	15.7 ¹¹²	-2	59.8 ¹¹⁸	50	5 01	39	11	16	26	04	74
20	118	37.5		30.5	306	45.9 ¹¹²	-3	11.5 ¹¹⁷	52	4 59	38	12	15	25	04	76
21	133	37.7		31.5	321	16.0 ¹¹¹		23.3 ¹¹⁸	54	56	37	13	14	23	04	78
22	148	37.9		32.5	335	46.1 ¹¹¹		35.1 ¹¹⁸	56	53	36	13	13	20	04	80
23	163	38.1		33.5	350	16.1 ¹¹⁰		46.8 ¹¹⁷	58	49	35	14	11	19	04	82
24	178	38.2	+2	34.5	4	46.1 ¹¹⁰	-3	58.5 ¹¹⁷	60 S	4 44	5 33	6 15	17 10	16	5 04	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 43 ^m 7		Mag: -4.0 PMG: 12 ^h 06 ^m		Mag: +1.2 PMG: 12 ^h 25 ^m		Mag: -2.2 PMG: 16 ^h 21 ^m		Mag: +0.3 PMG: 2 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	183	36.3	178	39.0	+0	39.2	173	35.5	+3	37.6	114	13.7	+21	40.2	324	40.1	-12	27.5
1	198	38.8	193	38.7		40.5	188	36.2		38.4	129	15.8		40.3	339	42.7		27.5
2	213	41.2	208	38.3		41.8	203	36.9		39.1	144	17.9		40.4	354	45.3		27.4
3	228	43.7	223	37.9		43.0	218	37.6		39.9	159	19.9		40.4	9	47.9		27.4
4	243	46.1	238	37.5		44.3	233	38.3		40.7	174	22.0		40.5	24	50.5		27.3
5	258	48.6	253	37.2	+0	45.5	248	39.0	+3	41.5	189	24.0	+21	40.5	39	53.1	-12	27.3
6	273	51.1	268	36.8	+0	46.8	263	39.7	+3	42.2	204	26.1	+21	40.6	54	55.7	-12	27.2
7	288	53.5	283	36.4		48.1	278	40.4		43.0	219	28.1		40.7	69	58.3		27.2
8	303	56.0	298	36.0		49.3	293	41.1		43.8	234	30.2		40.7	85	00.9		27.2
9	318	58.5	313	35.7		50.6	308	41.8		44.6	249	32.2		40.8	100	03.5		27.1
10	334	00.9	328	35.3		51.8	323	42.5		45.3	264	34.3		40.8	115	06.1		27.1
11	349	03.4	343	34.9	+0	53.1	338	43.2	+3	46.1	279	36.3	+21	40.9	130	08.7	-12	27.0
12	4	05.9	358	34.5	+0	54.4	353	43.9	+3	46.9	294	38.4	+21	41.0	145	11.3	-12	27.0
13	19	08.3	13	34.2		55.6	8	44.6		47.7	309	40.5		41.0	160	13.9		26.9
14	34	10.8	28	33.8		56.9	23	45.3		48.4	324	42.5		41.1	175	16.5		26.9
15	49	13.3	43	33.4		58.1	38	46.0		49.2	339	44.6		41.2	190	19.1		26.8
16	64	15.7	58	33.0	+0	59.4	53	46.7		50.0	354	46.6		41.2	205	21.7		26.8
17	79	18.2	73	32.6	+1	00.6	68	47.4	+3	50.8	9	48.7	+21	41.3	220	24.3	-12	26.7
18	94	20.6	88	32.3	+1	01.9	83	48.1	+3	51.5	24	50.7	+21	41.3	235	26.9	-12	26.7
19	109	23.1	103	31.9		03.2	98	48.9		52.3	39	52.8		41.4	250	29.5		26.6
20	124	25.6	118	31.5		04.4	113	49.6		53.1	54	54.8		41.5	265	32.1		26.6
21	139	28.0	133	31.1		05.7	128	50.3		53.8	69	56.9		41.5	280	34.7		26.5
22	154	30.5	148	30.8		06.9	143	51.0		54.6	84	58.9		41.6	295	37.3		26.5
23	169	33.0	163	30.4		08.2	158	51.7		55.4	100	01.0		41.6	310	39.9		26.4
24	184	35.4	178	30.0	+1	09.5	173	52.4	+3	56.2	115	03.0	+21	41.7	325	42.5	-12	26.4
Dif	—		-4		+13		+7		+8		+21		+1		+26			0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 3			Edad: 15 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'8 R°: ***m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	38.2	+2 34.5	4	46.1	-3 58.5	110	60 N	18 32	19 14	20 06	19 15 89	5 15 17	
1	193	38.4		19	16.1	-4 10.3	118	58	30	10	19 58	11 85	18 20	
2	208	38.6		33	46.0	22.0	117	56	28	06	51	07 82	21 22	
3	223	38.8		48	15.9	33.7	117	54	27	19 03	46	03 80	23 22	
4	238	39.0		62	45.7	45.4	117	52	25	18 59	40	19 00 78	25 26	
5	253	39.2	+2 39.3	77	15.4	-4 57.1	117	50	18 24	18 57	19 36	18 57 76	5 27 28	
6	268	39.4	+2 40.3	91	45.1	-5 08.7	116	45	18 21	18 51	19 26	18 51 72	5 31 31	
7	283	39.6		106	14.8	20.4	117	40	19	46	18	46 68	34 35	
8	298	39.8		120	44.4	32.0	116	35	17	43	13	41 66	37 38	
9	313	40.0		135	14.0	43.6	116	30	16	40	08	37 64	40 40	
10	328	40.1		149	43.5	-5 55.2	116	20	13	35	19 01	30 60	44 44	
11	343	40.3	+2 45.2	164	13.0	-6 06.7	115	10 N	18 11	18 32	18 56	18 24 56	5 48 48	
12	358	40.5	+2 46.2	178	42.4	-6 18.3	116	0	18 09	18 29	18 53	18 19 52	5 52 51	
13	13	40.7		193	11.8	29.8	115	10 S	07	28	52	13 49	5 56 55	
14	28	40.9		207	41.1	41.2	114	20	05	27	52	07 46	6 00 58	
15	43	41.1		222	10.3	-6 52.7	115	30	02	26	54	18 01 41	04 63	
16	58	41.3		236	39.5	-7 04.1	114	35	01	26	56	17 57 39	07 65	
17	73	41.5	+2 51.1	251	08.7	-7 15.5	114	40	18 00	18 27	18 58	17 53 36	6 10 68	
18	88	41.7	+2 52.0	265	37.8	-7 26.9	114	45	17 58	18 28	19 02	17 48 33	6 13 72	
19	103	41.9		280	06.8	38.2	113	50	57	29	06	42 30	18 75	
20	118	42.0		294	35.8	-7 49.5	113	52	56	29	09	40 27	20 77	
21	133	42.2		309	04.7	-8 00.8	113	54	55	30	11	37 26	22 79	
22	148	42.4		323	33.6	12.0	112	56	54	31	14	33 24	24 82	
23	163	42.6		338	02.4	23.2	112	58	53	32	18	30 21	26 85	
24	178	42.8	+2 57.9	352	31.2	-8 34.3	111	60 S	17 52	18 33	19 22	17 26 19	6 29 88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 39 ^m 7		Mag: -4.0 PMG: 12 ^h 06 ^m		Mag: +1.2 PMG: 12 ^h 24 ^m		Mag: -2.2 PMG: 16 ^h 18 ^m		Mag: +0.3 PMG: 2 ^h 17 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	184	35.4	178	30.0	+1 09.5	173	52.4	+3 56.2	115	03.0	+21 41.7	325	42.5	-12 26.4
1	199	37.9	193	29.6	10.7	188	53.1	56.9	130	05.1	41.8	340	45.1	26.3
2	214	40.4	208	29.3	12.0	203	53.8	57.7	145	07.1	41.8	355	47.7	26.3
3	229	42.8	223	28.9	13.2	218	54.5	58.5	160	09.2	41.9	10	50.3	26.2
4	244	45.3	238	28.5	14.5	233	55.2	+3 59.3	175	11.2	41.9	25	52.9	26.2
5	259	47.7	253	28.1	+1 15.8	248	55.9	+4 00.0	190	13.3	+21 42.0	40	55.5	-12 26.1
6	274	50.2	268	27.7	+1 17.0	263	56.6	+4 00.8	205	15.3	+21 42.1	55	58.0	-12 26.1
7	289	52.7	283	27.4	18.3	278	57.3	01.6	220	17.4	42.1	71	00.6	26.0
8	304	55.1	298	27.0	19.5	293	58.0	02.3	235	19.4	42.2	86	03.2	26.0
9	319	57.6	313	26.6	20.8	308	58.7	03.1	250	21.5	42.3	101	05.8	25.9
10	335	00.1	328	26.2	22.1	323	59.4	03.9	265	23.5	42.3	116	08.4	25.9
11	350	02.5	343	25.9	+1 23.3	339	00.1	+4 04.7	280	25.6	+21 42.4	131	11.0	-12 25.8
12	5	05.0	358	25.5	+1 24.6	354	00.8	+4 05.4	295	27.6	+21 42.4	146	13.6	-12 25.8
13	20	07.5	13	25.1	25.8	9	01.5	06.2	310	29.7	42.5	161	16.2	25.7
14	35	09.9	28	24.7	27.1	24	02.2	07.0	325	31.7	42.6	176	18.8	25.7
15	50	12.4	43	24.4	28.3	39	02.9	07.7	340	33.8	42.6	191	21.4	25.6
16	65	14.9	58	24.0	29.6	54	03.6	08.5	355	35.8	42.7	206	24.0	25.6
17	80	17.3	73	23.6	+1 30.9	69	04.3	+4 09.3	10	37.8	+21 42.7	221	26.6	-12 25.5
18	95	19.8	88	23.2	+1 32.1	84	05.0	+4 10.1	25	39.9	+21 42.8	236	29.2	-12 25.5
19	110	22.2	103	22.9	33.4	99	05.7	10.8	40	41.9	42.9	251	31.8	25.4
20	125	24.7	118	22.5	34.6	114	06.4	11.6	55	44.0	42.9	266	34.4	25.4
21	140	27.2	133	22.1	35.9	129	07.1	12.4	70	46.0	43.0	281	37.0	25.3
22	155	29.6	148	21.7	37.2	144	07.8	13.1	85	48.1	43.0	296	39.6	25.3
23	170	32.1	163	21.3	38.4	159	08.5	13.9	100	50.1	43.1	311	42.2	25.2
24	185	34.6	178	21.0	+1 39.7	174	09.2	+4 14.7	115	52.2	+21 43.2	326	44.8	-12 25.2
Dif	—		-4 +13		+7 +8		+20 +1		+26 0					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 05 ^m 0			Edad: 16 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'2 SD: 16'0 PMG: 0 ^h 31 ^m R°: 53 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	42.8	+2	57.9	352	31.2	97	-8	34.3	60 N	4	03	4	55	5	37	20	44		
1	193	43.0		58.9	6	59.9	97		45.4	58	11	4	59	39		36	85			
2	208	43.2	+2	59.9	21	28.6	97	-8	56.5	56	18	5	03	41		29	83			
3	223	43.4	+3	00.8	35	57.1	95	-9	07.5	54	24		07	43		23	80			
4	238	43.6		01.8	50	25.7	96		18.4	52	29		10	44		18	78			
5	253	43.8	+3	02.8	64	54.2	95	-9	29.4	50	4	34	5	13	5	45	20	13		
6	268	43.9	+3	03.8	79	22.6	94	-9	40.2	45	4	44	5	19	5	48	20	03		
7	283	44.1		04.7	93	50.9	93	-9	51.1	40	51		23	50		19	54			
8	298	44.3		05.7	108	19.2	93	-10	01.8	35	4	57	27	52		47	67			
9	313	44.5		06.7	122	47.5	93		12.6	30	5	02	30	54		41	65			
10	328	44.7		07.7	137	15.6	91		23.2	20	09		35	5	57	30	61			
11	343	44.9	+3	08.6	151	43.8	92	-10	33.8	10 N	5	14	5	38	6	00	19	20		
12	358	45.1	+3	09.6	166	11.8	90	-10	44.4	0	5	17	5	41	6	02	19	11		
13	13	45.3		10.6	180	39.8	90	-10	54.9	10 S	18		43	04		19	02			
14	28	45.5		11.6	195	07.8	90	-11	05.3	20	18		44	06		18	53			
15	43	45.6		12.5	209	35.6	88		15.7	30	17		44	08		42	46			
16	58	45.8		13.5	224	03.5	89		26.0	35	15		44	10		36	43			
17	73	46.0	+3	14.5	238	31.2	87	-11	36.3	40	5	13	5	44	6	11	18	29		
18	88	46.2	+3	15.5	252	58.9	87	-11	46.5	45	5	09	5	43	6	13	18	21		
19	103	46.4		16.4	267	26.6	87	-11	56.6	50	05		42	15		12	34			
20	118	46.6		17.4	281	54.1	85	-12	06.7	52	02		42	15		07	33			
21	133	46.8		18.4	296	21.6	85		16.7	54	5	00	41	16		18	03			
22	148	47.0		19.4	310	49.1	85		26.6	56	4	57	40	17		17	57			
23	163	47.2		20.3	325	16.5	84		36.5	58	53		39	18		51	26			
24	178	47.4	+3	21.3	339	43.8	83	-12	46.3	60 S	4	49	5	38	6	20	17	45		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 11 ^h 35 ^m 8			Mag: -4.0 PMG: 12 ^h 07 ^m			Mag: +1.2 PMG: 12 ^h 23 ^m			Mag: -2.2 PMG: 16 ^h 14 ^m			Mag: +0.3 PMG: 2 ^h 13 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	185	34.6	178	21.0	+1	39.7	174	09.2	+4	14.7	115	52.2	+21	43.2	326	44.8	-12	25.2		
1	200	37.0	193	20.6		40.9	189	09.9		15.5	130	54.2		43.2	341	47.4		25.1		
2	215	39.5	208	20.2		42.2	204	10.6		16.2	145	56.3		43.3	356	50.0		25.1		
3	230	42.0	223	19.8		43.4	219	11.3		17.0	160	58.3		43.4	11	52.6		25.0		
4	245	44.4	238	19.5		44.7	234	12.0		17.8	176	00.3		43.4	26	55.2		25.0		
5	260	46.9	253	19.1	+1	46.0	249	12.7	+4	18.5	191	02.4	+21	43.5	41	57.9	-12	24.9		
6	275	49.3	268	18.7	+1	47.2	264	13.4	+4	19.3	206	04.4	+21	43.5	57	00.5	-12	24.9		
7	290	51.8	283	18.3		48.5	279	14.1		20.1	221	06.5		43.6	72	03.1		24.8		
8	305	54.3	298	18.0		49.7	294	14.8		20.8	236	08.5		43.7	87	05.7		24.8		
9	320	56.7	313	17.6		51.0	309	15.5		21.6	251	10.6		43.7	102	08.3		24.7		
10	335	59.2	328	17.2		52.2	324	16.2		22.4	266	12.6		43.8	117	10.9		24.7		
11	351	01.7	343	16.8	+1	53.5	339	16.9	+4	23.2	281	14.7	+21	43.8	132	13.5	-12	24.6		
12	6	04.1	358	16.4	+1	54.8	354	17.6	+4	23.9	296	16.7	+21	43.9	147	16.1	-12	24.6		
13	21	06.6	13	16.1		56.0	9	18.3		24.7	311	18.7		44.0	162	18.7		24.5		
14	36	09.1	28	15.7		57.3	24	19.0		25.5	326	20.8		44.0	177	21.3		24.5		
15	51	11.5	43	15.3		58.5	39	19.7		26.2	341	22.8		44.1	192	23.9		24.4		
16	66	14.0	58	14.9	+1	59.8	54	20.4		27.0	356	24.9		44.2	207	26.5		24.4		
17	81	16.5	73	14.6	+2	01.1	69	21.1	+4	27.8	11	26.9	+21	44.2	222	29.1	-12	24.3		
18	96	18.9	88	14.2	+2	02.3	84	21.8	+4	28.5	26	28.9	+21	44.3	237	31.7	-12	24.3		
19	111	21.4	103	13.8		03.6	99	22.5		29.3	41	31.0		44.3	252	34.3		24.2		
20	126	23.8	118	13.4		04.8	114	23.2		30.1	56	33.0		44.4	267	36.9		24.2		
21	141	26.3	133	13.0		06.1	129	23.9		30.8	71	35.1		44.5	282	39.5		24.1		
22	156	28.8	148	12.7		07.3	144	24.6		31.6	86	37.1		44.5	297	42.1		24.1		
23	171	31.2	163	12.3		08.6	159	25.3		32.4	101	39.2		44.6	312	44.7		24.0		
24	186	33.7	178	11.9	+2	09.9	174	26.0	+4	33.1	116	41.2	+21	44.6	327	47.3	-12	24.0		
Dif	—			-4			+13	+7			+8	+20			+1	+26			+	+

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 04 ^m 7			Edad: 17 ^d 2 PHE { SD: 16 ^h 1 PMG: 1 ^h 24 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	m
0	178	47.4	+3	339	43.8	-12	46.3	60 N	18 37	19 19	20 12	22 11 84	5 53	26
1	193	47.5		354	11.1	83	-12	56.0	58	34	14	20 04	22 01 80	6 01 29
2	208	47.7		8	38.3	82	-13	05.6	56	32	10	19 56	21 52 78	08 32
3	223	47.9		23	05.4	81		15.2	54	30	06	50	43 77	15 34
4	238	48.1		37	32.5	81		24.6	52	29	03	44	36 75	21 35
5	253	48.3	+3	51	59.5	80	-13	34.0	50	18 27	19 00	19 39	21 30 73	6 26 37
6	268	48.5	+3	66	26.5	80	-13	43.4	45	18 24	18 54	19 29	21 16 70	6 38 40
7	283	48.7		80	53.4	79	-13	52.6	40	21	49	21	21 04 68	47 44
8	298	48.9		95	20.2	78	-14	01.8	35	19	44	14	20 54 67	6 56 45
9	313	49.1		109	47.0	78		10.8	30	17	41	09	46 65	7 03 48
10	328	49.2		124	13.7	77		19.8	20	13	36	19 01	31 62	16 50
11	343	49.4	+3	138	40.4	77	-14	28.7	10 N	18 11	18 32	18 56	20 18 60	7 27 53
12	358	49.6	+3	153	07.0	76	-14	37.5	0	18 08	18 29	18 53	20 06 58	7 37 56
13	13	49.8		167	33.5	75		46.3	10 S	05	26	51	19 55 55	48 59
14	28	50.0		182	00.0	75	-14	54.9	20	03	25	50	42 53	7 59 62
15	43	50.2		196	26.5	75	-15	03.4	30	18 00	24	52	28 50	8 12 65
16	58	50.4		210	52.8	73		11.9	35	17 58	24	53	19 49	19 67
17	73	50.6	+3	225	19.1	73	-15	20.3	40	17 57	18 24	18 55	19 10 47	8 27 70
18	88	50.8	+3	239	45.4	73	-15	28.5	45	17 55	18 24	18 58	18 59 44	8 37 72
19	103	50.9		254	11.6	72		36.7	50	52	25	19 02	46 41	49 76
20	118	51.1		268	37.7	71		44.8	52	51	25	04	40 40	8 55 77
21	133	51.3		283	03.8	71	-15	52.7	54	50	25	06	33 38	9 01 79
22	148	51.5		297	29.8	70	-16	00.6	56	49	26	09	26 36	08 81
23	163	51.7		311	55.8	70		08.4	58	48	27	12	17 34	16 83
24	178	51.9	+3	326	21.7	69	-16	16.0	60 S	17 46	18 27	19 16	18 08 31	9 25 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 31 ^m 9		Mag: -4.0 PMG: 12 ^h 08 ^m		Mag: +1.2 PMG: 12 ^h 22 ^m		Mag: -2.2 PMG: 16 ^h 11 ^m		Mag: +0.3 PMG: 2 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	186	33.7	178	11.9	+2	09.9	174	26.0	+4	33.1	116	41.2	+21	44.6	327	47.3	-12	24.0
1	201	36.2	193	11.5		11.1	189	26.7		33.9	131	43.2		44.7	342	49.9		23.9
2	216	38.6	208	11.2		12.4	204	27.4		34.7	146	45.3		44.8	357	52.5		23.9
3	231	41.1	223	10.8		13.6	219	28.1		35.5	161	47.3		44.8	12	55.1		23.8
4	246	43.6	238	10.4		14.9	234	28.8		36.2	176	49.3		44.9	27	57.7		23.8
5	261	46.0	253	10.0	+2	16.1	249	29.5	+4	37.0	191	51.4	+21	44.9	43	00.3	-12	23.7
6	276	48.5	268	09.6	+2	17.4	264	30.2	+4	37.8	206	53.4	+21	45.0	58	02.9	-12	23.7
7	291	51.0	283	09.3		18.6	279	30.9		38.5	221	55.5		45.1	73	05.5		23.6
8	306	53.4	298	08.9		19.9	294	31.6		39.3	236	57.5		45.1	88	08.1		23.6
9	321	55.9	313	08.5		21.2	309	32.3		40.1	251	59.5		45.2	103	10.7		23.5
10	336	58.3	328	08.1		22.4	324	33.0		40.8	267	01.6		45.3	118	13.3		23.5
11	352	00.8	343	07.8	+2	23.7	339	33.7	+4	41.6	282	03.6	+21	45.3	133	15.9	-12	23.4
12	7	03.3	358	07.4	+2	24.9	354	34.4	+4	42.4	297	05.7	+21	45.4	148	18.6	-12	23.4
13	22	05.7	13	07.0		26.2	9	35.1		43.1	312	07.7		45.4	163	21.2		23.3
14	37	08.2	28	06.6		27.4	24	35.8		43.9	327	09.7		45.5	178	23.8		23.3
15	52	10.7	43	06.2		28.7	39	36.5		44.7	342	11.8		45.6	193	26.4		23.2
16	67	13.1	58	05.9		30.0	54	37.2		45.4	357	13.8		45.6	208	29.0		23.2
17	82	15.6	73	05.5	+2	31.2	69	37.9	+4	46.2	12	15.8	+21	45.7	223	31.6	-12	23.1
18	97	18.1	88	05.1	+2	32.5	84	38.6	+4	47.0	27	17.9	+21	45.7	238	34.2	-12	23.1
19	112	20.5	103	04.7		33.7	99	39.3		47.7	42	19.9		45.8	253	36.8		23.0
20	127	23.0	118	04.4		35.0	114	40.0		48.5	57	21.9		45.9	268	39.4		23.0
21	142	25.4	133	04.0		36.2	129	40.7		49.3	72	24.0		45.9	283	42.0		22.9
22	157	27.9	148	03.6		37.5	144	41.4		50.0	87	26.0		46.0	298	44.6		22.9
23	172	30.4	163	03.2		38.7	159	42.1		50.8	102	28.1		46.1	313	47.2		22.8
24	187	32.8	178	02.8	+2	40.0	174	42.8	+4	51.6	117	30.1	+21	46.1	328	49.8	-12	22.8
Dif	—		-4	+13			+7	+8			+20	+1			+26	+1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 04 ^m 4			Edad: 18 ^d 2 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/7 PMG: 2 ^h 20 ^m R°: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	51.9	+3	44.6	326	21.7	-16	16.0	60 N	3	56	4	49	5	31	23	35
1	193	52.1		45.6	340	47.5		23.6	58	4	05		54		33	21	72
2	208	52.3		46.6	355	13.3		31.1	56	12		4	58		36	10	71
3	223	52.5		47.6	9	39.1		68	54	18		5	02		38	23	00
4	238	52.6		48.5	24	04.8		67	52	24			05		39	22	51
5	253	52.8	+3	49.5	38	30.4	-16	52.8	50	4	29	5	08	5	41	22	43
6	268	53.0	+3	50.5	52	56.0	-16	59.8	45	4	40	5	15	5	44	22	26
7	283	53.2		51.4	67	21.6	-17	06.7	40		48		20		47	12	66
8	298	53.4		52.4	81	47.1		65	35	4	54		24		50	22	01
9	313	53.6		53.4	96	12.5		64	30	5	00		28		52	21	51
10	328	53.8		54.4	110	37.9		64	20		07		33		55	33	62
11	343	54.0	+3	55.3	125	03.3	-17	33.3	10 N	5	13	5	37	5	58	21	18
12	358	54.2	+3	56.3	139	28.6	-17	39.7	0	5	16	5	40	6	01	21	04
13	13	54.3		57.3	153	53.8		45.9	10 S		18		43	04	20	50	
14	28	54.5		58.2	168	19.0		52.0	20	19		44	07		35	56	
15	43	54.7	+3	59.2	182	44.2	-17	58.0	30	18		46	09		18	55	
16	58	54.9	+4	00.2	197	09.3	-18	03.9	35	17		46	11		20	08	
17	73	55.1	+4	01.1	211	34.4	-18	09.7	40	5	15	5	46	6	13	19	57
18	88	55.3	+4	02.1	225	59.4	-18	15.3	45	5	12	5	46	6	15	19	43
19	103	55.5		03.1	240	24.4		20.8	50		08		45	18		27	50
20	118	55.7		04.0	254	49.4		26.2	52		06		45	19		20	48
21	133	55.8		05.0	269	14.3		31.5	54		04		45	20		11	48
22	148	56.0		06.0	283	39.2		36.7	56	5	01		44	21		19	02
23	163	56.2		06.9	298	04.0		41.7	58	4	58		44	23		18	51
24	178	56.4	+4	07.9	312	28.8	-18	46.6	60 S	4	54		5	43	6	25	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 27 ^m 9		Mag: -4.0 PMG: 12 ^h 08 ^m			Mag: +1.2 PMG: 12 ^h 21 ^m			Mag: -2.2 PMG: 16 ^h 08 ^m			Mag: +0.3 PMG: 2 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	187	32.8	178	02.8	+2	40.0	174	42.8	+4	51.6	117	30.1	+21	46.1				
1	202	35.3	193	02.5		41.3	189	43.5		52.3	132	32.1		46.2				
2	217	37.8	208	02.1		42.5	204	44.2		53.1	147	34.2		46.2				
3	232	40.2	223	01.7		43.8	219	44.9		53.8	162	36.2		46.3				
4	247	42.7	238	01.3		45.0	234	45.6		54.6	177	38.2		46.4				
5	262	45.2	253	00.9	+2	46.3	249	46.3	+4	55.4	192	40.3	+21	46.4				
6	277	47.6	268	00.6	+2	47.5	264	47.0	+4	56.1	207	42.3	+21	46.5				
7	292	50.1	283	00.2		48.8	279	47.7		56.9	222	44.3		46.5				
8	307	52.6	297	59.8		50.0	294	48.4		57.7	237	46.4		46.6				
9	322	55.0	312	59.4		51.3	309	49.1		58.4	252	48.4		46.7				
10	337	57.5	327	59.0		52.5	324	49.8	+4	59.2	267	50.4		46.7				
11	352	59.9	342	58.7	+2	53.8	339	50.5	+5	00.0	282	52.5	+21	46.8				
12	8	02.4	357	58.3	+2	55.1	354	51.2	+5	00.7	297	54.5	+21	46.9				
13	23	04.9	12	57.9		56.3	9	51.9		01.5	312	56.5		46.9				
14	38	07.3	27	57.5		57.6	24	52.6		02.3	327	58.6		47.0				
15	53	09.8	42	57.2	+2	58.8	39	53.4		03.0	343	00.6		47.0				
16	68	12.3	57	56.8	+3	00.1	54	54.1		03.8	358	02.6		47.1				
17	83	14.7	72	56.4	+3	01.3	69	54.8	+5	04.5	13	04.6	+21	47.2				
18	98	17.2	87	56.0	+3	02.6	84	55.5	+5	05.3	28	06.7	+21	47.2				
19	113	19.7	102	55.6		03.8	99	56.2		06.1	43	08.7		47.3				
20	128	22.1	117	55.3		05.1	114	56.9		06.8	58	10.7		47.3				
21	143	24.6	132	54.9		06.3	129	57.6		07.6	73	12.8		47.4				
22	158	27.1	147	54.5		07.6	144	58.3		08.4	88	14.8		47.5				
23	173	29.5	162	54.1		08.8	159	59.0		09.1	103	16.8		47.5				
24	188	32.0	177	53.7	+3	10.1	174	59.7	+5	09.9	118	18.9	+21	47.6				
Dif	—		-4		+13		+7		+8		+20		+1		+26		+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:0			Edad: 19 ^d 2 PHE	SD: 16:2				R°: 59 ^m				Hora R°		Hora R°	
	PMG: 12 ^h 04 ^m 1															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico					
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	178	56.4	+4 07.9	312	28.8	-18 46.6	58	60 N	18 42	19 25	20 18	** ** *	** ** *	6 55	50	
1	193	56.6	08.9	326	53.6	51.4	48	58	39	19	09	** ** *	** ** *	7 09	51	
2	208	56.8	09.9	341	18.4	-18 56.0	46	56	36	14	20 01	** ** *	** ** *	21	52	
3	223	57.0	10.8	355	43.1	-19 00.5	45	54	34	10	19 54	** ** *	** ** *	31	55	
4	238	57.2	11.8	10	07.7	04.9	44	52	32	07	48	** ** *	** ** *	40	53	
5	253	57.3	+4 12.8	24	32.4	-19 09.2	43	50	18 30	19 03	19 43	23 51	59	7 48	54	
6	268	57.5	+4 13.7	38	57.0	-19 13.3	41	45	18 27	18 56	19 32	23 33	59	8 06	55	
7	283	57.7	14.7	53	21.6	17.3	40	40	23	51	23	18 59	20	56		
8	298	57.9	15.7	67	46.2	21.2	39	35	21	46	16	23 05	59	32	57	
9	313	58.1	16.6	82	10.7	25.0	38	30	18	42	10	22 54	59	8 43	57	
10	328	58.3	17.6	96	35.2	28.6	36	20	14	36	19 02	35 59	9 01	58		
11	343	58.5	+4 18.6	110	59.7	-19 32.0	34	10 N	18 11	18 32	18 56	22 18	60	9 17	59	
12	358	58.7	+4 19.5	125	24.2	-19 35.4	32	0	18 07	18 28	18 52	22 03	59	9 32	59	
13	13	58.8	20.5	139	48.6	38.6	30	10 S	04	25	50	21 48	59	9 47	60	
14	28	59.0	21.5	154	13.0	41.7	31	20	18 01	23	49	31 59	10	03	60	
15	43	59.2	22.4	168	37.4	44.6	29	30	17 58	22	49	13 59	21	61		
16	58	59.4	23.4	183	01.8	47.4	28	35	56	21	50	21 02	59	32	61	
17	73	59.6	+4 24.4	197	26.2	-19 50.1	27	40	17 54	18 21	18 52	20 49	59	10 44	62	
18	88	59.8	+4 25.3	211	50.6	-19 52.7	26	45	17 51	18 20	18 54	20 34	59	10 58	63	
19	104	00.0	26.3	226	14.9	55.1	24	50	48	20	58	17 58	11	16	63	
20	119	00.2	27.2	240	39.3	57.3	22	52	47	20	18 59	20 08	58	24	64	
21	134	00.3	28.2	255	03.6	-19 59.5	22	54	45	20	19 01	19 59	58	33	65	
22	149	00.5	29.2	269	27.9	-20 01.5	20	56	44	21	04	48 58	44	65		
23	164	00.7	30.1	283	52.2	03.3	18	58	42	21	06	36 57	11	56	65	
24	179	00.9	+4 31.1	298	16.5	-20 05.0	17	60 S	17 40	18 21	19 10	19 22	57	12 09	67	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 11 ^h 24 ^m 0		Mag: -4.0 PMG: 12 ^h 09 ^m		Mag: +1.2 PMG: 12 ^h 19 ^m		Mag: -2.2 PMG: 16 ^h 05 ^m			Mag: +0.3 PMG: 2 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	188	32.0	177	53.7	+3 10.1	174	59.7	+5 09.9	118	18.9	+21 47.6	329	52.4	-12 21.5	
1	203	34.4	192	53.3	11.3	190	00.4	10.7	133	20.9	47.7	344	55.0	21.5	
2	218	36.9	207	53.0	12.6	205	01.1	11.4	148	22.9	47.7	359	57.6	21.4	
3	233	39.4	222	52.6	13.9	220	01.8	12.2	163	24.9	47.8	15	00.2	21.4	
4	248	41.8	237	52.2	15.1	235	02.5	12.9	178	27.0	47.8	30	02.8	21.3	
5	263	44.3	252	51.8	+3 16.4	250	03.2	+5 13.7	193	29.0	+21 47.9	45	05.4	-12 21.2	
6	278	46.8	267	51.4	+3 17.6	265	03.9	+5 14.5	208	31.0	+21 48.0	60	08.1	-12 21.2	
7	293	49.2	282	51.1	18.9	280	04.6	15.2	223	33.1	48.0	75	10.7	21.1	
8	308	51.7	297	50.7	20.1	295	05.3	16.0	238	35.1	48.1	90	13.3	21.1	
9	323	54.2	312	50.3	21.4	310	06.0	16.8	253	37.1	48.1	105	15.9	21.0	
10	338	56.6	327	49.9	22.6	325	06.7	17.5	268	39.1	48.2	120	18.5	21.0	
11	353	59.1	342	49.5	+3 23.9	340	07.4	+5 18.3	283	41.2	+21 48.3	135	21.1	-12 20.9	
12	9	01.5	357	49.2	+3 25.1	355	08.1	+5 19.0	298	43.2	+21 48.3	150	23.7	-12 20.9	
13	24	04.0	12	48.8	26.4	10	08.8	19.8	313	45.2	48.4	165	26.3	20.8	
14	39	06.5	27	48.4	27.6	25	09.5	20.6	328	47.3	48.5	180	28.9	20.8	
15	54	08.9	42	48.0	28.9	40	10.2	21.3	343	49.3	48.5	195	31.5	20.7	
16	69	11.4	57	47.6	30.1	55	10.9	22.1	358	51.3	48.6	210	34.2	20.7	
17	84	13.9	72	47.3	+3 31.4	70	11.6	+5 22.8	13	53.3	+21 48.6	225	36.8	-12 20.6	
18	99	16.3	87	46.9	+3 32.6	85	12.3	+5 23.6	28	55.4	+21 48.7	240	39.4	-12 20.6	
19	114	18.8	102	46.5	33.9	100	13.0	24.4	43	57.4	48.8	255	42.0	20.5	
20	129	21.3	117	46.1	35.1	115	13.7	25.1	58	59.4	48.8	270	44.6	20.5	
21	144	23.7	132	45.7	36.4	130	14.4	25.9	74	01.4	48.9	285	47.2	20.4	
22	159	26.2	147	45.3	37.6	145	15.1	26.6	89	03.5	49.0	300	49.8	20.4	
23	174	28.7	162	45.0	38.9	160	15.8	27.4	104	05.5	49.0	315	52.4	20.3	
24	189	31.1	177	44.6	+3 40.1	175	16.5	+5 28.2	119	07.5	+21 49.1	330	55.0	-12 20.3	
Dif	—		-4	+13		+7	+8		+20	+1		+26		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 8			Edad: 20 ^d 2 PHE { 4 ^h : 59/6 12 ^h : 59/5 20 ^h : 59/5 PMG: 4 ^h 17 ^m R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	00.9	+4	31.1	298	16.5	-20	05.0	60 N	3 49	4 42	5 25	0 48	58	7 45	64
1	194	01.1		32.1	312	40.8	53	06.6	16	58	3 58	48	28	33	59	8 00
2	209	01.3		33.0	327	05.1	53	08.1	15	56	4 06	52	30	21	58	13
3	224	01.5		34.0	341	29.4	53	09.4	13	54	13	4 57	33	09	60	24
4	239	01.6		35.0	355	53.7	53	10.5	11	52	19	5 00	35	0 00	59	33
5	254	01.8	+4	35.9	10	18.0	53	-20	11.6	50	4 25	5 04	5 37	**	**	8 42
6	269	02.0	+4	36.9	24	42.3	53	-20	12.5	9	45	4 36	5 11	5 41	**	9 01
7	284	02.2		37.9	39	06.6	53	13.2	7	40	44	17	44	**	16	61
8	299	02.4		38.8	53	30.9	53	13.9	7	35	51	21	47	**	29	61
9	314	02.6		39.8	67	55.2	53	14.3	4	30	4 57	25	49	23	53	40
10	329	02.8		40.8	82	19.6	54	14.7	4	20	5 06	31	54	34	56	9 59
11	344	02.9	+4	41.7	96	43.9	53	-20	14.9	2	10 N	5 12	5 36	5 57	23	18
12	359	03.1	+4	42.7	111	08.2	53	-20	15.0	1	0	5 16	5 40	6 01	23	02
13	14	03.3		43.6	125	32.6	54	14.9	1	10 S	18	43	04	22	47	10
14	29	03.5		44.6	139	56.9	53	14.7	2	20	19	45	07	30	61	11
15	44	03.7		45.6	154	21.3	54	14.4	3	30	19	47	11	12	61	22
16	59	03.9		46.5	168	45.7	54	13.9	5	35	18	47	13	22	01	33
17	74	04.1	+4	47.5	183	10.1	54	-20	13.3	6	40	5 17	5 48	6 15	21	48
18	89	04.2	+4	48.5	197	34.5	54	-20	12.5	8	45	5 14	5 48	6 18	21	33
19	104	04.4		49.4	211	59.0	55	11.6	9	50	11	48	21	15	66	19
20	119	04.6		50.4	226	23.5	55	10.6	10	52	09	48	22	21	06	28
21	134	04.8		51.3	240	47.9	54	09.5	11	54	07	48	24	20	57	38
22	149	05.0		52.3	255	12.4	55	08.2	13	56	05	48	25	46	68	12
23	164	05.2		53.3	269	37.0	56	06.7	15	58	5 02	48	27	33	69	13
24	179	05.4	+4	54.2	284	01.5	55	-20	05.2	15	60 S	4 59	5 48	6 29	20	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 11 ^h 20 ^m 1		Mag: -4.0 PMG: 12 ^h 09 ^m		Mag: +1.2 PMG: 12 ^h 18 ^m		Mag: -2.2 PMG: 16 ^h 01 ^m		Mag: +0.2 PMG: 1 ^h 56 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	189	31.1	177	44.6	+3	175	16.5	+5	28.2	119	07.5	
1	204	33.6	192	44.2		190	17.2		28.9	134	09.5	
2	219	36.0	207	43.8		205	17.9		29.7	149	11.6	
3	234	38.5	222	43.4		220	18.6		30.4	164	13.6	
4	249	41.0	237	43.0		235	19.3		31.2	179	15.6	
5	264	43.4	252	42.7	+3	250	20.0	+5	32.0	194	17.6	
6	279	45.9	267	42.3	+3	265	20.7	+5	32.7	209	19.7	
7	294	48.4	282	41.9		280	21.4		33.5	224	21.7	
8	309	50.8	297	41.5		295	22.1		34.2	239	23.7	
9	324	53.3	312	41.1		310	22.8		35.0	254	25.7	
10	339	55.8	327	40.7		325	23.5		35.8	269	27.7	
11	354	58.2	342	40.4	+3	340	24.2	+5	36.5	284	29.8	
12	10	00.7	357	40.0	+3	355	24.9	+5	37.3	299	31.8	
13	25	03.2	12	39.6		10	25.6		38.0	314	33.8	
14	40	05.6	27	39.2		25	26.3		38.8	329	35.8	
15	55	08.1	42	38.8	+3	58.9	40	27.0	39.6	344	37.9	
16	70	10.5	57	38.4	+4	00.1	55	27.7	40.3	359	39.9	
17	85	13.0	72	38.1	+4	01.4	70	28.4	+5	41.1	14	41.9
18	100	15.5	87	37.7	+4	02.6	85	29.1	+5	41.8	29	43.9
19	115	17.9	102	37.3		03.9	100	29.8		42.6	44	45.9
20	130	20.4	117	36.9		05.1	115	30.5		43.3	59	48.0
21	145	22.9	132	36.5		06.4	130	31.2		44.1	74	50.0
22	160	25.3	147	36.1		07.6	145	31.9		44.9	89	52.0
23	175	27.8	162	35.8		08.8	160	32.6		45.6	104	54.0
24	190	30.3	177	35.4	+4	10.1	175	33.3	+5	46.4	119	56.0
Dif	—		-4	+12			+7	+8			+20	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 5			Edad: 21 ^d 2 PHE { 4 ^h : 59/4 12 ^h : 59/3 20 ^h : 59/2 PMG: 5 ^h 16 ^m R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	05.4	+4	54.2	284	01.5	-20 05.2	60 N	18 47	19 30	20 24	1 46 44	8 49 76		
1	194	05.5		55.2	298	26.1	56 03.5	58	43	24	14	32 45	9 03 74		
2	209	05.7		56.1	312	50.7	56 -20 01.6	56	40	19	20 06	19 47	16 72		
3	224	05.9		57.1	327	15.4	57 -19 59.7	54	38	14	19 58	1 09 47	27 71		
4	239	06.1		58.1	341	40.1	57 57.6	52	36	10	52	0 59 49	36 70		
5	254	06.3	+4	59.0	356	04.8	57 -19 55.4	50	18 34	19 07	19 46	0 50 50	9 45 68		
6	269	06.5	+5	00.0	10	29.5	57 -19 53.0	45	18 29	18 59	19 34	0 32 51	10 03 66		
7	284	06.7	+5	01.0	24	54.3	58 50.5	40	25	53	25	17 53	17 65		
8	299	06.8		01.9	39	19.1	58 47.9	35	22	48	18	0 04 54	30 64		
9	314	07.0		02.9	53	43.9	58 45.1	30	19	43	12	** ** *	41 62		
10	329	07.2		03.8	68	08.8	59 42.2	20	15	37	19 03	** ** *	10 59 61		
11	344	07.4	+5	04.8	82	33.7	59 -19 39.2	10 N	18 10	18 32	18 56	** ** *	11 15 59		
12	359	07.6	+5	05.8	96	58.7	60 -19 36.1	0	18 07	18 28	18 52	** ** *	11 30 58		
13	14	07.8		06.7	111	23.6	59 32.8	10 S	18 03	24	49	23 46 58	11 45 56		
14	29	07.9		07.7	125	48.7	61 29.4	20	17 59	21	47	31 60	12 01 54		
15	44	08.1		08.6	140	13.8	61 25.9	30	55	19	47	13 63	19 52		
16	59	08.3		09.6	154	38.9	61 22.2	35	53	18	47	23 03 65	30 51		
17	74	08.5	+5	10.5	169	04.0	61 -19 18.5	40	17 50	18 17	18 49	22 51 67	12 42 49		
18	89	08.7	+5	11.5	183	29.3	63 -19 14.6	45	17 47	18 17	18 51	22 38 68	12 57 47		
19	104	08.9		12.5	197	54.5	62 10.5	50	44	16	53	21 71	13 14 45		
20	119	09.0		13.4	212	19.8	63 06.4	52	42	16	55	13 72	22 44		
21	134	09.2		14.4	226	45.2	64 -19 02.1	54	40	16	57	22 04 73	31 43		
22	149	09.4		15.3	241	10.6	64 -18 57.7	56	39	16	18 59	21 54 75	41 42		
23	164	09.6		16.3	255	36.0	64 53.2	58	36	15	19 01	42 78	13 53 40		
24	179	09.8	+5	17.3	270	01.5	65 -18 48.6	60 S	17 34	18 15	19 04	21 29 80	14 07 37		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 16 ^m 1		Mag: -4.0 PMG: 12 ^h 10 ^m			Mag: +1.2 PMG: 12 ^h 17 ^m			Mag: -2.1 PMG: 15 ^h 58 ^m			Mag: +0.2 PMG: 1 ^h 52 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	190	30.3	177	35.4	+4	10.1	175	33.3	+5	46.4	119	56.0	+21	50.6	
1	205	32.7	192	35.0		11.3	190	34.0		47.1	134	58.1		50.6	
2	220	35.2	207	34.6		12.6	205	34.7		47.9	150	00.1		50.7	
3	235	37.7	222	34.2		13.8	220	35.4		48.6	165	02.1		50.7	
4	250	40.1	237	33.8		15.1	235	36.1		49.4	180	04.1		50.8	
5	265	42.6	252	33.4	+4	16.3	250	36.8	+5	50.2	195	06.1	+21	50.9	
6	280	45.0	267	33.1	+4	17.6	265	37.5	+5	50.9	210	08.2	+21	50.9	
7	295	47.5	282	32.7		18.8	280	38.2		51.7	225	10.2		51.0	
8	310	50.0	297	32.3		20.1	295	38.9		52.4	240	12.2		51.1	
9	325	52.4	312	31.9		21.3	310	39.6		53.2	255	14.2		51.1	
10	340	54.9	327	31.5		22.6	325	40.3		53.9	270	16.2		51.2	
11	355	57.4	342	31.1	+4	23.8	340	41.0	+5	54.7	285	18.2	+21	51.2	
12	10	59.8	357	30.7	+4	25.0	355	41.7	+5	55.4	300	20.3	+21	51.3	
13	26	02.3	12	30.4		26.3	10	42.4		56.2	315	22.3		51.4	
14	41	04.8	27	30.0		27.5	25	43.1		57.0	330	24.3		51.4	
15	56	07.2	42	29.6		28.8	40	43.8		57.7	345	26.3		51.5	
16	71	09.7	57	29.2		30.0	55	44.5		58.5	0	28.3		51.5	
17	86	12.1	72	28.8	+4	31.3	70	45.2	+5	59.2	15	30.3	+21	51.6	
18	101	14.6	87	28.4	+4	32.5	85	45.9	+6	00.0	30	32.4	+21	51.7	
19	116	17.1	102	28.0		33.8	100	46.6	+6	00.7	45	34.4		51.7	
20	131	19.5	117	27.6		35.0	115	47.3		01.5	60	36.4		51.8	
21	146	22.0	132	27.3		36.2	130	48.0		02.2	75	38.4		51.9	
22	161	24.5	147	26.9		37.5	145	48.7		03.0	90	40.4		51.9	
23	176	26.9	162	26.5		38.7	160	49.4		03.8	105	42.4		52.0	
24	191	29.4	177	26.1	+4	40.0	175	50.1	+6	04.5	120	44.4	+21	52.0	
Dif	—		-4		+12		+7		+8		+20		+1		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 2			Edad: 22 ^d 2 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9 PMG: 6 ^h 14 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	09.8	+5	17.3	270	01.5	-18	48.6	60 N	3	42	4	36	5	19	2	30	
1	194	10.0		18.2	284	27.0	65	43.8	58	3	52		42		22	17	34	
2	209	10.1		19.2	298	52.6	66	39.0	56	4	00		47		25	2	06	
3	224	10.3		20.1	313	18.3	67	34.0	54		07		52		28	1	56	
4	239	10.5		21.1	327	44.0	67	28.9	51		14		56		30	48	39	
5	254	10.7	+5	22.0	342	09.7	67	-18	23.7	50	4	20	4	59	5	32	1	40
6	269	10.9	+5	23.0	356	35.5	68	-18	18.3	45	4	32	5	07	5	37	1	23
7	284	11.1		24.0	11	01.4	69	12.9	54	40		41		13	41	1	10	
8	299	11.2		24.9	25	27.3	69	07.3	56	35		48		19	44	0	58	
9	314	11.4		25.9	39	53.3	70	-18	01.7	30	4	55		23	47	48	49	
10	329	11.6		26.8	54	19.3	70	-17	55.9	20	5	04		30	52	30	52	
11	344	11.8	+5	27.8	68	45.4	71	-17	50.0	10 N	5	10	5	35	5	56	0	15
12	359	12.0	+5	28.7	83	11.6	72	-17	44.0	0	5	15	5	39	6	00	0	01
13	14	12.2		29.7	97	37.8	72	37.9	61	10 S		18		43	04	**	**	
14	29	12.3		30.6	112	04.0	72	31.6	63	20		20		46	08	**	**	
15	44	12.5		31.6	126	30.4	74	25.3	63	30		20		48	12	**	**	
16	59	12.7		32.6	140	56.7	73	18.9	64	35		20		49	14	**	**	
17	74	12.9	+5	33.5	155	23.2	75	-17	12.4	40	5	19	5	50	6	17	23	58
18	89	13.1	+5	34.5	169	49.7	75	-17	05.7	45	5	17	5	51	6	20	23	46
19	104	13.3		35.4	184	16.2	75	-16	59.0	50		14		52	24	32	73	
20	119	13.4		36.4	198	42.8	76	52.1	69	52		13		52	26	25	75	
21	134	13.6		37.3	213	09.5	77	45.2	69	54		11		52	27	17	77	
22	149	13.8		38.3	227	36.3	78	38.2	70	56		09		52	29	09	79	
23	164	14.0		39.2	242	03.1	78	31.0	72	58		07		52	32	23	00	
24	179	14.2	+5	40.2	256	29.9	78	-16	23.8	60 S	5	04	5	53	6	34	22	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 12 ^m 2		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: +1.2 PMG: 12 ^h 16 ^m		Mag: -2.1 PMG: 15 ^h 55 ^m		Mag: +0.2 PMG: 1 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	191	29.4	177	26.1	+4	40.0	175	50.1	+6	04.5	120	44.4	+21	52.0	333	00.5	-12	17.7
1	206	31.9	192	25.7		41.2	190	50.8		05.3	135	46.5		52.1	348	03.1		17.6
2	221	34.3	207	25.3		42.5	205	51.5		06.0	150	48.5		52.2	3	05.8		17.6
3	236	36.8	222	24.9		43.7	220	52.2		06.8	165	50.5		52.2	18	08.4		17.5
4	251	39.3	237	24.5		44.9	235	52.9		07.5	180	52.5		52.3	33	11.0		17.5
5	266	41.7	252	24.2	+4	46.2	250	53.6	+6	08.3	195	54.5	+21	52.4	48	13.6	-12	17.4
6	281	44.2	267	23.8	+4	47.4	265	54.3	+6	09.0	210	56.5	+21	52.4	63	16.2	-12	17.4
7	296	46.6	282	23.4		48.7	280	55.0		09.8	225	58.5		52.5	78	18.8		17.3
8	311	49.1	297	23.0		49.9	295	55.7		10.5	241	00.6		52.5	93	21.5		17.3
9	326	51.6	312	22.6		51.2	310	56.4		11.3	256	02.6		52.6	108	24.1		17.2
10	341	54.0	327	22.2		52.4	325	57.1		12.0	271	04.6		52.7	123	26.7		17.2
11	356	56.5	342	21.8	+4	53.6	340	57.8	+6	12.8	286	06.6	+21	52.7	138	29.3	-12	17.1
12	11	59.0	357	21.4	+4	54.9	355	58.5	+6	13.5	301	08.6	+21	52.8	153	31.9	-12	17.0
13	27	01.4	12	21.0		56.1	10	59.2		14.3	316	10.6		52.8	168	34.5		17.0
14	42	03.9	27	20.6		57.4	25	59.9		15.1	331	12.6		52.9	183	37.2		16.9
15	57	06.4	42	20.3		58.6	41	00.6		15.8	346	14.6		53.0	198	39.8		16.9
16	72	08.8	57	19.9	+4	59.8	56	01.3		16.6	1	16.7		53.0	213	42.4		16.8
17	87	11.3	72	19.5	+5	01.1	71	02.0	+6	17.3	16	18.7	+21	53.1	228	45.0	-12	16.8
18	102	13.8	87	19.1	+5	02.3	86	02.7	+6	18.1	31	20.7	+21	53.2	243	47.6	-12	16.7
19	117	16.2	102	18.7		03.6	101	03.4		18.8	46	22.7		53.2	258	50.3		16.7
20	132	18.7	117	18.3		04.8	116	04.1		19.6	61	24.7		53.3	273	52.9		16.6
21	147	21.1	132	17.9		06.0	131	04.8		20.3	76	26.7		53.3	288	55.5		16.6
22	162	23.6	147	17.5		07.3	146	05.5		21.1	91	28.7		53.4	303	58.1		16.5
23	177	26.1	162	17.1		08.5	161	06.2		21.8	106	30.7		53.5	319	00.7		16.4
24	192	28.5	177	16.7	+5	09.8	176	06.9	+6	22.6	121	32.7	+21	53.5	334	03.3	-12	16.4
Dif	—		-4		+12		+7		+8		+20		+1		+26		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 9			Edad: 23 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'5 R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	14.2	+5 40.2	256	29.9	-16 23.8	74	60 N	18 51	19 35	20 30	3 01 24	11 28 85	
1	194	14.3		270	56.8		74	58	48	29	20	2 51 26	37 82	
2	209	14.5		285	23.8		74	56	45	23	11	42 29	46 79	
3	224	14.7		299	50.9	81	75	54	42	18	20 03	34 31	11 53 78	
4	239	14.9		314	18.0	81	76	52	39	14	19 56	27 33	12 00 75	
5	254	15.1	+5 45.0	328	45.2	82	77	50	18 37	19 10	19 50	2 21 34	12 06 74	
6	269	15.3	+5 45.9	343	12.4	82	78	45	18 32	19 02	19 37	2 07 37	12 19 70	
7	284	15.4		357	39.7	83	79	40	27	18 55	27	1 55 40	29 67	
8	299	15.6			12 07.1	84	80	35	24	49	20	46 42	38 65	
9	314	15.8			26 34.5	84	80	30	21	45	13	37 44	12 46 63	
10	329	16.0			41 02.0	85	82	20	15	37	19 03	22 48	13 00 58	
11	344	16.2	+5 50.7	55	29.5	85	82	10 N	18 10	18 32	18 56	1 09 51	13 12 55	
12	359	16.3	+5 51.6	69	57.1	86	83	0	18 06	18 27	18 51	0 57 53	13 23 52	
13	14	16.5		84	24.8	87	84	10 S	18 02	23	48	44 57	33 50	
14	29	16.7		98	52.5	87	85	20	17 58	20	45	31 60	45 46	
15	44	16.9		113	20.3	88	86	30	53	17	45	16 63	13 58 43	
16	59	17.1		127	48.2	89	86	35	50	15	45	0 08 64	14 06 40	
17	74	17.2	+5 56.4	142	16.1	89	88	40	17 47	18 14	18 46	** ** *	14 14 38	
18	89	17.4	+5 57.3	156	44.1	90	88	45	17 44	18 13	18 47	** ** *	14 24 35	
19	104	17.6		58.3	171 12.1	90	88	50	40	12	49	** ** *	36 32	
20	119	17.8	+5 59.2	185	40.2	91	90	52	38	11	50	** ** *	42 30	
21	134	18.0	+6 00.2	200	08.4	92	90	54	36	11	52	** ** *	48 28	
22	149	18.1		01.1	214 36.6	92	91	56	33	10	53	** ** *	14 55 26	
23	164	18.3		02.1	229 04.9	93	92	58	31	10	55	** ** *	15 03 23	
24	179	18.5	+6 03.0	243	33.3	94	92	60 S	17 28	18 10	18 58	** ** *	15 11 21	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 08 ^m 3		Mag: -4.0 PMG: 12 ^h 11 ^m			Mag: +1.2 PMG: 12 ^h 15 ^m			Mag: -2.1 PMG: 15 ^h 52 ^m			Mag: +0.2 PMG: 1 ^h 43 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	192	28.5	177	16.7	+5 09.8	176	06.9	+6 22.6	121	32.7	+21 53.5	334	03.3	-12 16.4
1	207	31.0	192	16.3		191	07.6	23.3	136	34.8	53.6	349	06.0	16.3
2	222	33.5	207	16.0		206	08.3	24.1	151	36.8	53.7	4	08.6	16.3
3	237	35.9	222	15.6		221	09.0	24.8	166	38.8	53.7	19	11.2	16.2
4	252	38.4	237	15.2		236	09.7	25.6	181	40.8	53.8	34	13.8	16.2
5	267	40.9	252	14.8	+5 15.9	251	10.4	+6 26.3	196	42.8	+21 53.8	49	16.4	-12 16.1
6	282	43.3	267	14.4	+5 17.2	266	11.1	+6 27.1	211	44.8	+21 53.9	64	19.1	-12 16.1
7	297	45.8	282	14.0		281	11.8	27.8	226	46.8	54.0	79	21.7	16.0
8	312	48.3	297	13.6		296	12.5	28.6	241	48.8	54.0	94	24.3	16.0
9	327	50.7	312	13.2		311	13.2	29.3	256	50.8	54.1	109	26.9	15.9
10	342	53.2	327	12.8		326	13.9	30.1	271	52.8	54.1	124	29.5	15.8
11	357	55.6	342	12.4	+5 23.4	341	14.6	+6 30.8	286	54.8	+21 54.2	139	32.2	-12 15.8
12	12	58.1	357	12.0	+5 24.6	356	15.3	+6 31.6	301	56.8	+21 54.3	154	34.8	-12 15.7
13	28	00.6	12	11.6		11	16.0	32.3	316	58.9	54.3	169	37.4	15.7
14	43	03.0	27	11.2		26	16.7	33.1	332	00.9	54.4	184	40.0	15.6
15	58	05.5	42	10.9		41	17.4	33.8	347	02.9	54.5	199	42.6	15.6
16	73	08.0	57	10.5		56	18.1	34.6	2	04.9	54.5	214	45.3	15.5
17	88	10.4	72	10.1	+5 30.8	71	18.8	+6 35.3	17	06.9	+21 54.6	229	47.9	-12 15.5
18	103	12.9	87	09.7	+5 32.0	86	19.5	+6 36.1	32	08.9	+21 54.6	244	50.5	-12 15.4
19	118	15.4	102	09.3		101	20.2	36.8	47	10.9	54.7	259	53.1	15.4
20	133	17.8	117	08.9		116	20.9	37.6	62	12.9	54.8	274	55.7	15.3
21	148	20.3	132	08.5		131	21.6	38.3	77	14.9	54.8	289	58.4	15.2
22	163	22.7	147	08.1		146	22.3	39.1	92	16.9	54.9	305	01.0	15.2
23	178	25.2	162	07.7		161	23.0	39.8	107	18.9	55.0	320	03.6	15.1
24	193	27.7	177	07.3	+5 39.4	176	23.7	+6 40.6	122	20.9	+21 55.0	335	06.2	-12 15.1
Dif	—		-4		+12	+7		+7	+20		+1	+26		+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 6			Edad: 24 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'1 SD: 15'9 PMG: 8 ^h 03 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	18.5	+6	03.0	243	33.3	-13	03.8	60 N	3 34	4 29	5 13	3 25	18	12 53 84
1	194	18.7		04.0	258	01.7	94	-12	54.5	93	45	36	17	17 21	12 59 82
2	209	18.9		04.9	272	30.1	94		45.1	94	56	3 54	41	20	11 23 13 05 79
3	224	19.0		05.9	286	58.7	96		35.7	94	54	4 02	46	23	05 25 11 76
4	239	19.2		06.8	301	27.3	96		26.1	96	52	09	51	26	3 00 27 15 75
5	254	19.4	+6	07.8	315	55.9	96	-12	16.6	95	50	4 15	4 55	5 28	2 55 29 13 20 73
6	269	19.6	+6	08.7	330	24.6	97	-12	06.9	97	45	4 28	5 03	5 33	2 44 33 13 29 69
7	284	19.8		09.7	344	53.4	98	-11	57.2	97	40	38	10	38	35 36 36 66
8	299	19.9		10.6	359	22.2	98		47.5	97	35	46	16	41	28 38 43 63
9	314	20.1		11.6	13	51.1	99		37.6	99	30	4 52	20	45	21 41 49 60
10	329	20.3		12.5	28	20.0	99		27.8	98	20	5 02	28	50	10 44 13 58 57
11	344	20.5	+6	13.5	42	49.0	100	-11	17.8	100	10 N	5 09	5 34	5 55	2 00 48 14 07 53
12	359	20.7	+6	14.4	57	18.1	101	-11	07.8	100	0	5 14	5 39	5 59	1 50 51 14 15 50
13	14	20.8		15.4	71	47.2	101	-10	57.8	100	10 S	18	43	6 04	41 54 23 46
14	29	21.0		16.3	86	16.3	101		47.7	101	20	20	46	08	31 57 31 43
15	44	21.2		17.3	100	45.6	103		37.5	102	30	21	49	13	19 61 41 39
16	59	21.4		18.2	115	14.8	102		27.3	102	35	21	51	16	12 64 46 37
17	74	21.5	+6	19.1	129	44.2	104	-10	17.0	103	40	5 21	5 52	6 19	1 05 66 14 52 34
18	89	21.7	+6	20.1	144	13.5	103	-10	06.7	103	45	5 19	5 53	6 23	0 56 69 14 59 32
19	104	21.9		21.0	158	43.0	105	-9	56.3	104	50	17	55	27	45 73 15 08 27
20	119	22.1		22.0	173	12.5	105		45.9	104	52	16	55	29	40 75 12 26
21	134	22.3		22.9	187	42.0	105		35.4	105	54	15	56	31	34 77 16 24
22	149	22.4		23.9	202	11.6	106		24.9	105	56	13	56	33	28 79 21 22
23	164	22.6		24.8	216	41.2	106		14.4	105	58	11	57	36	21 82 26 20
24	179	22.8	+6	25.8	231	10.9	107	-9	03.8	106	60 S	5 09	5 57	6 39	0 13 85 15 32 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 04 ^m 3		Mag: -4.0 PMG: 12 ^h 12 ^m		Mag: +1.2 PMG: 12 ^h 14 ^m		Mag: -2.1 PMG: 15 ^h 48 ^m		Mag: +0.2 PMG: 1 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	193	27.7	177	07.3	176	23.7	122	20.9	335	06.2
1	208	30.1	192	06.9	191	24.4	137	22.9	350	08.8
2	223	32.6	207	06.5	206	25.1	152	24.9	5	11.5
3	238	35.1	222	06.1	221	25.8	167	26.9	20	14.1
4	253	37.5	237	05.7	236	26.5	182	28.9	35	16.7
5	268	40.0	252	05.3	251	27.2	197	30.9	50	19.3
6	283	42.5	267	04.9	266	27.9	212	33.0	65	22.0
7	298	44.9	282	04.5	281	28.6	227	35.0	80	24.6
8	313	47.4	297	04.1	296	29.3	242	37.0	95	27.2
9	328	49.9	312	03.7	311	30.0	257	39.0	110	29.8
10	343	52.3	327	03.3	326	30.7	272	41.0	125	32.4
11	358	54.8	342	02.9	341	31.4	287	43.0	140	35.1
12	13	57.2	357	02.5	356	32.1	302	45.0	155	37.7
13	28	59.7	12	02.2	11	32.8	317	47.0	170	40.3
14	44	02.2	27	01.8	26	33.5	332	49.0	185	42.9
15	59	04.6	42	01.4	41	34.2	347	51.0	200	45.6
16	74	07.1	57	01.0	56	34.9	2	53.0	215	48.2
17	89	09.6	72	00.6	71	35.6	17	55.0	230	50.8
18	104	12.0	87	00.2	86	36.3	32	57.0	245	53.4
19	119	14.5	101	59.8	101	37.0	47	59.0	260	56.0
20	134	17.0	116	59.4	116	37.7	63	01.0	275	58.7
21	149	19.4	131	59.0	131	38.4	78	03.0	291	01.3
22	164	21.9	146	58.6	146	39.0	93	05.0	306	03.9
23	179	24.3	161	58.2	161	39.7	108	07.0	321	06.5
24	194	26.8	176	57.8	176	40.4	123	09.0	336	09.2
Dif	—		-4	+12	+7	+7	+20	+1	+26	+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 3		Edad: 25 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'7 PMG: 8 ^h 53 ^m R°: 49 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	22.8	+6	25.8	231	10.9	-9 03.8	60 N	18 56	19 40	20 37	3 43	16	14 17	84			
1	194	23.0		26.7	245	40.7 ¹⁰⁸	-8 53.2 ¹⁰⁶	58	52	33	25	38	19	21	81			
2	209	23.1		27.7	260	10.5 ¹⁰⁸	42.5 ¹⁰⁷	56	49	27	16	34	21	24	78			
3	224	23.3		28.6	274	40.3 ¹⁰⁸	31.8 ¹⁰⁷	54	45	22	07	30	23	27	76			
4	239	23.5		29.5	289	10.2 ¹⁰⁹	21.0 ¹⁰⁸	52	43	17	20 00	27	24	30	74			
5	254	23.7	+6	30.5	303	40.2 ¹¹⁰	-8 10.2 ¹⁰⁸	50	18 40	19 13	19 54	3 24	26	14 33	72			
6	269	23.9	+6	31.4	318	10.1 ¹⁰⁹	-7 59.4 ¹⁰⁸	45	18 34	19 04	19 40	3 17	30	14 38	68			
7	284	24.0		32.4	332	40.2 ¹¹¹	48.5 ¹⁰⁹	40	29	18 57	30	11	33	42	65			
8	299	24.2		33.3	347	10.3 ¹¹¹	37.6 ¹⁰⁹	35	25	51	21	06	36	46	62			
9	314	24.4		34.3	1	40.4 ¹¹¹	26.6 ¹¹⁰	30	22	46	14	3	02 38	49	60			
10	329	24.6		35.2	16	10.6 ¹¹²	15.7 ¹⁰⁹	20	16	38	19 04	2 54	42	14 55	56			
11	344	24.7	+6	36.2	30	40.8 ¹¹²	-7 04.7 ¹¹⁰	10 N	18 10	18 32	18 56	2 48	45	15 00	52			
12	359	24.9	+6	37.1	45	11.0 ¹¹²	-6 53.6 ¹¹¹	0	18 06	18 26	18 51	2 41	49	15 05	48			
13	14	25.1		38.0	59	41.3 ¹¹³	42.6 ¹¹⁰	10 S	18 01	22	46	35	52	09	45			
14	29	25.3		39.0	74	11.7 ¹¹⁴	31.5 ¹¹¹	20	17 56	18	44	28	56	14	41			
15	44	25.4		39.9	88	42.1 ¹¹⁴	20.4 ¹¹¹	30	51	15	42	20	61	20	37			
16	59	25.6		40.9	103	12.5 ¹¹⁴	-6 09.2 ¹¹²	35	47	13	42	16	63	23	35			
17	74	25.8	+6	41.8	117	43.0 ¹¹⁵	-5 58.0 ¹¹²	40	17 44	18 11	18 42	2 11	65	15 26	32			
18	89	26.0	+6	42.7	132	13.5 ¹¹⁵	-5 46.9 ¹¹¹	45	17 40	18 09	18 43	2 05	69	15 31	28			
19	104	26.1		43.7	146	44.0 ¹¹⁵	35.6 ¹¹³	50	35	08	45	1	58 72	35	26			
20	119	26.3		44.6	161	14.6 ¹¹⁶	24.4 ¹¹²	52	33	07	46	55	74	38	23			
21	134	26.5		45.6	175	45.3 ¹¹⁷	13.1 ¹¹³	54	31	06	47	51	76	40	22			
22	149	26.7		46.5	190	15.9 ¹¹⁶	-5 01.9 ¹¹²	56	28	05	48	47	79	43	19			
23	164	26.8		47.5	204	46.6 ¹¹⁷	-4 50.6 ¹¹³	58	25	05	50	43	81	46	17			
24	179	27.0	+6	48.4	219	17.4 ¹¹⁸	-4 39.2 ¹¹⁴	60 S	17 22	18 04	18 52	1 38	83	15 49	15			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 00 ^m 4		Mag: -3.9 PMG: 12 ^h 12 ^m			Mag: +1.2 PMG: 12 ^h 13 ^m			Mag: -2.1 PMG: 15 ^h 45 ^m			Mag: +0.2 PMG: 1 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	194	26.8	176	57.8	+6	09.0	176	40.4	+6	58.5	123	09.0	+21	56.5	336	09.2	-12	13.7
1	209	29.3	191	57.4		10.2	191	41.1		59.2	138	11.0		56.6	351	11.8		13.7
2	224	31.7	206	57.0		11.4	206	41.8	+6	59.9	153	13.0		56.6	6	14.4		13.6
3	239	34.2	221	56.6		12.7	221	42.5	+7	00.7	168	15.0		56.7	21	17.0		13.6
4	254	36.7	236	56.2		13.9	236	43.2		01.4	183	17.0		56.7	36	19.7		13.5
5	269	39.1	251	55.8	+6	15.1	251	43.9	+7	02.2	198	19.0	+21	56.8	51	22.3	-12	13.5
6	284	41.6	266	55.4	+6	16.3	266	44.6	+7	02.9	213	21.0	+21	56.9	66	24.9	-12	13.4
7	299	44.1	281	55.0		17.6	281	45.3		03.7	228	23.0		56.9	81	27.5		13.4
8	314	46.5	296	54.6		18.8	296	46.0		04.4	243	25.0		57.0	96	30.1		13.3
9	329	49.0	311	54.2		20.0	311	46.7		05.1	258	27.0		57.1	111	32.8		13.2
10	344	51.5	326	53.8		21.3	326	47.4		05.9	273	29.0		57.1	126	35.4		13.2
11	359	53.9	341	53.4	+6	22.5	341	48.1	+7	06.6	288	31.0	+21	57.2	141	38.0	-12	13.1
12	14	56.4	356	53.0	+6	23.7	356	48.8	+7	07.4	303	33.0	+21	57.2	156	40.6	-12	13.1
13	29	58.8	11	52.6		24.9	11	49.5		08.1	318	35.0		57.3	171	43.3		13.0
14	45	01.3	26	52.2		26.2	26	50.2		08.9	333	37.0		57.4	186	45.9		13.0
15	60	03.8	41	51.8		27.4	41	50.9		09.6	348	39.0		57.4	201	48.5		12.9
16	75	06.2	56	51.4		28.6	56	51.6		10.3	3	41.0		57.5	216	51.1		12.9
17	90	08.7	71	51.0	+6	29.8	71	52.3	+7	11.1	18	43.0	+21	57.6	231	53.8	-12	12.8
18	105	11.2	86	50.5	+6	31.1	86	53.0	+7	11.8	33	45.0	+21	57.6	246	56.4	-12	12.7
19	120	13.6	101	50.1		32.3	101	53.7		12.6	48	47.0		57.7	261	59.0		12.7
20	135	16.1	116	49.7		33.5	116	54.4		13.3	63	49.0		57.7	277	01.6		12.6
21	150	18.6	131	49.3		34.7	131	55.1		14.1	78	51.0		57.8	292	04.3		12.6
22	165	21.0	146	48.9		36.0	146	55.8		14.8	93	53.0		57.9	307	06.9		12.5
23	180	23.5	161	48.5		37.2	161	56.5		15.5	108	55.0		57.9	322	09.5		12.5
24	195	26.0	176	48.1	+6	38.4	176	57.2	+7	16.3	123	56.9	+21	58.0	337	12.1	-12	12.4
Dif	—		-4		+12		+7		+7		+20		+1		+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 1			Edad: 26 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/2 PMG: 9 ^h 42 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	27.0	+6 48.4	219	17.4	-4 39.2		60 N	3 27	4 23	5 07	3 59	14	15 41	81
1	194	27.2		233	48.1 ¹¹⁷	27.9 ¹¹³		58	38	30	11	57	16	42	78
2	209	27.4		248	19.0 ¹¹⁹	16.6 ¹¹³		56	48	36	15	55	19	42	77
3	224	27.5		262	49.8 ¹¹⁸	-4 05.2 ¹¹⁴		54	3 56	41	18	53	21	43	75
4	239	27.7		277	20.7 ¹¹⁹	-3 53.8 ¹¹⁴		52	4 04	46	21	51	23	44	72
5	254	27.9	+6 53.1	291	51.6 ¹¹⁹	-3 42.4 ¹¹⁴		50	4 10	4 50	5 24	3 50	24	15 45	70
6	269	28.1	+6 54.0	306	22.5 ¹¹⁹	-3 31.0 ¹¹⁴		45	4 24	5 00	5 30	3 47	28	15 46	67
7	284	28.2		320	53.5 ¹²⁰	19.6 ¹¹⁴		40	34	07	34	44	31	47	64
8	299	28.4		335	24.5 ¹²⁰	-3 08.2 ¹¹⁴		35	43	13	39	42	34	48	61
9	314	28.6		349	55.6 ¹²¹	-2 56.8 ¹¹⁴		30	4 50	18	42	40	36	49	58
10	329	28.8		4	26.6 ¹²⁰	45.3 ¹¹⁵		20	5 00	26	48	36	41	51	54
11	344	28.9	+6 58.7	18	57.7 ¹²¹	-2 33.9 ¹¹⁴		10 N	5 08	5 33	5 54	3 33	44	15 52	50
12	359	29.1	+6 59.7	33	28.8 ¹²¹	-2 22.4 ¹¹⁵		0	5 14	5 38	5 59	3 30	48	15 53	47
13	14	29.3	+7 00.6	48	00.0 ¹²²	-2 11.0 ¹¹⁴		10 S	18	42	6 04	27	51	54	44
14	29	29.5		62	31.2 ¹²²	-1 59.5 ¹¹⁵		20	21	47	09	24	55	55	41
15	44	29.6		77	02.4 ¹²²	48.0 ¹¹⁵		30	23	50	14	21	59	57	36
16	59	29.8		91	33.6 ¹²²	36.6 ¹¹⁴		35	23	52	17	19	61	58	33
17	74	30.0	+7 04.4	106	04.9 ¹²³	-1 25.1 ¹¹⁵		40	5 23	5 54	6 21	3 16	64	15 58	31
18	89	30.2	+7 05.3	120	36.2 ¹²³	-1 13.7 ¹¹⁴		45	5 22	5 56	6 25	3 14	67	15 59	28
19	104	30.3		135	07.5 ¹²³	-1 02.2 ¹¹⁵		50	20	58	30	10	72	16 01	24
20	119	30.5		149	38.8 ¹²³	-0 50.7 ¹¹⁵		52	19	58	32	09	73	01	23
21	134	30.7		164	10.2 ¹²⁴	39.3 ¹¹⁴		54	18	5 59	35	07	75	02	21
22	149	30.8		178	41.5 ¹²³	27.8 ¹¹⁵		56	17	6 00	37	06	77	02	19
23	164	31.0		193	12.9 ¹²⁴	16.4 ¹¹⁴		58	16	01	40	04	79	03	17
24	179	31.2	+7 10.9	207	44.3 ¹²⁴	-0 04.9 ¹¹⁵		60 S	5 14	6 02	6 44	3 01	83	16 04	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 10 ^h 56 ^m 5		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: +1.2 PMG: 12 ^h 12 ^m		Mag: -2.1 PMG: 15 ^h 42 ^m		Mag: +0.2 PMG: 1 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	195	26.0	176	48.1	+6 38.4	176	57.2	+7 16.3	123	56.9	+21 58.0	337	12.1	-12 12.4	
1	210	28.4	191	47.7	39.6	191	57.9	17.0	138	58.9	58.0	352	14.8	12.3	
2	225	30.9	206	47.3	40.8	206	58.6	17.8	154	00.9	58.1	7	17.4	12.3	
3	240	33.3	221	46.9	42.1	221	59.3	18.5	169	02.9	58.2	22	20.0	12.2	
4	255	35.8	236	46.5	43.3	237	00.0	19.2	184	04.9	58.2	37	22.6	12.2	
5	270	38.3	251	46.1	+6 44.5	252	00.7	+7 20.0	199	06.9	+21 58.3	52	25.3	-12 12.1	
6	285	40.7	266	45.7	+6 45.7	267	01.4	+7 20.7	214	08.9	+21 58.4	67	27.9	-12 12.1	
7	300	43.2	281	45.3	47.0	282	02.1	21.5	229	10.9	58.4	82	30.5	12.0	
8	315	45.7	296	44.9	48.2	297	02.8	22.2	244	12.9	58.5	97	33.1	12.0	
9	330	48.1	311	44.5	49.4	312	03.5	22.9	259	14.9	58.5	112	35.8	11.9	
10	345	50.6	326	44.1	50.6	327	04.2	23.7	274	16.9	58.6	127	38.4	11.8	
11	0	53.1	341	43.7	+6 51.8	342	04.9	+7 24.4	289	18.9	+21 58.7	142	41.0	-12 11.8	
12	15	55.5	356	43.3	+6 53.1	357	05.6	+7 25.2	304	20.9	+21 58.7	157	43.7	-12 11.7	
13	30	58.0	11	42.9	54.3	12	06.3	25.9	319	22.9	58.8	172	46.3	11.7	
14	46	00.4	26	42.5	55.5	27	07.0	26.6	334	24.9	58.8	187	48.9	11.6	
15	61	02.9	41	42.0	56.7	42	07.7	27.4	349	26.9	58.9	202	51.5	11.6	
16	76	05.4	56	41.6	57.9	57	08.4	28.1	4	28.9	59.0	217	54.2	11.5	
17	91	07.8	71	41.2	+6 59.1	72	09.1	+7 28.8	19	30.8	+21 59.0	232	56.8	-12 11.4	
18	106	10.3	86	40.8	+7 00.4	87	09.8	+7 29.6	34	32.8	+21 59.1	247	59.4	-12 11.4	
19	121	12.8	101	40.4	01.6	102	10.5	30.3	49	34.8	59.2	263	02.0	11.3	
20	136	15.2	116	40.0	02.8	117	11.1	31.1	64	36.8	59.2	278	04.7	11.3	
21	151	17.7	131	39.6	04.0	132	11.8	31.8	79	38.8	59.3	293	07.3	11.2	
22	166	20.2	146	39.2	05.2	147	12.5	32.5	94	40.8	59.3	308	09.9	11.2	
23	181	22.6	161	38.8	06.5	162	13.2	33.3	109	42.8	59.4	323	12.6	11.1	
24	196	25.1	176	38.4	+7 07.7	177	13.9	+7 34.0	124	44.8	+21 59.5	338	15.2	-12 11.0	
Dif	—		-4	+12		+7	+7		+20		+1		+26		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 27 ^d 2 PHE { 4 ^h : 57'0 12 ^h : 56'9 20 ^h : 56'7 R°: 47 ^m										
	PMG: 12 ^h 01 ^m 8			SD: 15'6					PMG: 10 ^h 29 ^m					
hG ☉		Dec	hG ☾		Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	31.2	+7	10.9	207	44.3	-0 04.9	60 N	19 01	19 46	20 43	4 13 14	17 02 80	
1	194	31.4		11.8	222	15.8 ¹²⁵	+0 06.5 ¹¹⁴	58	18 57	38	31	13 17	17 00 78	
2	209	31.5		12.8	236	47.2 ¹²⁴	17.9 ¹¹⁴	56	53	32	21	14 19	16 59 75	
3	224	31.7		13.7	251	18.7 ¹²⁵	29.3 ¹¹⁴	54	49	26	12	14 21	58 73	
4	239	31.9		14.6	265	50.2 ¹²⁵	40.7 ¹¹⁴	52	46	21	20 04	14 23	56 71	
5	254	32.1	+7	15.6	280	21.7 ¹²⁵	+0 52.1 ¹¹⁴	50	18 43	19 16	19 57	4 14 25	16 55 70	
6	269	32.2	+7	16.5	294	53.3 ¹²⁶	+1 03.5 ¹¹⁴	45	18 37	19 07	19 43	4 15 28	16 53 65	
7	284	32.4		17.5	309	24.8 ¹²⁵	14.9 ¹¹⁴	40	31	18 59	32	15 31	51 62	
8	299	32.6		18.4	323	56.4 ¹²⁶	26.3 ¹¹⁴	35	27	53	23	16 33	49 60	
9	314	32.7		19.3	338	27.9 ¹²⁵	37.6 ¹¹³	30	23	47	16	16 36	47 58	
10	329	32.9		20.3	352	59.5 ¹²⁶	+1 48.9 ¹¹³	20	16	39	19 05	17 40	45 53	
11	344	33.1	+7	21.2	7	31.1 ¹²⁶	+2 00.2 ¹¹³	10 N	18 10	18 32	18 56	4 17 44	16 42 50	
12	359	33.3	+7	22.1	22	02.7 ¹²⁶	+2 11.5 ¹¹³	0	18 05	18 26	18 50	4 18 47	16 40 47	
13	14	33.4		23.1	36	34.4 ¹²⁷	22.8 ¹¹³	10 S	18 00	21	45	18 50	38 43	
14	29	33.6		24.0	51	06.0 ¹²⁶	34.1 ¹¹³	20	17 54	17	42	19 54	36 39	
15	44	33.8		24.9	65	37.7 ¹²⁷	45.3 ¹¹²	30	48	12	40	20 57	33 36	
16	59	33.9		25.8	80	09.3 ¹²⁶	+2 56.5 ¹¹²	35	45	10	39	20 60	31 34	
17	74	34.1	+7	26.8	94	41.0 ¹²⁷	+3 07.7 ¹¹²	40	17 41	18 08	18 39	4 20 63	16 29 32	
18	89	34.3	+7	27.7	109	12.7 ¹²⁷	+3 18.9 ¹¹²	45	17 36	18 06	18 40	4 21 66	16 27 29	
19	104	34.5		28.6	123	44.4 ¹²⁷	30.0 ¹¹¹	50	31	04	41	22 70	25 25	
20	119	34.6		29.6	138	16.1 ¹²⁷	41.1 ¹¹¹	52	29	03	41	22 72	24 23	
21	134	34.8		30.5	152	47.8 ¹²⁷	+3 52.2 ¹¹¹	54	26	02	42	22 74	23 21	
22	149	35.0		31.4	167	19.5 ¹²⁷	+4 03.3 ¹¹¹	56	23	18 00	43	23 75	21 20	
23	164	35.1		32.4	181	51.3 ¹²⁸	14.3 ¹¹⁰	58	20	17 59	45	23 78	20 17	
24	179	35.3	+7	33.3	196	23.0 ¹²⁷	+4 25.4 ¹¹¹	60 S	17 16	17 58	18 46	4 24 80	16 18 15	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 52 ^m 5		Mag: -3.9 PMG: 12 ^h 14 ^m		Mag: +1.2 PMG: 12 ^h 11 ^m		Mag: -2.1 PMG: 15 ^h 39 ^m		Mag: +0.2 PMG: 1 ^h 27 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	196	25.1	176	38.4	177	13.9	124	44.8	338	15.2				
1	211	27.6	191	38.0	192	14.6	139	46.8	353	17.8				
2	226	30.0	206	37.6	207	15.3	154	48.8	8	20.4				
3	241	32.5	221	37.1	222	16.0	169	50.8	23	23.1				
4	256	34.9	236	36.7	237	16.7	184	52.8	38	25.7				
5	271	37.4	251	36.3	252	17.4	199	54.7	53	28.3				
6	286	39.9	266	35.9	267	18.1	214	56.7	68	30.9				
7	301	42.3	281	35.5	282	18.8	229	58.7	83	33.6				
8	316	44.8	296	35.1	297	19.5	245	00.7	98	36.2				
9	331	47.3	311	34.7	312	20.2	260	02.7	113	38.8				
10	346	49.7	326	34.3	327	20.9	275	04.7	128	41.5				
11	1	52.2	341	33.9	342	21.6	290	06.7	143	44.1				
12	16	54.7	356	33.4	357	22.3	305	08.7	158	46.7				
13	31	57.1	11	33.0	12	23.0	320	10.7	173	49.3				
14	46	59.6	26	32.6	27	23.7	335	12.7	188	52.0				
15	62	02.0	41	32.2	42	24.4	350	14.6	203	54.6				
16	77	04.5	56	31.8	57	25.1	5	16.6	218	57.2				
17	92	07.0	71	31.4	72	25.8	20	18.6	233	59.9				
18	107	09.4	86	31.0	87	26.5	35	20.6	249	02.5				
19	122	11.9	101	30.6	102	27.2	50	22.6	264	05.1				
20	137	14.4	116	30.1	117	27.9	65	24.6	279	07.7				
21	152	16.8	131	29.7	132	28.6	80	26.6	294	10.4				
22	167	19.3	146	29.3	147	29.3	95	28.6	309	13.0				
23	182	21.8	161	28.9	162	30.0	110	30.5	324	15.6				
24	197	24.2	176	28.5	177	30.7	125	32.5	339	18.3				
Dif	—		-4	+12	+7	+7	+20	+1	+26	+1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 5			Edad: 28 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'4 20 ^h : 56'2 Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	35.3	+7	33.3	196	23.0	+4 25.4	60 N	3 19	4 16	5 01	4 27	16	18 22	79
1	194	35.5		34.2	210	54.7 ¹²⁷	36.3 ¹⁰⁹	58	31	24	06	30	18	18	76
2	209	35.6		35.2	225	26.5 ¹²⁸	47.3 ¹¹⁰	56	42	31	10	33	19	14	73
3	224	35.8		36.1	239	58.2 ¹²⁷	+4 58.2 ¹⁰⁹	54	51	36	13	35	22	11	71
4	239	36.0		37.0	254	30.0 ¹²⁸	+5 09.1 ¹⁰⁹	52	3 58	41	17	37	23	07	70
5	254	36.2	+7	37.9	269	01.8 ¹²⁸	+5 20.0 ¹⁰⁹	50	4 05	4 46	5 19	4 39	25	18 05	67
6	269	36.3	+7	38.9	283	33.5 ¹²⁷	+5 30.8 ¹⁰⁸	45	4 20	4 56	5 26	4 43	29	17 58	65
7	284	36.5		39.8	298	05.3 ¹²⁸	41.6 ¹⁰⁸	40	31	5 04	31	46	32	53	62
8	299	36.7		40.7	312	37.1 ¹²⁸	+5 52.4 ¹⁰⁸	35	40	10	36	49	34	49	59
9	314	36.8		41.7	327	08.8 ¹²⁷	+6 03.1 ¹⁰⁷	30	47	16	40	52	36	45	57
10	329	37.0		42.6	341	40.6 ¹²⁸	13.8 ¹⁰⁷	20	4 58	25	47	4 57	40	38	53
11	344	37.2	+7	43.5	356	12.4 ¹²⁸	+6 24.4 ¹⁰⁶	10 N	5 07	5 32	5 53	5 01	43	17 32	50
12	359	37.3	+7	44.4	10	44.1 ¹²⁷	+6 35.0 ¹⁰⁶	0	5 13	5 37	5 58	5 05	46	17 27	47
13	14	37.5		45.4	25	15.9 ¹²⁸	45.6 ¹⁰⁶	10 S	18	42	6 04	08	50	21	44
14	29	37.7		46.3	39	47.7 ¹²⁸	+6 56.1 ¹⁰⁵	20	21	47	09	13	53	15	41
15	44	37.8		47.2	54	19.5 ¹²⁸	+7 06.6 ¹⁰⁵	30	24	51	15	17	58	09	37
16	59	38.0		48.2	68	51.2 ¹²⁷	17.1 ¹⁰⁵	35	24	54	19	20	60	05	35
17	74	38.2	+7	49.1	83	23.0 ¹²⁸	+7 27.5 ¹⁰⁴	40	5 24	5 56	6 23	5 23	62	17 01	32
18	89	38.3	+7	50.0	97	54.8 ¹²⁸	+7 37.8 ¹⁰³	45	5 24	5 58	6 28	5 27	65	16 56	29
19	104	38.5		50.9	112	26.5 ¹²⁷	48.2 ¹⁰⁴	50	23	6 01	33	32	68	50	26
20	119	38.7		51.9	126	58.3 ¹²⁸	+7 58.4 ¹⁰²	52	23	02	36	34	70	47	24
21	134	38.9		52.8	141	30.0 ¹²⁷	+8 08.7 ¹⁰³	54	22	03	38	36	72	44	23
22	149	39.0		53.7	156	01.8 ¹²⁸	18.9 ¹⁰²	56	21	04	41	38	75	41	20
23	164	39.2		54.6	170	33.5 ¹²⁷	29.0 ¹⁰¹	58	20	05	45	41	77	37	19
24	179	39.4	+7	55.6	185	05.3 ¹²⁸	+8 39.1 ¹⁰¹	60 S	5 18	6 07	6 49	5 44	80	16 33	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 48 ^m 6		Mag: -3.9 PMG: 12 ^h 14 ^m		Mag: +1.2 PMG: 12 ^h 09 ^m		Mag: -2.1 PMG: 15 ^h 36 ^m		Mag: +0.2 PMG: 1 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	197	24.2	176	28.5	177	30.7	125	32.5	339	18.3
1	212	26.7	191	28.1	192	31.4	140	34.5	354	20.9
2	227	29.2	206	27.7	207	32.0	155	36.5	9	23.5
3	242	31.6	221	27.2	222	32.7	170	38.5	24	26.1
4	257	34.1	236	26.8	237	33.4	185	40.5	39	28.8
5	272	36.5	251	26.4	252	34.1	200	42.5	54	31.4
6	287	39.0	266	26.0	267	34.8	215	44.4	69	34.0
7	302	41.5	281	25.6	282	35.5	230	46.4	84	36.7
8	317	43.9	296	25.2	297	36.2	245	48.4	99	39.3
9	332	46.4	311	24.8	312	36.9	260	50.4	114	41.9
10	347	48.9	326	24.3	327	37.6	275	52.4	129	44.6
11	2	51.3	341	23.9	342	38.3	290	54.4	144	47.2
12	17	53.8	356	23.5	357	39.0	305	56.4	159	49.8
13	32	56.3	11	23.1	12	39.7	320	58.3	174	52.4
14	47	58.7	26	22.7	27	40.4	336	00.3	189	55.1
15	63	01.2	41	22.2	42	41.1	351	02.3	204	57.7
16	78	03.6	56	21.8	56.1	57 41.8	6	04.3	220	00.3
17	93	06.1	71	21.4	72 42.5	+8 04.1	21	06.3	235	03.0
18	108	08.6	86	21.0	87 43.2	+8 04.8	36	08.3	250	05.6
19	123	11.0	101	20.6	102 43.9	05.6	51	10.2	265	08.2
20	138	13.5	116	20.2	117 44.6	06.3	66	12.2	280	10.9
21	153	16.0	131	19.7	132 45.3	07.0	81	14.2	295	13.5
22	168	18.4	146	19.3	147 46.0	07.8	96	16.2	310	16.1
23	183	20.9	161	18.9	162 46.7	08.5	111	18.2	325	18.8
24	198	23.4	176	18.5	177 47.4	+8 09.2	126	20.2	340	21.4
Dif	—		-4	+12	+7	+7	+20	+1	+26	+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 2			Edad: 29 ^d 2 PHE { 4 ^h : 56:0 12 ^h : 55:9 20 ^h : 55:7 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	39.4	+7 55.6	185	05.3	+8 39.1	100	60 N	19 06	19 51	20 50	4 43 17	19 41 75		
1	194	39.5	56.5	199	37.0 ¹²⁷	49.1 ¹⁰⁰	58	58	19 01	43	37	48 20	34 73		
2	209	39.7	57.4	214	08.8 ¹²⁸	+8 59.1 ¹⁰⁰	56	56	18 57	36	26	52 23	27 71		
3	224	39.9	58.3	228	40.5 ¹²⁷	+9 09.1 ¹⁰⁰	54	54	53	30	16	4 57 24	22 69		
4	239	40.0	+7 59.3	243	12.2 ¹²⁷	19.0 ⁹⁹	52	52	49	25	08	5 00 26	17 67		
5	254	40.2	+8 00.2	257	43.9 ¹²⁷	+9 28.8 ⁹⁸	50	50	18 46	19 20	20 01	5 04 27	19 12 66		
6	269	40.4	+8 01.1	272	15.6 ¹²⁷	+9 38.6 ⁹⁸	45	45	18 39	19 10	19 46	5 12 30	19 03 62		
7	284	40.5	02.0	286	47.3 ¹²⁷	48.3 ⁹⁷	40	40	33	19 01	34	18 33	18 55 60		
8	299	40.7	02.9	301	19.0 ¹²⁷	+9 58.0 ⁹⁷	35	35	29	18 54	25	23 36	48 58		
9	314	40.9	03.9	315	50.7 ¹²⁷	+10 07.6 ⁹⁶	30	30	24	49	17	28 38	42 56		
10	329	41.0	04.8	330	22.4 ¹²⁷	17.2 ⁹⁶	20	20	17	39	19 05	37 41	31 53		
11	344	41.2	+8 05.7	344	54.1 ¹²⁷	+10 26.7 ⁹⁵	10 N	10 N	18 10	18 32	18 56	5 44 44	18 22 50		
12	359	41.4	+8 06.6	359	25.7 ¹²⁶	+10 36.2 ⁹⁵	0	0	18 05	18 25	18 50	5 51 47	18 14 47		
13	14	41.5	07.6	13	57.4 ¹²⁷	45.6 ⁹⁴	10 S	10 S	17 59	20	44	5 58 50	18 05 45		
14	29	41.7	08.5	28	29.0 ¹²⁶	+10 54.9 ⁹³	20	20	53	15	41	6 06 53	17 56 42		
15	44	41.9	09.4	43	00.7 ¹²⁷	+11 04.2 ⁹³	30	30	46	10	38	15 56	46 38		
16	59	42.0	10.3	57	32.3 ¹²⁶	13.4 ⁹²	35	35	42	08	37	20 58	40 36		
17	74	42.2	+8 11.2	72	03.9 ¹²⁶	+11 22.6 ⁹²	40	40	17 38	18 05	18 36	6 25 61	17 33 35		
18	89	42.3	+8 12.2	86	35.5 ¹²⁶	+11 31.7 ⁹¹	45	45	17 33	18 02	18 36	6 32 64	17 25 32		
19	104	42.5	13.1	101	07.1 ¹²⁶	40.8 ⁹¹	50	50	27	17 59	37	40 67	16 29		
20	119	42.7	14.0	115	38.7 ¹²⁶	49.8 ⁹⁰	52	52	24	58	37	44 68	11 28		
21	134	42.8	14.9	130	10.3 ¹²⁶	+11 58.7 ⁸⁹	54	54	21	57	38	48 70	07 25		
22	149	43.0	15.8	144	41.8 ¹²⁵	+12 07.5 ⁸⁸	56	56	18	55	38	53 72	17 01 24		
23	164	43.2	16.8	159	13.4 ¹²⁶	16.3 ⁸⁸	58	58	14	54	39	6 58 74	16 56 21		
24	179	43.3	+8 17.7	173	44.9 ¹²⁵	+12 25.1 ⁸⁸	60 S	60 S	17 10	17 52	18 40	7 04 77	16 49 19		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 44 ^m 7		Mag: -3.9 PMG: 12 ^h 15 ^m			Mag: +1.2 PMG: 12 ^h 08 ^m			Mag: -2.1 PMG: 15 ^h 33 ^m			Mag: +0.2 PMG: 1 ^h 18 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	198	23.4	176	18.5	+8 05.7	177	47.4	+8 09.2	126	20.2	+22 02.4	340	21.4	-12 08.3	
1	213	25.8	191	18.1	06.9	192	48.1	09.9	141	22.1	02.5	355	24.0	08.2	
2	228	28.3	206	17.6	08.1	207	48.7	10.7	156	24.1	02.5	10	26.6	08.2	
3	243	30.8	221	17.2	09.3	222	49.4	11.4	171	26.1	02.6	25	29.3	08.1	
4	258	33.2	236	16.8	10.5	237	50.1	12.1	186	28.1	02.7	40	31.9	08.1	
5	273	35.7	251	16.4	+8 11.7	252	50.8	+8 12.9	201	30.1	+22 02.7	55	34.5	-12 08.0	
6	288	38.1	266	16.0	+8 12.9	267	51.5	+8 13.6	216	32.0	+22 02.8	70	37.2	-12 08.0	
7	303	40.6	281	15.5	14.1	282	52.2	14.3	231	34.0	02.9	85	39.8	07.9	
8	318	43.1	296	15.1	15.3	297	52.9	15.0	246	36.0	02.9	100	42.4	07.8	
9	333	45.5	311	14.7	16.5	312	53.6	15.8	261	38.0	03.0	115	45.1	07.8	
10	348	48.0	326	14.3	17.7	327	54.3	16.5	276	40.0	03.0	130	47.7	07.7	
11	3	50.5	341	13.8	+8 18.9	342	55.0	+8 17.2	291	42.0	+22 03.1	145	50.3	-12 07.7	
12	18	52.9	356	13.4	+8 20.1	357	55.7	+8 18.0	306	43.9	+22 03.2	160	53.0	-12 07.6	
13	33	55.4	11	13.0	21.3	12	56.4	18.7	321	45.9	03.2	175	55.6	07.6	
14	48	57.9	26	12.6	22.5	27	57.1	19.4	336	47.9	03.3	190	58.2	07.5	
15	64	00.3	41	12.1	23.7	42	57.8	20.1	351	49.9	03.3	206	00.9	07.4	
16	79	02.8	56	11.7	24.9	57	58.5	20.9	6	51.9	03.4	221	03.5	07.4	
17	94	05.3	71	11.3	+8 26.1	72	59.2	+8 21.6	21	53.8	+22 03.5	236	06.1	-12 07.3	
18	109	07.7	86	10.9	+8 27.3	87	59.9	+8 22.3	36	55.8	+22 03.5	251	08.8	-12 07.3	
19	124	10.2	101	10.4	28.5	103	00.6	23.1	51	57.8	03.6	266	11.4	07.2	
20	139	12.6	116	10.0	29.7	118	01.3	23.8	66	59.8	03.6	281	14.0	07.1	
21	154	15.1	131	09.6	30.9	133	02.0	24.5	82	01.7	03.7	296	16.7	07.1	
22	169	17.6	146	09.2	32.1	148	02.6	25.2	97	03.7	03.8	311	19.3	07.0	
23	184	20.0	161	08.7	33.3	163	03.3	26.0	112	05.7	03.8	326	21.9	07.0	
24	199	22.5	176	08.3	+8 34.5	178	04.0	+8 26.7	127	07.7	+22 03.9	341	24.6	-12 06.9	
Dif	—		-4		+12	+7		+7	+20		+1	+26		+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 0			Edad: 0 ^d 6 PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /4 20 ^h : 55 ^s /2 PMG: 12 ^h 49 ^m R ^o : 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	43.3	+8	17.7	173	44.9	+12 25.1	60 N	3 11	4 10	4 55	5 00	21	20 56 72
1	194	43.5		18.6	188	16.5 ¹²⁶	33.7 ⁸⁶	58	24	18	5 00	08 24	47 69	
2	209	43.7		19.5	202	48.0 ¹²⁵	42.3 ⁸⁶	56	35	25	04	15 25	38 67	
3	224	43.8		20.4	217	19.5 ¹²⁵	50.9 ⁸⁶	54	45	31	08	21 27	31 65	
4	239	44.0		21.4	231	51.0 ¹²⁵	+12 59.3 ⁸⁴	52	3 53	37	12	26 29	24 64	
5	254	44.2	+8	22.3	246	22.5 ¹²⁵	+13 07.7 ⁸⁴	50	4 01	4 42	5 15	5 31	31	20 18 63
6	269	44.3	+8	23.2	260	53.9 ¹²⁴	+13 16.1 ⁸⁴	45	4 16	4 52	5 22	5 42	34	20 05 60
7	284	44.5		24.1	275	25.4 ¹²⁵	24.3 ⁸²	40	27	5 00	28	51 36	19 55 58	
8	299	44.6		25.0	289	56.8 ¹²⁴	32.5 ⁸²	35	37	07	33	5 59 38	46 56	
9	314	44.8		26.0	304	28.3 ¹²⁵	40.6 ⁸¹	30	45	13	38	6 06 39	38 54	
10	329	45.0		26.9	318	59.7 ¹²⁴	48.7 ⁸¹	20	4 57	23	45	18 42	24 52	
11	344	45.1	+8	27.8	333	31.1 ¹²⁴	+13 56.7 ⁸⁰	10 N	5 06	5 30	5 52	6 28	45	19 12 50
12	359	45.3	+8	28.7	348	02.5 ¹²⁴	+14 04.6 ⁷⁹	0	5 13	5 37	5 58	6 38	47	19 01 48
13	14	45.5		29.6	2	33.9 ¹²⁴	12.4 ⁷⁸	10 S	18	42	6 04	48 50	18 50 45	
14	29	45.6		30.5	17	05.2 ¹²³	20.2 ⁷⁸	20	22	48	10	6 59 52	38 43	
15	44	45.8		31.4	31	36.6 ¹²⁴	27.9 ⁷⁷	30	25	53	17	7 11 55	24 41	
16	59	45.9		32.4	46	07.9 ¹²³	35.5 ⁷⁶	35	26	55	21	18 57	16 40	
17	74	46.1	+8	33.3	60	39.3 ¹²⁴	+14 43.0 ⁷⁵	40	5 26	5 58	6 25	7 26 59	18 08 37	
18	89	46.3	+8	34.2	75	10.6 ¹²³	+14 50.5 ⁷⁵	45	5 27	6 01	6 30	7 36 61	17 57 35	
19	104	46.4		35.1	89	41.9 ¹²³	+14 57.9 ⁷⁴	50	26	04	36	47 64	45 32	
20	119	46.6		36.0	104	13.2 ¹²³	+15 05.2 ⁷³	52	26	05	39	52 66	39 31	
21	134	46.8		36.9	118	44.5 ¹²³	12.4 ⁷²	54	25	06	42	7 58 68	32 30	
22	149	46.9		37.8	133	15.7 ¹²²	19.6 ⁷²	56	25	08	45	8 05 69	25 28	
23	164	47.1		38.8	147	47.0 ¹²³	26.7 ⁷¹	58	24	09	49	12 72	17 27	
24	179	47.2	+8	39.7	162	18.2 ¹²²	+15 33.7 ⁷⁰	60 S	5 23	6 11	6 53	8 21 74	17 08 24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 40 ^m 7		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +1.2 PMG: 12 ^h 07 ^m		Mag: -2.1 PMG: 15 ^h 29 ^m		Mag: +0.2 PMG: 1 ^h 14 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	199	22.5	176	08.3	+8 34.5	178	04.0	+8 26.7	127	07.7	+22 03.9	341	24.6	-12 06.9
1	214	25.0	191	07.9	35.7	193	04.7	27.4	142	09.7	04.0	356	27.2	06.9
2	229	27.4	206	07.5	36.9	208	05.4	28.1	157	11.6	04.0	11	29.8	06.8
3	244	29.9	221	07.0	38.1	223	06.1	28.9	172	13.6	04.1	26	32.5	06.7
4	259	32.4	236	06.6	39.3	238	06.8	29.6	187	15.6	04.1	41	35.1	06.7
5	274	34.8	251	06.2	+8 40.4	253	07.5	+8 30.3	202	17.6	+22 04.2	56	37.7	-12 06.6
6	289	37.3	266	05.8	+8 41.6	268	08.2	+8 31.0	217	19.5	+22 04.3	71	40.4	-12 06.6
7	304	39.7	281	05.3	42.8	283	08.9	31.8	232	21.5	04.3	86	43.0	06.5
8	319	42.2	296	04.9	44.0	298	09.6	32.5	247	23.5	04.4	101	45.6	06.5
9	334	44.7	311	04.5	45.2	313	10.3	33.2	262	25.5	04.4	116	48.3	06.4
10	349	47.1	326	04.0	46.4	328	11.0	33.9	277	27.5	04.5	131	50.9	06.3
11	4	49.6	341	03.6	+8 47.6	343	11.7	+8 34.7	292	29.4	+22 04.6	146	53.5	-12 06.3
12	19	52.1	356	03.2	+8 48.8	358	12.4	+8 35.4	307	31.4	+22 04.6	161	56.2	-12 06.2
13	34	54.5	11	02.8	50.0	13	13.1	36.1	322	33.4	04.7	176	58.8	06.2
14	49	57.0	26	02.3	51.2	28	13.8	36.8	337	35.4	04.7	192	01.4	06.1
15	64	59.5	41	01.9	52.4	43	14.4	37.5	352	37.3	04.8	207	04.1	06.0
16	80	01.9	56	01.5	53.5	58	15.1	38.3	7	39.3	04.9	222	06.7	06.0
17	95	04.4	71	01.0	+8 54.7	73	15.8	+8 39.0	22	41.3	+22 04.9	237	09.3	-12 05.9
18	110	06.9	86	00.6	+8 55.9	88	16.5	+8 39.7	37	43.3	+22 05.0	252	12.0	-12 05.9
19	125	09.3	101	00.2	57.1	103	17.2	40.4	52	45.2	05.1	267	14.6	05.8
20	140	11.8	115	59.7	58.3	118	17.9	41.2	67	47.2	05.1	282	17.2	05.8
21	155	14.2	130	59.3	+8 59.5	133	18.6	41.9	82	49.2	05.2	297	19.9	05.7
22	170	16.7	145	58.9	+9 00.7	148	19.3	42.6	97	51.2	05.2	312	22.5	05.6
23	185	19.2	160	58.4	01.9	163	20.0	43.3	112	53.1	05.3	327	25.1	05.6
24	200	21.6	175	58.0	+9 03.0	178	20.7	+8 44.0	127	55.1	+22 05.4	342	27.8	-12 05.5
Dif	—		-4		+12	+7		+7	+20		+1	+26		+1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 00 ^m 7		Edad: 1 ^d 6 PHE { SD: 15:0 PMG: 13 ^h 37 ^m		4 ^h : 55:1 12 ^h : 54:9 20 ^h : 54:8 R°: 48 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	47.2	+8 39.7	162	18.2	+15 33.7	60 N	19 11	19 57	20 57	5 21 27	22 08 64			
1	194	47.4		176	49.4 ¹²²	40.6 ⁶⁹	58	06	48	43	32 29	21 56 62			
2	209	47.6		191	20.6 ¹²²	47.5 ⁶⁹	56	19 01	41	31	40 31	45 62			
3	224	47.7		205	51.8 ¹²²	+15 54.2 ⁶⁷	54	18 57	34	21	48 33	36 60			
4	239	47.9		220	23.0 ¹²²	+16 00.9 ⁶⁷	52	53	28	12	5 55 34	28 59			
5	254	48.0	+8 44.2	234	54.2 ¹²²	+16 07.5 ⁶⁶	50	18 49	19 23	20 05	6 02 35	21 21 58			
6	269	48.2	+8 45.2	249	25.4 ¹²²	+16 14.1 ⁶⁶	45	18 42	19 12	19 49	6 16 37	21 05 57			
7	284	48.4		263	56.5 ¹²¹	20.5 ⁶⁴	40	35	19 03	37	27 39	20 53 55			
8	299	48.5		278	27.6 ¹²¹	26.9 ⁶⁴	35	30	18 56	27	37 40	42 54			
9	314	48.7		292	58.8 ¹²²	33.2 ⁶³	30	25	50	19	6 45 42	32 53			
10	329	48.8		307	29.9 ¹²¹	39.4 ⁶²	20	17	40	19 06	7 00 44	16 51			
11	344	49.0	+8 49.7	322	01.0 ¹²¹	+16 45.5 ⁶¹	10 N	18 10	18 32	18 57	7 13 46	20 02 49			
12	359	49.2	+8 50.6	336	32.1 ¹²¹	+16 51.5 ⁶⁰	0	18 04	18 25	18 49	7 25 48	19 49 48			
13	14	49.3		351	03.1 ¹²⁰	+16 57.5 ⁶⁰	10 S	17 58	19	44	38 49	35 47			
14	29	49.5		5	34.2 ¹²¹	+17 03.3 ⁵⁸	20	51	13	39	7 51 52	21 45			
15	44	49.6		20	05.3 ¹²¹	09.1 ⁵⁸	30	44	08	36	8 06 54	19 05 43			
16	59	49.8		34	36.3 ¹²⁰	14.8 ⁵⁷	35	40	05	34	15 55	18 56 42			
17	74	50.0	+8 55.2	49	07.3 ¹²⁰	+17 20.4 ⁵⁶	40	17 35	18 02	18 33	8 25 57	18 45 41			
18	89	50.1	+8 56.1	63	38.3 ¹²⁰	+17 26.0 ⁵⁶	45	17 29	17 59	18 33	8 37 58	18 32 40			
19	104	50.3		78	09.3 ¹²⁰	31.4 ⁵⁴	50	23	55	33	51 61	17 38			
20	119	50.4		92	40.3 ¹²⁰	36.8 ⁵⁴	52	20	54	33	8 58 62	10 37			
21	134	50.6		107	11.3 ¹²⁰	42.0 ⁵²	54	17	52	33	9 06 63	18 02 36			
22	149	50.8	+8 59.7	121	42.3 ¹²⁰	47.2 ⁵²	56	13	51	34	14 65	17 53 35			
23	164	50.9	+9 00.6	136	13.3 ¹²⁰	52.3 ⁵¹	58	09	49	34	24 66	44 32			
24	179	51.1	+9 01.5	150	44.2 ¹¹⁹	+17 57.3 ⁵⁰	60 S	17 05	17 47	18 35	9 35 68	17 32 31			
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 10 ^h 36 ^m 8		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +1.2 PMG: 12 ^h 06 ^m		Mag: -2.1 PMG: 15 ^h 26 ^m			Mag: +0.2 PMG: 1 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	°	°	°	°	°	°	°	°			
0	200	21.6	175 58.0	+9 03.0	178 20.7	+8 44.0	127 55.1	+22 05.4	342 27.8	-12 05.5					
1	215	24.1	190 57.6	04.2	193 21.4	44.8	142 57.1	05.4	357 30.4	05.5					
2	230	26.6	205 57.1	05.4	208 22.1	45.5	157 59.1	05.5	12 33.0	05.4					
3	245	29.0	220 56.7	06.6	223 22.8	46.2	173 01.0	05.5	27 35.7	05.3					
4	260	31.5	235 56.3	07.8	238 23.5	46.9	188 03.0	05.6	42 38.3	05.3					
5	275	34.0	250 55.8	+9 09.0	253 24.2	+8 47.7	203 05.0	+22 05.7	57 40.9	-12 05.2					
6	290	36.4	265 55.4	+9 10.2	268 24.9	+8 48.4	218 06.9	+22 05.7	72 43.6	-12 05.2					
7	305	38.9	280 55.0	11.3	283 25.5	49.1	233 08.9	05.8	87 46.2	05.1					
8	320	41.3	295 54.5	12.5	298 26.2	49.8	248 10.9	05.8	102 48.8	05.1					
9	335	43.8	310 54.1	13.7	313 26.9	50.5	263 12.9	05.9	117 51.5	05.0					
10	350	46.3	325 53.7	14.9	328 27.6	51.3	278 14.8	06.0	132 54.1	04.9					
11	5	48.7	340 53.2	+9 16.1	343 28.3	+8 52.0	293 16.8	+22 06.0	147 56.7	-12 04.9					
12	20	51.2	355 52.8	+9 17.3	358 29.0	+8 52.7	308 18.8	+22 06.1	162 59.4	-12 04.8					
13	35	53.7	10 52.4	18.4	13 29.7	53.4	323 20.8	06.2	178 02.0	04.8					
14	50	56.1	25 51.9	19.6	28 30.4	54.1	338 22.7	06.2	193 04.7	04.7					
15	65	58.6	40 51.5	20.8	43 31.1	54.9	353 24.7	06.3	208 07.3	04.6					
16	81	01.1	55 51.0	22.0	58 31.8	55.6	8 26.7	06.3	223 09.9	04.6					
17	96	03.5	70 50.6	+9 23.2	73 32.5	+8 56.3	23 28.6	+22 06.4	238 12.6	-12 04.5					
18	111	06.0	85 50.2	+9 24.3	88 33.2	+8 57.0	38 30.6	+22 06.5	253 15.2	-12 04.5					
19	126	08.5	100 49.7	25.5	103 33.9	57.7	53 32.6	06.5	268 17.8	04.4					
20	141	10.9	115 49.3	26.7	118 34.6	58.4	68 34.5	06.6	283 20.5	04.4					
21	156	13.4	130 48.9	27.9	133 35.3	59.2	83 36.5	06.6	298 23.1	04.3					
22	171	15.8	145 48.4	29.0	148 35.9	+8 59.9	98 38.5	06.7	313 25.7	04.2					
23	186	18.3	160 48.0	30.2	163 36.6	+9 00.6	113 40.5	06.8	328 28.4	04.2					
24	201	20.8	175 47.5	+9 31.4	178 37.3	+9 01.3	128 42.4	+22 06.8	343 31.0	-12 04.1					
Dif	—		-4	+12	+7	+7	+20	+1	+26	+1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 2 ^d 6 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	51.1	+9 01.5	150	44.2	+17 57.3	60 N	3 04	4 04	4 49	5 48	35	23 12	56
1	194	51.2	02.4	165	15.2 ¹²⁰	+18 02.2 ⁴⁹	58	18	12	55	6 01	36	22 58	55
2	209	51.4	03.3	179	46.1 ¹¹⁹	07.1 ⁴⁹	56	29	20	4 59	11 38		47 54	
3	224	51.6	04.2	194	17.0 ¹¹⁹	11.8 ⁴⁷	54	39	26	5 04	21 38		36 54	
4	239	51.7	05.1	208	47.9 ¹¹⁹	16.4 ⁴⁶	52	48	32	08	29 40		27 54	
5	254	51.9	+9 06.1	223	18.9 ¹²⁰	+18 21.0 ⁴⁶	50	3 56	4 37	5 11	6 37	40	22 19	53
6	269	52.0	+9 07.0	237	49.8 ¹¹⁹	+18 25.5 ⁴⁵	45	4 12	4 48	5 19	6 53	42	22 02	52
7	284	52.2	07.9	252	20.6 ¹¹⁸	29.9 ⁴⁴	40	24	4 57	25	7 06	43	21 48	51
8	299	52.3	08.8	266	51.5 ¹¹⁹	34.2 ⁴³	35	34	5 05	31	17 44		36 50	
9	314	52.5	09.7	281	22.4 ¹¹⁹	38.4 ⁴²	30	42	11	35	27 45		25 50	
10	329	52.7	10.6	295	53.3 ¹¹⁹	42.5 ⁴¹	20	4 55	21	44	44 46		21 07	50
11	344	52.8	+9 11.5	310	24.1 ¹¹⁸	+18 46.5 ⁴⁰	10 N	5 05	5 29	5 51	7 59	48	20 51	49
12	359	53.0	+9 12.4	324	55.0 ¹¹⁹	+18 50.4 ³⁹	0	5 12	5 36	5 57	8 13	49	20 37	48
13	14	53.1	13.3	339	25.9 ¹¹⁹	54.3 ³⁹	10 S	18	42	6 04	27 50		22 48	
14	29	53.3	14.2	353	56.7 ¹¹⁸	+18 58.0 ³⁷	20	22	48	10	8 43	50	20 06	47
15	44	53.4	15.1	8	27.5 ¹¹⁸	+19 01.7 ³⁷	30	26	54	18	9 00	52	19 48	46
16	59	53.6	16.0	22	58.4 ¹¹⁹	05.2 ³⁵	35	27	5 57	22	10 52		38 45	
17	74	53.7	+9 16.9	37	29.2 ¹¹⁸	+19 08.7 ³⁵	40	5 28	6 00	6 27	9 22	53	19 26	45
18	89	53.9	+9 17.8	52	00.0 ¹¹⁸	+19 12.1 ³⁴	45	5 29	6 03	6 33	9 35	55	19 12	44
19	104	54.1	18.7	66	30.8 ¹¹⁸	15.4 ³³	50	29	07	39	9 52	56	18 55	43
20	119	54.2	19.6	81	01.6 ¹¹⁸	18.6 ³²	52	29	08	42	10 00	56	47 42	
21	134	54.4	20.5	95	32.5 ¹¹⁹	21.7 ³¹	54	29	10	46	09 57		38 41	
22	149	54.5	21.4	110	03.3 ¹¹⁸	24.7 ³⁰	56	29	12	49	19 58		28 41	
23	164	54.7	22.3	124	34.1 ¹¹⁸	27.6 ²⁹	58	28	14	54	30 59		16 40	
24	179	54.8	+9 23.2	139	04.9 ¹¹⁸	+19 30.4 ²⁸	60 S	5 28	6 16	6 58	10 43	60	18 03	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 32 ^m 9		Mag: -3.9 PMG: 12 ^h 17 ^m		Mag: +1.2 PMG: 12 ^h 05 ^m		Mag: -2.1 PMG: 15 ^h 23 ^m		Mag: +0.2 PMG: 1 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	201	20.8	175	47.5	+9 31.4	178 37.3	+9 01.3	128 42.4	+22 06.8	343 31.0	-12 04.1			
1	216	23.2	190	47.1	32.6	193 38.0	02.0	143 44.4	06.9	358 33.6	04.1			
2	231	25.7	205	46.7	33.8	208 38.7	02.8	158 46.4	06.9	13 36.3	04.0			
3	246	28.2	220	46.2	34.9	223 39.4	03.5	173 48.3	07.0	28 38.9	03.9			
4	261	30.6	235	45.8	36.1	238 40.1	04.2	188 50.3	07.1	43 41.6	03.9			
5	276	33.1	250	45.3	+9 37.3	253 40.8	+9 04.9	203 52.3	+22 07.1	58 44.2	-12 03.8			
6	291	35.6	265	44.9	+9 38.5	268 41.5	+9 05.6	218 54.2	+22 07.2	73 46.8	-12 03.8			
7	306	38.0	280	44.5	39.6	283 42.2	06.3	233 56.2	07.3	88 49.5	03.7			
8	321	40.5	295	44.0	40.8	298 42.9	07.0	248 58.2	07.3	103 52.1	03.6			
9	336	43.0	310	43.6	42.0	313 43.6	07.8	264 00.1	07.4	118 54.7	03.6			
10	351	45.4	325	43.1	43.2	328 44.3	08.5	279 02.1	07.4	133 57.4	03.5			
11	6	47.9	340	42.7	+9 44.3	343 44.9	+9 09.2	294 04.1	+22 07.5	149 00.0	-12 03.5			
12	21	50.3	355	42.2	+9 45.5	358 45.6	+9 09.9	309 06.1	+22 07.6	164 02.7	-12 03.4			
13	36	52.8	10	41.8	46.7	13 46.3	10.6	324 08.0	07.6	179 05.3	03.4			
14	51	55.3	25	41.4	47.8	28 47.0	11.3	339 10.0	07.7	194 07.9	03.3			
15	66	57.7	40	40.9	49.0	43 47.7	12.1	354 12.0	07.7	209 10.6	03.2			
16	82	00.2	55	40.5	50.2	58 48.4	12.8	9 13.9	07.8	224 13.2	03.2			
17	97	02.7	70	40.0	+9 51.4	73 49.1	+9 13.5	24 15.9	+22 07.9	239 15.8	-12 03.1			
18	112	05.1	85	39.6	+9 52.5	88 49.8	+9 14.2	39 17.9	+22 07.9	254 18.5	-12 03.1			
19	127	07.6	100	39.1	53.7	103 50.5	14.9	54 19.8	08.0	269 21.1	03.0			
20	142	10.1	115	38.7	54.9	118 51.2	15.6	69 21.8	08.0	284 23.7	02.9			
21	157	12.5	130	38.2	56.0	133 51.9	16.3	84 23.8	08.1	299 26.4	02.9			
22	172	15.0	145	37.8	57.2	148 52.6	17.1	99 25.7	08.2	314 29.0	02.8			
23	187	17.4	160	37.3	58.4	163 53.2	17.8	114 27.7	08.2	329 31.7	02.8			
24	202	19.9	175	36.9	+9 59.5	178 53.9	+9 18.5	129 29.7	+22 08.3	344 34.3	-12 02.7			
Dif	—		-4		+12	+7		+20		+1	+26		+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 2			Edad: 3 ^d 6 SD: 14'8 PMG: 15 ^h 13 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 48 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	54.8	+9 23.2	139	04.9	+19 30.4	28	60 N	19 16	20 02	21 04	6 23 44	** ** *	** ** *
1	194	55.0	24.1	153	35.7 ¹¹⁸	33.2	28	58	10	19 53	20 49	37 44	23 53 46	
2	209	55.1	25.0	168	06.5 ¹¹⁸	35.8	26	56	05	45	36	49 45	41 46	
3	224	55.3	25.9	182	37.3 ¹¹⁸	38.3	25	54	19 00	38	26	6 59 46	30 46	
4	239	55.4	26.8	197	08.0 ¹¹⁷	40.8	25	52	18 56	32	17	7 09 45	21 46	
5	254	55.6	+9 27.7	211	38.8 ¹¹⁸	+19 43.1	23	50	18 52	19 27	20 09	7 17 46	23 12 47	
6	269	55.8	+9 28.6	226	09.6 ¹¹⁸	+19 45.4	23	45	18 44	19 15	19 52	7 35 46	22 54 47	
7	284	55.9	29.5	240	40.4 ¹¹⁸	47.6	22	40	37	19 06	39	7 49 47	39 47	
8	299	56.1	30.4	255	11.2 ¹¹⁸	49.6	20	35	32	18 58	29	8 01 47	26 48	
9	314	56.2	31.3	269	42.0 ¹¹⁸	51.6	20	30	27	51	20	12 47	22 15 48	
10	329	56.4	32.2	284	12.8 ¹¹⁸	53.5	19	20	18	40	19 07	30 48	21 57 47	
11	344	56.5	+9 33.1	298	43.6 ¹¹⁸	+19 55.3	18	10 N	18 10	18 32	18 57	8 47 48	21 40 48	
12	359	56.7	+9 34.0	313	14.4 ¹¹⁸	+19 57.0	17	0	18 04	18 25	18 49	9 02 48	21 25 48	
13	14	56.8	34.9	327	45.2 ¹¹⁸	+19 58.6	16	10 S	17 57	18	43	17 48	21 10 48	
14	29	57.0	35.8	342	16.0 ¹¹⁸	+20 00.1	15	20	50	12	38	33 49	20 53 49	
15	44	57.1	36.7	356	46.8 ¹¹⁸	01.5	14	30	42	06	34	9 52 49	34 49	
16	59	57.3	37.6	11	17.6 ¹¹⁸	02.8	13	35	37	18 03	32	10 02 50	23 49	
17	74	57.4	+9 38.5	25	48.4 ¹¹⁸	+20 04.1	13	40	17 32	17 59	18 31	10 15 49	20 11 48	
18	89	57.6	+9 39.4	40	19.2 ¹¹⁸	+20 05.2	11	45	17 26	17 56	18 30	10 30 49	19 56 49	
19	104	57.7	40.3	54	50.0 ¹¹⁸	06.2	10	50	19	52	29	48 49	38 48	
20	119	57.9	41.2	69	20.8 ¹¹⁸	07.2	10	52	16	50	29	10 56 50	29 49	
21	134	58.1	42.1	83	51.6 ¹¹⁸	08.0	8	54	12	48	29	11 06 50	19 49	
22	149	58.2	43.0	98	22.4 ¹¹⁸	08.8	8	56	08	46	29	17 50	19 09 48	
23	164	58.4	43.9	112	53.3 ¹¹⁹	09.4	6	58	17 04	44	29	29 50	18 56 49	
24	179	58.5	+9 44.8	127	24.1 ¹¹⁸	+20 10.0	6	60 S	16 59	17 41	18 29	11 43 51	18 42 49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 29 ^m 0		Mag: -3.9 PMG: 12 ^h 18 ^m		Mag: +1.2 PMG: 12 ^h 04 ^m		Mag: -2.1 PMG: 15 ^h 20 ^m		Mag: +0.2 PMG: 1 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	202	19.9	175	36.9	+9 59.5	178	53.9	+9 18.5	129	29.7	+22 08.3	344	34.3	-12 02.7
1	217	22.4	190	36.5	+10 00.7	193	54.6	19.2	144	31.6	08.3	359	36.9	02.6
2	232	24.8	205	36.0	01.9	208	55.3	19.9	159	33.6	08.4	14	39.6	02.6
3	247	27.3	220	35.6	03.0	223	56.0	20.6	174	35.5	08.5	29	42.2	02.5
4	262	29.8	235	35.1	04.2	238	56.7	21.3	189	37.5	08.5	44	44.8	02.5
5	277	32.2	250	34.7	+10 05.4	253	57.4	+9 22.0	204	39.5	+22 08.6	59	47.5	-12 02.4
6	292	34.7	265	34.2	+10 06.5	268	58.1	+9 22.8	219	41.4	+22 08.6	74	50.1	-12 02.4
7	307	37.2	280	33.8	07.7	283	58.8	23.5	234	43.4	08.7	89	52.8	02.3
8	322	39.6	295	33.3	08.9	298	59.5	24.2	249	45.4	08.8	104	55.4	02.2
9	337	42.1	310	32.9	10.0	314	00.2	24.9	264	47.3	08.8	119	58.0	02.2
10	352	44.6	325	32.4	11.2	329	00.9	25.6	279	49.3	08.9	135	00.7	02.1
11	7	47.0	340	32.0	+10 12.4	344	01.5	+9 26.3	294	51.3	+22 09.0	150	03.3	-12 02.1
12	22	49.5	355	31.5	+10 13.5	359	02.2	+9 27.0	309	53.2	+22 09.0	165	06.0	-12 02.0
13	37	51.9	10	31.1	14.7	14	02.9	27.7	324	55.2	09.1	180	08.6	01.9
14	52	54.4	25	30.6	15.8	29	03.6	28.4	339	57.2	09.1	195	11.2	01.9
15	67	56.9	40	30.2	17.0	44	04.3	29.2	354	59.1	09.2	210	13.9	01.8
16	82	59.3	55	29.7	18.2	59	05.0	29.9	10	01.1	09.3	225	16.5	01.8
17	98	01.8	70	29.3	+10 19.3	74	05.7	+9 30.6	25	03.0	+22 09.3	240	19.1	-12 01.7
18	113	04.3	85	28.8	+10 20.5	89	06.4	+9 31.3	40	05.0	+22 09.4	255	21.8	-12 01.6
19	128	06.7	100	28.4	21.6	104	07.1	32.0	55	07.0	09.4	270	24.4	01.6
20	143	09.2	115	27.9	22.8	119	07.8	32.7	70	08.9	09.5	285	27.1	01.5
21	158	11.7	130	27.5	24.0	134	08.5	33.4	85	10.9	09.6	300	29.7	01.5
22	173	14.1	145	27.0	25.1	149	09.1	34.1	100	12.9	09.6	315	32.3	01.4
23	188	16.6	160	26.5	26.3	164	09.8	34.8	115	14.8	09.7	330	35.0	01.3
24	203	19.1	175	26.1	+10 27.4	179	10.5	+9 35.5	130	16.8	+22 09.7	345	37.6	-12 01.3
Dif	—		-5	+12		+7	+7		+20	+1		+26	+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15:9 PMG: 12 ^h 00 ^m 0			Edad: 4 ^d 6 SD: 14:8 PMG: 16 ^h 01 ^m	PHE { 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:2 Rº: 48 ^m	Náutico		Civil	Hora		Rº	Hora	Rº				
	hG ☉	Dec												hG ☾	Dif	Dec	Dif
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	179	58.5	+9	44.8	127	24.1	+20	10.0	60 N	2	56	3	57	4	43		
1	194	58.7		45.6	141	55.0 ¹¹⁹		10.5	58	3	10	4	06	49	21		
2	209	58.8		46.5	156	25.8 ¹¹⁸		10.8	56		23	14	54	34	52		
3	224	59.0		47.4	170	56.7 ¹¹⁹		11.1	54		34	21	4	59	45		
4	239	59.1		48.3	185	27.5 ¹¹⁸		11.3	52		43	27	5	03	7		
5	254	59.3	+9	49.2	199	58.4 ¹¹⁹	+20	11.4	50	3	51	4	33	5	07		
6	269	59.4	+9	50.1	214	29.3 ¹¹⁹	+20	11.4	45	4	08	4	45	5	15		
7	284	59.6		51.0	229	00.2 ¹¹⁹		11.3	40		21	4	54	22	36		
8	299	59.7		51.9	243	31.0 ¹¹⁸		11.1	35		31	5	02	28	48		
9	314	59.9		52.8	258	01.9 ¹¹⁹		10.8	30		40	09	33	8	59		
10	330	00.0		53.7	272	32.9 ¹²⁰		10.4	20	4	53		20	42	9		
11	345	00.2	+9	54.6	287	03.8 ¹¹⁹	+20	10.0	10 N	5	03	5	28	5	50		
12	0	00.3	+9	55.5	301	34.7 ¹¹⁹	+20	09.4	0	5	11	5	36	5	57		
13	15	00.5		56.4	316	05.6 ¹¹⁹		08.8	10 S		18	42	6	04	10		
14	30	00.6		57.2	330	36.6 ¹²⁰		08.0	20		23	49	11	22	46		
15	45	00.8		58.1	345	07.6 ¹²⁰		07.2	30		27	55	19	41	46		
16	60	00.9		59.0	359	38.5 ¹¹⁹		06.2	35		29	5	58	24	10		
17	75	01.1	+9	59.9	14	09.5 ¹²⁰	+20	05.2	40	5	30	6	02	6	29		
18	90	01.2	+10	00.8	28	40.5 ¹²⁰	+20	04.1	45	5	31	6	05	6	35		
19	105	01.4		01.7	43	11.5 ¹²⁰		02.8	50		32	10	42	37	44		
20	120	01.5		02.6	57	42.5 ¹²⁰		01.5	52		32	11	46	46	43		
21	135	01.7		03.5	72	13.5 ¹²⁰	+20	00.1	54		32	13	49	11	56		
22	150	01.8		04.4	86	44.6 ¹²¹	+19	58.6	56		32	15	53	12	07		
23	165	01.9		05.2	101	15.6 ¹²⁰		57.0	58		32	18	6	58	19		
24	180	02.1	+10	06.1	115	46.7 ¹²¹	+19	55.4	60 S	5	32	6	20	7	03		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 25 ^m 0		Mag: −3.9 PMG: 12 ^h 19 ^m			Mag: +1.2 PMG: 12 ^h 03 ^m			Mag: −2.1 PMG: 15 ^h 17 ^m			Mag: +0.2 PMG: 0 ^h 57 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	203	19.1	175	26.1	+10	27.4	179	10.5	+9	35.5	130	16.8	+22	09.7	345	37.6	
1	218	21.5	190	25.6		28.6	194	11.2		36.3	145	18.7		09.8	0	40.3	
2	233	24.0	205	25.2		29.8	209	11.9		37.0	160	20.7		09.9	15	42.9	
3	248	26.4	220	24.7		30.9	224	12.6		37.7	175	22.7		09.9	30	45.5	
4	263	28.9	235	24.3		32.1	239	13.3		38.4	190	24.6		10.0	45	48.2	
5	278	31.4	250	23.8	+10	33.2	254	14.0	+9	39.1	205	26.6	+22	10.0	60	50.8	
6	293	33.8	265	23.4	+10	34.4	269	14.7	+9	39.8	220	28.5	+22	10.1	75	53.5	
7	308	36.3	280	22.9		35.5	284	15.4		40.5	235	30.5		10.2	90	56.1	
8	323	38.8	295	22.4		36.7	299	16.1		41.2	250	32.5		10.2	105	58.7	
9	338	41.2	310	22.0		37.8	314	16.7		41.9	265	34.4		10.3	121	01.4	
10	353	43.7	325	21.5		39.0	329	17.4		42.6	280	36.4		10.3	136	04.0	
11	8	46.2	340	21.1	+10	40.1	344	18.1	+9	43.3	295	38.3	+22	10.4	151	06.6	
12	23	48.6	355	20.6	+10	41.3	359	18.8	+9	44.0	310	40.3	+22	10.5	166	09.3	
13	38	51.1	10	20.2		42.5	14	19.5		44.7	325	42.3		10.5	181	11.9	
14	53	53.6	25	19.7		43.6	29	20.2		45.4	340	44.2		10.6	196	14.6	
15	68	56.0	40	19.2		44.8	44	20.9		46.2	355	46.2		10.6	211	17.2	
16	83	58.5	55	18.8		45.9	59	21.6		46.9	10	48.1		10.7	226	19.8	
17	99	00.9	70	18.3	+10	47.1	74	22.3	+9	47.6	25	50.1	+22	10.8	241	22.5	
18	114	03.4	85	17.9	+10	48.2	89	23.0	+9	48.3	40	52.1	+22	10.8	256	25.1	
19	129	05.9	100	17.4		49.4	104	23.6		49.0	55	54.0		10.9	271	27.8	
20	144	08.3	115	16.9		50.5	119	24.3		49.7	70	56.0		10.9	286	30.4	
21	159	10.8	130	16.5		51.7	134	25.0		50.4	85	57.9		11.0	301	33.0	
22	174	13.3	145	16.0		52.8	149	25.7		51.1	100	59.9		11.1	316	35.7	
23	189	15.7	160	15.6		54.0	164	26.4		51.8	116	01.9		11.1	331	38.3	
24	204	18.2	175	15.1	+10	55.1	179	27.1	+9	52.5	131	03.8	+22	11.2	346	41.0	
Dif	—		−5			+12	+7		+7	+20		+1		+26		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 7			Edad: 5 ^d 6 SD: 14'8 PMG: 16 ^h 49 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 47 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	02.1	+10	06.1	115	46.7	+19 55.4	60 N	19 21	20 08	21 11	8 01 62	0 53 35		
1	195	02.2		07.0	130	17.8 ¹²¹	53.6 ¹⁸	58	15	19 58	20 55	14 61	39 37		
2	210	02.4		07.9	144	48.9 ¹²¹	51.7 ¹⁹	56	09	50	42	26 59	27 38		
3	225	02.5		08.8	159	20.0 ¹²¹	49.8 ¹⁹	54	04	42	31	37 58	16 39		
4	240	02.7		09.7	173	51.1 ¹²¹	47.7 ²¹	52	19 00	36	21	46 57	0 07 40		
5	255	02.8	+10	10.6	188	22.2 ¹²¹	+19 45.6 ²¹	50	18 56	19 30	20 12	8 54 57	** ** *		
6	270	03.0	+10	11.4	202	53.4 ¹²²	+19 43.4 ²²	45	18 47	19 18	19 55	9 12 54	** ** *		
7	285	03.1		12.3	217	24.6 ¹²²	41.0 ²⁴	40	40	19 08	41	26 53	** ** *		
8	300	03.3		13.2	231	55.7 ¹²¹	38.6 ²⁴	35	33	18 59	31	38 53	23 57 41		
9	315	03.4		14.1	246	26.9 ¹²²	36.1 ²⁵	30	28	53	22	9 49 51	47 42		
10	330	03.6		15.0	260	58.1 ¹²²	33.6 ²⁵	20	19	41	19 07	10 07 50	30 44		
11	345	03.7	+10	15.9	275	29.4 ¹²³	+19 30.9 ²⁷	10 N	18 11	18 32	18 57	10 23 48	23 15 45		
12	0	03.9	+10	16.8	290	00.6 ¹²²	+19 28.1 ²⁸	0	18 03	18 24	18 48	10 38 47	23 01 46		
13	15	04.0		17.6	304	31.9 ¹²³	25.2 ²⁹	10 S	17 56	17	42	10 53 45	22 46 49		
14	30	04.1		18.5	319	03.1 ¹²²	22.3 ²⁹	20	48	10	36	11 08 45	31 50		
15	45	04.3		19.4	333	34.4 ¹²³	19.3 ³⁰	30	39	04	31	27 42	13 53		
16	60	04.4		20.3	348	05.7 ¹²³	16.1 ³²	35	34	18 00	30	37 42	22 03 53		
17	75	04.6	+10	21.2	2	37.0 ¹²³	+19 12.9 ³²	40	17 29	17 56	18 28	11 49 41	21 51 55		
18	90	04.7	+10	22.0	17	08.4 ¹²⁴	+19 09.6 ³³	45	17 22	17 52	18 26	12 03 40	21 37 57		
19	105	04.9		22.9	31	39.7 ¹²³	06.2 ³⁴	50	15	48	25	21 37	20 59		
20	120	05.0		23.8	46	11.1 ¹²⁴	+19 02.8 ³⁴	52	11	46	25	29 37	12 60		
21	135	05.2		24.7	60	42.5 ¹²⁴	+18 59.2 ³⁶	54	07	43	24	38 36	21 03 61		
22	150	05.3		25.6	75	13.9 ¹²⁴	55.5 ³⁶	56	17 03	41	24	12 48 35	20 53 62		
23	165	05.5		26.5	89	45.3 ¹²⁴	51.8 ³⁷	58	16 58	39	24	13 00 33	42 63		
24	180	05.6	+10	27.3	104	16.7 ¹²⁴	+18 48.0 ³⁸	60 S	16 53	17 36	18 24	13 14 31	20 29 65		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 21 ^m 1		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: +1.2 PMG: 12 ^h 02 ^m		Mag: -2.1 PMG: 15 ^h 14 ^m		Mag: +0.2 PMG: 0 ^h 53 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	204	18.2	175	15.1	+10	55.1	179	27.1	+9	52.5	131	03.8	+22	11.2	346	41.0	-11	59.9
1	219	20.7	190	14.6		56.2	194	27.8		53.2	146	05.8		11.2	1	43.6		59.8
2	234	23.1	205	14.2		57.4	209	28.5		53.9	161	07.7		11.3	16	46.2		59.7
3	249	25.6	220	13.7		58.5	224	29.2		54.6	176	09.7		11.4	31	48.9		59.7
4	264	28.0	235	13.2	+10	59.7	239	29.8		55.3	191	11.6		11.4	46	51.5		59.6
5	279	30.5	250	12.8	+11	00.8	254	30.5	+9	56.0	206	13.6	+22	11.5	61	54.2	-11	59.6
6	294	33.0	265	12.3	+11	02.0	269	31.2	+9	56.7	221	15.6	+22	11.5	76	56.8	-11	59.5
7	309	35.4	280	11.8		03.1	284	31.9		57.4	236	17.5		11.6	91	59.4		59.5
8	324	37.9	295	11.4		04.3	299	32.6		58.1	251	19.5		11.7	107	02.1		59.4
9	339	40.4	310	10.9		05.4	314	33.3		58.8	266	21.4		11.7	122	04.7		59.3
10	354	42.8	325	10.5		06.5	329	34.0	+9	59.5	281	23.4		11.8	137	07.4		59.3
11	9	45.3	340	10.0	+11	07.7	344	34.7	+10	00.2	296	25.3	+22	11.8	152	10.0	-11	59.2
12	24	47.8	355	09.5	+11	08.8	359	35.4	+10	00.9	311	27.3	+22	11.9	167	12.7	-11	59.2
13	39	50.2	10	09.1		10.0	14	36.0		01.6	326	29.2		12.0	182	15.3		59.1
14	54	52.7	25	08.6		11.1	29	36.7		02.3	341	31.2		12.0	197	17.9		59.0
15	69	55.2	40	08.1		12.3	44	37.4		03.0	356	33.2		12.1	212	20.6		59.0
16	84	57.6	55	07.7		13.4	59	38.1		03.7	11	35.1		12.1	227	23.2		58.9
17	100	00.1	70	07.2	+11	14.5	74	38.8	+10	04.4	26	37.1	+22	12.2	242	25.9	-11	58.9
18	115	02.5	85	06.7	+11	15.7	89	39.5	+10	05.1	41	39.0	+22	12.3	257	28.5	-11	58.8
19	130	05.0	100	06.2		16.8	104	40.2		05.8	56	41.0		12.3	272	31.1		58.7
20	145	07.5	115	05.8		18.0	119	40.9		06.5	71	42.9		12.4	287	33.8		58.7
21	160	09.9	130	05.3		19.1	134	41.6		07.2	86	44.9		12.4	302	36.4		58.6
22	175	12.4	145	04.8		20.2	149	42.2		07.9	101	46.8		12.5	317	39.1		58.6
23	190	14.9	160	04.4		21.4	164	42.9		08.6	116	48.8		12.6	332	41.7		58.5
24	205	17.3	175	03.9	+11	22.5	179	43.6	+10	09.3	131	50.8	+22	12.6	347	44.3	-11	58.4
Dif	—		-5		+11		+7		+7		+20		+1		+26		+1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 5				Edad: 6 ^d 6 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5 PMG: 17 ^h 36 ^m R°: 47 ^m																			
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m						
0	180	05.6	+10	27.3	104	16.7	+18	48.0	60 N	2 47	3 50	4 37	9 03	68	1 28	28								
1	195	05.7		28.2	118	48.2 ¹²⁵		44.1 ³⁹	58	3 03	4 00	44	15 66		16	29								
2	210	05.9		29.1	133	19.7 ¹²⁵		40.1 ⁴⁰	56	17	09	49	25 65		1 05	31								
3	225	06.0		30.0	147	51.1 ¹²⁴		36.0 ⁴¹	54	28	16	54	35 63		0 55	30								
4	240	06.2		30.9	162	22.6 ¹²⁵		31.8 ⁴²	52	38	23	4 59	43 62		47	34								
5	255	06.3	+10	31.7	176	54.2 ¹²⁶	+18	27.6 ⁴²	50	3 46	4 29	5 03	9 51	60	0 39	35								
6	270	06.5	+10	32.6	191	25.7 ¹²⁵	+18	23.2 ⁴⁴	45	4 04	4 41	5 12	10 06	58	0 23	37								
7	285	06.6		33.5	205	57.3 ¹²⁶		18.8 ⁴⁴	40	17	51	19	19 56		0 09	39								
8	300	06.7		34.4	220	28.8 ¹²⁵		14.3 ⁴⁵	35	28	4 59	25	31 54		** ** *	**								
9	315	06.9		35.2	235	00.4 ¹²⁶		09.7 ⁴⁶	30	37	5 06	31	40 53		** ** *	**								
10	330	07.0		36.1	249	32.0 ¹²⁶		05.0 ⁴⁷	20	4 52	18	40	10 57	50	** ** *	**								
11	345	07.2	+10	37.0	264	03.6 ¹²⁶	+18	00.3 ⁴⁷	10 N	5 02	5 27	5 49	11 11	49	** ** *	**								
12	0	07.3	+10	37.9	278	35.3 ¹²⁷	+17	55.5 ⁴⁸	0	5 11	5 35	5 56	11 25	46	23 47	47								
13	15	07.5		38.7	293	06.9 ¹²⁶		50.5 ⁵⁰	10 S	18	42	6 04	38 45		35	48								
14	30	07.6		39.6	307	38.6 ¹²⁷		45.5 ⁵⁰	20	23	49	11	11 53	42	21	51								
15	45	07.7		40.5	322	10.3 ¹²⁷		40.4 ⁵¹	30	28	5 56	20	12 09	41	23 06	53								
16	60	07.9		41.4	336	42.0 ¹²⁷		35.3 ⁵¹	35	30	6 00	25	19 39		22 56	56								
17	75	08.0	+10	42.2	351	13.7 ¹²⁷	+17	30.0 ⁵³	40	5 32	6 04	6 31	12 30	37	22 46	57								
18	90	08.2	+10	43.1	5	45.5 ¹²⁸	+17	24.7 ⁵³	45	5 34	6 08	6 38	12 43	35	22 34	59								
19	105	08.3		44.0	20	17.2 ¹²⁷		19.3 ⁵⁴	50	35	13	45	12 58	33	19	62								
20	120	08.4		44.9	34	49.0 ¹²⁸		13.8 ⁵⁵	52	35	15	49	13 06	31	12	63								
21	135	08.6		45.7	49	20.8 ¹²⁸		08.2 ⁵⁶	54	36	17	53	14 30		22 04	65								
22	150	08.7		46.6	63	52.6 ¹²⁸	+17	02.6 ⁵⁶	56	36	19	6 57	23 28		21 55	67								
23	165	08.9		47.5	78	24.4 ¹²⁸	+16	56.8 ⁵⁸	58	36	22	7 02	33 27		45	69								
24	180	09.0	+10	48.4	92	56.3 ¹²⁹	+16	51.0 ⁵⁸	60 S	5 36	6 25	7 08	13 45	24	21 34	71								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 10 ^h 17 ^m 2				Mag: -3.9 PMG: 12 ^h 20 ^m				Mag: +1.2 PMG: 12 ^h 01 ^m				Mag: -2.1 PMG: 15 ^h 11 ^m				Mag: +0.2 PMG: 0 ^h 49 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	205	17.3			175	03.9	+11	22.5	179	43.6	+10	09.3	131	50.8	+22	12.6	347	44.3	-11	58.4				
1	220	19.8			190	03.4		23.6	194	44.3		10.0	146	52.7		12.7	2	47.0		58.4				
2	235	22.3			205	03.0		24.8	209	45.0		10.7	161	54.7		12.7	17	49.6		58.3				
3	250	24.7			220	02.5		25.9	224	45.7		11.4	176	56.6		12.8	32	52.3		58.3				
4	265	27.2			235	02.0		27.0	239	46.4		12.1	191	58.6		12.9	47	54.9		58.2				
5	280	29.7			250	01.5	+11	28.2	254	47.1	+10	12.8	207	00.5	+22	12.9	62	57.6	-11	58.1				
6	295	32.1			265	01.1	+11	29.3	269	47.8	+10	13.5	222	02.5	+22	13.0	78	00.2	-11	58.1				
7	310	34.6			280	00.6		30.4	284	48.4		14.2	237	04.4		13.0	93	02.8		58.0				
8	325	37.0			295	00.1		31.6	299	49.1		14.9	252	06.4		13.1	108	05.5		58.0				
9	340	39.5			309	59.7		32.7	314	49.8		15.6	267	08.3		13.2	123	08.1		57.9				
10	355	42.0			324	59.2		33.8	329	50.5		16.3	282	10.3		13.2	138	10.8		57.8				
11	10	44.4			339	58.7	+11	35.0	344	51.2	+10	17.0	297	12.2	+22	13.3	153	13.4	-11	57.8				
12	25	46.9			354	58.2	+11	36.1	359	51.9	+10	17.7	312	14.2	+22	13.3	168	16.0	-11	57.7				
13	40	49.4			9	57.8		37.2	14	52.6		18.4	327	16.1		13.4	183	18.7		57.7				
14	55	51.8			24	57.3		38.4	29	53.3		19.1	342	18.1		13.5	198	21.3		57.6				
15	70	54.3			39	56.8		39.5	44	53.9		19.8	357	20.0		13.5	213	24.0		57.5				
16	85	56.8			54	56.3		40.6	59	54.6		20.5	12	22.0		13.6	228	26.6		57.5				
17	100	59.2			69	55.9	+11	41.7	74	55.3	+10	21.2	27	23.9	+22	13.6	243	29.3	-11	57.4				
18	116	01.7			84	55.4	+11	42.9	89	56.0	+10	21.9	42	25.9	+22	13.7	258	31.9	-11	57.4				
19	131	04.1			99	54.9		44.0	104	56.7		22.6	57	27.8		13.8	273	34.5		57.3				
20	146	06.6			114	54.4		45.1	119	57.4		23.3	72	29.8		13.8	288	37.2		57.2				
21	161	09.1			129	53.9		46.3	134	58.1		24.0	87	31.7		13.9	303	39.8		57.2				
22	176	11.5			144	53.5		47.4	149	58.8		24.7	102	33.7		13.9	318	42.5		57.1				
23	191	14.0			159	53.0		48.5	164	59.4		25.4	117	35.7		14.0	333	45.1		57.1				
24	206	16.5			174	52.5	+11	49.6	180	00.1	+10	26.1	132	37.6	+22	14.1	348	47.7	-11	57.0				
Dif	—				-5				+11				+20				+1				+26			
					+11				+7				+1				+1							

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 59 ^m 3		Edad: 7 ^d 6 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 45 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	09.0	+10	48.4	92	56.3	+16	51.0	60 N	19 26	20 13	21 18	10 11	73	1 56	21	
1	195	09.1		49.2	107	28.1 ¹²⁸		45.1	59	58	19	20 03	21 01	21	70	45	24
2	210	09.3		50.1	122	00.0 ¹²⁹		39.2	59	56	13	19 54	20 47	30	68	36	26
3	225	09.4		51.0	136	31.9 ¹²⁹		33.1	61	54	08	46	36	38	66	28	27
4	240	09.6		51.9	151	03.8 ¹²⁹		27.0	61	52	19 03	40	25	45	64	21	29
5	255	09.7	+10	52.7	165	35.7 ¹²⁹	+16	20.8	62	50	18 59	19 33	20 16	10 51	63	1 14	30
6	270	09.8	+10	53.6	180	07.7 ¹³⁰	+16	14.5	63	45	18 49	19 20	19 58	11 04	61	1 00	33
7	285	10.0		54.5	194	39.6 ¹²⁹		08.2	63	40	42	10	44	15	58	0 48	35
8	300	10.1		55.3	209	11.6 ¹³⁰	+16	01.7	65	35	35	19 01	33	25	56	38	37
9	315	10.3		56.2	223	43.6 ¹³⁰	+15	55.2	65	30	29	18 54	23	33	54	29	39
10	330	10.4		57.1	238	15.5 ¹²⁹		48.6	66	20	19	42	19 08	11 47	51	14	41
11	345	10.5	+10	57.9	252	47.6 ¹³¹	+15	42.0	66	10 N	18 11	18 32	18 57	12 00	48	0 00	44
12	0	10.7	+10	58.8	267	19.6 ¹³⁰	+15	35.3	67	0	18 03	18 24	18 48	12 11	46	***	***
13	15	10.8	+10	59.7	281	51.6 ¹³⁰		28.5	68	10 S	17 55	16	41	23	44	***	***
14	30	11.0	+11	00.6	296	23.7 ¹³¹		21.6	69	20	47	09	35	35	41	***	***
15	45	11.1		01.4	310	55.7 ¹³⁰		14.6	70	30	37	18 02	29	50	37	23	59
16	60	11.2		02.3	325	27.8 ¹³¹		07.6	70	35	32	17 58	27	12	58	36	52
17	75	11.4	+11	03.2	339	59.9 ¹³¹	+15	00.5	71	40	17 26	17 53	18 25	13 07	34	23	43
18	90	11.5	+11	04.0	354	32.0 ¹³¹	+14	53.3	72	45	17 19	17 49	18 23	13 18	32	23	33
19	105	11.6		04.9	9	04.1 ¹³¹		46.1	72	50	11	44	21	31	29	21	64
20	120	11.8		05.8	23	36.2 ¹³¹		38.8	73	52	07	42	21	37	27	15	66
21	135	11.9		06.6	38	08.3 ¹³¹		31.4	74	54	17 03	39	20	44	25	09	68
22	150	12.0		07.5	52	40.5 ¹³²		23.9	75	56	16 58	36	20	13	51	24	23
23	165	12.2		08.4	67	12.6 ¹³¹		16.4	75	58	53	34	19	14	00	21	22
24	180	12.3	+11	09.2	81	44.8 ¹³²	+14	08.8	76	60 S	16 47	17 30	18 19	14 09	20	22	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 13 ^m 2		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: +1.2 PMG: 11 ^h 59 ^m		Mag: -2.1 PMG: 15 ^h 08 ^m		Mag: +0.2 PMG: 0 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	206	16.5	174	52.5	+11	49.6	180	00.1	+10	26.1	132	37.6	+22	14.1	348	47.7	-11	57.0
1	221	18.9	189	52.0		50.8	195	00.8		26.8	147	39.6		14.1	3	50.4		56.9
2	236	21.4	204	51.5		51.9	210	01.5		27.5	162	41.5		14.2	18	53.0		56.9
3	251	23.9	219	51.1		53.0	225	02.2		28.1	177	43.5		14.2	33	55.7		56.8
4	266	26.3	234	50.6		54.1	240	02.9		28.8	192	45.4		14.3	48	58.3		56.8
5	281	28.8	249	50.1	+11	55.2	255	03.6	+10	29.5	207	47.3	+22	14.4	64	01.0	-11	56.7
6	296	31.3	264	49.6	+11	56.4	270	04.3	+10	30.2	222	49.3	+22	14.4	79	03.6	-11	56.6
7	311	33.7	279	49.1		57.5	285	04.9		30.9	237	51.2		14.5	94	06.2		56.6
8	326	36.2	294	48.7		58.6	300	05.6		31.6	252	53.2		14.5	109	08.9		56.5
9	341	38.6	309	48.2	+11	59.7	315	06.3		32.3	267	55.1		14.6	124	11.5		56.5
10	356	41.1	324	47.7	+12	00.9	330	07.0		33.0	282	57.1		14.7	139	14.2		56.4
11	11	43.6	339	47.2	+12	02.0	345	07.7	+10	33.7	297	59.0	+22	14.7	154	16.8	-11	56.3
12	26	46.0	354	46.7	+12	03.1	0	08.4	+10	34.4	313	01.0	+22	14.8	169	19.5	-11	56.3
13	41	48.5	9	46.3		04.2	15	09.1		35.1	328	02.9		14.8	184	22.1		56.2
14	56	51.0	24	45.8		05.3	30	09.8		35.8	343	04.9		14.9	199	24.7		56.2
15	71	53.4	39	45.3		06.4	45	10.4		36.5	358	06.8		14.9	214	27.4		56.1
16	86	55.9	54	44.8		07.6	60	11.1		37.2	13	08.8		15.0	229	30.0		56.0
17	101	58.4	69	44.3	+12	08.7	75	11.8	+10	37.9	28	10.7	+22	15.1	244	32.7	-11	56.0
18	117	00.8	84	43.8	+12	09.8	90	12.5	+10	38.5	43	12.7	+22	15.1	259	35.3	-11	55.9
19	132	03.3	99	43.3		10.9	105	13.2		39.2	58	14.6		15.2	274	38.0		55.9
20	147	05.8	114	42.9		12.0	120	13.9		39.9	73	16.6		15.2	289	40.6		55.8
21	162	08.2	129	42.4		13.1	135	14.6		40.6	88	18.5		15.3	304	43.2		55.7
22	177	10.7	144	41.9		14.3	150	15.3		41.3	103	20.5		15.4	319	45.9		55.7
23	192	13.1	159	41.4		15.4	165	15.9		42.0	118	22.4		15.4	334	48.5		55.6
24	207	15.6	174	40.9	+12	16.5	180	16.6	+10	42.7	133	24.4	+22	15.5	349	51.2	-11	55.6
Dif	—		-5	+11			+7	+7			+19	+1			+26	+1		

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 59 ^m 1			Edad: 8 ^d 6 SD: 15°0 PMG: 19 ^h 08 ^m	PHE { 4 ^h : 55°0 12 ^h : 55°2 20 ^h : 55°4 R°: 46 ^m	Dec	Dif					Hora	R°	Hora	R°			
	hG ☉	Dec	hG ☾						Dif	Náutico						Civil		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	12.3	+11	09.2	81	44.8	+14	08.8	60 N	2	39	3	44	4	31	11	24	
1	195	12.5		10.1	96	17.0 ¹³²	+14	01.2 ⁷⁶	58	2	56	3	54	38	31	74	09	
2	210	12.6		10.9	110	49.2 ¹³²	+13	53.4 ⁷⁸	56	3	10	4	03	44	38	71	2	
3	225	12.7		11.8	125	21.3 ¹³¹		45.6 ⁷⁸	54	22	11	50		44	69	1	55	
4	240	12.9		12.7	139	53.5 ¹³²		37.8 ⁷⁸	52	32	18	55		49	68	50	25	
5	255	13.0	+11	13.5	154	25.8 ¹³³	+13	29.8 ⁸⁰	50	3	41	4	24	4	59	11	54	
6	270	13.1	+11	14.4	168	58.0 ¹³²	+13	21.8 ⁸⁰	45	4	00	4	37	5	08	12	05	
7	285	13.3		15.3	183	30.2 ¹³²		13.7 ⁸¹	40	14	48	16		13	60	23	33	
8	300	13.4		16.1	198	02.4 ¹³²	+13	05.6 ⁸¹	35	25	4	57	23	21	57	15	35	
9	315	13.5		17.0	212	34.7 ¹³³	+12	57.4 ⁸²	30	35	5	04	29	27	56	1	08	
10	330	13.7		17.9	227	06.9 ¹³²		49.1 ⁸³	20	4	50	16	39	38	52	0	55	
11	345	13.8	+11	18.7	241	39.2 ¹³³	+12	40.8 ⁸³	10 N	5	01	5	26	5	48	12	48	
12	0	13.9	+11	19.6	256	11.4 ¹³²	+12	32.4 ⁸⁴	0	5	10	5	35	5	56	12	57	
13	15	14.1		20.4	270	43.7 ¹³³		24.0 ⁸⁴	10 S	18	42	6	04	13	07	43	23	
14	30	14.2		21.3	285	16.0 ¹³³		15.4 ⁸⁶	20	24	50	12		16	40	0	12	
15	45	14.3		22.2	299	48.2 ¹³²	+12	06.8 ⁸⁶	30	29	5	57	22	27	37	**	**	
16	60	14.5		23.0	314	20.5 ¹³³	+11	58.2 ⁸⁷	35	32	6	01	27	34	34	**	**	
17	75	14.6	+11	23.9	328	52.8 ¹³³	+11	49.5 ⁸⁷	40	5	34	6	05	6	33	13	41	
18	90	14.7	+11	24.7	343	25.1 ¹³³	+11	40.7 ⁸⁸	45	5	36	6	10	6	40	13	50	
19	105	14.9		25.6	357	57.3 ¹³²		31.9 ⁸⁸	50	38	15	49		14	00	26	**	
20	120	15.0		26.5	12	29.6 ¹³³		23.0 ⁸⁹	52	38	18	52		04	25	**	**	
21	135	15.1		27.3	27	01.9 ¹³³		14.0 ⁹⁰	54	39	20	6	57	09	23	**	**	
22	150	15.3		28.2	41	34.2 ¹³³	+11	05.0 ⁹⁰	56	40	23	7	01	15	21	**	**	
23	165	15.4		29.0	56	06.5 ¹³³	+10	55.9 ⁹¹	58	40	26	07		21	19	**	**	
24	180	15.5	+11	29.9	70	38.8 ¹³³	+10	46.8 ⁹¹	60 S	5	41	6	29	7	13	14	29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 09 ^m 3			Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: +1.2 PMG: 11 ^h 58 ^m			Mag: -2.1 PMG: 15 ^h 04 ^m			Mag: +0.2 PMG: 0 ^h 40 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	207	15.6	174	40.9	+12	16.5	180	16.6	+10	42.7	133	24.4	+22	15.5	349	51.2		
1	222	18.1	189	40.4		17.6	195	17.3		43.4	148	26.3		15.5	4	53.8		
2	237	20.5	204	39.9		18.7	210	18.0		44.1	163	28.3		15.6	19	56.5		
3	252	23.0	219	39.4		19.8	225	18.7		44.8	178	30.2		15.7	34	59.1		
4	267	25.5	234	39.0		20.9	240	19.4		45.4	193	32.1		15.7	50	01.8		
5	282	27.9	249	38.5	+12	22.0	255	20.1	+10	46.1	208	34.1	+22	15.8	65	04.4		
6	297	30.4	264	38.0	+12	23.1	270	20.7	+10	46.8	223	36.0	+22	15.8	80	07.0		
7	312	32.9	279	37.5		24.3	285	21.4		47.5	238	38.0		15.9	95	09.7		
8	327	35.3	294	37.0		25.4	300	22.1		48.2	253	39.9		16.0	110	12.3		
9	342	37.8	309	36.5		26.5	315	22.8		48.9	268	41.9		16.0	125	15.0		
10	357	40.2	324	36.0		27.6	330	23.5		49.6	283	43.8		16.1	140	17.6		
11	12	42.7	339	35.5	+12	28.7	345	24.2	+10	50.3	298	45.8	+22	16.1	155	20.3		
12	27	45.2	354	35.0	+12	29.8	0	24.9	+10	51.0	313	47.7	+22	16.2	170	22.9		
13	42	47.6	9	34.5		30.9	15	25.5		51.6	328	49.7		16.3	185	25.5		
14	57	50.1	24	34.0		32.0	30	26.2		52.3	343	51.6		16.3	200	28.2		
15	72	52.6	39	33.6		33.1	45	26.9		53.0	358	53.5		16.4	215	30.8		
16	87	55.0	54	33.1		34.2	60	27.6		53.7	13	55.5		16.4	230	33.5		
17	102	57.5	69	32.6	+12	35.3	75	28.3	+10	54.4	28	57.4	+22	16.5	245	36.1		
18	118	00.0	84	32.1	+12	36.4	90	29.0	+10	55.1	43	59.4	+22	16.5	260	38.8		
19	133	02.4	99	31.6		37.5	105	29.7		55.8	59	01.3		16.6	275	41.4		
20	148	04.9	114	31.1		38.6	120	30.3		56.5	74	03.3		16.7	290	44.1		
21	163	07.4	129	30.6		39.7	135	31.0		57.1	89	05.2		16.7	305	46.7		
22	178	09.8	144	30.1		40.8	150	31.7		57.8	104	07.1		16.8	320	49.3		
23	193	12.3	159	29.6		41.9	165	32.4		58.5	119	09.1		16.8	335	52.0		
24	208	14.7	174	29.1	+12	43.0	180	33.1	+10	59.2	134	11.0	+22	16.9	350	54.6		
Dif	—		-5		+11		+7		+7		+19		+1		+26		+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 9			Edad: 9 ^d 6 PHE { 4 ^h : 55'6 12 ^h : 55'9 20 ^h : 56'1 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	180	15.5	+11 29.9	70	38.8	+10 46.8	92	60 N	19 31	20 19	21 26	12 40 79	2 35 16		
1	195	15.7		85	11.1 ¹³³	37.6	92	58	24	20 08	21 08	45 76	29 18		
2	210	15.8		99	43.3 ¹³²	28.4	92	56	17	19 59	20 53	49 74	24 20		
3	225	15.9		114	15.6 ¹³³	19.0	94	54	12	51	41	53 72	20 22		
4	240	16.1		128	47.9 ¹³³	09.7	93	52	06	43	30	12 57 70	15 24		
5	255	16.2	+11 34.2	143	20.2 ¹³³	+10 00.3	94	50	19 02	19 37	20 20	13 00 68	2 12 25		
6	270	16.3	+11 35.0	157	52.4 ¹³²	+9 50.8	95	45	18 52	19 23	20 01	13 07 65	2 03 29		
7	285	16.5		172	24.7 ¹³³	41.3	95	40	44	12	19 46	13 62	1 56 32		
8	300	16.6		186	57.0 ¹³³	31.7	96	35	37	19 03	34	18 59	50 34		
9	315	16.7		201	29.2 ¹³²	22.0	97	30	30	18 55	25	23 56	45 36		
10	330	16.9		216	01.5 ¹³³	12.4	96	20	20	42	19 09	30 53	35 40		
11	345	17.0	+11 39.3	230	33.7 ¹³²	+9 02.6	98	10 N	18 11	18 32	18 57	13 37 49	1 27 43		
12	0	17.1	+11 40.1	245	06.0 ¹³³	+8 52.8	98	0	18 02	18 23	18 48	13 43 46	1 19 46		
13	15	17.2		259	38.2 ¹³²	43.0	98	10 S	17 54	15	40	50 43	12 49		
14	30	17.4		274	10.4 ¹³²	33.1	99	20	45	07	33	13 56 40	1 03 52		
15	45	17.5		288	42.7 ¹³³	23.1	100	30	35	18 00	28	14 04 36	0 54 56		
16	60	17.6		303	14.9 ¹³²	13.1	100	35	30	17 55	25	08 34	48 58		
17	75	17.8	+11 44.4	317	47.1 ¹³²	+8 03.1	100	40	17 23	17 51	18 22	14 13 31	0 42 60		
18	90	17.9	+11 45.3	332	19.2 ¹³¹	+7 53.0	101	45	17 16	17 46	18 20	14 19 28	0 34 64		
19	105	18.0		346	51.4 ¹³²	42.8	102	50	07	40	18	26 24	25 67		
20	120	18.1		1	23.6 ¹³²	32.6	102	52	17 03	38	17	29 23	21 69		
21	135	18.3		15	55.7 ¹³¹	22.4	102	54	16 58	35	16	32 22	17 70		
22	150	18.4		30	27.9 ¹³²	12.1	103	56	53	32	15	36 20	12 72		
23	165	18.5		45	00.0 ¹³¹	+7 01.8	103	58	48	29	14	40 18	0 06 75		
24	180	18.7	+11 50.4	59	32.1 ¹³¹	+6 51.4	104	60 S	16 42	17 25	18 14	14 45 15	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 05 ^m 4		Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: +1.2 PMG: 11 ^h 57 ^m			Mag: -2.1 PMG: 15 ^h 01 ^m			Mag: +0.2 PMG: 0 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	208	14.7	174	29.1	+12 43.0	180	33.1	+10 59.2	134	11.0	+22 16.9	350	54.6	-11 54.1	
1	223	17.2	189	28.6	44.1	195	33.8	+10 59.9	149	13.0	17.0	5	57.3	54.1	
2	238	19.7	204	28.1	45.2	210	34.4	+11 00.6	164	14.9	17.0	20	59.9	54.0	
3	253	22.1	219	27.6	46.3	225	35.1	01.3	179	16.9	17.1	36	02.6	53.9	
4	268	24.6	234	27.1	47.4	240	35.8	01.9	194	18.8	17.1	51	05.2	53.9	
5	283	27.1	249	26.6	+12 48.5	255	36.5	+11 02.6	209	20.7	+22 17.2	66	07.9	-11 53.8	
6	298	29.5	264	26.1	+12 49.6	270	37.2	+11 03.3	224	22.7	+22 17.3	81	10.5	-11 53.8	
7	313	32.0	279	25.6	50.7	285	37.9	04.0	239	24.6	17.3	96	13.1	53.7	
8	328	34.5	294	25.1	51.8	300	38.6	04.7	254	26.6	17.4	111	15.8	53.6	
9	343	36.9	309	24.6	52.9	315	39.2	05.4	269	28.5	17.4	126	18.4	53.6	
10	358	39.4	324	24.1	54.0	330	39.9	06.0	284	30.5	17.5	141	21.1	53.5	
11	13	41.9	339	23.6	+12 55.1	345	40.6	+11 06.7	299	32.4	+22 17.5	156	23.7	-11 53.5	
12	28	44.3	354	23.1	+12 56.2	0	41.3	+11 07.4	314	34.3	+22 17.6	171	26.4	-11 53.4	
13	43	46.8	9	22.6	57.3	15	42.0	08.1	329	36.3	17.7	186	29.0	53.3	
14	58	49.2	24	22.1	58.4	30	42.7	08.8	344	38.2	17.7	201	31.7	53.3	
15	73	51.7	39	21.6	+12 59.5	45	43.3	09.5	359	40.2	17.8	216	34.3	53.2	
16	88	54.2	54	21.1	+13 00.6	60	44.0	10.1	14	42.1	17.8	231	36.9	53.2	
17	103	56.6	69	20.6	+13 01.7	75	44.7	+11 10.8	29	44.0	+22 17.9	246	39.6	-11 53.1	
18	118	59.1	84	20.1	+13 02.8	90	45.4	+11 11.5	44	46.0	+22 18.0	261	42.2	-11 53.0	
19	134	01.6	99	19.6	03.8	105	46.1	12.2	59	47.9	18.0	276	44.9	53.0	
20	149	04.0	114	19.1	04.9	120	46.8	12.9	74	49.9	18.1	291	47.5	52.9	
21	164	06.5	129	18.6	06.0	135	47.4	13.5	89	51.8	18.1	306	50.2	52.9	
22	179	09.0	144	18.1	07.1	150	48.1	14.2	104	53.7	18.2	321	52.8	52.8	
23	194	11.4	159	17.6	08.2	165	48.8	14.9	119	55.7	18.2	336	55.5	52.7	
24	209	13.9	174	17.1	+13 09.3	180	49.5	+11 15.6	134	57.6	+22 18.3	351	58.1	-11 52.7	
Dif	—		-5 +11			+7 +7			+19 +1			+26 +1			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 9				Edad: 10 ^d 6 PHE	SD: 15 ^h 3												
	PMG: 11 ^h 58 ^m 7					PMG: 20 ^h 41 ^m				R ^o : 47 ^m								
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	18.7	+11	50.4	59	32.1	+6	51.4	60 N	2 30	3 37	4 26	13 59	81	2 51	14		
1	195	18.8		51.2	74	04.2 ¹³¹		41.0 ¹⁰⁴	58	2 49	48	33	14 01	79	47	17		
2	210	18.9		52.1	88	36.3 ¹³¹		30.5 ¹⁰⁵	56	3 04	3 58	39	03 77		44	19		
3	225	19.0		52.9	103	08.3 ¹³⁰		20.0 ¹⁰⁵	54	16	4 06	45	05 74		42	20		
4	240	19.2		53.8	117	40.4 ¹³¹	+6	09.4 ¹⁰⁶	52	27	13	50	07 72		39	23		
5	255	19.3	+11	54.6	132	12.4 ¹³⁰	+5	58.8 ¹⁰⁶	50	3 37	4 20	4 55	14 08	71	2 37	24		
6	270	19.4	+11	55.5	146	44.4 ¹³⁰	+5	48.2 ¹⁰⁶	45	3 56	4 34	5 05	14 12	67	2 32	28		
7	285	19.5		56.3	161	16.4 ¹³⁰		37.5 ¹⁰⁷	40	4 11	45	13	15 63		28	30		
8	300	19.7		57.1	175	48.3 ¹²⁹		26.8 ¹⁰⁷	35	23	4 54	21	17 61		24	33		
9	315	19.8		58.0	190	20.3 ¹³⁰		16.0 ¹⁰⁸	30	33	5 02	27	19 59		21	35		
10	330	19.9		58.8	204	52.2 ¹²⁹	+5	05.3 ¹⁰⁷	20	4 48	15	37	23 54		15	40		
11	345	20.0	+11	59.7	219	24.1 ¹²⁹	+4	54.4 ¹⁰⁹	10 N	5 00	5 25	5 47	14 26	51	2 10	43		
12	0	20.2	+12	00.5	233	56.0 ¹²⁹	+4	43.6 ¹⁰⁸	0	5 10	5 34	5 55	14 29	48	2 05	47		
13	15	20.3		01.4	248	27.8 ¹²⁸		32.6 ¹¹⁰	10 S	18	42	6 04	33 43		2 01	49		
14	30	20.4		02.2	262	59.7 ¹²⁹		21.7 ¹⁰⁹	20	24	50	13	36 40		1 55	54		
15	45	20.6		03.1	277	31.5 ¹²⁸	+4	10.7 ¹¹⁰	30	30	5 58	23	40 36		50	57		
16	60	20.7		03.9	292	03.3 ¹²⁸	+3	59.7 ¹¹⁰	35	33	6 03	29	42 34		46	60		
17	75	20.8	+12	04.8	306	35.0 ¹²⁷	+3	48.7 ¹¹⁰	40	5 36	6 07	6 35	14 44	31	1 42	63		
18	90	20.9	+12	05.6	321	06.7 ¹²⁷	+3	37.6 ¹¹¹	45	5 38	6 12	6 43	14 47	28	1 38	65		
19	105	21.0		06.4	335	38.4 ¹²⁷		26.5 ¹¹¹	50	41	18	52	50 25		32	70		
20	120	21.2		07.3	350	10.1 ¹²⁷		15.4 ¹¹¹	52	42	21	6 56	52 23		30	71		
21	135	21.3		08.1	4	41.8 ¹²⁷	+3	04.2 ¹¹²	54	42	24	7 00	54 21		27	73		
22	150	21.4		09.0	19	13.4 ¹²⁶	+2	53.0 ¹¹²	56	43	27	05	56 19		24	75		
23	165	21.5		09.8	33	44.9 ¹²⁵		41.8 ¹¹²	58	44	30	11	14 58	17	21	77		
24	180	21.7	+12	10.6	48	16.5 ¹²⁶	+2	30.5 ¹¹³	60 S	5 45	6 34	7 17	15 00	14	1 17	80		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.2				Mag: -2.1				Mag: +0.2			
	10 ^h 01 ^m 4		PMG: 12 ^h 23 ^m				PMG: 11 ^h 56 ^m				PMG: 14 ^h 58 ^m				PMG: 0 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	13.9	174	17.1	+13	09.3	180	49.5	+11	15.6	134	57.6	+22	18.3	351	58.1	-11	52.7
1	224	16.3	189	16.6		10.4	195	50.2		16.3	149	59.6		18.4	7	00.7		52.6
2	239	18.8	204	16.0		11.5	210	50.9		16.9	165	01.5		18.4	22	03.4		52.6
3	254	21.3	219	15.5		12.5	225	51.5		17.6	180	03.4		18.5	37	06.0		52.5
4	269	23.7	234	15.0		13.6	240	52.2		18.3	195	05.4		18.5	52	08.7		52.4
5	284	26.2	249	14.5	+13	14.7	255	52.9	+11	19.0	210	07.3	+22	18.6	67	11.3	-11	52.4
6	299	28.7	264	14.0	+13	15.8	270	53.6	+11	19.7	225	09.3	+22	18.7	82	14.0	-11	52.3
7	314	31.1	279	13.5		16.9	285	54.3		20.3	240	11.2		18.7	97	16.6		52.3
8	329	33.6	294	13.0		18.0	300	55.0		21.0	255	13.1		18.8	112	19.3		52.2
9	344	36.1	309	12.5		19.0	315	55.6		21.7	270	15.1		18.8	127	21.9		52.1
10	359	38.5	324	12.0		20.1	330	56.3		22.4	285	17.0		18.9	142	24.6		52.1
11	14	41.0	339	11.5	+13	21.2	345	57.0	+11	23.1	300	18.9	+22	19.0	157	27.2	-11	52.0
12	29	43.5	354	11.0	+13	22.3	0	57.7	+11	23.7	315	20.9	+22	19.0	172	29.8	-11	52.0
13	44	45.9	9	10.4		23.4	15	58.4		24.4	330	22.8		19.1	187	32.5		51.9
14	59	48.4	24	09.9		24.4	30	59.1		25.1	345	24.8		19.1	202	35.1		51.8
15	74	50.8	39	09.4		25.5	45	59.7		25.8	0	26.7		19.2	217	37.8		51.8
16	89	53.3	54	08.9		26.6	61	00.4		26.4	15	28.6		19.2	232	40.4		51.7
17	104	55.8	69	08.4	+13	27.7	76	01.1	+11	27.1	30	30.6	+22	19.3	247	43.1	-11	51.7
18	119	58.2	84	07.9	+13	28.8	91	01.8	+11	27.8	45	32.5	+22	19.4	262	45.7	-11	51.6
19	135	00.7	99	07.4		29.8	106	02.5		28.5	60	34.4		19.4	277	48.4		51.5
20	150	03.2	114	06.9		30.9	121	03.1		29.1	75	36.4		19.5	292	51.0		51.5
21	165	05.6	129	06.3		32.0	136	03.8		29.8	90	38.3		19.5	307	53.7		51.4
22	180	08.1	144	05.8		33.1	151	04.5		30.5	105	40.3		19.6	322	56.3		51.4
23	195	10.6	159	05.3		34.1	166	05.2		31.2	120	42.2		19.6	337	58.9		51.3
24	210	13.0	174	04.8	+13	35.2	181	05.9	+11	31.8	135	44.1	+22	19.7	353	01.6	-11	51.2
Dif	—		-5		+11		+7		+7		+19		+1		+26		+1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 58 ^m 5				Edad: 11 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	21.7	+12	10.6	48	16.5	+2	30.5	60 N	19 36	20 25	21 34	15 20 85		3 05 15			
1	195	21.8		11.5	62	48.0 ¹²⁵		19.2 ¹¹³	58	28	13	21 15	20 82		04 17			
2	210	21.9		12.3	77	19.5 ¹²⁵	+2	07.9 ¹¹³	56	21	20 03	20 59	20 79		03 19			
3	225	22.0		13.2	91	50.9 ¹²⁴	+1	56.6 ¹¹³	54	15	19 55	46	19 78		02 22			
4	240	22.2		14.0	106	22.4 ¹²⁵		45.2 ¹¹⁴	52	10	47	34	19 76		02 23			
5	255	22.3	+12	14.8	120	53.7 ¹²³	+1	33.8 ¹¹⁴	50	19 05	19 40	20 24	15 19 73		3 01 25			
6	270	22.4	+12	15.7	135	25.1 ¹²⁴	+1	22.4 ¹¹⁴	45	18 54	19 26	20 04	15 19 69		3 00 28			
7	285	22.5		16.5	149	56.4 ¹²³	+1	11.0 ¹¹⁴	40	46	14	19 49	18 66		2 58 32			
8	300	22.6		17.4	164	27.7 ¹²³	+0	59.6 ¹¹⁴	35	38	19 05	36	18 63		57 35			
9	315	22.8		18.2	178	58.9 ¹²²		48.1 ¹¹⁵	30	32	18 57	26	18 61		56 37			
10	330	22.9		19.0	193	30.1 ¹²²		36.6 ¹¹⁵	20	20	43	19 10	17 57		55 41			
11	345	23.0	+12	19.9	208	01.2 ¹²¹	+0	25.1 ¹¹⁵	10 N	18 11	18 32	18 58	15 17 53		2 53 45			
12	0	23.1	+12	20.7	222	32.3 ¹²¹	+0	13.6 ¹¹⁵	0	18 02	18 23	18 48	15 17 49		2 52 48			
13	15	23.3		21.5	237	03.4 ¹²¹	+0	02.0 ¹¹⁶	10 S	17 53	14	39	16 46		50 52			
14	30	23.4		22.4	251	34.4 ¹²⁰	-0	09.5 ¹¹⁵	20	44	18 06	32	16 42		49 55			
15	45	23.5		23.2	266	05.4 ¹²⁰		21.1 ¹¹⁶	30	33	17 58	26	16 38		47 60			
16	60	23.6		24.1	280	36.4 ¹²⁰		32.7 ¹¹⁶	35	27	53	23	16 35		46 62			
17	75	23.7	+12	24.9	295	07.3 ¹¹⁹	-0	44.3 ¹¹⁶	40	17 20	17 48	18 20	15 15 33		2 45 65			
18	90	23.9	+12	25.7	309	38.1 ¹¹⁸	-0	55.9 ¹¹⁶	45	17 12	17 43	18 17	15 15 30		2 43 68			
19	105	24.0		26.6	324	08.9 ¹¹⁸	-1	07.5 ¹¹⁶	50	17 03	36	14	15 26		42 72			
20	120	24.1		27.4	338	39.7 ¹¹⁸		19.1 ¹¹⁶	52	16 59	34	13	15 24		41 74			
21	135	24.2		28.2	353	10.4 ¹¹⁷		30.8 ¹¹⁷	54	54	31	12	15 22		40 76			
22	150	24.3		29.1	7	41.1 ¹¹⁷		42.4 ¹¹⁶	56	49	27	11	15 20		39 78			
23	165	24.5		29.9	22	11.7 ¹¹⁶	-1	54.1 ¹¹⁷	58	43	24	10	15 17		38 80			
24	180	24.6	+12	30.7	36	42.2 ¹¹⁵	-2	05.7 ¹¹⁶	60 S	16 36	17 20	18 09	15 14 16		2 37 83			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 57 ^m 5		Mag: -3.9 PMG: 12 ^h 24 ^m				Mag: +1.2 PMG: 11 ^h 55 ^m				Mag: -2.0 PMG: 14 ^h 55 ^m				Mag: +0.1 PMG: 0 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	210	13.0	174	04.8	+13	35.2	181	05.9	+11	31.8	135	44.1	+22	19.7	353	01.6	-11	51.2
1	225	15.5	189	04.3		36.3	196	06.6		32.5	150	46.1		19.8	8	04.2		51.2
2	240	17.9	204	03.8		37.4	211	07.2		33.2	165	48.0		19.8	23	06.9		51.1
3	255	20.4	219	03.2		38.4	226	07.9		33.9	180	49.9		19.9	38	09.5		51.1
4	270	22.9	234	02.7		39.5	241	08.6		34.5	195	51.9		19.9	53	12.2		51.0
5	285	25.3	249	02.2	+13	40.6	256	09.3	+11	35.2	210	53.8	+22	20.0	68	14.8	-11	50.9
6	300	27.8	264	01.7	+13	41.6	271	10.0	+11	35.9	225	55.7	+22	20.1	83	17.5	-11	50.9
7	315	30.3	279	01.2		42.7	286	10.6		36.6	240	57.7		20.1	98	20.1		50.8
8	330	32.7	294	00.7		43.8	301	11.3		37.2	255	59.6		20.2	113	22.8		50.8
9	345	35.2	309	00.1		44.8	316	12.0		37.9	271	01.5		20.2	128	25.4		50.7
10	0	37.7	323	59.6		45.9	331	12.7		38.6	286	03.5		20.3	143	28.0		50.6
11	15	40.1	338	59.1	+13	47.0	346	13.4	+11	39.3	301	05.4	+22	20.3	158	30.7	-11	50.6
12	30	42.6	353	58.6	+13	48.0	1	14.1	+11	39.9	316	07.3	+22	20.4	173	33.3	-11	50.5
13	45	45.1	8	58.1		49.1	16	14.7		40.6	331	09.3		20.5	188	36.0		50.5
14	60	47.5	23	57.5		50.2	31	15.4		41.3	346	11.2		20.5	203	38.6		50.4
15	75	50.0	38	57.0		51.2	46	16.1		42.0	1	13.1		20.6	218	41.3		50.3
16	90	52.4	53	56.5		52.3	61	16.8		42.6	16	15.1		20.6	233	43.9		50.3
17	105	54.9	68	56.0	+13	53.4	76	17.5	+11	43.3	31	17.0	+22	20.7	248	46.6	-11	50.2
18	120	57.4	83	55.4	+13	54.4	91	18.1	+11	44.0	46	18.9	+22	20.7	263	49.2	-11	50.2
19	135	59.8	98	54.9		55.5	106	18.8		44.6	61	20.9		20.8	278	51.9		50.1
20	151	02.3	113	54.4		56.6	121	19.5		45.3	76	22.8		20.9	293	54.5		50.0
21	166	04.8	128	53.9		57.6	136	20.2		46.0	91	24.7		20.9	308	57.2		50.0
22	181	07.2	143	53.3		58.7	151	20.9		46.6	106	26.7		21.0	323	59.8		49.9
23	196	09.7	158	52.8	+13	59.7	166	21.5		47.3	121	28.6		21.0	339	02.4		49.9
24	211	12.2	173	52.3	+14	00.8	181	22.2	+11	48.0	136	30.5	+22	21.1	354	05.1	-11	49.8
Dif	—		-5		+11		+7		+7		+19		+1		+26		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 58 ^m 3				Edad: 12 ^d 6 PHE { SD: 15'8 PMG: 22 ^h 18 ^m 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'7 R°: 52 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	24.6	+12	30.7	36	42.2	-2	05.7	60 N	2	21	3	31	4	20	16	45	88			
1	195	24.7		31.6	51	12.8 ¹¹⁶		17.4 ¹¹⁷	58	41	42		28		42	85	21	19			
2	210	24.8		32.4	65	43.2 ¹¹⁴		29.1 ¹¹⁷	56	2	57	3	52	35		39	83	22	21		
3	225	24.9		33.2	80	13.6 ¹¹⁴		40.7 ¹¹⁶	54	3	10	4	01	41		37	80	24	22		
4	240	25.0		34.1	94	44.0 ¹¹⁴		-2 52.4 ¹¹⁷	52	22	09		46		35	77	25	25			
5	255	25.2	+12	34.9	109	14.3 ¹¹³		-3 04.1 ¹¹⁷	50	3	32	4	16	4	51	16	32	77	3	26	26
6	270	25.3	+12	35.7	123	44.6 ¹¹³		-3 15.7 ¹¹⁶	45	3	52	4	30	5	02	16	28	72	3	28	31
7	285	25.4		36.5	138	14.8 ¹¹²		27.4 ¹¹⁷	40	4	07		42	11		24	69		30	34	
8	300	25.5		37.4	152	44.9 ¹¹¹		39.1 ¹¹⁷	35	20	4	52	18		21	66		32	36		
9	315	25.6		38.2	167	15.0 ¹¹¹		-3 50.7 ¹¹⁶	30	30	5	00	25		19	63		33	39		
10	330	25.7		39.0	181	45.0 ¹¹⁰		-4 02.4 ¹¹⁷	20	47	13		36		14	59		36	43		
11	345	25.9	+12	39.9	196	15.0 ¹¹⁰		-4 14.0 ¹¹⁶	10 N	4	59	5	24	5	46	16	10	55	3	38	47
12	0	26.0	+12	40.7	210	44.9 ¹⁰⁹		-4 25.7 ¹¹⁷	0	5	09	5	34	5	55	16	06	52	3	40	50
13	15	26.1		41.5	225	14.8 ¹⁰⁹		37.3 ¹¹⁶	10 S	18	42	6	04		16	02	48		42	54	
14	30	26.2		42.3	239	44.6 ¹⁰⁸		-4 48.9 ¹¹⁶	20	25	5	51	13		15	58	45		44	58	
15	45	26.3		43.2	254	14.3 ¹⁰⁷		-5 00.5 ¹¹⁶	30	31	6	00	24		54	40		47	61		
16	60	26.4		44.0	268	44.0 ¹⁰⁷		12.1 ¹¹⁶	35	35	04		30		51	38		48	64		
17	75	26.6	+12	44.8	283	13.6 ¹⁰⁶		-5 23.7 ¹¹⁶	40	5	38	6	09	6	37	15	48	35	3	50	67
18	90	26.7	+12	45.7	297	43.2 ¹⁰⁶		-5 35.3 ¹¹⁶	45	5	40	6	15	6	45	15	45	32	3	51	71
19	105	26.8		46.5	312	12.7 ¹⁰⁵		46.8 ¹¹⁵	50	43	21		55		41	28		54	74		
20	120	26.9		47.3	326	42.1 ¹⁰⁴		-5 58.3 ¹¹⁵	52	45	24	6	59		39	26		55	76		
21	135	27.0		48.1	341	11.5 ¹⁰⁴		-6 09.9 ¹¹⁶	54	46	27	7	04		37	24		56	78		
22	150	27.1		49.0	355	40.8 ¹⁰³		21.4 ¹¹⁵	56	47	30		09		35	22		57	81		
23	165	27.2		49.8	10	10.0 ¹⁰²		32.8 ¹¹⁴	58	48	34		15		32	20		3	58	84	
24	180	27.4	+12	50.6	24	39.2 ¹⁰²		-6 44.3 ¹¹⁵	60 S	5	49	6	38	7	22	15	30	17	4	00	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 53 ^m 6		Mag: -3.9 PMG: 12 ^h 25 ^m		Mag: +1.2 PMG: 11 ^h 54 ^m		Mag: -2.0 PMG: 14 ^h 52 ^m		Mag: +0.1 PMG: 0 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	211	12.2	173	52.3	+14	00.8	181	22.2	+11	48.0
1	226	14.6	188	51.8		01.9	196	22.9		48.7
2	241	17.1	203	51.2		02.9	211	23.6		49.3
3	256	19.6	218	50.7		04.0	226	24.3		50.0
4	271	22.0	233	50.2		05.0	241	24.9		50.7
5	286	24.5	248	49.7	+14	06.1	256	25.6	+11	51.3
6	301	26.9	263	49.1	+14	07.2	271	26.3	+11	52.0
7	316	29.4	278	48.6		08.2	286	27.0		52.7
8	331	31.9	293	48.1		09.3	301	27.7		53.3
9	346	34.3	308	47.5		10.3	316	28.3		54.0
10	1	36.8	323	47.0		11.4	331	29.0		54.7
11	16	39.3	338	46.5	+14	12.4	346	29.7	+11	55.3
12	31	41.7	353	46.0	+14	13.5	1	30.4	+11	56.0
13	46	44.2	8	45.4		14.5	16	31.1		56.7
14	61	46.7	23	44.9		15.6	31	31.7		57.3
15	76	49.1	38	44.4		16.6	46	32.4		58.0
16	91	51.6	53	43.8		17.7	61	33.1		58.7
17	106	54.0	68	43.3	+14	18.7	76	33.8	+11	59.3
18	121	56.5	83	42.8	+14	19.8	91	34.5	+12	00.0
19	136	59.0	98	42.2		20.8	106	35.1	+12	00.7
20	152	01.4	113	41.7		21.9	121	35.8		01.3
21	167	03.9	128	41.2		22.9	136	36.5		02.0
22	182	06.4	143	40.6		24.0	151	37.2		02.7
23	197	08.8	158	40.1		25.0	166	37.9		03.3
24	212	11.3	173	39.6	+14	26.1	181	38.5	+12	04.0
Dif	—		-5		+11		+7		+7	
							+19		+1	
									+26	
									+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 13 ^d 6	PHE {	4 ^h : 58 ^h 9 12 ^h : 59 ^h 2 20 ^h : 59 ^h 4 R°: 56 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	27.4	+12 50.6	24	39.2	-6 44.3		60 N	19 41	20 31	21 43	18 13 90	3 35 19		
1	195	27.5	51.4	39	08.3 ¹⁰¹	-6 55.7 ¹¹⁴		58	33	19	22	07 87	40 21		
2	210	27.6	52.2	53	37.3 ¹⁰⁰	-7 07.1 ¹¹⁴		56	25	20 08	21 05	18 02 84	43 24		
3	225	27.7	53.1	68	06.3 ¹⁰⁰	18.5 ¹¹⁴		54	19	19 59	20 51	17 57 81	47 26		
4	240	27.8	53.9	82	35.2 ⁹⁹	29.8 ¹¹³		52	13	51	39	52 80	50 28		
5	255	27.9	+12 54.7	97	04.0 ⁹⁸	-7 41.1 ¹¹³		50	19 08	19 44	20 28	17 49 77	3 52 30		
6	270	28.0	+12 55.5	111	32.8 ⁹⁸	-7 52.4 ¹¹³		45	18 57	19 29	20 07	17 40 74	3 59 33		
7	285	28.2	56.4	126	01.5 ⁹⁷	-8 03.7 ¹¹³		40	48	16	19 51	33 71	4 04 37		
8	300	28.3	57.2	140	30.1 ⁹⁶	14.9 ¹¹²		35	40	19 06	38	27 68	08 40		
9	315	28.4	58.0	154	58.7 ⁹⁶	26.1 ¹¹²		30	33	18 58	28	22 65	12 42		
10	330	28.5	58.8	169	27.2 ⁹⁵	37.2 ¹¹¹		20	21	44	19 11	13 61	19 46		
11	345	28.6	+12 59.6	183	55.6 ⁹⁴	-8 48.3 ¹¹¹		10 N	18 11	18 33	18 58	17 05 58	4 25 49		
12	0	28.7	+13 00.5	198	23.9 ⁹³	-8 59.4 ¹¹¹		0	18 01	18 23	18 47	16 58 54	4 30 53		
13	15	28.8	01.3	212	52.2 ⁹³	-9 10.4 ¹¹⁰		10 S	17 52	14	39	50 52	36 56		
14	30	28.9	02.1	227	20.4 ⁹²	21.4 ¹¹⁰		20	42	18 05	31	43 48	42 60		
15	45	29.0	02.9	241	48.5 ⁹¹	32.4 ¹¹⁰		30	31	17 56	24	34 44	48 65		
16	60	29.2	03.7	256	16.6 ⁹¹	43.3 ¹⁰⁹		35	25	51	20	29 42	52 67		
17	75	29.3	+13 04.5	270	44.5 ⁸⁹	-9 54.1 ¹⁰⁸		40	17 18	17 45	18 17	16 23 40	4 57 69		
18	90	29.4	+13 05.4	285	12.4 ⁸⁹	-10 05.0 ¹⁰⁹		45	17 09	17 40	18 14	16 17 36	5 02 73		
19	105	29.5	06.2	299	40.3 ⁸⁹	15.7 ¹⁰⁷		50	16 59	33	11	09 33	08 77		
20	120	29.6	07.0	314	08.0 ⁸⁷	26.4 ¹⁰⁷		52	55	30	09	05 31	11 79		
21	135	29.7	07.8	328	35.7 ⁸⁷	37.1 ¹⁰⁷		54	50	26	08	16 01 29	14 81		
22	150	29.8	08.6	343	03.3 ⁸⁶	47.7 ¹⁰⁶		56	44	23	07	15 57 27	18 83		
23	165	29.9	09.4	357	30.8 ⁸⁵	-10 58.2 ¹⁰⁵		58	38	19	05	52 25	22 85		
24	180	30.0	+13 10.3	11	58.3 ⁸⁵	-11 08.7 ¹⁰⁵		60 S	16 31	17 15	18 04	15 47 21	5 26 89		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 9 ^h 49 ^m 6		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.2 PMG: 11 ^h 53 ^m			Mag: -2.0 PMG: 14 ^h 49 ^m			Mag: +0.1 PMG: 0 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	212	11.3	173	39.6	+14 26.1	181	38.5	+12 04.0	137	16.9	+22 22.5	355	08.6	-11 48.3	
1	227	13.8	188	39.0	27.1	196	39.2	04.7	152	18.8	22.5	10	11.3	48.3	
2	242	16.2	203	38.5	28.1	211	39.9	05.3	167	20.7	22.6	25	13.9	48.2	
3	257	18.7	218	37.9	29.2	226	40.6	06.0	182	22.7	22.6	40	16.6	48.2	
4	272	21.2	233	37.4	30.2	241	41.3	06.7	197	24.6	22.7	55	19.2	48.1	
5	287	23.6	248	36.9	+14 31.3	256	41.9	+12 07.3	212	26.5	+22 22.8	70	21.8	-11 48.0	
6	302	26.1	263	36.3	+14 32.3	271	42.6	+12 08.0	227	28.5	+22 22.8	85	24.5	-11 48.0	
7	317	28.5	278	35.8	33.4	286	43.3	08.6	242	30.4	22.9	100	27.1	47.9	
8	332	31.0	293	35.3	34.4	301	44.0	09.3	257	32.3	22.9	115	29.8	47.9	
9	347	33.5	308	34.7	35.4	316	44.6	10.0	272	34.2	23.0	130	32.4	47.8	
10	2	35.9	323	34.2	36.5	331	45.3	10.6	287	36.2	23.0	145	35.1	47.7	
11	17	38.4	338	33.6	+14 37.5	346	46.0	+12 11.3	302	38.1	+22 23.1	160	37.7	-11 47.7	
12	32	40.9	353	33.1	+14 38.5	1	46.7	+12 12.0	317	40.0	+22 23.2	175	40.4	-11 47.6	
13	47	43.3	8	32.6	39.6	16	47.4	12.6	332	42.0	23.2	190	43.0	47.6	
14	62	45.8	23	32.0	40.6	31	48.0	13.3	347	43.9	23.3	205	45.7	47.5	
15	77	48.3	38	31.5	41.7	46	48.7	13.9	2	45.8	23.3	220	48.3	47.4	
16	92	50.7	53	30.9	42.7	61	49.4	14.6	17	47.7	23.4	235	51.0	47.4	
17	107	53.2	68	30.4	+14 43.7	76	50.1	+12 15.3	32	49.7	+22 23.4	250	53.6	-11 47.3	
18	122	55.6	83	29.8	+14 44.8	91	50.7	+12 15.9	47	51.6	+22 23.5	265	56.3	-11 47.3	
19	137	58.1	98	29.3	45.8	106	51.4	16.6	62	53.5	23.6	280	58.9	47.2	
20	153	00.6	113	28.8	46.8	121	52.1	17.2	77	55.4	23.6	296	01.6	47.1	
21	168	03.0	128	28.2	47.9	136	52.8	17.9	92	57.4	23.7	311	04.2	47.1	
22	183	05.5	143	27.7	48.9	151	53.5	18.6	107	59.3	23.7	326	06.8	47.0	
23	198	08.0	158	27.1	49.9	166	54.1	19.2	123	01.2	23.8	341	09.5	47.0	
24	213	10.4	173	26.6	+14 51.0	181	54.8	+12 19.9	138	03.1	+22 23.8	356	12.1	-11 46.9	
Dif	—		-5		+10	+7		+7	+19		+1	+26		+1	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 9				Edad: 14 ^d 6 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 8 20 ^h : 60 ^m 0 PMG: **h **m R°: **m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	
0	180	30.0	+13	10.3	11	58.3	-11	08.7	105	60 N	2	12	3	24	4	14	19	43	88	3	54	24	
1	195	30.1		11.1	26	25.7	84	19.2	105	58		33		37		23		34	85	4	01	27	
2	210	30.3		11.9	40	53.0	83	29.5	103	56	2	50		47		30		26	82		07	30	
3	225	30.4		12.7	55	20.2	82	39.8	103	54	3	05	3	56		36		18	81		13	32	
4	240	30.5		13.5	69	47.4	82	-11	50.1	52		17	4	04		42		12	79		18	34	
5	255	30.6	+13	14.3	84	14.4	80	-12	00.3	50	3	27		4	12	4	47	19	06	77	4	22	36
6	270	30.7	+13	15.1	98	41.4	80	-12	10.4	45	3	48	4	27	4	59	18	54	74	4	32	39	
7	285	30.8		16.0	113	08.4	80		20.5	40	4	04		39	5	08	44	71		41	41		
8	300	30.9		16.8	127	35.2	78		30.5	35		17		49	16		35	69		48	44		
9	315	31.0		17.6	142	02.0	78		40.4	30		28	4	58	23		27	67		4	54	46	
10	330	31.1		18.4	156	28.7	77	-12	50.2	20		45	5	12	35		14	64		5	05	50	
11	345	31.2	+13	19.2	170	55.3	76	-13	00.0	10 N	4	58		5	23	5	45	18	03	61	5	14	54
12	0	31.3	+13	20.0	185	21.8	75	-13	09.7	0	5	09	5	33	5	55	17	52	58	5	23	57	
13	15	31.4		20.8	199	48.3	75		19.3	10 S		18		42	6	04	42	55		32	60		
14	30	31.5		21.6	214	14.7	74		28.9	20	25	5	51	14			31	52		42	62		
15	45	31.6		22.4	228	41.0	73		38.3	30	33	6	01	25			18	49		53	66		
16	60	31.8		23.3	243	07.2	72		47.7	35	36		06	32			11	47		5	59	69	
17	75	31.9	+13	24.1	257	33.4	72	-13	57.0	40	5	39	6	11	6	39	17	03	45	6	06	71	
18	90	32.0	+13	24.9	271	59.5	71	-14	06.3	45	5	43	6	17	6	48	16	53	42	6	15	74	
19	105	32.1		25.7	286	25.5	70		15.4	50	46		24	6	58		42	38		25	78		
20	120	32.2		26.5	300	51.4	69		24.4	52	48		27	7	02		36	38		30	79		
21	135	32.3		27.3	315	17.3	69		33.4	54	49		31	08			30	36		35	81		
22	150	32.4		28.1	329	43.1	68		42.3	56	50		34	13			24	33		41	83		
23	165	32.5		28.9	344	08.8	67		51.1	58	52		38	20			17	31		47	87		
24	180	32.6	+13	29.7	358	34.4	66	-14	59.8	60 S	5	54	6	43	7	27	16	08	29	6	55	89	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO						
	PMG 9 ^h 45 ^m 7				Mag: -3.9 PMG: 12 ^h 27 ^m				Mag: +1.2 PMG: 11 ^h 52 ^m				Mag: -2.0 PMG: 14 ^h 46 ^m				Mag: +0.1 PMG: 0 ^h 15 ^m						
	hG ♊		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	213	10.4	173	26.6	+14	51.0	181	54.8	+12	19.9	138	03.1	+22	23.8	356	12.1	-11	46.9					
1	228	12.9	188	26.0		52.0	196	55.5		20.5	153	05.1		23.9	11	14.8		46.8					
2	243	15.4	203	25.5		53.0	211	56.2		21.2	168	07.0		24.0	26	17.4		46.8					
3	258	17.8	218	24.9		54.0	226	56.8		21.9	183	08.9		24.0	41	20.1		46.7					
4	273	20.3	233	24.4		55.1	241	57.5		22.5	198	10.8		24.1	56	22.7		46.7					
5	288	22.8	248	23.8	+14	56.1	256	58.2	+12	23.2	213	12.8	+22	24.1	71	25.4	-11	46.6					
6	303	25.2	263	23.3	+14	57.1	271	58.9	+12	23.8	228	14.7	+22	24.2	86	28.0	-11	46.5					
7	318	27.7	278	22.7		58.1	286	59.6		24.5	243	16.6		24.2	101	30.7		46.5					
8	333	30.1	293	22.2	+14	59.2	302	00.2		25.2	258	18.6		24.3	116	33.3		46.4					
9	348	32.6	308	21.6	+15	00.2	317	00.9		25.8	273	20.5		24.3	131	36.0		46.4					
10	3	35.1	323	21.1		01.2	332	01.6		26.5	288	22.4		24.4	146	38.6		46.3					
11	18	37.5	338	20.5	+15	02.2	347	02.3	+12	27.1	303	24.3	+22	24.5	161	41.3	-11	46.2					
12	33	40.0	353	20.0	+15	03.3	2	02.9	+12	27.8	318	26.2	+22	24.5	176	43.9	-11	46.2					
13	48	42.5	8	19.4		04.3	17	03.6		28.4	333	28.2		24.6	191	46.6		46.1					
14	63	44.9	23	18.9		05.3	32	04.3		29.1	348	30.1		24.6	206	49.2		46.1					
15	78	47.4	38	18.3		06.3	47	05.0		29.7	3	32.0		24.7	221	51.8		46.0					
16	93	49.9	53	17.8		07.3	62	05.6		30.4	18	33.9		24.7	236	54.5		45.9					
17	108	52.3	68	17.2	+15	08.4	77	06.3	+12	31.1	33	35.9	+22	24.8	251	57.1	-11	45.9					
18	123	54.8	83	16.7	+15	09.4	92	07.0	+12	31.7	48	37.8	+22	24.9	266	59.8	-11	45.8					
19	138	57.3	98	16.1		10.4	107	07.7		32.4	63	39.7		24.9	282	02.4		45.8					
20	153	59.7	113	15.6		11.4	122	08.3		33.0	78	41.6		25.0	297	05.1		45.7					
21	169	02.2	128	15.0		12.4	137	09.0		33.7	93	43.6		25.0	312	07.7		45.6					
22	184	04.6	143	14.4		13.4	152	09.7		34.3	108	45.5		25.1	327	10.4		45.6					
23	199	07.1	158	13.9		14.5	167	10.4		35.0	123	47.4		25.1	342	13.0		45.5					
24	214	09.6	173	13.3	+15	15.5	182	11.1	+12	35.6	138	49.3	+22	25.2	357	15.7	-11	45.5					
Dif	—				-6 +10				+7 +7				+19 +1				+26 +1						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:9 PMG: 11 ^h 57 ^m 7			Edad: 15 ^d 6 PHE { 4 ^h : 60/2 12 ^h : 60/3 20 ^h : 60/4 SD: 16:4 PMG: 0 ^h 06 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	32.6	+13 29.7	358	34.4	-14 59.8	86	60 N	19 46	20 37	21 52	21 11 80	4 18 33		
1	195	32.7		13	00.0	-15 08.4	86	58	37	24	29	20 59 78	28 36		
2	210	32.8	31.3	27	25.5	16.9	85	56	29	13	21 11	48 77	37 38		
3	225	32.9	32.1	41	50.9	25.3	84	54	23	20 03	20 56	39 75	45 39		
4	240	33.0	32.9	56	16.3	33.6	83	52	17	19 55	43	31 74	52 41		
5	255	33.1	+13 33.7	70	41.6	-15 41.8	82	50	19 11	19 47	20 32	20 23 73	4 58 43		
6	270	33.2	+13 34.5	85	06.8	-15 49.9	81	45	18 59	19 31	20 11	20 08 70	5 11 46		
7	285	33.3	35.3	99	31.9	-15 57.9	80	40	50	19	19 54	19 55 69	22 49		
8	300	33.4	36.1	113	57.0	-16 05.8	79	35	41	19 08	40	44 67	32 50		
9	315	33.5	36.9	128	22.0	13.6	78	30	34	18 59	29	34 66	40 52		
10	330	33.6	37.7	142	46.9	21.3	77	20	22	45	19 12	18 64	5 55 55		
11	345	33.7	+13 38.5	157	11.8	-16 28.9	76	10 N	18 11	18 33	18 58	19 04 62	6 08 57		
12	0	33.8	+13 39.3	171	36.6	-16 36.4	75	0	18 01	18 22	18 47	18 50 61	6 20 59		
13	15	33.9	40.1	186	01.3	43.8	74	10 S	17 51	13	38	37 59	32 61		
14	30	34.0	40.9	200	26.0	51.0	72	20	41	18 04	30	23 57	44 64		
15	45	34.1	41.7	214	50.6	-16 58.2	72	30	29	17 54	22	18 07 55	6 59 67		
16	60	34.2	42.5	229	15.2	-17 05.2	70	35	23	49	18	17 58 53	7 08 68		
17	75	34.3	+13 43.3	243	39.7	-17 12.1	69	40	17 15	17 43	18 15	17 48 51	7 17 71		
18	90	34.4	+13 44.1	258	04.1	-17 18.9	68	45	17 06	17 37	18 11	17 35 50	7 29 72		
19	105	34.5	44.9	272	28.4	25.6	67	50	16 56	29	07	20 48	43 75		
20	120	34.6	45.7	286	52.7	32.2	66	52	51	26	06	14 46	49 77		
21	135	34.7	46.5	301	17.0	38.6	64	54	45	22	04	17 06 45	7 56 79		
22	150	34.8	47.3	315	41.2	44.9	63	56	39	19	02	16 57 44	8 04 81		
23	165	34.9	48.1	330	05.3	51.1	62	58	33	14	18 01	48 41	14 82		
24	180	35.0	+13 48.9	344	29.4	-17 57.2	61	60 S	16 25	17 10	17 59	16 37 39	8 24 85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 9 ^h 41 ^m 8		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: +1.2 PMG: 11 ^h 51 ^m		Mag: -2.0 PMG: 14 ^h 43 ^m		Mag: +0.1 PMG: 0 ^h 11 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	214	09.6	173	13.3	+15 15.5	182 11.1	+12 35.6	138 49.3	+22 25.2	357 15.7	-11 45.5	
1	229	12.0	188	12.8	16.5	197 11.7	36.3	153 51.3	25.2	12 18.3	45.4	
2	244	14.5	203	12.2	17.5	212 12.4	36.9	168 53.2	25.3	27 21.0	45.3	
3	259	17.0	218	11.7	18.5	227 13.1	37.6	183 55.1	25.4	42 23.6	45.3	
4	274	19.4	233	11.1	19.5	242 13.8	38.3	198 57.0	25.4	57 26.3	45.2	
5	289	21.9	248	10.5	+15 20.5	257 14.4	+12 38.9	213 58.9	+22 25.5	72 28.9	-11 45.2	
6	304	24.4	263	10.0	+15 21.5	272 15.1	+12 39.6	229 00.9	+22 25.5	87 31.6	-11 45.1	
7	319	26.8	278	09.4	22.6	287 15.8	40.2	244 02.8	25.6	102 34.2	45.0	
8	334	29.3	293	08.9	23.6	302 16.5	40.9	259 04.7	25.6	117 36.9	45.0	
9	349	31.7	308	08.3	24.6	317 17.1	41.5	274 06.6	25.7	132 39.5	44.9	
10	4	34.2	323	07.7	25.6	332 17.8	42.2	289 08.6	25.8	147 42.2	44.9	
11	19	36.7	338	07.2	+15 26.6	347 18.5	+12 42.8	304 10.5	+22 25.8	162 44.8	-11 44.8	
12	34	39.1	353	06.6	+15 27.6	2	19.2	+12 43.5	319 12.4	+22 25.9	177 47.4	-11 44.7
13	49	41.6	8	06.1	28.6	17 19.8	44.1	334 14.3	25.9	192 50.1	44.7	
14	64	44.1	23	05.5	29.6	32 20.5	44.8	349 16.2	26.0	207 52.7	44.6	
15	79	46.5	38	04.9	30.6	47 21.2	45.4	4	18.2	26.0	222 55.4	44.6
16	94	49.0	53	04.4	31.6	62 21.9	46.1	19 20.1	26.1	237 58.0	44.5	
17	109	51.5	68	03.8	+15 32.6	77 22.5	+12 46.7	34 22.0	+22 26.1	253 00.7	-11 44.4	
18	124	53.9	83	03.2	+15 33.6	92 23.2	+12 47.4	49 23.9	+22 26.2	268 03.3	-11 44.4	
19	139	56.4	98	02.7	34.6	107 23.9	48.0	64 25.8	26.3	283 06.0	44.3	
20	154	58.9	113	02.1	35.6	122 24.6	48.7	79 27.8	26.3	298 08.6	44.3	
21	170	01.3	128	01.5	36.6	137 25.2	49.3	94 29.7	26.4	313 11.3	44.2	
22	185	03.8	143	01.0	37.6	152 25.9	50.0	109 31.6	26.4	328 13.9	44.1	
23	200	06.2	158	00.4	38.6	167 26.6	50.6	124 33.5	26.5	343 16.6	44.1	
24	215	08.7	172	59.8	+15 39.6	182 27.2	+12 51.3	139 35.4	+22 26.5	358 19.2	-11 44.0	
Dif	—		-6	+10		+7	+7	+19	+1	+26	+1	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 6				Edad: 16 ^d 6 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 5 20 ^h : 60 ^s 5 SD: 16 ^s 5 PMG: 1 ^h 05 ^m R°: 61 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	180	35.0	+13	48.9	344	29.4		−17	57.2		60 N	2	03	3	18	4	09	22	31	67	4	51	46
1	195	35.1		49.7	358	53.4	50	−18	03.2	60	58		26		31		17		66		5	04	47
2	210	35.2		50.5	13	17.4	50		09.0	58	56		44		42		25		66		15		48
3	225	35.3		51.3	27	41.3	49		14.7	57	54	2	59	3	52		32		66		24		50
4	240	35.4		52.1	42	05.2	49		20.3	56	52	3	11	4	00		38		65		33		51
5	255	35.5	+13	52.9	56	29.0	48	−18	25.7	54	50	3	22	4	08	4	44	21	36	65	5	41	52
6	270	35.6	+13	53.7	70	52.8	48	−18	31.0	53	45	3	44	4	24	4	55	21	18	65	5	57	54
7	285	35.7		54.5	85	16.5	47		36.2	52	40	4	01		36	5	05	21	04	64	6	11	55
8	300	35.8		55.3	99	40.2	47		41.3	51	35		15		47	13		20	51	64		22	56
9	315	35.9		56.1	114	03.9	47		46.2	49	30		26	4	56	21		40	64		32		57
10	330	36.0		56.9	128	27.5	46		51.0	48	20		44	5	10	33		22	63		6	50	58
11	345	36.1	+13	57.7	142	51.0	45	−18	55.6	46	10 N	4	57	5	22	5	44	20	06	62	7	05	60
12	0	36.2	+13	58.5	157	14.6	46	−19	00.2	46	0	5	08	5	33	5	54	19	51	61	7	19	61
13	15	36.3	+13	59.3	171	38.0	44		04.5	43	10 S		18		43	6	04		36	61		33	63
14	30	36.4	+14	00.0	186	01.5	45		08.8	43	20		26	5	52	15		20	60		7	48	64
15	45	36.5	+14	00.8	200	24.9	44		12.9	41	30		34	6	02	26		19	02	59	8	06	65
16	60	36.6		01.6	214	48.3	44		16.9	40	35		37		07	33		18	51	59		16	66
17	75	36.7	+14	02.4	229	11.7	44	−19	20.7	38	40	5	41	6	13	6	41	18	39	59	8	28	66
18	90	36.8	+14	03.2	243	35.0	43	−19	24.4	37	45	5	45	6	19	6	50	18	25	58	8	41	68
19	105	36.9		04.0	257	58.3	43		28.0	36	50		49	27		7	01		08	57	8	58	69
20	120	37.0		04.8	272	21.5	42		31.4	34	52		50	30		06	18	00	56		9	06	70
21	135	37.1		05.6	286	44.8	43		34.6	32	54		52	34		11	17	51	55		15		70
22	150	37.1		06.4	301	08.0	42		37.8	32	56		54	38		17		41	55		25		71
23	165	37.2		07.1	315	31.2	42		40.8	30	58		56	42		24		29	54		36		73
24	180	37.3	+14	07.9	329	54.4	42	−19	43.6	28	60 S	5	58	6	47	7	32	17	16	53	9	49	74

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 37 ^m 8		Mag: −3.9 PMG: 12 ^h 28 ^m			Mag: +1.2 PMG: 11 ^h 50 ^m			Mag: −2.0 PMG: 14 ^h 40 ^m			Mag: +0.1 PMG: 0 ^h 07 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'			
0	215	08.7		172	59.8	+15	182	27.2	+12	51.3	139	35.4	+22	26.5	358	19.2	−11	44.0
1	230	11.2		187	59.3		197	27.9		51.9	154	37.4		26.6	13	21.9		44.0
2	245	13.6		202	58.7		212	28.6		52.6	169	39.3		26.6	28	24.5		43.9
3	260	16.1		217	58.1		227	29.3		53.2	184	41.2		26.7	43	27.2		43.8
4	275	18.6		232	57.6		242	29.9		53.8	199	43.1		26.8	58	29.8		43.8
5	290	21.0		247	57.0	+15	257	30.6	+12	54.5	214	45.0	+22	26.8	73	32.5	−11	43.7
6	305	23.5		262	56.4	+15	272	31.3	+12	55.1	229	47.0	+22	26.9	88	35.1	−11	43.7
7	320	26.0		277	55.9		287	32.0		55.8	244	48.9		26.9	103	37.8		43.6
8	335	28.4		292	55.3		302	32.6		56.4	259	50.8		27.0	118	40.4		43.5
9	350	30.9		307	54.7		317	33.3		57.1	274	52.7		27.0	133	43.0		43.5
10	5	33.4		322	54.1		332	34.0		57.7	289	54.6		27.1	148	45.7		43.4
11	20	35.8		337	53.6	+15	347	34.7	+12	58.4	304	56.5	+22	27.1	163	48.3	−11	43.4
12	35	38.3		352	53.0	+15	2	35.3	+12	59.0	319	58.5	+22	27.2	178	51.0	−11	43.3
13	50	40.7		7	52.4		17	36.0	+12	59.7	335	00.4		27.3	193	53.6		43.2
14	65	43.2		22	51.8		32	36.7	+13	00.3	350	02.3		27.3	208	56.3		43.2
15	80	45.7		37	51.3		47	37.4		01.0	5	04.2		27.4	223	58.9		43.1
16	95	48.1		52	50.7		62	38.0		01.6	20	06.1		27.4	239	01.6		43.1
17	110	50.6		67	50.1	+15	77	38.7	+13	02.2	35	08.1	+22	27.5	254	04.2	−11	43.0
18	125	53.1		82	49.5	+15	92	39.4	+13	02.9	50	10.0	+22	27.5	269	06.9	−11	42.9
19	140	55.5		97	49.0		107	40.0		03.5	65	11.9		27.6	284	09.5		42.9
20	155	58.0		112	48.4	+15	122	40.7		04.2	80	13.8		27.6	299	12.2		42.8
21	171	00.5		127	47.8	+16	137	41.4		04.8	95	15.7		27.7	314	14.8		42.8
22	186	02.9		142	47.2		152	42.1		05.5	110	17.6		27.8	329	17.5		42.7
23	201	05.4		157	46.7		167	42.7		06.1	125	19.6		27.8	344	20.1		42.6
24	216	07.9		172	46.1	+16	182	43.4	+13	06.7	140	21.5	+22	27.9	359	22.8	−11	42.6
Dif	—			−6		+10	+7		+6		+19		+1		+26		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 4			Edad: 17 ^d 6 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 5 20 ^h : 60 ^s 4 R°: 61 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	37.3	+14	07.9	329	54.4	-19	43.6	60 N	19 51	20 43	22 01	23 38 50	5 37 60
1	195	37.4		08.7	344	17.6		46.3	58	42	29	21 36	23 52	5 51 61
2	210	37.5		09.5	358	40.7		48.9	56	34	17	17	11 52	6 03 62
3	225	37.6		10.3	13	03.8		51.3	54	26	20 07	21 01	23 00 53	14 62
4	240	37.7		11.1	27	27.0		53.6	52	20	19 58	20 48	22 50 54	24 61
5	255	37.8	+14	11.9	41	50.1	-19	55.7	50	19 14	19 50	20 37	22 41 55	6 33 61
6	270	37.9	+14	12.6	56	13.2	-19	57.7	45	19 02	19 34	20 14	22 23 56	6 51 61
7	285	38.0		13.4	70	36.2	-19	59.5	40	18 52	21	19 56	22 08 56	7 06 61
8	300	38.1		14.2	84	59.3	-20	01.2	35	43	10	42	21 55 57	18 62
9	315	38.2		15.0	99	22.4		02.7	30	35	19 01	31	44 58	29 62
10	330	38.3		15.8	113	45.5		04.2	20	22	18 45	19 12	25 59	7 48 62
11	345	38.3	+14	16.6	128	08.6	-20	05.4	10 N	18 11	18 33	18 58	21 08 60	8 05 61
12	0	38.4	+14	17.3	142	31.6	-20	06.5	0	18 01	18 22	18 47	20 52 61	8 20 62
13	15	38.5		18.1	156	54.7		07.5	10 S	17 51	12	37	37 61	36 61
14	30	38.6		18.9	171	17.8		08.3	20	40	18 02	28	20 63	8 52 61
15	45	38.7		19.7	185	40.9		09.0	30	27	17 52	20	20 01 63	9 11 61
16	60	38.8		20.5	200	04.0		09.5	35	20	46	16	19 50 64	22 61
17	75	38.9	+14	21.2	214	27.1	-20	09.9	40	17 12	17 40	18 12	19 38 64	9 34 61
18	90	39.0	+14	22.0	228	50.2	-20	10.1	45	17 03	17 34	18 08	19 23 65	9 49 61
19	105	39.1		22.8	243	13.4		10.2	50	16 52	26	04	19 05 65	10 07 60
20	120	39.2		23.6	257	36.5		10.1	52	47	22	02	18 56 66	16 60
21	135	39.2		24.4	271	59.7		09.9	54	41	19	18 00	46 67	25 60
22	150	39.3		25.1	286	22.9		09.6	56	35	14	17 58	36 66	36 60
23	165	39.4		25.9	300	46.1		09.1	58	28	10	56	23 68	10 49 59
24	180	39.5	+14	26.7	315	09.3	-20	08.4	60 S	16 20	17 05	17 54	18 09 68	11 03 59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 33 ^m 9		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +1.2 PMG: 11 ^h 49 ^m		Mag: -2.0 PMG: 14 ^h 37 ^m		Mag: +0.1 PMG: 0 ^h 02 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	216	07.9	172	46.1	+16	03.4	182	43.4	+13	06.7
1	231	10.3	187	45.5		04.4	197	44.1		07.4
2	246	12.8	202	44.9		05.3	212	44.7		08.0
3	261	15.2	217	44.3		06.3	227	45.4		08.7
4	276	17.7	232	43.8		07.3	242	46.1		09.3
5	291	20.2	247	43.2	+16	08.3	257	46.8	+13	10.0
6	306	22.6	262	42.6	+16	09.2	272	47.4	+13	10.6
7	321	25.1	277	42.0		10.2	287	48.1		11.2
8	336	27.6	292	41.4		11.2	302	48.8		11.9
9	351	30.0	307	40.8		12.2	317	49.5		12.5
10	6	32.5	322	40.3		13.2	332	50.1		13.2
11	21	35.0	337	39.7	+16	14.1	347	50.8	+13	13.8
12	36	37.4	352	39.1	+16	15.1	2	51.5	+13	14.4
13	51	39.9	7	38.5		16.1	17	52.1		15.1
14	66	42.3	22	37.9		17.0	32	52.8		15.7
15	81	44.8	37	37.3		18.0	47	53.5		16.4
16	96	47.3	52	36.8		19.0	62	54.2		17.0
17	111	49.7	67	36.2	+16	20.0	77	54.8	+13	17.6
18	126	52.2	82	35.6	+16	20.9	92	55.5	+13	18.3
19	141	54.7	97	35.0		21.9	107	56.2		18.9
20	156	57.1	112	34.4		22.9	122	56.8		19.5
21	171	59.6	127	33.8		23.8	137	57.5		20.2
22	187	02.1	142	33.2		24.8	152	58.2		20.8
23	202	04.5	157	32.6		25.8	167	58.8		21.5
24	217	07.0	172	32.0	+16	26.7	182	59.5	+13	22.1
Dif	—		-6		+10		+7		+6	
							+19		+1	
									-8974	
									+	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 3				Edad: 18 ^d 6 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 2 20 ^h : 60 ^h 1 PMG: 3 ^h 07 ^m R°: 60 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	39.5	+14	26.7	315	09.3	-20	08.4	7	58	60 N	1	53	3	11	4	03	**	**	**
1	195	39.6		27.5	329	32.5		07.7	10	58		2	18		25		12	**	**	**
2	210	39.7		28.2	343	55.8	43	06.7	10	56		3	37		37		20	**	**	**
3	225	39.8		29.0	358	19.1	43	05.7	10	54		2	53		47		28	23	53	42
4	240	39.9		29.8	12	42.4	43	04.4	13	52		3	06	3	56		34	44	43	
5	255	39.9	+14	30.6	27	05.8	44	-20	03.1	13	50	3	18	4	04	4	40	23	36	45
6	270	40.0	+14	31.4	41	29.2	44	-20	01.6	15	45	3	41	4	20	4	52	23	19	47
7	285	40.1		32.1	55	52.6	44	-19	59.9	17	40	3	58		33	5	03	23	04	50
8	300	40.2		32.9	70	16.1	45	58.2	17	35		4	12		44	11	22	52	51	
9	315	40.3		33.7	84	39.6	45	56.2	20	30		24	4	54	19		42	52		31
10	330	40.4		34.4	99	03.1	45	54.2	20	20		42	5	09	32		24	54		8
11	345	40.5	+14	35.2	113	26.7	46	-19	52.0	22	10 N	4	56	5	22	5	43	22	08	56
12	0	40.5	+14	36.0	127	50.3	46	-19	49.6	24	0	5	08	5	33	5	54	21	53	59
13	15	40.6		36.8	142	13.9	46	47.1	25	20	10 S	18		43	6	04	38	61		37
14	30	40.7		37.5	156	37.6	47	44.5	26	10		26	5	53	15		23	62		9
15	45	40.8		38.3	171	01.4	48	41.8	27	30		35	6	03	28		21	04	65	10
16	60	40.9		39.1	185	25.1	47	38.9	29	35		39		09	35		20	54	66	23
17	75	41.0	+14	39.8	199	49.0	49	-19	35.8	31	40	5	43	6	15	6	43	20	42	67
18	90	41.1	+14	40.6	214	12.9	49	-19	32.7	31	45	5	47	6	22	6	52	20	28	69
19	105	41.1		41.4	228	36.8	49	29.4	33	50		51		30	7	04	10	71		11
20	120	41.2		42.2	243	00.8	50	25.9	35	52		53		33	09		20	02	72	16
21	135	41.3		42.9	257	24.8	50	22.4	35	54		55		37	15		19	53	74	25
22	150	41.4		43.7	271	48.9	51	18.7	37	56		57		41	21		42	76		36
23	165	41.5		44.5	286	13.1	52	14.8	39	58		5	59	46	28		31	77		11
24	180	41.5	+14	45.2	300	37.3	52	-19	10.9	39	60 S	6	02	6	51	7	36	19	17	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 30 ^m 0		Mag: -3.9 PMG: 12 ^h 30 ^m		Mag: +1.2 PMG: 11 ^h 48 ^m		Mag: -2.0 PMG: 14 ^h 34 ^m		Mag: +0.1 PMG: 23 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	217	07.0	172	32.0	+16	26.7	182	59.5	+13	22.1
1	232	09.5	187	31.5		27.7	198	00.2		22.7
2	247	11.9	202	30.9		28.6	213	00.9		23.4
3	262	14.4	217	30.3		29.6	228	01.5		24.0
4	277	16.8	232	29.7		30.6	243	02.2		24.6
5	292	19.3	247	29.1	+16	31.5	258	02.9	+13	25.3
6	307	21.8	262	28.5	+16	32.5	273	03.5	+13	25.9
7	322	24.2	277	27.9		33.5	288	04.2		26.5
8	337	26.7	292	27.3		34.4	303	04.9		27.2
9	352	29.2	307	26.7		35.4	318	05.6		27.8
10	7	31.6	322	26.1		36.3	333	06.2		28.4
11	22	34.1	337	25.5	+16	37.3	348	06.9	+13	29.1
12	37	36.6	352	24.9	+16	38.2	3	07.6	+13	29.7
13	52	39.0	7	24.3		39.2	18	08.2		30.3
14	67	41.5	22	23.7		40.1	33	08.9		31.0
15	82	44.0	37	23.1		41.1	48	09.6		31.6
16	97	46.4	52	22.5		42.1	63	10.2		32.2
17	112	48.9	67	21.9	+16	43.0	78	10.9	+13	32.9
18	127	51.3	82	21.3	+16	44.0	93	11.6	+13	33.5
19	142	53.8	97	20.7		44.9	108	12.2		34.1
20	157	56.3	112	20.1		45.9	123	12.9		34.8
21	172	58.7	127	19.5		46.8	138	13.6		35.4
22	188	01.2	142	18.9		47.8	153	14.3		36.0
23	203	03.7	157	18.3		48.7	168	14.9		36.7
24	218	06.1	172	17.7	+16	49.6	183	15.6	+13	37.3
Dif	—		-6		+10		+7		+6	
							+19		+1	
									+26	
									+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 2			Edad: 19 ^d 6 PHE { SD: 16'3 PMG: 4 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	41.5	+14 45.2	300	37.3	-19 10.9	60 N	19 56	20 49	22 12	0 28 36	7 52 83		
1	195	41.6	46.0	315	01.5	06.8	58	46	34	21 44	15 38	8 05 80		
2	210	41.7	46.8	329	25.9	54	56	38	22	23	0 03 41	16 78		
3	225	41.8	47.5	343	50.2	53	54	30	11	21 07	** ** *	26 76		
4	240	41.9	48.3	358	14.7	55	52	23	20 02	20 53	** ** *	35 75		
5	255	42.0	+14 49.1	12	39.2	55	50	19 17	19 54	20 41	** ** *	8 43 73		
6	270	42.0	+14 49.8	27	03.7	55	45	19 04	19 37	20 17	** ** *	9 00 70		
7	285	42.1	50.6	41	28.4	57	40	18 54	23	19 59	23 54 42	13 68		
8	300	42.2	51.3	55	53.1	57	35	45	12	44	43 45	25 66		
9	315	42.3	52.1	70	17.8	57	30	37	19 02	32	34 47	35 64		
10	330	42.4	52.9	84	42.7	59	20	23	18 46	19 13	18 50	9 52 62		
11	345	42.4	+14 53.6	99	07.5	58	10 N	18 11	18 33	18 59	23 04 53	10 07 60		
12	0	42.5	+14 54.4	113	32.5	60	0	18 01	18 22	18 47	22 52 55	10 21 57		
13	15	42.6	55.2	127	57.5	60	10 S	17 50	12	37	39 57	35 55		
14	30	42.7	55.9	142	22.6	61	20	38	18 01	27	25 60	10 50 52		
15	45	42.8	56.7	156	47.8	62	30	26	17 50	19	09 64	11 07 49		
16	60	42.8	57.4	171	13.0	62	35	18	44	14	22 00 65	17 48		
17	75	42.9	+14 58.2	185	38.3	63	40	17 10	17 38	18 10	21 49 68	11 28 46		
18	90	43.0	+14 59.0	200	03.7	64	45	17 00	17 31	18 06	21 37 70	11 41 44		
19	105	43.1	+14 59.7	214	29.2	65	50	16 48	23	18 01	21 74	11 57 41		
20	120	43.1	+15 00.5	228	54.7	65	52	43	19	17 59	14 76	12 04 40		
21	135	43.2	01.2	243	20.3	66	54	37	15	57	21 07 77	13 37		
22	150	43.3	02.0	257	46.0	67	56	30	10	54	20 58 79	22 36		
23	165	43.4	02.8	272	11.7	67	58	23	05	52	48 81	32 34		
24	180	43.5	+15 03.5	286	37.6	69	60 S	16 15	17 00	17 50	20 36 84	12 44 31		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 26 ^m 0		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: +1.2 PMG: 11 ^h 46 ^m		Mag: -2.0 PMG: 14 ^h 31 ^m		Mag: +0.1 PMG: 23 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	218	06.1	172	17.7	183	15.6	141	53.3	1	29.9
1	233	08.6	187	17.1	198	16.3	156	55.2	16	32.5
2	248	11.1	202	16.5	213	16.9	171	57.1	31	35.2
3	263	13.5	217	15.9	228	17.6	186	59.1	46	37.8
4	278	16.0	232	15.3	243	18.3	202	01.0	61	40.5
5	293	18.5	247	14.7	258	18.9	217	02.9	76	43.1
6	308	20.9	262	14.1	273	19.6	232	04.8	91	45.8
7	323	23.4	277	13.5	288	20.3	247	06.7	106	48.4
8	338	25.8	292	12.9	303	20.9	262	08.6	121	51.0
9	353	28.3	307	12.3	318	21.6	277	10.5	136	53.7
10	8	30.8	322	11.7	333	22.3	292	12.4	151	56.3
11	23	33.2	337	11.1	348	22.9	307	14.3	166	59.0
12	38	35.7	352	10.5	3	23.6	322	16.2	182	01.6
13	53	38.2	7	09.9	18	24.3	337	18.2	197	04.3
14	68	40.6	22	09.3	33	24.9	352	20.1	212	06.9
15	83	43.1	37	08.7	48	25.6	7	22.0	227	09.6
16	98	45.6	52	08.1	63	26.3	22	23.9	242	12.2
17	113	48.0	67	07.5	78	26.9	37	25.8	257	14.9
18	128	50.5	82	06.8	93	27.6	52	27.7	272	17.5
19	143	53.0	97	06.2	108	28.3	67	29.6	287	20.2
20	158	55.4	112	05.6	123	28.9	82	31.5	302	22.8
21	173	57.9	127	05.0	138	29.6	97	33.4	317	25.5
22	189	00.3	142	04.4	153	30.3	112	35.3	332	28.1
23	204	02.8	157	03.8	168	30.9	127	37.2	347	30.8
24	219	05.3	172	03.2	183	31.6	142	39.1	2	33.4
Dif	—		-6	+9	+7	+6	+19	+1	+26	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 0			Edad: 20 ^d 6 SD: 16°2 PMG: 5 ^h 05 ^m	PHE { 4 ^h : 59°4 12 ^h : 59°2 20 ^h : 59°0 R°: 54 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	43.5	+15 03.5	286	37.6	-16 59.4	60 N	1 42	3 05	3 58	1 04	26	9 15	85	
1	195	43.5	04.3	301	03.5	52.5	58	2 09	19	4 07	0 53	29	25	83	
2	210	43.6	05.0	315	29.4	45.6	56	30	31	16	44	31	34	80	
3	225	43.7	05.8	329	55.5	38.5	54	2 47	42	23	35	33	42	78	
4	240	43.8	06.5	344	21.6	31.3	52	3 01	3 51	30	27	35	50	76	
5	255	43.8	+15 07.3	358	47.8	-16 24.0	50	3 13	4 00	4 36	0 21	36	9 56	74	
6	270	43.9	+15 08.0	13	14.1	-16 16.7	45	3 37	4 17	4 49	0 06	40	10 10	71	
7	285	44.0	08.8	27	40.4	09.2	40	3 55	31	5 00	** ** *		21	68	
8	300	44.1	09.6	42	06.9	-16 01.6	35	4 10	42	09	** ** *		31	65	
9	315	44.1	10.3	56	33.4	-15 54.0	30	22	4 52	17	** ** *		39	64	
10	330	44.2	11.1	71	00.0	46.2	20	41	5 08	31	** ** *		10 54	60	
11	345	44.3	+15 11.8	85	26.6	-15 38.4	10 N	4 55	5 21	5 43	23 57	49	11 07	56	
12	0	44.4	+15 12.6	99	53.4	-15 30.4	0	5 07	5 32	5 54	23 47	52	11 18	54	
13	15	44.4	13.3	114	20.2	22.4	10 S	18	43	6 04	36	56	30	51	
14	30	44.5	14.1	128	47.1	14.3	20	27	5 53	16	25	59	42	48	
15	45	44.6	14.8	143	14.1	-15 06.1	30	36	6 04	29	13	62	11 56	45	
16	60	44.6	15.6	157	41.1	-14 57.8	35	40	10	36	23 05	65	12 05	42	
17	75	44.7	+15 16.3	172	08.3	-14 49.5	40	5 45	6 17	6 45	22 57	67	12 14	40	
18	90	44.8	+15 17.1	186	35.5	-14 41.0	45	5 49	6 24	6 55	22 47	70	12 25	37	
19	105	44.9	17.8	201	02.7	32.5	50	54	33	7 07	35	74	38	33	
20	120	44.9	18.6	215	30.1	23.9	52	56	36	12	30	75	44	31	
21	135	45.0	19.3	229	57.5	15.2	54	5 58	40	18	24	77	50	30	
22	150	45.1	20.1	244	25.1	-14 06.4	56	6 01	45	25	17	80	12 58	28	
23	165	45.1	20.8	258	52.6	-13 57.6	58	03	50	33	09	82	13 06	26	
24	180	45.2	+15 21.5	273	20.3	-13 48.7	60 S	6 06	6 56	7 41	22 00	86	13 15	23	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 22 ^m 1		Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +1.3 PMG: 11 ^h 45 ^m			Mag: -2.0 PMG: 14 ^h 28 ^m			Mag: +0.1 PMG: 23 ^h 46 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	219	05.3	172	03.2	+17 12.1	183	31.6	+13 52.4	142	39.1	+22 31.8	2	33.4	-11 38.3	
1	234	07.7	187	02.6	13.1	198	32.3	53.0	157	41.1	31.8	17	36.1	38.2	
2	249	10.2	202	01.9	14.0	213	32.9	53.6	172	43.0	31.9	32	38.7	38.2	
3	264	12.7	217	01.3	14.9	228	33.6	54.2	187	44.9	31.9	47	41.4	38.1	
4	279	15.1	232	00.7	15.9	243	34.3	54.9	202	46.8	32.0	62	44.0	38.1	
5	294	17.6	247	00.1	+17 16.8	258	34.9	+13 55.5	217	48.7	+22 32.1	77	46.6	-11 38.0	
6	309	20.1	261	59.5	+17 17.7	273	35.6	+13 56.1	232	50.6	+22 32.1	92	49.3	-11 37.9	
7	324	22.5	276	58.9	18.6	288	36.3	56.7	247	52.5	32.2	107	51.9	37.9	
8	339	25.0	291	58.3	19.6	303	36.9	57.4	262	54.4	32.2	122	54.6	37.8	
9	354	27.4	306	57.6	20.5	318	37.6	58.0	277	56.3	32.3	137	57.2	37.8	
10	9	29.9	321	57.0	21.4	333	38.3	58.6	292	58.2	32.3	152	59.9	37.7	
11	24	32.4	336	56.4	+17 22.3	348	38.9	+13 59.2	308	00.1	+22 32.4	168	02.5	-11 37.6	
12	39	34.8	351	55.8	+17 23.2	3	39.6	+13 59.9	323	02.0	+22 32.4	183	05.2	-11 37.6	
13	54	37.3	6	55.2	24.2	18	40.3	+14 00.5	338	03.9	32.5	198	07.8	37.5	
14	69	39.8	21	54.5	25.1	33	40.9	01.1	353	05.8	32.5	213	10.5	37.5	
15	84	42.2	36	53.9	26.0	48	41.6	01.7	8	07.7	32.6	228	13.1	37.4	
16	99	44.7	51	53.3	26.9	63	42.3	02.3	23	09.7	32.6	243	15.8	37.3	
17	114	47.2	66	52.7	+17 27.8	78	42.9	+14 03.0	38	11.6	+22 32.7	258	18.4	-11 37.3	
18	129	49.6	81	52.1	+17 28.7	93	43.6	+14 03.6	53	13.5	+22 32.7	273	21.1	-11 37.2	
19	144	52.1	96	51.4	29.6	108	44.3	04.2	68	15.4	32.8	288	23.7	37.2	
20	159	54.6	111	50.8	30.6	123	44.9	04.8	83	17.3	32.9	303	26.4	37.1	
21	174	57.0	126	50.2	31.5	138	45.6	05.4	98	19.2	32.9	318	29.0	37.0	
22	189	59.5	141	49.6	32.4	153	46.3	06.1	113	21.1	33.0	333	31.7	37.0	
23	205	01.9	156	48.9	33.3	168	46.9	06.7	128	23.0	33.0	348	34.3	36.9	
24	220	04.4	171	48.3	+17 34.2	183	47.6	+14 07.3	143	24.9	+22 33.1	3	37.0	-11 36.9	
Dif	—		-6		+9	+7		+6	+19		+1	+26		+1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9				Edad: 21 ^d 6 PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'4													
	PMG: 11 ^h 56 ^m 9																	
	PMG: 5 ^h 59 ^m R°: 52 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	180	45.2	+15	21.5	273	20.3	-13	48.7	60 N	20 01	20 55	22 23	1 30 20		10 40 85			
1	195	45.3		22.3	287	48.0	87	39.7	58	19 50	40	21 52	22 23		48 82			
2	210	45.4		23.0	302	15.9	89	30.7	56	42	27	30	15 25		10 54 80			
3	225	45.4		23.8	316	43.8	89	21.5	54	34	16	21 12	08 27		11 00 78			
4	240	45.5		24.5	331	11.7	89	12.3	52	27	20 06	20 57	1 02 29		06 75			
5	255	45.6	+15	25.3	345	39.8	91	-13 03.1	50	19 20	19 57	20 45	0 57 31		11 10 74			
6	270	45.6	+15	26.0	0	07.9	91	-12 53.7	45	19 07	19 39	20 20	0 46 34		11 21 69			
7	285	45.7		26.8	14	36.1	92	44.3	40	18 56	25	20 01	36 37		29 66			
8	300	45.8		27.5	29	04.3	92	34.9	35	46	13	19 46	28 39		36 64			
9	315	45.8		28.2	43	32.7	94	25.4	30	38	19 03	34	21 41		43 61			
10	330	45.9		29.0	58	01.1	94	15.8	20	24	18 47	19 14	0 08 46		11 54 57			
11	345	46.0	+15	29.7	72	29.6	95	-12 06.1	10 N	18 12	18 34	18 59	** ** *		12 03 54			
12	0	46.0	+15	30.5	86	58.1	95	-11 56.4	0	18 00	18 22	18 47	** ** *		12 12 51			
13	15	46.1		31.2	101	26.8	97	46.6	10 S	17 49	11	36	** ** *		21 47			
14	30	46.2		32.0	115	55.5	97	36.8	20	37	18 00	26	** ** *		30 44			
15	45	46.2		32.7	130	24.2	97	26.9	30	24	17 49	17	** ** *		41 40			
16	60	46.3		33.4	144	53.1	99	17.0	35	16	43	13	** ** *		47 38			
17	75	46.4	+15	34.2	159	22.0	99	-11 07.0	40	17 07	17 36	18 08	** ** *		12 54 35			
18	90	46.4	+15	34.9	173	50.9	99	-10 57.0	45	16 57	17 28	18 03	23 57 69		13 02 32			
19	105	46.5		35.7	188	20.0	101	46.9	50	45	19	17 58	49 73		11 29			
20	120	46.6		36.4	202	49.1	101	36.7	52	39	15	55	45 75		15 27			
21	135	46.6		37.1	217	18.3	102	26.5	54	33	11	53	41 76		20 25			
22	150	46.7		37.9	231	47.5	102	16.3	56	26	06	51	37 78		26 23			
23	165	46.8		38.6	246	16.8	103	-10 06.0	58	18	17 01	48	31 81		32 20			
24	180	46.8	+15	39.3	260	46.2	104	-9 55.6	60 S	16 09	16 55	17 45	23 26 83		13 38 18			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.9		Mag: +1.3		Mag: -2.0		Mag: +0.1									
	9 ^h 18 ^m 2		PMG: 12 ^h 33 ^m		PMG: 11 ^h 44 ^m		PMG: 14 ^h 25 ^m		PMG: 23 ^h 41 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	220	04.4	171	48.3	+17	34.2	183	47.6	+14	07.3	143	24.9	+22	33.1	3	37.0	-11	36.9
1	235	06.9	186	47.7		35.1	198	48.3		07.9	158	26.8		33.1	18	39.6		36.8
2	250	09.3	201	47.1		36.0	213	48.9		08.5	173	28.7		33.2	33	42.2		36.8
3	265	11.8	216	46.4		36.9	228	49.6		09.2	188	30.6		33.2	48	44.9		36.7
4	280	14.3	231	45.8		37.8	243	50.3		09.8	203	32.5		33.3	63	47.5		36.6
5	295	16.7	246	45.2	+17	38.7	258	50.9	+14	10.4	218	34.4	+22	33.3	78	50.2	-11	36.6
6	310	19.2	261	44.6	+17	39.7	273	51.6	+14	11.0	233	36.3	+22	33.4	93	52.8	-11	36.5
7	325	21.7	276	43.9		40.6	288	52.2		11.6	248	38.2		33.4	108	55.5		36.5
8	340	24.1	291	43.3		41.5	303	52.9		12.2	263	40.1		33.5	123	58.1		36.4
9	355	26.6	306	42.7		42.4	318	53.6		12.9	278	42.0		33.5	139	00.8		36.3
10	10	29.1	321	42.0		43.3	333	54.2		13.5	293	43.9		33.6	154	03.4		36.3
11	25	31.5	336	41.4	+17	44.2	348	54.9	+14	14.1	308	45.8	+22	33.6	169	06.1	-11	36.2
12	40	34.0	351	40.8	+17	45.1	3	55.6	+14	14.7	323	47.7	+22	33.7	184	08.7	-11	36.2
13	55	36.4	6	40.2		46.0	18	56.2		15.3	338	49.6		33.7	199	11.4		36.1
14	70	38.9	21	39.5		46.9	33	56.9		15.9	353	51.5		33.8	214	14.0		36.0
15	85	41.4	36	38.9		47.8	48	57.6		16.5	8	53.5		33.9	229	16.7		36.0
16	100	43.8	51	38.3		48.7	63	58.2		17.2	23	55.4		33.9	244	19.3		35.9
17	115	46.3	66	37.6	+17	49.6	78	58.9	+14	17.8	38	57.3	+22	34.0	259	22.0	-11	35.9
18	130	48.8	81	37.0	+17	50.5	93	59.5	+14	18.4	53	59.2	+22	34.0	274	24.6	-11	35.8
19	145	51.2	96	36.4		51.3	109	00.2		19.0	69	01.1		34.1	289	27.3		35.7
20	160	53.7	111	35.7		52.2	124	00.9		19.6	84	03.0		34.1	304	29.9		35.7
21	175	56.2	126	35.1		53.1	139	01.5		20.2	99	04.9		34.2	319	32.5		35.6
22	190	58.6	141	34.5		54.0	154	02.2		20.8	114	06.8		34.2	334	35.2		35.6
23	206	01.1	156	33.8		54.9	169	02.9		21.5	129	08.7		34.3	349	37.8		35.5
24	221	03.5	171	33.2	+17	55.8	184	03.5	+14	22.1	144	10.6	+22	34.3	4	40.5	-11	35.5
Dif	—		-6		+9		+7		+6		+19		+1		+26		+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ⁹ PMG: 11 ^h 56 ^m 8			Edad: 22 ^d 6 PHE SD: 15 ⁹ PMG: 6 ^h 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	46.8	+15 39.3	260	46.2	-9 55.6	60 N	1 30	2 58	3 52		1 50 16	12 05 83	
1	195	46.9	40.1	275	15.6 ¹⁰⁴	45.3 ¹⁰³	58	2 01	3 13	4 03		45 18	10 80	
2	210	47.0	40.8	289	45.2 ¹⁰⁶	34.8 ¹⁰⁵	56	23	26	11		40 21	14 78	
3	225	47.0	41.5	304	14.7 ¹⁰⁵	24.4 ¹⁰⁴	54	41	37	19		35 24	18 75	
4	240	47.1	42.3	318	44.4 ¹⁰⁷	13.9 ¹⁰⁵	52	2 56	47	26		31 25	21 73	
5	255	47.2	+15 43.0	333	14.0 ¹⁰⁶	-9 03.3 ¹⁰⁶	50	3 08	3 56	4 33		1 28 26	12 24 71	
6	270	47.2	+15 43.7	347	43.8 ¹⁰⁸	-8 52.7 ¹⁰⁶	45	3 33	4 14	4 46		1 20 30	12 30 68	
7	285	47.3	44.5	2	13.6 ¹⁰⁸	42.1 ¹⁰⁶	40	3 52	28	4 58		13 34	35 65	
8	300	47.4	45.2	16	43.5 ¹⁰⁹	31.4 ¹⁰⁷	35	4 07	40	5 07		07 37	40 62	
9	315	47.4	45.9	31	13.4 ¹⁰⁹	20.8 ¹⁰⁶	30	20	4 50	15		1 02 39	44 60	
10	330	47.5	46.7	45	43.4 ¹¹⁰	-8 10.0 ¹⁰⁸	20	39	5 06	30		0 54 42	51 55	
11	345	47.5	+15 47.4	60	13.5 ¹¹¹	-7 59.3 ¹⁰⁷	10 N	4 54	5 20	5 42		0 46 46	12 57 52	
12	0	47.6	+15 48.1	74	43.6 ¹¹¹	-7 48.5 ¹⁰⁸	0	5 07	5 32	5 53		0 39 49	13 03 48	
13	15	47.7	48.9	89	13.7 ¹¹¹	37.6 ¹⁰⁹	10 S	18	43	6 05		32 52	08 45	
14	30	47.7	49.6	103	44.0 ¹¹³	26.8 ¹⁰⁸	20	28	5 54	17		24 56	14 41	
15	45	47.8	50.3	118	14.2 ¹¹²	15.9 ¹⁰⁹	30	37	6 05	30		15 60	21 37	
16	60	47.8	51.0	132	44.6 ¹¹⁴	-7 05.0 ¹⁰⁹	35	42	12	38		10 63	25 34	
17	75	47.9	+15 51.8	147	14.9 ¹¹³	-6 54.0 ¹¹⁰	40	5 46	6 19	6 47		0 04 65	13 29 32	
18	90	48.0	+15 52.5	161	45.4 ¹¹⁵	-6 43.0 ¹¹⁰	45	5 51	6 26	6 57	** ** *	13 34 29		
19	105	48.0	53.2	176	15.9 ¹¹⁵	32.0 ¹¹⁰	50	57	35	7 10	** ** *	40 25		
20	120	48.1	54.0	190	46.4 ¹¹⁵	21.0 ¹¹⁰	52	5 59	39	15	** ** *	42 24		
21	135	48.1	54.7	205	17.0 ¹¹⁶	-6 10.0 ¹¹⁰	54	6 01	44	22	** ** *	45 22		
22	150	48.2	55.4	219	47.6 ¹¹⁶	-5 58.9 ¹¹¹	56	04	49	29	** ** *	49 20		
23	165	48.3	56.1	234	18.3 ¹¹⁷	47.8 ¹¹¹	58	07	6 54	37	** ** *	52 18		
24	180	48.3	+15 56.9	248	49.1 ¹¹⁸	-5 36.7 ¹¹¹	60 S	6 10	7 00	7 46	** ** *	13 56 16		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 9 ^h 14 ^m 2		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: +1.3 PMG: 11 ^h 43 ^m		Mag: -2.0 PMG: 14 ^h 21 ^m		Mag: +0.2 PMG: 23 ^h 37 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	°	'	°	°	°	'	
0	221	03.5	171	33.2	+17 55.8	184 03.5	+14 22.1	144 10.6	+22 34.3	4 40.5	-11 35.5
1	236	06.0	186	32.5	56.7	199 04.2	22.7	159 12.5	34.4	19 43.1	35.4
2	251	08.5	201	31.9	57.6	214 04.9	23.3	174 14.4	34.4	34 45.8	35.3
3	266	10.9	216	31.3	58.5	229 05.5	23.9	189 16.3	34.5	49 48.4	35.3
4	281	13.4	231	30.6	+17 59.4	244 06.2	24.5	204 18.2	34.5	64 51.1	35.2
5	296	15.9	246	30.0	+18 00.3	259 06.8	+14 25.1	219 20.1	+22 34.6	79 53.7	-11 35.2
6	311	18.3	261	29.4	+18 01.1	274 07.5	+14 25.7	234 22.0	+22 34.6	94 56.4	-11 35.1
7	326	20.8	276	28.7	02.0	289 08.2	26.4	249 23.9	34.7	109 59.0	35.0
8	341	23.3	291	28.1	02.9	304 08.8	27.0	264 25.8	34.7	125 01.7	35.0
9	356	25.7	306	27.4	03.8	319 09.5	27.6	279 27.7	34.8	140 04.3	34.9
10	11 28.2	321 26.8	04.7	334 10.2	28.2	334 10.2	28.2	294 29.6	34.8	155 07.0	34.9
11	26 30.7	336 26.2	+18 05.6	349 10.8	+14 28.8	349 10.8	+14 28.8	309 31.5	+22 34.9	170 09.6	-11 34.8
12	41 33.1	351 25.5	+18 06.4	4 11.5	+14 29.4	4 11.5	+14 29.4	324 33.4	+22 35.0	185 12.3	-11 34.8
13	56 35.6	6 24.9	07.3	19 12.1	30.0	19 12.1	30.0	339 35.3	35.0	200 14.9	34.7
14	71 38.0	21 24.2	08.2	34 12.8	30.6	34 12.8	30.6	354 37.2	35.1	215 17.5	34.6
15	86 40.5	36 23.6	09.1	49 13.5	31.2	49 13.5	31.2	9 39.1	35.1	230 20.2	34.6
16	101 43.0	51 22.9	10.0	64 14.1	31.8	64 14.1	31.8	24 41.0	35.2	245 22.8	34.5
17	116 45.4	66 22.3	+18 10.8	79 14.8	+14 32.5	79 14.8	+14 32.5	39 42.9	+22 35.2	260 25.5	-11 34.5
18	131 47.9	81 21.6	+18 11.7	94 15.4	+14 33.1	94 15.4	+14 33.1	54 44.8	+22 35.3	275 28.1	-11 34.4
19	146 50.4	96 21.0	12.6	109 16.1	33.7	109 16.1	33.7	69 46.7	35.3	290 30.8	34.3
20	161 52.8	111 20.4	13.5	124 16.8	34.3	124 16.8	34.3	84 48.6	35.4	305 33.4	34.3
21	176 55.3	126 19.7	14.3	139 17.4	34.9	139 17.4	34.9	99 50.5	35.4	320 36.1	34.2
22	191 57.8	141 19.1	15.2	154 18.1	35.5	154 18.1	35.5	114 52.4	35.5	335 38.7	34.2
23	207 00.2	156 18.4	16.1	169 18.8	36.1	169 18.8	36.1	129 54.3	35.5	350 41.4	34.1
24	222 02.7	171 17.8	+18 16.9	184 19.4	+14 36.7	184 19.4	+14 36.7	144 56.2	+22 35.6	5 44.0	-11 34.0
Dif	—	-6	+9	+7	+6	+7	+6	+19	+1	+26	+1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:9 PMG: 11 ^h 56 ^m 7			Edad: 23 ^d 6 PHE { 4 ^h : 57:5 12 ^h : 57:3 20 ^h : 57:1 SD: 15:7 PMG: 7 ^h 40 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	48.3	+15 56.9	248	49.1	-5 36.7		60 N	20 06	21 01	22 35	2 06 15	13 28 81	
1	195	48.4		263	19.8 ¹¹⁷		25.6 ¹¹¹	58	19 55	20 45	22 00	03 17	30 78	
2	210	48.4	58.3	277	50.7 ¹¹⁹		14.5 ¹¹¹	56	46	31	21 36	2 01 19	32 75	
3	225	48.5	59.0	292	21.5 ¹¹⁸	-5 03.3 ¹¹²		54	37	20	18	1 59 21	33 74	
4	240	48.6	+15 59.8	306	52.5 ¹²⁰	-4 52.1 ¹¹²		52	30	10	21 02	56 23	34 72	
5	255	48.6	+16 00.5	321	23.4 ¹¹⁹	-4 40.9 ¹¹²		50	19 23	20 01	20 49	1 54 25	13 35 71	
6	270	48.7	+16 01.2	335	54.4 ¹²⁰	-4 29.7 ¹¹²		45	19 09	19 42	20 23	1 50 29	13 38 66	
7	285	48.7	01.9	350	25.5 ¹²¹		18.5 ¹¹²	40	18 58	27	20 04	47 31	40 63	
8	300	48.8	02.6	4 56.6 ¹²¹	-4 07.3 ¹¹²			35	48	15	19 48	44 34	42 60	
9	315	48.8	03.4	19 27.7 ¹²¹	-3 56.0 ¹¹³			30	39	19 05	35	41 36	44 58	
10	330	48.9	04.1	33 58.9 ¹²²	44.8 ¹¹²			20	25	18 48	15	36 41	46 54	
11	345	49.0	+16 04.8	48 30.1 ¹²²	-3 33.5 ¹¹³			10 N	18 12	18 34	19 00	1 32 44	13 49 50	
12	0	49.0	+16 05.5	63 01.3 ¹²²	-3 22.3 ¹¹²			0	18 00	18 22	18 47	1 28 47	13 51 47	
13	15	49.1	06.2	77 32.6 ¹²³	-3 11.0 ¹¹³			10 S	17 49	18 10	36	24 51	53 44	
14	30	49.1	07.0	92 03.9 ¹²³	-2 59.7 ¹¹³			20	36	17 59	25	20 54	55 40	
15	45	49.2	07.7	106 35.3 ¹²⁴	48.4 ¹¹³			30	22	47	16	15 59	58 36	
16	60	49.2	08.4	121 06.7 ¹²⁴	37.1 ¹¹³			35	14	41	11	13 61	13 59 34	
17	75	49.3	+16 09.1	135 38.1 ¹²⁴	-2 25.8 ¹¹³			40	17 05	17 34	18 06	1 09 64	14 01 31	
18	90	49.3	+16 09.8	150 09.6 ¹²⁵	-2 14.5 ¹¹³			45	16 54	17 25	18 00	1 06 67	14 03 28	
19	105	49.4	10.6	164 41.1 ¹²⁵	-2 03.2 ¹¹³			50	42	16	17 55	02 70	05 25	
20	120	49.4	11.3	179 12.6 ¹²⁵	-1 51.9 ¹¹³			52	36	12	52	1 00 72	06 23	
21	135	49.5	12.0	193 44.2 ¹²⁶	40.6 ¹¹³			54	29	07	50	0 57 75	07 21	
22	150	49.6	12.7	208 15.8 ¹²⁶	29.3 ¹¹³			56	22	17 02	47	55 77	09 19	
23	165	49.6	13.4	222 47.4 ¹²⁶	18.0 ¹¹³			58	14	16 57	44	52 79	10 17	
24	180	49.7	+16 14.1	237 19.0 ¹²⁶	-1 06.7 ¹¹³			60 S	16 04	16 51	17 41	0 49 82	14 12 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 10 ^m 3		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.3 PMG: 11 ^h 42 ^m			Mag: -2.0 PMG: 14 ^h 18 ^m			Mag: +0.2 PMG: 23 ^h 33 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	222	02.7	171	17.8	+18 16.9	184	19.4	+14 36.7	144	56.2	+22 35.6	5 44.0	-11 34.0	
1	237	05.2	186	17.1	17.8	199	20.1	37.3	159	58.1	35.6	20 46.7	34.0	
2	252	07.6	201	16.5	18.7	214	20.7	37.9	175	00.0	35.7	35 49.3	33.9	
3	267	10.1	216	15.8	19.6	229	21.4	38.5	190	01.9	35.7	50 52.0	33.9	
4	282	12.5	231	15.2	20.4	244	22.1	39.1	205	03.8	35.8	65 54.6	33.8	
5	297	15.0	246	14.5	+18 21.3	259	22.7	+14 39.7	220	05.7	+22 35.8	80 57.3	-11 33.8	
6	312	17.5	261	13.9	+18 22.2	274	23.4	+14 40.3	235	07.6	+22 35.9	95 59.9	-11 33.7	
7	327	19.9	276	13.2	23.0	289	24.0	40.9	250	09.5	35.9	111 02.5	33.6	
8	342	22.4	291	12.6	23.9	304	24.7	41.5	265	11.4	36.0	126 05.2	33.6	
9	357	24.9	306	11.9	24.7	319	25.4	42.2	280	13.3	36.0	141 07.8	33.5	
10	12	27.3	321	11.3	25.6	334	26.0	42.8	295	15.2	36.1	156 10.5	33.5	
11	27	29.8	336	10.6	+18 26.5	349	26.7	+14 43.4	310	17.1	+22 36.1	171 13.1	-11 33.4	
12	42	32.3	351	10.0	+18 27.3	4 27.3	+14 44.0		325	19.0	+22 36.2	186 15.8	-11 33.3	
13	57	34.7	6 09.3	28.2		19 28.0	44.6		340	20.9	36.2	201 18.4	33.3	
14	72	37.2	21 08.6	29.1		34 28.7	45.2		355	22.8	36.3	216 21.1	33.2	
15	87	39.6	36 08.0	29.9		49 29.3	45.8		10 24.7	36.3		231 23.7	33.2	
16	102	42.1	51 07.3	30.8		64 30.0	46.4		25 26.6	36.4		246 26.4	33.1	
17	117	44.6	66 06.7	+18 31.6		79 30.6	+14 47.0		40 28.5	+22 36.5		261 29.0	-11 33.1	
18	132	47.0	81 06.0	+18 32.5		94 31.3	+14 47.6		55 30.4	+22 36.5		276 31.7	-11 33.0	
19	147	49.5	96 05.4	33.3		109 32.0	48.2		70 32.3	36.6		291 34.3	32.9	
20	162	52.0	111 04.7	34.2		124 32.6	48.8		85 34.2	36.6		306 36.9	32.9	
21	177	54.4	126 04.0	35.0		139 33.3	49.4		100 36.1	36.7		321 39.6	32.8	
22	192	56.9	141 03.4	35.9		154 33.9	50.0		115 37.9	36.7		336 42.2	32.8	
23	207	59.4	156 02.7	36.8		169 34.6	50.6		130 39.8	36.8		351 44.9	32.7	
24	223	01.8	171 02.1	+18 37.6		184 35.3	+14 51.2		145 41.7	+22 36.8		6 47.5	-11 32.7	
Dif	—		-7 +9			+7 +6			+19 +1			+26 +1		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 56 ^m 6				Edad: 25 ^d 6 PHE { 4 ^h : 56/3 12 ^h : 56/2 20 ^h : 56/0 PMG: 9 ^h 13 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	50.9	+16	31.1	226	05.3	+3	21.3	60 N	20 11	21 08	22 49	2 35 14	16 08 78				
1	195	50.9		31.8	240	37.5 ¹³²		32.3 ¹¹⁰	58	19 59	20 50	22 09	37 17	05 75				
2	210	50.9		32.5	255	09.6 ¹³¹		43.2 ¹⁰⁹	56	50	36	21 43	39 19	16 02 73				
3	225	51.0		33.2	269	41.7 ¹³¹	+3	54.1 ¹⁰⁹	54	41	24	23	40 21	15 59 71				
4	240	51.0		33.9	284	13.9 ¹³²	+4	05.0 ¹⁰⁹	52	33	14	21 07	42 23	56 69				
5	255	51.1	+16	34.6	298	46.1 ¹³²	+4	15.8 ¹⁰⁸	50	19 26	20 04	20 53	2 43 24	15 54 67				
6	270	51.1	+16	35.3	313	18.2 ¹³¹	+4	26.7 ¹⁰⁹	45	19 12	19 45	20 26	2 46 28	15 49 64				
7	285	51.2		36.0	327	50.4 ¹³²		37.4 ¹⁰⁷	40	19 00	30	20 06	48 31	45 61				
8	300	51.2		36.7	342	22.6 ¹³²		48.2 ¹⁰⁸	35	18 50	17	19 50	51 33	42 58				
9	315	51.3		37.4	356	54.8 ¹³²	+4	59.0 ¹⁰⁸	30	41	19 06	37	53 35	38 57				
10	330	51.3		38.1	11	27.0 ¹³²	+5	09.7 ¹⁰⁷	20	25	18 49	16	56 39	33 52				
11	345	51.4	+16	38.8	25	59.2 ¹³²	+5	20.3 ¹⁰⁶	10 N	18 12	18 34	19 00	2 59 43	15 28 49				
12	0	51.4	+16	39.5	40	31.4 ¹³²	+5	31.0 ¹⁰⁷	0	18 00	18 22	18 47	3 02 46	15 24 46				
13	15	51.4		40.2	55	03.6 ¹³²		41.6 ¹⁰⁶	10 S	17 48	18 10	35	05 49	19 43				
14	30	51.5		40.9	69	35.8 ¹³²	+5	52.2 ¹⁰⁶	20	35	17 58	24	08 52	15 39				
15	45	51.5		41.6	84	08.0 ¹³²	+6	02.7 ¹⁰⁵	30	21	46	14	11 57	09 36				
16	60	51.6		42.3	98	40.2 ¹³²		13.2 ¹⁰⁵	35	12	39	09	13 59	06 34				
17	75	51.6	+16	43.0	113	12.4 ¹³²	+6	23.7 ¹⁰⁵	40	17 03	17 31	18 04	3 16 61	15 03 31				
18	90	51.7	+16	43.7	127	44.6 ¹³²	+6	34.1 ¹⁰⁴	45	16 52	17 23	17 58	3 18 65	14 58 29				
19	105	51.7		44.4	142	16.8 ¹³²		44.5 ¹⁰⁴	50	38	13	52	22 67	54 25				
20	120	51.7		45.1	156	49.0 ¹³²	+6	54.9 ¹⁰⁴	52	32	09	49	23 70	51 24				
21	135	51.8		45.8	171	21.2 ¹³²	+7	05.2 ¹⁰³	54	25	17 04	46	25 71	49 22				
22	150	51.8		46.5	185	53.4 ¹³²		15.5 ¹⁰³	56	18	16 59	43	27 73	46 20				
23	165	51.9		47.1	200	25.6 ¹³²		25.7 ¹⁰²	58	16 09	53	40	29 75	43 18				
24	180	51.9	+16	47.8	214	57.8 ¹³²	+7	35.9 ¹⁰²	60 S	15 59	16 46	17 37	3 31 78	14 40 15				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 9 ^h 02 ^m 5			Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: +1.3 PMG: 11 ^h 40 ^m			Mag: -2.0 PMG: 14 ^h 12 ^m			Mag: +0.2 PMG: 23 ^h 24 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	01.0	170	46.1	+18	57.8	184	51.0	+15	05.5	146	27.2	+22	38.0	7	51.0	-11	31.3
1	239	03.4	185	45.4		58.6	199	51.7		06.1	161	29.1		38.1	22	53.7		31.2
2	254	05.9	200	44.7	+18	59.4	214	52.4		06.7	176	31.0		38.1	37	56.3		31.1
3	269	08.4	215	44.1	+19	00.3	229	53.0		07.3	191	32.9		38.2	52	59.0		31.1
4	284	10.8	230	43.4		01.1	244	53.7		07.9	206	34.8		38.2	68	01.6		31.0
5	299	13.3	245	42.7	+19	01.9	259	54.3	+15	08.5	221	36.7	+22	38.3	83	04.3	-11	31.0
6	314	15.7	260	42.1	+19	02.7	274	55.0	+15	09.1	236	38.6	+22	38.3	98	06.9	-11	30.9
7	329	18.2	275	41.4		03.6	289	55.6		09.7	251	40.5		38.4	113	09.6		30.9
8	344	20.7	290	40.7		04.4	304	56.3		10.2	266	42.4		38.4	128	12.2		30.8
9	359	23.1	305	40.0		05.2	319	57.0		10.8	281	44.3		38.5	143	14.8		30.7
10	14	25.6	320	39.4		06.0	334	57.6		11.4	296	46.2		38.5	158	17.5		30.7
11	29	28.1	335	38.7	+19	06.8	349	58.3	+15	12.0	311	48.1	+22	38.6	173	20.1	-11	30.6
12	44	30.5	350	38.0	+19	07.7	4	58.9	+15	12.6	326	50.0	+22	38.6	188	22.8	-11	30.6
13	59	33.0	5	37.3		08.5	19	59.6		13.2	341	51.8		38.7	203	25.4		30.5
14	74	35.5	20	36.6		09.3	35	00.2		13.8	356	53.7		38.7	218	28.1		30.5
15	89	37.9	35	36.0		10.1	50	00.9		14.4	11	55.6		38.8	233	30.7		30.4
16	104	40.4	50	35.3		10.9	65	01.5		15.0	26	57.5		38.8	248	33.4		30.3
17	119	42.9	65	34.6	+19	11.8	80	02.2	+15	15.6	41	59.4	+22	38.9	263	36.0	-11	30.3
18	134	45.3	80	33.9	+19	12.6	95	02.9	+15	16.2	57	01.3	+22	38.9	278	38.7	-11	30.2
19	149	47.8	95	33.2		13.4	110	03.5		16.7	72	03.2		39.0	293	41.3		30.2
20	164	50.2	110	32.6		14.2	125	04.2		17.3	87	05.1		39.0	308	43.9		30.1
21	179	52.7	125	31.9		15.0	140	04.8		17.9	102	07.0		39.1	323	46.6		30.1
22	194	55.2	140	31.2		15.8	155	05.5		18.5	117	08.9		39.1	338	49.2		30.0
23	209	57.6	155	30.5		16.6	170	06.1		19.1	132	10.8		39.2	353	51.9		29.9
24	225	00.1	170	29.8	+19	17.4	185	06.8	+15	19.7	147	12.7	+22	39.2	8	54.5	-11	29.9
Dif	—		-7		+8		+7		+6		+19		+1		+26		+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9				Edad: 26 ^d 6 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 7 20 ^h : 55 ^m 5 PMG: 9 ^h 59 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	51.9	+16	47.8	214	57.8	+7	35.9	60 N	1 03	2 45	3 42	2 49	17	17 26	76		
1	195	51.9		48.5	229	30.0 ¹³²		46.1 ¹⁰²	58	1 43	3 02	3 53	54	19	20	73		
2	210	52.0		49.2	244	02.2 ¹³²	+7	56.2 ¹⁰¹	56	2 09	16	4 03	2 58	21	15	71		
3	225	52.0		49.9	258	34.4 ¹³²	+8	06.3 ¹⁰¹	54	29	28	11	3 01	23	10	69		
4	240	52.1		50.6	273	06.5 ¹³¹		16.3 ¹⁰⁰	52	46	39	19	05	24	05	68		
5	255	52.1	+16	51.3	287	38.7 ¹³²	+8	26.3 ¹⁰⁰	50	2 59	3 48	4 26	3 07	27	17 01	66		
6	270	52.1	+16	52.0	302	10.9 ¹³²	+8	36.2 ⁹⁹	45	3 26	4 08	4 41	3 14	29	16 53	62		
7	285	52.2		52.7	316	43.0 ¹³¹		46.1 ⁹⁹	40	3 46	23	4 53	19	32	46	60		
8	300	52.2		53.3	331	15.2 ¹³²	+8	56.0 ⁹⁹	35	4 03	36	5 03	24	34	40	57		
9	315	52.3		54.0	345	47.3 ¹³¹	+9	05.8 ⁹⁸	30	16	4 46	12	28	37	35	55		
10	330	52.3		54.7	0	19.4 ¹³¹		15.5 ⁹⁷	20	37	5 04	27	35	40	25	52		
11	345	52.3	+16	55.4	14	51.6 ¹³²	+9	25.2 ⁹⁷	10 N	4 53	5 19	5 41	3 42	43	16 17	49		
12	0	52.4	+16	56.1	29	23.7 ¹³¹	+9	34.9 ⁹⁷	0	5 06	5 31	5 53	3 48	46	16 10	46		
13	15	52.4		56.8	43	55.8 ¹³¹		44.5 ⁹⁶	10 S	18	43	6 05	3 54	49	16 02	44		
14	30	52.5		57.5	58	27.9 ¹³¹	+9	54.0 ⁹⁵	20	29	5 55	18	4 00	52	15 54	41		
15	45	52.5		58.1	73	00.0 ¹³¹	+10	03.5 ⁹⁵	30	39	6 08	33	08	55	45	38		
16	60	52.5		58.8	87	32.0 ¹³⁰		13.0 ⁹⁵	35	44	15	41	12	58	40	35		
17	75	52.6	+16	59.5	102	04.1 ¹³¹	+10	22.4 ⁹⁴	40	5 50	6 22	6 51	4 17	60	15 34	33		
18	90	52.6	+17	00.2	116	36.2 ¹³¹	+10	31.7 ⁹³	45	5 56	6 31	7 02	4 23	63	15 27	31		
19	105	52.6		00.9	131	08.2 ¹³⁰		41.0 ⁹³	50	6 02	41	16	29	67	19	27		
20	120	52.7		01.6	145	40.2 ¹³⁰		50.2 ⁹²	52	05	45	22	33	68	15	26		
21	135	52.7		02.2	160	12.2 ¹³⁰	+10	59.4 ⁹²	54	07	50	29	36	70	11	24		
22	150	52.7		02.9	174	44.2 ¹³⁰	+11	08.5 ⁹¹	56	11	6 55	37	40	72	06	23		
23	165	52.8		03.6	189	16.2 ¹³⁰		17.6 ⁹¹	58	14	7 01	45	44	75	15 01	20		
24	180	52.8	+17	04.3	203	48.2 ¹³⁰	+11	26.6 ⁹⁰	60 S	6 17	7 08	7 55	4 49	77	14 55	18		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 58 ^m 5		Mag: -3.9 PMG: 12 ^h 39 ^m				Mag: +1.3 PMG: 11 ^h 39 ^m				Mag: -2.0 PMG: 14 ^h 09 ^m				Mag: +0.2 PMG: 23 ^h 20 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	225	00.1	170	29.8	+19	17.4	185	06.8	+15	19.7	147	12.7	+22	39.2	8	54.5	-11	29.9
1	240	02.6	185	29.1		18.2	200	07.4		20.3	162	14.5		39.3	23	57.2		29.8
2	255	05.0	200	28.5		19.0	215	08.1		20.9	177	16.4		39.3	38	59.8		29.8
3	270	07.5	215	27.8		19.9	230	08.8		21.4	192	18.3		39.4	54	02.5		29.7
4	285	10.0	230	27.1		20.7	245	09.4		22.0	207	20.2		39.4	69	05.1		29.7
5	300	12.4	245	26.4	+19	21.5	260	10.1	+15	22.6	222	22.1	+22	39.5	84	07.7	-11	29.6
6	315	14.9	260	25.7	+19	22.3	275	10.7	+15	23.2	237	24.0	+22	39.5	99	10.4	-11	29.5
7	330	17.3	275	25.0		23.1	290	11.4		23.8	252	25.9		39.6	114	13.0		29.5
8	345	19.8	290	24.3		23.9	305	12.0		24.4	267	27.8		39.6	129	15.7		29.4
9	0	22.3	305	23.7		24.7	320	12.7		25.0	282	29.7		39.7	144	18.3		29.4
10	15	24.7	320	23.0		25.5	335	13.3		25.5	297	31.6		39.7	159	21.0		29.3
11	30	27.2	335	22.3	+19	26.3	350	14.0	+15	26.1	312	33.5	+22	39.8	174	23.6	-11	29.3
12	45	29.7	350	21.6	+19	27.1	5	14.6	+15	26.7	327	35.3	+22	39.8	189	26.3	-11	29.2
13	60	32.1	5	20.9		27.9	20	15.3		27.3	342	37.2		39.9	204	28.9		29.1
14	75	34.6	20	20.2		28.7	35	16.0		27.9	357	39.1		39.9	219	31.5		29.1
15	90	37.1	35	19.5		29.5	50	16.6		28.5	12	41.0		40.0	234	34.2		29.0
16	105	39.5	50	18.8		30.3	65	17.3		29.0	27	42.9		40.0	249	36.8		29.0
17	120	42.0	65	18.1	+19	31.1	80	17.9	+15	29.6	42	44.8	+22	40.1	264	39.5	-11	28.9
18	135	44.5	80	17.5	+19	31.8	95	18.6	+15	30.2	57	46.7	+22	40.1	279	42.1	-11	28.9
19	150	46.9	95	16.8		32.6	110	19.2		30.8	72	48.6		40.2	294	44.8		28.8
20	165	49.4	110	16.1		33.4	125	19.9		31.4	87	50.5		40.2	309	47.4		28.7
21	180	51.8	125	15.4		34.2	140	20.5		32.0	102	52.4		40.3	324	50.1		28.7
22	195	54.3	140	14.7		35.0	155	21.2		32.5	117	54.2		40.3	339	52.7		28.6
23	210	56.8	155	14.0		35.8	170	21.8		33.1	132	56.1		40.4	354	55.3		28.6
24	225	59.2	170	13.3	+19	36.6	185	22.5	+15	33.7	147	58.0	+22	40.4	9	58.0	-11	28.5
Dif	—		-7		+8		+7		+6		+19		0		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 5			Edad: 27 ^d 6 PHE { SD: 15'1 PMG: 10 ^h 45 ^m 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	52.8	+17	04.3	203	48.2	+11	26.6	60 N	20 15	21 14	23 06	3 06	20	18 42	72
1	195	52.8		05.0	218	20.2 ¹³⁰		35.6 ⁹⁰	58	20 04	20 56	22 19	13 22		33 70	
2	210	52.9		05.6	232	52.1 ¹²⁹		44.4 ⁸⁸	56	19 54	41	21 50	19 24		26 68	
3	225	52.9		06.3	247	24.0 ¹²⁹	+11	53.3 ⁸⁹	54	45	28	29	24 26		19 66	
4	240	52.9		07.0	261	56.0 ¹³⁰	+12	02.1 ⁸⁸	52	37	17	21 12	29 28		13 64	
5	255	53.0	+17	07.7	276	27.9 ¹²⁹	+12	10.8 ⁸⁷	50	19 29	20 08	20 57	3 34	29	18 07	64
6	270	53.0	+17	08.3	290	59.8 ¹²⁹	+12	19.4 ⁸⁶	45	19 14	19 48	20 30	3 43	32	17 55	61
7	285	53.0		09.0	305	31.6 ¹²⁸		28.0 ⁸⁶	40	19 02	32	20 09	51 35		46 58	
8	300	53.1		09.7	320	03.5 ¹²⁹		36.5 ⁸⁵	35	18 51	19	19 52	3 58	37	37 57	
9	315	53.1		10.4	334	35.3 ¹²⁸		45.0 ⁸⁵	30	42	19 08	39	4 05	38	30 55	
10	330	53.1		11.0	349	07.1 ¹²⁸	+12	53.4 ⁸⁴	20	26	18 50	17	15 42		17 52	
11	345	53.2	+17	11.7	3	39.0 ¹²⁹	+13	01.7 ⁸³	10 N	18 13	18 35	19 01	4 25	44	17 06	50
12	0	53.2	+17	12.4	18	10.7 ¹²⁷	+13	10.0 ⁸³	0	18 00	18 22	18 47	4 34	46	16 56	47
13	15	53.2		13.1	32	42.5 ¹²⁸		18.2 ⁸²	10 S	17 47	18 09	35	43 49		46 45	
14	30	53.3		13.7	47	14.3 ¹²⁸		26.3 ⁸¹	20	34	17 57	24	4 52	52	35 42	
15	45	53.3		14.4	61	46.0 ¹²⁷		34.4 ⁸¹	30	19	44	13	5 03	55	23 39	
16	60	53.3		15.1	76	17.7 ¹²⁷		42.4 ⁸⁰	35	11	37	07	10 57		15 38	
17	75	53.4	+17	15.7	90	49.5 ¹²⁸	+13	50.4 ⁸⁰	40	17 01	17 29	18 02	5 17	59	16 07	36
18	90	53.4	+17	16.4	105	21.1 ¹²⁶	+13	58.2 ⁷⁸	45	16 49	17 21	17 56	5 26	61	15 58	33
19	105	53.4		17.1	119	52.8 ¹²⁷	+14	06.0 ⁷⁸	50	35	10	49	36 65		46 31	
20	120	53.5		17.8	134	24.5 ¹²⁷		13.8 ⁷⁸	52	29	06	46	41 66		41 30	
21	135	53.5		18.4	148	56.1 ¹²⁶		21.4 ⁷⁶	54	22	17 01	43	46 68		35 28	
22	150	53.5		19.1	163	27.7 ¹²⁶		29.0 ⁷⁶	56	14	16 55	40	52 70		29 26	
23	165	53.5		19.8	177	59.3 ¹²⁶		36.5 ⁷⁵	58	16 05	49	37	5 59	71	21 25	
24	180	53.6	+17	20.4	192	30.9 ¹²⁶	+14	44.0 ⁷⁵	60 S	15 54	16 42	17 33	6 06	75	15 13	22
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 54 ^m 6		Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: +1.3 PMG: 11 ^h 38 ^m			Mag: -2.0 PMG: 14 ^h 06 ^m			Mag: +0.2 PMG: 23 ^h 16 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	225	59.2	170	13.3	+19 36.6	185	22.5	+15 33.7	147	58.0	+22 40.4	9	58.0	-11 28.5		
1	241	01.7	185	12.6	37.4	200	23.1	34.3	162	59.9	40.5	25	00.6	28.5		
2	256	04.2	200	11.9	38.2	215	23.8	34.9	178	01.8	40.5	40	03.3	28.4		
3	271	06.6	215	11.2	38.9	230	24.4	35.4	193	03.7	40.6	55	05.9	28.3		
4	286	09.1	230	10.5	39.7	245	25.1	36.0	208	05.6	40.6	70	08.6	28.3		
5	301	11.6	245	09.8	+19 40.5	260	25.7	+15 36.6	223	07.5	+22 40.7	85	11.2	-11 28.2		
6	316	14.0	260	09.1	+19 41.3	275	26.4	+15 37.2	238	09.4	+22 40.7	100	13.9	-11 28.2		
7	331	16.5	275	08.4	42.1	290	27.1	37.8	253	11.2	40.8	115	16.5	28.1		
8	346	18.9	290	07.7	42.9	305	27.7	38.3	268	13.1	40.8	130	19.1	28.1		
9	1	21.4	305	07.0	43.6	320	28.4	38.9	283	15.0	40.9	145	21.8	28.0		
10	16	23.9	320	06.3	44.4	335	29.0	39.5	298	16.9	40.9	160	24.4	27.9		
11	31	26.3	335	05.6	+19 45.2	350	29.7	+15 40.1	313	18.8	+22 41.0	175	27.1	-11 27.9		
12	46	28.8	350	04.9	+19 46.0	5	30.3	+15 40.6	328	20.7	+22 41.0	190	29.7	-11 27.8		
13	61	31.3	5	04.2	46.7	20	31.0	41.2	343	22.6	41.0	205	32.4	27.8		
14	76	33.7	20	03.5	47.5	35	31.6	41.8	358	24.5	41.1	220	35.0	27.7		
15	91	36.2	35	02.8	48.3	50	32.3	42.4	13	26.3	41.1	235	37.6	27.7		
16	106	38.7	50	02.1	49.1	65	32.9	42.9	28	28.2	41.2	250	40.3	27.6		
17	121	41.1	65	01.4	+19 49.8	80	33.6	+15 43.5	43	30.1	+22 41.2	265	42.9	-11 27.5		
18	136	43.6	80	00.7	+19 50.6	95	34.2	+15 44.1	58	32.0	+22 41.3	280	45.6	-11 27.5		
19	151	46.1	95	00.0	51.4	110	34.9	44.7	73	33.9	41.3	295	48.2	27.4		
20	166	48.5	109	59.3	52.1	125	35.5	45.3	88	35.8	41.4	310	50.9	27.4		
21	181	51.0	124	58.6	52.9	140	36.2	45.8	103	37.7	41.4	325	53.5	27.3		
22	196	53.4	139	57.9	53.7	155	36.8	46.4	118	39.6	41.5	340	56.2	27.3		
23	211	55.9	154	57.2	54.4	170	37.5	47.0	133	41.4	41.5	355	58.8	27.2		
24	226	58.4	169	56.5	+19 55.2	185	38.1	+15 47.6	148	43.3	+22 41.6	11	01.4	-11 27.2		
Dif	—		-7	+8		+7	+6		+19	0		+26	+1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 28 ^d 6 PHE { 4 ^h : 55 ^o 0 12 ^h : 54 ^o 9 20 ^h : 54 ^o 7 PMG: 11 ^h 32 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	53.6	+17	20.4	192	30.9	+14	44.0	60 N	0 46	2 38	3 37	3 26	24	19	54	67	
1	195	53.6		21.1	207	02.5 ¹²⁶		51.3	73	58	1 34	2 56	48	35	27	43	65	
2	210	53.6		21.8	221	34.0 ¹²⁵	+14	58.6	73	56	2 02	3 11	3 59	43	29	34	63	
3	225	53.7		22.4	236	05.6 ¹²⁶	+15	05.9	73	54	23	24	4 08	50	31	25	62	
4	240	53.7		23.1	250	37.1 ¹²⁵		13.0	71	52	41	35	16	3 57	31	17	61	
5	255	53.7	+17	23.8	265	08.6 ¹²⁵	+15	20.1	71	50	2 55	3 45	4 23	4 03	33	19	11	59
6	270	53.7	+17	24.4	279	40.1 ¹²⁵	+15	27.1	70	45	3 23	4 05	4 38	4 15	36	18	56	58
7	285	53.8		25.1	294	11.5 ¹²⁴		34.0	69	40	3 44	21	4 51	26	38	44	56	
8	300	53.8		25.8	308	43.0 ¹²⁵		40.9	69	35	4 00	34	5 01	35	39	34	54	
9	315	53.8		26.4	323	14.4 ¹²⁴		47.7	68	30	14	4 45	11	43	41	25	53	
10	330	53.8		27.1	337	45.8 ¹²⁴	+15	54.4	67	20	35	5 03	26	4 57	43	18	09	52
11	345	53.9	+17	27.7	352	17.2 ¹²⁴	+16	01.0	66	10 N	4 52	5 18	5 40	5 09	46	17	56	49
12	0	53.9	+17	28.4	6	48.5 ¹²³	+16	07.5	65	0	5 06	5 31	5 53	5 20	48	17	43	48
13	15	53.9		29.1	21	19.9 ¹²⁴		14.0	65	10 S	18	44	6 06	32	49	31	46	
14	30	54.0		29.7	35	51.2 ¹²³		20.4	64	20	29	5 56	19	44	52	17	45	
15	45	54.0		30.4	50	22.6 ¹²⁴		26.7	63	30	40	6 09	34	5 58	55	17	02	42
16	60	54.0		31.0	64	53.9 ¹²³		32.9	62	35	46	16	43	6 07	55	16	53	41
17	75	54.0	+17	31.7	79	25.1 ¹²²	+16	39.1	62	40	5 52	6 24	6 53	6 16	57	16	43	40
18	90	54.0	+17	32.4	93	56.4 ¹²³	+16	45.1	60	45	5 58	6 33	7 04	6 27	59	16	31	38
19	105	54.1		33.0	108	27.7 ¹²³		51.1	60	50	6 04	43	18	41	61	17	36	
20	120	54.1		33.7	122	58.9 ¹²²	+16	57.0	59	52	07	48	25	47	63	11	34	
21	135	54.1		34.3	137	30.1 ¹²²	+17	02.8	58	54	10	53	32	6 54	64	16	03	33
22	150	54.1		35.0	152	01.3 ¹²²		08.6	58	56	14	6 59	40	7 02	66	15	55	32
23	165	54.2		35.6	166	32.5 ¹²²		14.2	56	58	17	7 05	7 49	10	68	46	30	
24	180	54.2	+17	36.3	181	03.7 ¹²²	+17	19.8	56	60 S	6 21	7 12	8 00	7 21	70	15	35	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 50 ^m 7		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: +1.3 PMG: 11 ^h 37 ^m		Mag: -2.0 PMG: 14 ^h 03 ^m		Mag: +0.2 PMG: 23 ^h 12 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	226	58.4	169	56.5	+19	55.2	185	38.1	+15	47.6	148	43.3	+22	41.6	11	01.4	-11	27.2
1	242	00.8	184	55.8		56.0	200	38.8		48.1	163	45.2		41.6	26	04.1		27.1
2	257	03.3	199	55.1		56.7	215	39.4		48.7	178	47.1		41.7	41	06.7		27.0
3	272	05.8	214	54.4		57.5	230	40.1		49.3	193	49.0		41.7	56	09.4		27.0
4	287	08.2	229	53.6		58.3	245	40.7		49.8	208	50.9		41.8	71	12.0		26.9
5	302	10.7	244	52.9	+19	59.0	260	41.4	+15	50.4	223	52.8	+22	41.8	86	14.7	-11	26.9
6	317	13.2	259	52.2	+19	59.8	275	42.0	+15	51.0	238	54.6	+22	41.9	101	17.3	-11	26.8
7	332	15.6	274	51.5	+20	00.5	290	42.7		51.6	253	56.5		41.9	116	19.9		26.8
8	347	18.1	289	50.8		01.3	305	43.3		52.1	268	58.4		42.0	131	22.6		26.7
9	2	20.6	304	50.1		02.1	320	44.0		52.7	284	00.3		42.0	146	25.2		26.6
10	17	23.0	319	49.4		02.8	335	44.6		53.3	299	02.2		42.1	161	27.9		26.6
11	32	25.5	334	48.7	+20	03.6	350	45.3	+15	53.8	314	04.1	+22	42.1	176	30.5	-11	26.5
12	47	27.9	349	48.0	+20	04.3	5	45.9	+15	54.4	329	06.0	+22	42.2	191	33.2	-11	26.5
13	62	30.4	4	47.2		05.1	20	46.6		55.0	344	07.8		42.2	206	35.8		26.4
14	77	32.9	19	46.5		05.8	35	47.2		55.6	359	09.7		42.3	221	38.4		26.4
15	92	35.3	34	45.8		06.6	50	47.9		56.1	14	11.6		42.3	236	41.1		26.3
16	107	37.8	49	45.1		07.3	65	48.5		56.7	29	13.5		42.4	251	43.7		26.3
17	122	40.3	64	44.4	+20	08.1	80	49.2	+15	57.3	44	15.4	+22	42.4	266	46.4	-11	26.2
18	137	42.7	79	43.7	+20	08.8	95	49.8	+15	57.8	59	17.3	+22	42.4	281	49.0	-11	26.1
19	152	45.2	94	43.0		09.6	110	50.5		58.4	74	19.2		42.5	296	51.7		26.1
20	167	47.7	109	42.2		10.3	125	51.1		59.0	89	21.0		42.5	311	54.3		26.0
21	182	50.1	124	41.5		11.1	140	51.8	+15	59.5	104	22.9		42.6	326	56.9		26.0
22	197	52.6	139	40.8		11.8	155	52.4	+16	00.1	119	24.8		42.6	341	59.6		25.9
23	212	55.0	154	40.1		12.6	170	53.1		00.7	134	26.7		42.7	357	02.2		25.9
24	227	57.5	169	39.4	+20	13.3	185	53.7	+16	01.2	149	28.6	+22	42.7	12	04.9	-11	25.8
Dif	—		-7		+8		+7		+6		+19		0		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 29 ^d 6 SD: 14 ^h 9 PMG: 12 ^h 20 ^m											PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 48 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	54.2	+17	36.3	181	03.7	+17	19.8	60 N	20 20	21 20	23 33	3 50	32	21 01	59
1	195	54.2		37.0	195	34.8 ¹²¹		25.3 ⁵⁵	58	20 08	21 01	22 29	4 02	33	20 48	58
2	210	54.2		37.6	210	05.9 ¹²¹		30.7 ⁵⁴	56	19 57	20 46	21 57	12	35	37	57
3	225	54.3		38.3	224	37.1 ¹²²		36.0 ⁵³	54	48	32	35	21	36	27	56
4	240	54.3		38.9	239	08.2 ¹²¹		41.2 ⁵²	52	40	21	17	28	38	18	56
5	255	54.3	+17	39.6	253	39.3 ¹²¹	+17	46.4 ⁵²	50	19 32	20 11	21 02	4 36	38	20 10	55
6	270	54.3	+17	40.2	268	10.3 ¹²⁰	+17	51.4 ⁵⁰	45	19 17	19 50	20 33	4 51	40	19 54	53
7	285	54.3		40.9	282	41.4 ¹²¹	+17	56.4 ⁵⁰	40	19 04	34	20 11	5 04	41	40	53
8	300	54.4		41.5	297	12.5 ¹²¹	+18	01.3 ⁴⁹	35	18 53	21	19 54	14	43	28	52
9	315	54.4		42.2	311	43.5 ¹²⁰		06.1 ⁴⁸	30	43	19 09	40	24	43	18	51
10	330	54.4		42.8	326	14.5 ¹²⁰		10.8 ⁴⁷	20	27	18 50	18	40	46	19 01	50
11	345	54.4	+17	43.5	340	45.5 ¹²⁰	+18	15.5 ⁴⁷	10 N	18 13	18 35	19 01	5 55	46	18 45	50
12	0	54.4	+17	44.1	355	16.5 ¹²⁰	+18	20.0 ⁴⁵	0	18 00	18 22	18 47	6 08	48	18 31	48
13	15	54.5		44.8	9	47.5 ¹²⁰		24.5 ⁴⁵	10 S	17 47	18 09	34	21	50	17	47
14	30	54.5		45.4	24	18.5 ¹²⁰		28.8 ⁴³	20	33	17 56	23	36	51	18 02	46
15	45	54.5		46.1	38	49.4 ¹¹⁹		33.1 ⁴³	30	18	43	12	6 53	52	17 44	45
16	60	54.5		46.7	53	20.4 ¹²⁰		37.3 ⁴²	35	17 09	36	06	7 02	54	34	45
17	75	54.5	+17	47.4	67	51.3 ¹¹⁹	+18	41.4 ⁴¹	40	16 59	17 27	18 00	7 13	55	17 23	43
18	90	54.6	+17	48.0	82	22.2 ¹¹⁹	+18	45.4 ⁴⁰	45	16 47	17 18	17 54	7 26	56	17 09	42
19	105	54.6		48.6	96	53.1 ¹¹⁹		49.3 ³⁹	50	32	07	47	42	58	16 53	41
20	120	54.6		49.3	111	24.0 ¹¹⁹		53.1 ³⁸	52	26	17 03	43	50	58	45	40
21	135	54.6		49.9	125	54.9 ¹¹⁹	+18	56.9 ³⁸	54	18	16 57	40	7 58	60	36	40
22	150	54.6		50.6	140	25.8 ¹¹⁹	+19	00.5 ³⁶	56	10	51	37	8 08	60	27	38
23	165	54.6		51.2	154	56.7 ¹¹⁹		04.1 ³⁶	58	16 00	45	33	18	62	16	37
24	180	54.7	+17	51.9	169	27.6 ¹¹⁹	+19	07.5 ³⁴	60 S	15 50	16 38	17 29	8 31	63	16 03	36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 46 ^m 7		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +1.3 PMG: 11 ^h 36 ^m		Mag: -2.0 PMG: 14 ^h 00 ^m		Mag: +0.2 PMG: 23 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	227	57.5	169	39.4	+20	13.3	185	53.7	+16	01.2	149	28.6	+22	42.7	12	04.9	-11	25.8
1	243	00.0	184	38.7		14.0	200	54.4		01.8	164	30.5		42.8	27	07.5		25.7
2	258	02.4	199	37.9		14.8	215	55.0		02.4	179	32.3		42.8	42	10.1		25.7
3	273	04.9	214	37.2		15.5	230	55.7		02.9	194	34.2		42.9	57	12.8		25.6
4	288	07.4	229	36.5		16.3	245	56.3		03.5	209	36.1		42.9	72	15.4		25.6
5	303	09.8	244	35.8	+20	17.0	260	57.0	+16	04.1	224	38.0	+22	43.0	87	18.1	-11	25.5
6	318	12.3	259	35.1	+20	17.7	275	57.6	+16	04.6	239	39.9	+22	43.0	102	20.7	-11	25.5
7	333	14.8	274	34.3		18.5	290	58.3		05.2	254	41.8		43.1	117	23.4		25.4
8	348	17.2	289	33.6		19.2	305	58.9		05.8	269	43.6		43.1	132	26.0		25.4
9	3	19.7	304	32.9		19.9	320	59.6		06.3	284	45.5		43.2	147	28.6		25.3
10	18	22.2	319	32.2		20.7	336	00.2		06.9	299	47.4		43.2	162	31.3		25.2
11	33	24.6	334	31.5	+20	21.4	351	00.9	+16	07.5	314	49.3	+22	43.3	177	33.9	-11	25.2
12	48	27.1	349	30.7	+20	22.1	6	01.5	+16	08.0	329	51.2	+22	43.3	192	36.6	-11	25.1
13	63	29.5	4	30.0		22.9	21	02.2		08.6	344	53.1		43.3	207	39.2		25.1
14	78	32.0	19	29.3		23.6	36	02.8		09.2	359	54.9		43.4	222	41.8		25.0
15	93	34.5	34	28.6		24.3	51	03.5		09.7	14	56.8		43.4	237	44.5		25.0
16	108	36.9	49	27.8		25.1	66	04.1		10.3	29	58.7		43.5	252	47.1		24.9
17	123	39.4	64	27.1	+20	25.8	81	04.8	+16	10.8	45	00.6	+22	43.5	267	49.8	-11	24.9
18	138	41.9	79	26.4	+20	26.5	96	05.4	+16	11.4	60	02.5	+22	43.6	282	52.4	-11	24.8
19	153	44.3	94	25.7		27.2	111	06.1		12.0	75	04.4		43.6	297	55.1		24.7
20	168	46.8	109	24.9		28.0	126	06.7		12.5	90	06.2		43.7	312	57.7		24.7
21	183	49.3	124	24.2		28.7	141	07.3		13.1	105	08.1		43.7	328	00.3		24.6
22	198	51.7	139	23.5		29.4	156	08.0		13.7	120	10.0		43.8	343	03.0		24.6
23	213	54.2	154	22.7		30.1	171	08.6		14.2	135	11.9		43.8	358	05.6		24.5
24	228	56.7	169	22.0	+20	30.8	186	09.3	+16	14.8	150	13.8	+22	43.9	13	08.3	-11	24.5
Dif	—		-7		+7		+6		+6		+19		0		+26		+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 56 ^m 3				Edad: 1 ^d 0 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/2 Rº: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	54.7	+17	51.9	169	27.6	+19	07.5	60 N	0 19	2 32	3 32	4 22	40	22 00	49		
1	195	54.7		52.5	183	58.4 ¹¹⁸		10.9 ³⁴	58	1 24	2 51	44	35	41	21 46	49		
2	210	54.7		53.2	198	29.3 ¹¹⁹		14.2 ³³	56	1 55	3 06	3 55	47	42	34	49		
3	225	54.7		53.8	213	00.1 ¹¹⁸		17.4 ³²	54	2 18	20	4 04	4 57	42	23	49		
4	240	54.7		54.4	227	31.0 ¹¹⁹		20.5 ³¹	52	36	31	12	5 06	43	14	49		
5	255	54.7	+17	55.1	242	01.8 ¹¹⁸	+19	23.5 ³⁰	50	2 51	3 41	4 20	5 14	43	21 05	49		
6	270	54.8	+17	55.7	256	32.6 ¹¹⁸	+19	26.4 ²⁹	45	3 20	4 02	4 36	5 31	45	20 47	49		
7	285	54.8		56.4	271	03.4 ¹¹⁸		29.2 ²⁸	40	41	18	4 49	45	45	33	48		
8	300	54.8		57.0	285	34.2 ¹¹⁸		31.9 ²⁷	35	3 58	32	5 00	5 57	46	20	49		
9	315	54.8		57.6	300	05.0 ¹¹⁸		34.6 ²⁷	30	4 12	4 43	09	6 07	47	20 09	49		
10	330	54.8		58.3	314	35.8 ¹¹⁸		37.1 ²⁵	20	34	5 02	26	26	47	19 51	48		
11	345	54.8	+17	58.9	329	06.6 ¹¹⁸	+19	39.6 ²⁵	10 N	4 52	5 18	5 40	6 41	48	19 35	48		
12	0	54.8	+17	59.5	343	37.4 ¹¹⁸	+19	41.9 ²³	0	5 06	5 31	5 53	6 56	48	19 19	49		
13	15	54.9	+18	00.2	358	08.2 ¹¹⁸		44.2 ²³	10 S	18	44	6 06	7 11	49	19 04	48		
14	30	54.9		00.8	12	39.0 ¹¹⁸		46.4 ²²	20	30	5 57	20	27	49	18 48	48		
15	45	54.9		01.4	27	09.8 ¹¹⁸		48.4 ²⁰	30	41	6 10	35	45	50	29	48		
16	60	54.9		02.1	41	40.6 ¹¹⁸		50.4 ²⁰	35	47	18	44	7 56	50	19	47		
17	75	54.9	+18	02.7	56	11.4 ¹¹⁸	+19	52.3 ¹⁹	40	5 53	6 26	6 55	8 08	51	18 06	47		
18	90	54.9	+18	03.3	70	42.1 ¹¹⁷	+19	54.1 ¹⁸	45	6 00	6 35	7 07	8 22	52	17 51	47		
19	105	54.9		04.0	85	12.9 ¹¹⁸		55.8 ¹⁷	50	07	46	21	40	52	34	46		
20	120	54.9		04.6	99	43.7 ¹¹⁸		57.4 ¹⁶	52	10	51	28	48	53	25	47		
21	135	55.0		05.2	114	14.5 ¹¹⁸	+19	58.9 ¹⁵	54	13	6 56	36	8 58	52	16	46		
22	150	55.0		05.9	128	45.3 ¹¹⁸	+20	00.3 ¹⁴	56	17	7 02	44	9 08	53	17 05	46		
23	165	55.0		06.5	143	16.0 ¹¹⁷		01.6 ¹³	58	21	09	7 54	20	54	16 53	45		
24	180	55.0	+18	07.1	157	46.8 ¹¹⁸	+20	02.9 ¹³	60 S	6 25	7 16	8 05	9 34	54	16 39	45		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 42 ^m 8		Mag: -3.9 PMG: 12 ^h 43 ^m				Mag: +1.3 PMG: 11 ^h 35 ^m				Mag: -2.0 PMG: 13 ^h 57 ^m				Mag: +0.2 PMG: 23 ^h 03 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	228	56.7	169	22.0	+20	30.8	186	09.3	+16	14.8	150	13.8	+22	43.9	13	08.3	-11	24.5
1	243	59.1	184	21.3		31.6	201	09.9		15.3	165	15.7		43.9	28	10.9		24.4
2	259	01.6	199	20.6		32.3	216	10.6		15.9	180	17.5		44.0	43	13.5		24.4
3	274	04.0	214	19.8		33.0	231	11.2		16.5	195	19.4		44.0	58	16.2		24.3
4	289	06.5	229	19.1		33.7	246	11.9		17.0	210	21.3		44.1	73	18.8		24.2
5	304	09.0	244	18.4	+20	34.4	261	12.5	+16	17.6	225	23.2	+22	44.1	88	21.5	-11	24.2
6	319	11.4	259	17.6	+20	35.1	276	13.2	+16	18.1	240	25.1	+22	44.1	103	24.1	-11	24.1
7	334	13.9	274	16.9		35.9	291	13.8		18.7	255	26.9		44.2	118	26.7		24.1
8	349	16.4	289	16.2		36.6	306	14.5		19.3	270	28.8		44.2	133	29.4		24.0
9	4	18.8	304	15.4		37.3	321	15.1		19.8	285	30.7		44.3	148	32.0		24.0
10	19	21.3	319	14.7		38.0	336	15.8		20.4	300	32.6		44.3	163	34.7		23.9
11	34	23.8	334	14.0	+20	38.7	351	16.4	+16	20.9	315	34.5	+22	44.4	178	37.3	-11	23.9
12	49	26.2	349	13.2	+20	39.4	6	17.0	+16	21.5	330	36.3	+22	44.4	193	40.0	-11	23.8
13	64	28.7	4	12.5		40.1	21	17.7		22.0	345	38.2		44.5	208	42.6		23.8
14	79	31.2	19	11.8		40.8	36	18.3		22.6	0	40.1		44.5	223	45.2		23.7
15	94	33.6	34	11.0		41.5	51	19.0		23.2	15	42.0		44.6	238	47.9		23.6
16	109	36.1	49	10.3		42.2	66	19.6		23.7	30	43.9		44.6	253	50.5		23.6
17	124	38.5	64	09.6	+20	42.9	81	20.3	+16	24.3	45	45.8	+22	44.7	268	53.2	-11	23.5
18	139	41.0	79	08.8	+20	43.6	96	20.9	+16	24.8	60	47.6	+22	44.7	283	55.8	-11	23.5
19	154	43.5	94	08.1		44.3	111	21.6		25.4	75	49.5		44.8	298	58.4		23.4
20	169	45.9	109	07.3		45.0	126	22.2		25.9	90	51.4		44.8	314	01.1		23.4
21	184	48.4	124	06.6		45.7	141	22.9		26.5	105	53.3		44.8	329	03.7		23.3
22	199	50.9	139	05.9		46.4	156	23.5		27.0	120	55.2		44.9	344	06.4		23.3
23	214	53.3	154	05.1		47.1	171	24.2		27.6	135	57.0		44.9	359	09.0		23.2
24	229	55.8	169	04.4	+20	47.8	186	24.8	+16	28.1	150	58.9	+22	45.0	14	11.6	-11	23.1
Dif	—		-7		+7		+6		+6		+19		0		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 3			Edad: 2 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 13 ^h 56 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	55.0	+18 07.1	157	46.8	+20 02.9	11	60 N	20 25	21 27	** **	5 02 50		22 49 39	
1	195	55.0	07.8	172	17.6 ¹¹⁸	04.0	11	58	12	21 07	22 39	16 50		35 40	
2	210	55.0	08.4	186	48.4 ¹¹⁸	05.0	10	56	20 01	20 50	22 05	29 49		23 41	
3	225	55.0	09.0	201	19.2 ¹¹⁸	06.0	10	54	19 52	37	21 40	39 50		12 42	
4	240	55.0	09.7	215	50.0 ¹¹⁸	06.8	8	52	43	25	21	49 50		22 03 42	
5	255	55.0	+18 10.3	230	20.8 ¹¹⁸	+20 07.6	8	50	19 35	20 14	21 06	5 57 50		21 54 43	
6	270	55.1	+18 10.9	244	51.6 ¹¹⁸	+20 08.3	7	45	19 19	19 53	20 36	6 16 49		21 36 44	
7	285	55.1	11.5	259	22.4 ¹¹⁸	08.8	5	40	19 06	36	20 14	30 49		21 45	
8	300	55.1	12.2	273	53.2 ¹¹⁸	09.3	5	35	18 54	22	19 56	43 49		21 09 45	
9	315	55.1	12.8	288	24.0 ¹¹⁸	09.7	4	30	45	19 11	42	6 54 49		20 58 46	
10	330	55.1	13.4	302	54.9 ¹¹⁹	10.0	3	20	28	18 51	19	7 13 48		39 47	
11	345	55.1	+18 14.0	317	25.7 ¹¹⁸	+20 10.2	2	10 N	18 13	18 36	19 02	7 29 48		20 23 47	
12	0	55.1	+18 14.7	331	56.5 ¹¹⁸	+20 10.3	1	0	18 00	18 22	18 47	7 44 48		20 08 47	
13	15	55.1	15.3	346	27.4 ¹¹⁹	10.3	0	10 S	17 47	18 09	34	8 00 47		19 52 49	
14	30	55.1	15.9	0	58.3 ¹¹⁹	10.2	1	20	32	17 56	22	16 48		36 49	
15	45	55.1	16.5	15	29.1 ¹¹⁸	10.0	2	30	16	42	11	35 47		17 50	
16	60	55.1	17.1	30	00.0 ¹¹⁹	09.7	3	35	17 07	34	18 05	46 47		19 06 50	
17	75	55.1	+18 17.8	44	30.9 ¹¹⁹	+20 09.3	4	40	16 57	17 26	17 58	8 59 46		18 53 51	
18	90	55.2	+18 18.4	59	01.8 ¹¹⁹	+20 08.9	4	45	16 44	17 16	17 51	9 14 46		18 38 52	
19	105	55.2	19.0	73	32.7 ¹¹⁹	08.3	6	50	29	05	44	32 46		20 52	
20	120	55.2	19.6	88	03.6 ¹¹⁹	07.6	7	52	22	17 00	41	41 45		12 52	
21	135	55.2	20.2	102	34.5 ¹¹⁹	06.9	7	54	15	16 54	37	9 50 45		18 02 53	
22	150	55.2	20.9	117	05.5 ¹²⁰	06.1	8	56	16 06	48	34	10 01 45		17 51 53	
23	165	55.2	21.5	131	36.4 ¹¹⁹	05.1	10	58	15 56	41	30	14 44		38 55	
24	180	55.2	+18 22.1	146	07.4 ¹²⁰	+20 04.1	10	60 S	15 45	16 34	17 25	10 28 44		17 24 55	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 38 ^m 9		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: +1.3 PMG: 11 ^h 34 ^m			Mag: -2.0 PMG: 13 ^h 54 ^m			Mag: +0.2 PMG: 22 ^h 59 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	229	55.8	169 04.4	+20 47.8	186 24.8	+16 28.1	150 58.9	+22 45.0	14 11.6	-11 23.1					
1	244	58.3	184 03.6	48.5	201 25.4	28.7	166 00.8	45.0	29 14.3	23.1					
2	260	00.7	199 02.9	49.2	216 26.1	29.3	181 02.7	45.1	44 16.9	23.0					
3	275	03.2	214 02.2	49.9	231 26.7	29.8	196 04.6	45.1	59 19.6	23.0					
4	290	05.6	229 01.4	50.6	246 27.4	30.4	211 06.4	45.2	74 22.2	22.9					
5	305	08.1	244 00.7	+20 51.3	261 28.0	+16 30.9	226 08.3	+22 45.2	89 24.8	-11 22.9					
6	320	10.6	258 59.9	+20 52.0	276 28.7	+16 31.5	241 10.2	+22 45.3	104 27.5	-11 22.8					
7	335	13.0	273 59.2	52.7	291 29.3	32.0	256 12.1	45.3	119 30.1	22.8					
8	350	15.5	288 58.4	53.4	306 30.0	32.6	271 13.9	45.4	134 32.8	22.7					
9	5	18.0	303 57.7	54.0	321 30.6	33.1	286 15.8	45.4	149 35.4	22.7					
10	20	20.4	318 57.0	54.7	336 31.2	33.7	301 17.7	45.4	164 38.0	22.6					
11	35	22.9	333 56.2	+20 55.4	351 31.9	+16 34.2	316 19.6	+22 45.5	179 40.7	-11 22.5					
12	50	25.4	348 55.5	+20 56.1	6 32.5	+16 34.8	331 21.5	+22 45.5	194 43.3	-11 22.5					
13	65	27.8	3 54.7	56.8	21 33.2	35.3	346 23.3	45.6	209 45.9	22.4					
14	80	30.3	18 54.0	57.5	36 33.8	35.9	1 25.2	45.6	224 48.6	22.4					
15	95	32.8	33 53.2	58.1	51 34.5	36.4	16 27.1	45.7	239 51.2	22.3					
16	110	35.2	48 52.5	58.8	66 35.1	37.0	31 29.0	45.7	254 53.9	22.3					
17	125	37.7	63 51.7	+20 59.5	81 35.8	+16 37.5	46 30.9	+22 45.8	269 56.5	-11 22.2					
18	140	40.1	78 51.0	+21 00.2	96 36.4	+16 38.1	61 32.7	+22 45.8	284 59.1	-11 22.2					
19	155	42.6	93 50.2	00.9	111 37.0	38.6	76 34.6	45.9	300 01.8	22.1					
20	170	45.1	108 49.5	01.5	126 37.7	39.2	91 36.5	45.9	315 04.4	22.1					
21	185	47.5	123 48.7	02.2	141 38.3	39.7	106 38.4	45.9	330 07.1	22.0					
22	200	50.0	138 48.0	02.9	156 39.0	40.3	121 40.2	46.0	345 09.7	22.0					
23	215	52.5	153 47.2	03.6	171 39.6	40.8	136 42.1	46.0	0 12.3	21.9					
24	230	54.9	168 46.5	+21 04.2	186 40.3	+16 41.3	151 44.0	+22 46.1	15 15.0	-11 21.8					
Dif	—		-7 +7		+6 +6		+19 0		+26 +1						

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 3 ^d 0 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 14 ^h 44 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.2	+18	22.1	146	07.4	+20	04.1	60 N	** **	2 25	3 27	5 52	59	23 28	30		
1	195	55.2		22.7	160	38.4 ¹²⁰		03.0 ¹¹	58	1 13	2 45	40	6 06	58	15	32		
2	210	55.2		23.3	175	09.4 ¹²⁰		01.8 ¹²	56	1 48	3 02	3 51	18	57	23 04	33		
3	225	55.2		24.0	189	40.4 ¹²⁰	+20	00.5 ¹³	54	2 12	16	4 00	29	56	22 54	35		
4	240	55.2		24.6	204	11.4 ¹²⁰	+19	59.1 ¹⁴	52	31	27	09	39	55	45	36		
5	255	55.2	+18	25.2	218	42.4 ¹²⁰	+19	57.6 ¹⁵	50	2 46	3 38	4 17	6 47	55	22 37	37		
6	270	55.2	+18	25.8	233	13.5 ¹²¹	+19	56.0 ¹⁶	45	3 16	3 59	4 33	7 05	53	22 20	38		
7	285	55.2		26.4	247	44.5 ¹²⁰		54.3 ¹⁷	40	39	4 16	47	19	53	22 06	40		
8	300	55.2		27.0	262	15.6 ¹²¹		52.6 ¹⁷	35	3 56	30	4 58	32	51	21 54	41		
9	315	55.2		27.6	276	46.7 ¹²¹		50.7 ¹⁹	30	4 11	4 42	5 08	7 43	50	44	42		
10	330	55.2		28.2	291	17.8 ¹²¹		48.8 ¹⁹	20	33	5 01	25	8 01	50	26	44		
11	345	55.2	+18	28.9	305	48.9 ¹²¹	+19	46.7 ²¹	10 N	4 51	5 17	5 39	8 17	49	21 10	46		
12	0	55.2	+18	29.5	320	20.1 ¹²²	+19	44.6 ²¹	0	5 06	5 31	5 53	8 32	48	20 55	47		
13	15	55.2		30.1	334	51.2 ¹²¹		42.4 ²²	10 S	19	44	6 06	8 47	47	41	48		
14	30	55.2		30.7	349	22.4 ¹²²		40.1 ²³	20	31	5 57	20	9 04	45	25	50		
15	45	55.2		31.3	3	53.6 ¹²²		37.7 ²⁴	30	42	6 11	37	22	44	20 07	51		
16	60	55.2		31.9	18	24.8 ¹²²		35.2 ²⁵	35	48	19	46	33	43	19 56	53		
17	75	55.2	+18	32.5	32	56.1 ¹²³	+19	32.6 ²⁶	40	5 55	6 28	6 57	9 45	42	19 44	54		
18	90	55.2	+18	33.1	47	27.3 ¹²²	+19	29.9 ²⁷	45	6 02	6 37	7 09	10 00	41	19 30	55		
19	105	55.2		33.7	61	58.6 ¹²³		27.2 ²⁷	50	09	49	24	18	39	12	57		
20	120	55.2		34.3	76	29.9 ¹²³		24.3 ²⁹	52	13	54	31	26	39	19 04	58		
21	135	55.2		34.9	91	01.2 ¹²³		21.4 ²⁹	54	16	6 59	39	35	38	18 55	58		
22	150	55.2		35.5	105	32.5 ¹²³		18.4 ³⁰	56	20	7 06	48	46	37	44	60		
23	165	55.2		36.2	120	03.9 ¹²⁴		15.3 ³¹	58	24	12	7 58	10 58	36	33	61		
24	180	55.2	+18	36.8	134	35.3 ¹²⁴	+19	12.1 ³²	60 S	6 28	7 20	8 09	11 12	34	18 19	62		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 34 ^m 9		Mag: -3.9 PMG: 12 ^h 46 ^m				Mag: +1.3 PMG: 11 ^h 33 ^m				Mag: -2.0 PMG: 13 ^h 51 ^m				Mag: +0.2 PMG: 22 ^h 55 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	54.9	168	46.5	+21	04.2	186	40.3	+16	41.3	151	44.0	+22	46.1	15	15.0	-11	21.8
1	245	57.4	183	45.7		04.9	201	40.9		41.9	166	45.9		46.1	30	17.6		21.8
2	260	59.9	198	45.0		05.6	216	41.5		42.4	181	47.8		46.2	45	20.3		21.7
3	276	02.3	213	44.2		06.2	231	42.2		43.0	196	49.6		46.2	60	22.9		21.7
4	291	04.8	228	43.5		06.9	246	42.8		43.5	211	51.5		46.3	75	25.5		21.6
5	306	07.3	243	42.7	+21	07.6	261	43.5	+16	44.1	226	53.4	+22	46.3	90	28.2	-11	21.6
6	321	09.7	258	42.0	+21	08.3	276	44.1	+16	44.6	241	55.3	+22	46.4	105	30.8	-11	21.5
7	336	12.2	273	41.2		08.9	291	44.8		45.2	256	57.1		46.4	120	33.4		21.5
8	351	14.6	288	40.5		09.6	306	45.4		45.7	271	59.0		46.4	135	36.1		21.4
9	6	17.1	303	39.7		10.2	321	46.0		46.3	287	00.9		46.5	150	38.7		21.4
10	21	19.6	318	39.0		10.9	336	46.7		46.8	302	02.8		46.5	165	41.4		21.3
11	36	22.0	333	38.2	+21	11.6	351	47.3	+16	47.3	317	04.7	+22	46.6	180	44.0	-11	21.2
12	51	24.5	348	37.4	+21	12.2	6	48.0	+16	47.9	332	06.5	+22	46.6	195	46.6	-11	21.2
13	66	27.0	3	36.7		12.9	21	48.6		48.4	347	08.4		46.7	210	49.3		21.1
14	81	29.4	18	35.9		13.5	36	49.3		49.0	2	10.3		46.7	225	51.9		21.1
15	96	31.9	33	35.2		14.2	51	49.9		49.5	17	12.2		46.8	240	54.5		21.0
16	111	34.4	48	34.4		14.9	66	50.5		50.1	32	14.0		46.8	255	57.2		21.0
17	126	36.8	63	33.7	+21	15.5	81	51.2	+16	50.6	47	15.9	+22	46.8	270	59.8	-11	20.9
18	141	39.3	78	32.9	+21	16.2	96	51.8	+16	51.1	62	17.8	+22	46.9	286	02.5	-11	20.9
19	156	41.8	93	32.1		16.8	111	52.5		51.7	77	19.7		46.9	301	05.1		20.8
20	171	44.2	108	31.4		17.5	126	53.1		52.2	92	21.5		47.0	316	07.7		20.8
21	186	46.7	123	30.6		18.1	141	53.7		52.8	107	23.4		47.0	331	10.4		20.7
22	201	49.1	138	29.9		18.8	156	54.4		53.3	122	25.3		47.1	346	13.0		20.7
23	216	51.6	153	29.1		19.4	171	55.0		53.8	137	27.2		47.1	1	15.6		20.6
24	231	54.1	168	28.3	+21	20.1	186	55.7	+16	54.4	152	29.0	+22	47.2	16	18.3	-11	20.6
Dif	—		-8		+7		+6		+5		+19		0		+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			Edad: 4 ^d 0 PHE { 4 ^h : 54 ^h /1 12 ^h : 54 ^h /1 20 ^h : 54 ^h /1 PMG: 15 ^h 31 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	55.2	+18 36.8	134	35.3	+19 12.1		60 N	20 30	21 33	** **	6 51 66		23 58 24	
1	195	55.2		149	06.6 ¹²³		08.8 ³³	58	17	21 12	22 52	7 04 64		47 26	
2	210	55.2		163	38.1 ¹²⁵		05.4 ³⁴	56	20 05	20 55	22 12	15 62		37 28	
3	225	55.2		178	09.5 ¹²⁴	+19 02.0		54	19 55	41	21 46	25 61		29 29	
4	240	55.2		192	40.9 ¹²⁴	+18 58.4		52	46	28	26	34 59		21 30	
5	255	55.2	+18 39.8	207	12.4 ¹²⁵	+18 54.8		50	19 38	20 18	21 10	7 42 58		23 14 31	
6	270	55.2	+18 40.4	221	43.9 ¹²⁵	+18 51.1		45	19 21	19 55	20 39	7 58 57		22 58 35	
7	285	55.2		236	15.4 ¹²⁵		47.3 ³⁸	40	19 08	38	20 16	8 12 54		46 36	
8	300	55.2		250	47.0 ¹²⁶		43.4 ³⁹	35	18 56	24	19 58	23 54		35 38	
9	315	55.2		265	18.5 ¹²⁵		39.4 ⁴⁰	30	46	19 12	43	33 52		26 39	
10	330	55.2		279	50.1 ¹²⁶		35.4 ⁴⁰	20	29	18 52	20	8 51 50		22 10 42	
11	345	55.2	+18 43.4	294	21.7 ¹²⁶	+18 31.2		10 N	18 14	18 36	19 02	9 06 48		21 56 44	
12	0	55.2	+18 44.0	308	53.3 ¹²⁶	+18 27.0		0	18 00	18 22	18 47	9 20 46		21 42 46	
13	15	55.2		323	25.0 ¹²⁷		22.7 ⁴³	10 S	17 46	18 08	34	34 45		29 48	
14	30	55.2		337	56.7 ¹²⁷		18.3 ⁴⁴	20	32	17 55	22	9 49 43		21 15 50	
15	45	55.2		352	28.4 ¹²⁷		13.8 ⁴⁵	30	15	41	09	10 06 41		20 58 53	
16	60	55.2		7	00.1 ¹²⁷		09.3 ⁴⁵	35	17 06	33	18 03	16 40		49 54	
17	75	55.2	+18 46.9	21	31.8 ¹²⁷	+18 04.7		40	16 55	17 24	17 57	10 27 39		20 38 55	
18	90	55.2	+18 47.5	36	03.6 ¹²⁸	+17 59.9		45	16 42	17 14	17 50	10 41 36		20 25 57	
19	105	55.2		48.1	50 35.4 ¹²⁸		55.1 ⁴⁸	50	27	17 02	42	10 57 34		09 60	
20	120	55.2		48.7	65 07.2 ¹²⁸		50.3 ⁴⁸	52	19	16 57	38	11 05 33		20 02 61	
21	135	55.2		49.3	79 39.0 ¹²⁸		45.3 ⁵⁰	54	11	51	35	13 32		19 53 63	
22	150	55.2		49.9	94 10.9 ¹²⁹		40.3 ⁵⁰	56	16 03	45	31	23 30		44 64	
23	165	55.2		50.5	108 42.7 ¹²⁸		35.1 ⁵²	58	15 52	38	26	34 28		34 66	
24	180	55.1	+18 51.1	123	14.6 ¹²⁹	+17 29.9		60 S	15 41	16 30	17 22	11 46 27		19 21 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 31 ^m 0		Mag: -3.9 PMG: 12 ^h 47 ^m			Mag: +1.3 PMG: 11 ^h 32 ^m			Mag: -2.0 PMG: 13 ^h 48 ^m			Mag: +0.2 PMG: 22 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	231	54.1	168	28.3	+21 20.1	186	55.7	+16 54.4	152	29.0	+22 47.2	16	18.3	-11 20.6	
1	246	56.5	183	27.6	20.7	201	56.3	54.9	167	30.9	47.2	31	20.9	20.5	
2	261	59.0	198	26.8	21.4	216	57.0	55.5	182	32.8	47.3	46	23.6	20.4	
3	277	01.5	213	26.0	22.0	231	57.6	56.0	197	34.7	47.3	61	26.2	20.4	
4	292	03.9	228	25.3	22.7	246	58.2	56.5	212	36.5	47.3	76	28.8	20.3	
5	307	06.4	243	24.5	+21 23.3	261	58.9	+16 57.1	227	38.4	+22 47.4	91	31.5	-11 20.3	
6	322	08.9	258	23.8	+21 23.9	276	59.5	+16 57.6	242	40.3	+22 47.4	106	34.1	-11 20.2	
7	337	11.3	273	23.0	24.6	292	00.2	58.1	257	42.2	47.5	121	36.7	20.2	
8	352	13.8	288	22.2	25.2	307	00.8	58.7	272	44.0	47.5	136	39.4	20.1	
9	7	16.2	303	21.5	25.9	322	01.4	59.2	287	45.9	47.6	151	42.0	20.1	
10	22	18.7	318	20.7	26.5	337	02.1	+16 59.8	302	47.8	47.6	166	44.7	20.0	
11	37	21.2	333	19.9	+21 27.1	352	02.7	+17 00.3	317	49.7	+22 47.7	181	47.3	-11 20.0	
12	52	23.6	348	19.2	+21 27.8	7	03.4	+17 00.8	332	51.5	+22 47.7	196	49.9	-11 19.9	
13	67	26.1	3	18.4	28.4	22	04.0	01.4	347	53.4	47.7	211	52.6	19.9	
14	82	28.6	18	17.6	29.0	37	04.6	01.9	2	55.3	47.8	226	55.2	19.8	
15	97	31.0	33	16.9	29.7	52	05.3	02.4	17	57.2	47.8	241	57.8	19.8	
16	112	33.5	48	16.1	30.3	67	05.9	03.0	32	59.0	47.9	257	00.5	19.7	
17	127	36.0	63	15.3	+21 30.9	82	06.6	+17 03.5	48	00.9	+22 47.9	272	03.1	-11 19.6	
18	142	38.4	78	14.5	+21 31.6	97	07.2	+17 04.0	63	02.8	+22 48.0	287	05.7	-11 19.6	
19	157	40.9	93	13.8	32.2	112	07.8	04.6	78	04.7	48.0	302	08.4	19.5	
20	172	43.4	108	13.0	32.8	127	08.5	05.1	93	06.5	48.0	317	11.0	19.5	
21	187	45.8	123	12.2	33.4	142	09.1	05.6	108	08.4	48.1	332	13.7	19.4	
22	202	48.3	138	11.5	34.1	157	09.8	06.2	123	10.3	48.1	347	16.3	19.4	
23	217	50.7	153	10.7	34.7	172	10.4	06.7	138	12.2	48.2	2	18.9	19.3	
24	232	53.2	168	09.9	+21 35.3	187	11.0	+17 07.2	153	14.0	+22 48.2	17	21.6	-11 19.3	
Dif	—		-8		+6	+6		+5	+19		0	+26		+	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 5 ^d 0 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 4 Rº: 46 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.1	+18	51.1	123	14.6	+17	29.9	60 N	**	**	2	19	3	22	7	57	70
1	195	55.1		51.7	137	46.5 ¹²⁹		24.7 ⁵²	58	1	00		40		36	8	08	68
2	210	55.1		52.3	152	18.5 ¹³⁰		19.3 ⁵⁴	56	1	40	2	57		47		17	66
3	225	55.1		52.9	166	50.5 ¹³⁰		13.9 ⁵⁴	54	2	06	3	12	3	57		26	64
4	240	55.1		53.5	181	22.4 ¹²⁹		08.4 ⁵⁵	52		26		24	4	06		33	63
5	255	55.1	+18	54.0	195	54.5 ¹³¹	+17	02.8 ⁵⁶	50	2	42	3	35	4	14	8	40	62
6	270	55.1	+18	54.6	210	26.5 ¹³⁰	+16	57.1 ⁵⁷	45	3	13	3	57	4	31	8	55	58
7	285	55.1		55.2	224	58.5 ¹³⁰		51.3 ⁵⁸	40		36	4	14		45	9	06	57
8	300	55.1		55.8	239	30.6 ¹³¹		45.5 ⁵⁸	35	3	54		28	4	56		17	54
9	315	55.1		56.4	254	02.7 ¹³¹		39.6 ⁵⁹	30	4	09	4	40	5	07		25	53
10	330	55.1		57.0	268	34.8 ¹³¹		33.7 ⁵⁹	20		32	5	00		24		41	50
11	345	55.1	+18	57.6	283	07.0 ¹³²	+16	27.6 ⁶¹	10 N	4	50	5	17	5	39	9	54	48
12	0	55.0	+18	58.1	297	39.2 ¹³²	+16	21.5 ⁶¹	0	5	06	5	31	5	53	10	06	46
13	15	55.0		58.7	312	11.3 ¹³¹		15.3 ⁶²	10 S		19		44	6	07		19	43
14	30	55.0		59.3	326	43.6 ¹³³		09.0 ⁶³	20	31	5	58		21	32	41	22	05
15	45	55.0	+18	59.9	341	15.8 ¹³²	+16	02.7 ⁶³	30	43	6	12		38	47	38	21	51
16	60	55.0	+19	00.5	355	48.0 ¹³²	+15	56.3 ⁶⁴	35		50		20	47	10	56	36	
17	75	55.0	+19	01.1	10	20.3 ¹³³	+15	49.8 ⁶⁵	40	5	56	6	29	6	58	11	06	34
18	90	55.0	+19	01.6	24	52.6 ¹³³	+15	43.2 ⁶⁶	45	6	04	6	39	7	11	11	17	33
19	105	55.0		02.2	39	24.9 ¹³³		36.6 ⁶⁶	50		12		51	27	31	30		09
20	120	55.0		02.8	53	57.3 ¹³⁴		29.9 ⁶⁷	52	15	6	56		34	38	28	21	03
21	135	55.0		03.4	68	29.6 ¹³³		23.1 ⁶⁸	54	19	7	02		42	45	27	20	56
22	150	54.9		04.0	83	02.0 ¹³⁴		16.3 ⁶⁸	56		23		09	7	51	11	53	25
23	165	54.9		04.5	97	34.4 ¹³⁴		09.4 ⁶⁹	58		27		16	8	02	12	02	23
24	180	54.9	+19	05.1	112	06.8 ¹³⁴	+15	02.4 ⁷⁰	60 S	6	32	7	24	8	13	12	13	21
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 27 ^m 1		Mag: -3.9 PMG: 12 ^h 48 ^m				Mag: +1.3 PMG: 11 ^h 31 ^m				Mag: -2.0 PMG: 13 ^h 45 ^m				Mag: +0.2 PMG: 22 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	53.2	168	09.9	+21	35.3	187	11.0	+17	07.2	153	14.0	+22	48.2	17	21.6	-11	19.3
1	247	55.7	183	09.2		35.9	202	11.7		07.8	168	15.9		48.3	32	24.2		19.2
2	262	58.1	198	08.4		36.6	217	12.3		08.3	183	17.8		48.3	47	26.8		19.2
3	278	00.6	213	07.6		37.2	232	13.0		08.8	198	19.7		48.4	62	29.5		19.1
4	293	03.1	228	06.8		37.8	247	13.6		09.4	213	21.5		48.4	77	32.1		19.1
5	308	05.5	243	06.1	+21	38.4	262	14.2	+17	09.9	228	23.4	+22	48.4	92	34.7	-11	19.0
6	323	08.0	258	05.3	+21	39.0	277	14.9	+17	10.4	243	25.3	+22	48.5	107	37.4	-11	19.0
7	338	10.5	273	04.5		39.6	292	15.5		11.0	258	27.1		48.5	122	40.0		18.9
8	353	12.9	288	03.7		40.3	307	16.2		11.5	273	29.0		48.6	137	42.6		18.9
9	8	15.4	303	03.0		40.9	322	16.8		12.0	288	30.9		48.6	152	45.3		18.8
10	23	17.9	318	02.2		41.5	337	17.4		12.5	303	32.8		48.7	167	47.9		18.7
11	38	20.3	333	01.4	+21	42.1	352	18.1	+17	13.1	318	34.6	+22	48.7	182	50.5	-11	18.7
12	53	22.8	348	00.6	+21	42.7	7	18.7	+17	13.6	333	36.5	+22	48.7	197	53.2	-11	18.6
13	68	25.2	2	59.9		43.3	22	19.3		14.1	348	38.4		48.8	212	55.8		18.6
14	83	27.7	17	59.1		43.9	37	20.0		14.7	3	40.3		48.8	227	58.5		18.5
15	98	30.2	32	58.3		44.5	52	20.6		15.2	18	42.1		48.9	243	01.1		18.5
16	113	32.6	47	57.5		45.1	67	21.3		15.7	33	44.0		48.9	258	03.7		18.4
17	128	35.1	62	56.7	+21	45.8	82	21.9	+17	16.2	48	45.9	+22	49.0	273	06.4	-11	18.4
18	143	37.6	77	56.0	+21	46.4	97	22.5	+17	16.8	63	47.7	+22	49.0	288	09.0	-11	18.3
19	158	40.0	92	55.2		47.0	112	23.2		17.3	78	49.6		49.1	303	11.6		18.3
20	173	42.5	107	54.4		47.6	127	23.8		17.8	93	51.5		49.1	318	14.3		18.2
21	188	45.0	122	53.6		48.2	142	24.4		18.3	108	53.4		49.1	333	16.9		18.2
22	203	47.4	137	52.8		48.8	157	25.1		18.9	123	55.2		49.2	348	19.5		18.1
23	218	49.9	152	52.1		49.4	172	25.7		19.4	138	57.1		49.2	3	22.2		18.1
24	233	52.4	167	51.3	+21	50.0	187	26.4	+17	19.9	153	59.0	+22	49.3	18	24.8	-11	18.0
Dif	—		-8		+6		+6		+5		+19		0		+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 3			Edad: 6 ^d 0 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 PMG: 17 ^h 03 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	54.9	+19 05.1	112	06.8	+15 02.4	71	60 N	20 35	21 40	** **	9 07 74	0 22 19	
1	195	54.9	05.7	126	39.2 ¹³⁴	+14 55.3	71	58	21	17	23 06	16 71	13 21	
2	210	54.9	06.3	141	11.7 ¹³⁵	48.2	71	56	20 09	21 00	22 20	23 69	0 05 23	
3	225	54.9	06.9	155	44.1 ¹³⁴	41.0	72	54	19 58	20 45	21 52	30 67	** ** *	
4	240	54.9	07.4	170	16.6 ¹³⁵	33.8	72	52	49	32	31	36 65	** ** *	
5	255	54.9	+19 08.0	184	49.1 ¹³⁵	+14 26.4	74	50	19 41	20 21	21 14	9 42 63	** ** *	
6	270	54.8	+19 08.6	199	21.6 ¹³⁵	+14 19.0	74	45	19 24	19 58	20 42	9 53 61	** ** *	
7	285	54.8	09.1	213	54.2 ¹³⁶	11.6	74	40	19 09	40	18	10 03 58	23 56 31	
8	300	54.8	09.7	228	26.7 ¹³⁵	+14 04.1	75	35	18 57	26	20 00	11 56	49 33	
9	315	54.8	10.3	242	59.3 ¹³⁶	+13 56.5	76	30	47	19 13	19 45	18 54	42 36	
10	330	54.8	10.9	257	31.9 ¹³⁶	48.8	77	20	29	18 53	21	31 50	32 39	
11	345	54.8	+19 11.4	272	04.5 ¹³⁶	+13 41.1	77	10 N	18 14	18 36	19 03	10 42 47	23 22 42	
12	0	54.8	+19 12.0	286	37.1 ¹³⁶	+13 33.3	78	0	18 00	18 22	18 47	10 52 45	23 14 44	
13	15	54.7	12.6	301	09.7 ¹³⁶	25.5	78	10 S	17 46	18 08	34	11 02 42	23 05 47	
14	30	54.7	13.2	315	42.4 ¹³⁷	17.6	79	20	31	17 54	21	13 39	22 55 51	
15	45	54.7	13.7	330	15.1 ¹³⁷	09.6	80	30	14	39	08	25 36	44 54	
16	60	54.7	14.3	344	47.7 ¹³⁶	+13 01.6	80	35	17 04	31	18 02	32 35	38 56	
17	75	54.7	+19 14.9	359	20.4 ¹³⁷	+12 53.5	81	40	16 53	17 22	17 55	11 40 32	22 31 58	
18	90	54.7	+19 15.4	13	53.1 ¹³⁷	+12 45.3	82	45	16 40	17 12	17 48	11 50 29	22 22 61	
19	105	54.6	16.0	28	25.8 ¹³⁷	37.1	82	50	24	17 00	39	12 01 26	12 65	
20	120	54.6	16.6	42	58.6 ¹³⁸	28.8	83	52	17	16 54	36	06 25	07 66	
21	135	54.6	17.1	57	31.3 ¹³⁷	20.5	83	54	16 08	48	32	12 23	22 02 68	
22	150	54.6	17.7	72	04.0 ¹³⁷	12.1	84	56	15 59	42	28	18 22	21 56 70	
23	165	54.6	18.3	86	36.8 ¹³⁸	+12 03.6	85	58	49	34	23	25 20	49 73	
24	180	54.6	+19 18.8	101	09.6 ¹³⁸	+11 55.1	85	60 S	15 36	16 26	17 19	12 34 17	21 42 75	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 23 ^m 1		Mag: -3.9 PMG: 12 ^h 49 ^m			Mag: +1.3 PMG: 11 ^h 30 ^m			Mag: -2.0 PMG: 13 ^h 42 ^m			Mag: +0.2 PMG: 22 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	233	52.4	167	51.3	+21 50.0	187	26.4	+17 19.9	153	59.0	+22 49.3	18	24.8	-11 18.0
1	248	54.8	182	50.5	50.6	202	27.0	20.4	169	00.8	49.3	33	27.4	18.0
2	263	57.3	197	49.7	51.2	217	27.6	21.0	184	02.7	49.4	48	30.1	17.9
3	278	59.7	212	48.9	51.7	232	28.3	21.5	199	04.6	49.4	63	32.7	17.9
4	294	02.2	227	48.1	52.3	247	28.9	22.0	214	06.5	49.4	78	35.3	17.8
5	309	04.7	242	47.4	+21 52.9	262	29.5	+17 22.5	229	08.3	+22 49.5	93	38.0	-11 17.8
6	324	07.1	257	46.6	+21 53.5	277	30.2	+17 23.1	244	10.2	+22 49.5	108	40.6	-11 17.7
7	339	09.6	272	45.8	54.1	292	30.8	23.6	259	12.1	49.6	123	43.2	17.7
8	354	12.1	287	45.0	54.7	307	31.5	24.1	274	13.9	49.6	138	45.9	17.6
9	9	14.5	302	44.2	55.3	322	32.1	24.6	289	15.8	49.7	153	48.5	17.5
10	24	17.0	317	43.4	55.9	337	32.7	25.2	304	17.7	49.7	168	51.1	17.5
11	39	19.5	332	42.6	+21 56.5	352	33.4	+17 25.7	319	19.6	+22 49.7	183	53.8	-11 17.4
12	54	21.9	347	41.9	+21 57.1	7	34.0	+17 26.2	334	21.4	+22 49.8	198	56.4	-11 17.4
13	69	24.4	2	41.1	57.6	22	34.6	26.7	349	23.3	49.8	213	59.0	17.3
14	84	26.8	17	40.3	58.2	37	35.3	27.2	4	25.2	49.9	229	01.7	17.3
15	99	29.3	32	39.5	58.8	52	35.9	27.8	19	27.0	49.9	244	04.3	17.2
16	114	31.8	47	38.7	+21 59.4	67	36.6	28.3	34	28.9	50.0	259	06.9	17.2
17	129	34.2	62	37.9	+22 00.0	82	37.2	+17 28.8	49	30.8	+22 50.0	274	09.6	-11 17.1
18	144	36.7	77	37.1	+22 00.5	97	37.8	+17 29.3	64	32.7	+22 50.0	289	12.2	-11 17.1
19	159	39.2	92	36.3	01.1	112	38.5	29.8	79	34.5	50.1	304	14.8	17.0
20	174	41.6	107	35.6	01.7	127	39.1	30.4	94	36.4	50.1	319	17.5	17.0
21	189	44.1	122	34.8	02.3	142	39.7	30.9	109	38.3	50.2	334	20.1	16.9
22	204	46.6	137	34.0	02.8	157	40.4	31.4	124	40.1	50.2	349	22.7	16.9
23	219	49.0	152	33.2	03.4	172	41.0	31.9	139	42.0	50.3	4	25.4	16.8
24	234	51.5	167	32.4	+22 04.0	187	41.6	+17 32.4	154	43.9	+22 50.3	19	28.0	-11 16.8
Dif	—		-8		+6	+6		+5	+19		0	+26		+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m .4				Edad: 7 ^d 0 SD: 14'9 PMG: 17 ^h 48 ^m					PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'3 R°: 45 ^m			Hora		R°		
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.6	+19	18.8	101	09.6	+11	55.1	60 N	**	**	2	12	3	18	0	41
1	195	54.5		19.4	115	42.3 ¹³⁷		46.5 ⁸⁶	58	0	46	35	31	27	73	34	18
2	210	54.5		19.9	130	15.1 ¹³⁸		37.9 ⁸⁶	56	1	32	2	53	43	32	71	28
3	225	54.5		20.5	144	47.9 ¹³⁸		29.2 ⁸⁷	54	2	00	3	08	3	54	37	69
4	240	54.5		21.1	159	20.7 ¹³⁸		20.5 ⁸⁷	52	21	20	4	03	41	68	18	24
5	255	54.5	+19	21.6	173	53.5 ¹³⁸	+11	11.7 ⁸⁸	50	2	38	3	32	4	11	10	45
6	270	54.4	+19	22.2	188	26.4 ¹³⁹	+11	02.8 ⁸⁹	45	3	10	3	54	4	29	10	54
7	285	54.4		22.8	202	59.2 ¹³⁸	+10	53.9 ⁸⁹	40	34	4	12	43	11	01	59	**
8	300	54.4		23.3	217	32.0 ¹³⁸		44.9 ⁹⁰	35	3	52	27	4	55	07	57	**
9	315	54.4		23.9	232	04.8 ¹³⁸		35.9 ⁹⁰	30	4	08	39	5	05	12	55	**
10	330	54.4		24.4	246	37.7 ¹³⁹		26.8 ⁹¹	20	31	4	59	23	21	51	**	
11	345	54.3	+19	25.0	261	10.5 ¹³⁸	+10	17.7 ⁹¹	10 N	4	50	5	16	5	39	11	29
12	0	54.3	+19	25.5	275	43.4 ¹³⁹	+10	08.5 ⁹²	0	5	05	5	31	5	53	11	37
13	15	54.3		26.1	290	16.2 ¹³⁸	+9	59.3 ⁹²	10 S	19	45	6	07	44	42	52	48
14	30	54.3		26.7	304	49.1 ¹³⁹		50.0 ⁹³	20	32	5	59	22	11	52	39	46
15	45	54.3		27.2	319	21.9 ¹³⁸		40.7 ⁹³	30	45	6	14	39	12	01	35	38
16	60	54.2		27.8	333	54.8 ¹³⁹		31.3 ⁹⁴	35	51	22	6	49	07	33	34	58
17	75	54.2	+19	28.3	348	27.6 ¹³⁸	+9	21.9 ⁹⁴	40	5	58	6	31	7	00	12	12
18	90	54.2	+19	28.9	3	00.5 ¹³⁹	+9	12.4 ⁹⁵	45	6	06	6	41	7	13	12	19
19	105	54.2		29.4	17	33.3 ¹³⁸	+9	02.8 ⁹⁶	50	14	54	30	30	27	25	17	66
20	120	54.1		30.0	32	06.2 ¹³⁹	+8	53.3 ⁹⁵	52	18	6	59	37	31	23	13	69
21	135	54.1		30.5	46	39.0 ¹³⁸		43.6 ⁹⁷	54	21	7	05	45	35	22	10	70
22	150	54.1		31.1	61	11.9 ¹³⁹		33.9 ⁹⁷	56	26	12	7	55	40	19	06	72
23	165	54.1		31.6	75	44.7 ¹³⁸		24.2 ⁹⁷	58	30	19	8	06	45	17	23	02
24	180	54.1	+19	32.2	90	17.6 ¹³⁹	+8	14.5 ⁹⁷	60 S	6	35	7	28	8	18	12	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 19 ^m 2		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: +1.3 PMG: 11 ^h 29 ^m		Mag: -2.0 PMG: 13 ^h 39 ^m		Mag: +0.2 PMG: 22 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	234	51.5	167	32.4	187	41.6	154	43.9	19	28.0
1	249	54.0	182	31.6	202	42.3	169	45.7	34	30.6
2	264	56.4	197	30.8	217	42.9	184	47.6	49	33.3
3	279	58.9	212	30.0	232	43.5	199	49.5	64	35.9
4	295	01.3	227	29.2	247	44.2	214	51.4	79	38.5
5	310	03.8	242	28.4	262	44.8	229	53.2	94	41.2
6	325	06.3	257	27.6	277	45.5	244	55.1	109	43.8
7	340	08.7	272	26.8	292	46.1	259	57.0	124	46.4
8	355	11.2	287	26.0	307	46.7	274	58.8	139	49.1
9	10	13.7	302	25.2	322	47.4	290	00.7	154	51.7
10	25	16.1	317	24.4	337	48.0	305	02.6	169	54.3
11	40	18.6	332	23.7	352	48.6	320	04.4	184	57.0
12	55	21.1	347	22.9	7	49.3	335	06.3	199	59.6
13	70	23.5	2	22.1	22	49.9	350	08.2	215	02.2
14	85	26.0	17	21.3	37	50.5	5	10.0	230	04.8
15	100	28.5	32	20.5	52	51.2	20	11.9	245	07.5
16	115	30.9	47	19.7	67	51.8	35	13.8	260	10.1
17	130	33.4	62	18.9	82	52.4	50	15.6	275	12.7
18	145	35.8	77	18.1	97	53.1	65	17.5	290	15.4
19	160	38.3	92	17.3	112	53.7	80	19.4	305	18.0
20	175	40.8	107	16.5	127	54.3	95	21.3	320	20.6
21	190	43.2	122	15.7	142	55.0	110	23.1	335	23.3
22	205	45.7	137	14.9	157	55.6	125	25.0	350	25.9
23	220	48.2	152	14.1	172	56.2	140	26.9	5	28.5
24	235	50.6	167	13.3	187	56.9	155	28.7	20	31.2
Dif	—		-8	+6	+6	+5	+19	0	+26	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 8 ^d 0	PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/1	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 56 ^m 4					R°: 45 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	54.1	+19 32.2	90	17.6	+8 14.5		60 N	20 39	21 46	** **	11 37 78		0 57 14	
1	195	54.0	32.7	104	50.4 ¹³⁸	+8 04.6 ⁹⁹		58	25	23	23 26	40 76		52 17	
2	210	54.0	33.3	119	23.2 ¹³⁸	+7 54.8 ⁹⁸		56	12	21 04	22 28	43 74		48 19	
3	225	54.0	33.8	133	56.1 ¹³⁹	44.9 ⁹⁹		54	20 02	20 49	21 58	46 71		45 20	
4	240	54.0	34.4	148	28.9 ¹³⁸	34.9 ¹⁰⁰		52	19 52	35	36	49 69		42 22	
5	255	53.9	+19 34.9	163	01.7 ¹³⁸	+7 24.9 ¹⁰⁰		50	19 44	20 24	21 18	11 51 68		0 39 24	
6	270	53.9	+19 35.5	177	34.5 ¹³⁸	+7 14.9 ¹⁰⁰		45	19 26	20 01	20 45	11 56 64		0 32 27	
7	285	53.9	36.0	192	07.3 ¹³⁸	+7 04.8 ¹⁰¹		40	19 11	19 42	21	12 00 61		27 30	
8	300	53.9	36.6	206	40.0 ¹³⁷	+6 54.7 ¹⁰¹		35	18 59	27	20 02	04 58		22 33	
9	315	53.8	37.1	221	12.8 ¹³⁸	44.5 ¹⁰²		30	48	19 15	19 46	07 56		18 35	
10	330	53.8	37.7	235	45.6 ¹³⁸	34.3 ¹⁰²		20	30	18 54	22	12 53		11 38	
11	345	53.8	+19 38.2	250	18.3 ¹³⁷	+6 24.1 ¹⁰²		10 N	18 15	18 37	19 03	12 17 49		0 04 42	
12	0	53.8	+19 38.7	264	51.1 ¹³⁸	+6 13.8 ¹⁰³		0	18 00	18 22	18 47	12 22 45	** ** *	** ** *	
13	15	53.7	39.3	279	23.8 ¹³⁷	+6 03.4 ¹⁰⁴		10 S	17 46	18 08	34	26 42	** ** *	** ** *	
14	30	53.7	39.8	293	56.5 ¹³⁷	+5 53.1 ¹⁰³		20	30	17 54	20	31 39	** ** *	** ** *	
15	45	53.7	40.4	308	29.2 ¹³⁷	42.7 ¹⁰⁴		30	13	38	07	36 35	** ** *	** ** *	
16	60	53.6	40.9	323	01.9 ¹³⁷	32.2 ¹⁰⁵		35	17 03	30	18 01	40 32	** ** *	** ** *	
17	75	53.6	+19 41.5	337	34.5 ¹³⁶	+5 21.8 ¹⁰⁴		40	16 51	17 21	17 54	12 43 30	** ** *	** ** *	
18	90	53.6	+19 42.0	352	07.2 ¹³⁷	+5 11.3 ¹⁰⁵		45	16 38	17 10	17 46	12 47 27	** ** *	** ** *	
19	105	53.6	42.5	6	39.8 ¹³⁶	+5 00.7 ¹⁰⁶		50	22	16 58	37	52 24	** ** *	** ** *	
20	120	53.5	43.1	21	12.4 ¹³⁶	+4 50.1 ¹⁰⁶		52	14	52	34	54 23	** ** *	** ** *	
21	135	53.5	43.6	35	45.0 ¹³⁶	39.5 ¹⁰⁶		54	16 05	46	30	57 20	** ** *	** ** *	
22	150	53.5	44.2	50	17.5 ¹³⁵	28.9 ¹⁰⁶		56	15 56	39	25	12 59 19	** ** *	** ** *	
23	165	53.4	44.7	64	50.1 ¹³⁶	18.2 ¹⁰⁷		58	45	31	21	13 02 17	** ** *	** ** *	
24	180	53.4	+19 45.2	79	22.6 ¹³⁵	+4 07.5 ¹⁰⁷		60 S	15 32	16 23	17 15	13 06 14	** ** *	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 15 ^m 3		Mag: -3.9 PMG: 12 ^h 52 ^m			Mag: +1.3 PMG: 11 ^h 28 ^m			Mag: -2.0 PMG: 13 ^h 36 ^m			Mag: +0.2 PMG: 22 ^h 34 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	235	50.6	167	13.3	+22 17.4	187	56.9	+17 44.8	155	28.7	+22 51.3	20	31.2	-11 15.5	
1	250	53.1	182	12.5	18.0	202	57.5	45.3	170	30.6	51.3	35	33.8	15.5	
2	265	55.6	197	11.7	18.5	217	58.1	45.8	185	32.5	51.4	50	36.4	15.4	
3	280	58.0	212	10.9	19.0	232	58.8	46.3	200	34.3	51.4	65	39.1	15.4	
4	296	00.5	227	10.1	19.6	247	59.4	46.8	215	36.2	51.5	80	41.7	15.3	
5	311	02.9	242	09.3	+22 20.1	263	00.0	+17 47.3	230	38.1	+22 51.5	95	44.3	-11 15.3	
6	326	05.4	257	08.5	+22 20.7	278	00.7	+17 47.8	245	39.9	+22 51.5	110	46.9	-11 15.2	
7	341	07.9	272	07.6	21.2	293	01.3	48.3	260	41.8	51.6	125	49.6	15.2	
8	356	10.3	287	06.8	21.7	308	01.9	48.8	275	43.7	51.6	140	52.2	15.1	
9	11	12.8	302	06.0	22.3	323	02.6	49.4	290	45.5	51.7	155	54.8	15.1	
10	26	15.3	317	05.2	22.8	338	03.2	49.9	305	47.4	51.7	170	57.5	15.0	
11	41	17.7	332	04.4	+22 23.3	353	03.8	+17 50.4	320	49.3	+22 51.8	186	00.1	-11 15.0	
12	56	20.2	347	03.6	+22 23.9	8	04.5	+17 50.9	335	51.1	+22 51.8	201	02.7	-11 14.9	
13	71	22.7	2	02.8	24.4	23	05.1	51.4	350	53.0	51.8	216	05.4	14.9	
14	86	25.1	17	02.0	24.9	38	05.7	51.9	5	54.9	51.9	231	08.0	14.8	
15	101	27.6	32	01.2	25.5	53	06.4	52.4	20	56.7	51.9	246	10.6	14.8	
16	116	30.1	47	00.4	26.0	68	07.0	52.9	35	58.6	52.0	261	13.2	14.7	
17	131	32.5	61	59.6	+22 26.5	83	07.6	+17 53.4	51	00.5	+22 52.0	276	15.9	-11 14.7	
18	146	35.0	76	58.8	+22 27.1	98	08.3	+17 53.9	66	02.3	+22 52.0	291	18.5	-11 14.6	
19	161	37.4	91	58.0	27.6	113	08.9	54.4	81	04.2	52.1	306	21.1	14.6	
20	176	39.9	106	57.2	28.1	128	09.5	54.9	96	06.1	52.1	321	23.8	14.5	
21	191	42.4	121	56.4	28.6	143	10.2	55.4	111	07.9	52.2	336	26.4	14.5	
22	206	44.8	136	55.5	29.2	158	10.8	55.9	126	09.8	52.2	351	29.0	14.4	
23	221	47.3	151	54.7	29.7	173	11.4	56.4	141	11.7	52.2	6	31.6	14.4	
24	236	49.8	166	53.9	+22 30.2	188	12.1	+17 56.9	156	13.5	+22 52.3	21	34.3	-11 14.3	
Dif	—		-8		+5	+6		+5	+19		0	+26		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 5			Edad: 9 ^d 0 PHE { SD: 15/3 PMG: 19 ^h 18 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	53.4	+19 45.2	79	22.6	+4 07.5	60 N	** *	2 06	3 13	12 55	81	1 11	14	
1	195	53.4	45.8	93	55.1 ¹³⁵	+3 56.7 ¹⁰⁸	58	0 26	30	28	56	78	09	16	
2	210	53.4	46.3	108	27.6 ¹³⁵	45.9 ¹⁰⁸	56	1 24	2 48	40	57	76	07	18	
3	225	53.3	46.8	123	00.0 ¹³⁴	35.1 ¹⁰⁸	54	1 54	3 04	3 51	57	74	05	21	
4	240	53.3	47.4	137	32.5 ¹³⁵	24.3 ¹⁰⁸	52	2 16	17	4 00	58	72	04	22	
5	255	53.3	+19 47.9	152	04.9 ¹³⁴	+3 13.4 ¹⁰⁹	50	2 34	3 29	4 09	12 59	70	1 03	23	
6	270	53.2	+19 48.4	166	37.2 ¹³³	+3 02.5 ¹⁰⁹	45	3 08	3 52	4 27	13 00	67	0 59	28	
7	285	53.2	49.0	181	09.6 ¹³⁴	+2 51.6 ¹⁰⁹	40	32	4 10	41	01	64	57	30	
8	300	53.2	49.5	195	41.9 ¹³³	40.6 ¹¹⁰	35	3 51	25	4 54	02	61	55	33	
9	315	53.1	50.0	210	14.2 ¹³³	29.7 ¹⁰⁹	30	4 06	38	5 04	03	58	53	35	
10	330	53.1	50.6	224	46.4 ¹³²	18.7 ¹¹⁰	20	31	4 59	23	05	54	49	39	
11	345	53.1	+19 51.1	239	18.7 ¹³³	+2 07.6 ¹¹¹	10 N	4 50	5 16	5 38	13 06	50	0 46	43	
12	0	53.1	+19 51.6	253	50.9 ¹³²	+1 56.6 ¹¹⁰	0	5 05	5 31	5 53	13 07	47	0 43	46	
13	15	53.0	52.1	268	23.0 ¹³¹	45.5 ¹¹¹	10 S	19	45	6 07	08	44	40	50	
14	30	53.0	52.7	282	55.1 ¹³¹	34.4 ¹¹¹	20	33	5 59	23	10	40	37	53	
15	45	53.0	53.2	297	27.2 ¹³¹	23.3 ¹¹¹	30	46	6 15	40	11	36	34	57	
16	60	52.9	53.7	311	59.3 ¹³¹	12.1 ¹¹²	35	5 52	23	6 50	12	34	32	59	
17	75	52.9	+19 54.3	326	31.3 ¹³⁰	+1 01.0 ¹¹¹	40	6 00	6 33	7 02	13 13	31	0 29	62	
18	90	52.9	+19 54.8	341	03.3 ¹³⁰	+0 49.8 ¹¹²	45	6 07	6 43	7 16	13 14	28	0 26	66	
19	105	52.8	55.3	355	35.2 ¹²⁹	38.6 ¹¹²	50	16	6 56	32	16	24	23	69	
20	120	52.8	55.8	10	07.2 ¹³⁰	27.4 ¹¹²	52	20	7 02	40	17	22	22	70	
21	135	52.8	56.4	24	39.0 ¹²⁸	16.1 ¹¹³	54	24	08	49	17	21	20	72	
22	150	52.7	56.9	39	10.8 ¹²⁸	+0 04.9 ¹¹²	56	28	15	7 58	18	19	18	75	
23	165	52.7	57.4	53	42.6 ¹²⁸	-0 06.4 ¹¹³	58	33	23	8 09	19	17	16	77	
24	180	52.7	+19 57.9	68	14.4 ¹²⁸	-0 17.7 ¹¹³	60 S	6 38	7 31	8 22	13 20	14	0 14	79	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 8 ^h 11 ^m 3			Mag: -3.9 PMG: 12 ^h 53 ^m			Mag: +1.3 PMG: 11 ^h 27 ^m			Mag: -2.0 PMG: 13 ^h 33 ^m			Mag: +0.3 PMG: 22 ^h 30 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	236	49.8	+22 30.2	166	53.9	30.7	188	12.1	+17 56.9	156	13.5	+22 52.3	21	34.3	-11 14.3
1	251	52.2	30.7	181	53.1	30.7	203	12.7	57.4	171	15.4	52.3	36	36.9	14.3
2	266	54.7	31.2	196	52.3	31.2	218	13.3	57.9	186	17.3	52.4	51	39.5	14.2
3	281	57.2	31.8	211	51.5	31.8	233	14.0	58.4	201	19.1	52.4	66	42.2	14.2
4	296	59.6	32.3	226	50.7	32.3	248	14.6	58.9	216	21.0	52.4	81	44.8	14.1
5	312	02.1	+22 32.8	241	49.9	+22 32.8	263	15.2	+17 59.4	231	22.9	+22 52.5	96	47.4	-11 14.1
6	327	04.6	+22 33.3	256	49.1	+22 33.3	278	15.8	+17 59.9	246	24.7	+22 52.5	111	50.1	-11 14.0
7	342	07.0	33.8	271	48.2	33.8	293	16.5	+18 00.4	261	26.6	52.6	126	52.7	14.0
8	357	09.5	34.3	286	47.4	34.3	308	17.1	00.9	276	28.5	52.6	141	55.3	13.9
9	12	11.9	34.8	301	46.6	34.8	323	17.7	01.4	291	30.3	52.6	156	57.9	13.9
10	27	14.4	35.3	316	45.8	35.3	338	18.4	01.9	306	32.2	52.7	172	00.6	13.8
11	42	16.9	+22 35.8	331	45.0	+22 35.8	353	19.0	+18 02.4	321	34.1	+22 52.7	187	03.2	-11 13.8
12	57	19.3	+22 36.4	346	44.2	+22 36.4	8	19.6	+18 02.9	336	35.9	+22 52.8	202	05.8	-11 13.7
13	72	21.8	36.9	1	43.4	36.9	23	20.3	03.4	351	37.8	52.8	217	08.4	13.7
14	87	24.3	37.4	16	42.5	37.4	38	20.9	03.9	6	39.7	52.8	232	11.1	13.6
15	102	26.7	37.9	31	41.7	37.9	53	21.5	04.4	21	41.5	52.9	247	13.7	13.6
16	117	29.2	38.4	46	40.9	38.4	68	22.2	04.9	36	43.4	52.9	262	16.3	13.5
17	132	31.7	+22 38.9	61	40.1	+22 38.9	83	22.8	+18 05.4	51	45.3	+22 53.0	277	19.0	-11 13.5
18	147	34.1	+22 39.4	76	39.3	+22 39.4	98	23.4	+18 05.9	66	47.1	+22 53.0	292	21.6	-11 13.4
19	162	36.6	39.9	91	38.5	39.9	113	24.1	06.4	81	49.0	53.0	307	24.2	13.4
20	177	39.0	40.4	106	37.6	40.4	128	24.7	06.9	96	50.8	53.1	322	26.8	13.3
21	192	41.5	40.9	121	36.8	40.9	143	25.3	07.4	111	52.7	53.1	337	29.5	13.3
22	207	44.0	41.4	136	36.0	41.4	158	25.9	07.9	126	54.6	53.2	352	32.1	13.2
23	222	46.4	41.9	151	35.2	41.9	173	26.6	08.4	141	56.4	53.2	7	34.7	13.2
24	237	48.9	+22 42.3	166	34.4	+22 42.3	188	27.2	+18 08.9	156	58.3	+22 53.2	22	37.4	-11 13.1
Dif	—			-8	+5		+6	+5		+19	0		+26	0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 5			Edad: 10 ^d 0 PHE { SD: 15'5 PMG: 20 ^h 06 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	180	52.7	+19 57.9	68	14.4	-0 17.7	60 N	20 44	21 53	** **	14 16 85	1 25 14		
1	195	52.6	58.4	82	46.1 ¹²⁷	29.0 ¹¹³	58	29	28	** **	14 82	25 17		
2	210	52.6	59.0	97	17.7 ¹²⁶	40.3 ¹¹³	56	16	21 09	22 37	13 79	25 20		
3	225	52.5	+19 59.5	111	49.3 ¹²⁶	-0 51.6 ¹¹³	54	20 05	20 52	22 04	11 77	26 21		
4	240	52.5	+20 00.0	126	20.9 ¹²⁶	-1 02.9 ¹¹³	52	19 55	39 21	41 10	75 26	26 23		
5	255	52.5	+20 00.5	140	52.4 ¹²⁵	-1 14.3 ¹¹⁴	50	19 46	20 27	21 22	14 09 73	1 26 25		
6	270	52.4	+20 01.0	155	23.9 ¹²⁵	-1 25.6 ¹¹³	45	19 28	20 03	20 48	14 07 69	1 27 28		
7	285	52.4	01.6	169	55.3 ¹²⁴	37.0 ¹¹⁴	40	13	19 44	23	05 65	27 32		
8	300	52.4	02.1	184	26.7 ¹²⁴	48.4 ¹¹⁴	35	19 01	29	20 04	03 63	28 34		
9	315	52.3	02.6	198	58.0 ¹²³	-1 59.8 ¹¹⁴	30	18 50	19 16	19 48	14 01 61	28 37		
10	330	52.3	03.1	213	29.3 ¹²³	-2 11.1 ¹¹³	20	31	18 55	23	13 59 56	28 41		
11	345	52.3	+20 03.6	228	00.5 ¹²²	-2 22.5 ¹¹⁴	10 N	18 15	18 37	19 04	13 56 53	1 29 44		
12	0	52.2	+20 04.1	242	31.7 ¹²²	-2 33.9 ¹¹⁴	0	18 00	18 22	18 48	13 54 49	1 29 48		
13	15	52.2	04.7	257	02.8 ¹²¹	45.3 ¹¹⁴	10 S	17 45	18 08	33	52 46	30 51		
14	30	52.1	05.2	271	33.8 ¹²⁰	-2 56.7 ¹¹⁴	20	30	17 53	20	50 42	30 55		
15	45	52.1	05.7	286	04.8 ¹²⁰	-3 08.1 ¹¹⁴	30	12	38	07	47 38	31 59		
16	60	52.1	06.2	300	35.8 ¹²⁰	19.5 ¹¹⁴	35	17 02	29	18 00	46 35	31 62		
17	75	52.0	+20 06.7	315	06.7 ¹¹⁹	-3 30.9 ¹¹⁴	40	16 50	17 19	17 52	13 44 33	1 31 65		
18	90	52.0	+20 07.2	329	37.5 ¹¹⁸	-3 42.3 ¹¹⁴	45	16 36	17 08	17 44	13 42 30	1 32 67		
19	105	52.0	07.7	344	08.3 ¹¹⁸	-3 53.7 ¹¹⁴	50	19	16 55	35	40 26	32 71		
20	120	51.9	08.2	358	39.0 ¹¹⁷	-4 05.1 ¹¹⁴	52	11	50	31	39 25	32 73		
21	135	51.9	08.8	13	09.6 ¹¹⁶	16.5 ¹¹⁴	54	16 02	43	27	38 23	32 76		
22	150	51.8	09.3	27	40.2 ¹¹⁶	27.9 ¹¹⁴	56	15 53	36	23	37 20	33 77		
23	165	51.8	09.8	42	10.7 ¹¹⁵	39.3 ¹¹⁴	58	41	28	18	36 18	33 80		
24	180	51.8	+20 10.3	56	41.2 ¹¹⁵	-4 50.7 ¹¹⁴	60 S	15 28	16 19	17 12	13 34 16	1 33 83		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 07 ^m 4		Mag: -3.9 PMG: 12 ^h 54 ^m		Mag: +1.3 PMG: 11 ^h 26 ^m		Mag: -2.0 PMG: 13 ^h 30 ^m		Mag: +0.3 PMG: 22 ^h 26 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	237	48.9	166 34.4	+22 42.3	188 27.2	+18 08.9	156 58.3	+22 53.2	22 37.4	-11 13.1
1	252	51.4	181 33.6	42.8	203 27.8	09.4	172 00.2	53.3	37 40.0	13.1
2	267	53.8	196 32.7	43.3	218 28.5	09.9	187 02.0	53.3	52 42.6	13.1
3	282	56.3	211 31.9	43.8	233 29.1	10.4	202 03.9	53.4	67 45.2	13.0
4	297	58.8	226 31.1	44.3	248 29.7	10.9	217 05.8	53.4	82 47.9	13.0
5	313	01.2	241 30.3	+22 44.8	263 30.4	+18 11.4	232 07.6	+22 53.4	97 50.5	-11 12.9
6	328	03.7	256 29.5	+22 45.3	278 31.0	+18 11.9	247 09.5	+22 53.5	112 53.1	-11 12.9
7	343	06.2	271 28.6	45.8	293 31.6	12.4	262 11.4	53.5	127 55.7	12.8
8	358	08.6	286 27.8	46.3	308 32.2	12.9	277 13.2	53.6	142 58.4	12.8
9	13	11.1	301 27.0	46.7	323 32.9	13.4	292 15.1	53.6	158 01.0	12.7
10	28	13.5	316 26.2	47.2	338 33.5	13.8	307 17.0	53.6	173 03.6	12.7
11	43	16.0	331 25.3	+22 47.7	353 34.1	+18 14.3	322 18.8	+22 53.7	188 06.2	-11 12.6
12	58	18.5	346 24.5	+22 48.2	8 34.8	+18 14.8	337 20.7	+22 53.7	203 08.9	-11 12.6
13	73	20.9	1 23.7	48.7	23 35.4	15.3	352 22.5	53.8	218 11.5	12.5
14	88	23.4	16 22.9	49.1	38 36.0	15.8	7 24.4	53.8	233 14.1	12.5
15	103	25.9	31 22.0	49.6	53 36.6	16.3	22 26.3	53.8	248 16.7	12.4
16	118	28.3	46 21.2	50.1	68 37.3	16.8	37 28.1	53.9	263 19.4	12.4
17	133	30.8	61 20.4	+22 50.6	83 37.9	+18 17.3	52 30.0	+22 53.9	278 22.0	-11 12.3
18	148	33.3	76 19.6	+22 51.0	98 38.5	+18 17.8	67 31.9	+22 54.0	293 24.6	-11 12.3
19	163	35.7	91 18.7	51.5	113 39.2	18.3	82 33.7	54.0	308 27.3	12.2
20	178	38.2	106 17.9	52.0	128 39.8	18.8	97 35.6	54.0	323 29.9	12.2
21	193	40.6	121 17.1	52.5	143 40.4	19.2	112 37.5	54.1	338 32.5	12.1
22	208	43.1	136 16.3	52.9	158 41.0	19.7	127 39.3	54.1	353 35.1	12.1
23	223	45.6	151 15.4	53.4	173 41.7	20.2	142 41.2	54.1	8 37.8	12.0
24	238	48.0	166 14.6	+22 53.9	188 42.3	+18 20.7	157 43.0	+22 54.2	23 40.4	-11 12.0
Dif	—		-8	+5	+6	+5	+19	0	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 6				Edad: 11 ^d 0 PHE SD: 15/8 PMG: 20 ^h 56 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	51.8	+20	10.3	56	41.2	-4	50.7	60 N	** **	1 59	3 09	15 41	88	1 39	17		
1	195	51.7		10.8	71	11.6 ¹¹⁴	-5	02.0 ¹¹³	58	** **	2 25	24	36 85		42	20		
2	210	51.7		11.3	85	41.9 ¹¹³		13.4 ¹¹⁴	56	1 16	2 44	37	32 82		45	22		
3	225	51.6		11.8	100	12.2 ¹¹³		24.7 ¹¹³	54	1 49	3 00	48	28 80		47	24		
4	240	51.6		12.3	114	42.4 ¹¹²		36.1 ¹¹⁴	52	2 12	14	3 58	25 78		49	26		
5	255	51.6	+20	12.8	129	12.5 ¹¹¹	-5	47.4 ¹¹³	50	2 30	3 26	4 06	15 22	76	1 51	28		
6	270	51.5	+20	13.3	143	42.6 ¹¹¹	-5	58.7 ¹¹³	45	3 05	3 50	4 25	15 16	72	1 55	32		
7	285	51.5		13.8	158	12.6 ¹¹⁰	-6	10.0 ¹¹³	40	30	4 08	40	10 69		1 59	34		
8	300	51.4		14.3	172	42.5 ¹⁰⁹		21.3 ¹¹³	35	3 49	24	4 52	06 66		2 02	37		
9	315	51.4		14.8	187	12.4 ¹⁰⁹		32.5 ¹¹²	30	4 05	37	5 03	15 02	63		05	39	
10	330	51.3		15.3	201	42.2 ¹⁰⁸		43.7 ¹¹²	20	30	4 58	22	14 55	59		09	44	
11	345	51.3	+20	15.8	216	11.9 ¹⁰⁷	-6	55.0 ¹¹³	10 N	4 49	5 16	5 38	14 49	56		2 13	48	
12	0	51.3	+20	16.3	230	41.5 ¹⁰⁶	-7	06.2 ¹¹²	0	5 05	5 31	5 53	14 43	53		2 17	51	
13	15	51.2		16.8	245	11.1 ¹⁰⁶		17.3 ¹¹¹	10 S	20	5 46	6 08	38 49		21	54		
14	30	51.2		17.3	259	40.6 ¹⁰⁵		28.5 ¹¹²	20	33	6 00	24	32 45		25	58		
15	45	51.1		17.8	274	10.0 ¹⁰⁴		39.6 ¹¹¹	30	47	16	42	25 42		30	62		
16	60	51.1		18.3	288	39.3 ¹⁰³	-7	50.7 ¹¹¹	35	5 54	25	6 52	21 40		33	64		
17	75	51.0	+20	18.8	303	08.6 ¹⁰³	-8	01.8 ¹¹¹	40	6 01	6 34	7 04	14 17	37		2 36	67	
18	90	51.0	+20	19.3	317	37.8 ¹⁰²	-8	12.8 ¹¹⁰	45	6 09	6 45	7 18	14 12	34		2 39	71	
19	105	51.0		19.8	332	06.9 ¹⁰¹		23.8 ¹¹⁰	50	18	6 58	35	06 30		43	75		
20	120	50.9		20.3	346	35.9 ¹⁰⁰		34.8 ¹¹⁰	52	22	7 04	43	04 28		45	77		
21	135	50.9		20.8	1	04.9 ¹⁰⁰		45.7 ¹⁰⁹	54	26	11	7 52	14 01	26		48	78	
22	150	50.8		21.3	15	33.7 ⁹⁸	-8	56.7 ¹¹⁰	56	31	18	8 02	13 57	24		50	81	
23	165	50.8		21.8	30	02.5 ⁹⁸	-9	07.5 ¹⁰⁸	58	36	26	13	54 21		53	83		
24	180	50.7	+20	22.3	44	31.2 ⁹⁷	-9	18.4 ¹⁰⁹	60 S	6 42	7 35	8 26	13 50	19		2 56	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 03 ^m 5		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +1.4 PMG: 11 ^h 25 ^m		Mag: -2.0 PMG: 13 ^h 27 ^m		Mag: +0.3 PMG: 22 ^h 21 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	238	48.0	166	14.6	+22	53.9	188	42.3	+18	20.7
1	253	50.5	181	13.8		54.3	203	42.9		21.2
2	268	53.0	196	13.0		54.8	218	43.6		21.7
3	283	55.4	211	12.1		55.2	233	44.2		22.2
4	298	57.9	226	11.3		55.7	248	44.8		22.7
5	314	00.4	241	10.5	+22	56.2	263	45.4	+18	23.1
6	329	02.8	256	09.6	+22	56.6	278	46.1	+18	23.6
7	344	05.3	271	08.8		57.1	293	46.7		24.1
8	359	07.8	286	08.0		57.5	308	47.3		24.6
9	14	10.2	301	07.2		58.0	323	48.0		25.1
10	29	12.7	316	06.3		58.5	338	48.6		25.6
11	44	15.1	331	05.5	+22	58.9	353	49.2	+18	26.1
12	59	17.6	346	04.7	+22	59.4	8	49.8	+18	26.5
13	74	20.1	1	03.8	+22	59.8	23	50.5		27.0
14	89	22.5	16	03.0	+23	00.3	38	51.1		27.5
15	104	25.0	31	02.2		00.7	53	51.7		28.0
16	119	27.5	46	01.3		01.2	68	52.3		28.5
17	134	29.9	61	00.5	+23	01.6	83	53.0	+18	29.0
18	149	32.4	75	59.7	+23	02.1	98	53.6	+18	29.4
19	164	34.9	90	58.8		02.5	113	54.2		29.9
20	179	37.3	105	58.0		02.9	128	54.8		30.4
21	194	39.8	120	57.2		03.4	143	55.5		30.9
22	209	42.3	135	56.3		03.8	158	56.1		31.4
23	224	44.7	150	55.5		04.3	173	56.7		31.8
24	239	47.2	165	54.7	+23	04.7	188	57.4	+18	32.3
Dif	—		-8		+5		+6		+5	
									+19	
									0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 0 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 4 20 ^h : 59 ^m 7 R°: 57 ^m												
	PMG: 11 ^h 56 ^m 7			SD: 16 ^h 0 PMG: 21 ^h 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	50.7	+20 22.3	44	31.2	-9 18.4		60 N	20 48	22 00	** **	17 09 89		1 56 21		
1	195	50.7		58	59.9	29.2	108	58	33	21 33	** **	17 01 86		2 02 23		
2	210	50.6	23.3	73	28.4	39.9	107	56	19	21 13	22 46	16 54 84		07 26		
3	225	50.6	23.8	87	56.9	50.7	108	54	20 08	20 56	22 10	48 82		11 28		
4	240	50.6	24.3	102	25.3	-10 01.3	106	52	19 58	42	21 45	43 79		15 30		
5	255	50.5	+20 24.8	116	53.6	-10 12.0	107	50	19 49	20 30	21 26	16 38 78		2 19 32		
6	270	50.5	+20 25.2	131	21.8	-10 22.6	106	45	19 30	20 05	20 51	16 28 74		2 27 35		
7	285	50.4	25.7	145	49.9	33.1	105	40	15	19 46	25	19 71		33 39		
8	300	50.4	26.2	160	17.9	43.6	105	35	19 02	31	20 06	12 68		39 41		
9	315	50.3	26.7	174	45.9	-10 54.1	105	30	18 51	19 17	19 49	16 05 67		44 44		
10	330	50.3	27.2	189	13.8	-11 04.5	104	20	32	18 56	24	15 54 63		2 53 47		
11	345	50.2	+20 27.7	203	41.5	-11 14.8	103	10 N	18 15	18 38	19 04	15 45 59		3 01 51		
12	0	50.2	+20 28.2	218	09.2	-11 25.1	103	0	18 00	18 22	18 48	15 36 56		3 08 54		
13	15	50.1	28.7	232	36.8	35.4	103	10 S	17 45	18 08	33	27 53		15 58		
14	30	50.1	29.1	247	04.4	45.5	101	20	29	17 53	20	17 51		23 61		
15	45	50.0	29.6	261	31.8	-11 55.7	102	30	11	37	18 06	07 46		32 65		
16	60	50.0	30.1	275	59.1	-12 05.7	100	35	17 00	28	17 59	15 01 44		37 67		
17	75	49.9	+20 30.6	290	26.4	-12 15.7	100	40	16 48	17 18	17 51	14 54 41		3 43 70		
18	90	49.9	+20 31.1	304	53.5	-12 25.7	100	45	16 34	17 07	17 43	14 46 39		3 50 73		
19	105	49.8	31.6	319	20.6	35.6	99	50	17	16 53	34	36 35		3 58 77		
20	120	49.8	32.0	333	47.6	45.4	98	52	09	47	29	32 33		4 02 78		
21	135	49.7	32.5	348	14.5	-12 55.1	97	54	16 00	41	25	27 31		06 80		
22	150	49.7	33.0	2	41.3	-13 04.8	97	56	15 50	34	20	21 30		11 82		
23	165	49.6	33.5	17	08.0	14.4	96	58	38	25	15	15 27		16 85		
24	180	49.6	+20 34.0	31	34.6	-13 23.9	95	60 S	15 24	16 16	17 10	14 09 24		4 22 88		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 59 ^m 5			Mag: -3.9 PMG: 12 ^h 57 ^m			Mag: +1.4 PMG: 11 ^h 24 ^m			Mag: -1.9 PMG: 13 ^h 24 ^m			Mag: +0.3 PMG: 22 ^h 17 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	239	47.2	165 54.7	+23 04.7	188 57.4	+18 32.3	158 27.7	+22 55.1	24 43.4	-11 10.8						
1	254	49.6	180 53.8	05.1	203 58.0	32.8	173 29.6	55.1	39 46.0	10.8						
2	269	52.1	195 53.0	05.6	218 58.6	33.3	188 31.5	55.2	54 48.6	10.7						
3	284	54.6	210 52.2	06.0	233 59.2	33.8	203 33.3	55.2	69 51.2	10.7						
4	299	57.0	225 51.3	06.5	248 59.9	34.2	218 35.2	55.3	84 53.9	10.6						
5	314	59.5	240 50.5	+23 06.9	264 00.5	+18 34.7	233 37.0	+22 55.3	99 56.5	-11 10.6						
6	330	02.0	255 49.6	+23 07.3	279 01.1	+18 35.2	248 38.9	+22 55.3	114 59.1	-11 10.5						
7	345	04.4	270 48.8	07.7	294 01.7	35.7	263 40.8	55.4	130 01.7	10.5						
8	0	06.9	285 48.0	08.2	309 02.4	36.2	278 42.6	55.4	145 04.3	10.4						
9	15	09.4	300 47.1	08.6	324 03.0	36.6	293 44.5	55.5	160 07.0	10.4						
10	30	11.8	315 46.3	09.0	339 03.6	37.1	308 46.3	55.5	175 09.6	10.4						
11	45	14.3	330 45.5	+23 09.5	354 04.2	+18 37.6	323 48.2	+22 55.5	190 12.2	-11 10.3						
12	60	16.7	345 44.6	+23 09.9	9 04.9	+18 38.1	338 50.1	+22 55.6	205 14.8	-11 10.3						
13	75	19.2	0 43.8	10.3	24 05.5	38.5	353 51.9	55.6	220 17.5	10.2						
14	90	21.7	15 42.9	10.7	39 06.1	39.0	8 53.8	55.6	235 20.1	10.2						
15	105	24.1	30 42.1	11.2	54 06.7	39.5	23 55.6	55.7	250 22.7	10.1						
16	120	26.6	45 41.3	11.6	69 07.4	40.0	38 57.5	55.7	265 25.3	10.1						
17	135	29.1	60 40.4	+23 12.0	84 08.0	+18 40.4	53 59.4	+22 55.8	280 27.9	-11 10.0						
18	150	31.5	75 39.6	+23 12.4	99 08.6	+18 40.9	69 01.2	+22 55.8	295 30.6	-11 10.0						
19	165	34.0	90 38.7	12.8	114 09.2	41.4	84 03.1	55.8	310 33.2	09.9						
20	180	36.5	105 37.9	13.2	129 09.9	41.9	99 05.0	55.9	325 35.8	09.9						
21	195	38.9	120 37.1	13.7	144 10.5	42.3	114 06.8	55.9	340 38.4	09.8						
22	210	41.4	135 36.2	14.1	159 11.1	42.8	129 08.7	55.9	355 41.0	09.8						
23	225	43.9	150 35.4	14.5	174 11.7	43.3	144 10.5	56.0	10 43.7	09.7						
24	240	46.3	165 34.5	+23 14.9	189 12.4	+18 43.7	159 12.4	+22 56.0	25 46.3	-11 09.7						
Dif	—		-8	+4	+6	+5	+19	0	+26	0						

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 7				Edad: 13 ^d 0 PHE { SD: 16/3 PMG: 22 ^h 46 ^m												
					R ^o : 61 ^m												
	hG ☉ Dec				hG ☾ Dif Dec Dif					Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	49.6	+20	34.0	31	34.6	-13	23.9	60 N	**	**	1 53	3 05	18 38	86	2 17	28
1	195	49.5		34.4	46	01.2	76	33.4	58	**	**	2 20	20	27 84		25 31	
2	210	49.5		34.9	60	27.6	74	42.8	56	1 07	40	34	18 81	33 33		33 36	
3	225	49.4		35.4	74	54.0	74	-13 52.1	54	1 43	2 57	45	10 79	39 36			
4	240	49.4		35.9	89	20.2	72	-14 01.4	52	2 08	3 11	3 55	18 02	78	45 37		
5	255	49.3	+20	36.3	103	46.4	72	-14 10.5	50	2 27	3 23	4 04	17 56	76	2 51	38	
6	270	49.3	+20	36.8	118	12.5	71	-14 19.6	45	3 02	3 48	4 23	17 42	73	3 02	42	
7	285	49.2		37.3	132	38.5	70	28.6	40	28	4 07	38	30 71		12 45		
8	300	49.2		37.8	147	04.4	69	37.5	35	3 48	23	4 51	20 69	20 47			
9	315	49.1		38.2	161	30.2	68	46.3	30	4 04	36	5 02	17 12	67	28 49		
10	330	49.1		38.7	175	55.9	67	-14 55.1	20	29	4 57	21	16 57	64	40 53		
11	345	49.0	+20	39.2	190	21.6	67	-15 03.7	10 N	4 49	5 15	5 38	16 44	62	3 52	55	
12	0	49.0	+20	39.7	204	47.1	65	-15 12.3	0	5 05	5 31	5 53	16 32	60	4 02	58	
13	15	48.9		40.1	219	12.6	65	20.7	10 S	20	5 46	6 08	20 58		13 60		
14	30	48.9		40.6	233	37.9	63	29.1	20	34	6 01	24	16 08	55	24 63		
15	45	48.8		41.1	248	03.2	63	37.4	30	48	17	43	15 53	52	37 67		
16	60	48.7		41.5	262	28.4	62	45.6	35	5 55	26	6 53	45 50		44 69		
17	75	48.7	+20	42.0	276	53.5	61	-15 53.7	40	6 03	6 36	7 05	15 35	49	4 53	71	
18	90	48.6	+20	42.5	291	18.5	60	-16 01.6	45	6 11	6 47	7 20	15 25	46	5 03	73	
19	105	48.6		42.9	305	43.5	60	09.5	50	20	7 00	37	11 44		15 77		
20	120	48.5		43.4	320	08.3	58	17.3	52	24	07	45	15 05	42	20 79		
21	135	48.5		43.9	334	33.1	58	25.0	54	29	13	7 55	14 58	41	26 81		
22	150	48.4		44.3	348	57.8	57	32.6	56	34	21	8 05	51 38		33 83		
23	165	48.4		44.8	3	22.4	56	40.0	58	39	29	17	42 36		41 85		
24	180	48.3	+20	45.3	17	46.9	55	-16 47.4	60 S	6 45	7 38	8 30	14 33	33	5 50	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 55 ^m 6		Mag: -3.9 PMG: 12 ^h 58 ^m		Mag: +1.4 PMG: 11 ^h 23 ^m		Mag: -1.9 PMG: 13 ^h 22 ^m		Mag: +0.3 PMG: 22 ^h 13 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	240	46.3	165	34.5	+23	14.9	189	12.4	+18	43.7
1	255	48.8	180	33.7		15.3	204	13.0		44.2
2	270	51.2	195	32.8		15.7	219	13.6		44.7
3	285	53.7	210	32.0		16.1	234	14.2		45.2
4	300	56.2	225	31.2		16.5	249	14.9		45.6
5	315	58.6	240	30.3	+23	16.9	264	15.5	+18	46.1
6	331	01.1	255	29.5	+23	17.3	279	16.1	+18	46.6
7	346	03.6	270	28.6		17.7	294	16.7		47.0
8	1	06.0	285	27.8		18.1	309	17.4		47.5
9	16	08.5	300	26.9		18.5	324	18.0		48.0
10	31	11.0	315	26.1		18.9	339	18.6		48.5
11	46	13.4	330	25.2	+23	19.3	354	19.2	+18	48.9
12	61	15.9	345	24.4	+23	19.7	9	19.9	+18	49.4
13	76	18.4	0	23.5		20.1	24	20.5		49.9
14	91	20.8	15	22.7		20.5	39	21.1		50.3
15	106	23.3	30	21.9		20.9	54	21.7		50.8
16	121	25.7	45	21.0		21.3	69	22.3		51.3
17	136	28.2	60	20.2	+23	21.7	84	23.0	+18	51.7
18	151	30.7	75	19.3	+23	22.1	99	23.6	+18	52.2
19	166	33.1	90	18.5		22.5	114	24.2		52.7
20	181	35.6	105	17.6		22.9	129	24.8		53.1
21	196	38.1	120	16.8		23.3	144	25.5		53.6
22	211	40.5	135	15.9		23.7	159	26.1		54.1
23	226	43.0	150	15.1		24.0	174	26.7		54.5
24	241	45.5	165	14.2	+23	24.4	189	27.3	+18	55.0
Dif	—		-8		+4		+6		+5	
							+19		0	
									+26	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 14 ^d 0	PHE {	4 ^h : 60 ^m 6 12 ^h : 60 ^m 8 20 ^h : 60 ^m 9								
	PMG: 11 ^h 56 ^m 8								SD: 16 ^h 5		PMG: 23 ^h 47 ^m		R°: 62 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	48.3	+20 45.3	17	46.9	-16 47.4	73	60 N	20 52	22 06	** **	20 04 76	2 45 39	
1	195	48.2	45.7	32	11.3	-16 54.7	54	58	36	21 38	** **	19 51 74	2 56 41	
2	210	48.2	46.2	46	35.6	-17 01.8	71	56	23	17	22 56	39 74	3 06 43	
3	225	48.1	46.7	60	59.9	08.8	70	54	11	21 00	22 16	29 72	15 45	
4	240	48.1	47.1	75	24.1	15.7	69	52	20 01	20 45	21 50	20 72	22 47	
5	255	48.0	+20 47.6	89	48.2	-17 22.5	68	50	19 51	20 33	21 30	19 12 71	3 29 48	
6	270	48.0	+20 48.0	104	12.2	-17 29.2	67	45	19 32	20 08	20 54	18 55 69	3 44 51	
7	285	47.9	48.5	118	36.2	35.8	66	40	17	19 48	28	41 68	3 57 52	
8	300	47.9	49.0	133	00.1	42.2	64	35	19 03	32	20 07	29 68	4 07 54	
9	315	47.8	49.4	147	23.9	48.6	64	30	18 52	19 19	19 51	19 66	17 55	
10	330	47.7	49.9	161	47.6	-17 54.8	62	20	33	18 57	25	18 01 65	33 57	
11	345	47.7	+20 50.3	176	11.3	-18 00.8	60	10 N	18 16	18 39	19 05	17 46 64	4 47 59	
12	0	47.6	+20 50.8	190	34.9	-18 06.8	60	0	18 00	18 23	18 48	17 32 62	5 00 61	
13	15	47.6	51.2	204	58.4	12.6	58	10 S	17 45	18 07	33	18 61	13 63	
14	30	47.5	51.7	219	21.8	18.3	57	20	29	17 52	19	17 03 60	27 65	
15	45	47.4	52.2	233	45.2	23.9	56	30	17 10	36	18 05	16 45 59	44 67	
16	60	47.4	52.6	248	08.5	29.3	54	35	16 59	27	17 58	35 58	5 53 68	
17	75	47.3	+20 53.1	262	31.8	-18 34.7	54	40	16 47	17 17	17 50	16 24 56	6 04 70	
18	90	47.3	+20 53.5	276	54.9	-18 39.8	51	45	16 33	17 05	17 41	16 11 55	6 16 72	
19	105	47.2	54.0	291	18.1	44.9	51	50	15	16 52	32	15 55 53	32 74	
20	120	47.1	54.4	305	41.1	49.8	49	52	16 07	45	28	47 52	39 75	
21	135	47.1	54.9	320	04.1	54.6	48	54	15 57	39	23	39 51	47 76	
22	150	47.0	55.3	334	27.1	-18 59.2	46	56	47	31	18	29 50	6 56 78	
23	165	47.0	55.8	348	50.0	-19 03.7	45	58	35	23	13	18 49	7 06 80	
24	180	46.9	+20 56.2	3	12.8	-19 08.1	44	60 S	15 21	16 13	17 07	15 06 47	7 18 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 51 ^m 7		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +1.4 PMG: 11 ^h 22 ^m		Mag: -1.9 PMG: 13 ^h 19 ^m		Mag: +0.3 PMG: 22 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	45.5	165	14.2	189	27.3	159	57.0	26	49.2
1	256	47.9	180	13.4	204	28.0	174	58.9	41	51.8
2	271	50.4	195	12.5	219	28.6	190	00.7	56	54.4
3	286	52.8	210	11.7	234	29.2	205	02.6	71	57.0
4	301	55.3	225	10.8	249	29.8	220	04.4	86	59.6
5	316	57.8	240	10.0	264	30.4	235	06.3	102	02.3
6	332	00.2	255	09.1	279	31.1	250	08.2	117	04.9
7	347	02.7	270	08.3	294	31.7	265	10.0	132	07.5
8	2	05.2	285	07.4	309	32.3	280	11.9	147	10.1
9	17	07.6	300	06.6	324	32.9	295	13.7	162	12.7
10	32	10.1	315	05.7	339	33.6	310	15.6	177	15.4
11	47	12.6	330	04.9	354	34.2	325	17.5	192	18.0
12	62	15.0	345	04.0	9	34.8	340	19.3	207	20.6
13	77	17.5	0	03.2	24	35.4	355	21.2	222	23.2
14	92	20.0	15	02.3	39	36.0	10	23.0	237	25.8
15	107	22.4	30	01.4	54	36.7	25	24.9	252	28.4
16	122	24.9	45	00.6	69	37.3	40	26.7	267	31.1
17	137	27.3	59	59.7	84	37.9	55	28.6	282	33.7
18	152	29.8	74	58.9	99	38.5	70	30.5	297	36.3
19	167	32.3	89	58.0	114	39.2	85	32.3	312	38.9
20	182	34.7	104	57.2	129	39.8	100	34.2	327	41.5
21	197	37.2	119	56.3	144	40.4	115	36.0	342	44.1
22	212	39.7	134	55.5	159	41.0	130	37.9	357	46.8
23	227	42.1	149	54.6	174	41.6	145	39.7	12	49.4
24	242	44.6	164	53.8	189	42.3	160	41.6	27	52.0
Dif	—		-9	+4	+6	+5	+19	0	+26	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 0 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 1 20 ^h : 61 ^m 2 R°: ***m												
	PMG: 11 ^h 56 ^m 9			SD: 16 ^h 6 PMG: ***h ***m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	46.9	+20 56.2	3	12.8	-19 08.1			60 N	** **	1 47	3 01	21 20	60	3 24	54
1	195	46.8	56.7	17	35.6	12.3	38	42	58	** **	2 15	17	21 05	61	37	56
2	210	46.8	57.1	31	58.3	16.4	37	41	56	0 57	36	31	20 53	60	3 49	57
3	225	46.7	57.6	46	21.0	20.3	37	39	54	1 37	2 53	42	41 62		4 00	57
4	240	46.7	58.0	60	43.6	24.1	36	38	52	2 03	3 08	3 53	32 61		09	58
5	255	46.6	+20 58.5	75	06.2	-19 27.8	36	37	50	2 23	3 20	4 02	20 23	61	4 17	58
6	270	46.5	+20 58.9	89	28.8	-19 31.3	36	35	45	3 00	3 46	4 21	20 04	62	4 35	59
7	285	46.5	59.3	103	51.3	34.7	35	34	40	26	4 05	37	19 49	63	4 49	60
8	300	46.4	+20 59.8	118	13.7	37.9	34	32	35	3 46	21	4 50	37 62		5 01	61
9	315	46.3	+21 00.2	132	36.1	41.0	34	31	30	4 03	35	5 02	25 63		12	61
10	330	46.3	00.7	146	58.5	43.9	34	29	20	28	4 57	21	19 06	63	30	62
11	345	46.2	+21 01.1	161	20.9	-19 46.7	34	28	10 N	4 49	5 15	5 38	18 50	63	5 46	63
12	0	46.2	+21 01.6	175	43.2	-19 49.3	33	26	0	5 05	5 31	5 53	18 34	64	6 01	64
13	15	46.1	02.0	190	05.5	51.8	33	25	10 S	20	5 46	6 09	19 63		16	64
14	30	46.0	02.4	204	27.7	54.1	32	23	20	35	6 02	25	18 03	63	32	65
15	45	46.0	02.9	218	50.0	56.3	33	22	30	49	18	44	17 44	63	6 51	65
16	60	45.9	03.3	233	12.2	-19 58.4	32	21	35	5 56	27	6 55	33 63		7 01	66
17	75	45.8	+21 03.8	247	34.3	-20 00.2	31	18	40	6 04	6 37	7 07	17 20	64	7 14	65
18	90	45.8	+21 04.2	261	56.5	-20 02.0	32	18	45	6 13	6 49	7 22	17 06	63	7 28	66
19	105	45.7	04.6	276	18.6	03.6	31	16	50	22	7 03	40	16 48	63	46	66
20	120	45.6	05.1	290	40.8	05.0	32	14	52	27	09	48	39 64		7 54	67
21	135	45.6	05.5	305	02.9	06.3	31	13	54	31	16	7 57	30 63		8 03	68
22	150	45.5	05.9	319	25.0	07.4	31	11	56	36	23	8 08	19 63		14	67
23	165	45.4	06.4	333	47.1	08.4	31	10	58	42	32	20	16 07	63	26	68
24	180	45.4	+21 06.8	348	09.1	-20 09.2	30	8	60 S	6 48	7 42	8 34	15 53	63	8 40	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 7 ^h 47 ^m 7		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.4 PMG: 11 ^h 21 ^m		Mag: -1.9 PMG: 13 ^h 16 ^m		Mag: +0.3 PMG: 22 ^h 05 ^m			
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec			
h	°	'	°	°	°	°	°	°	°	°	'	
0	242	44.6	164	53.8	+23 33.3	189	42.3	+19 06.0	160	41.6	+22 57.8	27 52.0 -11 07.5
1	257	47.1	179	52.9	33.6	204	42.9	06.5	175	43.5	57.8	42 54.6 07.5
2	272	49.5	194	52.0	34.0	219	43.5	07.0	190	45.3	57.8	57 57.2 07.4
3	287	52.0	209	51.2	34.3	234	44.1	07.4	205	47.2	57.9	72 59.8 07.4
4	302	54.5	224	50.3	34.7	249	44.7	07.9	220	49.0	57.9	88 02.5 07.3
5	317	56.9	239	49.5	+23 35.0	264	45.4	+19 08.3	235	50.9	+22 57.9	103 05.1 -11 07.3
6	332	59.4	254	48.6	+23 35.4	279	46.0	+19 08.8	250	52.7	+22 58.0	118 07.7 -11 07.2
7	348	01.8	269	47.8	35.7	294	46.6	09.2	265	54.6	58.0	133 10.3 07.2
8	3	04.3	284	46.9	36.1	309	47.2	09.7	280	56.5	58.0	148 12.9 07.1
9	18	06.8	299	46.0	36.4	324	47.8	10.1	295	58.3	58.1	163 15.5 07.1
10	33	09.2	314	45.2	36.8	339	48.5	10.6	311	00.2	58.1	178 18.2 07.1
11	48	11.7	329	44.3	+23 37.1	354	49.1	+19 11.1	326	02.0	+22 58.1	193 20.8 -11 07.0
12	63	14.2	344	43.5	+23 37.4	9	49.7	+19 11.5	341	03.9	+22 58.2	208 23.4 -11 07.0
13	78	16.6	359	42.6	37.8	24	50.3	12.0	356	05.7	58.2	223 26.0 06.9
14	93	19.1	14	41.7	38.1	39	50.9	12.4	11	07.6	58.2	238 28.6 06.9
15	108	21.6	29	40.9	38.5	54	51.6	12.9	26	09.4	58.3	253 31.2 06.8
16	123	24.0	44	40.0	38.8	69	52.2	13.3	41	11.3	58.3	268 33.8 06.8
17	138	26.5	59	39.2	+23 39.1	84	52.8	+19 13.8	56	13.2	+22 58.3	283 36.5 -11 06.7
18	153	29.0	74	38.3	+23 39.5	99	53.4	+19 14.2	71	15.0	+22 58.4	298 39.1 -11 06.7
19	168	31.4	89	37.4	39.8	114	54.0	14.7	86	16.9	58.4	313 41.7 06.7
20	183	33.9	104	36.6	40.1	129	54.7	15.1	101	18.7	58.5	328 44.3 06.6
21	198	36.3	119	35.7	40.5	144	55.3	15.6	116	20.6	58.5	343 46.9 06.6
22	213	38.8	134	34.9	40.8	159	55.9	16.0	131	22.4	58.5	358 49.5 06.5
23	228	41.3	149	34.0	41.1	174	56.5	16.5	146	24.3	58.6	13 52.1 06.5
24	243	43.7	164	33.1	+23 41.4	189	57.1	+19 16.9	161	26.2	+22 58.6	28 54.8 -11 06.4
Dif	—		-9 +3		+6 +5		+19 0		+26 0		0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 0			Edad: 16 ^d 0 PHE { 4 ^h : 61 ^h /2 12 ^h : 61 ^h /2 20 ^h : 61 ^h /1 SD: 16 ^h 7 PMG: 0 ^h 49 ^m R°: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	45.4	+21 06.8	348	09.1	-20 09.2	6	60 N	20 56	22 13	** **	22 20 43		4 18 71	
1	195	45.3	07.2	2	31.2	09.8	5	58	40	21 43	** **	22 06 45		33 70	
2	210	45.2	07.7	16	53.3	10.3	4	56	26	21	23 07	21 53 47		46 69	
3	225	45.2	08.1	31	15.3	10.7	5	54	14	21 03	22 22	43 48		4 57 69	
4	240	45.1	08.5	45	37.4	10.9	2	52	20 03	20 49	21 55	33 50		5 07 68	
5	255	45.0	+21 09.0	59	59.5	-20 11.0	1	50	19 54	20 36	21 34	21 24 51		5 15 69	
6	270	45.0	+21 09.4	74	21.5	-20 10.9	1	45	19 34	20 10	20 56	21 06 53		5 34 67	
7	285	44.9	09.8	88	43.6	10.6	3	40	18	19 50	30	20 52 54		5 49 67	
8	300	44.8	10.3	103	05.7	10.2	4	35	19 05	34	20 09	39 56		6 02 66	
9	315	44.8	10.7	117	27.8	09.6	6	30	18 53	19 20	19 52	28 57		13 66	
10	330	44.7	11.1	131	49.9	08.9	7	20	33	18 58	26	20 09 59		32 65	
11	345	44.6	+21 11.5	146	12.0	-20 08.0	9	10 N	18 16	18 39	19 06	19 53 60		6 49 64	
12	0	44.6	+21 12.0	160	34.1	-20 07.0	10	0	18 01	18 23	18 49	19 38 61		7 05 62	
13	15	44.5	12.4	174	56.3	05.8	12	10 S	17 45	18 07	33	22 64		20 62	
14	30	44.4	12.8	189	18.5	04.5	13	20	28	17 52	19	19 06 65		37 61	
15	45	44.4	13.2	203	40.7	03.0	15	30	17 09	35	18 05	18 47 67		7 56 60	
16	60	44.3	13.7	218	02.9	-20 01.4	16	35	16 58	26	17 57	36 68		8 07 59	
17	75	44.2	+21 14.1	232	25.1	-19 59.6	18	40	16 46	17 16	17 49	18 24 68		8 19 59	
18	90	44.2	+21 14.5	246	47.4	-19 57.7	19	45	16 31	17 04	17 40	18 09 70		8 34 58	
19	105	44.1	14.9	261	09.7	55.6	21	50	13	16 50	30	17 51 72		8 52 57	
20	120	44.0	15.4	275	32.1	53.4	22	52	16 04	44	26	43 72		9 01 56	
21	135	43.9	15.8	289	54.4	51.0	24	54	15 55	37	21	33 74		11 54	
22	150	43.9	16.2	304	16.9	48.5	25	56	44	29	16	22 75		21 54	
23	165	43.8	16.6	318	39.3	45.8	27	58	32	20	11	17 10 76		34 53	
24	180	43.7	+21 17.0	333	01.8	-19 43.0	28	60 S	15 17	16 10	17 05	16 56 77		9 48 52	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 43 ^m 8		Mag: -3.9 PMG: 13 ^h 03 ^m			Mag: +1.4 PMG: 11 ^h 20 ^m			Mag: -1.9 PMG: 13 ^h 13 ^m			Mag: +0.3 PMG: 22 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	243	43.7	164	33.1	+23 41.4	189	57.1	+19 16.9	161	26.2	+22 58.6	28	54.8	-11 06.4	
1	258	46.2	179	32.3	41.8	204	57.8	17.4	176	28.0	58.6	43	57.4	06.4	
2	273	48.7	194	31.4	42.1	219	58.4	17.8	191	29.9	58.7	59	00.0	06.4	
3	288	51.1	209	30.5	42.4	234	59.0	18.3	206	31.7	58.7	74	02.6	06.3	
4	303	53.6	224	29.7	42.7	249	59.6	18.7	221	33.6	58.7	89	05.2	06.3	
5	318	56.1	239	28.8	+23 43.1	265	00.2	+19 19.2	236	35.4	+22 58.8	104	07.8	-11 06.2	
6	333	58.5	254	28.0	+23 43.4	280	00.9	+19 19.6	251	37.3	+22 58.8	119	10.4	-11 06.2	
7	349	01.0	269	27.1	43.7	295	01.5	20.0	266	39.1	58.8	134	13.1	06.1	
8	4	03.5	284	26.2	44.0	310	02.1	20.5	281	41.0	58.9	149	15.7	06.1	
9	19	05.9	299	25.4	44.3	325	02.7	20.9	296	42.9	58.9	164	18.3	06.0	
10	34	08.4	314	24.5	44.6	340	03.3	21.4	311	44.7	58.9	179	20.9	06.0	
11	49	10.8	329	23.6	+23 45.0	355	03.9	+19 21.8	326	46.6	+22 59.0	194	23.5	-11 06.0	
12	64	13.3	344	22.8	+23 45.3	10	04.6	+19 22.3	341	48.4	+22 59.0	209	26.1	-11 05.9	
13	79	15.8	359	21.9	45.6	25	05.2	22.7	356	50.3	59.0	224	28.7	05.9	
14	94	18.2	14	21.0	45.9	40	05.8	23.2	11	52.1	59.1	239	31.4	05.8	
15	109	20.7	29	20.2	46.2	55	06.4	23.6	26	54.0	59.1	254	34.0	05.8	
16	124	23.2	44	19.3	46.5	70	07.0	24.1	41	55.8	59.1	269	36.6	05.7	
17	139	25.6	59	18.4	+23 46.8	85	07.7	+19 24.5	56	57.7	+22 59.2	284	39.2	-11 05.7	
18	154	28.1	74	17.6	+23 47.1	100	08.3	+19 24.9	71	59.5	+22 59.2	299	41.8	-11 05.7	
19	169	30.6	89	16.7	47.4	115	08.9	25.4	87	01.4	59.2	314	44.4	05.6	
20	184	33.0	104	15.8	47.7	130	09.5	25.8	102	03.3	59.3	329	47.0	05.6	
21	199	35.5	119	15.0	48.0	145	10.1	26.3	117	05.1	59.3	344	49.6	05.5	
22	214	37.9	134	14.1	48.3	160	10.7	26.7	132	07.0	59.3	359	52.3	05.5	
23	229	40.4	149	13.2	48.6	175	11.4	27.2	147	08.8	59.4	14	54.9	05.4	
24	244	42.9	164	12.4	+23 48.9	190	12.0	+19 27.6	162	10.7	+22 59.4	29	57.5	-11 05.4	
Dif	—		-9		+3	+6		+4	+19		0	+26			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1				Edad: 17 ^d 0 PHE { 4 ^h : 61 ^m 0 12 ^h : 60 ^m 9 20 ^h : 60 ^m 7 PMG: 1 ^h 53 ^m R°: 61 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	43.7	+21	17.0	333	01.8	-19	43.0	30	60 N	** **	1 41	2 57	23 03	31	5 29	83			
1	195	43.7		17.5	347	24.3	35	40.0	31	58	** **	2 10	3 14	22 51	34	43	81			
2	210	43.6		17.9	1	46.9	36	36.9	31	56	0 47	33	28	40	36	5 55	79			
3	225	43.5		18.3	16	09.5	36	33.6	33	54	1 32	2 50	40	31	38	6 06	77			
4	240	43.4		18.7	30	32.2	37	30.2	34	52	1 59	3 05	3 51	23	39	15	76			
5	255	43.4	+21	19.1	44	54.9	37	-19 26.7	35	50	2 20	3 18	4 00	22 15	41	6 24	74			
6	270	43.3	+21	19.5	59	17.7	38	-19 23.0	37	45	2 58	3 44	4 20	21 59	45	6 41	72			
7	285	43.2		20.0	73	40.5	38		38	40	3 24	4 04	36	46	47	6 56	70			
8	300	43.2		20.4	88	03.3	38		40	35	3 45	20	4 49	35	49	7 08	68			
9	315	43.1		20.8	102	26.3	40		41	30	4 02	34	5 01	25	51	19	66			
10	330	43.0		21.2	116	49.3	40		42	20	28	4 56	21	21 08	54	37	64			
11	345	42.9	+21	21.6	131	12.3	40	-19 02.5	44	10 N	4 48	5 15	5 38	20 53	57	7 53	62			
12	0	42.9	+21	22.0	145	35.4	41	-18 58.0	45	0	5 06	5 31	5 54	20 39	59	8 07	61			
13	15	42.8		22.4	159	58.6	42		47	10 S	21	5 47	6 09	26	61	22	59			
14	30	42.7		22.8	174	21.8	42		48	20	35	6 02	26	20 11	64	38	56			
15	45	42.6		23.2	188	45.1	43		49	30	50	19	45	19 54	66	8 56	54			
16	60	42.6		23.7	203	08.4	43		51	35	5 57	28	6 56	44	68	9 06	52			
17	75	42.5	+21	24.1	217	31.8	44	-18 33.4	51	40	6 05	6 39	7 09	19 32	71	9 18	51			
18	90	42.4	+21	24.5	231	55.3	45	-18 28.0	54	45	6 14	6 51	7 24	19 19	73	9 32	48			
19	105	42.3		24.9	246	18.9	46		54	50	24	7 05	42	19 03	76	49	46			
20	120	42.3		25.3	260	42.5	46		56	52	29	11	7 50	18 55	78	9 57	44			
21	135	42.2		25.7	275	06.2	47		57	54	33	18	8 00	47	79	10 05	44			
22	150	42.1		26.1	289	30.0	48	-18 05.5	58	56	39	26	11	37	81	15	42			
23	165	42.0		26.5	303	53.8	48	-17 59.6	59	58	44	35	23	26	83	27	39			
24	180	42.0	+21	26.9	318	17.7	49	-17 53.5	61	60 S	6 50	7 45	8 38	18 13	87	10 40	36			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 39 ^m 9		Mag: -3.9 PMG: 13 ^h 04 ^m				Mag: +1.4 PMG: 11 ^h 19 ^m				Mag: -1.9 PMG: 13 ^h 10 ^m				Mag: +0.3 PMG: 21 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	42.9	164	12.4	+23	48.9	190	12.0	+19	27.6	162	10.7	+22	59.4	29	57.5	-11	05.4
1	259	45.3	179	11.5		49.2	205	12.6		28.0	177	12.5		59.4	45	00.1		05.4
2	274	47.8	194	10.6		49.5	220	13.2		28.5	192	14.4		59.5	60	02.7		05.3
3	289	50.3	209	09.8		49.8	235	13.8		28.9	207	16.2		59.5	75	05.3		05.3
4	304	52.7	224	08.9		50.1	250	14.4		29.4	222	18.1		59.5	90	07.9		05.2
5	319	55.2	239	08.0	+23	50.4	265	15.1	+19	29.8	237	19.9	+22	59.6	105	10.5	-11	05.2
6	334	57.7	254	07.2	+23	50.7	280	15.7	+19	30.2	252	21.8	+22	59.6	120	13.1	-11	05.1
7	350	00.1	269	06.3		51.0	295	16.3		30.7	267	23.7		59.6	135	15.8		05.1
8	5	02.6	284	05.4		51.3	310	16.9		31.1	282	25.5		59.7	150	18.4		05.1
9	20	05.1	299	04.6		51.6	325	17.5		31.5	297	27.4		59.7	165	21.0		05.0
10	35	07.5	314	03.7		51.8	340	18.1		32.0	312	29.2		59.7	180	23.6		05.0
11	50	10.0	329	02.8	+23	52.1	355	18.8	+19	32.4	327	31.1	+22	59.8	195	26.2	-11	04.9
12	65	12.4	344	01.9	+23	52.4	10	19.4	+19	32.9	342	32.9	+22	59.8	210	28.8	-11	04.9
13	80	14.9	359	01.1		52.7	25	20.0		33.3	357	34.8		59.8	225	31.4		04.8
14	95	17.4	14	00.2		53.0	40	20.6		33.7	12	36.6		59.9	240	34.0		04.8
15	110	19.8	28	59.3		53.3	55	21.2		34.2	27	38.5		59.9	255	36.6		04.8
16	125	22.3	43	58.5		53.5	70	21.8		34.6	42	40.3	+22	59.9	270	39.3		04.7
17	140	24.8	58	57.6	+23	53.8	85	22.5	+19	35.0	57	42.2	+23	00.0	285	41.9	-11	04.7
18	155	27.2	73	56.7	+23	54.1	100	23.1	+19	35.5	72	44.0	+23	00.0	300	44.5	-11	04.6
19	170	29.7	88	55.8		54.4	115	23.7		35.9	87	45.9	+23	00.0	315	47.1		04.6
20	185	32.2	103	55.0		54.6	130	24.3		36.3	102	47.8	+23	00.1	330	49.7		04.5
21	200	34.6	118	54.1		54.9	145	24.9		36.8	117	49.6		00.1	345	52.3		04.5
22	215	37.1	133	53.2		55.2	160	25.5		37.2	132	51.5		00.1	0	54.9		04.5
23	230	39.6	148	52.4		55.4	175	26.2		37.6	147	53.3		00.2	15	57.5		04.4
24	245	42.0	163	51.5	+23	55.7	190	26.8	+19	38.1	162	55.2	+23	00.2	31	00.1	-11	04.4
Dif	—		-9		+3		+6		+4		+19		0		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 57 ^m 3			Edad: 18 ^d 0 PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'1 SD: 16'5 PMG: 2 ^h 54 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	42.0	+21 26.9	318	17.7	50	–17 53.5	60 N	21 00	22 20	** **	23 34 22	6 52 89	
1	195	41.9	27.3	332	41.7	50	47.3	58	20 43	21 48	** **	25 25	7 04 85	
2	210	41.8	27.7	347	05.8	51	41.0	56	29	25	23 20	16 28	14 83	
3	225	41.7	28.1	1	29.9	51	34.6	54	17	21 07	22 28	09 30	23 81	
4	240	41.7	28.5	15	54.2	53	28.0	52	20 06	20 52	21 59	23 02 32	31 79	
5	255	41.6	+21 28.9	30	18.5	53	–17 21.4	50	19 56	20 38	21 37	22 56 34	7 38 77	
6	270	41.5	+21 29.3	44	42.9	54	–17 14.6	45	19 36	20 12	20 59	22 44 37	7 53 74	
7	285	41.4	29.7	59	07.3	54	07.7	40	20	19 52	32	33 40	8 06 70	
8	300	41.3	30.1	73	31.9	56	–17 00.7	35	19 06	35	20 11	24 43	16 69	
9	315	41.3	30.5	87	56.5	56	–16 53.6	30	18 54	19 21	19 54	16 45	25 67	
10	330	41.2	30.9	102	21.2	57	46.4	20	34	18 58	27	22 02 49	41 63	
11	345	41.1	+21 31.3	116	46.0	58	–16 39.1	10 N	18 17	18 40	19 06	21 50 52	8 55 60	
12	0	41.0	+21 31.7	131	10.9	59	–16 31.6	0	18 01	18 23	18 49	21 38 55	9 08 57	
13	15	41.0	32.1	145	35.8	59	24.1	10 S	17 45	18 07	34	27 58	21 54	
14	30	40.9	32.5	160	00.9	61	16.5	20	28	17 52	19	15 61	34 51	
15	45	40.8	32.9	174	26.0	61	08.7	30	17 09	35	18 04	21 00 66	50 47	
16	60	40.7	33.3	188	51.2	62	–16 00.9	35	16 58	25	17 56	20 52 68	9 58 46	
17	75	40.6	+21 33.7	203	16.5	63	–15 53.0	40	16 45	17 15	17 48	20 43 70	10 09 43	
18	90	40.6	+21 34.1	217	41.9	64	–15 44.9	45	16 30	17 03	17 39	20 32 73	10 20 41	
19	105	40.5	34.4	232	07.4	65	36.8	50	11	16 48	29	19 76	35 37	
20	120	40.4	34.8	246	33.0	66	28.6	52	16 02	42	24	13 78	41 36	
21	135	40.3	35.2	260	58.6	66	20.2	54	15 53	35	20	20 06 80	49 33	
22	150	40.2	35.6	275	24.3	67	11.8	56	42	27	14	19 58 83	10 57 32	
23	165	40.2	36.0	289	50.2	69	–15 03.3	58	29	18	09	49 86	11 06 29	
24	180	40.1	+21 36.4	304	16.1	69	–14 54.7	60 S	15 14	16 08	17 02	19 40 88	11 16 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 36 ^m 0		Mag: –3.9 PMG: 13 ^h 05 ^m		Mag: +1.4 PMG: 11 ^h 18 ^m		Mag: –1.9 PMG: 13 ^h 07 ^m		Mag: +0.3 PMG: 21 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	245	42.0	163 51.5	+23 55.7	190 26.8	+19 38.1	162 55.2	+23 00.2	31 00.1	–11 04.4
1	260	44.5	178 50.6	56.0	205 27.4	38.5	177 57.0	00.2	46 02.7	04.3
2	275	46.9	193 49.7	56.3	220 28.0	38.9	192 58.9	00.3	61 05.4	04.3
3	290	49.4	208 48.9	56.5	235 28.6	39.4	208 00.7	00.3	76 08.0	04.3
4	305	51.9	223 48.0	56.8	250 29.2	39.8	223 02.6	00.3	91 10.6	04.2
5	320	54.3	238 47.1	+23 57.0	265 29.8	+19 40.2	238 04.4	+23 00.4	106 13.2	–11 04.2
6	335	56.8	253 46.2	+23 57.3	280 30.5	+19 40.7	253 06.3	+23 00.4	121 15.8	–11 04.1
7	350	59.3	268 45.4	57.6	295 31.1	41.1	268 08.1	00.4	136 18.4	04.1
8	6	01.7	283 44.5	57.8	310 31.7	41.5	283 10.0	00.5	151 21.0	04.0
9	21	04.2	298 43.6	58.1	325 32.3	42.0	298 11.8	00.5	166 23.6	04.0
10	36	06.7	313 42.8	58.3	340 32.9	42.4	313 13.7	00.5	181 26.2	04.0
11	51	09.1	328 41.9	+23 58.6	355 33.5	+19 42.8	328 15.6	+23 00.6	196 28.8	–11 03.9
12	66	11.6	343 41.0	+23 58.9	10 34.2	+19 43.2	343 17.4	+23 00.6	211 31.4	–11 03.9
13	81	14.1	358 40.1	59.1	25 34.8	43.7	358 19.3	00.6	226 34.0	03.8
14	96	16.5	13 39.3	59.4	40 35.4	44.1	13 21.1	00.7	241 36.7	03.8
15	111	19.0	28 38.4	59.6	55 36.0	44.5	28 23.0	00.7	256 39.3	03.8
16	126	21.4	43 37.5	+23 59.9	70 36.6	45.0	43 24.8	00.7	271 41.9	03.7
17	141	23.9	58 36.6	+24 00.1	85 37.2	+19 45.4	58 26.7	+23 00.7	286 44.5	–11 03.7
18	156	26.4	73 35.7	+24 00.4	100 37.8	+19 45.8	73 28.5	+23 00.8	301 47.1	–11 03.6
19	171	28.8	88 34.9	00.6	115 38.5	46.2	88 30.4	00.8	316 49.7	03.6
20	186	31.3	103 34.0	00.8	130 39.1	46.7	103 32.2	00.8	331 52.3	03.5
21	201	33.8	118 33.1	01.1	145 39.7	47.1	118 34.1	00.9	346 54.9	03.5
22	216	36.2	133 32.2	01.3	160 40.3	47.5	133 35.9	00.9	1 57.5	03.5
23	231	38.7	148 31.4	01.6	175 40.9	47.9	148 37.8	00.9	17 00.1	03.4
24	246	41.2	163 30.5	+24 01.8	190 41.5	+19 48.4	163 39.6	+23 01.0	32 02.7	–11 03.4
Dif	—	—	–9	+3	+6	+4	+19	0	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 4				Edad: 19 ^d 0 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 6 20 ^h : 59 ^m 4 SD: 16 ^h 3 PMG: 3 ^h 52 ^m R°: 54 ^m																
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°				
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	m	h	m	m	h	m	m
0	180	40.1	+21	36.4	304	16.1	-14	54.7	86	58	60 N	** **	1 35	2 54	23 56	18	8 21	88			
1	195	40.0		36.8	318	42.1	70	46.1	86	58	58	** **	2 06	3 11	50 20		29	85			
2	210	39.9		37.2	333	08.2	71	37.3	88	56	56	0 34	29	25	44 23		37	82			
3	225	39.8		37.6	347	34.4	72	28.5	88	54	54	1 26	2 47	38	39 25		44	80			
4	240	39.7		37.9	2	00.6	72	19.5	90	52	52	1 55	3 03	49	34 27		50	78			
5	255	39.7	+21	38.3	16	27.0	74	-14	10.5	90	50	2 17	3 16	3 58	23 30	29	8 55	76			
6	270	39.6	+21	38.7	30	53.4	74	-14	01.4	91	45	2 56	3 42	4 18	23 21	32	9 07	72			
7	285	39.5		39.1	45	19.9	75	-13	52.3	91	40	3 23	4 03	35	13 36		16	69			
8	300	39.4		39.5	59	46.6	77	43.0	93	35	35	3 44	19	4 48	07 38		25	66			
9	315	39.3		39.9	74	13.3	77	33.7	93	30	30	4 01	33	5 00	23 01	40	32	64			
10	330	39.3		40.2	88	40.0	77	24.3	94	20	20	27	4 56	20	22 51	44	44	60			
11	345	39.2	+21	40.6	103	06.9	79	-13	14.8	95	10 N	4 48	5 15	5 38	22 42	48	9 55	56			
12	0	39.1	+21	41.0	117	33.9	80	-13	05.3	95	0	5 06	5 32	5 54	22 33	52	10 05	53			
13	15	39.0		41.4	132	00.9	80	-12	55.7	96	10 S	21	5 47	6 10	25 55		15	50			
14	30	38.9		41.8	146	28.1	82	46.0	97	20	20	36	6 03	27	16 58		25	47			
15	45	38.8		42.1	160	55.3	82	36.3	97	30	30	51	20	46	06 62		37	43			
16	60	38.7		42.5	175	22.6	83	26.5	98	35	35	5 58	30	6 57	22 00	65	44	41			
17	75	38.7	+21	42.9	189	50.0	84	-12	16.6	99	40	6 07	6 40	7 10	21 53	68	10 52	38			
18	90	38.6	+21	43.3	204	17.5	85	-12	06.7	99	45	6 16	6 52	7 25	21 45	71	11 01	35			
19	105	38.5		43.6	218	45.1	86	-11	56.7	100	50	26	7 07	44	35 75		12	31			
20	120	38.4		44.0	233	12.7	86	46.6	101	52	52	31	13	7 53	31 77		17	29			
21	135	38.3		44.4	247	40.4	87	36.5	101	54	54	36	21	8 03	26 79		22	28			
22	150	38.2		44.8	262	08.2	88	26.3	102	56	56	41	29	14	21 81		29	25			
23	165	38.2		45.1	276	36.1	89	16.1	102	58	58	47	38	27	15 83		35	23			
24	180	38.1	+21	45.5	291	04.1	90	-11	05.8	103	60 S	6 53	7 48	8 42	21 08	86	11 43	20			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG 7 ^h 32 ^m 0				Mag: -3.8 PMG: 13 ^h 07 ^m				Mag: +1.4 PMG: 11 ^h 17 ^m				Mag: -1.9 PMG: 13 ^h 04 ^m				Mag: +0.3 PMG: 21 ^h 48 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	246	41.2	163	30.5	+24	01.8	190	41.5	+19	48.4	163	39.6	+23	01.0	32	02.7	-11	03.4			
1	261	43.6	178	29.6		02.1	205	42.1		48.8	178	41.5		01.0	47	05.3		03.3			
2	276	46.1	193	28.7		02.3	220	42.8		49.2	193	43.3		01.0	62	07.9		03.3			
3	291	48.6	208	27.9		02.5	235	43.4		49.6	208	45.2		01.1	77	10.6		03.3			
4	306	51.0	223	27.0		02.8	250	44.0		50.1	223	47.0		01.1	92	13.2		03.2			
5	321	53.5	238	26.1	+24	03.0	265	44.6	+19	50.5	238	48.9	+23	01.1	107	15.8	-11	03.2			
6	336	55.9	253	25.2	+24	03.2	280	45.2	+19	50.9	253	50.7	+23	01.2	122	18.4	-11	03.1			
7	351	58.4	268	24.3		03.5	295	45.8		51.3	268	52.6		01.2	137	21.0		03.1			
8	7	00.9	283	23.5		03.7	310	46.4		51.8	283	54.4		01.2	152	23.6		03.1			
9	22	03.3	298	22.6		03.9	325	47.0		52.2	298	56.3		01.3	167	26.2		03.0			
10	37	05.8	313	21.7		04.1	340	47.7		52.6	313	58.1		01.3	182	28.8		03.0			
11	52	08.3	328	20.8	+24	04.4	355	48.3	+19	53.0	329	00.0	+23	01.3	197	31.4	-11	02.9			
12	67	10.7	343	20.0	+24	04.6	10	48.9	+19	53.4	344	01.9	+23	01.3	212	34.0	-11	02.9			
13	82	13.2	358	19.1		04.8	25	49.5		53.9	359	03.7		01.4	227	36.6		02.9			
14	97	15.7	13	18.2		05.0	40	50.1		54.3	14	05.6		01.4	242	39.2		02.8			
15	112	18.1	28	17.3		05.3	55	50.7		54.7	29	07.4		01.4	257	41.8		02.8			
16	127	20.6	43	16.4		05.5	70	51.3		55.1	44	09.3		01.5	272	44.4		02.7			
17	142	23.0	58	15.6	+24	05.7	85	51.9	+19	55.5	59	11.1	+23	01.5	287	47.0	-11	02.7			
18	157	25.5	73	14.7	+24	05.9	100	52.6	+19	56.0	74	13.0	+23	01.5	302	49.6	-11	02.7			
19	172	28.0	88	13.8		06.1	115	53.2		56.4	89	14.8		01.6	317	52.2		02.6			
20	187	30.4	103	12.9		06.4	130	53.8		56.8	104	16.7		01.6	332	54.9		02.6			
21	202	32.9	118	12.0		06.6	145	54.4		57.2	119	18.5		01.6	347	57.5		02.5			
22	217	35.4	133	11.2		06.8	160	55.0		57.6	134	20.4		01.7	3	00.1		02.5			
23	232	37.8	148	10.3		07.0	175	55.6		58.1	149	22.2		01.7	18	02.7		02.5			
24	247	40.3	163	09.4	+24	07.2	190	56.2	+19	58.5	164	24.1	+23	01.7	33	05.3	-11	02.4			
Dif	—		-9		+2		+6		+4		+19		0		+26		0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 5			Edad: 20 ^d 0 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 8 20 ^h : 58 ^m 5 PMG: 4 ^h 46 ^m R°: 51 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	38.1	+21 45.5	291	04.1	-11 05.8	60 N	21 04	22 26	** ** *	** ** *	9 49	85
1	195	38.0	45.9	305	32.2	-10 55.5	58	20 47	21 53	** ** *	** ** *	54	83
2	210	37.9	46.3	320	00.3	45.1	56	32	29	23 39	** ** *	9 59	80
3	225	37.8	46.6	334	28.6	34.7	54	19	21 10	22 34	** ** *	10 04	77
4	240	37.7	47.0	348	56.9	24.2	52	20 08	20 54	22 03	** ** *	08	75
5	255	37.6	+21 47.4	3	25.3	-10 13.7	50	19 58	20 41	21 41	23 59	25	74
6	270	37.6	+21 47.7	17	53.7	-10 03.1	45	19 38	20 14	21 01	23 53	30	70
7	285	37.5	48.1	32	22.3	-9 52.5	40	21	19 53	20 34	49 32	25	67
8	300	37.4	48.5	46	50.9	41.8	35	19 07	37	20 12	45 35	31	64
9	315	37.3	48.8	61	19.6	31.1	30	18 55	19 22	19 55	41 38	36	61
10	330	37.2	49.2	75	48.4	20.4	20	35	18 59	28	35 42	44	57
11	345	37.1	+21 49.6	90	17.2	-9 09.6	10 N	18 17	18 40	19 07	23 30	45	54
12	0	37.0	+21 49.9	104	46.1	-8 58.7	0	18 01	18 23	18 49	23 25	49	50
13	15	36.9	50.3	119	15.1	47.9	10 S	17 45	18 08	34	20 52	11 05	47
14	30	36.8	50.7	133	44.2	37.0	20	28	17 52	19	14 56	12	43
15	45	36.8	51.0	148	13.4	26.1	30	17 08	34	18 04	08 60	20	39
16	60	36.7	51.4	162	42.6	15.1	35	16 57	25	17 56	05 62	25	36
17	75	36.6	+21 51.7	177	11.9	-8 04.1	40	16 44	17 14	17 47	23 01	65	34
18	90	36.5	+21 52.1	191	41.2	-7 53.1	45	16 28	17 02	17 38	22 56	69	31
19	105	36.4	52.5	206	10.7	42.0	50	10	16 47	28	50 73	43	27
20	120	36.3	52.8	220	40.2	30.9	52	16 01	40	23	48 74	46	26
21	135	36.2	53.2	235	09.7	19.8	54	15 51	33	18	45 76	50	23
22	150	36.1	53.5	249	39.4	-7 08.7	56	40	25	13	42 78	54	21
23	165	36.0	53.9	264	09.1	-6 57.5	58	27	16	07	38 81	11 58	19
24	180	36.0	+21 54.2	278	38.9	-6 46.3	60 S	15 11	16 06	17 00	22 34	84	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 28 ^m 1		Mag: -3.8 PMG: 13 ^h 08 ^m		Mag: +1.4 PMG: 11 ^h 16 ^m		Mag: -1.9 PMG: 13 ^h 01 ^m		Mag: +0.3 PMG: 21 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	247	40.3	163	09.4	190	56.2	164	24.1	33	05.3
1	262	42.8	178	08.5	205	56.8	179	25.9	48	07.9
2	277	45.2	193	07.6	220	57.5	194	27.8	63	10.5
3	292	47.7	208	06.7	235	58.1	209	29.6	78	13.1
4	307	50.2	223	05.9	250	58.7	224	31.5	93	15.7
5	322	52.6	238	05.0	265	59.3	239	33.3	108	18.3
6	337	55.1	253	04.1	280	59.9	254	35.2	123	20.9
7	352	57.5	268	03.2	296	00.5	269	37.0	138	23.5
8	8	00.0	283	02.3	311	01.1	284	38.9	153	26.1
9	23	02.5	298	01.5	326	01.7	299	40.7	168	28.7
10	38	04.9	313	00.6	341	02.4	314	42.6	183	31.3
11	53	07.4	327	59.7	356	03.0	329	44.4	198	33.9
12	68	09.9	342	58.8	11	03.6	344	46.3	213	36.5
13	83	12.3	357	57.9	26	04.2	359	48.1	228	39.1
14	98	14.8	12	57.0	41	04.8	14	50.0	243	41.7
15	113	17.3	27	56.2	56	05.4	29	51.8	258	44.3
16	128	19.7	42	55.3	71	06.0	44	53.7	273	46.9
17	143	22.2	57	54.4	86	06.6	59	55.5	288	49.5
18	158	24.7	72	53.5	101	07.2	74	57.4	303	52.1
19	173	27.1	87	52.6	116	07.9	89	59.2	318	54.7
20	188	29.6	102	51.7	131	08.5	105	01.1	333	57.3
21	203	32.0	117	50.9	146	09.1	120	02.9	348	59.9
22	218	34.5	132	50.0	161	09.7	135	04.8	4	02.5
23	233	37.0	147	49.1	176	10.3	150	06.6	19	05.1
24	248	39.4	162	48.2	191	10.9	165	08.5	34	07.7
Dif	—		-9	+2	+6	+4	+19	0	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7				Edad: 21 ^d 0 PHE { 4 ^h : 58 ^m 2 12 ^h : 58 ^m 0 20 ^h : 57 ^m 7 PMG: 5 ^h 37 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	36.0	+21	54.2	278	38.9	-6	46.3	60 N	** **	1 29	2 51	0 14	15	11 14	83				
1	195	35.9		54.6	293	08.7 ¹⁰⁸		35.1 ¹¹²	58	** **	2 02	3 08	10 18		17 80					
2	210	35.8		55.0	307	38.6 ¹⁰⁹		23.9 ¹¹²	56	0 16	26	23	07 20		19 78					
3	225	35.7		55.3	322	08.6 ¹¹⁰		12.6 ¹¹³	54	1 21	2 45	36	04 22		21 76					
4	240	35.6		55.7	336	38.6 ¹¹⁰	-6	01.4 ¹¹²	52	1 52	3 01	47	0 01 24		23 74					
5	255	35.5	+21	56.0	351	08.7 ¹¹¹	-5	50.1 ¹¹³	50	2 14	3 14	3 57	** ** *		11 25	72				
6	270	35.4	+21	56.4	5	38.8 ¹¹¹	-5	38.8 ¹¹³	45	2 54	3 41	4 17	** ** *		11 29	68				
7	285	35.3		56.7	20	09.0 ¹¹²		27.5 ¹¹³	40	3 21	4 02	34	** ** *		32 65					
8	300	35.2		57.1	34	39.3 ¹¹³		16.1 ¹¹⁴	35	3 43	18	4 48	** ** *		35 62					
9	315	35.1		57.4	49	09.6 ¹¹³	-5	04.8 ¹¹³	30	4 00	33	5 00	** ** *		37 59					
10	330	35.0		57.8	63	40.0 ¹¹⁴	-4	53.4 ¹¹⁴	20	27	4 56	20	** ** *		41 55					
11	345	34.9	+21	58.1	78	10.5 ¹¹⁵	-4	42.0 ¹¹⁴	10 N	4 48	5 15	5 38	** ** *		11 45	51				
12	0	34.9	+21	58.5	92	41.0 ¹¹⁵	-4	30.7 ¹¹³	0	5 06	5 32	5 54	** ** *		11 48	48				
13	15	34.8		58.8	107	11.5 ¹¹⁵		19.3 ¹¹⁴	10 S	22	5 48	6 10	** ** *		52 44					
14	30	34.7		59.2	121	42.1 ¹¹⁶	-4	07.9 ¹¹⁴	20	37	6 04	28	** ** *		55 41					
15	45	34.6		59.5	136	12.8 ¹¹⁷	-3	56.4 ¹¹⁵	30	5 52	21	47	** ** *		11 59	37				
16	60	34.5	+21	59.9	150	43.5 ¹¹⁷		45.0 ¹¹⁴	35	6 00	31	6 59	** ** *		12 01	35				
17	75	34.4	+22	00.2	165	14.3 ¹¹⁸	-3	33.6 ¹¹⁴	40	6 08	6 42	7 12	** ** *		12 04	31				
18	90	34.3	+22	00.6	179	45.1 ¹¹⁸	-3	22.2 ¹¹⁴	45	6 17	6 54	7 27	** ** *		12 07	28				
19	105	34.2		00.9	194	15.9 ¹¹⁸	-3	10.8 ¹¹⁴	50	28	7 09	46	** ** *		10 25					
20	120	34.1		01.2	208	46.9 ¹²⁰	-2	59.3 ¹¹⁵	52	33	15	7 55	** ** *		12 23					
21	135	34.0		01.6	223	17.8 ¹¹⁹		47.9 ¹¹⁴	54	38	23	8 05	** ** *		13 22					
22	150	33.9		01.9	237	48.8 ¹²⁰		36.4 ¹¹⁵	56	43	31	17	** ** *		15 20					
23	165	33.8		02.3	252	19.9 ¹²¹		25.0 ¹¹⁴	58	49	40	30	23 59 79		17 18					
24	180	33.7	+22	02.6	266	51.0 ¹²¹	-2	13.6 ¹¹⁴	60 S	6 55	7 50	8 45	23 58 81		12 20	14				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 24 ^m 2				Mag: -3.8 PMG: 13 ^h 10 ^m				Mag: +1.4 PMG: 11 ^h 15 ^m				Mag: -1.9 PMG: 12 ^h 58 ^m				Mag: +0.3 PMG: 21 ^h 40 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	248	39.4	162	48.2	+24	11.9	191	10.9	+20	08.4	165	08.5	+23	02.4	34	07.7	-11	01.5		
1	263	41.9	177	47.3		12.1	206	11.5		08.8	180	10.3		02.5	49	10.3		01.4		
2	278	44.4	192	46.4		12.3	221	12.1		09.2	195	12.2		02.5	64	12.9		01.4		
3	293	46.8	207	45.6		12.4	236	12.7		09.6	210	14.0		02.5	79	15.5		01.4		
4	308	49.3	222	44.7		12.6	251	13.3		10.0	225	15.9		02.6	94	18.2		01.3		
5	323	51.8	237	43.8	+24	12.8	266	14.0	+20	10.4	240	17.7	+23	02.6	109	20.8	-11	01.3		
6	338	54.2	252	42.9	+24	13.0	281	14.6	+20	10.8	255	19.6	+23	02.6	124	23.4	-11	01.2		
7	353	56.7	267	42.0		13.1	296	15.2		11.2	270	21.4		02.7	139	26.0		01.2		
8	8	59.2	282	41.1		13.3	311	15.8		11.6	285	23.3		02.7	154	28.6		01.2		
9	24	01.6	297	40.2		13.5	326	16.4		12.0	300	25.1		02.7	169	31.2		01.1		
10	39	04.1	312	39.4		13.6	341	17.0		12.4	315	27.0		02.7	184	33.8		01.1		
11	54	06.5	327	38.5	+24	13.8	356	17.6	+20	12.8	330	28.8	+23	02.8	199	36.4	-11	01.0		
12	69	09.0	342	37.6	+24	14.0	11	18.2	+20	13.2	345	30.7	+23	02.8	214	39.0	-11	01.0		
13	84	11.5	357	36.7		14.1	26	18.8		13.7	0	32.5		02.8	229	41.6		01.0		
14	99	13.9	12	35.8		14.3	41	19.4		14.1	15	34.4		02.9	244	44.2		00.9		
15	114	16.4	27	34.9		14.5	56	20.1		14.5	30	36.2		02.9	259	46.8		00.9		
16	129	18.9	42	34.0		14.6	71	20.7		14.9	45	38.1		02.9	274	49.4		00.9		
17	144	21.3	57	33.2	+24	14.8	86	21.3	+20	15.3	60	39.9	+23	03.0	289	52.0	-11	00.8		
18	159	23.8	72	32.3	+24	14.9	101	21.9	+20	15.7	75	41.8	+23	03.0	304	54.6	-11	00.8		
19	174	26.3	87	31.4		15.1	116	22.5		16.1	90	43.6		03.0	319	57.2		00.7		
20	189	28.7	102	30.5		15.3	131	23.1		16.5	105	45.5		03.0	334	59.8		00.7		
21	204	31.2	117	29.6		15.4	146	23.7		16.9	120	47.3		03.1	350	02.4		00.7		
22	219	33.6	132	28.7		15.6	161	24.3		17.3	135	49.2		03.1	5	05.0		00.6		
23	234	36.1	147	27.8		15.7	176	24.9		17.7	150	51.0		03.1	20	07.6		00.6		
24	249	38.6	162	26.9	+24	15.9	191	25.5	+20	18.1	165	52.9	+23	03.2	35	10.2	-11	00.5		
Dif	—		-9		+2		+6		+4		+18		0		+26		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 0 PHE	SD: 15 ^h 7				Final del crepúsculo	Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 57 ^m 8				PMG: 6 ^h 25 ^m					R°: 46 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	33.7	+22 02.6	266	51.0	-2 13.6		60 N	21 08	22 33	** **	0 29 15		12 37 80	
1	195	33.6	02.9	281	22.1 ¹²¹	-2 02.2 ¹¹⁴		58	20 50	21 57	** **	28 17		37 77	
2	210	33.5	03.3	295	53.3 ¹²²	-1 50.7 ¹¹⁵		56	35	33	** **	27 19		37 75	
3	225	33.4	03.6	310	24.6 ¹²³	39.3 ¹¹⁴		54	22	21 13	22 40	26 21		37 73	
4	240	33.4	04.0	324	55.8 ¹²²	27.9 ¹¹⁴		52	10	20 57	22 07	25 23		37 71	
5	255	33.3	+22 04.3	339	27.2 ¹²⁴	-1 16.5 ¹¹⁴		50	20 00	20 43	21 44	0 24 25		12 37 69	
6	270	33.2	+22 04.6	353	58.5 ¹²³	-1 05.1 ¹¹⁴		45	19 40	20 16	21 04	0 23 28		12 37 65	
7	285	33.1	05.0	8	29.9 ¹²⁴	-0 53.7 ¹¹⁴		40	23	19 55	20 35	21 31		37 62	
8	300	33.0	05.3	23	01.3 ¹²⁴	42.3 ¹¹⁴		35	19 09	38	20 14	20 33		37 59	
9	315	32.9	05.6	37	32.8 ¹²⁵	30.9 ¹¹⁴		30	18 57	24	19 56	19 36		36 58	
10	330	32.8	06.0	52	04.3 ¹²⁵	19.5 ¹¹⁴		20	36	19 00	29	17 40		36 54	
11	345	32.7	+22 06.3	66	35.9 ¹²⁶	-0 08.2 ¹¹³		10 N	18 18	18 41	19 08	0 15 44		12 36 50	
12	0	32.6	+22 06.6	81	07.4 ¹²⁵	+0 03.2 ¹¹⁴		0	18 01	18 24	18 50	0 14 46		12 36 47	
13	15	32.5	07.0	95	39.0 ¹²⁶	14.5 ¹¹³		10 S	17 45	18 08	34	12 50		36 43	
14	30	32.4	07.3	110	10.7 ¹²⁷	25.8 ¹¹³		20	28	17 51	19	10 54		36 39	
15	45	32.3	07.6	124	42.4 ¹²⁷	37.2 ¹¹⁴		30	17 08	34	18 03	08 59		36 35	
16	60	32.2	08.0	139	14.1 ¹²⁷	48.4 ¹¹²		35	16 56	24	17 55	07 61		36 33	
17	75	32.1	+22 08.3	153	45.8 ¹²⁷	+0 59.7 ¹¹³		40	16 43	17 13	17 47	0 06 63		12 35 31	
18	90	32.0	+22 08.6	168	17.6 ¹²⁸	+1 11.0 ¹¹³		45	16 27	17 01	17 37	0 05 66		12 35 28	
19	105	31.9	08.9	182	49.4 ¹²⁸	22.2 ¹¹²		50	16 08	16 46	27	03 70		35 24	
20	120	31.8	09.3	197	21.2 ¹²⁸	33.4 ¹¹²		52	15 59	39	22	02 72		35 22	
21	135	31.7	09.6	211	53.1 ¹²⁹	44.6 ¹¹²		54	49	32	17	01 74		35 21	
22	150	31.6	09.9	226	24.9 ¹²⁸	+1 55.8 ¹¹²		56	37	23	11	0 00 76		35 18	
23	165	31.5	10.3	240	56.8 ¹²⁹	+2 07.0 ¹¹²		58	24	14	17 05	** ** *		35 16	
24	180	31.4	+22 10.6	255	28.8 ¹³⁰	+2 18.1 ¹¹¹		60 S	15 09	16 03	16 59	** ** *		12 34 15	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 20 ^m 2		Mag: -3.8 PMG: 13 ^h 11 ^m			Mag: +1.4 PMG: 11 ^h 14 ^m			Mag: -1.9 PMG: 12 ^h 55 ^m			Mag: +0.3 PMG: 21 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	
0	249	38.6	162	26.9	+24 15.9	191	25.5	+20 18.1	165	52.9	+23 03.2	35	10.2	-11 00.5	
1	264	41.0	177	26.1	16.0	206	26.1	18.5	180	54.7	03.2	50	12.8	00.5	
2	279	43.5	192	25.2	16.2	221	26.8	18.9	195	56.5	03.2	65	15.4	00.5	
3	294	46.0	207	24.3	16.3	236	27.4	19.3	210	58.4	03.2	80	18.0	00.4	
4	309	48.4	222	23.4	16.5	251	28.0	19.7	226	00.2	03.3	95	20.6	00.4	
5	324	50.9	237	22.5	+24 16.6	266	28.6	+20 20.1	241	02.1	+23 03.3	110	23.1	-11 00.4	
6	339	53.4	252	21.6	+24 16.8	281	29.2	+20 20.5	256	03.9	+23 03.3	125	25.7	-11 00.3	
7	354	55.8	267	20.7	16.9	296	29.8	20.9	271	05.8	03.4	140	28.3	00.3	
8	9	58.3	282	19.8	17.0	311	30.4	21.3	286	07.6	03.4	155	30.9	00.2	
9	25	00.8	297	19.0	17.2	326	31.0	21.7	301	09.5	03.4	170	33.5	00.2	
10	40	03.2	312	18.1	17.3	341	31.6	22.1	316	11.3	03.4	185	36.1	00.2	
11	55	05.7	327	17.2	+24 17.5	356	32.2	+20 22.5	331	13.2	+23 03.5	200	38.7	-11 00.1	
12	70	08.1	342	16.3	+24 17.6	11	32.8	+20 22.9	346	15.0	+23 03.5	215	41.3	-11 00.1	
13	85	10.6	357	15.4	17.7	26	33.4	23.3	1	16.9	03.5	230	43.9	-11 00.1	
14	100	13.1	12	14.5	17.9	41	34.0	23.6	16	18.7	03.6	245	46.5	-11 00.0	
15	115	15.5	27	13.6	18.0	56	34.7	24.0	31	20.6	03.6	260	49.1	-11 00.0	
16	130	18.0	42	12.7	18.1	71	35.3	24.4	46	22.4	03.6	275	51.7	-10 59.9	
17	145	20.5	57	11.9	+24 18.3	86	35.9	+20 24.8	61	24.3	+23 03.6	290	54.3	-10 59.9	
18	160	22.9	72	11.0	+24 18.4	101	36.5	+20 25.2	76	26.1	+23 03.7	305	56.9	-10 59.9	
19	175	25.4	87	10.1	18.5	116	37.1	25.6	91	28.0	03.7	320	59.5	59.8	
20	190	27.9	102	09.2	18.6	131	37.7	26.0	106	29.8	03.7	336	02.1	59.8	
21	205	30.3	117	08.3	18.8	146	38.3	26.4	121	31.7	03.8	351	04.7	59.8	
22	220	32.8	132	07.4	18.9	161	38.9	26.8	136	33.5	03.8	6	07.3	59.7	
23	235	35.2	147	06.5	19.0	176	39.5	27.2	151	35.4	03.8	21	09.9	59.7	
24	250	37.7	162	05.6	+24 19.1	191	40.1	+20 27.6	166	37.2	+23 03.8	36	12.5	-10 59.7	
Dif	—		-9	+1		+6	+4		+18	0		+26		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 0				Edad: 23 ^d 0 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 PMG: 7 ^h 11 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	31.4	+22	10.6	255	28.8	+2	18.1	60 N	** **	1 23	2 48	0 44	14	13 57	78		
1	195	31.3		10.9	270	00.7 ¹²⁹		29.3 ¹¹²	58	** **	1 58	3 06	45	16	54	76		
2	210	31.2		11.2	284	32.7 ¹³⁰		40.3 ¹¹⁰	56	** **	2 23	21	46	19	52	73		
3	225	31.1		11.5	299	04.7 ¹³⁰	+2	51.4 ¹¹¹	54	1 16	42	34	47	21	50	71		
4	240	31.0		11.9	313	36.7 ¹³⁰	+3	02.5 ¹¹¹	52	1 48	2 58	45	48	22	48	69		
5	255	30.9	+22	12.2	328	08.8 ¹³¹	+3	13.5 ¹¹⁰	50	2 11	3 12	3 55	0 49	24	13 46	68		
6	270	30.8	+22	12.5	342	40.8 ¹³⁰	+3	24.5 ¹¹⁰	45	2 52	3 40	4 16	0 51	27	13 42	64		
7	285	30.7		12.8	357	12.9 ¹³¹		35.5 ¹¹⁰	40	3 20	4 01	33	52	31	39	61		
8	300	30.6		13.1	11	45.0 ¹³¹		46.4 ¹⁰⁹	35	42	18	47	53	34	36	59		
9	315	30.5		13.5	26	17.1 ¹³¹	+3	57.3 ¹⁰⁹	30	3 59	32	4 59	55	35	34	56		
10	330	30.4		13.8	40	49.2 ¹³¹	+4	08.2 ¹⁰⁹	20	4 27	4 56	5 20	57	39	30	52		
11	345	30.3	+22	14.1	55	21.4 ¹³²	+4	19.0 ¹⁰⁸	10 N	4 48	5 15	5 38	0 59	42	13 26	49		
12	0	30.2	+22	14.4	69	53.5 ¹³¹	+4	29.9 ¹⁰⁹	0	5 06	5 32	5 54	1 00	46	13 23	45		
13	15	30.1		14.7	84	25.7 ¹³²		40.7 ¹⁰⁸	10 S	22	5 48	6 11	02	49	19	43		
14	30	30.0		15.0	98	57.9 ¹³²	+4	51.4 ¹⁰⁷	20	37	6 04	28	04	53	15	40		
15	45	29.9		15.4	113	30.1 ¹³²	+5	02.1 ¹⁰⁷	30	5 53	22	6 48	07	56	11	36		
16	60	29.8		15.7	128	02.3 ¹³²		12.8 ¹⁰⁷	35	6 01	32	7 00	08	59	09	33		
17	75	29.7	+22	16.0	142	34.6 ¹³³	+5	23.5 ¹⁰⁷	40	6 09	6 43	7 13	1 09	62	13 06	31		
18	90	29.6	+22	16.3	157	06.8 ¹³²	+5	34.1 ¹⁰⁶	45	6 19	6 56	7 29	1 11	65	13 03	28		
19	105	29.5		16.6	171	39.0 ¹³²		44.7 ¹⁰⁶	50	30	7 10	48	13	68	12 59	25		
20	120	29.4		16.9	186	11.3 ¹³³	+5	55.3 ¹⁰⁶	52	34	17	7 57	14	70	57	23		
21	135	29.3		17.2	200	43.6 ¹³³	+6	05.8 ¹⁰⁵	54	39	25	8 07	15	72	56	21		
22	150	29.2		17.5	215	15.8 ¹³²		16.3 ¹⁰⁵	56	45	33	19	16	74	53	20		
23	165	29.1		17.9	229	48.1 ¹³³		26.7 ¹⁰⁴	58	51	43	32	18	76	51	17		
24	180	29.0	+22	18.2	244	20.4 ¹³³	+6	37.1 ¹⁰⁴	60 S	6 58	7 53	8 48	1 19	79	12 49	14		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 16 ^m 3		Mag: -3.8 PMG: 13 ^h 12 ^m				Mag: +1.4 PMG: 11 ^h 13 ^m				Mag: -1.9 PMG: 12 ^h 52 ^m				Mag: +0.3 PMG: 21 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	37.7	162	05.6	+24	19.1	191	40.1	+20	27.6	166	37.2	+23	03.8	36	12.5	-10	59.7
1	265	40.2	177	04.7		19.3	206	40.7		28.0	181	39.1		03.9	51	15.1		59.6
2	280	42.6	192	03.9		19.4	221	41.3		28.4	196	40.9		03.9	66	17.7		59.6
3	295	45.1	207	03.0		19.5	236	41.9		28.8	211	42.8		03.9	81	20.3		59.5
4	310	47.6	222	02.1		19.6	251	42.6		29.1	226	44.6		03.9	96	22.9		59.5
5	325	50.0	237	01.2	+24	19.7	266	43.2	+20	29.5	241	46.4	+23	04.0	111	25.5	-10	59.5
6	340	52.5	252	00.3	+24	19.8	281	43.8	+20	29.9	256	48.3	+23	04.0	126	28.1	-10	59.4
7	355	55.0	266	59.4		20.0	296	44.4		30.3	271	50.1		04.0	141	30.7		59.4
8	10	57.4	281	58.5		20.1	311	45.0		30.7	286	52.0		04.1	156	33.3		59.4
9	25	59.9	296	57.6		20.2	326	45.6		31.1	301	53.8		04.1	171	35.9		59.3
10	41	02.4	311	56.7		20.3	341	46.2		31.5	316	55.7		04.1	186	38.5		59.3
11	56	04.8	326	55.8	+24	20.4	356	46.8	+20	31.9	331	57.5	+23	04.1	201	41.1	-10	59.3
12	71	07.3	341	55.0	+24	20.5	11	47.4	+20	32.3	346	59.4	+23	04.2	216	43.6	-10	59.2
13	86	09.7	356	54.1		20.6	26	48.0		32.6	2	01.2		04.2	231	46.2		59.2
14	101	12.2	11	53.2		20.7	41	48.6		33.0	17	03.1		04.2	246	48.8		59.1
15	116	14.7	26	52.3		20.8	56	49.2		33.4	32	04.9		04.2	261	51.4		59.1
16	131	17.1	41	51.4		20.9	71	49.8		33.8	47	06.8		04.3	276	54.0		59.1
17	146	19.6	56	50.5	+24	21.0	86	50.4	+20	34.2	62	08.6	+23	04.3	291	56.6	-10	59.0
18	161	22.1	71	49.6	+24	21.1	101	51.0	+20	34.6	77	10.5	+23	04.3	306	59.2	-10	59.0
19	176	24.5	86	48.7		21.2	116	51.6		35.0	92	12.3		04.4	322	01.8		59.0
20	191	27.0	101	47.8		21.3	131	52.3		35.4	107	14.2		04.4	337	04.4		58.9
21	206	29.5	116	46.9		21.4	146	52.9		35.7	122	16.0		04.4	352	07.0		58.9
22	221	31.9	131	46.1		21.5	161	53.5		36.1	137	17.8		04.4	7	09.6		58.9
23	236	34.4	146	45.2		21.6	176	54.1		36.5	152	19.7		04.5	22	12.2		58.8
24	251	36.9	161	44.3	+24	21.7	191	54.7	+20	36.9	167	21.5	+23	04.5	37	14.8	-10	58.8
Dif	—		-9		+1		+6		+4		+18		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 24 ^d 0 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^o 8 20 ^h : 55 ^o 6 SD: 15 ^h 3 PMG: 7 ^h 57 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	29.0	+22 18.2	244	20.4	+6 37.1	104	60 N	21 11	22 39	** **	0 58 15	15 15 76	
1	195	28.9	18.5	258	52.7 ¹³³	47.5	104	58	20 53	22 02	** **	1 01 18	10 73	
2	210	28.8	18.8	273	25.0 ¹³³	+6 57.8	103	56	37	21 36	** **	05 20	05 71	
3	225	28.7	19.1	287	57.3 ¹³³	+7 08.1	103	54	24	16	22 46	08 22	15 01 69	
4	240	28.6	19.4	302	29.6 ¹³³	18.3	102	52	13	21 00	22 11	10 24	14 57 67	
5	255	28.5	+22 19.7	317	01.9 ¹³³	+7 28.5	102	50	20 02	20 46	21 47	1 13 25	14 54 65	
6	270	28.4	+22 20.0	331	34.2 ¹³³	+7 38.7	102	45	19 41	20 18	21 06	1 18 29	14 46 63	
7	285	28.2	20.3	346	06.5 ¹³³	48.8	101	40	24	19 56	20 37	23 31	40 60	
8	300	28.1	20.6	0	38.8 ¹³³	+7 58.8	100	35	19 10	39	20 15	27 33	35 57	
9	315	28.0	20.9	15	11.1 ¹³³	+8 08.9	101	30	18 58	25	19 58	30 36	30 55	
10	330	27.9	21.2	29	43.4 ¹³³	18.8	99	20	37	19 01	30	36 40	22 52	
11	345	27.8	+22 21.5	44	15.8 ¹³⁴	+8 28.8	100	10 N	18 19	18 41	19 08	1 41 43	14 15 49	
12	0	27.7	+22 21.8	58	48.1 ¹³³	+8 38.7	99	0	18 02	18 24	18 50	1 46 46	14 08 46	
13	15	27.6	22.1	73	20.4 ¹³³	48.5	98	10 S	17 45	18 08	34	51 49	14 02 43	
14	30	27.5	22.4	87	52.7 ¹³³	+8 58.3	98	20	28	17 51	19	1 57 52	13 55 40	
15	45	27.4	22.7	102	25.0 ¹³³	+9 08.0	97	30	17 07	34	18 03	2 03 56	47 36	
16	60	27.3	23.0	116	57.3 ¹³³	17.7	97	35	16 56	24	17 55	07 58	42 35	
17	75	27.2	+22 23.3	131	29.6 ¹³³	+9 27.4	97	40	16 42	17 12	17 46	2 11 60	13 37 32	
18	90	27.1	+22 23.6	146	01.9 ¹³³	+9 37.0	96	45	16 26	17 00	17 37	2 16 63	13 31 30	
19	105	27.0	23.9	160	34.2 ¹³³	46.5	95	50	16 07	16 45	26	21 67	24 26	
20	120	26.9	24.2	175	06.4 ¹³²	+9 56.0	95	52	15 58	38	21	24 68	20 25	
21	135	26.8	24.5	189	38.7 ¹³³	+10 05.4	94	54	47	30	16	27 70	17 23	
22	150	26.7	24.8	204	11.0 ¹³³	14.8	94	56	36	22	10	30 72	13 21	
23	165	26.6	25.1	218	43.2 ¹³²	24.2	94	58	22	12	17 04	34 74	08 20	
24	180	26.4	+22 25.4	233	15.5 ¹³³	+10 33.4	92	60 S	15 06	16 02	16 57	2 38 77	13 03 17	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 12 ^m 4		Mag: -3.8 PMG: 13 ^h 14 ^m		Mag: +1.4 PMG: 11 ^h 12 ^m		Mag: -1.9 PMG: 12 ^h 49 ^m		Mag: +0.3 PMG: 21 ^h 27 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	251	36.9	161	44.3	+24 21.7	191	54.7	+20 36.9	167	21.5	+23 04.5	37	14.8	-10 58.8
1	266	39.3	176	43.4	21.8	206	55.3	37.3	182	23.4	04.5	52	17.4	58.7
2	281	41.8	191	42.5	21.9	221	55.9	37.7	197	25.2	04.5	67	20.0	58.7
3	296	44.2	206	41.6	22.0	236	56.5	38.0	212	27.1	04.6	82	22.6	58.7
4	311	46.7	221	40.7	22.0	251	57.1	38.4	227	28.9	04.6	97	25.2	58.6
5	326	49.2	236	39.8	+24 22.1	266	57.7	+20 38.8	242	30.8	+23 04.6	112	27.7	-10 58.6
6	341	51.6	251	38.9	+24 22.2	281	58.3	+20 39.2	257	32.6	+23 04.7	127	30.3	-10 58.6
7	356	54.1	266	38.0	22.3	296	58.9	39.6	272	34.5	04.7	142	32.9	58.5
8	11	56.6	281	37.1	22.4	311	59.5	39.9	287	36.3	04.7	157	35.5	58.5
9	26	59.0	296	36.3	22.5	327	00.1	40.3	302	38.2	04.7	172	38.1	58.5
10	42	01.5	311	35.4	22.5	342	00.7	40.7	317	40.0	04.8	187	40.7	58.4
11	57	04.0	326	34.5	+24 22.6	357	01.3	+20 41.1	332	41.9	+23 04.8	202	43.3	-10 58.4
12	72	06.4	341	33.6	+24 22.7	12	01.9	+20 41.5	347	43.7	+23 04.8	217	45.9	-10 58.4
13	87	08.9	356	32.7	22.8	27	02.5	41.8	2	45.5	04.8	232	48.5	58.3
14	102	11.3	11	31.8	22.8	42	03.2	42.2	17	47.4	04.9	247	51.1	58.3
15	117	13.8	26	30.9	22.9	57	03.8	42.6	32	49.2	04.9	262	53.7	58.3
16	132	16.3	41	30.0	23.0	72	04.4	43.0	47	51.1	04.9	277	56.3	58.2
17	147	18.7	56	29.1	+24 23.1	87	05.0	+20 43.4	62	52.9	+23 04.9	292	58.9	-10 58.2
18	162	21.2	71	28.2	+24 23.1	102	05.6	+20 43.7	77	54.8	+23 05.0	308	01.4	-10 58.1
19	177	23.7	86	27.3	23.2	117	06.2	44.1	92	56.6	05.0	323	04.0	58.1
20	192	26.1	101	26.4	23.3	132	06.8	44.5	107	58.5	05.0	338	06.6	58.1
21	207	28.6	116	25.6	23.3	147	07.4	44.9	123	00.3	05.0	353	09.2	58.0
22	222	31.1	131	24.7	23.4	162	08.0	45.2	138	02.2	05.1	8	11.8	58.0
23	237	33.5	146	23.8	23.5	177	08.6	45.6	153	04.0	05.1	23	14.4	58.0
24	252	36.0	161	22.9	+24 23.5	192	09.2	+20 46.0	168	05.9	+23 05.1	38	17.0	-10 57.9
Dif	—		-9	+1		+6	+4		+18		0	+26		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 3				Edad: 25 ^d 0 PHE { SD: 15 ^h 1 PMG: 8 ^h 43 ^m R°: 46 ^m 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	26.4	+22	25.4	233	15.5	+10	33.4	60 N	** **	1 17	2 45	1 13	19	16	31	73	
1	195	26.3		25.7	247	47.7 ¹³²		42.7 ⁹³	58	** **	1 55	3 04	19	21		23	71	
2	210	26.2		25.9	262	20.0 ¹³³	+10	51.8 ⁹¹	56	** **	2 20	19	25	23		16	69	
3	225	26.1		26.2	276	52.2 ¹³²	+11	00.9 ⁹¹	54	1 10	40	32	30	24		10	66	
4	240	26.0		26.5	291	24.4 ¹³²		10.0 ⁹¹	52	1 45	2 57	44	34	26	16	04	65	
5	255	25.9	+22	26.8	305	56.6 ¹³²	+11	19.0 ⁹⁰	50	2 09	3 11	3 54	1 38	28	15	59	64	
6	270	25.8	+22	27.1	320	28.8 ¹³²	+11	27.9 ⁸⁹	45	2 50	3 38	4 15	1 47	31	15	49	60	
7	285	25.7		27.4	335	01.0 ¹³²		36.8 ⁸⁹	40	3 19	4 00	32	1 54	33		40	58	
8	300	25.6		27.7	349	33.2 ¹³²		45.7 ⁸⁹	35	41	17	46	2 00	36		32	56	
9	315	25.5		28.0	4	05.3 ¹³¹	+11	54.4 ⁸⁷	30	3 59	32	4 59	06	37		25	55	
10	330	25.4		28.2	18	37.5 ¹³²	+12	03.1 ⁸⁷	20	4 27	4 55	5 20	16	40		14	51	
11	345	25.3	+22	28.5	33	09.6 ¹³¹	+12	11.8 ⁸⁷	10 N	4 48	5 15	5 38	2 24	43	15	04	49	
12	0	25.2	+22	28.8	47	41.8 ¹³²	+12	20.4 ⁸⁶	0	5 06	5 32	5 55	2 32	46	14	54	47	
13	15	25.0		29.1	62	13.9 ¹³¹		28.9 ⁸⁵	10 S	22	5 49	6 11	40	49		45	44	
14	30	24.9		29.4	76	46.0 ¹³¹		37.3 ⁸⁴	20	38	6 05	29	49	51		35	41	
15	45	24.8		29.7	91	18.1 ¹³¹		45.7 ⁸⁴	30	5 53	23	6 49	2 59	55		23	39	
16	60	24.7		29.9	105	50.1 ¹³⁰	+12	54.1 ⁸⁴	35	6 02	33	7 01	3 05	56		17	36	
17	75	24.6	+22	30.2	120	22.2 ¹³¹	+13	02.4 ⁸³	40	6 10	6 44	7 14	3 11	59	14	09	35	
18	90	24.5	+22	30.5	134	54.2 ¹³⁰	+13	10.6 ⁸²	45	6 20	6 57	7 30	3 19	61	14	01	32	
19	105	24.4		30.8	149	26.3 ¹³¹		18.7 ⁸¹	50	31	7 12	50	28	65	13	50	29	
20	120	24.3		31.1	163	58.3 ¹³⁰		26.8 ⁸¹	52	36	19	7 59	32	67		45	28	
21	135	24.2		31.3	178	30.3 ¹³⁰		34.8 ⁸⁰	54	41	27	8 10	37	68		40	26	
22	150	24.1		31.6	193	02.3 ¹³⁰		42.8 ⁸⁰	56	47	35	21	42	70		34	25	
23	165	23.9		31.9	207	34.2 ¹²⁹		50.6 ⁷⁸	58	6 53	45	35	48	72		28	22	
24	180	23.8	+22	32.2	222	06.2 ¹³⁰	+13	58.5 ⁷⁹	60 S	7 00	7 56	8 51	3 55	75	13	20	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 08 ^m 4		Mag: -3.8 PMG: 13 ^h 15 ^m		Mag: +1.4 PMG: 11 ^h 11 ^m		Mag: -1.9 PMG: 12 ^h 46 ^m		Mag: +0.4 PMG: 21 ^h 23 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	252	36.0	161	22.9	+24	23.5	192	09.2	+20	46.0
1	267	38.5	176	22.0		23.6	207	09.8		46.4
2	282	40.9	191	21.1		23.6	222	10.4		46.7
3	297	43.4	206	20.2		23.7	237	11.0		47.1
4	312	45.8	221	19.3		23.8	252	11.6		47.5
5	327	48.3	236	18.4	+24	23.8	267	12.2	+20	47.9
6	342	50.8	251	17.5	+24	23.9	282	12.8	+20	48.2
7	357	53.2	266	16.6		23.9	297	13.4		48.6
8	12	55.7	281	15.8		24.0	312	14.0		49.0
9	27	58.2	296	14.9		24.0	327	14.6		49.4
10	43	00.6	311	14.0		24.1	342	15.2		49.7
11	58	03.1	326	13.1	+24	24.1	357	15.8	+20	50.1
12	73	05.6	341	12.2	+24	24.2	12	16.4	+20	50.5
13	88	08.0	356	11.3		24.2	27	17.0		50.8
14	103	10.5	11	10.4		24.3	42	17.6		51.2
15	118	13.0	26	09.5		24.3	57	18.3		51.6
16	133	15.4	41	08.6		24.3	72	18.9		52.0
17	148	17.9	56	07.7	+24	24.4	87	19.5	+20	52.3
18	163	20.3	71	06.8	+24	24.4	102	20.1	+20	52.7
19	178	22.8	86	05.9		24.5	117	20.7		53.1
20	193	25.3	101	05.0		24.5	132	21.3		53.4
21	208	27.7	116	04.2		24.5	147	21.9		53.8
22	223	30.2	131	03.3		24.6	162	22.5		54.2
23	238	32.7	146	02.4		24.6	177	23.1		54.5
24	253	35.1	161	01.5	+24	24.6	192	23.7	+20	54.9
Dif	—		-9		0		+6		+4	
							+18		0	
									+26	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 26 ^d 0 PHE { 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/7										
	PMG: 11 ^h 58 ^m 5			SD: 15°0 PMG: 9 ^h 29 ^m R°: 47 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	180	23.8	+22 32.2	222	06.2	+13 58.5	60 N	21 14	22 45	** **	1 32 22		17 44 69	
1	195	23.7	32.4	236	38.1 ¹²⁹	+14 06.2	58	20 55	22 06	** **	40 25		34 66	
2	210	23.6	32.7	251	10.0 ¹²⁹	13.9	56	40	21 39	** **	48 26		25 64	
3	225	23.5	33.0	265	41.9 ¹²⁹	21.5	54	26	19	22 51	1 54 29		17 63	
4	240	23.4	33.3	280	13.8 ¹²⁹	29.0	52	15	21 02	22 15	2 00 30		09 62	
5	255	23.3	+22 33.5	294	45.7 ¹²⁹	+14 36.5	50	20 04	20 48	21 50	2 06 31		17 03 61	
6	270	23.2	+22 33.8	309	17.5 ¹²⁸	+14 43.9	45	19 43	20 20	21 08	2 18 34		16 49 58	
7	285	23.1	34.1	323	49.3 ¹²⁸	51.2	40	25	19 58	20 39	27 37		38 56	
8	300	22.9	34.3	338	21.2 ¹²⁹	+14 58.5	35	19 11	40	20 17	36 38		28 55	
9	315	22.8	34.6	352	52.9 ¹²⁷	+15 05.7	30	18 59	26	19 59	43 40		20 53	
10	330	22.7	34.9	7	24.7 ¹²⁸	12.8	20	37	19 02	31	2 56 42		16 05 51	
11	345	22.6	+22 35.1	21	56.5 ¹²⁸	+15 19.8	10 N	18 19	18 42	19 09	3 07 45		15 53 49	
12	0	22.5	+22 35.4	36	28.2 ¹²⁷	+15 26.8	0	18 02	18 25	18 51	3 18 47		15 41 47	
13	15	22.4	35.7	50	59.9 ¹²⁷	33.7	10 S	17 45	18 08	34	29 49		29 45	
14	30	22.3	35.9	65	31.7 ¹²⁸	40.5	20	28	17 51	19	40 52		16 43	
15	45	22.2	36.2	80	03.3 ¹²⁶	47.2	30	17 07	33	18 03	3 54 54		15 02 41	
16	60	22.0	36.5	94	35.0 ¹²⁷	+15 53.9	35	16 55	23	17 55	4 01 56		14 53 40	
17	75	21.9	+22 36.7	109	06.7 ¹²⁷	+16 00.5	40	16 42	17 12	17 46	4 10 57		14 44 38	
18	90	21.8	+22 37.0	123	38.3 ¹²⁶	+16 07.0	45	16 26	16 59	17 36	4 20 60		14 33 36	
19	105	21.7	37.3	138	09.9 ¹²⁶	13.4	50	16 06	44	25	33 62		19 34	
20	120	21.6	37.5	152	41.5 ¹²⁶	19.8	52	15 57	37	20	39 63		13 33	
21	135	21.5	37.8	167	13.1 ¹²⁶	26.1	54	46	29	15	45 65		14 06 31	
22	150	21.4	38.1	181	44.6 ¹²⁵	32.3	56	34	20	09	4 52 67		13 59 29	
23	165	21.2	38.3	196	16.2 ¹²⁶	38.4	58	20	11	17 03	5 00 69		50 28	
24	180	21.1	+22 38.6	210	47.7 ¹²⁵	+16 44.4	60 S	15 04	16 00	16 56	5 10 71		13 40 26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 04 ^m 5		Mag: -3.8 PMG: 13 ^h 17 ^m		Mag: +1.4 PMG: 11 ^h 10 ^m		Mag: -1.9 PMG: 12 ^h 43 ^m		Mag: +0.4 PMG: 21 ^h 19 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	253	35.1	161	01.5	192	23.7	168	50.1	39	19.1
1	268	37.6	176	00.6	207	24.3	183	52.0	54	21.7
2	283	40.1	190	59.7	222	24.9	198	53.8	69	24.3
3	298	42.5	205	58.8	237	25.5	213	55.7	84	26.9
4	313	45.0	220	57.9	252	26.1	228	57.5	99	29.5
5	328	47.4	235	57.0	267	26.7	243	59.4	114	32.1
6	343	49.9	250	56.1	282	27.3	259	01.2	129	34.7
7	358	52.4	265	55.2	297	27.9	274	03.1	144	37.2
8	13	54.8	280	54.4	312	28.5	289	04.9	159	39.8
9	28	57.3	295	53.5	327	29.1	304	06.7	174	42.4
10	43	59.8	310	52.6	342	29.7	319	08.6	189	45.0
11	59	02.2	325	51.7	357	30.3	334	10.4	204	47.6
12	74	04.7	340	50.8	12	30.9	349	12.3	219	50.2
13	89	07.2	355	49.9	27	31.5	4	14.1	234	52.8
14	104	09.6	10	49.0	42	32.1	19	16.0	249	55.3
15	119	12.1	25	48.1	57	32.7	34	17.8	264	57.9
16	134	14.6	40	47.2	72	33.3	49	19.7	280	00.5
17	149	17.0	55	46.3	87	33.9	64	21.5	295	03.1
18	164	19.5	70	45.4	102	34.5	79	23.3	310	05.7
19	179	21.9	85	44.5	117	35.1	94	25.2	325	08.3
20	194	24.4	100	43.7	132	35.7	109	27.0	340	10.9
21	209	26.9	115	42.8	147	36.3	124	28.9	355	13.4
22	224	29.3	130	41.9	162	36.9	139	30.7	10	16.0
23	239	31.8	145	41.0	177	37.5	154	32.6	25	18.6
24	254	34.3	160	40.1	192	38.1	169	34.4	40	21.2
Dif	—		-9		+6		+18		+26	
			0		+4		0		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 7			Edad: 27 ^d 0 PHE { SD: 14 ^h 9 PMG: 10 ^h 16 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	21.1	+22 38.6	210	47.7	+16 44.4	60 N	** **	1 12	2 43		1 54	29	18 53	61
1	195	21.0	38.8	225	19.2 ¹²⁵	50.4	59	** **	1 51	3 02		2 05	31	40	60
2	210	20.9	39.1	239	50.7 ¹²⁵	+16 56.3	56	** **	2 18	17		14	33	29	59
3	225	20.8	39.3	254	22.1 ¹²⁴	+17 02.1	58	1 06	38	31		23	33	20	58
4	240	20.7	39.6	268	53.6 ¹²⁵	07.8	57	1 42	2 55	42		30	35	11	57
5	255	20.6	+22 39.9	283	25.0 ¹²⁴	+17 13.5	57	2 07	3 09	3 53		2 37	36	18 04	56
6	270	20.4	+22 40.1	297	56.4 ¹²⁴	+17 19.0	55	2 49	3 37	4 14		2 52	38	17 47	55
7	285	20.3	40.4	312	27.8 ¹²⁴	24.5	54	3 18	3 59	32		3 04	39	34	54
8	300	20.2	40.6	326	59.2 ¹²⁴	29.9	54	40	4 17	46		14	41	23	53
9	315	20.1	40.9	341	30.5 ¹²³	35.2	53	3 58	31	4 59		23	42	17 13	52
10	330	20.0	41.1	356	01.9 ¹²⁴	40.5	53	4 26	4 55	5 20		38	45	16 56	51
11	345	19.9	+22 41.4	10	33.2 ¹²³	+17 45.6	51	4 48	5 15	5 38		3 52	46	16 42	49
12	0	19.8	+22 41.6	25	04.5 ¹²³	+17 50.7	51	5 07	5 33	5 55		4 05	48	16 28	48
13	15	19.6	41.9	39	35.8 ¹²³	+17 55.7	50	23	5 49	6 12		18	49	16 14	47
14	30	19.5	42.1	54	07.1 ¹²³	+18 00.6	49	38	6 06	30		32	50	15 59	46
15	45	19.4	42.4	68	38.3 ¹²²	05.4	48	30	5 54	24		48	52	43	44
16	60	19.3	42.6	83	09.6 ¹²³	10.1	47	35	6 03	34		4 57	54	33	43
17	75	19.2	+22 42.9	97	40.8 ¹²²	+18 14.8	47	40	6 12	6 45		5 07	56	15 22	42
18	90	19.1	+22 43.1	112	12.0 ¹²²	+18 19.3	45	45	6 21	6 58		5 20	57	15 09	40
19	105	18.9	43.4	126	43.2 ¹²²	23.8	45	50	33	7 14		35	59	14 53	39
20	120	18.8	43.6	141	14.3 ¹²¹	28.2	44	52	37	21		42	60	46	37
21	135	18.7	43.9	155	45.5 ¹²²	32.5	43	54	43	29		50	61	37	37
22	150	18.6	44.1	170	16.7 ¹²²	36.7	42	56	49	37		5 59	62	28	36
23	165	18.5	44.3	184	47.8 ¹²¹	40.8	41	58	6 55	47		6 09	64	18	34
24	180	18.4	+22 44.6	199	18.9 ¹²¹	+18 44.8	40	60 S	7 02	7 58		6 21	65	14 06	32
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 00 ^m 6		Mag: -3.8 PMG: 13 ^h 18 ^m			Mag: +1.4 PMG: 11 ^h 09 ^m			Mag: -1.9 PMG: 12 ^h 40 ^m			Mag: +0.4 PMG: 21 ^h 15 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	254	34.3	160	40.1	+24 25.0	192	38.1	+21 03.6	169	34.4	+23 06.3	40	21.2	-10 56.3	
1	269	36.7	175	39.2	25.0	207	38.7	04.0	184	36.3	06.3	55	23.8	56.3	
2	284	39.2	190	38.3	25.0	222	39.3	04.3	199	38.1	06.4	70	26.4	56.3	
3	299	41.7	205	37.4	25.0	237	39.9	04.7	214	39.9	06.4	85	28.9	56.2	
4	314	44.1	220	36.5	25.0	252	40.5	05.0	229	41.8	06.4	100	31.5	56.2	
5	329	46.6	235	35.6	+24 25.0	267	41.1	+21 05.4	244	43.6	+23 06.4	115	34.1	-10 56.2	
6	344	49.1	250	34.7	+24 25.0	282	41.7	+21 05.7	259	45.5	+23 06.5	130	36.7	-10 56.1	
7	359	51.5	265	33.8	25.0	297	42.3	06.1	274	47.3	06.5	145	39.3	56.1	
8	14	54.0	280	33.0	25.0	312	42.9	06.5	289	49.2	06.5	160	41.9	56.1	
9	29	56.4	295	32.1	25.0	327	43.5	06.8	304	51.0	06.5	175	44.5	56.0	
10	44	58.9	310	31.2	25.0	342	44.1	07.2	319	52.9	06.6	190	47.0	56.0	
11	60	01.4	325	30.3	+24 25.0	357	44.7	+21 07.5	334	54.7	+23 06.6	205	49.6	-10 56.0	
12	75	03.8	340	29.4	+24 25.0	12	45.3	+21 07.9	349	56.5	+23 06.6	220	52.2	-10 56.0	
13	90	06.3	355	28.5	24.9	27	45.9	08.2	4	58.4	06.6	235	54.8	55.9	
14	105	08.8	10	27.6	24.9	42	46.5	08.6	20	00.2	06.7	250	57.4	55.9	
15	120	11.2	25	26.7	24.9	57	47.1	08.9	35	02.1	06.7	265	59.9	55.9	
16	135	13.7	40	25.8	24.9	72	47.7	09.3	50	03.9	06.7	281	02.5	55.8	
17	150	16.2	55	24.9	+24 24.9	87	48.3	+21 09.6	65	05.8	+23 06.7	296	05.1	-10 55.8	
18	165	18.6	70	24.1	+24 24.9	102	48.9	+21 10.0	80	07.6	+23 06.8	311	07.7	-10 55.8	
19	180	21.1	85	23.2	24.8	117	49.5	10.3	95	09.5	06.8	326	10.3	55.7	
20	195	23.5	100	22.3	24.8	132	50.1	10.7	110	11.3	06.8	341	12.9	55.7	
21	210	26.0	115	21.4	24.8	147	50.7	11.0	125	13.1	06.8	356	15.4	55.7	
22	225	28.5	130	20.5	24.8	162	51.3	11.4	140	15.0	06.8	11	18.0	55.6	
23	240	30.9	145	19.6	24.7	177	51.9	11.7	155	16.8	06.9	26	20.6	55.6	
24	255	33.4	160	18.7	+24 24.7	192	52.5	+21 12.1	170	18.7	+23 06.9	41	23.2	-10 55.6	
Dif	—		-9		0	+6		+4	+18		0	+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 58 ^m 9			Edad: 28 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	18.4	+22 44.6	199	18.9	+18 44.8	40	60 N	21 17	22 51	** **	2 23 37		19 54 53	
1	195	18.2	44.8	213	50.0 ¹²¹	48.8	38	58	20 58	22 09	** **	36 38		40 52	
2	210	18.1	45.1	228	21.1 ¹²¹	52.6	38	56	42	21 42	** **	47 39		28 52	
3	225	18.0	45.3	242	52.2 ¹²¹	+18 56.4	37	54	28	21	22 57	2 56 41		18 51	
4	240	17.9	45.5	257	23.2 ¹²⁰	+19 00.1	36	52	16	21 04	22 18	3 05 41		08 52	
5	255	17.8	+22 45.8	271	54.3 ¹²¹	+19 03.7	36	50	20 06	20 50	21 53	3 13 41		19 00 51	
6	270	17.6	+22 46.0	286	25.3 ¹²⁰	+19 07.2	35	45	19 44	20 21	21 10	3 30 42		18 42 51	
7	285	17.5	46.3	300	56.4 ¹²¹	10.6	34	40	27	19 59	20 40	43 44		28 50	
8	300	17.4	46.5	315	27.4 ¹²⁰	13.9	33	35	19 12	42	18	3 55 45		16 49	
9	315	17.3	46.7	329	58.4 ¹²⁰	17.1	32	30	18 59	27	20 00	4 05 45		18 05 50	
10	330	17.2	47.0	344	29.4 ¹²⁰	20.3	32	20	38	19 02	19 32	23 46		17 47 49	
11	345	17.1	+22 47.2	359	00.3 ¹¹⁹	+19 23.3	30	10 N	18 20	18 43	19 10	4 38 47		17 31 48	
12	0	16.9	+22 47.4	13	31.3 ¹²⁰	+19 26.3	30	0	18 03	18 25	18 51	4 53 48		17 16 48	
13	15	16.8	47.7	28	02.3 ¹²⁰	29.1	28	10 S	17 46	18 08	35	5 07 49		17 01 48	
14	30	16.7	47.9	42	33.2 ¹¹⁹	31.9	28	20	28	17 51	19	22 50		16 45 47	
15	45	16.6	48.1	57	04.2 ¹²⁰	34.6	27	30	17 07	33	18 03	40 51		27 46	
16	60	16.5	48.4	71	35.1 ¹¹⁹	37.2	26	35	16 55	23	17 55	5 51 51		16 46	
17	75	16.3	+22 48.6	86	06.0 ¹¹⁹	+19 39.7	25	40	16 41	17 12	17 46	6 03 52		16 04 45	
18	90	16.2	+22 48.8	100	37.0 ¹²⁰	+19 42.1	24	45	16 25	16 59	17 36	6 17 52		15 49 45	
19	105	16.1	49.1	115	07.9 ¹¹⁹	44.4	23	50	16 05	43	24	34 54		32 44	
20	120	16.0	49.3	129	38.8 ¹¹⁹	46.6	22	52	15 56	36	19	42 54		23 44	
21	135	15.9	49.5	144	09.7 ¹¹⁹	48.8	22	54	45	28	14	6 51 55		14 44	
22	150	15.7	49.7	158	40.6 ¹¹⁹	50.8	20	56	33	19	08	7 01 56		15 04 43	
23	165	15.6	50.0	173	11.5 ¹¹⁹	52.7	19	58	19	16 10	17 02	13 56		14 52 42	
24	180	15.5	+22 50.2	187	42.4 ¹¹⁹	+19 54.6	19	60 S	15 02	15 59	16 55	7 26 58		14 38 42	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 56 ^m 6		Mag: -3.8 PMG: 13 ^h 20 ^m		Mag: +1.4 PMG: 11 ^h 08 ^m		Mag: -1.9 PMG: 12 ^h 37 ^m		Mag: +0.4 PMG: 21 ^h 11 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	255	33.4	160	18.7	+24 24.7	192	52.5	+21 12.1	170	18.7	+23 06.9	41 23.2	-10 55.6		
1	270	35.9	175	17.8	24.7	207	53.1	12.4	185	20.5	06.9	56 25.8	55.5		
2	285	38.3	190	16.9	24.6	222	53.7	12.8	200	22.4	06.9	71 28.4	55.5		
3	300	40.8	205	16.0	24.6	237	54.3	13.1	215	24.2	07.0	86 30.9	55.5		
4	315	43.3	220	15.2	24.6	252	54.9	13.5	230	26.0	07.0	101 33.5	55.5		
5	330	45.7	235	14.3	+24 24.5	267	55.5	+21 13.8	245	27.9	+23 07.0	116 36.1	-10 55.4		
6	345	48.2	250	13.4	+24 24.5	282	56.1	+21 14.2	260	29.7	+23 07.0	131 38.7	-10 55.4		
7	0	50.7	265	12.5	24.5	297	56.7	14.5	275	31.6	07.0	146 41.3	55.4		
8	15	53.1	280	11.6	24.4	312	57.3	14.9	290	33.4	07.1	161 43.8	55.3		
9	30	55.6	295	10.7	24.4	327	57.9	15.2	305	35.3	07.1	176 46.4	55.3		
10	45	58.0	310	09.8	24.4	342	58.5	15.6	320	37.1	07.1	191 49.0	55.3		
11	61	00.5	325	08.9	+24 24.3	357	59.1	+21 15.9	335	38.9	+23 07.1	206 51.6	-10 55.2		
12	76	03.0	340	08.0	+24 24.3	12	59.7	+21 16.3	350	40.8	+23 07.2	221 54.2	-10 55.2		
13	91	05.4	355	07.1	24.2	28	00.3	16.6	5	42.6	07.2	236 56.7	55.2		
14	106	07.9	10	06.3	24.2	43	00.9	17.0	20	44.5	07.2	251 59.3	55.1		
15	121	10.4	25	05.4	24.1	58	01.5	17.3	35	46.3	07.2	267 01.9	55.1		
16	136	12.8	40	04.5	24.1	73	02.1	17.6	50	48.2	07.3	282 04.5	55.1		
17	151	15.3	55	03.6	+24 24.0	88	02.7	+21 18.0	65	50.0	+23 07.3	297 07.1	-10 55.1		
18	166	17.8	70	02.7	+24 24.0	103	03.3	+21 18.3	80	51.8	+23 07.3	312 09.6	-10 55.0		
19	181	20.2	85	01.8	23.9	118	03.9	18.7	95	53.7	07.3	327 12.2	55.0		
20	196	22.7	100	00.9	23.9	133	04.5	19.0	110	55.5	07.3	342 14.8	55.0		
21	211	25.2	115	00.0	23.8	148	05.1	19.4	125	57.4	07.4	357 17.4	54.9		
22	226	27.6	129	59.1	23.8	163	05.7	19.7	140	59.2	07.4	12 20.0	54.9		
23	241	30.1	144	58.3	23.7	178	06.3	20.0	156	01.1	07.4	27 22.5	54.9		
24	256	32.5	159	57.4	+24 23.7	193	06.9	+21 20.4	171	02.9	+23 07.4	42 25.1	-10 54.8		
Dif	—		-9	0		+6	+3		+18		0	+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 1			Edad: 29 ^d 0 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	15.5	+22 50.2	187	42.4	+19 54.6	18	60 N	** **	1 07	2 41	3 00	46	20 47	42
1	195	15.4	50.4	202	13.2	56.4	18	58	** *	1 48	3 00	14	47	32	44
2	210	15.3	50.6	216	44.1	58.0	16	56	** *	2 16	16	26	47	20	44
3	225	15.1	50.9	231	15.0	+19 59.6	16	54	1 01	37	30	37	47	09	44
4	240	15.0	51.1	245	45.9	+20 01.1	15	52	1 39	2 54	41	46	47	20	00
5	255	14.9	+22 51.3	260	16.7	+20 02.5	14	50	2 05	3 08	3 52	3 54	48	19 51	45
6	270	14.8	+22 51.5	274	47.6	+20 03.8	13	45	2 48	3 37	4 14	4 12	48	19 33	45
7	285	14.7	51.8	289	18.5	05.0	12	40	3 17	3 59	31	27	48	18	46
8	300	14.5	52.0	303	49.3	06.1	11	35	40	4 16	46	40	47	19 05	47
9	315	14.4	52.2	318	20.2	07.1	10	30	3 58	31	4 58	4 50	48	18 55	46
10	330	14.3	52.4	332	51.0	08.0	9	20	4 26	4 55	5 20	5 09	48	36	47
11	345	14.2	+22 52.6	347	21.9	+20 08.8	8	10 N	4 48	5 15	5 38	5 25	48	18 19	48
12	0	14.1	+22 52.9	1	52.8	+20 09.5	7	0	5 07	5 33	5 55	5 41	48	18 04	48
13	15	13.9	53.1	16	23.6	10.2	7	10 S	23	5 50	6 12	5 56	48	17 49	48
14	30	13.8	53.3	30	54.5	10.7	5	20	39	6 07	30	6 12	48	32	49
15	45	13.7	53.5	45	25.4	11.2	5	30	5 55	25	6 51	31	48	13	49
16	60	13.6	53.7	59	56.2	11.5	3	35	6 04	35	7 03	42	48	17 02	49
17	75	13.4	+22 53.9	74	27.1	+20 11.8	3	40	6 13	6 47	7 17	6 55	48	16 49	50
18	90	13.3	+22 54.1	88	58.0	+20 11.9	1	45	6 23	7 00	7 33	7 09	48	16 34	50
19	105	13.2	54.4	103	28.9	12.0	1	50	34	15	7 53	28	48	16	50
20	120	13.1	54.6	117	59.8	12.0	0	52	39	22	8 03	36	48	16 07	51
21	135	13.0	54.8	132	30.7	11.9	0	54	44	30	13	46	48	15 58	50
22	150	12.8	55.0	147	01.6	11.7	2	56	50	39	26	7 57	48	47	51
23	165	12.7	55.2	161	32.5	11.4	3	58	6 57	7 49	40	8 09	48	34	51
24	180	12.6	+22 55.4	176	03.4	+20 11.0	4	60 S	7 04	8 00	8 56	8 24	47	15 20	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 52 ^m 7		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: +1.4 PMG: 11 ^h 07 ^m		Mag: -1.9 PMG: 12 ^h 34 ^m		Mag: +0.4 PMG: 21 ^h 07 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	256	32.5	159	57.4	+24 23.7	193	06.9	+21 20.4	171	02.9	+23 07.4	42	25.1	-10 54.8	
1	271	35.0	174	56.5	23.6	208	07.5	20.7	186	04.7	07.5	57	27.7	54.8	
2	286	37.5	189	55.6	23.5	223	08.1	21.1	201	06.6	07.5	72	30.3	54.8	
3	301	39.9	204	54.7	23.5	238	08.7	21.4	216	08.4	07.5	87	32.8	54.8	
4	316	42.4	219	53.8	23.4	253	09.3	21.7	231	10.3	07.5	102	35.4	54.7	
5	331	44.9	234	52.9	+24 23.4	268	09.9	+21 22.1	246	12.1	+23 07.5	117	38.0	-10 54.7	
6	346	47.3	249	52.0	+24 23.3	283	10.5	+21 22.4	261	14.0	+23 07.6	132	40.6	-10 54.7	
7	1	49.8	264	51.2	23.2	298	11.1	22.8	276	15.8	07.6	147	43.2	54.6	
8	16	52.3	279	50.3	23.2	313	11.7	23.1	291	17.6	07.6	162	45.7	54.6	
9	31	54.7	294	49.4	23.1	328	12.3	23.4	306	19.5	07.6	177	48.3	54.6	
10	46	57.2	309	48.5	23.0	343	12.9	23.8	321	21.3	07.6	192	50.9	54.6	
11	61	59.7	324	47.6	+24 22.9	358	13.5	+21 24.1	336	23.2	+23 07.7	207	53.5	-10 54.5	
12	77	02.1	339	46.7	+24 22.9	13	14.1	+21 24.5	351	25.0	+23 07.7	222	56.0	-10 54.5	
13	92	04.6	354	45.8	22.8	28	14.7	24.8	6	26.9	07.7	237	58.6	54.5	
14	107	07.0	9	44.9	22.7	43	15.3	25.1	21	28.7	07.7	253	01.2	54.4	
15	122	09.5	24	44.1	22.6	58	15.9	25.5	36	30.5	07.8	268	03.8	54.4	
16	137	12.0	39	43.2	22.6	73	16.5	25.8	51	32.4	07.8	283	06.3	54.4	
17	152	14.4	54	42.3	+24 22.5	88	17.1	+21 26.1	66	34.2	+23 07.8	298	08.9	-10 54.3	
18	167	16.9	69	41.4	+24 22.4	103	17.7	+21 26.5	81	36.1	+23 07.8	313	11.5	-10 54.3	
19	182	19.4	84	40.5	22.3	118	18.3	26.8	96	37.9	07.8	328	14.1	54.3	
20	197	21.8	99	39.6	22.2	133	18.9	27.1	111	39.8	07.9	343	16.7	54.3	
21	212	24.3	114	38.7	22.2	148	19.5	27.5	126	41.6	07.9	358	19.2	54.2	
22	227	26.8	129	37.9	22.1	163	20.1	27.8	141	43.4	07.9	13	21.8	54.2	
23	242	29.2	144	37.0	22.0	178	20.7	28.1	156	45.3	07.9	28	24.4	54.2	
24	257	31.7	159	36.1	+24 21.9	193	21.3	+21 28.5	171	47.1	+23 07.9	43	27.0	-10 54.1	
Dif	—		-9		-1	+6		+3	+18		0	+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 30 ^d 0 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 53 ⁹										
	PMG: 11 ^h 59 ^m 3			SD: 14 ^h 7 PMG: 12 ^h 40 ^m R°: 48 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	180	12.6	+22 55.4	176	03.4	+20 11.0	60 N	21 20	22 56	** **	3 46 56		21 29 33	
1	195	12.5	55.6	190	34.3 ¹¹⁹	10.5	58	21 00	22 13	** **	4 01 55		16 34	
2	210	12.3	55.8	205	05.2 ¹¹⁹	09.9	56	20 44	21 45	** **	13 54		21 04 36	
3	225	12.2	56.0	219	36.2 ¹²⁰	09.2	54	30	23	23 02	24 54		20 53 37	
4	240	12.1	56.2	234	07.1 ¹¹⁹	08.5	52	18	21 06	22 21	33 54		44 38	
5	255	12.0	+22 56.4	248	38.1 ¹²⁰	+20 07.6	50	20 07	20 51	21 55	4 42 53		20 36 39	
6	270	11.8	+22 56.6	263	09.0 ¹¹⁹	+20 06.6	45	19 45	20 23	21 12	5 00 52		20 18 41	
7	285	11.7	56.9	277	40.0 ¹²⁰	05.6	40	28	20 00	20 42	15 51		20 04 42	
8	300	11.6	57.1	292	11.0 ¹²⁰	04.4	35	13	19 43	19	27 51		19 52 43	
9	315	11.5	57.3	306	42.0 ¹²⁰	03.2	30	19 00	28	20 01	38 50		41 44	
10	330	11.3	57.5	321	13.0 ¹²⁰	01.9	20	18 39	19 03	19 32	5 57 49		23 45	
11	345	11.2	+22 57.7	335	44.0 ¹²⁰	+20 00.5	10 N	18 20	18 43	19 10	6 13 49		19 07 46	
12	0	11.1	+22 57.9	350	15.1 ¹²¹	+19 59.0	0	18 03	18 25	18 52	6 29 47		18 52 47	
13	15	11.0	58.1	4	46.1 ¹²⁰	57.4	10 S	17 46	18 09	35	6 44 47		37 48	
14	30	10.9	58.3	19	17.2 ¹²¹	55.7	20	28	17 52	19	7 00 46		21 49	
15	45	10.7	58.5	33	48.2 ¹²⁰	53.9	30	17 07	33	18 03	19 45		18 02 51	
16	60	10.6	58.7	48	19.3 ¹²¹	52.0	35	16 55	23	17 54	30 45		17 51 52	
17	75	10.5	+22 58.9	62	50.4 ¹²¹	+19 50.0	40	16 41	17 11	17 45	7 43 43		17 39 53	
18	90	10.4	+22 59.1	77	21.5 ¹²¹	+19 48.0	45	16 25	16 58	17 35	7 57 43		17 24 54	
19	105	10.2	59.2	91	52.7 ¹²²	45.8	50	16 04	43	24	8 16 41		17 06 56	
20	120	10.1	59.4	106	23.8 ¹²¹	43.6	52	15 55	35	19	24 41		16 58 56	
21	135	10.0	59.6	120	55.0 ¹²²	41.3	54	44	27	13	34 40		48 57	
22	150	09.9	+22 59.8	135	26.2 ¹²²	38.8	56	32	19	07	45 39		38 57	
23	165	09.7	+23 00.0	149	57.4 ¹²²	36.3	58	18	16 09	17 01	8 57 39		25 59	
24	180	09.6	+23 00.2	164	28.6 ¹²²	+19 33.7	60 S	15 01	15 57	16 54	9 11 38		16 11 60	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 48 ^m 8		Mag: -3.8 PMG: 13 ^h 22 ^m		Mag: +1.4 PMG: 11 ^h 06 ^m		Mag: -1.9 PMG: 12 ^h 31 ^m		Mag: +0.4 PMG: 21 ^h 03 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	257	31.7	159	36.1	193	21.3	171	47.1	43	27.0				
1	272	34.2	174	35.2	208	21.9	186	49.0	58	29.5				
2	287	36.6	189	34.3	223	22.5	201	50.8	73	32.1				
3	302	39.1	204	33.4	238	23.1	216	52.7	88	34.7				
4	317	41.5	219	32.5	253	23.7	231	54.5	103	37.3				
5	332	44.0	234	31.7	268	24.3	246	56.3	118	39.8				
6	347	46.5	249	30.8	283	24.9	261	58.2	133	42.4				
7	2	48.9	264	29.9	298	25.5	277	00.0	148	45.0				
8	17	51.4	279	29.0	313	26.1	292	01.9	163	47.5				
9	32	53.9	294	28.1	328	26.7	307	03.7	178	50.1				
10	47	56.3	309	27.2	343	27.3	322	05.6	193	52.7				
11	62	58.8	324	26.3	358	27.9	337	07.4	208	55.3				
12	78	01.3	339	25.5	13	28.5	352	09.2	223	57.8				
13	93	03.7	354	24.6	28	29.1	7	11.1	239	00.4				
14	108	06.2	9	23.7	43	29.7	22	12.9	254	03.0				
15	123	08.6	24	22.8	58	30.3	37	14.8	269	05.6				
16	138	11.1	39	21.9	73	30.9	52	16.6	284	08.1				
17	153	13.6	54	21.0	88	31.5	67	18.4	299	10.7				
18	168	16.0	69	20.2	103	32.1	82	20.3	314	13.3				
19	183	18.5	84	19.3	118	32.7	97	22.1	329	15.9				
20	198	21.0	99	18.4	133	33.3	112	24.0	344	18.4				
21	213	23.4	114	17.5	148	33.9	127	25.8	359	21.0				
22	228	25.9	129	16.6	163	34.4	142	27.7	14	23.6				
23	243	28.4	144	15.7	178	35.0	157	29.5	29	26.1				
24	258	30.8	159	14.9	193	35.6	172	31.3	44	28.7				
Dif	—		-9		-1		+18		0					
					+6				+26					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 5			Edad: 1 ^d 3 PHE { 4 ^h : 53 ^m 9 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 PMG: 13 ^h 28 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	09.6	+23	00.2	164	28.6	+19	33.7	60 N	** **	1 02	2 39	4 42	64	22 02	26
1	195	09.5		00.4	178	59.8 ¹²²		31.0 ²⁷	58	** **	1 46	2 59	4 56	62	21 50	28
2	210	09.4		00.6	193	31.1 ¹²³		28.3 ²⁷	56	** **	2 14	3 15	5 07	61	40	29
3	225	09.2		00.8	208	02.4 ¹²³		25.4 ²⁹	54	0 57	35	29	18	59	30	31
4	240	09.1		01.0	222	33.6 ¹²²		22.4 ³⁰	52	1 37	2 52	41	27	58	22	32
5	255	09.0	+23	01.2	237	05.0 ¹²⁴	+19	19.4 ³⁰	50	2 03	3 07	3 51	5 35	57	21 15	33
6	270	08.8	+23	01.4	251	36.3 ¹²³	+19	16.3 ³¹	45	2 47	3 36	4 13	5 52	55	20 59	36
7	285	08.7		01.5	266	07.6 ¹²³		13.1 ³²	40	3 17	3 58	31	6 06	54	46	37
8	300	08.6		01.7	280	39.0 ¹²⁴		09.8 ³³	35	39	4 16	46	18	53	35	39
9	315	08.5		01.9	295	10.4 ¹²⁴		06.4 ³⁴	30	3 58	31	4 58	28	52	25	40
10	330	08.3		02.1	309	41.8 ¹²⁴	+19	02.9 ³⁵	20	4 26	4 55	5 20	6 46	50	20 08	42
11	345	08.2	+23	02.3	324	13.2 ¹²⁴	+18	59.3 ³⁶	10 N	4 49	5 16	5 39	7 02	48	19 53	45
12	0	08.1	+23	02.5	338	44.7 ¹²⁵	+18	55.7 ³⁶	0	5 07	5 33	5 56	7 16	47	19 39	46
13	15	08.0		02.7	353	16.2 ¹²⁵		51.9 ³⁸	10 S	24	5 50	6 13	31	45	25	48
14	30	07.8		02.8	7	47.7 ¹²⁵		48.1 ³⁸	20	40	6 07	31	7 46	44	19 10	50
15	45	07.7		03.0	22	19.2 ¹²⁵		44.2 ³⁹	30	5 56	26	6 52	8 04	42	18 53	52
16	60	07.6		03.2	36	50.7 ¹²⁵		40.2 ⁴⁰	35	6 04	36	7 04	15	40	43	54
17	75	07.5	+23	03.4	51	22.3 ¹²⁶	+18	36.1 ⁴¹	40	6 14	6 48	7 18	8 26	40	18 32	55
18	90	07.3	+23	03.6	65	53.9 ¹²⁶	+18	32.0 ⁴¹	45	6 24	7 01	7 34	8 40	38	18 18	57
19	105	07.2		03.7	80	25.5 ¹²⁶		27.7 ⁴³	50	35	16	7 55	8 57	36	18 02	59
20	120	07.1		03.9	94	57.1 ¹²⁶		23.4 ⁴³	52	40	24	8 04	9 05	35	17 54	60
21	135	06.9		04.1	109	28.8 ¹²⁷		19.0 ⁴⁴	54	46	32	15	14	34	45	62
22	150	06.8		04.3	124	00.5 ¹²⁷		14.5 ⁴⁵	56	52	41	27	24	33	35	63
23	165	06.7		04.4	138	32.2 ¹²⁷		09.9 ⁴⁶	58	6 58	7 51	42	36	31	24	65
24	180	06.6	+23	04.6	153	03.9 ¹²⁷	+18	05.3 ⁴⁶	60 S	7 05	8 02	8 59	9 49	29	17 11	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 44 ^m 8		Mag: -3.8 PMG: 13 ^h 24 ^m		Mag: +1.4 PMG: 11 ^h 05 ^m		Mag: -1.9 PMG: 12 ^h 28 ^m		Mag: +0.4 PMG: 20 ^h 58 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	258	30.8	159	14.9	+24	193	35.6	+21	172	31.3	+23	44	28.7	-10	53.5
1	273	33.3	174	14.0		208	36.2		187	33.2		59	31.3		53.4
2	288	35.8	189	13.1		223	36.8		202	35.0		74	33.9		53.4
3	303	38.2	204	12.2		238	37.4		217	36.9		89	36.4		53.4
4	318	40.7	219	11.3		253	38.0		232	38.7		104	39.0		53.4
5	333	43.1	234	10.4	+24	268	38.6	+21	247	40.5	+23	119	41.6	-10	53.3
6	348	45.6	249	09.6	+24	283	39.2	+21	262	42.4	+23	134	44.1	-10	53.3
7	3	48.1	264	08.7		298	39.8		277	44.2		149	46.7		53.3
8	18	50.5	279	07.8		313	40.4		292	46.1		164	49.3		53.3
9	33	53.0	294	06.9		328	41.0		307	47.9		179	51.9		53.2
10	48	55.5	309	06.0		343	41.6		322	49.8		194	54.4		53.2
11	63	57.9	324	05.2	+24	358	42.2	+21	337	51.6	+23	209	57.0	-10	53.2
12	79	00.4	339	04.3	+24	13	42.8	+21	352	53.4	+23	224	59.6	-10	53.1
13	94	02.9	354	03.4		28	43.4		7	55.3		240	02.1		53.1
14	109	05.3	9	02.5		43	44.0		22	57.1		255	04.7		53.1
15	124	07.8	24	01.6		58	44.6		37	59.0		270	07.3		53.1
16	139	10.3	39	00.8		73	45.2		53	00.8		285	09.9		53.0
17	154	12.7	53	59.9	+24	88	45.8	+21	68	02.6	+23	300	12.4	-10	53.0
18	169	15.2	68	59.0	+24	103	46.4	+21	83	04.5	+23	315	15.0	-10	53.0
19	184	17.6	83	58.1		118	47.0		98	06.3		330	17.6		53.0
20	199	20.1	98	57.2		133	47.6		113	08.2		345	20.1		52.9
21	214	22.6	113	56.4		148	48.2		128	10.0		0	22.7		52.9
22	229	25.0	128	55.5		163	48.8		143	11.9		15	25.3		52.9
23	244	27.5	143	54.6		178	49.4		158	13.7		30	27.8		52.9
24	259	30.0	158	53.7	+24	193	50.0	+21	173	15.5	+23	45	30.4	-10	52.8
Dif	—		-9		-1	+6		+3	+18		0	+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 7			Edad: 2 ^d 3 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 1 20 ^h : 54 ^o 1 PMG: 14 ^h 14 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	06.6	+23 04.6	153	03.9	+18 05.3	48	60 N	21 22	23 01	** **	5 46 69		22 28 20	
1	195	06.4	04.8	167	35.7 ¹²⁸	+18 00.5	48	58	21 02	22 16	** **	5 58 66		18 22	
2	210	06.3	05.0	182	07.4 ¹²⁷	+17 55.7	48	56	20 45	21 47	** **	6 08 65		09 25	
3	225	06.2	05.1	196	39.3 ¹²⁹	50.8	49	54	32	25	23 06	17 63		22 01 27	
4	240	06.1	05.3	211	11.1 ¹²⁸	45.8	50	52	19	21 08	22 24	25 62		21 54 28	
5	255	05.9	+23 05.5	225	42.9 ¹²⁸	+17 40.8	50	50	20 09	20 53	21 57	6 32 61		21 48 29	
6	270	05.8	+23 05.7	240	14.8 ¹²⁹	+17 35.7	51	45	19 47	20 24	21 13	6 47 58		21 35 31	
7	285	05.7	05.8	254	46.7 ¹²⁹	30.4	53	40	29	20 02	20 43	7 00 56		23 34	
8	300	05.5	06.0	269	18.6 ¹²⁹	25.1	53	35	14	19 44	20	11 54		14 36	
9	315	05.4	06.2	283	50.6 ¹³⁰	19.8	53	30	19 01	29	20 02	20 53		21 05 38	
10	330	05.3	06.3	298	22.6 ¹³⁰	14.3	55	20	18 39	19 04	19 33	36 50		20 50 41	
11	345	05.2	+23 06.5	312	54.6 ¹³⁰	+17 08.8	55	10 N	18 21	18 44	19 11	7 50 48		20 38 43	
12	0	05.0	+23 06.7	327	26.6 ¹³⁰	+17 03.2	56	0	18 03	18 26	18 52	8 03 46		20 25 46	
13	15	04.9	06.8	341	58.7 ¹³¹	+16 57.5	57	10 S	17 46	18 09	35	16 44		13 48	
14	30	04.8	07.0	356	30.7 ¹³⁰	51.8	57	20	28	17 52	19	30 42		20 00 50	
15	45	04.6	07.2	11	02.8 ¹³¹	45.9	59	30	17 07	33	18 03	46 39		19 45 53	
16	60	04.5	07.3	25	35.0 ¹³²	40.0	59	35	16 55	23	17 54	8 55 38		37 54	
17	75	04.4	+23 07.5	40	07.1 ¹³¹	+16 34.0	60	40	16 41	17 11	17 45	9 06 36		19 27 56	
18	90	04.3	+23 07.7	54	39.3 ¹³²	+16 28.0	60	45	16 24	16 58	17 35	9 18 34		19 15 59	
19	105	04.1	07.8	69	11.5 ¹³²	21.9	61	50	16 04	42	24	33 31		19 01 61	
20	120	04.0	08.0	83	43.7 ¹³²	15.7	62	52	15 54	35	18	40 30		18 54 63	
21	135	03.9	08.1	98	16.0 ¹³³	09.4	63	54	43	27	13	48 28		47 64	
22	150	03.7	08.3	112	48.3 ¹³³	+16 03.0	64	56	31	18	07	9 57 26		38 67	
23	165	03.6	08.5	127	20.6 ¹³³	+15 56.6	64	58	15 16	16 08	17 00	10 07 24		29 68	
24	180	03.5	+23 08.6	141	52.9 ¹³³	+15 50.1	65	60 S	14 59	15 56	16 53	10 18 22		18 18 71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 40 ^m 9		Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: +1.4 PMG: 11 ^h 04 ^m			Mag: -1.9 PMG: 12 ^h 25 ^m			Mag: +0.4 PMG: 20 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	259	30.0	158	53.7	+24 16.2	193	50.0	+21 44.0	173	15.5	+23 08.9	45	30.4	-10 52.8	
1	274	32.4	173	52.8	16.1	208	50.6	44.3	188	17.4	08.9	60	33.0	52.8	
2	289	34.9	188	52.0	15.9	223	51.1	44.7	203	19.2	08.9	75	35.5	52.8	
3	304	37.4	203	51.1	15.8	238	51.7	45.0	218	21.1	09.0	90	38.1	52.8	
4	319	39.8	218	50.2	15.6	253	52.3	45.3	233	22.9	09.0	105	40.7	52.7	
5	334	42.3	233	49.3	+24 15.5	268	52.9	+21 45.6	248	24.7	+23 09.0	120	43.2	-10 52.7	
6	349	44.8	248	48.5	+24 15.3	283	53.5	+21 45.9	263	26.6	+23 09.0	135	45.8	-10 52.7	
7	4	47.2	263	47.6	15.2	298	54.1	46.2	278	28.4	09.0	150	48.4	52.6	
8	19	49.7	278	46.7	15.0	313	54.7	46.5	293	30.3	09.1	165	51.0	52.6	
9	34	52.1	293	45.8	14.8	328	55.3	46.8	308	32.1	09.1	180	53.5	52.6	
10	49	54.6	308	44.9	14.7	343	55.9	47.2	323	34.0	09.1	195	56.1	52.6	
11	64	57.1	323	44.1	+24 14.5	358	56.5	+21 47.5	338	35.8	+23 09.1	210	58.7	-10 52.5	
12	79	59.5	338	43.2	+24 14.4	13	57.1	+21 47.8	353	37.6	+23 09.1	226	01.2	-10 52.5	
13	95	02.0	353	42.3	14.2	28	57.7	48.1	8	39.5	09.2	241	03.8	52.5	
14	110	04.5	8	41.4	14.0	43	58.3	48.4	23	41.3	09.2	256	06.4	52.5	
15	125	06.9	23	40.6	13.9	58	58.9	48.7	38	43.2	09.2	271	08.9	52.4	
16	140	09.4	38	39.7	13.7	73	59.5	49.0	53	45.0	09.2	286	11.5	52.4	
17	155	11.9	53	38.8	+24 13.5	89	00.1	+21 49.3	68	46.8	+23 09.2	301	14.1	-10 52.4	
18	170	14.3	68	37.9	+24 13.4	104	00.7	+21 49.6	83	48.7	+23 09.2	316	16.6	-10 52.4	
19	185	16.8	83	37.1	13.2	119	01.3	49.9	98	50.5	09.3	331	19.2	52.3	
20	200	19.2	98	36.2	13.0	134	01.9	50.3	113	52.4	09.3	346	21.8	52.3	
21	215	21.7	113	35.3	12.8	149	02.5	50.6	128	54.2	09.3	1	24.3	52.3	
22	230	24.2	128	34.4	12.7	164	03.1	50.9	143	56.0	09.3	16	26.9	52.3	
23	245	26.6	143	33.6	12.5	179	03.7	51.2	158	57.9	09.3	31	29.5	52.2	
24	260	29.1	158	32.7	+24 12.3	194	04.3	+21 51.5	173	59.7	+23 09.4	46	32.0	-10 52.2	
Dif	—		-9	-2		+6	+3		+18		0	+26			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 59 ^m 9				Edad: 3 ^d 3 PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/4 R°: 45 ^m PMG: 15 ^h 00 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	03.5	+23	08.6	141	52.9	+15	50.1	60 N	** **	0 58	2 38	6 55	72	22 48	17		
1	195	03.3		08.8	156	25.3 ¹³⁴		43.6 ⁶⁵	58	** **	1 44	2 58	7 04	70	40	19		
2	210	03.2		08.9	170	57.6 ¹³³		36.9 ⁶⁷	56	** **	2 12	3 14		13 67	34	21		
3	225	03.1		09.1	185	30.0 ¹³⁴		30.2 ⁶⁷	54	0 53	34	28	20	66	28	22		
4	240	03.0		09.2	200	02.5 ¹³⁵		23.5 ⁶⁷	52	1 35	2 52	40	27	64	22	25		
5	255	02.8	+23	09.4	214	34.9 ¹³⁴	+15	16.6 ⁶⁹	50	2 02	3 06	3 51	7 33	62	22 17	26		
6	270	02.7	+23	09.6	229	07.4 ¹³⁵	+15	09.7 ⁶⁹	45	2 46	3 36	4 13	7 45	60	22 06	29		
7	285	02.6		09.7	243	39.9 ¹³⁵	+15	02.7 ⁷⁰	40	3 16	3 58	31	7 56	57	21 57	32		
8	300	02.4		09.9	258	12.4 ¹³⁵	+14	55.7 ⁷⁰	35	39	4 16	45	8 05	55	50	33		
9	315	02.3		10.0	272	45.0 ¹³⁶		48.6 ⁷¹	30	3 58	31	4 58	13	53	43	35		
10	330	02.2		10.2	287	17.5 ¹³⁵		41.4 ⁷²	20	4 26	4 56	5 20	26	50	31	39		
11	345	02.0	+23	10.3	301	50.1 ¹³⁶	+14	34.2 ⁷²	10 N	4 49	5 16	5 39	8 38	47	21 21	41		
12	0	01.9	+23	10.5	316	22.7 ¹³⁶	+14	26.9 ⁷³	0	5 08	5 34	5 56	8 49	45	21 11	44		
13	15	01.8		10.6	330	55.4 ¹³⁷		19.5 ⁷⁴	10 S	24	5 51	6 13	9 00	42	21 01	47		
14	30	01.7		10.8	345	28.0 ¹³⁶		12.1 ⁷⁴	20	40	6 08	32	12	40	20 50	50		
15	45	01.5		10.9	0	00.7 ¹³⁷	+14	04.6 ⁷⁵	30	5 57	26	6 53	25	37	38	54		
16	60	01.4		11.1	14	33.4 ¹³⁷	+13	57.0 ⁷⁶	35	6 05	37	7 05	33	35	31	56		
17	75	01.3	+23	11.2	29	06.1 ¹³⁷	+13	49.4 ⁷⁶	40	6 14	6 48	7 19	9 42	32	20 23	58		
18	90	01.1	+23	11.3	43	38.9 ¹³⁸	+13	41.7 ⁷⁷	45	6 25	7 02	7 36	9 52	30	20 14	60		
19	105	01.0		11.5	58	11.6 ¹³⁷		33.9 ⁷⁸	50	36	18	7 56	10 04	28	20 02	64		
20	120	00.9		11.6	72	44.4 ¹³⁸		26.1 ⁷⁸	52	41	25	8 06	10	26	19 57	65		
21	135	00.7		11.8	87	17.2 ¹³⁸		18.3 ⁷⁸	54	47	33	17	16	25	51	67		
22	150	00.6		11.9	101	50.0 ¹³⁸		10.3 ⁸⁰	56	6 53	42	29	23	23	45	68		
23	165	00.5		12.1	116	22.9 ¹³⁹	+13	02.3 ⁸⁰	58	7 00	7 52	8 44	31	21	37	71		
24	180	00.3	+23	12.2	130	55.8 ¹³⁹	+12	54.3 ⁸⁰	60 S	7 07	8 03	9 01	10 40	18	19 29	73		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 37 ^m 0		Mag: -3.8 PMG: 13 ^h 27 ^m				Mag: +1.5 PMG: 11 ^h 03 ^m				Mag: -1.9 PMG: 12 ^h 22 ^m				Mag: +0.4 PMG: 20 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	260	29.1	158	32.7	+24	12.3	194	04.3	+21	51.5	173	59.7	+23	09.4	46	32.0	-10	52.2
1	275	31.6	173	31.8		12.1	209	04.8		51.8	189	01.6		09.4	61	34.6		52.2
2	290	34.0	188	30.9		12.0	224	05.4		52.1	204	03.4		09.4	76	37.1		52.2
3	305	36.5	203	30.1		11.8	239	06.0		52.4	219	05.2		09.4	91	39.7		52.1
4	320	39.0	218	29.2		11.6	254	06.6		52.7	234	07.1		09.4	106	42.3		52.1
5	335	41.4	233	28.3	+24	11.4	269	07.2	+21	53.0	249	08.9	+23	09.4	121	44.8	-10	52.1
6	350	43.9	248	27.4	+24	11.2	284	07.8	+21	53.3	264	10.8	+23	09.5	136	47.4	-10	52.1
7	5	46.4	263	26.6		11.0	299	08.4		53.6	279	12.6		09.5	151	50.0		52.0
8	20	48.8	278	25.7		10.9	314	09.0		53.9	294	14.5		09.5	166	52.5		52.0
9	35	51.3	293	24.8		10.7	329	09.6		54.2	309	16.3		09.5	181	55.1		52.0
10	50	53.7	308	23.9		10.5	344	10.2		54.5	324	18.1		09.5	196	57.7		52.0
11	65	56.2	323	23.1	+24	10.3	359	10.8	+21	54.8	339	20.0	+23	09.6	212	00.2	-10	51.9
12	80	58.7	338	22.2	+24	10.1	14	11.4	+21	55.1	354	21.8	+23	09.6	227	02.8	-10	51.9
13	96	01.1	353	21.3		09.9	29	12.0		55.4	9	23.7		09.6	242	05.4		51.9
14	111	03.6	8	20.5		09.7	44	12.6		55.7	24	25.5		09.6	257	07.9		51.9
15	126	06.1	23	19.6		09.5	59	13.2		56.0	39	27.3		09.6	272	10.5		51.8
16	141	08.5	38	18.7		09.3	74	13.8		56.3	54	29.2		09.6	287	13.0		51.8
17	156	11.0	53	17.8	+24	09.1	89	14.4	+21	56.6	69	31.0	+23	09.7	302	15.6	-10	51.8
18	171	13.5	68	17.0	+24	08.9	104	15.0	+21	56.9	84	32.9	+23	09.7	317	18.2	-10	51.8
19	186	15.9	83	16.1		08.7	119	15.6		57.2	99	34.7		09.7	332	20.7		51.8
20	201	18.4	98	15.2		08.5	134	16.1		57.5	114	36.5		09.7	347	23.3		51.7
21	216	20.9	113	14.4		08.3	149	16.7		57.8	129	38.4		09.7	2	25.9		51.7
22	231	23.3	128	13.5		08.1	164	17.3		58.1	144	40.2		09.7	17	28.4		51.7
23	246	25.8	143	12.6		07.9	179	17.9		58.4	159	42.1		09.8	32	31.0		51.7
24	261	28.2	158	11.8	+24	07.7	194	18.5	+21	58.7	174	43.9	+23	09.8	47	33.5	-10	51.6
Dif	—		-9		-2		+6		+3		+18		0		+26			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 4 ^d 3	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8	PMG: 15 ^h 45 ^m R°: 44 ^m				Civil Náutico			Hora R°		Hora R°			
	PMG: 12 ^h 00 ^m 1																		
	hG ☉	Dec			hG ☾	Dif			Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	00.3	+23	12.2	130	55.8	+12	54.3			60 N	21	24	23	06	**	**	8 07 74	
1	195	00.2		12.3	145	28.6 ¹³⁸		46.2 ⁸¹			58	21	04	22	18	**	**	14 72	
2	210	00.1		12.5	160	01.5 ¹³⁹		38.0 ⁸²			56	20	47	21	49	**	**	20 70	
3	225	00.0		12.6	174	34.5 ¹⁴⁰		29.8 ⁸²			54	33	27	23	10	**	**	26 67	
4	239	59.8		12.8	189	07.4 ¹³⁹		21.5 ⁸³			52	21	21	09	22	26		31 65	
5	254	59.7	+23	12.9	203	40.3 ¹³⁹	+12	13.1 ⁸⁴			50	20	10	20	54	21	59	8 35 64	
6	269	59.6	+23	13.0	218	13.3 ¹⁴⁰	+12	04.7 ⁸⁴			45	19	48	20	25	21	14	8 45 61	
7	284	59.4		13.2	232	46.3 ¹⁴⁰	+11	56.3 ⁸⁴			40	30	20	03	20	44		8 53 58	
8	299	59.3		13.3	247	19.3 ¹⁴⁰		47.8 ⁸⁵			35	15	19	44	21			9 00 56	
9	314	59.2		13.4	261	52.3 ¹⁴⁰		39.2 ⁸⁶			30	19	02	29	20	03		06 54	
10	329	59.0		13.6	276	25.4 ¹⁴¹		30.6 ⁸⁶			20	18	40	19	05	19	34	16 50	
11	344	58.9	+23	13.7	290	58.4 ¹⁴⁰	+11	21.9 ⁸⁷			10 N	18	21	18	44	19	11	9 25 48	
12	359	58.8	+23	13.8	305	31.5 ¹⁴¹	+11	13.2 ⁸⁷			0	18	04	18	26	18	52	9 34 44	
13	14	58.6		14.0	320	04.5 ¹⁴⁰	+11	04.4 ⁸⁸			10 S	17	46	18	09	36		42 42	
14	29	58.5		14.1	334	37.6 ¹⁴¹	+10	55.6 ⁸⁸			20	28	17	52	20			9 52 38	
15	44	58.4		14.2	349	10.7 ¹⁴¹		46.7 ⁸⁹			30	17	07	33	18	03		10 02 35	
16	59	58.2		14.4	3	43.8 ¹⁴¹		37.8 ⁸⁹			35	16	55	23	17	55		08 33	
17	74	58.1	+23	14.5	18	17.0 ¹⁴²	+10	28.8 ⁹⁰			40	16	41	17	11	17	45	10 14 31	
18	89	58.0	+23	14.6	32	50.1 ¹⁴¹	+10	19.8 ⁹⁰			45	16	24	16	58	17	35	10 22 28	
19	104	57.8		14.8	47	23.3 ¹⁴²		10.7 ⁹¹			50	16	04	42	23			32 24	
20	119	57.7		14.9	61	56.4 ¹⁴¹	+10	01.6 ⁹¹			52	15	54	35	18			36 23	
21	134	57.6		15.0	76	29.6 ¹⁴²	+9	52.4 ⁹²			54	43	26	13				41 21	
22	149	57.4		15.1	91	02.7 ¹⁴¹		43.2 ⁹²			56	30	17	06				46 20	
23	164	57.3		15.3	105	35.9 ¹⁴²		33.9 ⁹³			58	15	16	16	07	17	00	52 18	
24	179	57.2	+23	15.4	120	09.1 ¹⁴²	+9	24.6 ⁹³			60 S	14	59	15	56	16	52	10 58 16	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 33 ^m 0			Mag: -3.8 PMG: 13 ^h 28 ^m			Mag: +1.5 PMG: 11 ^h 02 ^m			Mag: -1.9 PMG: 12 ^h 20 ^m			Mag: +0.4 PMG: 20 ^h 46 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec	hG ♇	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	261	28.2	158	11.8	+24	07.7	194	18.5	+21	58.7	174	43.9	+23	09.8	47	33.5
1	276	30.7	173	10.9		07.5	209	19.1		59.0	189	45.7		09.8	62	36.1
2	291	33.2	188	10.0		07.3	224	19.7		59.3	204	47.6		09.8	77	38.7
3	306	35.6	203	09.1		07.1	239	20.3		59.6	219	49.4		09.8	92	41.2
4	321	38.1	218	08.3		06.9	254	20.9	+21	59.9	234	51.3		09.8	107	43.8
5	336	40.6	233	07.4	+24	06.7	269	21.5	+22	00.2	249	53.1	+23	09.9	122	46.4
6	351	43.0	248	06.5	+24	06.4	284	22.1	+22	00.5	264	55.0	+23	09.9	137	48.9
7	6	45.5	263	05.7		06.2	299	22.7		00.8	279	56.8		09.9	152	51.5
8	21	48.0	278	04.8		06.0	314	23.3		01.1	294	58.6		09.9	167	54.0
9	36	50.4	293	03.9		05.8	329	23.9		01.4	310	00.5		09.9	182	56.6
10	51	52.9	308	03.1		05.6	344	24.5		01.7	325	02.3		09.9	197	59.2
11	66	55.4	323	02.2	+24	05.3	359	25.1	+22	02.0	340	04.2	+23	10.0	213	01.7
12	81	57.8	338	01.3	+24	05.1	14	25.7	+22	02.3	355	06.0	+23	10.0	228	04.3
13	97	00.3	353	00.5		04.9	29	26.3		02.6	10	07.8		10.0	243	06.8
14	112	02.7	7	59.6		04.7	44	26.8		02.9	25	09.7		10.0	258	09.4
15	127	05.2	22	58.7		04.5	59	27.4		03.2	40	11.5		10.0	273	12.0
16	142	07.7	37	57.9		04.2	74	28.0		03.5	55	13.4		10.0	288	14.5
17	157	10.1	52	57.0	+24	04.0	89	28.6	+22	03.7	70	15.2	+23	10.1	303	17.1
18	172	12.6	67	56.1	+24	03.8	104	29.2	+22	04.0	85	17.0	+23	10.1	318	19.6
19	187	15.1	82	55.3		03.5	119	29.8		04.3	100	18.9		10.1	333	22.2
20	202	17.5	97	54.4		03.3	134	30.4		04.6	115	20.7		10.1	348	24.8
21	217	20.0	112	53.6		03.1	149	31.0		04.9	130	22.6		10.1	3	27.3
22	232	22.5	127	52.7		02.8	164	31.6		05.2	145	24.4		10.1	18	29.9
23	247	24.9	142	51.8		02.6	179	32.2		05.5	160	26.2		10.2	33	32.4
24	262	27.4	157	51.0	+24	02.4	194	32.8	+22	05.8	175	28.1	+23	10.2	48	35.0
Dif	—		-9	-2		+6	+3			+18	0			+26	0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 3				Edad: 5 ^d 3 PHE { SD: 14 ^h 9 PMG: 16 ^h 29 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	57.2	+23	15.4	120	09.1	+9	24.6	60 N	** **	0 55	2 37	9 21	76	23 19	14		
1	194	57.1		15.5	134	42.3 ¹⁴²		15.2 ⁹⁴	58	** **	1 42	2 57	26	73	16	16		
2	209	56.9		15.6	149	15.5 ¹⁴²	+9	05.8	56	** **	2 11	3 13	30	71	14	18		
3	224	56.8		15.8	163	48.7 ¹⁴²	+8	56.3 ⁹⁵	54	0 50	33	27	33	69	11	20		
4	239	56.7		15.9	178	22.0 ¹⁴³		46.8 ⁹⁵	52	1 34	2 51	40	36	68	09	22		
5	254	56.5	+23	16.0	192	55.2 ¹⁴²	+8	37.3 ⁹⁵	50	2 01	3 06	3 50	9 39	66	23 07	23		
6	269	56.4	+23	16.1	207	28.4 ¹⁴²	+8	27.7 ⁹⁶	45	2 46	3 35	4 13	9 46	62	23 03	26		
7	284	56.3		16.2	222	01.6 ¹⁴²		18.1 ⁹⁶	40	3 16	3 58	31	51	59	22 59	29		
8	299	56.1		16.4	236	34.9 ¹⁴³	+8	08.4 ⁹⁷	35	39	4 16	45	9 56	56	56	32		
9	314	56.0		16.5	251	08.1 ¹⁴²	+7	58.7 ⁹⁷	30	3 58	31	4 58	10 00	54	53	34		
10	329	55.9		16.6	265	41.3 ¹⁴²		48.9 ⁹⁸	20	4 27	4 56	5 20	06	51	48	38		
11	344	55.7	+23	16.7	280	14.6 ¹⁴³	+7	39.1 ⁹⁸	10 N	4 49	5 16	5 39	10 13	47	22 44	41		
12	359	55.6	+23	16.8	294	47.8 ¹⁴²	+7	29.3 ⁹⁸	0	5 08	5 34	5 57	10 18	44	22 39	45		
13	14	55.5		16.9	309	21.0 ¹⁴²		19.4 ⁹⁹	10 S	25	5 51	6 14	24	41	35	48		
14	29	55.3		17.1	323	54.3 ¹⁴³	+7	09.5 ⁹⁹	20	41	6 08	32	30	38	31	51		
15	44	55.2		17.2	338	27.5 ¹⁴²	+6	59.5 ¹⁰⁰	30	5 57	27	6 53	37	34	26	55		
16	59	55.1		17.3	353	00.8 ¹⁴³		49.5 ¹⁰⁰	35	6 06	38	7 06	41	32	23	57		
17	74	54.9	+23	17.4	7	34.0 ¹⁴²	+6	39.5 ¹⁰⁰	40	6 15	6 49	7 20	10 45	30	22 19	60		
18	89	54.8	+23	17.5	22	07.2 ¹⁴²	+6	29.4 ¹⁰¹	45	6 25	7 03	7 36	10 50	27	22 15	63		
19	104	54.7		17.6	36	40.4 ¹⁴²		19.3 ¹⁰¹	50	37	19	7 57	56	24	11	66		
20	119	54.5		17.7	51	13.7 ¹⁴³	+6	09.2 ¹⁰¹	52	42	26	8 07	10 59	22	08	68		
21	134	54.4		17.8	65	46.9 ¹⁴²	+5	59.0 ¹⁰²	54	48	34	18	11 02	21	06	70		
22	149	54.3		17.9	80	20.1 ¹⁴²		48.8 ¹⁰²	56	6 54	43	30	06	18	03	72		
23	164	54.1		18.1	94	53.3 ¹⁴²		38.6 ¹⁰²	58	7 01	7 53	8 45	10	16	22 00	74		
24	179	54.0	+23	18.2	109	26.5 ¹⁴²	+5	28.3 ¹⁰³	60 S	7 08	8 05	9 02	11 14	14	21 57	77		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 29 ^m 1		Mag: -3.8 PMG: 13 ^h 29 ^m				Mag: +1.5 PMG: 11 ^h 01 ^m				Mag: -1.9 PMG: 12 ^h 17 ^m				Mag: +0.4 PMG: 20 ^h 42 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	27.4	157	51.0	+24	02.4	194	32.8	+22	05.8	175	28.1	+23	10.2	48	35.0	-10	51.1
1	277	29.8	172	50.1		02.1	209	33.4		06.1	190	29.9		10.2	63	37.6		51.1
2	292	32.3	187	49.2		01.9	224	34.0		06.4	205	31.8		10.2	78	40.1		51.0
3	307	34.8	202	48.4		01.7	239	34.6		06.6	220	33.6		10.2	93	42.7		51.0
4	322	37.2	217	47.5		01.4	254	35.2		06.9	235	35.4		10.2	108	45.2		51.0
5	337	39.7	232	46.6	+24	01.2	269	35.8	+22	07.2	250	37.3	+23	10.3	123	47.8	-10	51.0
6	352	42.2	247	45.8	+24	00.9	284	36.3	+22	07.5	265	39.1	+23	10.3	138	50.3	-10	50.9
7	7	44.6	262	44.9		00.7	299	36.9		07.8	280	41.0		10.3	153	52.9		50.9
8	22	47.1	277	44.1		00.4	314	37.5		08.1	295	42.8		10.3	168	55.5		50.9
9	37	49.6	292	43.2	+24	00.2	329	38.1		08.4	310	44.6		10.3	183	58.0		50.9
10	52	52.0	307	42.3	+24	00.0	344	38.7		08.7	325	46.5		10.3	199	00.6		50.9
11	67	54.5	322	41.5	+23	59.7	359	39.3	+22	08.9	340	48.3	+23	10.4	214	03.1	-10	50.8
12	82	57.0	337	40.6	+23	59.5	14	39.9	+22	09.2	355	50.2	+23	10.4	229	05.7	-10	50.8
13	97	59.4	352	39.8		59.2	29	40.5		09.5	10	52.0		10.4	244	08.2		50.8
14	113	01.9	7	38.9		58.9	44	41.1		09.8	25	53.8		10.4	259	10.8		50.8
15	128	04.3	22	38.0		58.7	59	41.7		10.1	40	55.7		10.4	274	13.4		50.8
16	143	06.8	37	37.2		58.4	74	42.3		10.4	55	57.5		10.4	289	15.9		50.7
17	158	09.3	52	36.3	+23	58.2	89	42.9	+22	10.6	70	59.4	+23	10.4	304	18.5	-10	50.7
18	173	11.7	67	35.5	+23	57.9	104	43.5	+22	10.9	86	01.2	+23	10.5	319	21.0	-10	50.7
19	188	14.2	82	34.6		57.7	119	44.1		11.2	101	03.0		10.5	334	23.6		50.7
20	203	16.7	97	33.7		57.4	134	44.7		11.5	116	04.9		10.5	349	26.1		50.6
21	218	19.1	112	32.9		57.1	149	45.2		11.8	131	06.7		10.5	4	28.7		50.6
22	233	21.6	127	32.0		56.9	164	45.8		12.1	146	08.6		10.5	19	31.2		50.6
23	248	24.1	142	31.2		56.6	179	46.4		12.3	161	10.4		10.5	34	33.8		50.6
24	263	26.5	157	30.3	+23	56.4	194	47.0	+22	12.6	176	12.2	+23	10.6	49	36.4	-10	50.6
Dif	—		-9 -3				+6 +3				+18 0				+26 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 6 ^d 3	PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 7 20 ^h : 56 ^m 0	SD: 15 ^h 1			R°: 45 ^m	Civil		Náutico	Hora R°		Hora R°			
	PMG: 12 ^h 00 ^m 5					PMG: 17 ^h 13 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	179	54.0	+23	18.2	109	26.5	+5	28.3	60 N	21 25	23 09	** **	10 37	78	23 33	13		
1	194	53.9		18.3	123	59.6 ¹⁴¹		18.0 ¹⁰³	58	21 05	22 20	** **	39	75	32	16		
2	209	53.7		18.4	138	32.8 ¹⁴²	+5	07.7 ¹⁰³	56	20 48	21 51	** **	41	73	32	18		
3	224	53.6		18.5	153	06.0 ¹⁴²	+4	57.3 ¹⁰⁴	54	34	28	23 14	42	71	31	20		
4	239	53.5		18.6	167	39.1 ¹⁴¹		46.9 ¹⁰⁴	52	22	21 11	22 28	44	69	31	21		
5	254	53.3	+23	18.7	182	12.3 ¹⁴²	+4	36.5 ¹⁰⁴	50	20 11	20 56	22 01	10 45	67	23 30	24		
6	269	53.2	+23	18.8	196	45.4 ¹⁴¹	+4	26.0 ¹⁰⁵	45	19 49	20 26	21 16	10 48	64	23 29	27		
7	284	53.1		18.9	211	18.5 ¹⁴¹		15.5 ¹⁰⁵	40	31	20 03	20 45	50	61	28	30		
8	299	52.9		19.0	225	51.6 ¹⁴¹	+4	05.0 ¹⁰⁵	35	16	19 45	22	52	58	28	32		
9	314	52.8		19.1	240	24.7 ¹⁴¹	+3	54.4 ¹⁰⁶	30	19 03	30	20 03	54	56	27	35		
10	329	52.6		19.2	254	57.7 ¹⁴⁰		43.9 ¹⁰⁵	20	18 41	19 05	19 34	10 57	52	26	39		
11	344	52.5	+23	19.3	269	30.8 ¹⁴¹	+3	33.3 ¹⁰⁶	10 N	18 22	18 45	19 12	11 00	48	23 25	42		
12	359	52.4	+23	19.4	284	03.8 ¹⁴⁰	+3	22.7 ¹⁰⁶	0	18 04	18 27	18 53	11 02	45	23 24	46		
13	14	52.2		19.5	298	36.8 ¹⁴⁰		12.0 ¹⁰⁷	10 S	17 47	18 10	36	05	42	23	49		
14	29	52.1		19.6	313	09.8 ¹⁴⁰	+3	01.3 ¹⁰⁷	20	28	17 52	20	08	38	22	52		
15	44	52.0		19.7	327	42.8 ¹⁴⁰	+2	50.6 ¹⁰⁷	30	17 07	34	18 03	11	34	21	56		
16	59	51.8		19.8	342	15.8 ¹⁴⁰		39.9 ¹⁰⁷	35	16 55	23	17 55	13	32	20	59		
17	74	51.7	+23	19.9	356	48.7 ¹³⁹	+2	29.2 ¹⁰⁷	40	16 41	17 11	17 45	11 15	29	23 19	62		
18	89	51.6	+23	20.0	11	21.6 ¹³⁹	+2	18.4 ¹⁰⁸	45	16 24	16 58	17 35	11 17	27	23 18	65		
19	104	51.4		20.1	25	54.5 ¹³⁹	+2	07.6 ¹⁰⁸	50	16 03	42	23	20	23	17	68		
20	119	51.3		20.2	40	27.4 ¹³⁹	+1	56.8 ¹⁰⁸	52	15 54	34	18	21	22	16	71		
21	134	51.2		20.2	55	00.2 ¹³⁸		46.0 ¹⁰⁸	54	42	26	12	23	20	16	72		
22	149	51.0		20.3	69	33.0 ¹³⁸		35.1 ¹⁰⁹	56	30	17	06	24	18	15	74		
23	164	50.9		20.4	84	05.8 ¹³⁸		24.3 ¹⁰⁸	58	15 15	16 07	17 00	26	16	14	77		
24	179	50.8	+23	20.5	98	38.6 ¹³⁸	+1	13.4 ¹⁰⁹	60 S	14 58	15 55	16 52	11 28	13	23 14	79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 25 ^m 2		Mag: -3.8 PMG: 13 ^h 31 ^m			Mag: +1.5 PMG: 11 ^h 00 ^m			Mag: -1.9 PMG: 12 ^h 14 ^m			Mag: +0.4 PMG: 20 ^h 38 ^m						
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	263	26.5	157	30.3	+23	56.4	194	47.0	+22	12.6	176	12.2	+23	10.6	49	36.4	-10	
1	278	29.0	172	29.5		56.1	209	47.6		12.9	191	14.1		10.6	64	38.9	50.5	
2	293	31.5	187	28.6		55.8	224	48.2		13.2	206	15.9		10.6	79	41.5	50.5	
3	308	33.9	202	27.7		55.5	239	48.8		13.5	221	17.8		10.6	94	44.0	50.5	
4	323	36.4	217	26.9		55.3	254	49.4		13.7	236	19.6		10.6	109	46.6	50.5	
5	338	38.8	232	26.0	+23	55.0	269	50.0	+22	14.0	251	21.4	+23	10.6	124	49.1	-10	
6	353	41.3	247	25.2	+23	54.7	284	50.6	+22	14.3	266	23.3	+23	10.6	139	51.7	-10	
7	8	43.8	262	24.3		54.5	299	51.2		14.6	281	25.1		10.7	154	54.2	50.4	
8	23	46.2	277	23.5		54.2	314	51.8		14.8	296	27.0		10.7	169	56.8	50.4	
9	38	48.7	292	22.6		53.9	329	52.4		15.1	311	28.8		10.7	184	59.3	50.4	
10	53	51.2	307	21.8		53.6	344	53.0		15.4	326	30.6		10.7	200	01.9	50.4	
11	68	53.6	322	20.9	+23	53.4	359	53.6	+22	15.7	341	32.5	+23	10.7	215	04.5	-10	
12	83	56.1	337	20.0	+23	53.1	14	54.1	+22	15.9	356	34.3	+23	10.7	230	07.0	-10	
13	98	58.6	352	19.2		52.8	29	54.7		16.2	11	36.2		10.7	245	09.6	50.3	
14	114	01.0	7	18.3		52.5	44	55.3		16.5	26	38.0		10.8	260	12.1	50.3	
15	129	03.5	22	17.5		52.2	59	55.9		16.8	41	39.8		10.8	275	14.7	50.2	
16	144	05.9	37	16.6		51.9	74	56.5		17.0	56	41.7		10.8	290	17.2	50.2	
17	159	08.4	52	15.8	+23	51.7	89	57.1	+22	17.3	71	43.5	+23	10.8	305	19.8	-10	
18	174	10.9	67	14.9	+23	51.4	104	57.7	+22	17.6	86	45.4	+23	10.8	320	22.3	-10	
19	189	13.3	82	14.1		51.1	119	58.3		17.9	101	47.2		10.8	335	24.9	50.2	
20	204	15.8	97	13.2		50.8	134	58.9		18.1	116	49.0		10.8	350	27.4	50.1	
21	219	18.3	112	12.4		50.5	149	59.5		18.4	131	50.9		10.9	5	30.0	50.1	
22	234	20.7	127	11.5		50.2	165	00.1		18.7	146	52.7		10.9	20	32.5	50.1	
23	249	23.2	142	10.7		49.9	180	00.7		19.0	161	54.6		10.9	35	35.1	50.1	
24	264	25.7	157	09.8	+23	49.6	195	01.3	+22	19.2	176	56.4	+23	10.9	50	37.6	-10	
Dif	—		-9		-3		+6		+3		+18		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 00 ^m 7			Edad: 7 ^d 3 PHE { SD: 15'3 PMG: 17 ^h 58 ^m														
				R ^o : 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m			
0	179	50.8	+23	20.5	98	38.6	+1 13.4	60 N	** ** *	0 52	2 36	11 55	80	23 46	15			
1	194	50.6		20.6	113	11.3 ¹³⁷	+1 02.5 ¹⁰⁹	58	** ** *	1 41	2 56	54	78	48	18			
2	209	50.5		20.7	127	44.0 ¹³⁷	+0 51.6 ¹⁰⁹	56	** ** *	2 11	3 13	54	75	50	20			
3	224	50.4		20.8	142	16.7 ¹³⁷	40.6 ¹¹⁰	54	0 47	33	27	53	74	51	22			
4	239	50.2		20.9	156	49.3 ¹³⁶	29.7 ¹⁰⁹	52	1 33	2 51	39	53	71	52	24			
5	254	50.1	+23	21.0	171	21.9 ¹³⁶	+0 18.7 ¹¹⁰	50	2 00	3 06	3 50	11 52	70	23 54	25			
6	269	50.0	+23	21.0	185	54.5 ¹³⁶	+0 07.7 ¹¹⁰	45	2 46	3 35	4 13	11 52	66	23 56	29			
7	284	49.8		21.1	200	27.1 ¹³⁶	-0 03.2 ¹⁰⁹	40	3 16	3 58	31	51	63	23 58	32			
8	299	49.7		21.2	214	59.6 ¹³⁵	14.2 ¹¹⁰	35	39	4 16	46	50	60	** ** *	** ** *			
9	314	49.6		21.3	229	32.0 ¹³⁴	25.3 ¹¹¹	30	3 58	31	4 59	50	57	** ** *	** ** *			
10	329	49.4		21.4	244	04.5 ¹³⁵	36.3 ¹¹⁰	20	4 27	4 56	5 21	49	54	** ** *	** ** *			
11	344	49.3	+23	21.5	258	36.9 ¹³⁴	-0 47.3 ¹¹⁰	10 N	4 49	5 16	5 40	11 48	50	** ** *	** ** *			
12	359	49.2	+23	21.5	273	09.2 ¹³³	-0 58.4 ¹¹¹	0	5 08	5 35	5 57	11 47	47	** ** *	** ** *			
13	14	49.0		21.6	287	41.6 ¹³⁴	-1 09.4 ¹¹⁰	10 S	25	5 52	6 14	47	43	** ** *	** ** *			
14	29	48.9		21.7	302	13.9 ¹³³	20.5 ¹¹¹	20	41	6 09	33	46	40	** ** *	** ** *			
15	44	48.7		21.8	316	46.1 ¹³²	31.5 ¹¹⁰	30	5 58	28	6 54	45	36	** ** *	** ** *			
16	59	48.6		21.9	331	18.3 ¹³²	42.6 ¹¹¹	35	6 07	38	7 06	45	33	** ** *	** ** *			
17	74	48.5	+23	21.9	345	50.5 ¹³²	-1 53.7 ¹¹¹	40	6 16	6 50	7 21	11 44	31	** ** *	** ** *			
18	89	48.3	+23	22.0	0	22.6 ¹³¹	-2 04.8 ¹¹¹	45	6 26	7 04	7 37	11 44	28	** ** *	** ** *			
19	104	48.2		22.1	14	54.7 ¹³¹	15.9 ¹¹¹	50	38	20	7 58	43	25	** ** *	** ** *			
20	119	48.1		22.2	29	26.7 ¹³⁰	27.0 ¹¹¹	52	43	27	8 08	43	23	** ** *	** ** *			
21	134	47.9		22.2	43	58.7 ¹³⁰	38.0 ¹¹⁰	54	49	35	19	43	21	** ** *	** ** *			
22	149	47.8		22.3	58	30.6 ¹²⁹	-2 49.1 ¹¹¹	56	6 55	44	32	42	19	** ** *	** ** *			
23	164	47.7		22.4	73	02.5 ¹²⁹	-3 00.2 ¹¹¹	58	7 02	7 54	8 46	42	17	** ** *	** ** *			
24	179	47.5	+23	22.5	87	34.3 ¹²⁸	-3 11.3 ¹¹¹	60 S	7 09	8 06	9 04	11 41	15	** ** *	** ** *			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 21 ^m 2		Mag: -3.8 PMG: 13 ^h 32 ^m			Mag: +1.5 PMG: 10 ^h 59 ^m			Mag: -1.9 PMG: 12 ^h 11 ^m			Mag: +0.4 PMG: 20 ^h 34 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	264	25.7	157	09.8	+23	49.6	195	01.3	+22	19.2	176	56.4	+23	10.9	50	37.6	-10	50.1
1	279	28.1	172	09.0		49.3	210	01.8		19.5	191	58.2		10.9	65	40.2		50.0
2	294	30.6	187	08.1		49.0	225	02.4		19.8	207	00.1		10.9	80	42.7		50.0
3	309	33.1	202	07.3		48.7	240	03.0		20.0	222	01.9		10.9	95	45.3		50.0
4	324	35.5	217	06.4		48.4	255	03.6		20.3	237	03.8		11.0	110	47.8		50.0
5	339	38.0	232	05.6	+23	48.1	270	04.2	+22	20.6	252	05.6	+23	11.0	125	50.4	-10	50.0
6	354	40.4	247	04.7	+23	47.8	285	04.8	+22	20.9	267	07.4	+23	11.0	140	52.9	-10	50.0
7	9	42.9	262	03.9		47.5	300	05.4		21.1	282	09.3		11.0	155	55.5		49.9
8	24	45.4	277	03.0		47.2	315	06.0		21.4	297	11.1		11.0	170	58.0		49.9
9	39	47.8	292	02.2		46.9	330	06.6		21.7	312	13.0		11.0	186	00.6		49.9
10	54	50.3	307	01.3		46.6	345	07.2		21.9	327	14.8		11.0	201	03.1		49.9
11	69	52.8	322	00.5	+23	46.3	0	07.8	+22	22.2	342	16.6	+23	11.1	216	05.7	-10	49.9
12	84	55.2	336	59.6	+23	46.0	15	08.4	+22	22.5	357	18.5	+23	11.1	231	08.2	-10	49.8
13	99	57.7	351	58.8		45.7	30	09.0		22.7	12	20.3		11.1	246	10.8		49.8
14	115	00.2	6	57.9		45.4	45	09.6		23.0	27	22.2		11.1	261	13.3		49.8
15	130	02.6	21	57.1		45.1	60	10.1		23.3	42	24.0		11.1	276	15.9		49.8
16	145	05.1	36	56.3		44.8	75	10.7		23.5	57	25.8		11.1	291	18.4		49.8
17	160	07.6	51	55.4	+23	44.4	90	11.3	+22	23.8	72	27.7	+23	11.1	306	21.0	-10	49.7
18	175	10.0	66	54.6	+23	44.1	105	11.9	+22	24.1	87	29.5	+23	11.1	321	23.5	-10	49.7
19	190	12.5	81	53.7		43.8	120	12.5		24.3	102	31.4		11.2	336	26.1		49.7
20	205	14.9	96	52.9		43.5	135	13.1		24.6	117	33.2		11.2	351	28.6		49.7
21	220	17.4	111	52.0		43.2	150	13.7		24.8	132	35.0		11.2	6	31.2		49.7
22	235	19.9	126	51.2		42.9	165	14.3		25.1	147	36.9		11.2	21	33.7		49.6
23	250	22.3	141	50.3		42.5	180	14.9		25.4	162	38.7		11.2	36	36.3		49.6
24	265	24.8	156	49.5	+23	42.2	195	15.5	+22	25.6	177	40.6	+23	11.2	51	38.8	-10	49.6
Dif	—		-8	-3			+6	+3			+18	0			+25	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 8 ^d 3	PHE { 4 ^h : 57'0 12 ^h : 57'3 20 ^h : 57'6	PMG: 12 ^h 00 ^m 9			R°: 50 ^m		R°		R°			
	PMG: 12 ^h 00 ^m 9					R°: 50 ^m			R°		R°					
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	47.5	+23	22.5	87	34.3	-3	11.3	60 N	21 26	23 12	** ** *	13 15	84	** ** *	** ** *
1	194	47.4		22.5	102	06.1 ¹²⁸		22.4 ¹¹¹	58	21 06	22 22	** ** *	12 81		** ** *	** ** *
2	209	47.3		22.6	116	37.8 ¹²⁷		33.5 ¹¹¹	56	20 49	21 52	** ** *	09 79		** ** *	** ** *
3	224	47.1		22.7	131	09.5 ¹²⁷		44.6 ¹¹¹	54	35	30	23 16	07 76		** ** *	** ** *
4	239	47.0		22.7	145	41.2 ¹²⁷	-3	55.7 ¹¹¹	52	23	21 12	22 30	04 74		** ** *	** ** *
5	254	46.9	+23	22.8	160	12.7 ¹²⁵	-4	06.8 ¹¹¹	50	20 12	20 56	22 02	13 02	72	** ** *	** ** *
6	269	46.7	+23	22.9	174	44.3 ¹²⁶	-4	17.8 ¹¹⁰	45	19 49	20 27	21 16	12 58	68	** ** *	** ** *
7	284	46.6		23.0	189	15.7 ¹²⁴		28.9 ¹¹¹	40	31	20 04	20 46	54 65		** ** *	** ** *
8	299	46.4		23.0	203	47.2 ¹²⁵		40.0 ¹¹¹	35	16	19 46	23	50 63		0 00	35
9	314	46.3		23.1	218	18.5 ¹²³	-4	51.0 ¹¹⁰	30	19 03	31	20 04	47 61		02	37
10	329	46.2		23.2	232	49.8 ¹²³	-5	02.1 ¹¹¹	20	18 41	19 06	19 35	43 56		05	41
11	344	46.0	+23	23.2	247	21.0 ¹²²	-5	13.1 ¹¹⁰	10 N	18 22	18 45	19 12	12 38	53	0 07	45
12	359	45.9	+23	23.3	261	52.2 ¹²²	-5	24.1 ¹¹⁰	0	18 05	18 27	18 53	12 34	49	0 10	47
13	14	45.8		23.3	276	23.3 ¹²¹		35.1 ¹¹⁰	10 S	17 47	18 10	36	30 46		12	51
14	29	45.6		23.4	290	54.4 ¹²¹		46.1 ¹¹⁰	20	29	17 53	20	26 42		14	55
15	44	45.5		23.5	305	25.4 ¹²⁰	-5	57.1 ¹¹⁰	30	17 07	34	18 04	21 39		17	59
16	59	45.4		23.5	319	56.3 ¹¹⁹	-6	08.1 ¹¹⁰	35	16 55	23	17 55	18 37		19	61
17	74	45.2	+23	23.6	334	27.2 ¹¹⁹	-6	19.0 ¹⁰⁹	40	16 41	17 11	17 46	12 15	34	0 21	64
18	89	45.1	+23	23.7	348	58.0 ¹¹⁸	-6	30.0 ¹¹⁰	45	16 24	16 58	17 35	12 12	30	0 23	67
19	104	45.0		23.7	3	28.7 ¹¹⁷		40.9 ¹⁰⁹	50	16 03	42	23	08 26		25	71
20	119	44.8		23.8	17	59.4 ¹¹⁷	-6	51.8 ¹⁰⁹	52	15 54	34	18	06 25		27	72
21	134	44.7		23.8	32	30.0 ¹¹⁶	-7	02.7 ¹⁰⁹	54	42	26	12	04 23		28	74
22	149	44.6		23.9	47	00.5 ¹¹⁵		13.5 ¹⁰⁸	56	30	17	06	12 01	22	29	77
23	164	44.4		23.9	61	31.0 ¹¹⁵		24.4 ¹⁰⁹	58	15 15	16 07	17 00	11 59	19	31	79
24	179	44.3	+23	24.0	76	01.4 ¹¹⁴	-7	35.2 ¹⁰⁸	60 S	14 58	15 55	16 52	11 56	16	0 33	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.8		Mag: +1.5		Mag: -1.9		Mag: +0.4									
	6 ^h 17 ^m 3		PMG: 13 ^h 33 ^m		PMG: 10 ^h 59 ^m		PMG: 12 ^h 08 ^m		PMG: 20 ^h 30 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	265	24.8	156	49.5	+23	42.2	195	15.5	+22	25.6	177	40.6	+23	11.2	51	38.8	-10	49.6
1	280	27.3	171	48.7		41.9	210	16.1		25.9	192	42.4		11.2	66	41.4		49.6
2	295	29.7	186	47.8		41.6	225	16.7		26.2	207	44.2		11.3	81	43.9		49.6
3	310	32.2	201	47.0		41.2	240	17.3		26.4	222	46.1		11.3	96	46.5		49.6
4	325	34.7	216	46.1		40.9	255	17.8		26.7	237	47.9		11.3	111	49.0		49.5
5	340	37.1	231	45.3	+23	40.6	270	18.4	+22	26.9	252	49.8	+23	11.3	126	51.6	-10	49.5
6	355	39.6	246	44.4	+23	40.2	285	19.0	+22	27.2	267	51.6	+23	11.3	141	54.1	-10	49.5
7	10	42.0	261	43.6		39.9	300	19.6		27.5	282	53.4		11.3	156	56.7		49.5
8	25	44.5	276	42.8		39.6	315	20.2		27.7	297	55.3		11.3	171	59.2		49.5
9	40	47.0	291	41.9		39.2	330	20.8		28.0	312	57.1		11.3	187	01.8		49.4
10	55	49.4	306	41.1		38.9	345	21.4		28.2	327	59.0		11.4	202	04.3		49.4
11	70	51.9	321	40.2	+23	38.6	0	22.0	+22	28.5	343	00.8	+23	11.4	217	06.9	-10	49.4
12	85	54.4	336	39.4	+23	38.2	15	22.6	+22	28.8	358	02.6	+23	11.4	232	09.4	-10	49.4
13	100	56.8	351	38.6		37.9	30	23.2		29.0	13	04.5		11.4	247	11.9		49.4
14	115	59.3	6	37.7		37.6	45	23.8		29.3	28	06.3		11.4	262	14.5		49.4
15	131	01.8	21	36.9		37.2	60	24.4		29.5	43	08.2		11.4	277	17.0		49.3
16	146	04.2	36	36.1		36.9	75	24.9		29.8	58	10.0		11.4	292	19.6		49.3
17	161	06.7	51	35.2	+23	36.5	90	25.5	+22	30.0	73	11.8	+23	11.4	307	22.1	-10	49.3
18	176	09.2	66	34.4	+23	36.2	105	26.1	+22	30.3	88	13.7	+23	11.5	322	24.7	-10	49.3
19	191	11.6	81	33.5		35.8	120	26.7		30.6	103	15.5		11.5	337	27.2		49.3
20	206	14.1	96	32.7		35.5	135	27.3		30.8	118	17.4		11.5	352	29.8		49.2
21	221	16.5	111	31.9		35.2	150	27.9		31.1	133	19.2		11.5	7	32.3		49.2
22	236	19.0	126	31.0		34.8	165	28.5		31.3	148	21.0		11.5	22	34.9		49.2
23	251	21.5	141	30.2		34.5	180	29.1		31.6	163	22.9		11.5	37	37.4		49.2
24	266	23.9	156	29.4	+23	34.1	195	29.7	+22	31.8	178	24.7	+23	11.5	52	39.9	-10	49.2
Dif	—		-8		-3		+6		+3		+18		0		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 01 ^m 2				Edad: 9 ^d 3 PHE { SD: 15 ^h 7 ^m PMG: 19 ^h 36 ^m R°: 53 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	44.3	+23	24.0	76	01.4	-7	35.2	60 N	** **	0 50	2 36	14 39	86	0 01	18		
1	194	44.1		24.1	90	31.7 ¹¹³		46.0 ¹⁰⁸	58	** **	1 40	2 56	33 83		06	20		
2	209	44.0		24.1	105	02.0 ¹¹³	-7	56.7 ¹⁰⁷	56	** **	2 10	3 13	28 80		10	22		
3	224	43.9		24.2	119	32.1 ¹¹¹	-8	07.5 ¹⁰⁸	54	0 46	33	27	23 78		13	25		
4	239	43.7		24.2	134	02.2 ¹¹¹		18.2 ¹⁰⁷	52	1 32	2 51	39	18 77		16	27		
5	254	43.6	+23	24.3	148	32.3 ¹¹¹	-8	28.8 ¹⁰⁶	50	2 00	3 06	3 50	14 14	75	0 19	28		
6	269	43.5	+23	24.3	163	02.2 ¹⁰⁹	-8	39.5 ¹⁰⁷	45	2 46	3 35	4 13	14 06	71	0 25	32		
7	284	43.3		24.4	177	32.1 ¹⁰⁹	-8	50.1 ¹⁰⁶	40	3 16	3 58	31	13 59	68	30	35		
8	299	43.2		24.4	192	01.9 ¹⁰⁸	-9	00.7 ¹⁰⁶	35	39	4 16	46	53 65		35	38		
9	314	43.1		24.5	206	31.6 ¹⁰⁷		11.3 ¹⁰⁶	30	3 58	31	4 59	48 63		39	40		
10	329	42.9		24.5	221	01.3 ¹⁰⁷		21.8 ¹⁰⁵	20	4 27	4 56	5 21	39 59		46	44		
11	344	42.8	+23	24.6	235	30.8 ¹⁰⁵	-9	32.3 ¹⁰⁵	10 N	4 50	5 17	5 40	13 31	56	0 52	47		
12	359	42.7	+23	24.6	250	00.3 ¹⁰⁵	-9	42.7 ¹⁰⁴	0	5 09	5 35	5 57	13 23	53	0 57	51		
13	14	42.5		24.7	264	29.7 ¹⁰⁴	-9	53.1 ¹⁰⁴	10 S	26	5 52	6 15	16 50		1 03	54		
14	29	42.4		24.7	278	59.0 ¹⁰³	-10	03.5 ¹⁰⁴	20	42	6 09	33	08 47		09	58		
15	44	42.2		24.7	293	28.3 ¹⁰³		13.8 ¹⁰³	30	5 58	28	6 55	13 00	42	16	61		
16	59	42.1		24.8	307	57.4 ¹⁰¹		24.1 ¹⁰³	35	6 07	39	7 07	12 55	40	20	64		
17	74	42.0	+23	24.8	322	26.5 ¹⁰¹	-10	34.4 ¹⁰³	40	6 17	6 51	7 21	12 49	38	1 25	66		
18	89	41.8	+23	24.9	336	55.5 ¹⁰⁰	-10	44.6 ¹⁰²	45	6 27	7 04	7 38	12 42	35	1 30	69		
19	104	41.7		24.9	351	24.4 ⁹⁹	-10	54.7 ¹⁰¹	50	39	20	7 59	34 32		36	74		
20	119	41.6		25.0	5	53.2 ⁹⁸	-11	04.8 ¹⁰¹	52	44	28	8 09	31 29		39	75		
21	134	41.4		25.0	20	21.9 ⁹⁷		14.9 ¹⁰¹	54	50	36	20	27 28		42	78		
22	149	41.3		25.0	34	50.6 ⁹⁷		24.9 ¹⁰⁰	56	6 56	45	32	23 25		46	79		
23	164	41.2		25.1	49	19.1 ⁹⁵		34.9 ¹⁰⁰	58	7 03	7 55	8 47	18 23		50	82		
24	179	41.0	+23	25.1	63	47.6 ⁹⁵	-11	44.8 ⁹⁹	60 S	7 10	8 07	9 05	12 12	21	1 54	85		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 13 ^m 4		Mag: -3.8 PMG: 13 ^h 35 ^m				Mag: +1.5 PMG: 10 ^h 58 ^m				Mag: -1.9 PMG: 12 ^h 05 ^m				Mag: +0.4 PMG: 20 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	266	23.9	156	29.4	+23	34.1	195	29.7	+22	31.8	178	24.7	+23	11.5	52	39.9	-10	49.2
1	281	26.4	171	28.5		33.7	210	30.3		32.1	193	26.6		11.5	67	42.5		49.2
2	296	28.9	186	27.7		33.4	225	30.9		32.3	208	28.4		11.5	82	45.0		49.1
3	311	31.3	201	26.9		33.0	240	31.5		32.6	223	30.2		11.6	97	47.6		49.1
4	326	33.8	216	26.0		32.7	255	32.1		32.8	238	32.1		11.6	112	50.1		49.1
5	341	36.3	231	25.2	+23	32.3	270	32.6	+22	33.1	253	33.9	+23	11.6	127	52.7	-10	49.1
6	356	38.7	246	24.4	+23	32.0	285	33.2	+22	33.3	268	35.8	+23	11.6	142	55.2	-10	49.1
7	11	41.2	261	23.5		31.6	300	33.8		33.6	283	37.6		11.6	157	57.8		49.1
8	26	43.6	276	22.7		31.2	315	34.4		33.8	298	39.4		11.6	173	00.3		49.0
9	41	46.1	291	21.9		30.9	330	35.0		34.1	313	41.3		11.6	188	02.8		49.0
10	56	48.6	306	21.0		30.5	345	35.6		34.3	328	43.1		11.6	203	05.4		49.0
11	71	51.0	321	20.2	+23	30.2	0	36.2	+22	34.6	343	45.0	+23	11.7	218	07.9	-10	49.0
12	86	53.5	336	19.4	+23	29.8	15	36.8	+22	34.8	358	46.8	+23	11.7	233	10.5	-10	49.0
13	101	56.0	351	18.5		29.4	30	37.4		35.1	13	48.6		11.7	248	13.0		49.0
14	116	58.4	6	17.7		29.1	45	38.0		35.3	28	50.5		11.7	263	15.6		48.9
15	132	00.9	21	16.9		28.7	60	38.6		35.6	43	52.3		11.7	278	18.1		48.9
16	147	03.4	36	16.1		28.3	75	39.2		35.8	58	54.2		11.7	293	20.6		48.9
17	162	05.8	51	15.2	+23	27.9	90	39.7	+22	36.1	73	56.0	+23	11.7	308	23.2	-10	48.9
18	177	08.3	66	14.4	+23	27.6	105	40.3	+22	36.3	88	57.8	+23	11.7	323	25.7	-10	48.9
19	192	10.8	81	13.6		27.2	120	40.9		36.6	103	59.7		11.7	338	28.3		48.9
20	207	13.2	96	12.7		26.8	135	41.5		36.8	119	01.5		11.8	353	30.8		48.8
21	222	15.7	111	11.9		26.4	150	42.1		37.1	134	03.4		11.8	8	33.3		48.8
22	237	18.1	126	11.1		26.1	165	42.7		37.3	149	05.2		11.8	23	35.9		48.8
23	252	20.6	141	10.3		25.7	180	43.3		37.6	164	07.0		11.8	38	38.4		48.8
24	267	23.1	156	09.4	+23	25.3	195	43.9	+22	37.8	179	08.9	+23	11.8	53	41.0	-10	48.8
Dif	—		-8		-4		+6		+2		+18		0		+25		0	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 3	PHE {	SD: 16 ^h 0	PMG: 20 ^h 29 ^m	R°: 58 ^m									
	PMG: 12 ^h 01 ^m 4																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	179	41.0	+23	25.1	63	47.6	–11	44.8	60 N	21 27	23 14	*** **	16 05	87	0 19	23	
1	194	40.9		25.2	78	16.0	–11	54.6	58	21 07	22 23	*** **	15 56	84	26	26	
2	209	40.8		25.2	92	44.3	–12	04.4	56	20 50	21 53	*** **	48	82	32	29	
3	224	40.6		25.2	107	12.5		14.2	54	36	30	23 18	41	79	38	30	
4	239	40.5		25.3	121	40.6		23.9	52	23	21 12	22 31	35	77	43	32	
5	254	40.3	+23	25.3	136	08.6	–12	33.5	50	20 12	20 57	22 03	15 29	76	0 47	34	
6	269	40.2	+23	25.3	150	36.6	–12	43.1	45	19 50	20 27	21 17	15 17	72	0 57	38	
7	284	40.1		25.4	165	04.4	–12	52.6	40	32	20 05	20 46	15 07	70	1 05	41	
8	299	39.9		25.4	179	32.2	–13	02.0	35	17	19 46	23	14 58	68	13	42	
9	314	39.8		25.4	193	59.8		11.4	30	19 04	31	20 05	51	65	19	45	
10	329	39.7		25.5	208	27.4		20.7	20	18 42	19 06	19 35	38	62	30	48	
11	344	39.5	+23	25.5	222	54.9	–13	30.0	10 N	18 23	18 46	19 13	14 27	59	1 39	52	
12	359	39.4	+23	25.5	237	22.2	–13	39.1	0	18 05	18 28	18 54	14 16	57	1 48	55	
13	14	39.3		25.6	251	49.5		48.3	10 S	17 48	18 10	37	14 06	54	1 57	57	
14	29	39.1		25.6	266	16.7	–13	57.3	20	29	17 53	21	13 55	51	2 07	60	
15	44	39.0		25.6	280	43.8	–14	06.3	30	17 08	34	18 04	42	48	17	65	
16	59	38.9		25.6	295	10.8		15.2	35	16 55	24	17 55	35	46	24	66	
17	74	38.7	+23	25.7	309	37.7	–14	24.0	40	16 41	17 12	17 46	13 27	43	2 31	69	
18	89	38.6	+23	25.7	324	04.6	–14	32.7	45	16 24	16 58	17 36	13 17	41	2 39	72	
19	104	38.5		25.7	338	31.3		41.4	50	16 04	42	24	06	38	50	75	
20	119	38.3		25.7	352	57.9		50.0	52	15 54	35	18	13	00	37	2 54	77
21	134	38.2		25.8	7	24.4	–14	58.5	54	43	26	13	12	55	34	3 00	78
22	149	38.0		25.8	21	50.9	–15	06.9	56	30	17	07	48	33	05	81	
23	164	37.9		25.8	36	17.2		15.2	58	15 15	16 07	17 00	41	30	12	83	
24	179	37.8	+23	25.8	50	43.5	–15	23.5	60 S	14 58	15 55	16 52	12 33	27	3 19	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 09 ^m 5		Mag: –3.8 PMG: 13 ^h 36 ^m		Mag: +1.5 PMG: 10 ^h 57 ^m		Mag: –1.9 PMG: 12 ^h 02 ^m		Mag: +0.5 PMG: 20 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	267	23.1	156	09.4	+23	25.3	195	43.9	+22	37.8
1	282	25.5	171	08.6		24.9	210	44.5		38.1
2	297	28.0	186	07.8		24.5	225	45.1		38.3
3	312	30.5	201	07.0		24.2	240	45.7		38.5
4	327	32.9	216	06.1		23.8	255	46.3		38.8
5	342	35.4	231	05.3	+23	23.4	270	46.8	+22	39.0
6	357	37.9	246	04.5	+23	23.0	285	47.4	+22	39.3
7	12	40.3	261	03.7		22.6	300	48.0		39.5
8	27	42.8	276	02.8		22.2	315	48.6		39.8
9	42	45.3	291	02.0		21.8	330	49.2		40.0
10	57	47.7	306	01.2		21.4	345	49.8		40.2
11	72	50.2	321	00.4	+23	21.1	0	50.4	+22	40.5
12	87	52.6	335	59.5	+23	20.7	15	51.0	+22	40.7
13	102	55.1	350	58.7		20.3	30	51.6		41.0
14	117	57.6	5	57.9		19.9	45	52.2		41.2
15	133	00.0	20	57.1		19.5	60	52.8		41.4
16	148	02.5	35	56.3		19.1	75	53.3		41.7
17	163	05.0	50	55.4	+23	18.7	90	53.9	+22	41.9
18	178	07.4	65	54.6	+23	18.3	105	54.5	+22	42.2
19	193	09.9	80	53.8		17.9	120	55.1		42.4
20	208	12.4	95	53.0		17.5	135	55.7		42.6
21	223	14.8	110	52.2		17.1	150	56.3		42.9
22	238	17.3	125	51.3		16.7	165	56.9		43.1
23	253	19.8	140	50.5		16.3	180	57.5		43.3
24	268	22.2	155	49.7	+23	15.8	195	58.1	+22	43.6
Dif	—		–8		–4		+6		+2	
							+18		0	
									+25	0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 01 ^m 6			Edad: 11 ^d 3 PHE { 4 ^h : 59/8 12 ^h : 60/1 20 ^h : 60/3 PMG: 21 ^h 27 ^m Rº: 61 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	37.8	+23	25.8	50	43.5	-15	23.5	60 N	** **	0 49	2 36	17 32	81	0 42	32	
1	194	37.6		25.8	65	09.6		31.7	58	** **	1 40	2 56	20 79	0 52	35		
2	209	37.5		25.9	79	35.7		39.7	56	** **	2 10	3 13	10 77	1 01	37		
3	224	37.4		25.9	94	01.6		47.7	54	0 45	33	27	17 00	76	08	39	
4	239	37.2		25.9	108	27.5		-15 55.6	52	1 32	2 51	40	16 52	75	15	41	
5	254	37.1	+23	25.9	122	53.3		-16 03.4	50	2 00	3 06	3 50	16 45	73	1 21	42	
6	269	37.0	+23	25.9	137	19.0		-16 11.1	45	2 46	3 36	4 13	16 29	71	1 35	45	
7	284	36.8		26.0	151	44.5		18.7	40	3 16	3 58	31	17 69		46	47	
8	299	36.7		26.0	166	10.0		26.2	35	40	4 16	46	16 06	67	1 55	50	
9	314	36.6		26.0	180	35.4		33.7	30	3 58	32	4 59	15 56	67	2 04	51	
10	329	36.4		26.0	195	00.8		41.0	20	4 27	4 57	5 21	40 64		18	54	
11	344	36.3	+23	26.0	209	26.0		-16 48.2	10 N	4 50	5 17	5 40	15 26	62	2 31	56	
12	359	36.1	+23	26.0	223	51.1		-16 55.3	0	5 09	5 35	5 58	15 13	60	2 43	58	
13	14	36.0		26.0	238	16.1		-17 02.3	10 S	26	5 53	6 15	15 00	58	2 54	61	
14	29	35.9		26.1	252	41.1		09.2	20	42	6 10	34	14 46	57	3 07	63	
15	44	35.7		26.1	267	05.9		16.0	30	5 59	29	6 55	30 54		22	66	
16	59	35.6		26.1	281	30.7		22.7	35	6 08	39	7 08	21 53		30	68	
17	74	35.5	+23	26.1	295	55.4		-17 29.2	40	6 17	6 51	7 22	14 10	52	3 40	69	
18	89	35.3	+23	26.1	310	19.9		-17 35.7	45	6 27	7 05	7 39	13 58	50	3 51	72	
19	104	35.2		26.1	324	44.4		42.1	50	39	21	7 59	44 47		4 05	75	
20	119	35.1		26.1	339	08.8		48.3	52	45	28	8 09	37 45		11	76	
21	134	34.9		26.1	353	33.2		-17 54.4	54	50	37	20	29 44		18	78	
22	149	34.8		26.1	7	57.6		-18 00.4	56	6 56	46	33	21 42		26	80	
23	164	34.7		26.1	22	21.4		06.3	58	7 03	7 56	8 48	11 41		35	82	
24	179	34.5	+23	26.1	36	45.6		-18 12.1	60 S	7 11	8 08	9 05	13 00	39	4 46	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 05 ^m 5		Mag: -3.8 PMG: 13 ^h 37 ^m		Mag: +1.5 PMG: 10 ^h 56 ^m		Mag: -1.9 PMG: 11 ^h 59 ^m		Mag: +0.5 PMG: 20 ^h 18 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	268	22.2	155	49.7	+23	195	58.1	+22	179	53.1	+23	54	41.9	-10	48.4
1	283	24.7	170	48.9		210	58.7		194	54.9		69	44.5		48.4
2	298	27.1	185	48.1		225	59.3		209	56.7		84	47.0		48.4
3	313	29.6	200	47.3		240	59.9		224	58.6		99	49.5		48.4
4	328	32.1	215	46.4		256	00.4		240	00.4		114	52.1		48.4
5	343	34.5	230	45.6	+23	271	01.0	+22	255	02.3	+23	129	54.6	-10	48.3
6	358	37.0	245	44.8	+23	286	01.6	+22	270	04.1	+23	144	57.1	-10	48.3
7	13	39.5	260	44.0		301	02.2		285	05.9		159	59.7		48.3
8	28	41.9	275	43.2		316	02.8		300	07.8		175	02.2		48.3
9	43	44.4	290	42.4		331	03.4		315	09.6		190	04.7		48.3
10	58	46.9	305	41.6		346	04.0		330	11.5		205	07.3		48.3
11	73	49.3	320	40.7	+23	1	04.6	+22	345	13.3	+23	220	09.8	-10	48.3
12	88	51.8	335	39.9	+23	16	05.2	+22	0	15.1	+23	235	12.3	-10	48.2
13	103	54.2	350	39.1		31	05.8		15	17.0		250	14.9		48.2
14	118	56.7	5	38.3		46	06.4		30	18.8		265	17.4		48.2
15	133	59.2	20	37.5		61	06.9		45	20.7		280	20.0		48.2
16	149	01.6	35	36.7		76	07.5		60	22.5		295	22.5		48.2
17	164	04.1	50	35.9	+23	91	08.1	+22	75	24.3	+23	310	25.0	-10	48.2
18	179	06.6	65	35.1	+23	106	08.7	+22	90	26.2	+23	325	27.6	-10	48.2
19	194	09.0	80	34.3		121	09.3		105	28.0		340	30.1		48.2
20	209	11.5	95	33.4		136	09.9		120	29.9		355	32.6		48.1
21	224	14.0	110	32.6		151	10.5		135	31.7		10	35.2		48.1
22	239	16.4	125	31.8		166	11.1		150	33.5		25	37.7		48.1
23	254	18.9	140	31.0		181	11.7		165	35.4		40	40.2		48.1
24	269	21.4	155	30.2	+23	196	12.3	+22	180	37.2	+23	55	42.8	-10	48.1
Dif	—		-8		-4	+6		+2	+18		0	+25			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 12 ^d 3 PHE { 4 ^h : 60 ^h 6 12 ^h : 60 ^h 8 20 ^h : 61 ^h 0 R°: 63 ^m												
	PMG: 12 ^h 01 ^m 8				SD: 16 ^h 5 PMG: 22 ^h 28 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	34.5	+23	26.1	36	45.6	-18	12.1	60 N	21 28	23 14	** **	18 53	70	1 14	45	
1	194	34.4		26.1	51	09.6	50	17.7	58	21 07	22 23	** **	39	69	27	47	
2	209	34.3		26.1	65	33.5	49	23.2	56	20 50	21 53	** **	27	68	38	48	
3	224	34.1		26.1	79	57.4	49	28.6	54		36	31	23	18	47	50	
4	239	34.0		26.1	94	21.1	47	33.9	53		24	21 13	22	31	1 56	51	
5	254	33.8	+23	26.1	108	44.8	47	-18	39.0	51	20 13	20 58	22	03	2 03	52	
6	269	33.7	+23	26.1	123	08.4	46	-18	44.0	50	19 50	20 28	21	18	2 20	54	
7	284	33.6		26.1	137	31.9	45	48.9	49	40	32	20 05	20	47	33	56	
8	299	33.4		26.1	151	55.3	44	53.7	48	35	17	19 47	24	13	45	56	
9	314	33.3		26.1	166	18.7	44	-18	58.3	46	19 04	32	20	05	2 55	57	
10	329	33.2		26.1	180	42.0	43	-19	02.8	45	18 42	19 07	19	36	3 12	59	
11	344	33.0	+23	26.1	195	05.2	42	-19	07.2	44	18 23	18 46	19	13	3 27	61	
12	359	32.9	+23	26.1	209	28.4	42	-19	11.4	42	18 05	18 28	18	54	3 41	62	
13	14	32.8		26.1	223	51.5	41	15.5	41	10 S	17 48	18 11	37	15	58	63	
14	29	32.6		26.1	238	14.5	40	19.4	39	20	29	17 53	21	43	4 10	65	
15	44	32.5		26.1	252	37.4	39	23.2	38	30	17 08	35	18	04	24	61	
16	59	32.4		26.1	267	00.3	39	26.9	37	35	16 56	24	17	56	38	67	
17	74	32.2	+23	26.1	281	23.2	39	-19	30.5	36	16 42	17 12	17	46	4 49	68	
18	89	32.1	+23	26.1	295	45.9	37	-19	33.8	33	16 25	16 59	17	36	5 03	69	
19	104	32.0		26.1	310	08.6	37	37.1	33	50	16 04	43	24	31	57	70	
20	119	31.8		26.1	324	31.3	37	40.2	31	52	15 54	35	19	22	58	72	
21	134	31.7		26.0	338	53.9	36	43.2	30	54	43	27	13	13	57	72	
22	149	31.6		26.0	353	16.4	35	46.0	28	56	30	18	07	14	03	73	
23	164	31.4		26.0	7	38.9	35	48.7	27	58	15 15	16 07	17	00	5 57	75	
24	179	31.3	+23	26.0	22	01.4	35	-19	51.2	25	14 58	15 56	16	53	6 10	76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 01 ^m 6		Mag: -3.8 PMG: 13 ^h 39 ^m		Mag: +1.5 PMG: 10 ^h 55 ^m		Mag: -1.9 PMG: 11 ^h 56 ^m		Mag: +0.5 PMG: 20 ^h 14 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	269	21.4	155	30.2	196	12.3	180	37.2	55	42.8
1	284	23.8	170	29.4	211	12.9	195	39.1	70	45.3
2	299	26.3	185	28.6	226	13.5	210	40.9	85	47.8
3	314	28.7	200	27.8	241	14.0	225	42.7	100	50.4
4	329	31.2	215	27.0	256	14.6	240	44.6	115	52.9
5	344	33.7	230	26.2	271	15.2	255	46.4	130	55.4
6	359	36.1	245	25.4	286	15.8	270	48.3	145	58.0
7	14	38.6	260	24.6	301	16.4	285	50.1	161	00.5
8	29	41.1	275	23.8	316	17.0	300	51.9	176	03.0
9	44	43.5	290	23.0	331	17.6	315	53.8	191	05.6
10	59	46.0	305	22.2	346	18.2	330	55.6	206	08.1
11	74	48.5	320	21.4	1	18.8	345	57.5	221	10.6
12	89	50.9	335	20.6	16	19.4	0	59.3	236	13.2
13	104	53.4	350	19.7	31	20.0	16	01.1	251	15.7
14	119	55.9	5	18.9	46	20.5	31	03.0	266	18.2
15	134	58.3	20	18.1	61	21.1	46	04.8	281	20.8
16	150	00.8	35	17.3	76	21.7	61	06.7	296	23.3
17	165	03.2	50	16.5	91	22.3	76	08.5	311	25.8
18	180	05.7	65	15.7	106	22.9	91	10.3	326	28.3
19	195	08.2	80	14.9	121	23.5	106	12.2	341	30.9
20	210	10.6	95	14.1	136	24.1	121	14.0	356	33.4
21	225	13.1	110	13.3	151	24.7	136	15.9	11	35.9
22	240	15.6	125	12.5	166	25.3	151	17.7	26	38.5
23	255	18.0	140	11.7	181	25.9	166	19.5	41	41.0
24	270	20.5	155	10.9	196	26.5	181	21.4	56	43.5
Dif	—		-8		+6		+18		+25	
			-4		+2		0		0	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 0				Edad: 13 ^d 3 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 3 20 ^h : 61 ^m 4 Rº: 64 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	31.3	+23	26.0	22	01.4	-19	51.2	60 N	** **	0 49	2 36	20 03	52	1 59	63				
1	194	31.1		26.0	36	23.8	34	53.6	58	** **	1 41	2 57	19 48	54	2 14	62				
2	209	31.0		26.0	50	46.1	33	55.8	56	** **	2 11	3 13		35 55		26 63				
3	224	30.9		26.0	65	08.4	33	57.9	54	0 45	33	28	24	56		37 63				
4	239	30.7		25.9	79	30.7	33	-19 59.8	52	1 33	2 51	40	14	57		47 63				
5	254	30.6	+23	25.9	93	52.9	32	-20 01.6	50	2 01	3 06	3 51	19 05	58	2 55	64				
6	269	30.5	+23	25.9	108	15.1	32	-20 03.3	45	2 46	3 36	4 13	18 47	58	3 14	63				
7	284	30.3		25.9	122	37.2	31	04.8	40	3 17	3 59	32	32	59	29	63				
8	299	30.2		25.9	136	59.3	31	06.1	35	40	4 17	4 47	19	60	41	64				
9	314	30.1		25.9	151	21.4	31	07.3	30	3 59	32	5 00	18 08	61	3 52	64				
10	329	29.9		25.8	165	43.5	31	08.3	20	4 28	4 57	22	17 48	62	4 11	64				
11	344	29.8	+23	25.8	180	05.5	30	-20 09.2	10 N	4 51	5 18	5 41	17 32	63	4 28	63				
12	359	29.7	+23	25.8	194	27.5	30	-20 09.9	0	5 10	5 36	5 58	17 16	64	4 43	64				
13	14	29.5		25.8	208	49.4	29	10.5	10 S	27	5 53	6 16	17 01	64	4 58	64				
14	29	29.4		25.7	223	11.4	30	10.9	20	43	6 10	34	16 44	65	5 15	63				
15	44	29.3		25.7	237	33.3	29	11.1	30	5 59	29	6 56		25 66		34 63				
16	59	29.1		25.7	251	55.2	29	11.3	35	6 08	40	7 08		14 67		45 63				
17	74	29.0	+23	25.7	266	17.1	29	-20 11.2	40	6 18	6 52	7 22	16 02	66	5 57	63				
18	89	28.9	+23	25.6	280	39.0	29	-20 11.0	45	6 28	7 05	7 39	15 47	67	6 12	63				
19	104	28.7		25.6	295	00.8	28	10.6	50	40	21	8 00		28 69	30	63				
20	119	28.6		25.6	309	22.7	29	10.1	52	45	29	10		20 68	39	62				
21	134	28.5		25.6	323	44.5	28	09.5	54	51	37	21	15 10	69	48	62				
22	149	28.3		25.5	338	06.4	29	08.6	56	6 57	46	34	14 59	70	6 59	62				
23	164	28.2		25.5	352	28.2	28	07.7	58	7 04	7 56	8 48		47 70	7 12	61				
24	179	28.1	+23	25.5	6	50.1	29	-20 06.5	60 S	7 11	8 08	9 06	14 32	71	7 26	61				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 57 ^m 7		Mag: -3.8 PMG: 13 ^h 40 ^m				Mag: +1.5 PMG: 10 ^h 54 ^m				Mag: -1.9 PMG: 11 ^h 53 ^m				Mag: +0.5 PMG: 20 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	20.5	155	10.9	+22	54.9	196	26.5	+22	54.5	181	21.4	+23	12.5	56	43.5	-10	47.8
1	285	23.0	170	10.2		54.4	211	27.0		54.7	196	23.2		12.5	71	46.1		47.8
2	300	25.4	185	09.4		54.0	226	27.6		54.9	211	25.1		12.5	86	48.6		47.8
3	315	27.9	200	08.6		53.5	241	28.2		55.1	226	26.9		12.5	101	51.1		47.8
4	330	30.4	215	07.8		53.0	256	28.8		55.3	241	28.7		12.5	116	53.6		47.7
5	345	32.8	230	07.0	+22	52.6	271	29.4	+22	55.5	256	30.6	+23	12.5	131	56.2	-10	47.7
6	0	35.3	245	06.2	+22	52.1	286	30.0	+22	55.8	271	32.4	+23	12.5	146	58.7	-10	47.7
7	15	37.7	260	05.4		51.6	301	30.6		56.0	286	34.3		12.5	162	01.2		47.7
8	30	40.2	275	04.6		51.2	316	31.2		56.2	301	36.1		12.5	177	03.8		47.7
9	45	42.7	290	03.8		50.7	331	31.8		56.4	316	37.9		12.6	192	06.3		47.7
10	60	45.1	305	03.0		50.2	346	32.4		56.6	331	39.8		12.6	207	08.8		47.7
11	75	47.6	320	02.2	+22	49.7	1	33.0	+22	56.8	346	41.6	+23	12.6	222	11.4	-10	47.7
12	90	50.1	335	01.4	+22	49.3	16	33.6	+22	57.1	1	43.5	+23	12.6	237	13.9	-10	47.6
13	105	52.5	350	00.6		48.8	31	34.1		57.3	16	45.3		12.6	252	16.4		47.6
14	120	55.0	4	59.8		48.3	46	34.7		57.5	31	47.1		12.6	267	18.9		47.6
15	135	57.5	19	59.0		47.8	61	35.3		57.7	46	49.0		12.6	282	21.5		47.6
16	150	59.9	34	58.2		47.3	76	35.9		57.9	61	50.8		12.6	297	24.0		47.6
17	166	02.4	49	57.5	+22	46.9	91	36.5	+22	58.1	76	52.7	+23	12.6	312	26.5	-10	47.6
18	181	04.9	64	56.7	+22	46.4	106	37.1	+22	58.3	91	54.5	+23	12.6	327	29.0	-10	47.6
19	196	07.3	79	55.9		45.9	121	37.7		58.5	106	56.3		12.6	342	31.6		47.6
20	211	09.8	94	55.1		45.4	136	38.3		58.7	121	58.2		12.6	357	34.1		47.6
21	226	12.2	109	54.3		44.9	151	38.9		59.0	137	00.0		12.6	12	36.6		47.6
22	241	14.7	124	53.5		44.4	166	39.5		59.2	152	01.9		12.6	27	39.2		47.5
23	256	17.2	139	52.7		43.9	181	40.1		59.4	167	03.7		12.7	42	41.7		47.5
24	271	19.6	154	51.9	+22	43.5	196	40.6	+22	59.6	182	05.6	+23	12.7	57	44.2	-10	47.5
Dif	—		-8		-5		+6		+2		+18		0		+25			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7				Edad: 14 ^d 3 PHE { 4 ^h : 61 ^h /4 12 ^h : 61 ^h /4 20 ^h : 61 ^h /4 R°: ***m															
	PMG: 12 ^h 02 ^m 2				PMG: ***h ***m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	179	28.1	+23	25.5	6	50.1	-20	06.5	60 N	21 28	23 14	*** **	20 55 38		3 02 78					
1	194	27.9		25.4	21	11.9	28	05.2	58	21 07	22 23	*** **	42 40		16 78					
2	209	27.8		25.4	35	33.7	28	03.8	56	20 51	21 53	*** **	30 43		29 76					
3	224	27.7		25.4	49	55.6	29	02.2	54	36	31	23 18	20 44		40 75					
4	239	27.5		25.3	64	17.4	28	-20 00.5	52	24	21 13	22 31	11 46		50 73					
5	254	27.4	+23	25.3	78	39.3	29	-19 58.5	50	20 13	20 58	22 03	20 03 47		3 59 72					
6	269	27.3	+23	25.3	93	01.2	29	-19 56.5	45	19 51	20 28	21 18	19 45 50		4 17 71					
7	284	27.1		25.2	107	23.1	29	54.3	40	33	20 05	20 47	31 52		32 70					
8	299	27.0		25.2	121	45.0	29	51.9	35	18	19 47	24	19 54		45 68					
9	314	26.9		25.2	136	06.9	29	49.4	30	19 05	32	20 05	19 09 55		4 56 67					
10	329	26.7		25.1	150	28.9	30	46.7	20	18 42	19 07	19 36	18 50 58		5 15 66					
11	344	26.6	+23	25.1	164	50.8	29	-19 43.9	10 N	18 24	18 47	19 14	18 35 60		5 31 65					
12	359	26.5	+23	25.1	179	12.8	30	-19 40.9	0	18 06	18 28	18 55	18 20 62		5 47 63					
13	14	26.3		25.0	193	34.8	30	37.8	10 S	17 48	18 11	38	18 05 64		6 02 62					
14	29	26.2		25.0	207	56.9	31	34.5	20	30	17 54	21	17 49 66		18 60					
15	44	26.1		24.9	222	19.0	31	31.1	30	17 09	35	18 05	31 69		37 58					
16	59	25.9		24.9	236	41.1	31	27.5	35	16 56	24	17 56	21 69		6 48 57					
17	74	25.8	+23	24.8	251	03.2	31	-19 23.8	40	16 42	17 13	17 47	17 08 72		7 00 56					
18	89	25.7	+23	24.8	265	25.4	32	-19 19.9	45	16 25	16 59	17 36	16 54 74		7 15 54					
19	104	25.5		24.8	279	47.6	32	15.9	50	16 05	43	25	37 76		33 52					
20	119	25.4		24.7	294	09.9	33	11.8	52	15 55	36	19	28 78		41 51					
21	134	25.3		24.7	308	32.2	33	07.5	54	44	27	14	19 79		7 50 51					
22	149	25.1		24.6	322	54.5	33	-19 03.0	56	31	18	07	16 09 80		8 01 49					
23	164	25.0		24.6	337	16.9	34	-18 58.4	58	15 16	16 08	17 01	15 57 82		13 47					
24	179	24.9	+23	24.5	351	39.3	34	-18 53.7	60 S	14 59	15 56	16 53	15 43 85		8 27 45					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 53 ^m 7				Mag: -3.8 PMG: 13 ^h 41 ^m				Mag: +1.5 PMG: 10 ^h 53 ^m				Mag: -1.9 PMG: 11 ^h 50 ^m				Mag: +0.5 PMG: 20 ^h 06 ^m			
	hG ♈		hG ♀		hG ♂		hG ♄		hG ♃		hG ♅		hG ♆		hG ♁		hG ♁			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	271	19.6	154	51.9	+22	43.5	196	40.6	+22	59.6	182	05.6	+23	12.7	57	44.2	-10	47.5		
1	286	22.1	169	51.1		43.0	211	41.2	+22	59.8	197	07.4		12.7	72	46.7		47.5		
2	301	24.6	184	50.4		42.5	226	41.8	+23	00.0	212	09.2		12.7	87	49.3		47.5		
3	316	27.0	199	49.6		42.0	241	42.4	+23	00.2	227	11.1		12.7	102	51.8		47.5		
4	331	29.5	214	48.8		41.5	256	43.0		00.4	242	12.9		12.7	117	54.3		47.5		
5	346	32.0	229	48.0	+22	41.0	271	43.6	+23	00.6	257	14.8	+23	12.7	132	56.8	-10	47.5		
6	1	34.4	244	47.2	+22	40.5	286	44.2	+23	00.8	272	16.6	+23	12.7	147	59.4	-10	47.5		
7	16	36.9	259	46.4		40.0	301	44.8		01.0	287	18.4		12.7	163	01.9		47.4		
8	31	39.4	274	45.6		39.5	316	45.4		01.2	302	20.3		12.7	178	04.4		47.4		
9	46	41.8	289	44.9		39.0	331	46.0		01.5	317	22.1		12.7	193	06.9		47.4		
10	61	44.3	304	44.1		38.5	346	46.6		01.7	332	24.0		12.7	208	09.5		47.4		
11	76	46.7	319	43.3	+22	38.0	1	47.1	+23	01.9	347	25.8	+23	12.7	223	12.0	-10	47.4		
12	91	49.2	334	42.5	+22	37.5	16	47.7	+23	02.1	2	27.6	+23	12.7	238	14.5	-10	47.4		
13	106	51.7	349	41.7		37.0	31	48.3		02.3	17	29.5		12.8	253	17.0		47.4		
14	121	54.1	4	41.0		36.5	46	48.9		02.5	32	31.3		12.8	268	19.6		47.4		
15	136	56.6	19	40.2		36.0	61	49.5		02.7	47	33.2		12.8	283	22.1		47.4		
16	151	59.1	34	39.4		35.5	76	50.1		02.9	62	35.0		12.8	298	24.6		47.4		
17	167	01.5	49	38.6	+22	35.0	91	50.7	+23	03.1	77	36.8	+23	12.8	313	27.1	-10	47.4		
18	182	04.0	64	37.8	+22	34.4	106	51.3	+23	03.3	92	38.7	+23	12.8	328	29.7	-10	47.3		
19	197	06.5	79	37.1		33.9	121	51.9		03.5	107	40.5		12.8	343	32.2		47.3		
20	212	08.9	94	36.3		33.4	136	52.5		03.7	122	42.4		12.8	358	34.7		47.3		
21	227	11.4	109	35.5		32.9	151	53.1		03.9	137	44.2		12.8	13	37.2		47.3		
22	242	13.8	124	34.7		32.4	166	53.6		04.1	152	46.0		12.8	28	39.7		47.3		
23	257	16.3	139	33.9		31.9	181	54.2		04.3	167	47.9		12.8	43	42.3		47.3		
24	272	18.8	154	33.2	+22	31.4	196	54.8	+23	04.5	182	49.7	+23	12.8	58	44.8	-10	47.3		
Dif	—		-8		-5		+6		+2		+18		0		+25					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 3 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 2 20 ^h : 61 ^h 1 SD: 16 ^h 7 PMG: 0 ^h 35 ^m R°: 61 ^m													
	PMG: 12 ^h 02 ^m 4																
hG ☉		Dec	hG ☾		Dif	Dec	Dif	Náutico	Civil	Hora		R°	Hora		R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	24.9	+23	24.5	351	39.3	−18	53.7	60 N	** **	0 51	2 37	21 33	27	4 20	89	
1	194	24.7		24.5	6	01.8	35	48.8	58	** **	1 42	2 57	22 30		34	85	
2	209	24.6		24.4	20	24.3	35	43.8	56	** **	2 11	3 14	13 32		45	83	
3	224	24.5		24.4	34	46.9	36	38.6	54	0 47	34	28	21 04	35	4 55	81	
4	239	24.3		24.3	49	09.6	37	33.3	52	1 33	2 52	41	20 57	36	5 03	80	
5	254	24.2	+23	24.3	63	32.3	37	−18	50	2 01	3 07	3 52	20 50	38	5 11	79	
6	269	24.1	+23	24.2	77	55.0	37	−18	45	2 47	3 37	4 14	20 35	42	5 28	75	
7	284	23.9		24.2	92	17.8	38	16.7	40	3 17	3 59	32	23 45		42	72	
8	299	23.8		24.1	106	40.7	39	10.8	35	41	4 17	4 47	13 47		5 53	71	
9	314	23.7		24.1	121	03.6	39	−18	30	3 59	33	5 00	20 04	49	6 03	69	
10	329	23.5		24.0	135	26.6	40	−17	20	4 28	4 58	22	19 48	53	21	65	
11	344	23.4	+23	24.0	149	49.7	41	−17	10 N	4 51	5 18	5 41	19 35	56	6 36	63	
12	359	23.3	+23	23.9	164	12.8	41	−17	0	5 10	5 36	5 59	19 22	59	6 50	60	
13	14	23.1		23.8	178	36.0	42	39.7	10 S	27	5 53	6 16	19 09	62	7 04	58	
14	29	23.0		23.8	192	59.2	42	33.1	20	5 43	6 11	35	18 55	65	18	56	
15	44	22.9		23.7	207	22.6	44	26.4	30	6 00	30	6 56	40 68		35	53	
16	59	22.7		23.7	221	46.0	44	19.5	35	08	40	7 08	30 71		45	51	
17	74	22.6	+23	23.6	236	09.4	44	−17	40	6 18	6 52	7 23	18 20	73	7 56	49	
18	89	22.5	+23	23.6	250	33.0	46	−17	45	6 28	7 05	7 39	18 08	75	8 09	46	
19	104	22.3		23.5	264	56.6	46	−16	50	40	22	8 00	17 53	79	25	43	
20	119	22.2		23.4	279	20.3	47	50.9	52	45	29	10	46 80		32	42	
21	134	22.1		23.4	293	44.0	47	43.4	54	51	37	21	38 83		41	39	
22	149	21.9		23.3	308	07.9	49	35.9	56	6 57	46	34	29 85		8 50	37	
23	164	21.8		23.2	322	31.8	49	28.2	58	7 04	7 57	8 48	19 88		9 00	35	
24	179	21.7	+23	23.2	336	55.8	50	−16	60 S	7 11	8 08	9 06	17 08	90	9 12	32	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 5 ^h 49 ^m 8		Mag: −3.8 PMG: 13 ^h 42 ^m			Mag: +1.5 PMG: 10 ^h 52 ^m			Mag: −1.9 PMG: 11 ^h 47 ^m			Mag: +0.5 PMG: 20 ^h 02 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	272	18.8	154	33.2	+22	31.4	196	54.8	+23	04.5	182	49.7	+23	12.8		
1	287	21.2	169	32.4		30.8	211	55.4		04.7	197	51.6		12.8		
2	302	23.7	184	31.6		30.3	226	56.0		04.9	212	53.4		12.8		
3	317	26.2	199	30.8		29.8	241	56.6		05.1	227	55.2		12.8		
4	332	28.6	214	30.1		29.3	256	57.2		05.3	242	57.1		12.8		
5	347	31.1	229	29.3	+22	28.8	271	57.8	+23	05.5	257	58.9	+23	12.8		
6	2	33.6	244	28.5	+22	28.2	286	58.4	+23	05.7	273	00.8	+23	12.9		
7	17	36.0	259	27.7		27.7	301	59.0		05.9	288	02.6		12.9		
8	32	38.5	274	27.0		27.2	316	59.6		06.1	303	04.5		12.9		
9	47	41.0	289	26.2		26.7	332	00.2		06.3	318	06.3		12.9		
10	62	43.4	304	25.4		26.1	347	00.7		06.5	333	08.1		12.9		
11	77	45.9	319	24.7	+22	25.6	2	01.3	+23	06.7	348	10.0	+23	12.9		
12	92	48.3	334	23.9	+22	25.1	17	01.9	+23	06.9	3	11.8	+23	12.9		
13	107	50.8	349	23.1		24.5	32	02.5		07.1	18	13.7		12.9		
14	122	53.3	4	22.3		24.0	47	03.1		07.3	33	15.5		12.9		
15	137	55.7	19	21.6		23.5	62	03.7		07.5	48	17.3		12.9		
16	152	58.2	34	20.8		22.9	77	04.3		07.6	63	19.2		12.9		
17	168	00.7	49	20.0	+22	22.4	92	04.9	+23	07.8	78	21.0	+23	12.9		
18	183	03.1	64	19.3	+22	21.9	107	05.5	+23	08.0	93	22.9	+23	12.9		
19	198	05.6	79	18.5		21.3	122	06.1		08.2	108	24.7		12.9		
20	213	08.1	94	17.7		20.8	137	06.7		08.4	123	26.5		12.9		
21	228	10.5	109	17.0		20.2	152	07.2		08.6	138	28.4		12.9		
22	243	13.0	124	16.2		19.7	167	07.8		08.8	153	30.2		12.9		
23	258	15.5	139	15.4		19.2	182	08.4		09.0	168	32.1		12.9		
24	273	17.9	154	14.7	+22	18.6	197	09.0	+23	09.2	183	33.9	+23	13.0		
Dif	—		−8		−5		+6		+2		+18		0		+25	

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 7			Edad: 16 ^d 3 PHE { 4 ^h : 60 ^h 9 12 ^h : 60 ^h 8 20 ^h : 60 ^h 5 R°: 58 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	21.7	+23	23.2	336	55.8	51	-16	20.4	60 N	21 28	23 12	** **	22 00	21	5 49 92		
1	194	21.5		23.1	351	19.9	51		12.5	58	21 07	22 23	** **	21 52	24	5 59 89		
2	209	21.4		23.0	5	44.0	51	-16	04.5	56	20 51	21 53	** **	45 26		6 08 86		
3	224	21.3		23.0	20	08.2	52	-15	56.4	54	36	31	23 17	39 28		16 84		
4	239	21.1		22.9	34	32.6	54		48.2	52	24	21 13	22 31	33 31		23 82		
5	254	21.0	+23	22.8	48	57.0	54	-15	39.9	50	20 13	20 58	22 03	21 28	32	6 30 79		
6	269	20.9	+23	22.8	63	21.4	54	-15	31.4	45	19 51	20 28	21 18	21 17	36	6 43 76		
7	284	20.7		22.7	77	46.0	56		22.9	40	33	20 06	20 47	08 39		6 54 73		
8	299	20.6		22.6	92	10.6	56		14.3	35	18	19 48	24	21 00	42	7 04 70		
9	314	20.5		22.6	106	35.4	58	-15	05.6	30	19 05	32	20 06	20 53	44	12 68		
10	329	20.4		22.5	121	00.2	58	-14	56.7	20	18 43	19 07	19 37	41 48		26 64		
11	344	20.2	+23	22.4	135	25.1	59	-14	47.8	10 N	18 24	18 47	19 14	20 31	51	7 39 60		
12	359	20.1	+23	22.3	149	50.1	60	-14	38.8	0	18 06	18 29	18 55	20 21	55	7 50 57		
13	14	20.0		22.3	164	15.1	60		29.7	10 S	17 49	18 12	38	11 58		8 02 54		
14	29	19.8		22.2	178	40.3	62		20.5	20	30	17 54	22	20 00	62	14 50		
15	44	19.7		22.1	193	05.5	62		11.3	30	17 09	36	18 05	19 48	66	28 46		
16	59	19.6		22.0	207	30.9	64	-14	01.9	35	16 57	25	17 57	41 68		36 44		
17	74	19.4	+23	22.0	221	56.3	64	-13	52.5	40	16 43	17 13	17 47	19 33	71	8 45 41		
18	89	19.3	+23	21.9	236	21.8	65	-13	42.9	45	16 26	17 00	17 37	19 23	75	8 55 39		
19	104	19.2		21.8	250	47.4	66		33.3	50	16 05	16 44	25	12 78		9 08 35		
20	119	19.0		21.7	265	13.0	66		23.6	52	15 55	36	20	06 81		14 33		
21	134	18.9		21.7	279	38.8	68		13.9	54	44	28	14	19 01	82	20 31		
22	149	18.8		21.6	294	04.7	69	-13	04.0	56	32	19	08	18 54	85	27 29		
23	164	18.6		21.5	308	30.6	69	-12	54.1	58	17	16 09	17 01	47 87		35 27		
24	179	18.5	+23	21.4	322	56.6	70	-12	44.1	60 S	15 00	15 57	16 54	18 38	91	9 44 24		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 45 ^m 9			Mag: -3.8 PMG: 13 ^h 44 ^m			Mag: +1.5 PMG: 10 ^h 51 ^m			Mag: -1.9 PMG: 11 ^h 44 ^m			Mag: +0.5 PMG: 19 ^h 58 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	273	17.9	154	14.7	+22	18.6	197	09.0	+23	09.2	183	33.9	+23	13.0	59	45.3	-10	47.1
1	288	20.4	169	13.9		18.1	212	09.6		09.4	198	35.7		13.0	74	47.8		47.1
2	303	22.8	184	13.1		17.5	227	10.2		09.6	213	37.6		13.0	89	50.3		47.1
3	318	25.3	199	12.4		17.0	242	10.8		09.8	228	39.4		13.0	104	52.9		47.1
4	333	27.8	214	11.6		16.4	257	11.4		09.9	243	41.3		13.0	119	55.4		47.1
5	348	30.2	229	10.8	+22	15.9	272	12.0	+23	10.1	258	43.1	+23	13.0	134	57.9	-10	47.0
6	3	32.7	244	10.1	+22	15.3	287	12.6	+23	10.3	273	45.0	+23	13.0	150	00.4	-10	47.0
7	18	35.2	259	09.3		14.8	302	13.2		10.5	288	46.8		13.0	165	02.9		47.0
8	33	37.6	274	08.6		14.2	317	13.7		10.7	303	48.6		13.0	180	05.4		47.0
9	48	40.1	289	07.8		13.7	332	14.3		10.9	318	50.5		13.0	195	08.0		47.0
10	63	42.6	304	07.0		13.1	347	14.9		11.1	333	52.3		13.0	210	10.5		47.0
11	78	45.0	319	06.3	+22	12.6	2	15.5	+23	11.3	348	54.2	+23	13.0	225	13.0	-10	47.0
12	93	47.5	334	05.5	+22	12.0	17	16.1	+23	11.5	3	56.0	+23	13.0	240	15.5	-10	47.0
13	108	50.0	349	04.8		11.4	32	16.7		11.6	18	57.8		13.0	255	18.0		47.0
14	123	52.4	4	04.0		10.9	47	17.3		11.8	33	59.7		13.0	270	20.5		47.0
15	138	54.9	19	03.2		10.3	62	17.9		12.0	49	01.5		13.0	285	23.1		47.0
16	153	57.3	34	02.5		09.8	77	18.5		12.2	64	03.4		13.0	300	25.6		47.0
17	168	59.8	49	01.7	+22	09.2	92	19.1	+23	12.4	79	05.2	+23	13.0	315	28.1	-10	47.0
18	184	02.3	64	01.0	+22	08.6	107	19.7	+23	12.6	94	07.0	+23	13.0	330	30.6	-10	47.0
19	199	04.7	79	00.2		08.1	122	20.3		12.8	109	08.9		13.0	345	33.1		46.9
20	214	07.2	93	59.5		07.5	137	20.8		12.9	124	10.7		13.0	0	35.6		46.9
21	229	09.7	108	58.7		06.9	152	21.4		13.1	139	12.6		13.0	15	38.2		46.9
22	244	12.1	123	57.9		06.4	167	22.0		13.3	154	14.4		13.0	30	40.7		46.9
23	259	14.6	138	57.2		05.8	182	22.6		13.5	169	16.3		13.1	45	43.2		46.9
24	274	17.1	153	56.4	+22	05.2	197	23.2	+23	13.7	184	18.1	+23	13.1	60	45.7	-10	46.9
Dif	—		-8		-6		+6		+2		+18		0		+25			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 17 ^d 3 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 0 20 ^h : 59 ^h 7															
	PMG: 12 ^h 02 ^m 9				SD: 16 ^h 5 PMG: 2 ^h 34 ^m R°: 54 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	18.5	+23	21.4	322	56.6	-12	44.1	60 N	** **	0 53	2 38	22 21	16	7 21	90				
1	194	18.4		21.3	337	22.7		34.0	58	** **	1 43	2 58		16 19		28 87				
2	209	18.3		21.2	351	48.9		23.9	56	** **	2 13	3 15		11 22		34 84				
3	224	18.1		21.2	6	15.2		13.7	54	0 49	35	29		07 24		40 81				
4	239	18.0		21.1	20	41.6	-12	03.4	52	1 35	2 53	41		04 26		45 79				
5	254	17.9	+23	21.0	35	08.0	-11	53.1	50	2 02	3 08	3 52	22 00	28	7 49	78				
6	269	17.7	+23	20.9	49	34.6	-11	42.7	45	2 48	3 37	4 15	21 53	32	7 59	73				
7	284	17.6		20.8	64	01.2		32.2	40	3 18	4 00	33		47 35		8 07 70				
8	299	17.5		20.7	78	27.9		21.7	35	3 41	18	4 48		42 37		14 67				
9	314	17.3		20.6	92	54.7		11.1	30	4 00	33	5 01		37 40		20 65				
10	329	17.2		20.6	107	21.6	-11	00.5	20	29	4 58	23		29 45		30 61				
11	344	17.1	+23	20.5	121	48.6	-10	49.8	10 N	4 52	5 19	5 42	21 22	48	8 39	57				
12	359	16.9	+23	20.4	136	15.7	-10	39.0	0	5 10	5 37	5 59	21 16	51	8 47	54				
13	14	16.8		20.3	150	42.8		28.2	10 S	27	5 54	6 17		09 55		8 56 49				
14	29	16.7		20.2	165	10.0		17.4	20	5 44	6 11	35	21 02	59	9 04	47				
15	44	16.6		20.1	179	37.3	-10	06.5	30	6 00	30	6 56	20 54	63	14	42				
16	59	16.4		20.0	194	04.7	-9	55.5	35	09	40	7 09		49 66		20 40				
17	74	16.3	+23	19.9	208	32.2	-9	44.5	40	6 18	6 52	7 23	20 44	69	9 26	37				
18	89	16.2	+23	19.8	222	59.8	-9	33.5	45	6 28	7 06	7 39	20 38	72	9 34	33				
19	104	16.0		19.7	237	27.4		22.4	50	40	22	8 00		30 77		43 30				
20	119	15.9		19.6	251	55.1		11.3	52	45	29	10		27 78		47 28				
21	134	15.8		19.5	266	22.9	-9	00.1	54	51	37	21		23 80		51 26				
22	149	15.7		19.4	280	50.8	-8	48.9	56	6 57	46	34		19 83		9 56 24				
23	164	15.5		19.3	295	18.8		37.7	58	7 04	7 57	8 48		14 86		10 02 21				
24	179	15.4	+23	19.2	309	46.8	-8	26.4	60 S	7 11	8 08	9 06	20 09	88	10 08	19				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 41 ^m 9				Mag: -3.8 PMG: 13 ^h 45 ^m				Mag: +1.5 PMG: 10 ^h 50 ^m				Mag: -1.9 PMG: 11 ^h 41 ^m				Mag: +0.5 PMG: 19 ^h 54 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	274	17.1			153	56.4	+22	05.2	197	23.2	+23	13.7	184	18.1	+23	13.1	60	45.7	-10	46.9
1	289	19.5			168	55.7		04.7	212	23.8		13.8	199	19.9		13.1	75	48.2		46.9
2	304	22.0			183	54.9		04.1	227	24.4		14.0	214	21.8		13.1	90	50.7		46.9
3	319	24.5			198	54.2		03.5	242	25.0		14.2	229	23.6		13.1	105	53.2		46.9
4	334	26.9			213	53.4		03.0	257	25.6		14.4	244	25.5		13.1	120	55.8		46.9
5	349	29.4			228	52.7	+22	02.4	272	26.2	+23	14.6	259	27.3	+23	13.1	135	58.3	-10	46.9
6	4	31.8			243	51.9	+22	01.8	287	26.8	+23	14.8	274	29.1	+23	13.1	151	00.8	-10	46.9
7	19	34.3			258	51.2		01.2	302	27.4		14.9	289	31.0		13.1	166	03.3		46.9
8	34	36.8			273	50.4		00.6	317	27.9		15.1	304	32.8		13.1	181	05.8		46.9
9	49	39.2			288	49.7	+22	00.1	332	28.5		15.3	319	34.7		13.1	196	08.3		46.9
10	64	41.7			303	48.9	+21	59.5	347	29.1		15.5	334	36.5		13.1	211	10.8		46.9
11	79	44.2			318	48.2	+21	58.9	2	29.7	+23	15.6	349	38.4	+23	13.1	226	13.4	-10	46.8
12	94	46.6			333	47.4	+21	58.3	17	30.3	+23	15.8	4	40.2	+23	13.1	241	15.9	-10	46.8
13	109	49.1			348	46.7		57.7	32	30.9		16.0	19	42.0		13.1	256	18.4		46.8
14	124	51.6			3	45.9		57.2	47	31.5		16.2	34	43.9		13.1	271	20.9		46.8
15	139	54.0			18	45.2		56.6	62	32.1		16.4	49	45.7		13.1	286	23.4		46.8
16	154	56.5			33	44.4		56.0	77	32.7		16.5	64	47.6		13.1	301	25.9		46.8
17	169	58.9			48	43.7	+21	55.4	92	33.3	+23	16.7	79	49.4	+23	13.1	316	28.4	-10	46.8
18	185	01.4			63	43.0	+21	54.8	107	33.9	+23	16.9	94	51.2	+23	13.1	331	31.0	-10	46.8
19	200	03.9			78	42.2		54.2	122	34.4		17.1	109	53.1		13.1	346	33.5		46.8
20	215	06.3			93	41.5		53.6	137	35.0		17.2	124	54.9		13.1	1	36.0		46.8
21	230	08.8			108	40.7		53.0	152	35.6		17.4	139	56.8		13.1	16	38.5		46.8
22	245	11.3			123	40.0		52.4	167	36.2		17.6	154	58.6		13.1	31	41.0		46.8
23	260	13.7			138	39.2		51.8	182	36.8		17.8	170	00.5		13.1	46	43.5		46.8
24	275	16.2			153	38.5	+21	51.2	197	37.4	+23	17.9	185	02.3	+23	13.1	61	46.0	-10	46.8
Dif	—				-7 -6				+6 +2				+18 0				+25 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 18 ^d 3	PHE { 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/8													
	PMG: 12 ^h 03 ^m 1					SD: 16 ^h 2			PMG: 3 ^h 28 ^m		R°: 51 ^m							
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	m	h m	m			
0	179	15.4	+23	19.2	309	46.8	-8 26.4	60 N	21 27	23 10	** **	22 37	15	8 51	87			
1	194	15.3		19.1	324	14.9 91	15.0 ¹¹⁴	58	21 07	22 22	** **	35	18	55	84			
2	209	15.1		19.0	338	43.1 92	-8 03.7 ¹¹³	56	20 50	21 52	** **	33	20	8 58	82			
3	224	15.0		18.9	353	11.4 93	-7 52.3 ¹¹⁴	54	36	30	23 14	31	22	9 01	79			
4	239	14.9		18.8	7	39.8 94	40.9 ¹¹⁴	52	24	21 13	22 30	30	23	04	77			
5	254	14.7	+23	18.7	22	08.2 94	-7 29.5 ¹¹⁴	50	20 13	20 58	22 03	22 28	25	9 07	75			
6	269	14.6	+23	18.6	36	36.7 95	-7 18.0 ¹¹⁵	45	19 51	20 28	21 18	22 25	29	9 12	71			
7	284	14.5		18.5	51	05.3 96	-7 06.5 ¹¹⁵	40	33	20 06	20 47	22	32	17	68			
8	299	14.4		18.4	65	33.9 96	-6 55.0 ¹¹⁵	35	18	19 48	24	19	36	21	65			
9	314	14.2		18.3	80	02.7 98	43.4 ¹¹⁶	30	19 05	32	20 06	17	38	25	62			
10	329	14.1		18.2	94	31.5 98	31.8 ¹¹⁶	20	18 43	19 08	19 37	14	41	31	57			
11	344	14.0	+23	18.1	109	00.3 98	-6 20.3 ¹¹⁵	10 N	18 24	18 47	19 14	22 10	46	9 36	54			
12	359	13.8	+23	18.0	123	29.3 ¹⁰⁰	-6 08.6 ¹¹⁷	0	18 07	18 29	18 55	22 07	49	9 41	50			
13	14	13.7		17.9	137	58.3 ¹⁰⁰	-5 57.0 ¹¹⁶	10 S	17 49	18 12	39	04	53	45	47			
14	29	13.6		17.8	152	27.4 ¹⁰¹	45.4 ¹¹⁶	20	31	17 55	22	22 01	56	51	43			
15	44	13.5		17.7	166	56.5 ¹⁰¹	33.7 ¹¹⁷	30	17 10	36	18 06	21 57	61	9 56	39			
16	59	13.3		17.6	181	25.7 ¹⁰²	22.0 ¹¹⁷	35	16 58	26	17 57	55	63	10 00	36			
17	74	13.2	+23	17.4	195	55.0 ¹⁰³	-5 10.3 ¹¹⁷	40	16 43	17 14	17 48	21 53	66	10 03	34			
18	89	13.1	+23	17.3	210	24.4 ¹⁰⁴	-4 58.6 ¹¹⁷	45	16 27	17 01	17 38	21 50	69	10 07	31			
19	104	12.9		17.2	224	53.8 ¹⁰⁴	46.9 ¹¹⁷	50	16 06	16 45	26	47	73	13	26			
20	119	12.8		17.1	239	23.3 ¹⁰⁵	35.2 ¹¹⁷	52	15 56	37	21	45	75	15	25			
21	134	12.7		17.0	253	52.8 ¹⁰⁵	23.5 ¹¹⁷	54	45	29	15	43	78	17	23			
22	149	12.6		16.9	268	22.4 ¹⁰⁶	-4 11.7 ¹¹⁸	56	33	20	09	42	79	20	21			
23	164	12.4		16.8	282	52.1 ¹⁰⁷	-4 00.0 ¹¹⁷	58	18	16 10	17 02	40	81	23	19			
24	179	12.3	+23	16.6	297	21.8 ¹⁰⁷	-3 48.2 ¹¹⁸	60 S	15 01	15 58	16 55	21 37	85	10 27	16			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 5 ^h 38 ^m 0		Mag: -3.8 PMG: 13 ^h 46 ^m			Mag: +1.5 PMG: 10 ^h 49 ^m			Mag: -1.9 PMG: 11 ^h 38 ^m				Mag: +0.5 PMG: 19 ^h 50 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec			hG ♄	Dec				
h	°	'	°	'	°	°	'	°	°	'	'	°	'	°	'			
0	275	16.2	153	38.5	+21	51.2	197	37.4	+23	17.9	185	02.3	+23	13.1	61	46.0	-10	46.8
1	290	18.7	168	37.7		50.6	212	38.0		18.1	200	04.1		13.1	76	48.5		46.8
2	305	21.1	183	37.0		50.1	227	38.6		18.3	215	06.0		13.1	91	51.0		46.8
3	320	23.6	198	36.3		49.5	242	39.2		18.4	230	07.8		13.1	106	53.6		46.8
4	335	26.1	213	35.5		48.9	257	39.8		18.6	245	09.7		13.2	121	56.1		46.8
5	350	28.5	228	34.8	+21	48.3	272	40.4	+23	18.8	260	11.5	+23	13.2	136	58.6	-10	46.8
6	5	31.0	243	34.0	+21	47.6	287	41.0	+23	19.0	275	13.3	+23	13.2	152	01.1	-10	46.7
7	20	33.4	258	33.3		47.0	302	41.5		19.1	290	15.2		13.2	167	03.6		46.7
8	35	35.9	273	32.6		46.4	317	42.1		19.3	305	17.0		13.2	182	06.1		46.7
9	50	38.4	288	31.8		45.8	332	42.7		19.5	320	18.9		13.2	197	08.6		46.7
10	65	40.8	303	31.1		45.2	347	43.3		19.6	335	20.7		13.2	212	11.1		46.7
11	80	43.3	318	30.4	+21	44.6	2	43.9	+23	19.8	350	22.6	+23	13.2	227	13.6	-10	46.7
12	95	45.8	333	29.6	+21	44.0	17	44.5	+23	20.0	5	24.4	+23	13.2	242	16.2	-10	46.7
13	110	48.2	348	28.9		43.4	32	45.1		20.1	20	26.2		13.2	257	18.7		46.7
14	125	50.7	3	28.2		42.8	47	45.7		20.3	35	28.1		13.2	272	21.2		46.7
15	140	53.2	18	27.4		42.2	62	46.3		20.5	50	29.9		13.2	287	23.7		46.7
16	155	55.6	33	26.7		41.6	77	46.9		20.6	65	31.8		13.2	302	26.2		46.7
17	170	58.1	48	26.0	+21	41.0	92	47.5	+23	20.8	80	33.6	+23	13.2	317	28.7	-10	46.7
18	186	00.6	63	25.2	+21	40.3	107	48.1	+23	21.0	95	35.5	+23	13.2	332	31.2	-10	46.7
19	201	03.0	78	24.5		39.7	122	48.7		21.1	110	37.3		13.2	347	33.7		46.7
20	216	05.5	93	23.8		39.1	137	49.2		21.3	125	39.1		13.2	2	36.2		46.7
21	231	07.9	108	23.0		38.5	152	49.8		21.5	140	41.0		13.2	17	38.7		46.7
22	246	10.4	123	22.3		37.9	167	50.4		21.6	155	42.8		13.2	32	41.2		46.7
23	261	12.9	138	21.6		37.3	182	51.0		21.8	170	44.7		13.2	47	43.7		46.7
24	276	15.3	153	20.8	+21	36.6	197	51.6	+23	22.0	185	46.5	+23	13.2	62	46.3	-10	46.7
Dif	—		-7		-6		+6		+2		+18		0		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 19 ^d 3	PHE {	4 ^h : 58 ^h 5 12 ^h : 58 ^h 2 20 ^h : 57 ^h 9									
	PMG: 12 ^h 03 ^m 3							SD: 16 ^h 0			R°: 49 ^m		R°: 49 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	179	12.3	+23	16.6	297	21.8	-3	48.2	60 N	** *	0 57	2 39	22 52	15	
1	194	12.2		16.5	311	51.6 ¹⁰⁸		36.5 ¹¹⁷	58	** *	1 45	3 00	53 16	19	
2	209	12.1		16.4	326	21.5 ¹⁰⁹		24.7 ¹¹⁸	56	** *	2 14	16	53 19	20	
3	224	11.9		16.3	340	51.4 ¹⁰⁹		13.0 ¹¹⁷	54	0 52	36	30	53 21	20	
4	239	11.8		16.2	355	21.4 ¹¹⁰	-3	01.2 ¹¹⁸	52	1 37	2 54	42	53 23	21	
5	254	11.7	+23	16.1	9	51.4 ¹¹⁰	-2	49.4 ¹¹⁸	50	2 04	3 09	3 53	22 53	25	
6	269	11.5	+23	15.9	24	21.5 ¹¹¹	-2	37.7 ¹¹⁷	45	2 49	3 38	4 16	22 54	28	
7	284	11.4		15.8	38	51.6 ¹¹¹		25.9 ¹¹⁸	40	3 19	4 01	34	54 32	25	
8	299	11.3		15.7	53	21.8 ¹¹²		14.2 ¹¹⁷	35	3 42	19	4 48	55 33	26	
9	314	11.2		15.6	67	52.1 ¹¹³	-2	02.4 ¹¹⁸	30	4 01	34	5 01	55 36	27	
10	329	11.0		15.4	82	22.4 ¹¹³	-1	50.7 ¹¹⁷	20	30	4 59	23	55 41	28	
11	344	10.9	+23	15.3	96	52.7 ¹¹³	-1	39.0 ¹¹⁷	10 N	4 52	5 19	5 42	22 56	44	
12	359	10.8	+23	15.2	111	23.1 ¹¹⁴	-1	27.2 ¹¹⁸	0	5 11	5 37	6 00	22 56	48	
13	14	10.7		15.1	125	53.6 ¹¹⁵		15.5 ¹¹⁷	10 S	28	5 54	17	57 51	32	
14	29	10.5		14.9	140	24.1 ¹¹⁵	-1	03.8 ¹¹⁷	20	5 44	6 11	35	57 55	34	
15	44	10.4		14.8	154	54.6 ¹¹⁵	-0	52.1 ¹¹⁷	30	6 00	30	6 56	58 59	35	
16	59	10.3		14.7	169	25.2 ¹¹⁶		40.4 ¹¹⁷	35	09	41	7 09	58 61	36	
17	74	10.2	+23	14.6	183	55.9 ¹¹⁷	-0	28.8 ¹¹⁶	40	6 18	6 52	7 23	22 59	64	
18	89	10.0	+23	14.4	198	26.6 ¹¹⁷	-0	17.1 ¹¹⁷	45	6 28	7 06	7 39	22 59	67	
19	104	09.9		14.3	212	57.3 ¹¹⁷	-0	05.5 ¹¹⁶	50	40	22	8 00	23 00	71	
20	119	09.8		14.2	227	28.1 ¹¹⁸	+0	06.2 ¹¹⁷	52	45	29	10	00 73	40	
21	134	09.6		14.0	241	58.9 ¹¹⁸		17.8 ¹¹⁶	54	51	37	21	01 74	40	
22	149	09.5		13.9	256	29.8 ¹¹⁹		29.4 ¹¹⁶	56	6 57	46	33	01 76	41	
23	164	09.4		13.8	271	00.7 ¹¹⁹		40.9 ¹¹⁵	58	7 04	7 56	8 48	01 79	42	
24	179	09.3	+23	13.6	285	31.7 ¹²⁰	+0	52.5 ¹¹⁶	60 S	7 11	8 08	9 05	23 02	81	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 34 ^m 1			Mag: -3.8 PMG: 13 ^h 47 ^m			Mag: +1.5 PMG: 10 ^h 48 ^m			Mag: -1.9 PMG: 11 ^h 35 ^m			Mag: +0.5 PMG: 19 ^h 46 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	276	15.3	153	20.8	+21	36.6	197	51.6	+23	22.0	185	46.5	+23	13.2	
1	291	17.8	168	20.1		36.0	212	52.2		22.1	200	48.3		13.2	
2	306	20.3	183	19.4		35.4	227	52.8		22.3	215	50.2		13.2	
3	321	22.7	198	18.6		34.8	242	53.4		22.5	230	52.0		13.2	
4	336	25.2	213	17.9		34.1	257	54.0		22.6	245	53.9		13.2	
5	351	27.7	228	17.2	+21	33.5	272	54.6	+23	22.8	260	55.7	+23	13.2	
6	6	30.1	243	16.5	+21	32.9	287	55.2	+23	23.0	275	57.6	+23	13.2	
7	21	32.6	258	15.7		32.3	302	55.8		23.1	290	59.4		13.2	
8	36	35.0	273	15.0		31.6	317	56.3		23.3	306	01.2		13.2	
9	51	37.5	288	14.3		31.0	332	56.9		23.4	321	03.1		13.2	
10	66	40.0	303	13.6		30.4	347	57.5		23.6	336	04.9		13.2	
11	81	42.4	318	12.8	+21	29.7	2	58.1	+23	23.8	351	06.8	+23	13.2	
12	96	44.9	333	12.1	+21	29.1	17	58.7	+23	23.9	6	08.6	+23	13.2	
13	111	47.4	348	11.4		28.5	32	59.3		24.1	21	10.5		13.2	
14	126	49.8	3	10.7		27.8	47	59.9		24.2	36	12.3		13.2	
15	141	52.3	18	09.9		27.2	63	00.5		24.4	51	14.1		13.2	
16	156	54.8	33	09.2		26.6	78	01.1		24.5	66	16.0		13.2	
17	171	57.2	48	08.5	+21	25.9	93	01.7	+23	24.7	81	17.8	+23	13.2	
18	186	59.7	63	07.8	+21	25.3	108	02.3	+23	24.9	96	19.7	+23	13.2	
19	202	02.2	78	07.1		24.6	123	02.9		25.0	111	21.5		13.2	
20	217	04.6	93	06.3		24.0	138	03.5		25.2	126	23.4		13.2	
21	232	07.1	108	05.6		23.4	153	04.0		25.3	141	25.2		13.2	
22	247	09.5	123	04.9		22.7	168	04.6		25.5	156	27.0		13.2	
23	262	12.0	138	04.2		22.1	183	05.2		25.6	171	28.9		13.2	
24	277	14.5	153	03.5	+21	21.4	198	05.8	+23	25.8	186	30.7	+23	13.2	
Dif	—			-7			+6			+2			+18		
													0		
													+25		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 3	PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/0	PMG: 12 ^h 03 ^m 5			PMG: 5 ^h 08 ^m		R°: 47 ^m					
	hG ☉	Dec				hG ☾			Dif	Dec	Dif					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	09.3	+23	13.6	285	31.7	+0	52.5	60 N	21	26	23	06	**	23	07
1	194	09.1		13.5	300	02.7 ¹²⁰	+1	04.0 ¹¹⁵	58	21	06	22	20	**	09	18
2	209	09.0		13.4	314	33.7 ¹²⁰		15.5 ¹¹⁵	56	20	50	21	51	**	12	20
3	224	08.9		13.2	329	04.8 ¹²¹		27.0 ¹¹⁵	54	36	30	23	11		14	22
4	239	08.8		13.1	343	35.9 ¹²¹		38.5 ¹¹⁵	52	24	21	22	29		16	24
5	254	08.6	+23	13.0	358	07.0 ¹²¹	+1	49.9 ¹¹⁴	50	20	13	20	57	22	23	18
6	269	08.5	+23	12.8	12	38.2 ¹²²	+2	01.4 ¹¹⁵	45	19	51	20	28	21	23	22
7	284	08.4		12.7	27	09.4 ¹²²		12.8 ¹¹⁴	40	33	20	06	20	47	26	31
8	299	08.3		12.6	41	40.7 ¹²³		24.1 ¹¹³	35	18	19	48	24		28	34
9	314	08.1		12.4	56	12.0 ¹²³		35.5 ¹¹⁴	30	19	05	33	20	06	31	36
10	329	08.0		12.3	70	43.3 ¹²³		46.8 ¹¹³	20	18	43	19	08	19	37	36
11	344	07.9	+23	12.1	85	14.6 ¹²³	+2	58.1 ¹¹³	10 N	18	25	18	48	19	23	40
12	359	07.8	+23	12.0	99	46.0 ¹²⁴	+3	09.3 ¹¹²	0	18	07	18	30	18	23	44
13	14	07.6		11.9	114	17.4 ¹²⁴		20.5 ¹¹²	10 S	17	50	18	13	39	48	49
14	29	07.5		11.7	128	48.9 ¹²⁵		31.7 ¹¹²	20	32	17	56	23		52	53
15	44	07.4		11.6	143	20.3 ¹²⁴		42.9 ¹¹²	30	17	11	37	18	07	57	56
16	59	07.3		11.4	157	51.8 ¹²⁵	+3	54.0 ¹¹¹	35	16	58	26	17	58	23	59
17	74	07.1	+23	11.3	172	23.3 ¹²⁵	+4	05.1 ¹¹¹	40	16	44	17	15	17	49	**
18	89	07.0	+23	11.1	186	54.9 ¹²⁶	+4	16.2 ¹¹¹	45	16	28	17	01	17	39	**
19	104	06.9		11.0	201	26.5 ¹²⁶		27.2 ¹¹⁰	50	16	07	16	46	27	**	
20	119	06.8		10.8	215	58.1 ¹²⁶		38.2 ¹¹⁰	52	15	57	38	22		**	
21	134	06.6		10.7	230	29.7 ¹²⁶	+4	49.1 ¹⁰⁹	54	47	30	30	16		**	
22	149	06.5		10.5	245	01.3 ¹²⁶	+5	00.0 ¹⁰⁹	56	34	21	21	10		**	
23	164	06.4		10.4	259	33.0 ¹²⁷	+5	10.9 ¹⁰⁹	58	20	11	17	04		**	
24	179	06.3	+23	10.2	274	04.7 ¹²⁷	+5	21.8 ¹⁰⁹	60 S	15	02	16	00	16	56	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 30 ^m 1		Mag: -3.8 PMG: 13 ^h 48 ^m		Mag: +1.5 PMG: 10 ^h 47 ^m		Mag: -1.9 PMG: 11 ^h 33 ^m		Mag: +0.5 PMG: 19 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	277	14.5	153	03.5	+21	21.4	198	05.8	+23	25.8
1	292	16.9	168	02.7		20.8	213	06.4		26.0
2	307	19.4	183	02.0		20.1	228	07.0		26.1
3	322	21.9	198	01.3		19.5	243	07.6		26.3
4	337	24.3	213	00.6		18.8	258	08.2		26.4
5	352	26.8	227	59.9	+21	18.2	273	08.8	+23	26.6
6	7	29.3	242	59.2	+21	17.5	288	09.4	+23	26.7
7	22	31.7	257	58.4		16.9	303	10.0		26.9
8	37	34.2	272	57.7		16.2	318	10.6		27.0
9	52	36.7	287	57.0		15.6	333	11.2		27.2
10	67	39.1	302	56.3		14.9	348	11.8		27.3
11	82	41.6	317	55.6	+21	14.2	3	12.3	+23	27.5
12	97	44.0	332	54.9	+21	13.6	18	12.9	+23	27.6
13	112	46.5	347	54.2		12.9	33	13.5		27.8
14	127	49.0	2	53.5		12.3	48	14.1		27.9
15	142	51.4	17	52.8		11.6	63	14.7		28.1
16	157	53.9	32	52.0		10.9	78	15.3		28.2
17	172	56.4	47	51.3	+21	10.3	93	15.9	+23	28.4
18	187	58.8	62	50.6	+21	09.6	108	16.5	+23	28.5
19	203	01.3	77	49.9		09.0	123	17.1		28.7
20	218	03.8	92	49.2		08.3	138	17.7		28.8
21	233	06.2	107	48.5		07.6	153	18.3		29.0
22	248	08.7	122	47.8		07.0	168	18.9		29.1
23	263	11.1	137	47.1		06.3	183	19.5		29.3
24	278	13.6	152	46.4	+21	05.6	198	20.1	+23	29.4
Dif	—		-7		-7		+6		+2	
								+18		0
									+25	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 3	PHE	4 ^h : 56 ^m 7 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2		R°: 46 ^m			Hora	R°	Hora	R°
	PMG: 12 ^h 03 ^m 7	PMG: 5 ^h 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m
0	179	06.3	+23	10.2	274	04.7	+5	21.8	60 N	** **	1 01	2 41	23 22	17
1	194	06.2		10.1	288	36.4 ¹²⁷		32.6 ¹⁰⁸	58	** **	1 47	3 01	27 20	12 57 75
2	209	06.0		09.9	303	08.1 ¹²⁷		43.3 ¹⁰⁷	56	** **	2 16	18	32 22	53 72
3	224	05.9		09.8	317	39.8 ¹²⁷	+5	54.0 ¹⁰⁷	54	0 56	38	32	36 24	49 7
4	239	05.8		09.6	332	11.6 ¹²⁸	+6	04.7 ¹⁰⁷	52	1 39	2 55	44	40 25	46 69
5	254	05.7	+23	09.5	346	43.4 ¹²⁸	+6	15.3 ¹⁰⁶	50	2 06	3 10	3 54	23 43	27 12 43 68
6	269	05.5	+23	09.3	1	15.2 ¹²⁸	+6	25.9 ¹⁰⁶	45	2 50	3 39	4 17	23 51	30 12 37 64
7	284	05.4		09.2	15	47.0 ¹²⁸		36.5 ¹⁰⁶	40	3 20	4 02	34	23 57	33 32 61
8	299	05.3		09.0	30	18.8 ¹²⁸		47.0 ¹⁰⁵	35	3 43	20	4 49	** **	** ** 28 58
9	314	05.2		08.9	44	50.7 ¹²⁹	+6	57.5 ¹⁰⁵	30	4 01	35	5 02	** **	** ** 24 56
10	329	05.0		08.7	59	22.5 ¹²⁸	+7	07.9 ¹⁰⁴	20	30	4 59	24	** **	** ** 17 53
11	344	04.9	+23	08.5	73	54.4 ¹²⁹	+7	18.2 ¹⁰³	10 N	4 53	5 20	5 43	** **	** ** 12 11 50
12	359	04.8	+23	08.4	88	26.3 ¹²⁹	+7	28.6 ¹⁰⁴	0	5 11	5 38	6 00	** **	** ** 12 06 46
13	14	04.7		08.2	102	58.2 ¹²⁹		38.8 ¹⁰²	10 S	28	5 54	17	** **	** ** 12 00 44
14	29	04.6		08.1	117	30.1 ¹²⁹		49.1 ¹⁰³	20	5 44	6 12	36	** **	** ** 11 55 40
15	44	04.4		07.9	132	02.0 ¹²⁹	+7	59.2 ¹⁰¹	30	6 00	30	6 57	** **	** ** 48 37
16	59	04.3		07.7	146	33.9 ¹²⁹	+8	09.4 ¹⁰²	35	09	41	7 09	** **	** ** 44 35
17	74	04.2	+23	07.6	161	05.8 ¹²⁹	+8	19.5 ¹⁰¹	40	6 18	6 52	7 23	0 03	61 11 40 32
18	89	04.1	+23	07.4	175	37.8 ¹³⁰	+8	29.5 ¹⁰⁰	45	6 28	7 06	7 39	0 06	65 11 35 29
19	104	03.9		07.3	190	09.7 ¹²⁹		39.5 ¹⁰⁰	50	40	21	8 00	11 68	29 26
20	119	03.8		07.1	204	41.7 ¹³⁰		49.4 ⁹⁹	52	45	29	09	13 70	26 25
21	134	03.7		06.9	219	13.7 ¹³⁰	+8	59.3 ⁹⁹	54	51	37	20	15 72	23 23
22	149	03.6		06.8	233	45.6 ¹²⁹	+9	09.1 ⁹⁸	56	6 57	46	33	17 74	20 21
23	164	03.5		06.6	248	17.6 ¹³⁰		18.9 ⁹⁸	58	7 03	7 56	8 47	20 76	16 19
24	179	03.3	+23	06.4	262	49.6 ¹³⁰	+9	28.6 ⁹⁷	60 S	7 11	8 07	9 04	0 23	79 11 12 16

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -3.8			Mag: +1.5			Mag: -1.9			Mag: +0.5		
	5 ^h 26 ^m 2		PMG: 13 ^h 50 ^m			PMG: 10 ^h 46 ^m			PMG: 11 ^h 30 ^m			PMG: 19 ^h 38 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	278	13.6	152	46.4	+21	05.6	198	20.1	+23	29.4	187	15.0	+23	13.2
1	293	16.1	167	45.7		04.9	213	20.6		29.6	202	16.8		13.2
2	308	18.5	182	45.0		04.3	228	21.2		29.7	217	18.6		13.2
3	323	21.0	197	44.3		03.6	243	21.8		29.9	232	20.5		13.2
4	338	23.5	212	43.6		02.9	258	22.4		30.0	247	22.3		13.2
5	353	25.9	227	42.9	+21	02.2	273	23.0	+23	30.1	262	24.2	+23	13.2
6	8	28.4	242	42.2	+21	01.6	288	23.6	+23	30.3	277	26.0	+23	13.2
7	23	30.9	257	41.5		00.9	303	24.2		30.4	292	27.9		13.2
8	38	33.3	272	40.8	+21	00.2	318	24.8		30.6	307	29.7		13.2
9	53	35.8	287	40.1	+20	59.5	333	25.4		30.7	322	31.5		13.2
10	68	38.3	302	39.4		58.9	348	26.0		30.9	337	33.4		13.2
11	83	40.7	317	38.7	+20	58.2	3	26.6	+23	31.0	352	35.2	+23	13.2
12	98	43.2	332	38.0	+20	57.5	18	27.2	+23	31.1	7	37.1	+23	13.2
13	113	45.6	347	37.3		56.8	33	27.8		31.3	22	38.9		13.2
14	128	48.1	2	36.6		56.1	48	28.4		31.4	37	40.8		13.2
15	143	50.6	17	35.9		55.4	63	28.9		31.6	52	42.6		13.2
16	158	53.0	32	35.2		54.7	78	29.5		31.7	67	44.5		13.2
17	173	55.5	47	34.5	+20	54.1	93	30.1	+23	31.8	82	46.3	+23	13.2
18	188	58.0	62	33.8	+20	53.4	108	30.7	+23	32.0	97	48.1	+23	13.2
19	204	00.4	77	33.1		52.7	123	31.3		32.1	112	50.0		13.2
20	219	02.9	92	32.4		52.0	138	31.9		32.3	127	51.8		13.2
21	234	05.4	107	31.7		51.3	153	32.5		32.4	142	53.7		13.2
22	249	07.8	122	31.0		50.6	168	33.1		32.5	157	55.5		13.2
23	264	10.3	137	30.3		49.9	183	33.7		32.7	172	57.4		13.2
24	279	12.7	152	29.6	+20	49.2	198	34.3	+23	32.8	187	59.2	+23	13.2
Dif	—		-7		-7		+6		+1		+18		0	
														+25

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 22 ^d 3	PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/5									
	PMG: 12 ^h 03 ^m 9					SD: 15/3			PMG: 6 ^h 41 ^m		R°: 47 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m		h m m	h m m
0	179	03.3	+23 06.4	262	49.6	+9 28.6	97	60 N	21 25	23 02	** **		23 39 21	14 18 75
1	194	03.2	06.3	277	21.6 ¹³⁰	38.3	97	58	21 05	22 18	** **		47 23	12 71
2	209	03.1	06.1	291	53.6 ¹³⁰	47.9	96	56	20 49	21 50	** **		23 54 25	05 70
3	224	03.0	05.9	306	25.5 ¹²⁹	+9 57.4	95	54	35	29	23 07	** **	** **	14 00 68
4	239	02.9	05.8	320	57.5 ¹³⁰	+10 06.9	95	52	23	21 11	22 27	** **	** **	13 55 66
5	254	02.7	+23 05.6	335	29.5 ¹³⁰	+10 16.4	95	50	20 12	20 56	22 01	** **	** **	13 51 64
6	269	02.6	+23 05.4	350	01.5 ¹³⁰	+10 25.8	94	45	19 50	20 27	21 17	** **	** **	13 41 62
7	284	02.5	05.2	4	33.5 ¹³⁰	35.1	93	40	33	20 05	20 47	** **	** **	33 59
8	299	02.4	05.1	19	05.5 ¹³⁰	44.3	92	35	18	19 47	24	0 02	36	26 57
9	314	02.2	04.9	33	37.5 ¹³⁰	+10 53.6	93	30	19 05	32	20 06	07 37		20 55
10	329	02.1	04.7	48	09.5 ¹³⁰	+11 02.7	91	20	18 43	19 08	19 37	16 40		10 52
11	344	02.0	+23 04.5	62	41.5 ¹³⁰	+11 11.8	91	10 N	18 25	18 48	19 15	0 23	44	13 01 49
12	359	01.9	+23 04.4	77	13.5 ¹³⁰	+11 20.8	90	0	18 08	18 30	18 56	0 30	46	12 52 47
13	14	01.8	04.2	91	45.5 ¹³⁰	29.8	90	10 S	17 50	18 13	39	37 49		44 44
14	29	01.6	04.0	106	17.5 ¹³⁰	38.7	89	20	32	17 56	24	45 52		35 41
15	44	01.5	03.8	120	49.4 ¹²⁹	47.6	89	30	17 11	38	18 07	53 56		25 37
16	59	01.4	03.7	135	21.4 ¹³⁰	+11 56.3	87	35	16 59	27	17 59	0 58 58		19 36
17	74	01.3	+23 03.5	149	53.4 ¹³⁰	+12 05.1	88	40	16 45	17 16	17 50	1 04 60		12 12 34
18	89	01.2	+23 03.3	164	25.3 ¹²⁹	+12 13.7	86	45	16 29	17 02	17 40	1 11 62		12 04 32
19	104	01.1	03.1	178	57.3 ¹³⁰	22.3	86	50	16 08	16 47	28	19 66		11 55 28
20	119	00.9	02.9	193	29.3 ¹³⁰	30.9	86	52	15 59	39	23	23 67		51 27
21	134	00.8	02.8	208	01.2 ¹²⁹	39.3	84	54	48	31	17	27 69		46 25
22	149	00.7	02.6	222	33.2 ¹³⁰	47.7	84	56	36	23	11	31 71		41 23
23	164	00.6	02.4	237	05.1 ¹²⁹	+12 56.1	84	58	21	13	17 05	36 74		35 21
24	179	00.5	+23 02.2	251	37.0 ¹²⁹	+13 04.3	82	60 S	15 04	16 01	16 58	1 42 76		11 28 19
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 22 ^m 3		Mag: -3.8 PMG: 13 ^h 51 ^m			Mag: +1.5 PMG: 10 ^h 45 ^m			Mag: -1.9 PMG: 11 ^h 27 ^m			Mag: +0.5 PMG: 19 ^h 34 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	12.7	152 29.6	+20 49.2	198 34.3	+23 32.8	187 59.2	+23 13.2	65 46.4	-10 46.6				
1	294	15.2	167 28.9	48.5	213 34.9	32.9	203 01.0	13.2	80 48.9	46.6				
2	309	17.7	182 28.2	47.8	228 35.5	33.1	218 02.9	13.2	95 51.4	46.6				
3	324	20.1	197 27.5	47.1	243 36.1	33.2	233 04.7	13.2	110 53.9	46.6				
4	339	22.6	212 26.9	46.4	258 36.7	33.4	248 06.6	13.2	125 56.4	46.6				
5	354	25.1	227 26.2	+20 45.7	273 37.3	+23 33.5	263 08.4	+23 13.2	140 58.9	-10 46.6				
6	9	27.5	242 25.5	+20 45.0	288 37.9	+23 33.6	278 10.3	+23 13.2	156 01.4	-10 46.6				
7	24	30.0	257 24.8	44.3	303 38.4	33.8	293 12.1	13.2	171 03.9	46.6				
8	39	32.5	272 24.1	43.6	318 39.0	33.9	308 14.0	13.2	186 06.4	46.6				
9	54	34.9	287 23.4	42.9	333 39.6	34.0	323 15.8	13.2	201 08.9	46.6				
10	69	37.4	302 22.7	42.2	348 40.2	34.2	338 17.6	13.2	216 11.3	46.6				
11	84	39.9	317 22.0	+20 41.5	3	40.8	+23 34.3	353 19.5	+23 13.2	231 13.8	-10 46.6			
12	99	42.3	332 21.4	+20 40.8	18 41.4	+23 34.4	8 21.3	+23 13.2	246 16.3	-10 46.6				
13	114	44.8	347 20.7	40.1	33 42.0	34.6	23 23.2	13.2	261 18.8	46.6				
14	129	47.2	2 20.0	39.4	48 42.6	34.7	38 25.0	13.2	276 21.3	46.6				
15	144	49.7	17 19.3	38.7	63 43.2	34.8	53 26.9	13.2	291 23.8	46.6				
16	159	52.2	32 18.6	38.0	78 43.8	35.0	68 28.7	13.2	306 26.3	46.6				
17	174	54.6	47 17.9	+20 37.3	93 44.4	+23 35.1	83 30.6	+23 13.2	321 28.8	-10 46.6				
18	189	57.1	62 17.2	+20 36.5	108 45.0	+23 35.2	98 32.4	+23 13.2	336 31.3	-10 46.6				
19	204	59.6	77 16.6	35.8	123 45.6	35.3	113 34.2	13.2	351 33.8	46.6				
20	220	02.0	92 15.9	35.1	138 46.2	35.5	128 36.1	13.2	6 36.3	46.6				
21	235	04.5	107 15.2	34.4	153 46.8	35.6	143 37.9	13.2	21 38.8	46.6				
22	250	07.0	122 14.5	33.7	168 47.4	35.7	158 39.8	13.2	36 41.3	46.6				
23	265	09.4	137 13.8	33.0	183 48.0	35.9	173 41.6	13.2	51 43.8	46.6				
24	280	11.9	152 13.2	+20 32.2	198 48.5	+23 36.0	188 43.5	+23 13.2	66 46.3	-10 46.6				
Dif	—		-7	-7	+6	+1	+18	0	+25	0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 1			Edad: 23 ^d 3 PHE { SD: 15 ^h 1 PMG: 7 ^h 28 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	00.5	+23	02.2		251	37.0	+13	04.3	60 N	** ** *	1 06	2 43	** ** *	15 33 70
1	194	00.3		02.0		266	08.9	12.5	82	58	** ** *	1 50	3 03	** ** *	23 68
2	209	00.2		01.8		280	40.9	20.7	82	56	** ** *	2 18	19	** ** *	15 66
3	224	00.1		01.7		295	12.8	28.7	80	54	1 01	40	33	0 00 27	08 66
4	239	00.0		01.5		309	44.7	36.7	80	52	1 41	2 57	45	05 29	15 01 63
5	253	59.9	+23	01.3		324	16.5	44.7	80	50	2 08	3 12	3 56	0 10 30	14 55 62
6	268	59.7	+23	01.1		338	48.4	52.5	78	45	2 52	3 41	4 18	0 21 33	14 43 59
7	283	59.6		00.9		353	20.3	00.3	78	40	3 21	4 03	35	30 35	32 57
8	298	59.5		00.7		7	52.2	08.0	77	35	3 44	21	4 50	38 37	23 55
9	313	59.4		00.5		22	24.0	15.7	77	30	4 02	4 36	5 03	44 39	15 54
10	328	59.3		00.3		36	55.8	23.3	76	20	31	5 00	25	0 56 42	14 02 51
11	343	59.2	+23	00.1		51	27.7	30.8	75	10 N	4 53	5 20	5 43	1 07 44	13 50 49
12	358	59.0	+23	00.0		65	59.5	38.2	74	0	5 12	5 38	6 00	1 16 47	13 39 47
13	13	58.9	+22	59.8		80	31.3	45.6	74	10 S	28	5 55	18	26 49	28 44
14	28	58.8		59.6		95	03.1	52.9	73	20	5 44	6 12	36	37 51	16 42
15	43	58.7		59.4		109	34.8	00.1	72	30	6 00	30	6 57	49 54	13 02 40
16	58	58.6		59.2		124	06.6	07.3	72	35	09	41	7 09	1 56 56	12 55 38
17	73	58.5	+22	59.0		138	38.4	14.3	70	40	6 18	6 52	7 23	2 04 58	12 46 37
18	88	58.3	+22	58.8		153	10.1	21.3	70	45	6 28	7 05	7 39	2 13 61	12 36 34
19	103	58.2		58.6		167	41.8	28.3	70	50	40	21	7 59	25 63	23 32
20	118	58.1		58.4		182	13.5	35.1	68	52	45	28	8 09	30 65	18 30
21	133	58.0		58.2		196	45.3	41.9	68	54	50	36	20	36 66	11 29
22	148	57.9		58.0		211	16.9	48.6	67	56	6 56	45	32	42 68	12 04 28
23	163	57.8		57.8		225	48.6	55.2	66	58	7 03	7 55	8 46	50 70	11 56 26
24	178	57.6	+22	57.6		240	20.3	01.7	65	60 S	7 10	8 06	9 03	2 58 73	11 47 24

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 18 ^m 3		Mag: -3.8 PMG: 13 ^h 52 ^m			Mag: +1.5 PMG: 10 ^h 44 ^m			Mag: -1.9 PMG: 11 ^h 24 ^m			Mag: +0.5 PMG: 19 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	280	11.9	152	13.2	+20	32.2	198	48.5	+23	36.0	188	43.5	+23	13.2	66	46.3	-10	46.6
1	295	14.4	167	12.5		31.5	213	49.1		36.1	203	45.3		13.2	81	48.7		46.6
2	310	16.8	182	11.8		30.8	228	49.7		36.2	218	47.2		13.2	96	51.2		46.6
3	325	19.3	197	11.1		30.1	243	50.3		36.4	233	49.0		13.2	111	53.7		46.6
4	340	21.7	212	10.5		29.4	258	50.9		36.5	248	50.8		13.2	126	56.2		46.6
5	355	24.2	227	09.8	+20	28.6	273	51.5	+23	36.6	263	52.7	+23	13.2	141	58.7	-10	46.6
6	10	26.7	242	09.1	+20	27.9	288	52.1	+23	36.8	278	54.5	+23	13.2	157	01.2	-10	46.6
7	25	29.1	257	08.4		27.2	303	52.7		36.9	293	56.4		13.2	172	03.7		46.6
8	40	31.6	272	07.7		26.5	318	53.3		37.0	308	58.2		13.2	187	06.2		46.6
9	55	34.1	287	07.1		25.7	333	53.9		37.1	324	00.1		13.2	202	08.7		46.6
10	70	36.5	302	06.4		25.0	348	54.5		37.3	339	01.9		13.2	217	11.2		46.6
11	85	39.0	317	05.7	+20	24.3	3	55.1	+23	37.4	354	03.8	+23	13.2	232	13.7	-10	46.6
12	100	41.5	332	05.1	+20	23.5	18	55.7	+23	37.5	9	05.6	+23	13.2	247	16.2	-10	46.6
13	115	43.9	347	04.4		22.8	33	56.3		37.6	24	07.4		13.2	262	18.6		46.6
14	130	46.4	2	03.7		22.1	48	56.9		37.8	39	09.3		13.2	277	21.1		46.6
15	145	48.9	17	03.0		21.4	63	57.5		37.9	54	11.1		13.2	292	23.6		46.6
16	160	51.3	32	02.4		20.6	78	58.1		38.0	69	13.0		13.2	307	26.1		46.6
17	175	53.8	47	01.7	+20	19.9	93	58.7	+23	38.1	84	14.8	+23	13.2	322	28.6	-10	46.6
18	190	56.2	62	01.0	+20	19.1	108	59.2	+23	38.2	99	16.7	+23	13.1	337	31.1	-10	46.6
19	205	58.7	77	00.4		18.4	123	59.8		38.4	114	18.5		13.1	352	33.6		46.6
20	221	01.2	91	59.7		17.7	139	00.4		38.5	129	20.4		13.1	7	36.1		46.6
21	236	03.6	106	59.0		16.9	154	01.0		38.6	144	22.2		13.1	22	38.6		46.6
22	251	06.1	121	58.4		16.2	169	01.6		38.7	159	24.0		13.1	37	41.0		46.6
23	266	08.6	136	57.7		15.5	184	02.2		38.8	174	25.9		13.1	52	43.5		46.6
24	281	11.0	151	57.0	+20	14.7	199	02.8	+23	39.0	189	27.7	+23	13.1	67	46.0	-10	46.6
Dif	—		-7		-7		+6		+1		+18		0		+25			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 04 ^m 2			Edad: 24 ^d 3 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 SD: 14:9 PMG: 8 ^h 14 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	57.6	+22 57.6	240	20.3	+16 01.7	65	60 N	21 23	22 58	** **	0 00 26	16 43 64		
1	193	57.5	57.4	254	51.9 ¹²⁶	08.2	65	58	21 04	22 16	** **	10 29	31 63		
2	208	57.4	57.2	269	23.6 ¹²⁷	14.6	64	56	20 48	21 48	** **	19 30	21 61		
3	223	57.3	57.0	283	55.2 ¹²⁶	20.9	63	54	34	27	23 03	27 31	12 60		
4	238	57.2	56.8	298	26.8 ¹²⁶	27.1	62	52	22	21 10	22 25	34 33	16 04 59		
5	253	57.1	+22 56.6	312	58.4 ¹²⁶	+16 33.3	62	50	20 12	20 56	21 59	0 40 34	15 57 58		
6	268	56.9	+22 56.4	327	29.9 ¹²⁵	+16 39.4	61	45	19 50	20 27	21 16	0 54 36	15 42 56		
7	283	56.8	56.2	342	01.5 ¹²⁶	45.4	60	40	32	20 05	20 46	1 05 38	29 55		
8	298	56.7	56.0	356	33.1 ¹²⁶	51.3	59	35	18	19 47	24	15 40	18 54		
9	313	56.6	55.8	11	04.6 ¹²⁵	+16 57.1	58	30	19 05	32	20 05	23 41	15 09 52		
10	328	56.5	55.5	25	36.1 ¹²⁵	+17 02.9	58	20	18 44	19 08	19 37	38 43	14 53 50		
11	343	56.4	+22 55.3	40	07.6 ¹²⁵	+17 08.5	56	10 N	18 25	18 48	19 15	1 51 45	14 39 49		
12	358	56.3	+22 55.1	54	39.1 ¹²⁵	+17 14.1	56	0	18 08	18 30	18 56	2 03 47	14 26 47		
13	13	56.1	54.9	69	10.6 ¹²⁵	19.6	55	10 S	17 51	18 14	40	15 49	14 12 47		
14	28	56.0	54.7	83	42.0 ¹²⁴	25.1	55	20	33	17 57	24	28 51	13 58 45		
15	43	55.9	54.5	98	13.5 ¹²⁵	30.4	53	30	12	38	08	43 53	42 43		
16	58	55.8	54.3	112	44.9 ¹²⁴	35.7	53	35	17 00	28	18 00	2 52 54	33 42		
17	73	55.7	+22 54.1	127	16.3 ¹²⁴	+17 40.8	51	40	16 46	17 17	17 51	3 02 56	13 23 40		
18	88	55.6	+22 53.9	141	47.7 ¹²⁴	+17 45.9	51	45	16 30	17 04	17 41	3 14 57	13 10 39		
19	103	55.5	53.6	156	19.1 ¹²⁴	51.0	51	50	10	16 48	29	28 60	12 55 37		
20	118	55.3	53.4	170	50.5 ¹²⁴	+17 55.9	49	52	16 00	41	24	35 61	48 36		
21	133	55.2	53.2	185	21.9 ¹²⁴	+18 00.7	48	54	15 50	33	19	42 62	40 35		
22	148	55.1	53.0	199	53.2 ¹²³	05.5	48	56	37	24	13	3 50 64	32 33		
23	163	55.0	52.8	214	24.5 ¹²³	10.2	47	58	23	14	17 06	4 00 65	22 31		
24	178	54.9	+22 52.6	228	55.9 ¹²⁴	+18 14.8	46	60 S	15 06	16 03	16 59	4 11 67	12 11 29		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 14 ^m 4		Mag: -3.8 PMG: 13 ^h 53 ^m		Mag: +1.5 PMG: 10 ^h 43 ^m		Mag: -1.9 PMG: 11 ^h 21 ^m		Mag: +0.5 PMG: 19 ^h 26 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	281	11.0	151 57.0	+20 14.7	199 02.8	+23 39.0	189 27.7	+23 13.1	67 46.0	-10 46.6
1	296	13.5	166 56.4	14.0	214 03.4	39.1	204 29.6	13.1	82 48.5	46.6
2	311	16.0	181 55.7	13.2	229 04.0	39.2	219 31.4	13.1	97 51.0	46.7
3	326	18.4	196 55.0	12.5	244 04.6	39.3	234 33.3	13.1	112 53.5	46.7
4	341	20.9	211 54.4	11.7	259 05.2	39.4	249 35.1	13.1	127 56.0	46.7
5	356	23.3	226 53.7	+20 11.0	274 05.8	+23 39.6	264 37.0	+23 13.1	142 58.5	-10 46.7
6	11	25.8	241 53.0	+20 10.2	289 06.4	+23 39.7	279 38.8	+23 13.1	158 01.0	-10 46.7
7	26	28.3	256 52.4	09.5	304 07.0	39.8	294 40.7	13.1	173 03.4	46.7
8	41	30.7	271 51.7	08.7	319 07.6	39.9	309 42.5	13.1	188 05.9	46.7
9	56	33.2	286 51.0	08.0	334 08.2	40.0	324 44.3	13.1	203 08.4	46.7
10	71	35.7	301 50.4	07.2	349 08.8	40.1	339 46.2	13.1	218 10.9	46.7
11	86	38.1	316 49.7	+20 06.5	4 09.4	+23 40.2	354 48.0	+23 13.1	233 13.4	-10 46.7
12	101	40.6	331 49.1	+20 05.7	19 10.0	+23 40.4	9 49.9	+23 13.1	248 15.9	-10 46.7
13	116	43.1	346 48.4	05.0	34 10.6	40.5	24 51.7	13.1	263 18.4	46.7
14	131	45.5	1 47.8	04.2	49 11.2	40.6	39 53.6	13.1	278 20.8	46.7
15	146	48.0	16 47.1	03.5	64 11.8	40.7	54 55.4	13.1	293 23.3	46.7
16	161	50.5	31 46.4	02.7	79 12.3	40.8	69 57.3	13.1	308 25.8	46.7
17	176	52.9	46 45.8	+20 02.0	94 12.9	+23 40.9	84 59.1	+23 13.1	323 28.3	-10 46.7
18	191	55.4	61 45.1	+20 01.2	109 13.5	+23 41.0	100 01.0	+23 13.1	338 30.8	-10 46.7
19	206	57.8	76 44.5	+20 00.4	124 14.1	41.2	115 02.8	13.1	353 33.3	46.7
20	222	00.3	91 43.8	+19 59.7	139 14.7	41.3	130 04.6	13.1	8 35.8	46.7
21	237	02.8	106 43.2	58.9	154 15.3	41.4	145 06.5	13.1	23 38.2	46.7
22	252	05.2	121 42.5	58.1	169 15.9	41.5	160 08.3	13.1	38 40.7	46.7
23	267	07.7	136 41.8	57.4	184 16.5	41.6	175 10.2	13.0	53 43.2	46.7
24	282	10.2	151 41.2	+19 56.6	199 17.1	+23 41.7	190 12.0	+23 13.0	68 45.7	-10 46.7
Dif	—		-7	-8	+6	+1	+18	0	+25	0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 25 ^d 3	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2	SD: 14 ^h 8	PMG: 9 ^h 02 ^m		R°: 47 ^m							
	PMG: 12 ^h 04 ^m 4																
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	178	54.9	+22	52.6	228	55.9	+18	14.8	60 N	** **	1 11	2 46	0 26	34	17 47	56	
1	193	54.8		52.4	243	27.2 ¹²³		19.3 45	58	** **	1 53	3 05	39	35	34	55	
2	208	54.7		52.1	257	58.5 ¹²³		23.7 44	56	** **	2 21	21	49	37	22	55	
3	223	54.6		51.9	272	29.7 ¹²²		28.0 43	54	1 06	42	35	0 58	38	12	54	
4	238	54.4		51.7	287	01.0 ¹²³		32.2 42	52	1 44	2 59	47	1 07	38	17 03	53	
5	253	54.3	+22	51.5	301	32.3 ¹²³	+18	36.4 42	50	2 10	3 13	3 57	1 14	40	16 55	53	
6	268	54.2	+22	51.3	316	03.5 ¹²²	+18	40.5 41	45	2 53	3 42	4 19	1 30	41	16 38	52	
7	283	54.1		51.0	330	34.7 ¹²²		44.5 40	40	3 23	4 04	36	43	43	24	51	
8	298	54.0		50.8	345	05.9 ¹²²		48.4 39	35	3 45	22	4 51	1 55	43	12	50	
9	313	53.9		50.6	359	37.1 ¹²²		52.2 38	30	4 03	4 36	5 04	2 04	44	16 01	50	
10	328	53.8		50.4	14	08.3 ¹²²		55.9 37	20	32	5 01	25	21	46	15 43	50	
11	343	53.7	+22	50.1	28	39.5 ¹²²	+18	59.5 36	10 N	4 54	5 21	5 44	2 36	47	15 28	48	
12	358	53.6	+22	49.9	43	10.7 ¹²²	+19	03.1 36	0	5 12	5 38	6 01	2 50	48	15 13	48	
13	13	53.4		49.7	57	41.8 ¹²¹		06.5 34	10 S	29	5 55	18	3 04	49	14 59	47	
14	28	53.3		49.5	72	13.0 ¹²²		09.9 34	20	5 44	6 12	36	19	50	43	46	
15	43	53.2		49.2	86	44.1 ¹²¹		13.1 32	30	6 00	30	6 56	36	51	25	46	
16	58	53.1		49.0	101	15.2 ¹²¹		16.3 32	35	09	40	7 08	46	52	15	45	
17	73	53.0	+22	48.8	115	46.3 ¹²¹	+19	19.4 31	40	6 18	6 52	7 22	3 58	53	14 03	44	
18	88	52.9	+22	48.5	130	17.4 ¹²¹	+19	22.4 30	45	6 28	7 05	7 38	4 11	54	13 49	43	
19	103	52.8		48.3	144	48.5 ¹²¹		25.4 30	50	39	20	7 59	28	55	32	42	
20	118	52.7		48.1	159	19.6 ¹²¹		28.2 28	52	44	28	8 08	36	56	24	42	
21	133	52.6		47.9	173	50.7 ¹²¹		30.9 27	54	50	35	19	44	57	15	41	
22	148	52.4		47.6	188	21.7 ¹²⁰		33.6 27	56	6 56	44	31	4 54	58	13 05	40	
23	163	52.3		47.4	202	52.8 ¹²¹		36.1 25	58	7 02	7 54	8 45	5 05	59	12 53	40	
24	178	52.2	+22	47.2	217	23.8 ¹²⁰	+19	38.6 25	60 S	7 09	8 05	9 01	5 18	61	12 40	38	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: +1.5		Mag: -1.9		Mag: +0.5	
	5 ^h 10 ^m 5		PMG: 13 ^h 54 ^m		PMG: 10 ^h 42 ^m		PMG: 11 ^h 18 ^m		PMG: 19 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	10.2	151	41.2	+19	56.6	199	17.1	+23	41.7
1	297	12.6	166	40.5		55.9	214	17.7		41.8
2	312	15.1	181	39.9		55.1	229	18.3		41.9
3	327	17.6	196	39.2		54.3	244	18.9		42.0
4	342	20.0	211	38.6		53.6	259	19.5		42.1
5	357	22.5	226	37.9	+19	52.8	274	20.1	+23	42.3
6	12	25.0	241	37.3	+19	52.0	289	20.7	+23	42.4
7	27	27.4	256	36.6		51.2	304	21.3		42.5
8	42	29.9	271	36.0		50.5	319	21.9		42.6
9	57	32.3	286	35.3		49.7	334	22.5		42.7
10	72	34.8	301	34.7		48.9	349	23.1		42.8
11	87	37.3	316	34.1	+19	48.1	4	23.7	+23	42.9
12	102	39.7	331	33.4	+19	47.4	19	24.3	+23	43.0
13	117	42.2	346	32.8		46.6	34	24.9		43.1
14	132	44.7	1	32.1		45.8	49	25.5		43.2
15	147	47.1	16	31.5		45.0	64	26.1		43.3
16	162	49.6	31	30.8		44.3	79	26.7		43.4
17	177	52.1	46	30.2	+19	43.5	94	27.3	+23	43.5
18	192	54.5	61	29.5	+19	42.7	109	27.9	+23	43.6
19	207	57.0	76	28.9		41.9	124	28.5		43.7
20	222	59.4	91	28.3		41.1	139	29.0		43.8
21	238	01.9	106	27.6		40.3	154	29.6		43.9
22	253	04.4	121	27.0		39.6	169	30.2		44.0
23	268	06.8	136	26.3		38.8	184	30.8		44.1
24	283	09.3	151	25.7	+19	38.0	199	31.4	+23	44.2
Dif	—		-6		-8		+6		+1	
								+18		0
									+25	
										0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 26 ^d 3	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0										
	PMG: 12 ^h 04 ^m 6					SD: 14 ^h 7			PMG: 9 ^h 49 ^m		R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	52.2	+22 47.2	217	23.8	+19 38.6	23	60 N	21 21	22 53	** **	1 00	43	18 43	46
1	193	52.1	46.9	231	54.9 ¹²¹	40.9	23	58	21 02	22 13	** **	14	43	29	46
2	208	52.0	46.7	246	25.9 ¹²⁰	43.2	23	56	20 46	21 46	** **	26	44	17	46
3	223	51.9	46.4	260	56.9 ¹²⁰	45.4	22	54	33	26	22 59	36	45	18 06	47
4	238	51.8	46.2	275	28.0 ¹²¹	47.5	21	52	21	21 09	22 22	45	45	17 56	47
5	253	51.7	+22 46.0	289	59.0 ¹²⁰	+19 49.5	20	50	20 11	20 54	21 57	1 54	45	17 48	47
6	268	51.6	+22 45.7	304	30.0 ¹²⁰	+19 51.4	19	45	19 49	20 26	21 15	2 11	46	17 30	47
7	283	51.5	45.5	319	01.0 ¹²⁰	53.2	18	40	32	20 04	20 45	26	46	15	47
8	298	51.4	45.3	333	32.0 ¹²⁰	55.0	18	35	17	19 47	23	38	46	17 02	48
9	313	51.2	45.0	348	02.9 ¹¹⁹	56.6	16	30	19 05	32	20 05	2 48	47	16 51	48
10	328	51.1	44.8	2	33.9 ¹²⁰	58.2	16	20	18 44	19 08	19 37	3 07	47	33	47
11	343	51.0	+22 44.5	17	04.9 ¹²⁰	+19 59.6	14	10 N	18 25	18 48	19 15	3 23	47	16 16	48
12	358	50.9	+22 44.3	31	35.9 ¹²⁰	+20 01.0	14	0	18 08	18 31	18 57	3 38	48	16 01	48
13	13	50.8	44.1	46	06.9 ¹²⁰	02.2	12	10 S	17 51	18 14	40	3 53	48	15 46	48
14	28	50.7	43.8	60	37.8 ¹¹⁹	03.4	12	20	33	17 57	25	4 09	49	29	48
15	43	50.6	43.6	75	08.8 ¹²⁰	04.5	11	30	13	39	09	27	49	11	48
16	58	50.5	43.3	89	39.8 ¹²⁰	05.5	10	35	17 01	29	18 01	38	49	15 00	48
17	73	50.4	+22 43.1	104	10.7 ¹¹⁹	+20 06.4	9	40	16 47	17 18	17 52	4 51	49	14 47	48
18	88	50.3	+22 42.8	118	41.7 ¹²⁰	+20 07.2	8	45	16 31	17 05	17 42	5 05	50	14 32	48
19	103	50.2	42.6	133	12.6 ¹¹⁹	07.9	7	50	11	16 49	31	23	50	14	48
20	118	50.1	42.3	147	43.6 ¹²⁰	08.5	6	52	16 02	42	26	32	50	14 06	48
21	133	50.0	42.1	162	14.6 ¹²⁰	09.0	5	54	15 51	34	20	41	51	13 56	48
22	148	49.9	41.8	176	45.5 ¹¹⁹	09.4	4	56	39	26	14	5 52	50	45	48
23	163	49.7	41.6	191	16.5 ¹²⁰	09.8	4	58	25	16	08	6 04	51	33	48
24	178	49.6	+22 41.3	205	47.4 ¹¹⁹	+20 10.0	2	60 S	15 09	16 05	17 01	6 19	51	13 18	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 5 ^h 06 ^m 5		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.5 PMG: 10 ^h 41 ^m		Mag: -1.9 PMG: 11 ^h 15 ^m		Mag: +0.5 PMG: 19 ^h 18 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	283	09.3	151	25.7	+19 38.0	199 31.4	+23 44.2	190 56.3	+23 12.9	69 45.3	-10 46.9
1	298	11.8	166	25.1	37.2	214 32.0	44.3	205 58.2	12.9	84 47.8	46.9
2	313	14.2	181	24.4	36.4	229 32.6	44.4	221 00.0	12.9	99 50.2	46.9
3	328	16.7	196	23.8	35.6	244 33.2	44.5	236 01.9	12.9	114 52.7	46.9
4	343	19.2	211	23.1	34.8	259 33.8	44.6	251 03.7	12.9	129 55.2	46.9
5	358	21.6	226	22.5	+19 34.0	274 34.4	+23 44.7	266 05.6	+23 12.9	144 57.7	-10 46.9
6	13	24.1	241	21.9	+19 33.2	289 35.0	+23 44.8	281 07.4	+23 12.9	160 00.2	-10 46.9
7	28	26.6	256	21.2	32.5	304 35.6	44.9	296 09.3	12.9	175 02.6	46.9
8	43	29.0	271	20.6	31.7	319 36.2	45.0	311 11.1	12.9	190 05.1	46.9
9	58	31.5	286	20.0	30.9	334 36.8	45.1	326 13.0	12.9	205 07.6	46.9
10	73	33.9	301	19.3	30.1	349 37.4	45.2	341 14.8	12.9	220 10.1	46.9
11	88	36.4	316	18.7	+19 29.3	4 38.0	+23 45.3	356 16.7	+23 12.9	235 12.6	-10 46.9
12	103	38.9	331	18.1	+19 28.5	19 38.6	+23 45.4	11 18.5	+23 12.9	250 15.0	-10 46.9
13	118	41.3	346	17.4	27.7	34 39.2	45.5	26 20.4	12.9	265 17.5	47.0
14	133	43.8	1	16.8	26.9	49 39.8	45.6	41 22.2	12.9	280 20.0	47.0
15	148	46.3	16	16.2	26.1	64 40.4	45.7	56 24.1	12.9	295 22.5	47.0
16	163	48.7	31	15.5	25.3	79 41.0	45.8	71 25.9	12.9	310 24.9	47.0
17	178	51.2	46	14.9	+19 24.5	94 41.6	+23 45.9	86 27.7	+23 12.8	325 27.4	-10 47.0
18	193	53.7	61	14.3	+19 23.7	109 42.2	+23 46.0	101 29.6	+23 12.8	340 29.9	-10 47.0
19	208	56.1	76	13.6	22.9	124 42.8	46.1	116 31.4	12.8	355 32.4	47.0
20	223	58.6	91	13.0	22.1	139 43.4	46.2	131 33.3	12.8	10 34.9	47.0
21	239	01.1	106	12.4	21.2	154 44.0	46.3	146 35.1	12.8	25 37.3	47.0
22	254	03.5	121	11.8	20.4	169 44.6	46.4	161 37.0	12.8	40 39.8	47.0
23	269	06.0	136	11.1	19.6	184 45.2	46.5	176 38.8	12.8	55 42.3	47.0
24	284	08.4	151	10.5	+19 18.8	199 45.8	+23 46.6	191 40.7	+23 12.8	70 44.8	-10 47.0
Dif	—		-6	-8		+6	+1	+18	0	+25	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 8			Edad: 27 ^d 3	PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 53 ^h 9 R ^o : 48 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	49.6	+22	205	47.4	+20	10.0	2	60 N	** **	1 17	2 49	1 43	53	19 29 37
1	193	49.5		220	18.4 ¹²⁰		10.2	2	58	** **	1 57	3 08	1 57	53	15 38
2	208	49.4		234	49.4 ¹²⁰		10.2	0	56	** **	2 24	23	2 10	52	19 03 39
3	223	49.3		249	20.3 ¹¹⁹		10.2	0	54	1 11	2 44	37	21	51	18 53 39
4	238	49.2		263	51.3 ¹²⁰		10.1	1	52	1 48	3 01	48	30	51	43 40
5	253	49.1	+22	278	22.3 ¹²⁰	+20	09.9	2	50	2 12	3 15	3 59	2 39	51	18 35 41
6	268	49.0	+22	292	53.2 ¹¹⁹	+20	09.5	4	45	2 55	3 43	4 20	2 57	50	18 17 42
7	283	48.9		307	24.2 ¹²⁰		09.1	4	40	3 24	4 05	38	3 12	50	18 02 43
8	298	48.8		321	55.2 ¹²⁰		08.6	5	35	3 46	23	4 52	24	50	17 50 44
9	313	48.7		336	26.2 ¹²⁰		08.0	6	30	4 04	4 37	5 05	35	50	39 45
10	328	48.6		350	57.2 ¹²⁰		07.3	7	20	32	5 01	26	3 54	49	20 46
11	343	48.5	+22	5	28.2 ¹²⁰	+20	06.6	7	10 N	4 54	5 21	5 44	4 10	49	17 04 47
12	358	48.4	+22	19	59.2 ¹²⁰	+20	05.7	9	0	5 13	5 39	6 01	4 26	48	16 49 48
13	13	48.3		34	30.2 ¹²⁰		04.7	10	10 S	29	5 55	18	41	47	34 48
14	28	48.2		49	01.2 ¹²⁰		03.7	10	20	5 45	6 12	36	4 58	46	16 17 50
15	43	48.1		63	32.3 ¹²¹		02.5	12	30	6 00	30	6 56	5 16	47	15 59 50
16	58	48.0		78	03.3 ¹²⁰	+20	01.3	12	35	09	40	7 08	27	46	48 51
17	73	47.9	+22	92	34.4 ¹²¹	+20	00.0	13	40	6 18	6 51	7 22	5 40	45	15 35 52
18	88	47.8	+22	107	05.4 ¹²⁰	+19	58.5	15	45	6 27	7 04	7 38	5 55	45	15 20 53
19	103	47.7		121	36.5 ¹²¹		57.0	15	50	39	20	7 58	6 13	44	15 02 54
20	118	47.6		136	07.6 ¹²¹		55.4	16	52	44	27	8 07	22	43	14 54 54
21	133	47.4		150	38.7 ¹²¹		53.7	17	54	49	35	18	32	43	44 55
22	148	47.3		165	09.8 ¹²¹		51.9	18	56	6 55	43	30	42	43	33 56
23	163	47.2		179	40.9 ¹²¹		50.0	19	58	7 01	7 53	8 43	6 55	42	21 56
24	178	47.1	+22	194	12.0 ¹²¹	+19	48.1	19	60 S	7 08	8 04	9 00	7 10	40	14 06 57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 02 ^m 6		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +1.5 PMG: 10 ^h 41 ^m		Mag: -1.9 PMG: 11 ^h 12 ^m		Mag: +0.5 PMG: 19 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	284	08.4	151	10.5	199	45.8	191	40.7	70	44.8
1	299	10.9	166	09.9	214	46.4	206	42.5	85	47.2
2	314	13.4	181	09.3	229	47.0	221	44.4	100	49.7
3	329	15.8	196	08.6	244	47.6	236	46.2	115	52.2
4	344	18.3	211	08.0	259	48.2	251	48.1	130	54.7
5	359	20.8	226	07.4	274	48.8	266	49.9	145	57.1
6	14	23.2	241	06.8	289	49.4	281	51.8	160	59.6
7	29	25.7	256	06.1	304	50.0	296	53.6	176	02.1
8	44	28.2	271	05.5	319	50.6	311	55.5	191	04.6
9	59	30.6	286	04.9	334	51.2	326	57.3	206	07.1
10	74	33.1	301	04.3	349	51.8	341	59.2	221	09.5
11	89	35.6	316	03.7	4	52.4	357	01.0	236	12.0
12	104	38.0	331	03.0	19	53.0	12	02.9	251	14.5
13	119	40.5	346	02.4	34	53.6	27	04.7	266	17.0
14	134	42.9	1	01.8	49	54.2	42	06.6	281	19.4
15	149	45.4	16	01.2	64	54.8	57	08.4	296	21.9
16	164	47.9	31	00.6	79	55.4	72	10.3	311	24.4
17	179	50.3	46	00.0	94	56.0	87	12.1	326	26.8
18	194	52.8	60	59.3	109	56.6	102	13.9	341	29.3
19	209	55.3	75	58.7	124	57.2	117	15.8	356	31.8
20	224	57.7	90	58.1	139	57.8	132	17.6	11	34.3
21	240	00.2	105	57.5	154	58.4	147	19.5	26	36.7
22	255	02.7	120	56.9	169	59.0	162	21.3	41	39.2
23	270	05.1	135	56.3	184	59.6	177	23.2	56	41.7
24	285	07.6	150	55.7	200	00.2	192	25.0	71	44.2
Dif	—		-6	-8	+6	+1	+18	0	+25	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 28 ^d 3	PHE { 4 ^h : 53 ^m 9 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0	Latitud			Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 9									SD: 14 ^h 7		PMG: 11 ^h 25 ^m		R°: 47 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	47.1	+22 35.1	194	12.0	+19 48.1	21	60 N	21 19	22 47	** **	2 36 61		20 06 28	
1	193	47.0	34.9	208	43.1 ¹²¹	46.0	21	58	21 00	22 10	** **	2 50 59		19 53 30	
2	208	46.9	34.6	223	14.3 ¹²²	43.9	21	56	20 45	21 44	** **	3 02 58		42 32	
3	223	46.8	34.3	237	45.4 ¹²¹	41.6	23	54	32	24	22 54	12 58		32 33	
4	238	46.7	34.1	252	16.6 ¹²²	39.3	23	52	20	21 07	22 19	21 57		23 35	
5	253	46.6	+22 33.8	266	47.8 ¹²²	+19 36.8	25	50	20 10	20 53	21 55	3 30 56		19 16 35	
6	268	46.5	+22 33.5	281	19.0 ¹²²	+19 34.3	25	45	19 48	20 25	21 13	3 47 55		18 59 38	
7	283	46.4	33.2	295	50.2 ¹²²	31.7	26	40	31	20 04	20 45	4 02 53		45 40	
8	298	46.3	33.0	310	21.4 ¹²²	29.0	27	35	17	19 46	23	14 52		34 40	
9	313	46.2	32.7	324	52.7 ¹²³	26.3	27	30	19 05	32	20 05	25 51		24 41	
10	328	46.1	32.4	339	23.9 ¹²²	23.4	29	20	18 44	19 08	19 37	43 50		18 06 44	
11	343	46.0	+22 32.1	353	55.2 ¹²³	+19 20.4	30	10 N	18 25	18 48	19 15	4 59 48		17 51 45	
12	358	45.9	+22 31.9	8	26.5 ¹²³	+19 17.4	30	0	18 09	18 31	18 57	5 14 47		17 37 46	
13	13	45.8	31.6	22	57.8 ¹²³	14.2	32	10 S	17 52	18 15	41	28 47		22 49	
14	28	45.7	31.3	37	29.1 ¹²³	11.0	32	20	34	17 58	25	5 44 45		17 07 50	
15	43	45.6	31.0	52	00.5 ¹²⁴	07.7	33	30	14	40	10	6 03 43		16 49 52	
16	58	45.5	30.8	66	31.8 ¹²³	04.3	34	35	17 02	30	18 01	13 42		39 53	
17	73	45.4	+22 30.5	81	03.2 ¹²⁴	+19 00.8	35	40	16 49	17 19	17 53	6 25 42		16 27 54	
18	88	45.3	+22 30.2	95	34.6 ¹²⁴	+18 57.3	35	45	16 33	17 06	17 43	6 40 39		16 13 56	
19	103	45.2	29.9	110	06.0 ¹²⁴	53.6	37	50	13	16 51	32	6 57 38		15 56 58	
20	118	45.1	29.7	124	37.5 ¹²⁵	49.9	37	52	16 04	44	27	7 05 38		48 59	
21	133	45.0	29.4	139	08.9 ¹²⁴	46.0	39	54	15 53	36	22	15 36		39 60	
22	148	44.9	29.1	153	40.4 ¹²⁵	42.1	39	56	41	28	16	25 35		29 61	
23	163	44.8	28.8	168	11.9 ¹²⁵	38.1	40	58	28	18	10	37 33		17 63	
24	178	44.7	+22 28.5	182	43.4 ¹²⁵	+18 34.0	41	60 S	15 12	16 07	17 03	7 50 32		15 03 65	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 58 ^m 7		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +1.5 PMG: 10 ^h 40 ^m		Mag: -1.9 PMG: 11 ^h 09 ^m		Mag: +0.6 PMG: 19 ^h 10 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	285	07.6	150	55.7	200	00.2	+23 48.7	192	25.0	+23 12.7	71	44.2	-10 47.2		
1	300	10.1	165	55.0	215	00.8	48.8	207	26.9	12.6	86	46.6	47.2		
2	315	12.5	180	54.4	230	01.4	48.8	222	28.7	12.6	101	49.1	47.2		
3	330	15.0	195	53.8	245	02.0	48.9	237	30.6	12.6	116	51.6	47.3		
4	345	17.4	210	53.2	260	02.6	49.0	252	32.4	12.6	131	54.0	47.3		
5	0	19.9	225	52.6	+18 55.0	275	03.2	+23 49.1	267	34.3	+23 12.6	146	56.5	-10 47.3	
6	15	22.4	240	52.0	+18 54.1	290	03.8	+23 49.2	282	36.1	+23 12.6	161	59.0	-10 47.3	
7	30	24.8	255	51.4	53.3	305	04.4	49.3	297	38.0	12.6	177	01.5	47.3	
8	45	27.3	270	50.8	52.5	320	05.0	49.3	312	39.8	12.6	192	03.9	47.3	
9	60	29.8	285	50.2	51.6	335	05.6	49.4	327	41.7	12.6	207	06.4	47.3	
10	75	32.2	300	49.6	50.8	350	06.2	49.5	342	43.5	12.6	222	08.9	47.3	
11	90	34.7	315	49.0	+18 49.9	5	06.8	+23 49.6	357	45.4	+23 12.6	237	11.4	-10 47.3	
12	105	37.2	330	48.4	+18 49.1	20	07.4	+23 49.7	12	47.2	+23 12.6	252	13.8	-10 47.3	
13	120	39.6	345	47.8	48.3	35	08.0	49.7	27	49.1	12.6	267	16.3	47.3	
14	135	42.1	0	47.1	47.4	50	08.6	49.8	42	50.9	12.6	282	18.8	47.4	
15	150	44.5	15	46.5	46.6	65	09.2	49.9	57	52.8	12.5	297	21.2	47.4	
16	165	47.0	30	45.9	45.7	80	09.8	50.0	72	54.6	12.5	312	23.7	47.4	
17	180	49.5	45	45.3	+18 44.9	95	10.4	+23 50.0	87	56.5	+23 12.5	327	26.2	-10 47.4	
18	195	51.9	60	44.7	+18 44.0	110	11.0	+23 50.1	102	58.3	+23 12.5	342	28.6	-10 47.4	
19	210	54.4	75	44.1	43.2	125	11.6	50.2	118	00.2	12.5	357	31.1	47.4	
20	225	56.9	90	43.5	42.3	140	12.2	50.3	133	02.0	12.5	12	33.6	47.4	
21	240	59.3	105	42.9	41.5	155	12.8	50.3	148	03.9	12.5	27	36.1	47.4	
22	256	01.8	120	42.3	40.6	170	13.4	50.4	163	05.7	12.5	42	38.5	47.4	
23	271	04.3	135	41.7	39.8	185	14.0	50.5	178	07.6	12.5	57	41.0	47.4	
24	286	06.7	150	41.1	+18 38.9	200	14.6	+23 50.6	193	09.4	+23 12.5	72	43.5	-10 47.5	
Dif	—		-6	-8		+6	+1		+18	0		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 29 ^d 3	PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1 R ^o : 46 ^m										
	PMG: 12 ^h 05 ^m 1					SD: 14 ^h 7		PMG: 12 ^h 12 ^m			R ^o : 46 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h		°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	44.7	+22 28.5	182	43.4	+18 34.0	60 N	** **	1 23	2 52	3 37	67	20 34	22	
1	193	44.6	28.2	197	14.9 ¹²⁵	29.9 41	58	** **	2 01	3 10	3 49	66	23 24		
2	208	44.5	28.0	211	46.5 ¹²⁶	25.6 43	56	** **	27	26	4 00	64	14 26		
3	223	44.4	27.7	226	18.1 ¹²⁶	21.3 43	54	1 16	2 47	39	10 62		20 05	28	
4	238	44.3	27.4	240	49.7 ¹²⁶	16.9 44	52	1 51	3 03	3 50	18 61		19 58	29	
5	253	44.2	+22 27.1	255	21.3 ¹²⁶	+18 12.4 45	50	2 15	3 17	4 01	4 26	59	19 51	31	
6	268	44.1	+22 26.8	269	52.9 ¹²⁶	+18 07.8 46	45	2 57	3 45	4 22	4 42	57	19 37	33	
7	283	44.1	26.5	284	24.6 ¹²⁷	+18 03.1 47	40	3 26	4 07	39	4 55	55	25 35		
8	298	44.0	26.2	298	56.3 ¹²⁷	+17 58.4 47	35	3 48	24	4 53	5 06	54	14 38		
9	313	43.9	26.0	313	28.0 ¹²⁷	53.5 49	30	4 05	4 38	5 06	16 52		19 05	39	
10	328	43.8	25.7	327	59.7 ¹²⁷	48.6 49	20	33	5 02	27	33 50		18 50	41	
11	343	43.7	+22 25.4	342	31.4 ¹²⁷	+17 43.6 50	10 N	4 55	5 22	5 45	5 47	48	18 36	44	
12	358	43.6	+22 25.1	357	03.2 ¹²⁸	+17 38.6 50	0	5 13	5 39	6 01	6 01	46	18 23	46	
13	13	43.5	24.8	11	35.0 ¹²⁸	33.4 52	10 S	29	5 55	18	15 44		18 11	48	
14	28	43.4	24.5	26	06.8 ¹²⁸	28.2 52	20	5 45	6 12	36	29 43		17 57	50	
15	43	43.3	24.2	40	38.7 ¹²⁹	22.9 53	30	6 00	30	6 56	46 40		41 53		
16	58	43.2	23.9	55	10.5 ¹²⁸	17.5 54	35	08	40	7 08	6 55	39	32 54		
17	73	43.1	+22 23.6	69	42.4 ¹²⁹	+17 12.0 55	40	6 17	6 51	7 21	7 07	37	17 21	56	
18	88	43.0	+22 23.3	84	14.3 ¹²⁹	+17 06.5 55	45	6 27	7 04	7 37	7 19	36	17 09	58	
19	103	42.9	23.0	98	46.3 ¹³⁰	+17 00.9 56	50	38	19	7 57	35 33		16 54	61	
20	118	42.8	22.7	113	18.2 ¹²⁹	+16 55.2 57	52	43	26	8 06	43 31		47 62		
21	133	42.7	22.4	127	50.2 ¹³⁰	49.4 58	54	48	33	16	7 51	30	39 64		
22	148	42.6	22.1	142	22.2 ¹³⁰	43.5 59	56	6 54	42	28	8 00	29	30 65		
23	163	42.5	21.8	156	54.2 ¹³⁰	37.6 59	58	7 00	7 51	42	10 27		20 67		
24	178	42.4	+22 21.5	171	26.3 ¹³¹	+16 31.6 60	60 S	7 07	8 02	8 58	8 22	25	16 08	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 54 ^m 7		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: +1.6 PMG: 10 ^h 39 ^m		Mag: -1.9 PMG: 11 ^h 06 ^m		Mag: +0.6 PMG: 19 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	286	06.7	150	41.1	+18 38.9	200	14.6	+23 50.6	193	09.4	+23 12.5	72	43.5	-10 47.5
1	301	09.2	165	40.5	38.1	215	15.2	50.6	208	11.3	12.5	87	45.9	47.5
2	316	11.7	180	39.9	37.2	230	15.8	50.7	223	13.1	12.5	102	48.4	47.5
3	331	14.1	195	39.3	36.4	245	16.4	50.8	238	15.0	12.4	117	50.9	47.5
4	346	16.6	210	38.7	35.5	260	17.0	50.9	253	16.8	12.4	132	53.3	47.5
5	1	19.0	225	38.2	+18 34.7	275	17.6	+23 50.9	268	18.7	+23 12.4	147	55.8	-10 47.5
6	16	21.5	240	37.6	+18 33.8	290	18.2	+23 51.0	283	20.5	+23 12.4	162	58.3	-10 47.5
7	31	24.0	255	37.0	33.0	305	18.8	51.1	298	22.4	12.4	178	00.7	47.5
8	46	26.4	270	36.4	32.1	320	19.4	51.2	313	24.2	12.4	193	03.2	47.5
9	61	28.9	285	35.8	31.2	335	20.0	51.2	328	26.1	12.4	208	05.7	47.5
10	76	31.4	300	35.2	30.4	350	20.6	51.3	343	27.9	12.4	223	08.1	47.6
11	91	33.8	315	34.6	+18 29.5	5	21.2	+23 51.4	358	29.8	+23 12.4	238	10.6	-10 47.6
12	106	36.3	330	34.0	+18 28.7	20	21.8	+23 51.4	13	31.6	+23 12.4	253	13.1	-10 47.6
13	121	38.8	345	33.4	27.8	35	22.4	51.5	28	33.5	12.4	268	15.5	47.6
14	136	41.2	0	32.8	26.9	50	23.0	51.6	43	35.3	12.4	283	18.0	47.6
15	151	43.7	15	32.2	26.1	65	23.6	51.6	58	37.2	12.4	298	20.5	47.6
16	166	46.2	30	31.6	25.2	80	24.2	51.7	73	39.0	12.3	313	22.9	47.6
17	181	48.6	45	31.1	+18 24.3	95	24.8	+23 51.8	88	40.9	+23 12.3	328	25.4	-10 47.6
18	196	51.1	60	30.5	+18 23.5	110	25.4	+23 51.9	103	42.7	+23 12.3	343	27.9	-10 47.6
19	211	53.5	75	29.9	22.6	125	26.0	51.9	118	44.6	12.3	358	30.3	47.7
20	226	56.0	90	29.3	21.7	140	26.6	52.0	133	46.4	12.3	13	32.8	47.7
21	241	58.5	105	28.7	20.9	155	27.2	52.1	148	48.3	12.3	28	35.3	47.7
22	257	00.9	120	28.1	20.0	170	27.8	52.1	163	50.1	12.3	43	37.7	47.7
23	272	03.4	135	27.5	19.1	185	28.4	52.2	178	52.0	12.3	58	40.2	47.7
24	287	05.9	150	26.9	+18 18.3	200	29.0	+23 52.3	193	53.8	+23 12.3	73	42.7	-10 47.7
Dif	—		-6		-9	+6		+1	+19		0	+25		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 30 ^d 3 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /3 R°: 45 ^m													
	PMG: 12 ^h 05 ^m 2			SD: 14 ^h 7 PMG: 12 ^h 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	42.4	+22	21.5	171	26.3	+16	31.6	60	N	21 16	22 42	** **	4 44	72	20 56	18
1	193	42.3		21.2	185	58.4 ¹³¹		25.6	60	58	20 58	22 06	** **	4 55	69	47	20
2	208	42.2		20.9	200	30.5 ¹³¹		19.4	62	56	43	21 41	** **	5 04	67	40	22
3	223	42.1		20.6	215	02.6 ¹³¹		13.2	62	54	30	21	22 49		12 65	33	24
4	238	42.1		20.3	229	34.7 ¹³¹		06.9	63	52	19	21 05	22 16		19 63	27	26
5	253	42.0	+22	20.0	244	06.9 ¹³²	+16	00.5	64	50	20 09	20 52	21 53	5 25	62	20 22	27
6	268	41.9	+22	19.7	258	39.1 ¹³²	+15	54.1	64	45	19 48	20 24	21 12	5 39	59	20 10	30
7	283	41.8		19.4	273	11.3 ¹³²		47.6	65	40	31	20 03	20 43	5 50	57	20 00	33
8	298	41.7		19.1	287	43.6 ¹³³		41.0	66	35	17	19 46	22	6 00	55	19 52	34
9	313	41.6		18.8	302	15.9 ¹³³		34.3	67	30	19 04	31	20 04	08 53		44	37
10	328	41.5		18.5	316	48.2 ¹³³		27.6	67	20	18 43	19 08	19 37	23 50		31	40
11	343	41.4	+22	18.2	331	20.5 ¹³³	+15	20.8	68	10 N	18 26	18 48	19 15	6 35	48	19 20	42
12	358	41.3	+22	17.9	345	52.8 ¹³³	+15	14.0	68	0	18 09	18 31	18 57	6 47	46	19 09	45
13	13	41.2		17.6	0	25.2 ¹³⁴	+15	07.0	70	10 S	17 52	18 15	41	6 59	43	18 59	47
14	28	41.1		17.3	14	57.6 ¹³⁴	+15	00.0	70	20	35	17 59	26	7 12	40	47	50
15	43	41.0		17.0	29	30.0 ¹³⁴	+14	53.0	70	30	15	41	11	26	38	34	53
16	58	40.9		16.7	44	02.4 ¹³⁴		45.9	71	35	17 03	31	18 02	34	36	26	55
17	73	40.9	+22	16.4	58	34.9 ¹³⁵	+14	38.7	72	40	16 50	17 20	17 54	7 44	34	18 17	58
18	88	40.8	+22	16.0	73	07.4 ¹³⁵	+14	31.4	73	45	16 34	17 07	17 44	7 55	31	18 07	60
19	103	40.7		15.7	87	39.9 ¹³⁵		24.1	73	50	15	16 52	33	8 08	29	17 55	63
20	118	40.6		15.4	102	12.4 ¹³⁵		16.7	74	52	16 06	46	29	14	28	49	64
21	133	40.5		15.1	116	44.9 ¹³⁵		09.2	75	54	15 55	38	23	21	26	43	66
22	148	40.4		14.8	131	17.5 ¹³⁶	+14	01.7	75	56	44	30	18	29	24	35	68
23	163	40.3		14.5	145	50.1 ¹³⁶	+13	54.1	76	58	30	20	12	37	22	27	70
24	178	40.2	+22	14.2	160	22.7 ¹³⁶	+13	46.5	76	60 S	15 14	16 10	17 05	8 47	20	17 18	73
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 4 ^h 50 ^m 8		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: +1.6 PMG: 10 ^h 38 ^m		Mag: -1.9 PMG: 11 ^h 03 ^m		Mag: +0.6 PMG: 19 ^h 02 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	287	05.9	150	26.9	200	29.0	193	53.8	73	42.7							
1	302	08.3	165	26.4	215	29.6	208	55.7	88	45.1							
2	317	10.8	180	25.8	230	30.2	223	57.5	103	47.6							
3	332	13.3	195	25.2	245	30.8	238	59.4	118	50.1							
4	347	15.7	210	24.6	260	31.4	254	01.2	133	52.5							
5	2	18.2	225	24.0	275	32.0	269	03.1	148	55.0							
6	17	20.7	240	23.4	290	32.6	284	04.9	163	57.4							
7	32	23.1	255	22.9	305	33.2	299	06.8	178	59.9							
8	47	25.6	270	22.3	320	33.8	314	08.6	194	02.4							
9	62	28.0	285	21.7	335	34.4	329	10.5	209	04.8							
10	77	30.5	300	21.1	350	35.0	344	12.3	224	07.3							
11	92	33.0	315	20.6	5	35.6	359	14.2	239	09.8							
12	107	35.4	330	20.0	20	36.3	14	16.0	254	12.2							
13	122	37.9	345	19.4	35	36.9	29	17.9	269	14.7							
14	137	40.4	0	18.8	50	37.5	44	19.7	284	17.2							
15	152	42.8	15	18.2	65	38.1	59	21.6	299	19.6							
16	167	45.3	30	17.7	80	38.7	74	23.4	314	22.1							
17	182	47.8	45	17.1	95	39.3	89	25.3	329	24.5							
18	197	50.2	60	16.5	110	39.9	104	27.1	344	27.0							
19	212	52.7	75	15.9	125	40.5	119	29.0	359	29.5							
20	227	55.1	90	15.4	140	41.1	134	30.9	14	31.9							
21	242	57.6	105	14.8	155	41.7	149	32.7	29	34.4							
22	258	00.1	120	14.2	170	42.3	164	34.6	44	36.8							
23	273	02.5	135	13.7	185	42.9	179	36.4	59	39.3							
24	288	05.0	150	13.1	200	43.5	194	38.3	74	41.8							
Dif	—		-6	-9	+6	+1	+19	0	+25	0							

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 4			Edad: 1 ^d 7 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6 PMG: 13 ^h 43 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	40.2	+22	160	22.7	+13	46.5	60 N	*** **	1 29	2 55	5 56	73	21 14	15
1	193	40.1		174	55.4 ¹³⁷		38.7 ⁷⁸	58	*** **	2 05	3 13	6 04	71	07	18
2	208	40.0		189	28.0 ¹³⁶		31.0 ⁷⁷	56	*** **	30	28	11	69	21 02	20
3	223	40.0		204	00.7 ¹³⁷		23.1 ⁷⁹	54	1 22	2 49	41	17	67	20 57	22
4	238	39.9		218	33.4 ¹³⁷		15.2 ⁷⁹	52	1 55	3 06	3 52	22	66	53	23
5	253	39.8	+22	233	06.2 ¹³⁸	+13	07.3 ⁷⁹	50	2 18	3 19	4 02	6 27	64	20 49	24
6	268	39.7	+22	247	38.9 ¹³⁷	+12	59.3 ⁸⁰	45	2 59	3 47	4 23	6 38	61	20 40	28
7	283	39.6		262	11.7 ¹³⁸		51.2 ⁸¹	40	3 27	4 08	40	47	58	33	30
8	298	39.5		276	44.5 ¹³⁸		43.1 ⁸¹	35	3 49	25	4 54	6 55	55	26	33
9	313	39.4		291	17.3 ¹³⁸		34.9 ⁸²	30	4 07	4 39	5 07	7 01	54	21	34
10	328	39.3		305	50.1 ¹³⁸		26.6 ⁸³	20	34	5 03	27	13	50	11	38
11	343	39.2	+22	320	23.0 ¹³⁹	+12	18.3 ⁸³	10 N	4 56	5 22	5 45	7 23	47	20 02	42
12	358	39.2	+22	334	55.8 ¹³⁸	+12	10.0 ⁸³	0	5 13	5 39	6 02	7 33	44	19 54	44
13	13	39.1	10.0	349	28.7 ¹³⁹	+12	01.6 ⁸⁴	10 S	29	5 56	18	42	42	46	47
14	28	39.0	09.7	4	01.6 ¹³⁹	+11	53.1 ⁸⁵	20	5 45	6 12	36	7 52	39	37	50
15	43	38.9	09.4	18	34.5 ¹³⁹		44.6 ⁸⁵	30	6 00	30	6 56	8 04	35	27	54
16	58	38.8	09.0	33	07.5 ¹⁴⁰		36.0 ⁸⁶	35	08	39	7 07	10	34	21	56
17	73	38.7	+22	47	40.4 ¹³⁹	+11	27.4 ⁸⁶	40	6 17	6 50	7 20	8 18	31	19 15	58
18	88	38.6	+22	62	13.4 ¹⁴⁰	+11	18.7 ⁸⁷	45	6 26	7 03	7 36	8 26	29	19 07	61
19	103	38.6	08.1	76	46.4 ¹⁴⁰		09.9 ⁸⁸	50	37	18	7 55	37	25	18 58	64
20	118	38.5	07.7	91	19.4 ¹⁴⁰	+11	01.2 ⁸⁷	52	42	25	8 04	42	24	53	66
21	133	38.4	07.4	105	52.4 ¹⁴⁰	+10	52.3 ⁸⁹	54	47	32	15	47	22	49	67
22	148	38.3	07.1	120	25.5 ¹⁴¹		43.4 ⁸⁹	56	52	40	26	53	21	43	70
23	163	38.2	06.7	134	58.5 ¹⁴⁰		34.5 ⁸⁹	58	6 58	7 50	40	8 59	19	37	72
24	178	38.1	+22	149	31.6 ¹⁴¹	+10	25.5 ⁹⁰	60 S	7 05	8 00	8 55	9 07	16	18 31	74
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 46 ^m 9			Mag: -3.9 PMG: 14 ^h 00 ^m			Mag: +1.6 PMG: 10 ^h 37 ^m			Mag: -1.9 PMG: 11 ^h 00 ^m			Mag: +0.6 PMG: 18 ^h 58 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	288	05.0		150	13.1	+17	57.1	200	43.5	+23	53.7	194	38.3	+23	12.1
1	303	07.5		165	12.5		56.2	215	44.1		53.8	209	40.1		12.0
2	318	09.9		180	11.9		55.3	230	44.7		53.8	224	42.0		12.0
3	333	12.4		195	11.4		54.4	245	45.3		53.9	239	43.8		12.0
4	348	14.9		210	10.8		53.5	260	45.9		53.9	254	45.7		12.0
5	3	17.3		225	10.2	+17	52.6	275	46.5	+23	54.0	269	47.5	+23	12.0
6	18	19.8		240	09.7	+17	51.7	290	47.1	+23	54.1	284	49.4	+23	12.0
7	33	22.3		255	09.1		50.8	305	47.7		54.1	299	51.2		12.0
8	48	24.7		270	08.5		49.9	320	48.3		54.2	314	53.1		12.0
9	63	27.2		285	08.0		49.0	335	48.9		54.2	329	54.9		12.0
10	78	29.6		300	07.4		48.1	350	49.5		54.3	344	56.8		12.0
11	93	32.1		315	06.8	+17	47.2	5	50.2	+23	54.3	359	58.6	+23	11.9
12	108	34.6		330	06.3	+17	46.3	20	50.8	+23	54.4	15	00.5	+23	11.9
13	123	37.0		345	05.7		45.4	35	51.4		54.4	30	02.3		11.9
14	138	39.5		0	05.1		44.5	50	52.0		54.5	45	04.2		11.9
15	153	42.0		15	04.6		43.6	65	52.6		54.5	60	06.0		11.9
16	168	44.4		30	04.0		42.7	80	53.2		54.6	75	07.9		11.9
17	183	46.9		45	03.5	+17	41.8	95	53.8	+23	54.6	90	09.7	+23	11.9
18	198	49.4		60	02.9	+17	40.9	110	54.4	+23	54.7	105	11.6	+23	11.9
19	213	51.8		75	02.3		40.0	125	55.0		54.7	120	13.5		11.9
20	228	54.3		90	01.8		39.1	140	55.6		54.8	135	15.3		11.8
21	243	56.8		105	01.2		38.2	155	56.2		54.8	150	17.2		11.8
22	258	59.2		120	00.7		37.2	170	56.8		54.9	165	19.0		11.8
23	274	01.7		135	00.1		36.3	185	57.4		54.9	180	20.9		11.8
24	289	04.1		149	59.6	+17	35.4	200	58.0	+23	55.0	195	22.7	+23	11.8
Dif	—			-6			-9	+6		+1		+19		0	
														+25	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 7	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 05 ^m 5	PMG: 14 ^h 28 ^m	R°: 44 ^m			Civil			Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	38.1	+22 06.4	149	31.6	+10 25.5	90	60 N	21 13	22 36	** **	7 09 75	21 29 14	
1	193	38.0	06.1	164	04.7 ¹⁴¹	16.5	90	58	20 56	22 02	** **	15 72	25 16	
2	208	38.0	05.7	178	37.8 ¹⁴¹	+10 07.4	91	56	41	21 38	** **	20 70	22 18	
3	223	37.9	05.4	193	10.9 ¹⁴¹	+9 58.3	91	54	28	19	22 44	24 68	19 20	
4	238	37.8	05.1	207	44.0 ¹⁴¹	49.1	92	52	17	21 03	22 13	28 66	16 21	
5	253	37.7	+22 04.7	222	17.2 ¹⁴²	+9 39.9	92	50	20 07	20 50	21 50	7 31 65	21 13 23	
6	268	37.6	+22 04.4	236	50.3 ¹⁴¹	+9 30.6	93	45	19 46	20 23	21 10	7 39 61	21 08 26	
7	283	37.5	04.1	251	23.5 ¹⁴²	21.3	93	40	30	20 02	20 42	45 59	21 03 29	
8	298	37.5	03.7	265	56.7 ¹⁴²	11.9	94	35	16	19 45	21	50 56	20 59 32	
9	313	37.4	03.4	280	29.9 ¹⁴²	+9 02.5	94	30	19 04	31	20 03	7 55 54	55 34	
10	328	37.3	03.1	295	03.0 ¹⁴¹	+8 53.1	94	20	18 43	19 08	19 36	8 03 51	49 38	
11	343	37.2	+22 02.7	309	36.3 ¹⁴³	+8 43.6	95	10 N	18 26	18 48	19 15	8 10 48	20 44 41	
12	358	37.1	+22 02.4	324	09.5 ¹⁴²	+8 34.0	96	0	18 09	18 31	18 57	8 17 44	20 38 44	
13	13	37.0	02.0	338	42.7 ¹⁴²	24.5	95	10 S	17 53	18 15	42	24 41	33 47	
14	28	37.0	01.7	353	15.9 ¹⁴²	14.9	96	20	36	17 59	27	31 38	27 51	
15	43	36.9	01.4	7	49.2 ¹⁴³	+8 05.2	97	30	16	42	11	39 34	21 54	
16	58	36.8	01.0	22	22.4 ¹⁴²	+7 55.5	97	35	17 04	32	18 03	44 32	17 57	
17	73	36.7	+22 00.7	36	55.7 ¹⁴³	+7 45.8	97	40	16 51	17 21	17 55	8 49 30	20 13 59	
18	88	36.6	+22 00.3	51	28.9 ¹⁴²	+7 36.0	98	45	16 36	17 09	17 46	8 55 27	20 08 62	
19	103	36.5	+22 00.0	66	02.2 ¹⁴³	26.2	98	50	17	16 54	35	9 02 24	20 02 66	
20	118	36.5	+21 59.7	80	35.5 ¹⁴³	16.4	98	52	16 08	47	30	06 22	19 59 67	
21	133	36.4	59.3	95	08.7 ¹⁴²	+7 06.5	99	54	15 58	40	25	09 21	56 69	
22	148	36.3	59.0	109	42.0 ¹⁴³	+6 56.6	99	56	46	32	20	14 18	53 71	
23	163	36.2	58.6	124	15.3 ¹⁴³	46.6 ¹⁰⁰	100	58	33	23	14	18 17	49 73	
24	178	36.1	+21 58.3	138	48.6 ¹⁴³	+6 36.6 ¹⁰⁰	100	60 S	15 18	16 12	17 07	9 23 14	19 45 76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 42 ^m 9		Mag: -3.9		Mag: +1.6		Mag: -1.9		Mag: +0.6					
	hG ♈	Dec	PMG: 14 ^h 01 ^m		PMG: 10 ^h 36 ^m		PMG: 10 ^h 57 ^m		PMG: 18 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	289	04.1	149	59.6	+17 35.4	200	58.0	+23 55.0	195	22.7	+23 11.8	75	40.8	-10 48.3
1	304	06.6	164	59.0	34.5	215	58.6	55.0	210	24.6	11.8	90	43.2	48.4
2	319	09.1	179	58.4	33.6	230	59.2	55.1	225	26.4	11.8	105	45.7	48.4
3	334	11.5	194	57.9	32.7	245	59.8	55.1	240	28.3	11.8	120	48.2	48.4
4	349	14.0	209	57.3	31.8	261	00.4	55.2	255	30.1	11.8	135	50.6	48.4
5	4	16.5	224	56.8	+17 30.9	276	01.1	+23 55.2	270	32.0	+23 11.8	150	53.1	-10 48.4
6	19	18.9	239	56.2	+17 29.9	291	01.7	+23 55.3	285	33.8	+23 11.7	165	55.5	-10 48.4
7	34	21.4	254	55.7	29.0	306	02.3	55.3	300	35.7	11.7	180	58.0	48.4
8	49	23.9	269	55.1	28.1	321	02.9	55.3	315	37.5	11.7	196	00.4	48.5
9	64	26.3	284	54.6	27.2	336	03.5	55.4	330	39.4	11.7	211	02.9	48.5
10	79	28.8	299	54.0	26.3	351	04.1	55.4	345	41.3	11.7	226	05.3	48.5
11	94	31.3	314	53.5	+17 25.3	6	04.7	+23 55.5	0	43.1	+23 11.7	241	07.8	-10 48.5
12	109	33.7	329	52.9	+17 24.4	21	05.3	+23 55.5	15	45.0	+23 11.7	256	10.3	-10 48.5
13	124	36.2	344	52.4	23.5	36	05.9	55.6	30	46.8	11.7	271	12.7	48.5
14	139	38.6	359	51.8	22.6	51	06.5	55.6	45	48.7	11.7	286	15.2	48.5
15	154	41.1	14	51.3	21.7	66	07.1	55.7	60	50.5	11.6	301	17.6	48.6
16	169	43.6	29	50.7	20.7	81	07.7	55.7	75	52.4	11.6	316	20.1	48.6
17	184	46.0	44	50.2	+17 19.8	96	08.3	+23 55.7	90	54.2	+23 11.6	331	22.5	-10 48.6
18	199	48.5	59	49.6	+17 18.9	111	08.9	+23 55.8	105	56.1	+23 11.6	346	25.0	-10 48.6
19	214	51.0	74	49.1	18.0	126	09.6	55.8	120	57.9	11.6	1	27.4	48.6
20	229	53.4	89	48.5	17.0	141	10.2	55.9	135	59.8	11.6	16	29.9	48.6
21	244	55.9	104	48.0	16.1	156	10.8	55.9	151	01.6	11.6	31	32.3	48.7
22	259	58.4	119	47.4	15.2	171	11.4	55.9	166	03.5	11.6	46	34.8	48.7
23	275	00.8	134	46.9	14.2	186	12.0	56.0	181	05.4	11.6	61	37.3	48.7
24	290	03.3	149	46.4	+17 13.3	201	12.6	+23 56.0	196	07.2	+23 11.5	76	39.7	-10 48.7
Dif	—		-5		-9	+6		0	+19		0	+25		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 3 ^d 7	PHE { 4 ^h : 55 ^h 1 12 ^h : 55 ^h 3 20 ^h : 55 ^h 5	SD: 15 ^h 0		R°: 44 ^m	R°		R°				
	PMG: 12 ^h 05 ^m 7					PMG: 15 ^h 12 ^m			R°		R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	36.1	+21 58.3	138	48.6	+6 36.6	60 N	** **	1 36	2 58	8 24	77	21 43	13	
1	193	36.1	57.9	153	21.9 ¹⁴³	26.6 ¹⁰⁰	58	** **	2 09	3 16	27 74		41 16		
2	208	36.0	57.6	167	55.2 ¹⁴³	16.5 ¹⁰¹	56	** **	33	31	30 71		40 18		
3	223	35.9	57.2	182	28.5 ¹⁴³	+6 06.5 ¹⁰⁰	54	1 28	2 52	43	32 70		39 19		
4	238	35.8	56.9	197	01.7 ¹⁴²	+5 56.3 ¹⁰²	52	1 59	3 08	3 55	34 68		37 22		
5	253	35.7	+21 56.5	211	35.0 ¹⁴³	+5 46.2 ¹⁰¹	50	2 22	3 22	4 04	8 36	66	21 36	23	
6	268	35.7	+21 56.2	226	08.3 ¹⁴³	+5 36.0 ¹⁰²	45	3 01	3 49	4 25	8 40	63	21 34	27	
7	283	35.6	55.8	240	41.6 ¹⁴³	25.8 ¹⁰²	40	29	4 10	42	44 59		32 30		
8	298	35.5	55.5	255	14.9 ¹⁴³	15.5 ¹⁰³	35	3 51	26	4 55	46 58		31 32		
9	313	35.4	55.1	269	48.2 ¹⁴³	+5 05.3 ¹⁰²	30	4 08	4 41	5 08	49 55		29 34		
10	328	35.4	54.8	284	21.4 ¹⁴²	+4 55.0 ¹⁰³	20	35	5 04	28	54 50		27 38		
11	343	35.3	+21 54.4	298	54.7 ¹⁴³	+4 44.6 ¹⁰⁴	10 N	4 56	5 23	5 46	8 58	47	21 25	41	
12	358	35.2	+21 54.1	313	28.0 ¹⁴³	+4 34.3 ¹⁰³	0	5 14	5 40	6 02	9 01	45	21 22	45	
13	13	35.1	53.7	328	01.3 ¹⁴³	23.9 ¹⁰⁴	10 S	30	5 56	18	05 41		20 48		
14	28	35.0	53.4	342	34.5 ¹⁴²	13.5 ¹⁰⁴	20	5 45	6 12	35	09 38		18 51		
15	43	35.0	53.0	357	07.8 ¹⁴³	+4 03.1 ¹⁰⁴	30	6 00	29	6 55	13 34		15 56		
16	58	34.9	52.6	11	41.0 ¹⁴²	+3 52.6 ¹⁰⁵	35	08	39	7 07	16 32		14 57		
17	73	34.8	+21 52.3	26	14.2 ¹⁴²	+3 42.1 ¹⁰⁵	40	6 16	6 50	7 20	9 19	29	21 12	60	
18	88	34.7	+21 51.9	40	47.5 ¹⁴³	+3 31.6 ¹⁰⁵	45	6 25	7 02	7 35	9 22	27	21 10	63	
19	103	34.7	51.6	55	20.7 ¹⁴²	21.1 ¹⁰⁵	50	36	17	7 54	26 23		08 66		
20	118	34.6	51.2	69	53.9 ¹⁴²	+3 10.6 ¹⁰⁵	52	40	23	8 03	28 22		06 69		
21	133	34.5	50.8	84	27.1 ¹⁴²	+3 00.0 ¹⁰⁶	54	45	31	13	30 20		05 70		
22	148	34.4	50.5	99	00.2 ¹⁴¹	+2 49.4 ¹⁰⁶	56	51	39	24	32 18		04 72		
23	163	34.4	50.1	113	33.4 ¹⁴²	38.8 ¹⁰⁶	58	6 57	48	37	35 16		02 75		
24	178	34.3	+21 49.8	128	06.6 ¹⁴²	+2 28.2 ¹⁰⁶	60 S	7 03	7 58	8 53	9 37	14	21 01	77	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 39 ^m 0		Mag: -3.9 PMG: 14 ^h 01 ^m			Mag: +1.6 PMG: 10 ^h 35 ^m			Mag: -1.9 PMG: 10 ^h 54 ^m			Mag: +0.6 PMG: 18 ^h 50 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	290	03.3	149	46.4	+17 13.3	201	12.6	+23 56.0	196	07.2	+23 11.5	76	39.7	-10 48.7	
1	305	05.7	164	45.8	12.4	216	13.2	56.1	211	09.1	11.5	91	42.2	48.7	
2	320	08.2	179	45.3	11.4	231	13.8	56.1	226	10.9	11.5	106	44.6	48.7	
3	335	10.7	194	44.7	10.5	246	14.4	56.1	241	12.8	11.5	121	47.1	48.8	
4	350	13.1	209	44.2	09.6	261	15.0	56.2	256	14.6	11.5	136	49.5	48.8	
5	5	15.6	224	43.6	+17 08.6	276	15.6	+23 56.2	271	16.5	+23 11.5	151	52.0	-10 48.8	
6	20	18.1	239	43.1	+17 07.7	291	16.2	+23 56.2	286	18.3	+23 11.5	166	54.4	-10 48.8	
7	35	20.5	254	42.6	06.8	306	16.8	56.3	301	20.2	11.5	181	56.9	48.8	
8	50	23.0	269	42.0	05.8	321	17.5	56.3	316	22.0	11.4	196	59.3	48.8	
9	65	25.5	284	41.5	04.9	336	18.1	56.4	331	23.9	11.4	212	01.8	48.8	
10	80	27.9	299	41.0	04.0	351	18.7	56.4	346	25.8	11.4	227	04.2	48.9	
11	95	30.4	314	40.4	+17 03.0	6	19.3	+23 56.4	1	27.6	+23 11.4	242	06.7	-10 48.9	
12	110	32.9	329	39.9	+17 02.1	21	19.9	+23 56.5	16	29.5	+23 11.4	257	09.1	-10 48.9	
13	125	35.3	344	39.3	01.1	36	20.5	56.5	31	31.3	11.4	272	11.6	48.9	
14	140	37.8	359	38.8	+17 00.2	51	21.1	56.5	46	33.2	11.4	287	14.0	48.9	
15	155	40.2	14	38.3	+16 59.3	66	21.7	56.6	61	35.0	11.4	302	16.5	48.9	
16	170	42.7	29	37.7	58.3	81	22.3	56.6	76	36.9	11.3	317	18.9	49.0	
17	185	45.2	44	37.2	+16 57.4	96	22.9	+23 56.6	91	38.7	+23 11.3	332	21.4	-10 49.0	
18	200	47.6	59	36.7	+16 56.4	111	23.5	+23 56.7	106	40.6	+23 11.3	347	23.8	-10 49.0	
19	215	50.1	74	36.1	55.5	126	24.2	56.7	121	42.5	11.3	2	26.3	49.0	
20	230	52.6	89	35.6	54.5	141	24.8	56.7	136	44.3	11.3	17	28.7	49.0	
21	245	55.0	104	35.1	53.6	156	25.4	56.8	151	46.2	11.3	32	31.2	49.0	
22	260	57.5	119	34.5	52.6	171	26.0	56.8	166	48.0	11.3	47	33.6	49.1	
23	276	00.0	134	34.0	51.7	186	26.6	56.8	181	49.9	11.3	62	36.1	49.1	
24	291	02.4	149	33.5	+16 50.7	201	27.2	+23 56.8	196	51.7	+23 11.2	77	38.5	-10 49.1	
Dif	—		-5 -9			+6 0			+19 0			+25 0			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 4 ^d 7	PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 05 ^m 8					Rº: 46 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	34.3	+21 49.8	128	06.6	+2 28.2		60 N	21 10	22 30	** **	9 41 78	21 56 14	
1	193	34.2	49.4	142	39.7 ¹⁴¹	17.5 ¹⁰⁷		58	20 53	21 58	** **	41 76	57 16	
2	208	34.1	49.0	157	12.8 ¹⁴¹	+2 06.9 ¹⁰⁶		56	39	35	23 33	41 74	58 18	
3	223	34.1	48.7	171	45.9 ¹⁴¹	+1 56.2 ¹⁰⁷		54	26	16	22 38	42 71	58 21	
4	238	34.0	48.3	186	19.0 ¹⁴¹	45.5 ¹⁰⁷		52	15	21 01	22 09	42 69	59 22	
5	253	33.9	+21 47.9	200	52.1 ¹⁴¹	+1 34.8 ¹⁰⁷		50	20 05	20 48	21 47	9 42 68	21 59 24	
6	268	33.8	+21 47.6	215	25.2 ¹⁴¹	+1 24.0 ¹⁰⁸		45	19 45	20 21	21 08	9 43 64	22 01 27	
7	283	33.8	47.2	229	58.2 ¹⁴⁰	13.3 ¹⁰⁷		40	29	20 01	20 41	43 61	02 30	
8	298	33.7	46.8	244	31.2 ¹⁴⁰	+1 02.5 ¹⁰⁸		35	15	19 44	20	44 58	03 33	
9	313	33.6	46.5	259	04.2 ¹⁴⁰	+0 51.8 ¹⁰⁷		30	19 03	30	20 03	44 56	03 36	
10	328	33.5	46.1	273	37.2 ¹⁴⁰	41.0 ¹⁰⁸		20	18 43	19 07	19 36	44 52	05 39	
11	343	33.5	+21 45.7	288	10.2 ¹⁴⁰	+0 30.2 ¹⁰⁸		10 N	18 26	18 48	19 15	9 45 48	22 06 43	
12	358	33.4	+21 45.4	302	43.1 ¹³⁹	+0 19.4 ¹⁰⁸		0	18 09	18 32	18 58	9 46 45	22 07 46	
13	13	33.3	45.0	317	16.0 ¹³⁹	+0 08.6 ¹⁰⁸		10 S	17 53	16	42	46 42	08 49	
14	28	33.3	44.6	331	48.9 ¹³⁹	-0 02.2 ¹⁰⁸		20	36	18 00	27	47 38	09 53	
15	43	33.2	44.3	346	21.8 ¹³⁹	13.1 ¹⁰⁹		30	17	17 43	12	47 35	11 56	
16	58	33.1	43.9	0	54.6 ¹³⁸	23.9 ¹⁰⁸		35	17 06	33	18 04	48 32	11 59	
17	73	33.0	+21 43.5	15	27.4 ¹³⁸	-0 34.8 ¹⁰⁹		40	16 53	17 23	17 56	9 48 30	22 12 62	
18	88	33.0	+21 43.1	30	00.2 ¹³⁸	-0 45.6 ¹⁰⁸		45	16 37	17 10	17 47	9 49 27	22 13 65	
19	103	32.9	42.8	44	33.0 ¹³⁸	-0 56.5 ¹⁰⁹		50	19	16 56	37	49 24	14 69	
20	118	32.8	42.4	59	05.7 ¹³⁷	-1 07.3 ¹⁰⁸		52	10	49	32	50 21	15 70	
21	133	32.8	42.0	73	38.4 ¹³⁷	18.2 ¹⁰⁹		54	16 00	42	27	50 20	15 72	
22	148	32.7	41.6	88	11.0 ¹³⁶	29.1 ¹⁰⁹		56	15 49	34	22	50 19	16 74	
23	163	32.6	41.3	102	43.7 ¹³⁷	40.0 ¹⁰⁹		58	36	25	16	51 16	17 76	
24	178	32.5	+21 40.9	117	16.3 ¹³⁶	-1 50.8 ¹⁰⁸		60 S	15 21	16 15	17 10	9 51 14	22 18 79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 35 ^m 1		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.6 PMG: 10 ^h 34 ^m		Mag: -1.9 PMG: 10 ^h 51 ^m		Mag: +0.6 PMG: 18 ^h 46 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	291	02.4	149	33.5	+16 50.7	201 27.2	+23 56.8	196 51.7	+23 11.2	77 38.5	-10 49.1
1	306	04.9	164	33.0	49.8	216 27.8	56.9	211 53.6	11.2	92 41.0	49.1
2	321	07.3	179	32.4	48.8	231 28.4	56.9	226 55.4	11.2	107 43.4	49.1
3	336	09.8	194	31.9	47.9	246 29.0	56.9	241 57.3	11.2	122 45.9	49.1
4	351	12.3	209	31.4	46.9	261 29.6	57.0	256 59.2	11.2	137 48.3	49.2
5	6	14.7	224	30.8	+16 46.0	276 30.3	+23 57.0	272 01.0	+23 11.2	152 50.8	-10 49.2
6	21	17.2	239	30.3	+16 45.0	291 30.9	+23 57.0	287 02.9	+23 11.2	167 53.2	-10 49.2
7	36	19.7	254	29.8	44.1	306 31.5	57.1	302 04.7	11.2	182 55.7	49.2
8	51	22.1	269	29.3	43.1	321 32.1	57.1	317 06.6	11.1	197 58.1	49.2
9	66	24.6	284	28.7	42.2	336 32.7	57.1	332 08.4	11.1	213 00.6	49.3
10	81	27.1	299	28.2	41.2	351 33.3	57.1	347 10.3	11.1	228 03.0	49.3
11	96	29.5	314	27.7	+16 40.3	6 33.9	+23 57.2	2 12.2	+23 11.1	243 05.5	-10 49.3
12	111	32.0	329	27.2	+16 39.3	21 34.5	+23 57.2	17 14.0	+23 11.1	258 07.9	-10 49.3
13	126	34.5	344	26.6	38.3	36 35.1	57.2	32 15.9	11.1	273 10.4	49.3
14	141	36.9	359	26.1	37.4	51 35.7	57.2	47 17.7	11.1	288 12.8	49.3
15	156	39.4	14 25.6	36.4	66 36.4	57.3	57.3	62 19.6	11.1	303 15.2	49.4
16	171	41.8	29 25.1	35.5	81 37.0	57.3	57.3	77 21.4	11.0	318 17.7	49.4
17	186	44.3	44 24.6	+16 34.5	96 37.6	+23 57.3	57.3	92 23.3	+23 11.0	333 20.1	-10 49.4
18	201	46.8	59 24.0	+16 33.5	111 38.2	+23 57.3	57.3	107 25.1	+23 11.0	348 22.6	-10 49.4
19	216	49.2	74 23.5	32.6	126 38.8	57.4	57.4	122 27.0	11.0	3 25.0	49.4
20	231	51.7	89 23.0	31.6	141 39.4	57.4	57.4	137 28.9	11.0	18 27.5	49.5
21	246	54.2	104 22.5	30.6	156 40.0	57.4	57.4	152 30.7	11.0	33 29.9	49.5
22	261	56.6	119 22.0	29.7	171 40.6	57.4	57.4	167 32.6	11.0	48 32.4	49.5
23	276	59.1	134 21.5	28.7	186 41.3	57.4	57.4	182 34.4	11.0	63 34.8	49.5
24	292	01.6	149 20.9	+16 27.7	201 41.9	+23 57.5	57.5	197 36.3	+23 10.9	78 37.3	-10 49.5
Dif	—		-5 -10		+6 0		0	+19 0		+24 0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 7	PHE { 4 ^h : 56 ^h /3 12 ^h : 56 ^h /5 20 ^h : 56 ^h /7 R°: 47 ^m									
	PMG: 12 ^h 05 ^m 9													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	178	32.5	+21	40.9	117	16.3	-1 50.8	60 N	** ** *	1 42	3 02	10 59	80	22 10 16
1	193	32.5		40.5	131	48.8 ¹³⁵	-2 01.7 ¹⁰⁹	58	** ** *	2 14	19	57 77	13 19	
2	208	32.4		40.1	146	21.4 ¹³⁶	12.6 ¹⁰⁹	56	0 39	37	34	55 75	16 21	
3	223	32.3		39.7	160	53.9 ¹³⁵	23.5 ¹⁰⁹	54	1 34	2 56	46	53 73	19 23	
4	238	32.3		39.4	175	26.3 ¹³⁴	34.4 ¹⁰⁹	52	2 03	3 11	3 57	51 72	21 25	
5	253	32.2	+21	39.0	189	58.8 ¹³⁵	-2 45.2 ¹⁰⁸	50	2 25	3 24	4 07	10 50	69	22 23 27
6	268	32.1	+21	38.6	204	31.2 ¹³⁴	-2 56.1 ¹⁰⁹	45	3 04	3 51	4 27	10 47	65	22 28 30
7	283	32.1		38.2	219	03.5 ¹³³	-3 07.0 ¹⁰⁹	40	31	4 11	43	44 63	32 33	
8	298	32.0		37.8	233	35.8 ¹³³	17.8 ¹⁰⁸	35	3 52	28	4 57	42 60	36 35	
9	313	31.9		37.4	248	08.1 ¹³³	28.7 ¹⁰⁹	30	4 09	4 42	5 09	40 58	39 37	
10	328	31.9		37.1	262	40.3 ¹³²	39.6 ¹⁰⁹	20	36	5 05	29	36 54	44 41	
11	343	31.8	+21	36.7	277	12.5 ¹³²	-3 50.4 ¹⁰⁸	10 N	4 57	5 23	5 46	10 33	51	22 49 44
12	358	31.7	+21	36.3	291	44.7 ¹³²	-4 01.2 ¹⁰⁸	0	5 14	5 40	6 02	10 31	47	22 53 48
13	13	31.7		35.9	306	16.8 ¹³¹	12.1 ¹⁰⁹	10 S	30	5 56	18	28 44	22 57 52	
14	28	31.6		35.5	320	48.8 ¹³⁰	22.9 ¹⁰⁸	20	44	6 12	35	25 40	23 02 55	
15	43	31.5		35.1	335	20.8 ¹³⁰	33.7 ¹⁰⁸	30	5 59	29	6 55	22 36	07 59	
16	58	31.5		34.7	349	52.8 ¹³⁰	44.5 ¹⁰⁸	35	6 07	38	7 06	20 34	10 61	
17	73	31.4	+21	34.4	4	24.7 ¹²⁹	-4 55.3 ¹⁰⁸	40	6 15	6 49	7 19	10 18	32	23 14 63
18	88	31.3	+21	34.0	18	56.6 ¹²⁹	-5 06.1 ¹⁰⁸	45	6 24	7 01	7 34	10 16	28	23 18 67
19	103	31.3		33.6	33	28.4 ¹²⁸	16.9 ¹⁰⁸	50	35	15	7 52	13 25	23 70	
20	118	31.2		33.2	48	00.2 ¹²⁸	27.6 ¹⁰⁷	52	39	22	8 01	11 24	25 72	
21	133	31.1		32.8	62	31.9 ¹²⁷	38.3 ¹⁰⁷	54	44	29	11	10 22	27 74	
22	148	31.1		32.4	77	03.6 ¹²⁷	49.1 ¹⁰⁸	56	49	37	22	09 19	30 76	
23	163	31.0		32.0	91	35.3 ¹²⁷	-5 59.8 ¹⁰⁷	58	6 55	46	35	07 17	33 79	
24	178	30.9	+21	31.6	106	06.8 ¹²⁵	-6 10.5 ¹⁰⁷	60 S	7 01	7 56	8 50	10 05	15	23 37 81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 31 ^m 2		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +1.6 PMG: 10 ^h 33 ^m		Mag: -1.9 PMG: 10 ^h 48 ^m		Mag: +0.6 PMG: 18 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	292	01.6	149	20.9	+16	27.7	201	41.9	+23	57.5	197	36.3	+23	10.9	78	37.3	-10	49.5
1	307	04.0	164	20.4		26.8	216	42.5		57.5	212	38.1		10.9	93	39.7		49.5
2	322	06.5	179	19.9		25.8	231	43.1		57.5	227	40.0		10.9	108	42.1		49.6
3	337	09.0	194	19.4		24.8	246	43.7		57.5	242	41.9		10.9	123	44.6		49.6
4	352	11.4	209	18.9		23.9	261	44.3		57.6	257	43.7		10.9	138	47.0		49.6
5	7	13.9	224	18.4	+16	22.9	276	44.9	+23	57.6	272	45.6	+23	10.9	153	49.5	-10	49.6
6	22	16.3	239	17.9	+16	21.9	291	45.5	+23	57.6	287	47.4	+23	10.9	168	51.9	-10	49.6
7	37	18.8	254	17.3		20.9	306	46.2		57.6	302	49.3		10.8	183	54.4		49.7
8	52	21.3	269	16.8		20.0	321	46.8		57.6	317	51.1		10.8	198	56.8		49.7
9	67	23.7	284	16.3		19.0	336	47.4		57.6	332	53.0		10.8	213	59.3		49.7
10	82	26.2	299	15.8		18.0	351	48.0		57.7	347	54.9		10.8	229	01.7		49.7
11	97	28.7	314	15.3	+16	17.0	6	48.6	+23	57.7	2	56.7	+23	10.8	244	04.1	-10	49.7
12	112	31.1	329	14.8	+16	16.1	21	49.2	+23	57.7	17	58.6	+23	10.8	259	06.6	-10	49.8
13	127	33.6	344	14.3		15.1	36	49.8		57.7	33	00.4		10.8	274	09.0		49.8
14	142	36.1	359	13.8		14.1	51	50.4		57.7	48	02.3		10.7	289	11.5		49.8
15	157	38.5	14	13.3		13.1	66	51.1		57.8	63	04.2		10.7	304	13.9		49.8
16	172	41.0	29	12.8		12.2	81	51.7		57.8	78	06.0		10.7	319	16.4		49.8
17	187	43.4	44	12.3	+16	11.2	96	52.3	+23	57.8	93	07.9	+23	10.7	334	18.8	-10	49.8
18	202	45.9	59	11.8	+16	10.2	111	52.9	+23	57.8	108	09.7	+23	10.7	349	21.2	-10	49.9
19	217	48.4	74	11.2		09.2	126	53.5		57.8	123	11.6		10.7	4	23.7		49.9
20	232	50.8	89	10.7		08.2	141	54.1		57.8	138	13.4		10.7	19	26.1		49.9
21	247	53.3	104	10.2		07.3	156	54.7		57.8	153	15.3		10.6	34	28.6		49.9
22	262	55.8	119	09.7		06.3	171	55.3		57.9	168	17.2		10.6	49	31.0		49.9
23	277	58.2	134	09.2		05.3	186	56.0		57.9	183	19.0		10.6	64	33.5		50.0
24	293	00.7	149	08.7	+16	04.3	201	56.6	+23	57.9	198	20.9	+23	10.6	79	35.9	-10	50.0
Dif	—		-5		-10		+6		0		+19		0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 0			Edad: 6 ^d 7 PHE { 4 ^h : 57 ^o 0 12 ^h : 57 ^o 2 20 ^h : 57 ^o 5 R ^o : 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	30.9	+21	31.6	106	06.8	-6	10.5	60 N	21 07	22 24	** **	12 19	83	22 26	20		
1	193	30.9		31.2	120	38.3 ¹²⁵		21.1 ¹⁰⁶	58	20 50	21 54	** **	14 80		32 23			
2	208	30.8		30.8	135	09.8 ¹²⁵		31.8 ¹⁰⁷	56	36	32	23 19	10 77		37 25			
3	223	30.7		30.4	149	41.2 ¹²⁴		42.4 ¹⁰⁶	54	24	21 14	22 33	06 75		42 27			
4	238	30.7		30.0	164	12.6 ¹²⁴	-6	53.0 ¹⁰⁶	52	13	20 59	22 05	12 03	73	46 29			
5	253	30.6	+21	29.6	178	43.9 ¹²³	-7	03.6 ¹⁰⁶	50	20 04	20 46	21 44	11 59	72	22 50	30		
6	268	30.5	+21	29.3	193	15.1 ¹²²	-7	14.2 ¹⁰⁶	45	19 44	20 20	21 06	11 52	68	22 58	34		
7	283	30.5		28.9	207	46.3 ¹²²		24.7 ¹⁰⁵	40	28	20 00	20 39	47 65		23 05	37		
8	298	30.4		28.5	222	17.4 ¹²¹		35.2 ¹⁰⁵	35	14	19 43	19	42 62		11 39			
9	313	30.4		28.1	236	48.5 ¹²¹		45.7 ¹⁰⁵	30	19 03	29	20 02	38 60		16 42			
10	328	30.3		27.7	251	19.5 ¹²⁰	-7	56.1 ¹⁰⁴	20	18 43	19 07	19 35	30 56		25 45			
11	343	30.2	+21	27.3	265	50.4 ¹¹⁹	-8	06.6 ¹⁰⁵	10 N	18 26	18 48	19 15	11 24	52	23 33	49		
12	358	30.2	+21	26.9	280	21.3 ¹¹⁹	-8	17.0 ¹⁰⁴	0	18 10	18 32	18 58	11 18	49	23 41	51		
13	13	30.1		26.5	294	52.1 ¹¹⁸		27.4 ¹⁰⁴	10 S	17 54	16	42	12 46		49 54			
14	28	30.0		26.1	309	22.9 ¹¹⁸		37.7 ¹⁰³	20	37	18 01	28	11 05	44	23 57	57		
15	43	30.0		25.7	323	53.6 ¹¹⁷		48.0 ¹⁰³	30	18	17 44	13	10 58	40	** ** *	**		
16	58	29.9		25.3	338	24.2 ¹¹⁶	-8	58.3 ¹⁰³	35	17 07	34	18 06	54 37		** ** *	**		
17	73	29.9	+21	24.8	352	54.8 ¹¹⁶	-9	08.5 ¹⁰²	40	16 54	17 24	17 57	10 50	34	** ** *	**		
18	88	29.8	+21	24.4	7	25.3 ¹¹⁵	-9	18.7 ¹⁰²	45	16 39	17 12	17 49	10 44	32	** ** *	**		
19	103	29.7		24.0	21	55.7 ¹¹⁴		28.9 ¹⁰²	50	21	16 58	38	38 28		** ** *	**		
20	118	29.7		23.6	36	26.0 ¹¹³		39.0 ¹⁰¹	52	12	51	34	35 27		** ** *	**		
21	133	29.6		23.2	50	56.3 ¹¹³		49.1 ¹⁰¹	54	16 02	44	29	32 25		** ** *	**		
22	148	29.6		22.8	65	26.5 ¹¹²	-9	59.2 ¹⁰¹	56	15 52	36	24	28 23		** ** *	**		
23	163	29.5		22.4	79	56.7 ¹¹²	-10	09.2 ¹⁰⁰	58	39	28	18	24 21		** ** *	**		
24	178	29.4	+21	22.0	94	26.7 ¹¹⁰	-10	19.2 ¹⁰⁰	60 S	15 24	16 18	17 12	10 20	18	** ** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 27 ^m 2		Mag: -3.9 PMG: 14 ^h 04 ^m				Mag: +1.6 PMG: 10 ^h 32 ^m				Mag: -1.9 PMG: 10 ^h 45 ^m				Mag: +0.6 PMG: 18 ^h 39 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	00.7	149	08.7	+16	04.3	201	56.6	+23	57.9	198	20.9	+23	10.6	79	35.9	-10	50.0
1	308	03.2	164	08.2		03.3	216	57.2		57.9	213	22.7		10.6	94	38.3		50.0
2	323	05.6	179	07.7		02.3	231	57.8		57.9	228	24.6		10.6	109	40.8		50.0
3	338	08.1	194	07.2		01.3	246	58.4		57.9	243	26.5		10.6	124	43.2		50.0
4	353	10.6	209	06.7	+16	00.4	261	59.0		57.9	258	28.3		10.5	139	45.7		50.1
5	8	13.0	224	06.2	+15	59.4	276	59.6	+23	57.9	273	30.2	+23	10.5	154	48.1	-10	50.1
6	23	15.5	239	05.7	+15	58.4	292	00.3	+23	58.0	288	32.0	+23	10.5	169	50.5	-10	50.1
7	38	17.9	254	05.2		57.4	307	00.9		58.0	303	33.9		10.5	184	53.0		50.1
8	53	20.4	269	04.7		56.4	322	01.5		58.0	318	35.8		10.5	199	55.4		50.1
9	68	22.9	284	04.2		55.4	337	02.1		58.0	333	37.6		10.5	214	57.9		50.2
10	83	25.3	299	03.7		54.4	352	02.7		58.0	348	39.5		10.5	230	00.3		50.2
11	98	27.8	314	03.2	+15	53.4	7	03.3	+23	58.0	3	41.3	+23	10.4	245	02.7	-10	50.2
12	113	30.3	329	02.7	+15	52.4	22	04.0	+23	58.0	18	43.2	+23	10.4	260	05.2	-10	50.2
13	128	32.7	344	02.3		51.4	37	04.6		58.0	33	45.0		10.4	275	07.6		50.2
14	143	35.2	359	01.8		50.4	52	05.2		58.0	48	46.9		10.4	290	10.1		50.3
15	158	37.7	14	01.3		49.5	67	05.8		58.0	63	48.8		10.4	305	12.5		50.3
16	173	40.1	29	00.8		48.5	82	06.4		58.0	78	50.6		10.4	320	14.9		50.3
17	188	42.6	44	00.3	+15	47.5	97	07.0	+23	58.0	93	52.5	+23	10.4	335	17.4	-10	50.3
18	203	45.1	58	59.8	+15	46.5	112	07.6	+23	58.1	108	54.3	+23	10.3	350	19.8	-10	50.4
19	218	47.5	73	59.3		45.5	127	08.3		58.1	123	56.2		10.3	5	22.2		50.4
20	233	50.0	88	58.8		44.5	142	08.9		58.1	138	58.1		10.3	20	24.7		50.4
21	248	52.4	103	58.3		43.5	157	09.5		58.1	153	59.9		10.3	35	27.1		50.4
22	263	54.9	118	57.8		42.5	172	10.1		58.1	169	01.8		10.3	50	29.6		50.4
23	278	57.4	133	57.3		41.5	187	10.7		58.1	184	03.6		10.3	65	32.0		50.5
24	293	59.8	148	56.8	+15	40.5	202	11.3	+23	58.1	199	05.5	+23	10.2	80	34.4	-10	50.5
Dif	—		-5		-10		+6		0		+19		0		+24		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1				Edad: 7 ^d 7 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 0 20 ^h : 58 ^m 3 R°: 54 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	29.4	+21	22.0	94	26.7	-10	19.2	60 N	** **	1 49	3 06	13 42	84	22 46	27	
1	193	29.4		21.6	108	56.7 ¹¹⁰		29.1 ⁹⁹	58	** **	2 19	22	34 81		22 55	29	
2	208	29.3		21.2	123	26.7 ¹¹⁰		39.0 ⁹⁹	56	0 53	41	37	27 79		23 02	32	
3	223	29.3		20.8	137	56.5 ¹⁰⁸		48.9 ⁹⁹	54	1 40	2 59	49	21 77		09 33		
4	238	29.2		20.4	152	26.3 ¹⁰⁸	-10	58.7 ⁹⁸	52	2 07	3 14	3 59	16 74		15 35		
5	253	29.2	+21	20.0	166	56.0 ¹⁰⁷	-11	08.4 ⁹⁷	50	2 28	3 27	4 09	13 11	73	23 20	37	
6	268	29.1	+21	19.5	181	25.6 ¹⁰⁶	-11	18.1 ⁹⁷	45	3 06	3 53	4 29	13 00	70	23 32	40	
7	283	29.0		19.1	195	55.2 ¹⁰⁶		27.8 ⁹⁷	40	33	4 13	45	12 52	66		42 42	
8	298	29.0		18.7	210	24.7 ¹⁰⁵		37.4 ⁹⁶	35	3 54	29	4 58	44 64		50 45		
9	313	28.9		18.3	224	54.1 ¹⁰⁴		46.9 ⁹⁵	30	4 10	4 43	5 10	38 62		23 58	46	
10	328	28.9		17.9	239	23.4 ¹⁰³	-11	56.4 ⁹⁵	20	37	5 05	30	26 59		** **	** **	
11	343	28.8	+21	17.5	253	52.6 ¹⁰²	-12	05.9 ⁹⁵	10 N	4 57	5 24	5 47	12 16	56	** **	** **	
12	358	28.8	+21	17.1	268	21.8 ¹⁰²	-12	15.3 ⁹⁴	0	5 14	5 40	6 02	12 07	53	** **	** **	
13	13	28.7		16.6	282	50.9 ¹⁰¹		24.6 ⁹³	10 S	30	5 56	18	11 58	51	** **	** **	
14	28	28.6		16.2	297	19.9 ¹⁰⁰		33.9 ⁹³	20	44	6 11	35	49 47		** **	** **	
15	43	28.6		15.8	311	48.8 ⁹⁹		43.1 ⁹²	30	5 59	28	6 54	38 44		0 06	61	
16	58	28.5		15.4	326	17.7 ⁹⁹	-12	52.3 ⁹²	35	6 06	37	7 05	31 42		11 63		
17	73	28.5	+21	15.0	340	46.4 ⁹⁷	-13	01.4 ⁹¹	40	6 14	6 48	7 18	11 24	40	0 17	66	
18	88	28.4	+21	14.6	355	15.1 ⁹⁷	-13	10.4 ⁹⁰	45	6 23	7 00	7 32	11 16	37	0 25	68	
19	103	28.4		14.1	9	43.7 ⁹⁶		19.4 ⁹⁰	50	33	14	51	06 34		33 72		
20	118	28.3		13.7	24	12.2 ⁹⁵		28.3 ⁸⁹	52	38	20	7 59	11 02	32	37 74		
21	133	28.3		13.3	38	40.6 ⁹⁴		37.2 ⁸⁹	54	42	27	8 09	10 57	30	41 76		
22	148	28.2		12.9	53	09.0 ⁹⁴		46.0 ⁸⁸	56	47	35	20	51 28		46 78		
23	163	28.2		12.4	67	37.3 ⁹³	-13	54.7 ⁸⁷	58	53	44	32	45 26		52 80		
24	178	28.1	+21	12.0	82	05.4 ⁹¹	-14	03.3 ⁸⁶	60 S	6 59	7 53	8 47	10 38	23	0 58	83	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 23 ^m 3		Mag: -3.9 PMG: 14 ^h 05 ^m			Mag: +1.6 PMG: 10 ^h 31 ^m			Mag: -1.9 PMG: 10 ^h 42 ^m			Mag: +0.6 PMG: 18 ^h 35 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	293	59.8	148	56.8	+15	40.5	202	11.3	+23	58.1	199	05.5	+23	10.2	80	34.4	-10	50.5
1	309	02.3	163	56.4		39.5	217	12.0		58.1	214	07.4		10.2	95	36.9		50.5
2	324	04.8	178	55.9		38.5	232	12.6		58.1	229	09.2		10.2	110	39.3		50.5
3	339	07.2	193	55.4		37.5	247	13.2		58.1	244	11.1		10.2	125	41.7		50.5
4	354	09.7	208	54.9		36.4	262	13.8		58.1	259	12.9		10.2	140	44.2		50.6
5	9	12.2	223	54.4	+15	35.4	277	14.4	+23	58.1	274	14.8	+23	10.2	155	46.6	-10	50.6
6	24	14.6	238	53.9	+15	34.4	292	15.0	+23	58.1	289	16.7	+23	10.2	170	49.1	-10	50.6
7	39	17.1	253	53.4		33.4	307	15.7		58.1	304	18.5		10.1	185	51.5		50.6
8	54	19.5	268	53.0		32.4	322	16.3		58.1	319	20.4		10.1	200	53.9		50.6
9	69	22.0	283	52.5		31.4	337	16.9		58.1	334	22.2		10.1	215	56.4		50.7
10	84	24.5	298	52.0		30.4	352	17.5		58.1	349	24.1		10.1	230	58.8		50.7
11	99	26.9	313	51.5	+15	29.4	7	18.1	+23	58.1	4	26.0	+23	10.1	246	01.2	-10	50.7
12	114	29.4	328	51.0	+15	28.4	22	18.7	+23	58.1	19	27.8	+23	10.1	261	03.7	-10	50.7
13	129	31.9	343	50.5		27.4	37	19.4		58.1	34	29.7		10.0	276	06.1		50.8
14	144	34.3	358	50.1		26.4	52	20.0		58.1	49	31.6		10.0	291	08.5		50.8
15	159	36.8	13	49.6		25.4	67	20.6		58.1	64	33.4		10.0	306	11.0		50.8
16	174	39.3	28	49.1		24.3	82	21.2		58.1	79	35.3		10.0	321	13.4		50.8
17	189	41.7	43	48.6	+15	23.3	97	21.8	+23	58.1	94	37.1	+23	10.0	336	15.8	-10	50.8
18	204	44.2	58	48.1	+15	22.3	112	22.5	+23	58.1	109	39.0	+23	10.0	351	18.3	-10	50.9
19	219	46.7	73	47.7		21.3	127	23.1		58.1	124	40.9		10.0	6	20.7		50.9
20	234	49.1	88	47.2		20.3	142	23.7		58.1	139	42.7		09.9	21	23.1		50.9
21	249	51.6	103	46.7		19.3	157	24.3		58.1	154	44.6		09.9	36	25.6		50.9
22	264	54.0	118	46.2		18.3	172	24.9		58.1	169	46.4		09.9	51	28.0		51.0
23	279	56.5	133	45.8		17.2	187	25.5		58.1	184	48.3		09.9	66	30.4		51.0
24	294	59.0	148	45.3	+15	16.2	202	26.2	+23	58.1	199	50.2	+23	09.9	81	32.9	-10	51.0
Dif	—		-5			-10	+6			0	+19			0	+24			

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 8 ^d 7	PHE {	4 ^h : 58 ^h /6 12 ^h : 58 ^h /9 20 ^h : 59 ^h /2 R°: 57 ^m											
	PMG: 12 ^h 06 ^m 2						PMG: 19 ^h 14 ^m										
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	m	h m	m	
0	178	28.1	+21	12.0	82	05.4	91	−14	03.3	60 N	21 03	22 18	** **	15 06	81	23 13	37
1	193	28.0		11.6	96	33.5	91		11.9	86	58	20 47	21 49	** **	14 55	79	24 39
2	208	28.0		11.2	111	01.5	90		20.4	85	56	33	28	23 08	46	77	34 41
3	223	27.9		10.7	125	29.4	89		28.9	85	54	21	21 10	22 27	38	75	42 43
4	238	27.9		10.3	139	57.3	89		37.2	83	52	11	20 56	22 01	30	74	50 44
5	253	27.8	+21	09.9	154	25.0	87	−14	45.5	83	50	20 02	20 43	21 41	14 24	72	23 57 45
6	268	27.8	+21	09.5	168	52.7	87	−14	53.7	82	45	19 42	20 18	21 04	14 10	69	** ** *
7	283	27.7		09.0	183	20.3	86	−15	01.8	81	40	27	19 58	20 38	13 58	67	** ** *
8	298	27.7		08.6	197	47.7	84		09.9	81	35	13	42	17	48	66	** ** *
9	313	27.6		08.2	212	15.1	84		17.9	80	30	19 02	29	20 01	40	64	** ** *
10	328	27.6		07.8	226	42.5	84		25.8	79	20	18 42	19 06	19 35	25	61	0 10 50
11	343	27.5	+21	07.3	241	09.7	82	−15	33.6	78	10 N	18 25	18 48	19 15	13 12	59	0 22 52
12	358	27.5	+21	06.9	255	36.8	81	−15	41.3	77	0	18 10	18 32	18 58	13 00	57	0 32 55
13	13	27.4		06.5	270	03.9	81		48.9	76	10 S	17 54	17	43	12 49	54	43 57
14	28	27.4		06.0	284	30.8	79	−15	56.5	76	20	38	18 01	28	36	52	0 54 60
15	43	27.3		05.6	298	57.7	79	−16	03.9	74	30	19	17 45	14	22	49	1 07 63
16	58	27.3		05.2	313	24.5	78		11.3	74	35	17 08	36	18 07	13	48	14 65
17	73	27.2	+21	04.7	327	51.2	77	−16	18.6	73	40	16 56	17 25	17 59	12 04	46	1 23 67
18	88	27.2	+21	04.3	342	17.8	76	−16	25.8	72	45	16 41	17 14	17 50	11 53	44	1 33 70
19	103	27.1		03.9	356	44.3	75		32.9	71	50	23	17 00	40	40	41	45 73
20	118	27.1		03.4	11	10.8	75		39.9	70	52	15	16 54	36	34	39	51 74
21	133	27.0		03.0	25	37.1	73		46.8	69	54	16 05	47	31	27	38	1 57 76
22	148	27.0		02.6	40	03.4	73	−16	53.6	68	56	15 54	39	26	19	37	2 04 78
23	163	26.9		02.1	54	29.6	72	−17	00.3	67	58	42	30	21	11	34	12 80
24	178	26.9	+21	01.7	68	55.7	71	−17	07.0	67	60 S	15 28	16 21	17 15	11 01	32	2 21 83

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 19 ^m 4		Mag: −3.9 PMG: 14 ^h 05 ^m			Mag: +1.6 PMG: 10 ^h 30 ^m			Mag: −1.9 PMG: 10 ^h 39 ^m			Mag: +0.6 PMG: 18 ^h 31 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'			
0	294	59.0	148	45.3	+15	16.2	202	26.2	+23	58.1	199	50.2	+23	09.9	81	32.9	−10	51.0
1	310	01.4	163	44.8		15.2	217	26.8		58.1	214	52.0		09.9	96	35.3		51.0
2	325	03.9	178	44.3		14.2	232	27.4		58.1	229	53.9		09.8	111	37.7		51.0
3	340	06.4	193	43.9		13.2	247	28.0		58.1	244	55.8		09.8	126	40.2		51.1
4	355	08.8	208	43.4		12.1	262	28.6		58.1	259	57.6		09.8	141	42.6		51.1
5	10	11.3	223	42.9	+15	11.1	277	29.3	+23	58.1	274	59.5	+23	09.8	156	45.0	−10	51.1
6	25	13.8	238	42.4	+15	10.1	292	29.9	+23	58.0	290	01.3	+23	09.8	171	47.5	−10	51.1
7	40	16.2	253	42.0		09.1	307	30.5		58.0	305	03.2		09.8	186	49.9		51.2
8	55	18.7	268	41.5		08.0	322	31.1		58.0	320	05.1		09.7	201	52.3		51.2
9	70	21.2	283	41.0		07.0	337	31.7		58.0	335	06.9		09.7	216	54.8		51.2
10	85	23.6	298	40.6		06.0	352	32.4		58.0	350	08.8		09.7	231	57.2		51.2
11	100	26.1	313	40.1	+15	05.0	7	33.0	+23	58.0	5	10.7	+23	09.7	246	59.6	−10	51.3
12	115	28.5	328	39.6	+15	03.9	22	33.6	+23	58.0	20	12.5	+23	09.7	262	02.1	−10	51.3
13	130	31.0	343	39.1		02.9	37	34.2		58.0	35	14.4		09.7	277	04.5		51.3
14	145	33.5	358	38.7		01.9	52	34.8		58.0	50	16.2		09.6	292	06.9		51.3
15	160	35.9	13	38.2	+15	00.9	67	35.5		58.0	65	18.1		09.6	307	09.4		51.3
16	175	38.4	28	37.7	+14	59.8	82	36.1		58.0	80	20.0		09.6	322	11.8		51.4
17	190	40.9	43	37.3	+14	58.8	97	36.7	+23	57.9	95	21.8	+23	09.6	337	14.2	−10	51.4
18	205	43.3	58	36.8	+14	57.8	112	37.3	+23	57.9	110	23.7	+23	09.6	352	16.7	−10	51.4
19	220	45.8	73	36.4		56.7	127	37.9		57.9	125	25.6		09.6	7	19.1		51.4
20	235	48.3	88	35.9		55.7	142	38.6		57.9	140	27.4		09.5	22	21.5		51.5
21	250	50.7	103	35.4		54.7	157	39.2		57.9	155	29.3		09.5	37	23.9		51.5
22	265	53.2	118	35.0		53.6	172	39.8		57.9	170	31.1		09.5	52	26.4		51.5
23	280	55.6	133	34.5		52.6	187	40.4		57.9	185	33.0		09.5	67	28.8		51.5
24	295	58.1	148	34.0	+14	51.6	202	41.0	+23	57.9	200	34.9	+23	09.5	82	31.2	−10	51.6
Dif	—		−5		−10		+6		0		+19		0		+24			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 9 ^d 7	PHE {	SD: 16 ^h 1	SD: 20 ^h 11 ^m	4 ^h : 59 ^m 4 12 ^h : 59 ^m 7 20 ^h : 59 ^m 9 R°: 61 ^m						Hora	R°	Hora	R°			
	hG ☉	Dec																hG ☾	Dif	Dec
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m
0	178	26.9	+21	01.7	68	55.7	-17	07.0	65	60 N	**	**	1 55	3 10	16 27	74	23 50	51		
1	193	26.8		01.2	83	21.7	70	13.5	65	58	**	**	2 23	26	14 73		**	**	**	
2	208	26.8		00.8	97	47.6	69	19.9	64	56	1	04	2 45	40	16 03	71	**	**	**	
3	223	26.7	+21	00.4	112	13.4	68	26.2	63	54	1	45	3 02	3 51	15 53	70	**	**	**	
4	238	26.7	+20	59.9	126	39.2	68	32.4	62	52	2	12	17	4 02	44 69		**	**	**	
5	253	26.7	+20	59.5	141	04.8	66	-17	38.5	61	50	2	32	3 30	4 11	15 36	69	**	**	**
6	268	26.6	+20	59.0	155	30.4	66	-17	44.5	60	45	3	09	3 55	4 30	15 19	67	0	12	48
7	283	26.6		58.6	169	55.9	65	50.4	59	40	35	4	15	46	15 05	66		24	50	
8	298	26.5		58.2	184	21.3	64	-17	56.2	58	35	3	55	31	4 59	14 54	65	35	51	
9	313	26.5		57.7	198	46.6	63	-18	01.8	56	30	4	12	4 44	5 11	44 64		0	44	53
10	328	26.4		57.3	213	11.9	63	07.4	56	20	38	5	06	30	26 63		1	00	55	
11	343	26.4	+20	56.8	227	37.0	61	-18	12.8	54	10 N	4	58	5 24	5 47	14 11	61	1	14	57
12	358	26.3	+20	56.4	242	02.1	61	-18	18.2	54	0	5	15	5 41	6 03	13 57	60	1	27	58
13	13	26.3		55.9	256	27.1	60	23.4	52	10 S	30	5	56	18	43 59		40	60		
14	28	26.2		55.5	270	52.0	59	28.5	51	20	44	6	11	34	28 58		1	54	62	
15	43	26.2		55.0	285	16.9	59	33.5	50	30	5	58	27	6 53	11 56		2	10	64	
16	58	26.2		54.6	299	41.6	57	38.3	48	35	6	05	37	7 04	13 01	55		19	66	
17	73	26.1	+20	54.1	314	06.3	57	-18	43.1	48	40	6	13	6 47	7 16	12 50	54	2	30	67
18	88	26.1	+20	53.7	328	30.9	56	-18	47.7	46	45	6	22	6 58	7 31	12 37	52	2	43	68
19	103	26.0		53.2	342	55.5	56	52.2	45	50	32	7	12	49	21 50		2	58	71	
20	118	26.0		52.8	357	19.9	54	-18	56.6	44	52	36	18	7 57	13 50		3	05	72	
21	133	25.9		52.3	11	44.3	54	-19	00.8	42	54	40	25	8 06	12 05	49		13	73	
22	148	25.9		51.9	26	08.6	53	04.9	41	56	45	33	17	11 56	47	22	74			
23	163	25.9		51.4	40	32.9	53	08.9	40	58	51	41	29	45 46		32	76			
24	178	25.8	+20	51.0	54	57.1	52	-19	12.8	39	60 S	6	57	7 51	8 43	11 33	44	3	44	78

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 4 ^h 15 ^m 4		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +1.6 PMG: 10 ^h 29 ^m			Mag: -1.9 PMG: 10 ^h 36 ^m			Mag: +0.6 PMG: 18 ^h 27 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	295	58.1	148	34.0	+14	51.6	202	41.0	+23	57.9	200	34.9	+23	09.5	82	31.2	-10	51.6	
1	311	00.6	163	33.6		50.5	217	41.7		57.9	215	36.7		09.5	97	33.7		51.6	
2	326	03.0	178	33.1		49.5	232	42.3		57.8	230	38.6		09.4	112	36.1		51.6	
3	341	05.5	193	32.7		48.5	247	42.9		57.8	245	40.5		09.4	127	38.5		51.6	
4	356	08.0	208	32.2		47.4	262	43.5		57.8	260	42.3		09.4	142	40.9		51.7	
5	11	10.4	223	31.7	+14	46.4	277	44.2	+23	57.8	275	44.2	+23	09.4	157	43.4	-10	51.7	
6	26	12.9	238	31.3	+14	45.4	292	44.8	+23	57.8	290	46.0	+23	09.4	172	45.8	-10	51.7	
7	41	15.4	253	30.8		44.3	307	45.4		57.8	305	47.9		09.4	187	48.2		51.7	
8	56	17.8	268	30.4		43.3	322	46.0		57.7	320	49.8		09.3	202	50.7		51.8	
9	71	20.3	283	29.9		42.2	337	46.6		57.7	335	51.6		09.3	217	53.1		51.8	
10	86	22.8	298	29.4		41.2	352	47.3		57.7	350	53.5		09.3	232	55.5		51.8	
11	101	25.2	313	29.0	+14	40.2	7	47.9	+23	57.7	5	55.4	+23	09.3	247	57.9	-10	51.8	
12	116	27.7	328	28.5	+14	39.1	22	48.5	+23	57.7	20	57.2	+23	09.3	263	00.4	-10	51.9	
13	131	30.1	343	28.1		38.1	37	49.1		57.7	35	59.1		09.2	278	02.8		51.9	
14	146	32.6	358	27.6		37.0	52	49.7		57.6	51	01.0		09.2	293	05.2		51.9	
15	161	35.1	13	27.2		36.0	67	50.4		57.6	66	02.8		09.2	308	07.7		51.9	
16	176	37.5	28	26.7		34.9	82	51.0		57.6	81	04.7		09.2	323	10.1		51.9	
17	191	40.0	43	26.3	+14	33.9	97	51.6	+23	57.6	96	06.6	+23	09.2	338	12.5	-10	52.0	
18	206	42.5	58	25.8	+14	32.8	112	52.2	+23	57.6	111	08.4	+23	09.2	353	14.9	-10	52.0	
19	221	44.9	73	25.4		31.8	127	52.9		57.5	126	10.3		09.1	8	17.4		52.0	
20	236	47.4	88	24.9		30.8	142	53.5		57.5	141	12.1		09.1	23	19.8		52.0	
21	251	49.9	103	24.5		29.7	157	54.1		57.5	156	14.0		09.1	38	22.2		52.1	
22	266	52.3	118	24.0		28.7	172	54.7		57.5	171	15.9		09.1	53	24.6		52.1	
23	281	54.8	133	23.6		27.6	187	55.4		57.5	186	17.7		09.1	68	27.1		52.1	
24	296	57.3	148	23.1	+14	26.6	202	56.0	+23	57.4	201	19.6	+23	09.1	83	29.5	-10	52.1	
Dif	—		-5 -10			+6 0			+19 0			0			+24 0				

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 06 ^m 3			Edad: 10 ^d 7 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'6 R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	25.8	+20 51.0	54	57.1	51	12.8	37	60 N	20 59	22 12	** **	17 41 61	** **	** **	
1	193	25.8	50.5	69	21.2	51	16.5	37	58	44	21 45	** **	27 60	0 03	53	
2	208	25.7	50.1	83	45.2	50	20.2	37	56	30	24	22 59	14 61	15	54	
3	223	25.7	49.6	98	09.2	50	23.6	34	54	19	21 07	22 22	17 03 61	25	55	
4	238	25.6	49.2	112	33.1	49	27.0	34	52	09	20 53	21 57	16 53 62	34	55	
5	253	25.6	+20 48.7	126	56.9	48	30.2	32	50	20 00	20 41	21 37	16 45 61	0 42	56	
6	268	25.6	+20 48.3	141	20.7	48	33.3	31	45	19 41	20 16	21 01	16 26 62	1 00	57	
7	283	25.5	47.8	155	44.4	47	36.2	29	40	25	19 57	20 36	16 11 62	14	58	
8	298	25.5	47.3	170	08.0	46	39.1	29	35	12	41	16	15 59 62	26	58	
9	313	25.4	46.9	184	31.6	46	41.7	26	30	19 01	28	20 00	48 62	37	59	
10	328	25.4	46.4	198	55.1	45	44.3	26	20	18 42	19 06	19 34	29 62	1 55	60	
11	343	25.4	+20 46.0	213	18.6	45	46.7	24	10 N	18 25	18 48	19 14	15 12 63	2 11	60	
12	358	25.3	+20 45.5	227	42.0	44	48.9	22	0	18 10	18 32	18 58	14 57 62	2 25	62	
13	13	25.3	45.0	242	05.4	44	51.1	22	10 S	17 55	17	43	42 62	40	62	
14	28	25.3	44.6	256	28.7	43	53.1	20	20	39	18 02	29	26 62	2 56	62	
15	43	25.2	44.1	270	51.9	42	54.9	18	30	20	17 46	15	14 07 62	3 14	63	
16	58	25.2	43.7	285	15.1	42	56.6	17	35	17 09	37	08	13 56 62	25	63	
17	73	25.1	+20 43.2	299	38.3	42	58.2	16	40	16 57	17 27	18 00	13 44 62	3 37	64	
18	88	25.1	+20 42.7	314	01.4	41	59.6	14	45	16 43	17 15	17 52	13 29 62	3 51	65	
19	103	25.1	42.3	328	24.5	41	00.9	13	50	25	17 02	42	11 62	4 09	65	
20	118	25.0	41.8	342	47.5	40	02.0	11	52	17	16 56	38	13 03 61	17	65	
21	133	25.0	41.3	357	10.5	40	03.0	10	54	16 08	49	34	12 54 61	26	66	
22	148	25.0	40.9	11	33.4	39	03.8	8	56	15 57	42	29	43 61	36	67	
23	163	24.9	40.4	25	56.3	39	04.5	7	58	46	33	23	31 61	4 48	67	
24	178	24.9	+20 39.9	40	19.2	39	05.1	6	60 S	15 32	16 24	17 18	12 17 61	5 02	67	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 11 ^m 5		Mag: -3.9 PMG: 14 ^h 07 ^m			Mag: +1.6 PMG: 10 ^h 28 ^m			Mag: -1.9 PMG: 10 ^h 33 ^m			Mag: +0.6 PMG: 18 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	296	57.3	148 23.1	+14 26.6	202 56.0	+23 57.4	201 19.6	+23 09.1	83 29.5	-10 52.1						
1	311	59.7	163 22.7	25.5	217 56.6	57.4	216 21.5	09.0	98 31.9	52.2						
2	327	02.2	178 22.2	24.5	232 57.2	57.4	231 23.3	09.0	113 34.3	52.2						
3	342	04.6	193 21.8	23.4	247 57.9	57.4	246 25.2	09.0	128 36.8	52.2						
4	357	07.1	208 21.3	22.4	262 58.5	57.4	261 27.1	09.0	143 39.2	52.3						
5	12	09.6	223 20.9	+14 21.3	277 59.1	+23 57.3	276 28.9	+23 09.0	158 41.6	-10 52.3						
6	27	12.0	238 20.4	+14 20.2	292 59.7	+23 57.3	291 30.8	+23 08.9	173 44.0	-10 52.3						
7	42	14.5	253 20.0	19.2	308 00.3	57.3	306 32.7	08.9	188 46.5	52.3						
8	57	17.0	268 19.5	18.1	323 01.0	57.3	321 34.5	08.9	203 48.9	52.4						
9	72	19.4	283 19.1	17.1	338 01.6	57.2	336 36.4	08.9	218 51.3	52.4						
10	87	21.9	298 18.6	16.0	353 02.2	57.2	351 38.3	08.9	233 53.7	52.4						
11	102	24.4	313 18.2	+14 15.0	8 02.8	+23 57.2	6 40.1	+23 08.9	248 56.2	-10 52.4						
12	117	26.8	328 17.8	+14 13.9	23 03.5	+23 57.2	21 42.0	+23 08.8	263 58.6	-10 52.5						
13	132	29.3	343 17.3	12.9	38 04.1	57.1	36 43.9	08.8	279 01.0	52.5						
14	147	31.8	358 16.9	11.8	53 04.7	57.1	51 45.7	08.8	294 03.4	52.5						
15	162	34.2	13 16.4	10.7	68 05.3	57.1	66 47.6	08.8	309 05.9	52.5						
16	177	36.7	28 16.0	09.7	83 06.0	57.0	81 49.5	08.8	324 08.3	52.6						
17	192	39.1	43 15.6	+14 08.6	98 06.6	+23 57.0	96 51.3	+23 08.7	339 10.7	-10 52.6						
18	207	41.6	58 15.1	+14 07.6	113 07.2	+23 57.0	111 53.2	+23 08.7	354 13.1	-10 52.6						
19	222	44.1	73 14.7	06.5	128 07.9	57.0	126 55.1	08.7	9 15.5	52.6						
20	237	46.5	88 14.2	05.4	143 08.5	56.9	141 56.9	08.7	24 18.0	52.7						
21	252	49.0	103 13.8	04.4	158 09.1	56.9	156 58.8	08.7	39 20.4	52.7						
22	267	51.5	118 13.4	03.3	173 09.7	56.9	172 00.7	08.7	54 22.8	52.7						
23	282	53.9	133 12.9	02.2	188 10.4	56.8	187 02.5	08.6	69 25.2	52.7						
24	297	56.4	148 12.5	+14 01.2	203 11.0	+23 56.8	202 04.4	+23 08.6	84 27.7	-10 52.8						
Dif	—		-4		-11		+6		0		+19		0		+24	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 11 ^d 7	PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 9 20 ^h : 61 ^m 0											
	PMG: 12 ^h 06 ^m 4					SD: 16 ^h 5		SD: 16 ^h 5			SD: 16 ^h 5		SD: 16 ^h 5			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.9	+20 39.9	40	19.2	-20 05.1	4	60 N	*** **	2 02	3 14	18 42	45	0 41	69	
1	193	24.8	39.5	54	42.0	05.5	4	58	*** **	28	30	27 47		0 56	68	
2	208	24.8	39.0	69	04.8	05.7	2	56	1 14	2 49	43	15 49		1 09	67	
3	223	24.8	38.5	83	27.6	05.8	1	54	1 51	3 06	3 54	18 04	50	20	66	
4	238	24.7	38.1	97	50.3	05.8	0	52	2 16	20	4 04	17 55	51	29	67	
5	253	24.7	+20 37.6	112	13.0	-20 05.6	2	50	2 36	3 32	4 13	17 46	52	1 38	67	
6	268	24.7	+20 37.1	126	35.7	-20 05.3	3	45	3 12	3 57	4 32	17 28	54	1 57	66	
7	283	24.6	36.7	140	58.4	04.8	5	40	37	4 16	4 48	13 56		2 12	65	
8	298	24.6	36.2	155	21.0	04.2	6	35	3 57	32	5 01	17 01	57	24	65	
9	313	24.6	35.7	169	43.6	03.4	8	30	4 13	4 45	12	16 50	58	36	64	
10	328	24.5	35.2	184	06.2	02.5	9	20	39	5 07	31	31 60		2 55	63	
11	343	24.5	+20 34.8	198	28.8	-20 01.4	11	10 N	4 58	5 25	5 48	16 15	61	3 11	63	
12	358	24.5	+20 34.3	212	51.4	-20 00.2	12	0	5 15	5 41	6 03	15 59	63	3 27	62	
13	13	24.4	33.8	227	13.9	-19 58.8	14	10 S	30	5 56	18	44 64		42	62	
14	28	24.4	33.3	241	36.5	57.2	16	20	44	6 11	34	28 65		3 58	61	
15	43	24.4	32.9	255	59.0	55.6	16	30	5 57	27	6 52	15 09	67	4 17	60	
16	58	24.3	32.4	270	21.5	53.7	19	35	6 05	36	7 03	14 58	68	28	60	
17	73	24.3	+20 31.9	284	44.1	-19 51.8	19	40	6 12	6 45	7 15	14 46	68	4 41	59	
18	88	24.3	+20 31.4	299	06.6	-19 49.7	21	45	6 21	6 57	7 29	14 31	70	4 56	58	
19	103	24.2	31.0	313	29.1	47.4	23	50	30	7 10	47	13 71		5 14	57	
20	118	24.2	30.5	327	51.6	45.0	24	52	34	16	7 55	14 04	72	22	57	
21	133	24.2	30.0	342	14.1	42.4	26	54	39	23	8 04	13 55	73	32	56	
22	148	24.2	29.5	356	36.6	39.7	27	56	43	30	14	44 74		43	55	
23	163	24.1	29.0	10 59.2	36	36.8	29	58	48	38	26	32 75		5 55	54	
24	178	24.1	+20 28.6	25	21.7	-19 33.8	30	60 S	6 54	7 48	8 40	13 18	76	6 09	53	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 07 ^m 6		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: +1.6 PMG: 10 ^h 27 ^m		Mag: -1.9 PMG: 10 ^h 30 ^m		Mag: +0.6 PMG: 18 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	297	56.4	148 12.5	+14 01.2	203 11.0	+23 56.8	202 04.4	+23 08.6	84 27.7	-10 52.8
1	312	58.9	163 12.1	+14 00.1	218 11.6	56.8	217 06.3	08.6	99 30.1	52.8
2	328	01.3	178 11.6	+13 59.0	233 12.2	56.8	232 08.1	08.6	114 32.5	52.8
3	343	03.8	193 11.2	58.0	248 12.9	56.7	247 10.0	08.6	129 34.9	52.9
4	358	06.3	208 10.7	56.9	263 13.5	56.7	262 11.9	08.5	144 37.3	52.9
5	13	08.7	223 10.3	+13 55.8	278 14.1	+23 56.7	277 13.7	+23 08.5	159 39.8	-10 52.9
6	28	11.2	238 09.9	+13 54.8	293 14.7	+23 56.6	292 15.6	+23 08.5	174 42.2	-10 52.9
7	43	13.6	253 09.4	53.7	308 15.4	56.6	307 17.5	08.5	189 44.6	53.0
8	58	16.1	268 09.0	52.6	323 16.0	56.6	322 19.3	08.5	204 47.0	53.0
9	73	18.6	283 08.6	51.6	338 16.6	56.5	337 21.2	08.4	219 49.4	53.0
10	88	21.0	298 08.2	50.5	353 17.2	56.5	352 23.1	08.4	234 51.9	53.0
11	103	23.5	313 07.7	+13 49.4	8 17.9	+23 56.5	7 24.9	+23 08.4	249 54.3	-10 53.1
12	118	26.0	328 07.3	+13 48.4	23 18.5	+23 56.4	22 26.8	+23 08.4	264 56.7	-10 53.1
13	133	28.4	343 06.9	47.3	38 19.1	56.4	37 28.7	08.4	279 59.1	53.1
14	148	30.9	358 06.4	46.2	53 19.8	56.4	52 30.5	08.3	295 01.5	53.1
15	163	33.4	13 06.0	45.1	68 20.4	56.3	67 32.4	08.3	310 04.0	53.2
16	178	35.8	28 05.6	44.1	83 21.0	56.3	82 34.3	08.3	325 06.4	53.2
17	193	38.3	43 05.2	+13 43.0	98 21.6	+23 56.3	97 36.1	+23 08.3	340 08.8	-10 53.2
18	208	40.7	58 04.7	+13 41.9	113 22.3	+23 56.2	112 38.0	+23 08.3	355 11.2	-10 53.3
19	223	43.2	73 04.3	40.8	128 22.9	56.2	127 39.9	08.3	10 13.6	53.3
20	238	45.7	88 03.9	39.8	143 23.5	56.1	142 41.7	08.2	25 16.1	53.3
21	253	48.1	103 03.4	38.7	158 24.2	56.1	157 43.6	08.2	40 18.5	53.3
22	268	50.6	118 03.0	37.6	173 24.8	56.1	172 45.5	08.2	55 20.9	53.4
23	283	53.1	133 02.6	36.5	188 25.4	56.0	187 47.3	08.2	70 23.3	53.4
24	298	55.5	148 02.2	+13 35.4	203 26.0	+23 56.0	202 49.2	+23 08.2	85 25.7	-10 53.4
Dif	—		-4	-11	+6	0	+19	0	+24	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 12 ^d 7 PHE	$\left\{ \begin{array}{l} 4^h: 61'1 \\ 12^h: 61'2 \\ 20^h: 61'2 \end{array} \right.$					R°: 60 ^m			R°		R°		
	PMG: 12 ^h 06 ^m 4																	
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	178	24.1	+20	28.6	25	21.7	-19	33.8	32	60 N	20	55	22	05	***	**	19	27
1	193	24.1		28.1	39	44.2	35	30.6	32	58	40	21	40	***	**	14	36	
2	208	24.0		27.6	54	06.8	36	27.3	33	56	27	20	22	50		19	04	
3	223	24.0		27.1	68	29.4	36	23.9	34	54	16	21	04	22	16	18	54	
4	238	24.0		26.6	82	51.9	35	20.3	36	52	20	06	20	50	21	52	46	
5	253	23.9	+20	26.1	97	14.5	36	-19	16.5	38	50	19	57	20	38	21	34	
6	268	23.9	+20	25.6	111	37.2	37	-19	12.6	39	45	19	39	20	14	20	59	
7	283	23.9		25.2	125	59.8	36	08.6	40	40	24	19	55	34		18	09	
8	298	23.9		24.7	140	22.4	36	04.4	42	35	11	40	20	14		17	58	
9	313	23.8		24.2	154	45.1	37	-19	00.1	43	30	19	00	27	19	58	48	
10	328	23.8		23.7	169	07.8	37	-18	55.6	45	20	18	41	19	05	33	31	
11	343	23.8	+20	23.2	183	30.6	38	-18	51.0	46	10 N	18	25	18	48	19	14	
12	358	23.8	+20	22.7	197	53.3	37	-18	46.3	47	0	18	10	18	32	18	58	
13	13	23.7		22.2	212	16.1	38	41.4	49	10 S	17	55	17	43		16	48	
14	28	23.7		21.7	226	38.9	38	36.4	50	20	39	18	03	30		33	65	
15	43	23.7		21.3	241	01.8	39	31.2	52	30	21	17	47	16		16	68	
16	58	23.7		20.8	255	24.7	39	25.9	53	35	17	11	38	09		16	06	
17	73	23.6	+20	20.3	269	47.6	39	-18	20.5	54	40	16	59	17	28	18	02	
18	88	23.6	+20	19.8	284	10.6	40	-18	14.9	56	45	16	45	17	17	17	53	
19	103	23.6		19.3	298	33.6	40	09.2	57	50	28	17	04	44		24	78	
20	118	23.5		18.8	312	56.6	40	-18	03.4	58	52	20	16	58	40		16	
21	133	23.5		18.3	327	19.7	41	-17	57.4	60	54	11	52	36		15	08	
22	148	23.5		17.8	341	42.9	42	51.3	61	56	16	01	44	31		14	58	
23	163	23.5		17.3	356	06.1	42	45.0	63	58	15	49	36	26		47	85	
24	178	23.5	+20	16.8	10	29.3	42	-17	38.7	63	60 S	15	36	16	27	17	21	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 03 ^m 6		Mag: -3.9 PMG: 14 ^h 08 ^m				Mag: +1.6 PMG: 10 ^h 26 ^m				Mag: -1.9 PMG: 10 ^h 27 ^m				Mag: +0.6 PMG: 18 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	298	55.5	148	02.2	+13	35.4	203	26.0	+23	56.0	202	49.2	+23	08.2	85	25.7	-10	53.4
1	313	58.0	163	01.8		34.4	218	26.7		55.9	217	51.1		08.1	100	28.1		53.5
2	329	00.5	178	01.3		33.3	233	27.3		55.9	232	52.9		08.1	115	30.6		53.5
3	344	02.9	193	00.9		32.2	248	27.9		55.9	247	54.8		08.1	130	33.0		53.5
4	359	05.4	208	00.5		31.1	263	28.6		55.8	262	56.7		08.1	145	35.4		53.5
5	14	07.9	223	00.1	+13	30.0	278	29.2	+23	55.8	277	58.6	+23	08.1	160	37.8	-10	53.6
6	29	10.3	237	59.6	+13	29.0	293	29.8	+23	55.7	293	00.4	+23	08.0	175	40.2	-10	53.6
7	44	12.8	252	59.2		27.9	308	30.4		55.7	308	02.3		08.0	190	42.6		53.6
8	59	15.2	267	58.8		26.8	323	31.1		55.7	323	04.2		08.0	205	45.1		53.7
9	74	17.7	282	58.4		25.7	338	31.7		55.6	338	06.0		08.0	220	47.5		53.7
10	89	20.2	297	58.0		24.6	353	32.3		55.6	353	07.9		08.0	235	49.9		53.7
11	104	22.6	312	57.5	+13	23.5	8	33.0	+23	55.5	8	09.8	+23	07.9	250	52.3	-10	53.7
12	119	25.1	327	57.1	+13	22.4	23	33.6	+23	55.5	23	11.6	+23	07.9	265	54.7	-10	53.8
13	134	27.6	342	56.7		21.4	38	34.2		55.5	38	13.5		07.9	280	57.1		53.8
14	149	30.0	357	56.3		20.3	53	34.9		55.4	53	15.4		07.9	295	59.6		53.8
15	164	32.5	12	55.9		19.2	68	35.5		55.4	68	17.2		07.9	311	02.0		53.9
16	179	35.0	27	55.5		18.1	83	36.1		55.3	83	19.1		07.8	326	04.4		53.9
17	194	37.4	42	55.1	+13	17.0	98	36.8	+23	55.3	98	21.0	+23	07.8	341	06.8	-10	53.9
18	209	39.9	57	54.6	+13	15.9	113	37.4	+23	55.2	113	22.9	+23	07.8	356	09.2	-10	53.9
19	224	42.4	72	54.2		14.8	128	38.0		55.2	128	24.7		07.8	11	11.6		54.0
20	239	44.8	87	53.8		13.7	143	38.6		55.1	143	26.6		07.8	26	14.0		54.0
21	254	47.3	102	53.4		12.6	158	39.3		55.1	158	28.5		07.7	41	16.5		54.0
22	269	49.7	117	53.0		11.6	173	39.9		55.0	173	30.3		07.7	56	18.9		54.1
23	284	52.2	132	52.6		10.5	188	40.5		55.0	188	32.2		07.7	71	21.3		54.1
24	299	54.7	147	52.2	+13	09.4	203	41.2	+23	55.0	203	34.1	+23	07.7	86	23.7	-10	54.1
Dif	—		-4		-11		+6		0		+19		0		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15:7 PMG: 12 ^h 06 ^m 5			Edad: 13 ^d 7 PHE { SD: 16:7 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	23.5	+20 16.8	10	29.3	-17 38.7	60 N	*** **	2 08	3 18	19 59	25	3 14	91	
1	193	23.4	16.3	24	52.6	32.2	58	** **	34	33	50	27	26	88	
2	208	23.4	15.8	39	15.9	25.6	56	1 24	2 53	46	42	29	36	85	
3	223	23.4	15.3	53	39.3	18.8	54	1 57	3 10	3 57	34	32	45	83	
4	238	23.4	14.8	68	02.7	11.9	52	2 21	23	4 07	28	34	3 53	81	
5	253	23.3	+20 14.3	82	26.2	-17 04.9	50	2 40	3 35	4 16	19 21	36	4 00	80	
6	268	23.3	+20 13.8	96	49.7	-16 57.8	45	3 14	3 59	4 34	19 08	40	4 15	76	
7	283	23.3	13.3	111	13.3	50.6	40	39	4 18	4 49	18 58	42	28	73	
8	298	23.3	12.8	125	36.9	43.2	35	3 59	34	5 02	48	46	39	71	
9	313	23.2	12.3	140	00.7	35.7	30	4 15	4 47	13	40	48	4 48	69	
10	328	23.2	11.8	154	24.4	28.1	20	40	5 08	32	26	52	5 04	65	
11	343	23.2	+20 11.3	168	48.2	-16 20.4	10 N	4 59	5 25	5 48	18 14	55	5 18	62	
12	358	23.2	+20 10.8	183	12.1	-16 12.6	0	5 15	5 41	6 03	18 02	58	5 31	59	
13	13	23.2	10.3	197	36.1	-16 04.7	10 S	30	5 55	18	17 51	61	44	56	
14	28	23.1	09.8	212	00.1	-15 56.6	20	43	6 10	33	38	65	5 57	54	
15	43	23.1	09.3	226	24.2	48.4	30	5 57	26	6 51	24	69	6 13	50	
16	58	23.1	08.8	240	48.3	40.2	35	6 04	34	7 02	16	71	22	48	
17	73	23.1	+20 08.3	255	12.5	-15 31.8	40	6 11	6 44	7 14	17 07	73	6 32	46	
18	88	23.1	+20 07.8	269	36.8	-15 23.3	45	6 19	6 55	7 28	16 55	77	6 44	43	
19	103	23.0	07.3	284	01.1	14.7	50	28	7 08	44	42	80	6 58	40	
20	118	23.0	06.8	298	25.5	-15 06.0	52	32	14	7 52	36	82	7 05	38	
21	133	23.0	06.3	312	50.0	-14 57.2	54	36	20	8 01	29	84	13	35	
22	148	23.0	05.8	327	14.5	48.3	56	41	28	11	21	86	21	34	
23	163	23.0	05.3	341	39.1	39.3	58	46	36	23	12	89	30	31	
24	178	23.0	+20 04.7	356	03.8	-14 30.2	60 S	6 51	7 45	8 36	16 02	92	7 41	28	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 59 ^m 7		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.6 PMG: 10 ^h 25 ^m		Mag: -1.9 PMG: 10 ^h 24 ^m		Mag: +0.6 PMG: 18 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	299	54.7	147	52.2	203	41.2	203	34.1	86	23.7
1	314	57.1	162	51.8	218	41.8	218	35.9	101	26.1
2	329	59.6	177	51.3	233	42.4	233	37.8	116	28.5
3	345	02.1	192	50.9	248	43.1	248	39.7	131	30.9
4	0	04.5	207	50.5	263	43.7	263	41.6	146	33.4
5	15	07.0	222	50.1	278	44.3	278	43.4	161	35.8
6	30	09.5	237	49.7	293	45.0	293	45.3	176	38.2
7	45	11.9	252	49.3	308	45.6	308	47.2	191	40.6
8	60	14.4	267	48.9	323	46.2	323	49.0	206	43.0
9	75	16.9	282	48.5	338	46.9	338	50.9	221	45.4
10	90	19.3	297	48.1	353	47.5	353	52.8	236	47.8
11	105	21.8	312	47.7	8	48.1	8	54.7	251	50.2
12	120	24.2	327	47.3	23	48.8	23	56.5	266	52.7
13	135	26.7	342	46.9	38	49.4	38	58.4	281	55.1
14	150	29.2	357	46.5	54	50.0	54	00.3	296	57.5
15	165	31.6	12	46.1	68	50.7	69	02.1	311	59.9
16	180	34.1	27	45.7	83	51.3	84	04.0	327	02.3
17	195	36.6	42	45.3	98	51.9	99	05.9	342	04.7
18	210	39.0	57	44.8	113	52.6	114	07.8	357	07.1
19	225	41.5	72	44.4	128	53.2	129	09.6	12	09.5
20	240	44.0	87	44.0	143	53.8	144	11.5	27	12.0
21	255	46.4	102	43.6	158	54.5	159	13.4	42	14.4
22	270	48.9	117	43.2	173	55.1	174	15.2	57	16.8
23	285	51.4	132	42.8	188	55.7	189	17.1	72	19.2
24	300	53.8	147	42.4	203	56.4	204	19.0	87	21.6
Dif	—		-4	-11	+6	-1	+19	0	+24	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 06 ^m 5			Edad: 14 ^d 7 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'6 SD: 16'6 PMG: 0 ^h 16 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	178	23.0	+20 04.7	356	03.8	58	-14 30.2	60 N	20 51	21 59	** **	20 24 19	4 45 93	
1	193	22.9	04.2	10	28.6	58	21.0	58	36	35	** **	17 22	4 54 89	
2	208	22.9	03.7	24	53.4	58	11.8	56	24	16	22 41	11 25	5 01 87	
3	223	22.9	03.2	39	18.3	59	-14 02.4	54	13	21 00	22 10	06 27	08 84	
4	238	22.9	02.7	53	43.3	60	-13 52.9	52	20 03	20 47	21 48	20 02 28	14 82	
5	253	22.9	+20 02.2	68	08.3	60	-13 43.4	50	19 55	20 35	21 30	19 57 31	5 20 80	
6	268	22.9	+20 01.7	82	33.4	61	-13 33.7	45	19 37	20 12	20 56	19 48 35	5 31 77	
7	283	22.8	01.2	96	58.6	62	24.0	40	22	19 53	32	40 38	41 73	
8	298	22.8	00.6	111	23.8	62	14.2	35	19 10	38	20 13	34 40	50 70	
9	313	22.8	+20 00.1	125	49.2	64	-13 04.3	30	18 59	25	19 57	28 43	5 57 67	
10	328	22.8	+19 59.6	140	14.6	64	-12 54.3	20	41	19 04	33	18 47	6 09 64	
11	343	22.8	+19 59.1	154	40.1	65	-12 44.3	10 N	18 25	18 47	19 14	19 09 51	6 20 60	
12	358	22.8	+19 58.6	169	05.6	65	-12 34.1	0	18 10	18 32	18 58	19 00 55	6 30 57	
13	13	22.7	58.1	183	31.3	67	23.9	10 S	17 55	18	43	18 52 58	40 53	
14	28	22.7	57.5	197	57.0	67	13.6	20	40	18 03	30	43 62	6 51 49	
15	43	22.7	57.0	212	22.7	67	-12 03.3	30	22	17 48	17	33 66	7 03 45	
16	58	22.7	56.5	226	48.6	69	-11 52.9	35	12	39	10	27 68	10 43	
17	73	22.7	+19 56.0	241	14.5	69	-11 42.4	40	17 00	17 30	18 03	18 20 72	7 18 40	
18	88	22.7	+19 55.5	255	40.5	70	-11 31.8	45	16 47	17 19	17 55	18 12 75	7 27 37	
19	103	22.7	54.9	270	06.6	71	21.2	50	30	06	46	18 02 80	38 33	
20	118	22.6	54.4	284	32.8	72	-11 10.5	52	22	17 01	42	17 58 81	43 31	
21	133	22.6	53.9	298	59.0	72	-10 59.7	54	14	16 54	38	53 83	48 30	
22	148	22.6	53.4	313	25.3	73	48.9	56	16 04	47	34	47 86	7 55 27	
23	163	22.6	52.9	327	51.7	74	38.0	58	15 53	39	29	41 89	8 01 25	
24	178	22.6	+19 52.3	342	18.1	74	-10 27.0	60 S	15 40	16 31	17 24	17 34 92	8 09 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 3 ^h 55 ^m 8		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: +1.6 PMG: 10 ^h 24 ^m		Mag: -1.9 PMG: 10 ^h 21 ^m		Mag: +0.6 PMG: 18 ^h 08 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	300	53.8	147 42.4	+12 43.0	203 56.4	+23 53.7	204 19.0	+23 07.2	87 21.6	-10 54.8		
1	315	56.3	162 42.0	41.9	218 57.0	53.7	219 20.9	07.2	102 24.0	54.9		
2	330	58.7	177 41.6	40.7	233 57.6	53.6	234 22.7	07.1	117 26.4	54.9		
3	346	01.2	192 41.3	39.6	248 58.3	53.6	249 24.6	07.1	132 28.8	54.9		
4	1	03.7	207 40.9	38.5	263 58.9	53.5	264 26.5	07.1	147 31.2	55.0		
5	16	06.1	222 40.5	+12 37.4	278 59.5	+23 53.4	279 28.3	+23 07.1	162 33.6	-10 55.0		
6	31	08.6	237 40.1	+12 36.3	294 00.2	+23 53.4	294 30.2	+23 07.0	177 36.0	-10 55.0		
7	46	11.1	252 39.7	35.2	309 00.8	53.3	309 32.1	07.0	192 38.5	55.0		
8	61	13.5	267 39.3	34.1	324 01.4	53.3	324 34.0	07.0	207 40.9	55.1		
9	76	16.0	282 38.9	33.0	339 02.1	53.2	339 35.8	07.0	222 43.3	55.1		
10	91	18.5	297 38.5	31.9	354 02.7	53.1	354 37.7	07.0	237 45.7	55.1		
11	106	20.9	312 38.1	+12 30.7	9 03.3	+23 53.1	9 39.6	+23 06.9	252 48.1	-10 55.2		
12	121	23.4	327 37.7	+12 29.6	24 04.0	+23 53.0	24 41.5	+23 06.9	267 50.5	-10 55.2		
13	136	25.8	342 37.3	28.5	39 04.6	53.0	39 43.3	06.9	282 52.9	55.2		
14	151	28.3	357 36.9	27.4	54 05.3	52.9	54 45.2	06.9	297 55.3	55.3		
15	166	30.8	12 36.5	26.3	69 05.9	52.8	69 47.1	06.9	312 57.7	55.3		
16	181	33.2	27 36.1	25.2	84 06.5	52.8	84 48.9	06.8	328 00.1	55.3		
17	196	35.7	42 35.7	+12 24.1	99 07.2	+23 52.7	99 50.8	+23 06.8	343 02.5	-10 55.4		
18	211	38.2	57 35.3	+12 22.9	114 07.8	+23 52.7	114 52.7	+23 06.8	358 04.9	-10 55.4		
19	226	40.6	72 35.0	21.8	129 08.4	52.6	129 54.6	06.8	13 07.4	55.4		
20	241	43.1	87 34.6	20.7	144 09.1	52.5	144 56.4	06.7	28 09.8	55.4		
21	256	45.6	102 34.2	19.6	159 09.7	52.5	159 58.3	06.7	43 12.2	55.5		
22	271	48.0	117 33.8	18.5	174 10.3	52.4	175 00.2	06.7	58 14.6	55.5		
23	286	50.5	132 33.4	17.4	189 11.0	52.3	190 02.1	06.7	73 17.0	55.5		
24	301	53.0	147 33.0	+12 16.2	204 11.6	+23 52.3	205 03.9	+23 06.7	88 19.4	-10 55.6		
Dif	—		-4	-11	+6		-1	+19		0	+24	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 5			Edad: 15 ^d 7 PHE { 4 ^h : 60'4 12 ^h : 60'1 20 ^h : 59'9 SD: 16'5 PMG: 1 ^h 14 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.6	+19 52.3	342	18.1	-10 27.0	110	60 N	** **	2 15	3 23	20 43	16	6 18	90	
1	193	22.6	51.8	356	44.7	76	16.0	58	0 28	39	37	39	19	23	88	
2	208	22.6	51.3	11	11.3	76	-10 05.0	56	1 32	2 58	3 50	36	21	28	85	
3	223	22.6	50.8	25	38.0	77	-9 53.9	54	2 03	3 13	4 00	33	24	32	83	
4	238	22.6	50.2	40	04.7	77	42.7	52	26	27	10	30	26	36	81	
5	253	22.5	+19 49.7	54	31.6	79	-9 31.5	50	2 44	3 38	4 19	20 28	27	6 40	78	
6	268	22.5	+19 49.2	68	58.5	79	-9 20.3	45	3 17	4 02	4 37	20 23	31	6 48	74	
7	283	22.5	48.7	83	25.4	79	-9 08.9	40	3 42	20	4 51	18	35	6 54	71	
8	298	22.5	48.1	97	52.5	81	-8 57.6	35	4 01	35	5 04	14	38	7 00	67	
9	313	22.5	47.6	112	19.6	81	46.2	30	16	4 48	14	11	40	04	66	
10	328	22.5	47.1	126	46.8	82	34.8	20	4 41	5 09	33	05	44	13	60	
11	343	22.5	+19 46.5	141	14.1	83	-8 23.3	10 N	5 00	5 26	5 48	20 00	48	7 20	57	
12	358	22.5	+19 46.0	155	41.4	83	-8 11.8	0	5 15	5 41	6 03	19 55	52	7 27	53	
13	13	22.5	45.5	170	08.8	84	-8 00.2	10 S	29	5 55	17	50	56	33	50	
14	28	22.5	44.9	184	36.3	85	-7 48.6	20	43	6 09	33	45	59	40	46	
15	43	22.5	44.4	199	03.9	86	37.0	30	5 56	25	6 50	39	64	48	42	
16	58	22.4	43.9	213	31.5	86	25.3	35	6 03	33	7 00	35	67	53	39	
17	73	22.4	+19 43.3	227	59.2	87	-7 13.6	40	6 10	6 43	7 12	19 32	69	7 58	36	
18	88	22.4	+19 42.8	242	26.9	87	-7 01.9	45	6 17	6 53	7 26	19 27	73	8 04	33	
19	103	22.4	42.3	256	54.8	89	-6 50.2	50	26	7 06	42	22	77	11	29	
20	118	22.4	41.7	271	22.7	89	38.4	52	30	12	50	19	79	14	27	
21	133	22.4	41.2	285	50.6	89	26.6	54	34	18	7 58	16	81	18	25	
22	148	22.4	40.7	300	18.7	91	14.8	56	38	25	8 08	13	84	22	23	
23	163	22.4	40.1	314	46.8	91	-6 02.9	58	43	33	19	10	86	26	21	
24	178	22.4	+19 39.6	329	14.9	91	-5 51.0	60 S	6 48	7 41	8 32	19 06	89	8 31	18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 3 ^h 51 ^m 8		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: +1.6 PMG: 10 ^h 23 ^m		Mag: -1.9 PMG: 10 ^h 18 ^m		Mag: +0.6 PMG: 18 ^h 04 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	°	'	°	°	°	'						
0	301	53.0	147	33.0	+12 16.2	204	11.6	+23 52.3	205	03.9	+23 06.7	88	19.4	-10 55.6		
1	316	55.4	162	32.6	15.1	219	12.3	52.2	220	05.8	06.6	103	21.8	55.6		
2	331	57.9	177	32.2	14.0	234	12.9	52.2	235	07.7	06.6	118	24.2	55.6		
3	347	00.3	192	31.9	12.9	249	13.5	52.1	250	09.6	06.6	133	26.6	55.7		
4	2	02.8	207	31.5	11.7	264	14.2	52.0	265	11.4	06.6	148	29.0	55.7		
5	17	05.3	222	31.1	+12 10.6	279	14.8	+23 52.0	280	13.3	+23 06.5	163	31.4	-10 55.7		
6	32	07.7	237	30.7	+12 09.5	294	15.4	+23 51.9	295	15.2	+23 06.5	178	33.8	-10 55.8		
7	47	10.2	252	30.3	08.4	309	16.1	51.8	310	17.1	06.5	193	36.2	55.8		
8	62	12.7	267	29.9	07.3	324	16.7	51.8	325	18.9	06.5	208	38.6	55.8		
9	77	15.1	282	29.6	06.1	339	17.4	51.7	340	20.8	06.5	223	41.0	55.9		
10	92	17.6	297	29.2	05.0	354	18.0	51.6	355	22.7	06.4	238	43.4	55.9		
11	107	20.1	312	28.8	+12 03.9	9	18.6	+23 51.6	10	24.6	+23 06.4	253	45.8	-10 55.9		
12	122	22.5	327	28.4	+12 02.8	24	19.3	+23 51.5	25	26.4	+23 06.4	268	48.2	-10 56.0		
13	137	25.0	342	28.0	01.6	39	19.9	51.4	40	28.3	06.4	283	50.7	56.0		
14	152	27.5	357	27.6	+12 00.5	54	20.6	51.3	55	30.2	06.3	298	53.1	56.0		
15	167	29.9	12	27.3	+11 59.4	69	21.2	51.3	70	32.1	06.3	313	55.5	56.1		
16	182	32.4	27	26.9	58.2	84	21.8	51.2	85	33.9	06.3	328	57.9	56.1		
17	197	34.8	42	26.5	+11 57.1	99	22.5	+23 51.1	100	35.8	+23 06.3	344	00.3	-10 56.1		
18	212	37.3	57	26.1	+11 56.0	114	23.1	+23 51.1	115	37.7	+23 06.3	359	02.7	-10 56.2		
19	227	39.8	72	25.8	54.9	129	23.8	51.0	130	39.6	06.2	14	05.1	56.2		
20	242	42.2	87	25.4	53.7	144	24.4	50.9	145	41.4	06.2	29	07.5	56.2		
21	257	44.7	102	25.0	52.6	159	25.0	50.9	160	43.3	06.2	44	09.9	56.3		
22	272	47.2	117	24.6	51.5	174	25.7	50.8	175	45.2	06.2	59	12.3	56.3		
23	287	49.6	132	24.2	50.3	189	26.3	50.7	190	47.1	06.1	74	14.7	56.3		
24	302	52.1	147	23.9	+11 49.2	204	27.0	+23 50.6	205	48.9	+23 06.1	89	17.1	-10 56.4		
Dif	—		-4 -11		+6 -1		+19 0		+19 0		+24 0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 7 PHE	SD: 16 ^h 3				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 5				PMG: 2 ^h 07 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	22.4	+19 39.6	329	14.9	-5 51.0		60 N	20 47	21 52	** **	20 59 16	7 48 88	
1	193	22.4	39.1	343	43.2 ⁹³	39.1 ¹¹⁹		58	33	30	23 22	58 18	51 84	
2	208	22.4	38.5	358	11.5 ⁹³	27.2 ¹¹⁹		56	20	21 11	22 33	57 21	53 82	
3	223	22.4	38.0	12	39.8 ⁹³	15.3 ¹¹⁹		54	10	20 56	22 04	57 22	55 80	
4	238	22.4	37.4	27	08.3 ⁹⁵	-5 03.4 ¹¹⁹		52	20 01	43	21 43	56 24	57 77	
5	253	22.4	+19 36.9	41	36.8 ⁹⁵	-4 51.4 ¹²⁰		50	19 52	20 32	21 26	20 55 26	7 58 76	
6	268	22.4	+19 36.4	56	05.3 ⁹⁵	-4 39.4 ¹²⁰		45	19 35	20 09	20 53	20 54 30	8 02 72	
7	283	22.4	35.8	70	33.9 ⁹⁶	27.5 ¹¹⁹		40	20	19 51	30	53 33	05 68	
8	298	22.4	35.3	85	02.6 ⁹⁷	15.5 ¹²⁰		35	19 08	37	20 11	52 35	07 66	
9	313	22.3	34.7	99	31.3 ⁹⁷	-4 03.5 ¹²⁰		30	18 58	24	19 56	51 38	10 62	
10	328	22.3	34.2	114	00.1 ⁹⁸	-3 51.5 ¹²⁰		20	40	19 04	32	49 43	13 59	
11	343	22.3	+19 33.6	128	29.0 ⁹⁹	-3 39.4 ¹²¹		10 N	18 24	18 47	19 13	20 48 46	8 17 54	
12	358	22.3	+19 33.1	142	57.9 ⁹⁹	-3 27.4 ¹²⁰		0	18 10	18 32	18 57	20 47 49	8 20 51	
13	13	22.3	32.6	157	26.9 ¹⁰⁰	15.4 ¹²⁰		10 S	17 56	18	44	46 53	23 47	
14	28	22.3	32.0	171	55.9 ¹⁰⁰	-3 03.4 ¹²⁰		20	41	18 04	31	44 57	26 43	
15	43	22.3	31.5	186	25.0 ¹⁰¹	-2 51.4 ¹²⁰		30	23	17 49	18	43 61	30 39	
16	58	22.3	30.9	200	54.2 ¹⁰²	39.3 ¹²¹		35	14	41	11	42 64	32 36	
17	73	22.3	+19 30.4	215	23.4 ¹⁰²	-2 27.3 ¹²⁰		40	17 02	17 31	18 04	20 41 67	8 34 34	
18	88	22.3	+19 29.8	229	52.6 ¹⁰²	-2 15.3 ¹²⁰		45	16 49	17 21	17 57	20 40 70	8 37 30	
19	103	22.3	29.3	244	21.9 ¹⁰³	-2 03.3 ¹²⁰		50	33	09	48	39 74	40 27	
20	118	22.3	28.7	258	51.3 ¹⁰⁴	-1 51.3 ¹²⁰		52	25	17 03	45	38 76	41 25	
21	133	22.3	28.2	273	20.7 ¹⁰⁴	39.3 ¹²⁰		54	17	16 57	41	37 78	43 23	
22	148	22.3	27.6	287	50.2 ¹⁰⁵	27.3 ¹²⁰		56	16 07	50	36	37 80	45 21	
23	163	22.3	27.1	302	19.7 ¹⁰⁵	15.3 ¹²⁰		58	15 56	43	32	36 82	47 18	
24	178	22.3	+19 26.5	316	49.3 ¹⁰⁶	-1 03.3 ¹²⁰		60 S	15 44	16 34	17 27	20 35 85	8 49 16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 47 ^m 9		Mag: -3.9 PMG: 14 ^h 11 ^m			Mag: +1.6 PMG: 10 ^h 22 ^m			Mag: -1.9 PMG: 10 ^h 15 ^m			Mag: +0.6 PMG: 18 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	302	52.1	147 23.9	+11 49.2	204 27.0	+23 50.6	205 48.9	+23 06.1	89 17.1	-10 56.4				
1	317	54.6	162 23.5	48.1	219 27.6	50.6	220 50.8	06.1	104 19.5	56.4				
2	332	57.0	177 23.1	46.9	234 28.2	50.5	235 52.7	06.1	119 21.9	56.4				
3	347	59.5	192 22.7	45.8	249 28.9	50.4	250 54.6	06.1	134 24.3	56.5				
4	3 01.9	207 22.4	44.7	264 29.5	50.4	265 56.4	06.0	149 26.7	56.5					
5	18 04.4	222 22.0	+11 43.5	279 30.2	+23 50.3	280 58.3	+23 06.0	164 29.1	-10 56.5					
6	33 06.9	237 21.6	+11 42.4	294 30.8	+23 50.2	296 00.2	+23 06.0	179 31.5	-10 56.6					
7	48 09.3	252 21.3	41.3	309 31.4	50.1	311 02.1	06.0	194 33.9	56.6					
8	63 11.8	267 20.9	40.1	324 32.1	50.1	326 03.9	05.9	209 36.3	56.6					
9	78 14.3	282 20.5	39.0	339 32.7	50.0	341 05.8	05.9	224 38.7	56.7					
10	93 16.7	297 20.1	37.8	354 33.4	49.9	356 07.7	05.9	239 41.1	56.7					
11	108 19.2	312 19.8	+11 36.7	9 34.0	+23 49.8	11 09.6	+23 05.9	254 43.5	-10 56.7					
12	123 21.7	327 19.4	+11 35.6	24 34.6	+23 49.7	26 11.5	+23 05.8	269 45.9	-10 56.8					
13	138 24.1	342 19.0	34.4	39 35.3	49.7	41 13.3	05.8	284 48.3	56.8					
14	153 26.6	357 18.7	33.3	54 35.9	49.6	56 15.2	05.8	299 50.7	56.8					
15	168 29.1	12 18.3	32.2	69 36.6	49.5	71 17.1	05.8	314 53.1	56.9					
16	183 31.5	27 17.9	31.0	84 37.2	49.4	86 19.0	05.8	329 55.5	56.9					
17	198 34.0	42 17.6	+11 29.9	99 37.9	+23 49.4	101 20.8	+23 05.7	344 57.9	-10 56.9					
18	213 36.4	57 17.2	+11 28.7	114 38.5	+23 49.3	116 22.7	+23 05.7	0 00.3	-10 57.0					
19	228 38.9	72 16.8	27.6	129 39.1	49.2	131 24.6	05.7	15 02.7	57.0					
20	243 41.4	87 16.5	26.4	144 39.8	49.1	146 26.5	05.7	30 05.1	57.0					
21	258 43.8	102 16.1	25.3	159 40.4	49.0	161 28.3	05.6	45 07.5	57.1					
22	273 46.3	117 15.7	24.2	174 41.1	49.0	176 30.2	05.6	60 09.9	57.1					
23	288 48.8	132 15.4	23.0	189 41.7	48.9	191 32.1	05.6	75 12.3	57.1					
24	303 51.2	147 15.0	+11 21.9	204 42.4	+23 48.8	206 34.0	+23 05.6	90 14.7	-10 57.2					
Dif	—	-4		-11	+6		-1	+19		0	+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 7	PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /4 20 ^h : 58 ^m /1										
	PMG: 12 ^h 06 ^m 5					SD: 16 ^d 0		PMG: 2 ^h 59 ^m			R ^o : 49 ^m				
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	22.3	+19 26.5	316	49.3	-1 03.3	60 N	** **	2 21	3 27	21 15	15	9 16	84	
1	193	22.3	26.0	331	18.9 ¹⁰⁶	-0 51.3 ¹²⁰	58	0 52	2 44	41	16 18		15 81		
2	208	22.3	25.4	345	48.6 ¹⁰⁷	39.4 ¹¹⁹	56	1 40	3 02	3 53	18 20		15 79		
3	223	22.3	24.9	0	18.3 ¹⁰⁷	27.4 ¹²⁰	54	2 09	17	4 04	19 22		15 76		
4	238	22.3	24.3	14	48.0 ¹⁰⁷	15.5 ¹¹⁹	52	30	30	13	20 24		14 75		
5	253	22.3	+19 23.8	29	17.9 ¹⁰⁹	-0 03.6 ¹¹⁹	50	2 48	3 41	4 21	21 21	26	9 14	73	
6	268	22.3	+19 23.2	43	47.7 ¹⁰⁸	+0 08.3 ¹¹⁹	45	3 20	4 04	4 39	21 24	29	9 14	68	
7	283	22.3	22.7	58	17.6 ¹⁰⁹	20.2 ¹¹⁹	40	3 44	22	4 53	26 32		13 66		
8	298	22.3	22.1	72	47.6 ¹¹⁰	32.0 ¹¹⁸	35	4 02	37	5 05	27 35		13 63		
9	313	22.3	21.5	87	17.6 ¹¹⁰	43.9 ¹¹⁹	30	18	4 49	15	29 37		12 61		
10	328	22.3	21.0	101	47.6 ¹¹⁰	+0 55.7 ¹¹⁸	20	4 41	5 10	33	32 41		12 56		
11	343	22.3	+19 20.4	116	17.7 ¹¹¹	+1 07.5 ¹¹⁸	10 N	5 00	5 26	5 49	21 34	45	9 11	53	
12	358	22.3	+19 19.9	130	47.8 ¹¹¹	+1 19.2 ¹¹⁷	0	5 16	5 41	6 03	21 36	49	9 11	48	
13	13	22.4	19.3	145	18.0 ¹¹²	31.0 ¹¹⁸	10 S	29	5 55	17	39 51		10 45		
14	28	22.4	18.8	159	48.2 ¹¹²	42.7 ¹¹⁷	20	42	6 09	32	41 55		09 42		
15	43	22.4	18.2	174	18.4 ¹¹²	+1 54.4 ¹¹⁷	30	5 55	24	49	44 59		09 37		
16	58	22.4	17.6	188	48.7 ¹¹³	+2 06.1 ¹¹⁷	35	6 01	32	6 59	46 61		08 36		
17	73	22.4	+19 17.1	203	19.0 ¹¹³	+2 17.7 ¹¹⁶	40	6 08	6 41	7 10	21 48	64	9 08	32	
18	88	22.4	+19 16.5	217	49.4 ¹¹⁴	+2 29.3 ¹¹⁶	45	6 16	6 51	7 24	21 50	67	9 07	30	
19	103	22.4	16.0	232	19.7 ¹¹³	40.9 ¹¹⁶	50	24	7 04	40	53 71		07 25		
20	118	22.4	15.4	246	50.2 ¹¹⁵	+2 52.5 ¹¹⁶	52	28	09	47	54 73		06 24		
21	133	22.4	14.8	261	20.6 ¹¹⁴	+3 04.0 ¹¹⁵	54	32	15	7 55	55 75		06 22		
22	148	22.4	14.3	275	51.1 ¹¹⁵	15.5 ¹¹⁵	56	36	22	8 05	57 77		06 20		
23	163	22.4	13.7	290	21.7 ¹¹⁶	26.9 ¹¹⁴	58	40	29	15	21 58	80	05 18		
24	178	22.4	+19 13.1	304	52.2 ¹¹⁵	+3 38.3 ¹¹⁴	60 S	6 45	7 38	8 28	22 00	82	9 05	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 44 ^m 0		Mag: -3.9 PMG: 14 ^h 11 ^m		Mag: +1.6 PMG: 10 ^h 21 ^m		Mag: -1.9 PMG: 10 ^h 12 ^m		Mag: +0.6 PMG: 17 ^h 56 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	°	°	'	°
0	303	51.2	147 15.0	+11 21.9	204 42.4	+23 48.8	206 34.0	+23 05.6	90 14.7	-10 57.2	
1	318	53.7	162 14.6	20.7	219 43.0	48.7	221 35.9	05.5	105 17.1	57.2	
2	333	56.2	177 14.3	19.6	234 43.6	48.6	236 37.7	05.5	120 19.5	57.2	
3	348	58.6	192 13.9	18.4	249 44.3	48.6	251 39.6	05.5	135 21.9	57.3	
4	4 01.1	207 13.5	17.3	264 44.9	48.5	266 41.5	266 41.5	05.5	150 24.3	57.3	
5	19 03.6	222 13.2	+11 16.1	279 45.6	+23 48.4	281 43.4	+23 05.4		165 26.7	-10 57.3	
6	34 06.0	237 12.8	+11 15.0	294 46.2	+23 48.3	296 45.3	+23 05.4		180 29.1	-10 57.4	
7	49 08.5	252 12.5	13.8	309 46.9	48.2	311 47.1	05.4		195 31.5	57.4	
8	64 10.9	267 12.1	12.7	324 47.5	48.1	326 49.0	05.4		210 33.9	57.4	
9	79 13.4	282 11.7	11.5	339 48.1	48.1	341 50.9	05.3		225 36.3	57.5	
10	94 15.9	297 11.4	10.4	354 48.8	48.0	356 52.8	05.3		240 38.7	57.5	
11	109 18.3	312 11.0	+11 09.2	9 49.4	+23 47.9	11 54.6	+23 05.3		255 41.1	-10 57.5	
12	124 20.8	327 10.7	+11 08.1	24 50.1	+23 47.8	26 56.5	+23 05.3		270 43.5	-10 57.6	
13	139 23.3	342 10.3	06.9	39 50.7	47.7	41 58.4	05.3		285 45.9	57.6	
14	154 25.7	357 09.9	05.8	54 51.4	47.6	57 00.3	05.2		300 48.3	57.6	
15	169 28.2	12 09.6	04.6	69 52.0	47.6	72 02.2	05.2		315 50.7	57.7	
16	184 30.7	27 09.2	03.5	84 52.7	47.5	87 04.0	05.2		330 53.1	57.7	
17	199 33.1	42 08.9	+11 02.3	99 53.3	+23 47.4	102 05.9	+23 05.2		345 55.5	-10 57.8	
18	214 35.6	57 08.5	+11 01.2	114 53.9	+23 47.3	117 07.8	+23 05.1		0 57.9	-10 57.8	
19	229 38.0	72 08.2	+11 00.0	129 54.6	47.2	132 09.7	05.1		16 00.2	57.8	
20	244 40.5	87 07.8	+10 58.9	144 55.2	47.1	147 11.6	05.1		31 02.6	57.9	
21	259 43.0	102 07.4	57.7	159 55.9	47.0	162 13.4	05.1		46 05.0	57.9	
22	274 45.4	117 07.1	56.6	174 56.5	46.9	177 15.3	05.0		61 07.4	57.9	
23	289 47.9	132 06.7	55.4	189 57.2	46.9	192 17.2	05.0		76 09.8	58.0	
24	304 50.4	147 06.4	+10 54.3	204 57.8	+23 46.8	207 19.1	+23 05.0		91 12.2	-10 58.0	
Dif	—		-4	-12	+6	-1	+19	0	+24	0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 7	PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 1										
	PMG: 12 ^h 06 ^m 5					SD: 15 ^h 8			PMG: 3 ^h 48 ^m		R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	22.4	+19	13.1	304	52.2	+3	38.3	60 N	20 42	21 46	** **	21 30 17	10 40 80	
1	193	22.4		12.6	319	22.8 ¹¹⁶	+3	49.7 ¹¹⁴	58	29	24	23 07	34 20	36 78	
2	208	22.4		12.0	333	53.5 ¹¹⁷	+4	01.1 ¹¹⁴	56	17	21 07	22 25	38 22	34 75	
3	223	22.4		11.4	348	24.1 ¹¹⁶		12.4 ¹¹³	54	20 07	20 52	21 59	41 24	31 74	
4	238	22.4		10.9	2	54.8 ¹¹⁷		23.7 ¹¹³	52	19 58	40	38	44 25	29 72	
5	253	22.4	+19	10.3	17	25.5 ¹¹⁷	+4	34.9 ¹¹²	50	19 50	20 29	21 22	21 47 27	10 27 70	
6	268	22.5	+19	09.7	31	56.3 ¹¹⁸	+4	46.1 ¹¹²	45	19 33	20 07	20 50	21 53 30	10 22 67	
7	283	22.5		09.2	46	27.0 ¹¹⁷	+4	57.2 ¹¹¹	40	19	19 49	27	21 58 33	19 63	
8	298	22.5		08.6	60	57.8 ¹¹⁸	+5	08.3 ¹¹¹	35	19 07	35	20 09	22 02 36	16 60	
9	313	22.5		08.0	75	28.7 ¹¹⁹		19.4 ¹¹¹	30	18 57	23	19 54	06 38	13 58	
10	328	22.5		07.5	89	59.5 ¹¹⁸		30.4 ¹¹⁰	20	39	19 03	31	13 41	08 54	
11	343	22.5	+19	06.9	104	30.4 ¹¹⁹	+5	41.4 ¹¹⁰	10 N	18 24	18 46	19 13	22 19 44	10 04 51	
12	358	22.5	+19	06.3	119	01.3 ¹¹⁹	+5	52.4 ¹¹⁰	0	18 10	18 32	18 57	22 25 47	9 59 48	
13	13	22.5		05.7	133	32.2 ¹¹⁹	+6	03.3 ¹⁰⁹	10 S	17 56	18	44	30 51	55 45	
14	28	22.5		05.2	148	03.2 ¹²⁰		14.1 ¹⁰⁸	20	41	18 05	31	36 54	51 41	
15	43	22.5		04.6	162	34.2 ¹²⁰		24.9 ¹⁰⁸	30	25	17 50	19	43 58	46 38	
16	58	22.5		04.0	177	05.2 ¹²⁰		35.7 ¹⁰⁸	35	15	42	13	47 60	44 35	
17	73	22.6	+19	03.5	191	36.2 ¹²⁰	+6	46.4 ¹⁰⁷	40	17 04	17 33	18 06	22 52 62	9 40 33	
18	88	22.6	+19	02.9	206	07.2 ¹²⁰	+6	57.0 ¹⁰⁶	45	16 51	17 23	17 59	22 57 65	9 37 29	
19	103	22.6		02.3	220	38.3 ¹²¹	+7	07.6 ¹⁰⁶	50	35	11	51	23 04 68	32 27	
20	118	22.6		01.7	235	09.4 ¹²¹		18.2 ¹⁰⁶	52	28	06	47	07 70	30 25	
21	133	22.6		01.2	249	40.5 ¹²¹		28.7 ¹⁰⁵	54	20	17 00	43	10 72	28 23	
22	148	22.6	+19	00.6	264	11.6 ¹²¹		39.2 ¹⁰⁵	56	10	16 53	39	14 74	26 21	
23	163	22.6	+19	00.0	278	42.7 ¹²¹		49.6 ¹⁰⁴	58	16 00	46	35	18 76	23 19	
24	178	22.6	+18	59.4	293	13.8 ¹²¹	+7	59.9 ¹⁰³	60 S	15 48	16 38	17 30	23 22 79	9 20 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 40 ^m 0		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: +1.6 PMG: 10 ^h 20 ^m		Mag: -1.9 PMG: 10 ^h 09 ^m		Mag: +0.6 PMG: 17 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	304	50.4	147	06.4	+10	54.3	204	57.8	+23	05.0
1	319	52.8	162	06.0		53.1	219	58.5		05.0
2	334	55.3	177	05.7		51.9	234	59.1		04.9
3	349	57.8	192	05.3		50.8	249	59.8		04.9
4	5	00.2	207	05.0		49.6	265	00.4		04.9
5	20	02.7	222	04.6	+10	48.5	280	01.1	+23	04.9
6	35	05.2	237	04.3	+10	47.3	295	01.7	+23	04.8
7	50	07.6	252	03.9		46.2	310	02.3		04.8
8	65	10.1	267	03.6		45.0	325	03.0		04.8
9	80	12.5	282	03.2		43.8	340	03.6		04.8
10	95	15.0	297	02.9		42.7	355	04.3		04.7
11	110	17.5	312	02.5	+10	41.5	10	04.9	+23	04.7
12	125	19.9	327	02.2	+10	40.3	25	05.6	+23	04.7
13	140	22.4	342	01.8		39.2	40	06.2		04.7
14	155	24.9	357	01.5		38.0	55	06.9		04.6
15	170	27.3	12	01.1		36.9	70	07.5		04.6
16	185	29.8	27	00.8		35.7	85	08.2		04.6
17	200	32.3	42	00.4	+10	34.5	100	08.8	+23	04.6
18	215	34.7	57	00.1	+10	33.4	115	09.5	+23	04.5
19	230	37.2	71	59.8		32.2	130	10.1		04.5
20	245	39.6	86	59.4		31.0	145	10.8		04.5
21	260	42.1	101	59.1		29.9	160	11.4		04.5
22	275	44.6	116	58.7		28.7	175	12.1		04.4
23	290	47.0	131	58.4		27.5	190	12.7		04.4
24	305	49.5	146	58.0	+10	26.4	205	13.4	+23	04.5
Dif	—		-3		-12		+6		-1	
							+19		0	
									+24	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 5			Edad: 19 ^d 7 PHE { 4 ^h : 56'8 12 ^h : 56'5 20 ^h : 56'3 SD: 15'5 PMG: 4 ^h 36 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.6	+18 59.4	293	13.8	+7 59.9	60 N	** *	2 28	3 32	21 47	20	12 00	77	
1	193	22.6	58.8	307	45.0 ¹²²	+8 10.2 ¹⁰³	58	1 07	2 49	45	21 54	22	11 54	75	
2	208	22.7	58.3	322	16.2 ¹²²	20.5 ¹⁰³	56	1 48	3 07	3 57	22 00	24	49	73	
3	223	22.7	57.7	336	47.4 ¹²²	30.7 ¹⁰²	54	2 15	21	4 07	05 26		45	70	
4	238	22.7	57.1	351	18.6 ¹²²	40.8 ¹⁰¹	52	35	33	16	09 28		41	68	
5	253	22.7	+18 56.5	5	49.8 ¹²²	+8 50.9 ¹⁰¹	50	2 52	3 44	4 24	22 14	29	11 37	67	
6	268	22.7	+18 55.9	20	21.1 ¹²³	+9 00.9 ¹⁰⁰	45	3 23	4 07	4 41	22 23	33	11 29	63	
7	283	22.7	55.4	34	52.3 ¹²²	10.9 ¹⁰⁰	40	3 46	24	4 55	31 35		22	61	
8	298	22.7	54.8	49	23.6 ¹²³	20.8 ⁹⁹	35	4 04	38	5 06	38 37		16	59	
9	313	22.8	54.2	63	54.8 ¹²²	30.6 ⁹⁸	30	19	4 50	17	44 39		11	57	
10	328	22.8	53.6	78	26.1 ¹²³	40.4 ⁹⁸	20	4 42	5 10	34	22 54	42	11 02	53	
11	343	22.8	+18 53.0	92	57.4 ¹²³	+9 50.1 ⁹⁷	10 N	5 01	5 27	5 49	23 03	45	10 55	50	
12	358	22.8	+18 52.5	107	28.7 ¹²³	+9 59.8 ⁹⁶	0	5 16	5 41	6 03	23 12	47	10 47	48	
13	13	22.8	51.9	122	00.0 ¹²³	+10 09.4 ⁹⁶	10 S	29	5 55	17	21 49		40	45	
14	28	22.8	51.3	136	31.4 ¹²⁴	18.9 ⁹⁵	20	41	6 08	31	30 53		32	42	
15	43	22.9	50.7	151	02.7 ¹²³	28.4 ⁹⁵	30	5 54	23	48	41 55		24	38	
16	58	22.9	50.1	165	34.0 ¹²³	37.8 ⁹⁴	35	6 00	31	6 58	47 57		19	36	
17	73	22.9	+18 49.5	180	05.4 ¹²⁴	+10 47.2 ⁹⁴	40	6 07	6 39	7 09	23 54	60	10 13	34	
18	88	22.9	+18 48.9	194	36.7 ¹²³	+10 56.5 ⁹³	45	6 14	6 49	7 21	** ** *	**	10 06	32	
19	103	22.9	48.3	209	08.1 ¹²⁴	+11 05.7 ⁹²	50	22	7 01	37	** ** *	**	9 59	28	
20	118	22.9	47.8	223	39.4 ¹²³	14.9 ⁹²	52	25	07	44	** ** *	**	55	26	
21	133	23.0	47.2	238	10.8 ¹²⁴	24.0 ⁹¹	54	29	12	7 52	** ** *	**	51	25	
22	148	23.0	46.6	252	42.2 ¹²⁴	33.0 ⁹⁰	56	33	19	8 01	** ** *	**	47	23	
23	163	23.0	46.0	267	13.6 ¹²⁴	42.0 ⁹⁰	58	37	26	12	** ** *	**	42	20	
24	178	23.0	+18 45.4	281	44.9 ¹²³	+11 50.9 ⁸⁹	60 S	6 42	7 34	8 23	** ** *	**	9 36	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 3 ^h 36 ^m 1		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: +1.6 PMG: 10 ^h 19 ^m		Mag: -2.0 PMG: 10 ^h 06 ^m		Mag: +0.6 PMG: 17 ^h 49 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	305	49.5	146	58.0	+10 26.4	205	13.4	+23 44.5	208	04.2	+23 04.4		
1	320	52.0	161	57.7	25.2	220	14.0	44.4	223	06.1	04.4		
2	335	54.4	176	57.3	24.0	235	14.7	44.3	238	08.0	04.3		
3	350	56.9	191	57.0	22.9	250	15.3	44.2	253	09.9	04.3		
4	5	59.4	206	56.7	21.7	265	16.0	44.1	268	11.8	04.3		
5	21	01.8	221	56.3	+10 20.5	280	16.6	+23 44.0	283	13.6	+23 04.3		
6	36	04.3	236	56.0	+10 19.4	295	17.3	+23 43.9	298	15.5	+23 04.2		
7	51	06.8	251	55.6	18.2	310	17.9	43.8	313	17.4	04.2		
8	66	09.2	266	55.3	17.0	325	18.6	43.7	328	19.3	04.2		
9	81	11.7	281	55.0	15.8	340	19.2	43.6	343	21.2	04.2		
10	96	14.1	296	54.6	14.7	355	19.9	43.5	358	23.1	04.1		
11	111	16.6	311	54.3	+10 13.5	10	20.5	+23 43.4	13	24.9	+23 04.1		
12	126	19.1	326	54.0	+10 12.3	25	21.2	+23 43.3	28	26.8	+23 04.1		
13	141	21.5	341	53.6	11.2	40	21.8	43.2	43	28.7	04.1		
14	156	24.0	356	53.3	10.0	55	22.5	43.1	58	30.6	04.0		
15	171	26.5	11	52.9	08.8	70	23.1	43.0	73	32.5	04.0		
16	186	28.9	26	52.6	07.6	85	23.8	42.9	88	34.4	04.0		
17	201	31.4	41	52.3	+10 06.5	100	24.4	+23 42.8	103	36.2	+23 04.0		
18	216	33.9	56	51.9	+10 05.3	115	25.1	+23 42.7	118	38.1	+23 03.9		
19	231	36.3	71	51.6	04.1	130	25.7	42.6	133	40.0	03.9		
20	246	38.8	86	51.3	02.9	145	26.4	42.5	148	41.9	03.9		
21	261	41.3	101	50.9	01.8	160	27.0	42.4	163	43.8	03.9		
22	276	43.7	116	50.6	+10 00.6	175	27.7	42.3	178	45.7	03.8		
23	291	46.2	131	50.3	+9 59.4	190	28.3	42.2	193	47.5	03.8		
24	306	48.6	146	49.9	+9 58.2	205	29.0	+23 42.1	208	49.4	+23 03.8		
Dif	—		-3	-12		+7	-1		+19	0		+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 20 ^d 7 PHE	SD: 15/3				R°: 48 ^m						
	PMG: 12 ^h 06 ^m 4				PMG: 5 ^h 23 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	23.0	+18 45.4	281	44.9	+11 50.9	88	60 N	20 37	21 39	** **	22 07 24	13 17 73		
1	193	23.0	44.8	296	16.3 ¹²⁴	+11 59.7	88	58	24	19	22 54	16 27	09 70		
2	208	23.0	44.2	310	47.7 ¹²⁴	+12 08.5	87	56	13	21 02	22 18	24 28	13 02 68		
3	223	23.1	43.6	325	19.1 ¹²⁴	17.2	87	54	20 03	20 48	21 53	31 30	12 55 67		
4	238	23.1	43.0	339	50.5 ¹²⁴	25.8	86	52	19 55	36	34	37 32	49 65		
5	253	23.1	+18 42.4	354	21.9 ¹²⁴	+12 34.4	86	50	19 47	20 26	21 18	22 43 33	12 44 64		
6	268	23.1	+18 41.8	8	53.3 ¹²⁴	+12 42.9	85	45	19 30	20 04	20 47	22 56 35	12 32 61		
7	283	23.1	41.3	23	24.7 ¹²⁴	51.3	84	40	17	19 47	25	23 06 37	23 58		
8	298	23.2	40.7	37	56.1 ¹²⁴	+12 59.7	84	35	19 05	33	20 07	15 39	15 56		
9	313	23.2	40.1	52	27.5 ¹²⁴	+13 08.0	83	30	18 55	21	19 53	23 40	12 08 55		
10	328	23.2	39.5	66	58.9 ¹²⁴	16.2	82	20	38	19 02	30	36 43	11 55 52		
11	343	23.2	+18 38.9	81	30.3 ¹²⁴	+13 24.3	81	10 N	18 24	18 46	19 12	23 48 45	11 45 49		
12	358	23.3	+18 38.3	96	01.7 ¹²⁴	+13 32.4	81	0	18 10	18 32	18 57	23 59 48	11 35 47		
13	13	23.3	37.7	110	33.1 ¹²⁴	40.4	80	10 S	17 56	19	44	** ** *	25 45		
14	28	23.3	37.1	125	04.5 ¹²⁴	48.3	79	20	42	18 05	32	** ** *	14 43		
15	43	23.3	36.5	139	35.9 ¹²⁴	+13 56.1	78	30	26	17 51	20	** ** *	11 02 40		
16	58	23.3	35.9	154	07.3 ¹²⁴	+14 03.9	78	35	16	43	14	** ** *	10 55 38		
17	73	23.4	+18 35.3	168	38.7 ¹²⁴	+14 11.6	77	40	17 06	17 35	18 07	** ** *	10 47 36		
18	88	23.4	+18 34.7	183	10.1 ¹²⁴	+14 19.2	76	45	16 53	17 25	18 00	0 02 62	10 38 34		
19	103	23.4	34.1	197	41.4 ¹²³	26.8	76	50	38	13	17 53	12 66	27 31		
20	118	23.4	33.5	212	12.8 ¹²⁴	34.2	74	52	31	08	49	17 67	21 30		
21	133	23.5	32.9	226	44.2 ¹²⁴	41.6	74	54	23	17 03	46	22 69	16 28		
22	148	23.5	32.3	241	15.6 ¹²⁴	49.0	74	56	14	16 56	42	28 70	10 26		
23	163	23.5	31.7	255	46.9 ¹²³	+14 56.2	72	58	16 04	49	38	34 73	10 02 25		
24	178	23.5	+18 31.1	270	18.3 ¹²⁴	+15 03.4	72	60 S	15 52	16 42	17 33	0 41 75	9 55 22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 32 ^m 2		Mag: -3.9 PMG: 14 ^h 13 ^m		Mag: +1.6 PMG: 10 ^h 18 ^m		Mag: -2.0 PMG: 10 ^h 03 ^m		Mag: +0.6 PMG: 17 ^h 45 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	306	48.6	146	49.9	+9 58.2	205	29.0	+23 42.1	208	49.4	+23 03.8
1	321	51.1	161	49.6	57.0	220	29.6	42.0	223	51.3	03.7
2	336	53.6	176	49.3	55.9	235	30.3	41.9	238	53.2	03.7
3	351	56.0	191	48.9	54.7	250	31.0	41.8	253	55.1	03.7
4	6	58.5	206	48.6	53.5	265	31.6	41.7	268	57.0	03.7
5	22	01.0	221	48.3	+9 52.3	280	32.3	+23 41.6	283	58.8	+23 03.6
6	37	03.4	236	47.9	+9 51.1	295	32.9	+23 41.5	299	00.7	+23 03.6
7	52	05.9	251	47.6	50.0	310	33.6	41.4	314	02.6	03.6
8	67	08.4	266	47.3	48.8	325	34.2	41.2	329	04.5	03.6
9	82	10.8	281	47.0	47.6	340	34.9	41.1	344	06.4	03.5
10	97	13.3	296	46.6	46.4	355	35.5	41.0	359	08.3	03.5
11	112	15.7	311	46.3	+9 45.2	10	36.2	+23 40.9	14	10.2	+23 03.5
12	127	18.2	326	46.0	+9 44.1	25	36.8	+23 40.8	29	12.0	+23 03.5
13	142	20.7	341	45.6	42.9	40	37.5	40.7	44	13.9	03.4
14	157	23.1	356	45.3	41.7	55	38.1	40.6	59	15.8	03.4
15	172	25.6	11	45.0	40.5	70	38.8	40.5	74	17.7	03.4
16	187	28.1	26	44.7	39.3	85	39.5	40.4	89	19.6	03.4
17	202	30.5	41	44.3	+9 38.1	100	40.1	+23 40.3	104	21.5	+23 03.3
18	217	33.0	56	44.0	+9 37.0	115	40.8	+23 40.2	119	23.4	+23 03.3
19	232	35.5	71	43.7	35.8	130	41.4	40.0	134	25.2	03.3
20	247	37.9	86	43.4	34.6	145	42.1	39.9	149	27.1	03.2
21	262	40.4	101	43.0	33.4	160	42.7	39.8	164	29.0	03.2
22	277	42.9	116	42.7	32.2	175	43.4	39.7	179	30.9	03.2
23	292	45.3	131	42.4	31.0	190	44.0	39.6	194	32.8	03.2
24	307	47.8	146	42.1	+9 29.8	205	44.7	+23 39.5	209	34.7	+23 03.1
Dif	—		-3	-12		+7	-1		+19		0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 21 ^d 7 PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 1 20 ^h : 54 ^h 9 PMG: 6 ^h 11 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	178	23.5	+18	31.1	270	18.3	+15	03.4	60 N	** **	2 34	3 36	22 31	31	14 30	67		
1	193	23.6		30.5	284	49.7 ¹²⁴		10.5	71 58	1 20	2 54	3 49		43 32		19 65		
2	208	23.6		29.9	299	21.0 ¹²³		17.5	70 56	1 56	3 11	4 00	22 52	35		10 63		
3	223	23.6		29.3	313	52.4 ¹²⁴		24.4	69 54	2 21		25 10	23 01	36		14 02	62	
4	238	23.6		28.6	328	23.7 ¹²³		31.3	69 52		40 37	19 19		09 37		13 54	61	
5	253	23.7	+18	28.0	342	55.1 ¹²⁴	+15	38.0	67 50	2 56	3 47	4 27	23 16	37		13 48	59	
6	268	23.7	+18	27.4	357	26.4 ¹²³	+15	44.7	67 45	3 26	4 09	4 43	23 31	39		13 33	58	
7	283	23.7		26.8	11	57.7 ¹²³		51.4	67 40	3 48		26 4 57		43 41		21 56		
8	298	23.7		26.2	26	29.0 ¹²³	+15	57.9	65 35	4 06		40 5 08	23 54	42		11 55		
9	313	23.8		25.6	41	00.4 ¹²⁴	+16	04.3	64 30		20 4 52	18 18	** **	** **		13 03	53	
10	328	23.8		25.0	55	31.7 ¹²³		10.7	64 20	4 43	5 11	35	** **	** **		12 47	52	
11	343	23.8	+18	24.4	70	03.0 ¹²³	+16	17.0	63 10 N	5 01	5 27	5 49	** **	** **		12 34	50	
12	358	23.8	+18	23.8	84	34.3 ¹²³	+16	23.2	62 0	5 16	5 41	6 03	** **	** **		12 22	48	
13	13	23.9		23.2	99	05.6 ¹²³		29.4	60 10 S		29 5 54	16 16	0 10	50		12 10	46	
14	28	23.9		22.6	113	36.9 ¹²³		35.4	60 20		41 6 07	31 31		23 51		11 57	44	
15	43	23.9		22.0	128	08.1 ¹²²		41.4	60 30		53 21	47 36		54 42		42 42		
16	58	24.0		21.3	142	39.4 ¹²³		47.3	59 35	5 59		29 6 56	44 56			33 41		
17	73	24.0	+18	20.7	157	10.7 ¹²³	+16	53.1	58 40	6 05	6 38	7 07	0 54	57		11 23	39	
18	88	24.0	+18	20.1	171	41.9 ¹²²	+16	58.8	57 45	6 12	6 47	7 19	1 04	60		11 12	37	
19	103	24.0		19.5	186	13.2 ¹²³	+17	04.4	56 50		19 6 59	34 18		61 10		58 35		
20	118	24.1		18.9	200	44.4 ¹²²		10.0	56 52	23	7 04	41 24		63 51		34 51		
21	133	24.1		18.3	215	15.7 ¹²³		15.4	54 54			49 31		64 44		33 44		
22	148	24.1		17.7	229	46.9 ¹²²		20.8	54 56			16 7 58	38 66			36 31		
23	163	24.2		17.0	244	18.1 ¹²²		26.1	53 58		34 22	8 08	47 68			27 29		
24	178	24.2	+18	16.4	258	49.3 ¹²²	+17	31.3	52 60 S	6 39	7 30	8 19	1 56	71		10 17	27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 28 ^m 2		Mag: -3.9 PMG: 14 ^h 13 ^m		Mag: +1.6 PMG: 10 ^h 17 ^m		Mag: -2.0 PMG: 10 ^h 00 ^m		Mag: +0.6 PMG: 17 ^h 41 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	307	47.8	146	42.1	+9 205	44.7	+23 309	34.7	+23 94	04.2
1	322	50.2	161	41.8		28.6		39.4		06.6
2	337	52.7	176	41.4		27.5		39.3		09.0
3	352	55.2	191	41.1		26.3		39.1		11.4
4	7	57.6	206	40.8		25.1		39.0		13.8
5	23	00.1	221	40.5	+9 280	48.0	+23 389	44.1	+23 169	16.2
6	38	02.6	236	40.1	+9 295	48.6	+23 388	46.0	+23 184	18.5
7	53	05.0	251	39.8		21.5		38.7		20.9
8	68	07.5	266	39.5		20.3		38.6		23.3
9	83	10.0	281	39.2		19.1		38.4		25.7
10	98	12.4	296	38.9		17.9		38.3		28.1
11	113	14.9	311	38.5	+9 10	51.9	+23 382	14 55.4	+23 259	30.4
12	128	17.4	326	38.2	+9 25	52.6	+23 381	29 57.3	+23 274	32.8
13	143	19.8	341	37.9		14.3		38.0		35.2
14	158	22.3	356	37.6		13.2		37.9		37.6
15	173	24.7	11	37.3		12.0		37.7		40.0
16	188	27.2	26	37.0		10.8		37.6		42.4
17	203	29.7	41	36.6	+9 100	55.9	+23 375	105 06.8	+23 349	44.7
18	218	32.1	56	36.3	+9 115	56.5	+23 374	120 08.7	+23 4	47.1
19	233	34.6	71	36.0		07.2		37.3		49.5
20	248	37.1	86	35.7		06.0		37.1		51.9
21	263	39.5	101	35.4		04.8		37.0		54.3
22	278	42.0	116	35.1		03.6		36.9		56.6
23	293	44.5	131	34.8		02.4		36.8		59.0
24	308	46.9	146	34.4	+9 206	00.5	+23 367	210 20.0	+23 95	01.4
Dif	—		-3		-12		+7		+19	
									0	
									+24	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 22 ^d 7 PHE { 4 ^h : 54 ^m /8 12 ^h : 54 ^m /6 20 ^h : 54 ^m /5					Civil		Náutico		Hora R°		
	PMG: 12 ^h 06 ^m 4			PMG: 6 ^h 58 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	178	24.2	+18	16.4	258	49.3	+17	31.3	60 N	20 33	21 33	** ** *	23 02	40	15 37 59
1	193	24.2		15.8	273	20.5 ¹²²		36.5 ⁵²	58	20	21 14	22 42	15 41	24 58	
2	208	24.3		15.2	287	51.7 ¹²²		41.5 ⁵⁰	56	09	20 58	22 10	27 41	13 57	
3	223	24.3		14.6	302	22.9 ¹²²		46.5 ⁵⁰	54	20 00	44	21 47	37 42	15 04 56	
4	238	24.3		14.0	316	54.1 ¹²²		51.3 ⁴⁸	52	19 51	33	29	46 42	14 55 56	
5	253	24.4	+18	13.3	331	25.3 ¹²²	+17	56.1 ⁴⁸	50	19 44	20 22	21 13	23 53	44	14 47 55
6	268	24.4	+18	12.7	345	56.4 ¹²¹	+18	00.8 ⁴⁷	45	19 28	20 02	20 44	** ** *	14 31 53	
7	283	24.4		12.1	0	27.6 ¹²²		05.4 ⁴⁶	40	15	19 45	22	** ** *	17 53	
8	298	24.5		11.5	14	58.8 ¹²²		10.0 ⁴⁶	35	19 04	31	20 05	** ** *	14 06 52	
9	313	24.5		10.9	29	29.9 ¹²¹		14.4 ⁴⁴	30	18 54	20	19 51	0 03 43	13 56 51	
10	328	24.5		10.2	44	01.1 ¹²²		18.8 ⁴⁴	20	37	19 01	29	19 45	39 50	
11	343	24.6	+18	09.6	58	32.2 ¹²¹	+18	23.0 ⁴²	10 N	18 23	18 45	19 11	0 33 47	13 24 48	
12	358	24.6	+18	09.0	73	03.3 ¹²¹	+18	27.2 ⁴²	0	18 10	18 32	18 57	0 47 47	13 10 47	
13	13	24.6		08.4	87	34.4 ¹²¹		31.3 ⁴¹	10 S	17 57	19	44	1 00 49	12 56 46	
14	28	24.7		07.8	102	05.5 ¹²¹		35.3 ⁴⁰	20	43	18 06	33	14 51	41 45	
15	43	24.7		07.1	116	36.7 ¹²²		39.2 ³⁹	30	27	17 52	21	30 53	24 44	
16	58	24.7		06.5	131	07.8 ¹²¹		43.0 ³⁸	35	18	45	15	40 53	14 43	
17	73	24.8	+18	05.9	145	38.8 ¹²⁰	+18	46.7 ³⁷	40	17 07	17 36	18 09	1 51 54	12 02 43	
18	88	24.8	+18	05.3	160	09.9 ¹²¹	+18	50.4 ³⁷	45	16 55	17 27	18 02	2 04 55	11 49 42	
19	103	24.8		04.6	174	41.0 ¹²¹		53.9 ³⁵	50	41	16	17 55	19 58	33 40	
20	118	24.9		04.0	189	12.1 ¹²¹	+18	57.4 ³⁵	52	34	11	52	27 58	25 40	
21	133	24.9		03.4	203	43.2 ¹²¹	+19	00.8 ³⁴	54	26	17 05	49	35 59	17 38	
22	148	24.9		02.7	218	14.2 ¹²⁰		04.1 ³³	56	17	16 59	45	44 60	11 07 38	
23	163	25.0		02.1	232	45.3 ¹²¹		07.3 ³²	58	16 08	53	41	2 55 61	10 56 37	
24	178	25.0	+18	01.5	247	16.3 ¹²⁰	+19	10.4 ³¹	60 S	15 57	16 45	17 37	3 07 63	10 44 35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 24 ^m 3		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: +1.6 PMG: 10 ^h 16 ^m		Mag: -2.0 PMG: 9 ^h 57 ^m		Mag: +0.6 PMG: 17 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	308	46.9	146	34.4	+9	01.2	206	00.5	+23	36.7
1	323	49.4	161	34.1	+9	00.0	221	01.1		36.5
2	338	51.8	176	33.8	+8	58.8	236	01.8		36.4
3	353	54.3	191	33.5		57.6	251	02.5		36.3
4	8	56.8	206	33.2		56.4	266	03.1		36.2
5	23	59.2	221	32.9	+8	55.2	281	03.8	+23	36.0
6	39	01.7	236	32.6	+8	54.0	296	04.4	+23	35.9
7	54	04.2	251	32.3		52.8	311	05.1		35.8
8	69	06.6	266	32.0		51.6	326	05.8		35.7
9	84	09.1	281	31.6		50.4	341	06.4		35.6
10	99	11.6	296	31.3		49.2	356	07.1		35.4
11	114	14.0	311	31.0	+8	48.0	11	07.7	+23	35.3
12	129	16.5	326	30.7	+8	46.8	26	08.4	+23	35.2
13	144	19.0	341	30.4		45.6	41	09.1		35.1
14	159	21.4	356	30.1		44.4	56	09.7		34.9
15	174	23.9	11	29.8		43.2	71	10.4		34.8
16	189	26.3	26	29.5		42.0	86	11.0		34.7
17	204	28.8	41	29.2	+8	40.8	101	11.7	+23	34.5
18	219	31.3	56	28.9	+8	39.6	116	12.4	+23	34.4
19	234	33.7	71	28.6		38.4	131	13.0		34.3
20	249	36.2	86	28.3		37.2	146	13.7		34.2
21	264	38.7	101	28.0		36.0	161	14.4		34.0
22	279	41.1	116	27.7		34.8	176	15.0		33.9
23	294	43.6	131	27.4		33.5	191	15.7		33.8
24	309	46.1	146	27.0	+8	32.3	206	16.3	+23	33.7
Dif	—		-3		-12		+7		-1	
							+19		0	
									+24	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 3				Edad: 23 ^d 7 PHE { SD: 14'8 PMG: 7 ^h 46 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 R°: 48 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.0	+18	01.5	247	16.3	+19	10.4	60 N	** **	2 40	3 41	23 42	49	16 36	50	
1	193	25.1		00.9	261	47.4 ¹²¹		13.4 ³⁰	58	1 31	3 00	3 53	23 56	49	22	50	
2	208	25.1	+18	00.2	276	18.4 ¹²⁰		16.3 ²⁹	56	2 03	16	4 04	** ** *		10	50	
3	223	25.1	+17	59.6	290	49.5 ¹²¹		19.2 ²⁹	54	26	29	13	** ** *		16 00	49	
4	238	25.2		59.0	305	20.5 ¹²⁰		21.9 ²⁷	52	2 45	41	22	** ** *		15 51	49	
5	253	25.2	+17	58.3	319	51.5 ¹²⁰	+19	24.5 ²⁶	50	3 00	3 51	4 29	** ** *		15 42	49	
6	268	25.2	+17	57.7	334	22.5 ¹²⁰	+19	27.1 ²⁶	45	3 29	4 12	4 45	0 10	44	15 24	49	
7	283	25.3		57.1	348	53.6 ¹²¹		29.6 ²⁵	40	3 51	28	4 58	24	45	15 10	49	
8	298	25.3		56.4	3	24.6 ¹²⁰		32.0 ²⁴	35	4 08	42	5 09	36	45	14 58	48	
9	313	25.4		55.8	17	55.6 ¹²⁰		34.3 ²³	30	22	4 53	19	0 46	46	47	49	
10	328	25.4		55.2	32	26.6 ¹²⁰		36.4 ²¹	20	4 44	5 12	35	1 04	47	29	48	
11	343	25.4	+17	54.5	46	57.6 ¹²⁰	+19	38.6 ²²	10 N	5 01	5 27	5 50	1 20	47	14 12	49	
12	358	25.5	+17	53.9	61	28.6 ¹²⁰	+19	40.6 ²⁰	0	5 16	5 41	6 03	1 34	48	13 57	48	
13	13	25.5		53.3	75	59.6 ¹²⁰		42.5 ¹⁹	10 S	28	5 54	16	1 49	48	42	48	
14	28	25.6		52.6	90	30.6 ¹²⁰		44.3 ¹⁸	20	40	6 07	30	2 05	49	26	48	
15	43	25.6		52.0	105	01.6 ¹²⁰		46.1 ¹⁸	30	51	20	45	23	49	13 08	47	
16	58	25.6		51.4	119	32.6 ¹²⁰		47.7 ¹⁶	35	5 57	28	6 54	33	50	12 57	47	
17	73	25.7	+17	50.7	134	03.6 ¹²⁰	+19	49.3 ¹⁶	40	6 03	6 36	7 05	2 45	51	12 45	47	
18	88	25.7	+17	50.1	148	34.6 ¹²⁰	+19	50.7 ¹⁴	45	6 10	6 45	7 17	2 59	52	12 31	46	
19	103	25.8		49.5	163	05.5 ¹¹⁹		52.1 ¹⁴	50	17	6 56	31	3 17	52	13	46	
20	118	25.8		48.8	177	36.5 ¹²⁰		53.4 ¹³	52	20	7 01	38	25	52	12 05	45	
21	133	25.8		48.2	192	07.5 ¹²⁰		54.6 ¹²	54	23	06	46	34	53	11 55	46	
22	148	25.9		47.5	206	38.5 ¹²⁰		55.7 ¹¹	56	27	12	7 54	44	54	45	45	
23	163	25.9		46.9	221	09.5 ¹²⁰		56.7 ¹⁰	58	31	19	8 03	3 56	54	33	45	
24	178	26.0	+17	46.3	235	40.5 ¹²⁰	+19	57.6 ⁹	60 S	6 35	7 26	8 14	4 10	55	11 19	44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 20 ^m 4		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: +1.6 PMG: 10 ^h 14 ^m		Mag: -2.0 PMG: 9 ^h 54 ^m		Mag: +0.6 PMG: 17 ^h 33 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	309	46.1	146	27.0	+8	32.3	206	16.3	+23	33.7	211	05.3	+23	01.8	95	58.5	-11	02.6
1	324	48.5	161	26.7		31.1	221	17.0		33.5	226	07.2		01.8	111	00.8		02.7
2	339	51.0	176	26.4		29.9	236	17.7		33.4	241	09.1		01.8	126	03.2		02.7
3	354	53.5	191	26.1		28.7	251	18.3		33.3	256	11.0		01.7	141	05.6		02.8
4	9	55.9	206	25.8		27.5	266	19.0		33.1	271	12.9		01.7	156	08.0		02.8
5	24	58.4	221	25.5	+8	26.3	281	19.7	+23	33.0	286	14.8	+23	01.7	171	10.3	-11	02.9
6	40	00.8	236	25.2	+8	25.1	296	20.3	+23	32.9	301	16.7	+23	01.7	186	12.7	-11	02.9
7	55	03.3	251	24.9		23.9	311	21.0		32.7	316	18.6		01.6	201	15.1		02.9
8	70	05.8	266	24.6		22.7	326	21.6		32.6	331	20.5		01.6	216	17.5		03.0
9	85	08.2	281	24.3		21.5	341	22.3		32.5	346	22.4		01.6	231	19.8		03.0
10	100	10.7	296	24.0		20.3	356	23.0		32.3	1	24.3		01.5	246	22.2		03.1
11	115	13.2	311	23.7	+8	19.0	11	23.6	+23	32.2	16	26.2	+23	01.5	261	24.6	-11	03.1
12	130	15.6	326	23.4	+8	17.8	26	24.3	+23	32.1	31	28.0	+23	01.5	276	27.0	-11	03.2
13	145	18.1	341	23.1		16.6	41	25.0		31.9	46	29.9		01.5	291	29.3		03.2
14	160	20.6	356	22.8		15.4	56	25.6		31.8	61	31.8		01.4	306	31.7		03.2
15	175	23.0	11	22.5		14.2	71	26.3		31.7	76	33.7		01.4	321	34.1		03.3
16	190	25.5	26	22.2		13.0	86	27.0		31.5	91	35.6		01.4	336	36.5		03.3
17	205	28.0	41	21.9	+8	11.8	101	27.6	+23	31.4	106	37.5	+23	01.3	351	38.8	-11	03.4
18	220	30.4	56	21.6	+8	10.6	116	28.3	+23	31.3	121	39.4	+23	01.3	6	41.2	-11	03.4
19	235	32.9	71	21.3		09.3	131	29.0		31.1	136	41.3		01.3	21	43.6		03.5
20	250	35.3	86	21.0		08.1	146	29.6		31.0	151	43.2		01.3	36	46.0		03.5
21	265	37.8	101	20.8		06.9	161	30.3		30.9	166	45.1		01.2	51	48.3		03.5
22	280	40.3	116	20.5		05.7	176	31.0		30.7	181	47.0		01.2	66	50.7		03.6
23	295	42.7	131	20.2		04.5	191	31.6		30.6	196	48.9		01.2	81	53.1		03.6
24	310	45.2	146	19.9	+8	03.3	206	32.3	+23	30.5	211	50.8	+23	01.1	96	55.4	-11	03.7
Dif	—		-3		-12		+7		-1		+19		0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 24 ^d 7 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0											
	PMG: 12 ^h 06 ^m 2			SD: 14 ^h 7 PMG: 8 ^h 34 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	26.0	+17 46.3	235	40.5	+19 57.6	8	60 N	20 28	21 26	23 24	** ** *		17 26	40
1	193	26.0	45.6	250	11.5 ¹²⁰	58.4	7	58	16	21 08	22 32	** ** *		12	41
2	208	26.1	45.0	264	42.5 ¹²⁰	59.1	6	56	20 05	20 53	22 03	0 08	49	17 00	41
3	223	26.1	44.3	279	13.5 ¹²⁰	+19 59.7	6	54	19 56	40	21 41	19	48	16 49	42
4	238	26.2	43.7	293	44.5 ¹²⁰	+20 00.3	6	52	48	29	24	28	49	40	43
5	253	26.2	+17 43.0	308	15.4 ¹¹⁹	+20 00.7	4	50	19 41	20 19	21 09	0 37	48	16 31	44
6	268	26.2	+17 42.4	322	46.4 ¹²⁰	+20 01.1	4	45	19 25	19 59	20 41	0 54	49	16 13	44
7	283	26.3	41.8	337	17.4 ¹²⁰	01.3	2	40	13	43	20	1 09	49	15 59	45
8	298	26.3	41.1	351	48.4 ¹²⁰	01.5	2	35	19 02	29	20 03	21	49	46	46
9	313	26.4	40.5	6	19.5 ¹²¹	01.6	1	30	18 52	18	19 49	32	49	36	45
10	328	26.4	39.8	20	50.5 ¹²⁰	01.6	0	20	36	19 00	27	1 51	48	17	46
11	343	26.5	+17 39.2	35	21.5 ¹²⁰	+20 01.5	1	10 N	18 23	18 45	19 11	2 07	48	15 01	47
12	358	26.5	+17 38.5	49	52.5 ¹²⁰	+20 01.3	2	0	18 10	18 31	18 57	2 22	48	14 45	48
13	13	26.6	37.9	64	23.5 ¹²⁰	01.0	3	10 S	17 57	19	44	37	48	30	48
14	28	26.6	37.2	78	54.5 ¹²⁰	00.6	4	20	43	18 07	33	2 54	47	14 14	49
15	43	26.7	36.6	93	25.6 ¹²¹	+20 00.1	5	30	28	17 53	22	3 12	48	13 55	50
16	58	26.7	35.9	107	56.6 ¹²⁰	+19 59.6	5	35	19	46	16	23	47	44	50
17	73	26.7	+17 35.3	122	27.6 ¹²⁰	+19 58.9	7	40	17 09	17 38	18 11	3 36	47	13 32	50
18	88	26.8	+17 34.6	136	58.7 ¹²¹	+19 58.1	8	45	16 57	17 29	18 04	3 51	46	13 17	51
19	103	26.8	34.0	151	29.8 ¹²¹	57.3	8	50	43	18	17 57	4 09	46	12 59	51
20	118	26.9	33.3	166	00.8 ¹²⁰	56.4	9	52	37	14	54	17	46	50	52
21	133	26.9	32.7	180	31.9 ¹²¹	55.3	11	54	29	08	51	27	46	41	52
22	148	27.0	32.0	195	03.0 ¹²¹	54.2	11	56	21	17 03	48	38	45	30	52
23	163	27.0	31.4	209	34.0 ¹²⁰	53.0	12	58	12	16 56	44	4 50	45	18	53
24	178	27.1	+17 30.7	224	05.1 ¹²¹	+19 51.7	13	60 S	16 01	16 49	17 40	5 05	44	12 03	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 16 ^m 4		Mag: -3.9 PMG: 14 ^h 15 ^m		Mag: +1.6 PMG: 10 ^h 13 ^m		Mag: -2.0 PMG: 9 ^h 51 ^m		Mag: +0.7 PMG: 17 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	310	45.2	146	19.9	+8 03.3	206 32.3	+23 30.5	211 50.8	+23 01.1	96 55.4	-11 03.7
1	325	47.7	161	19.6	02.1	221 33.0	30.3	226 52.7	01.1	111 57.8	03.7
2	340	50.1	176	19.3	+8 00.8	236 33.6	30.2	241 54.6	01.1	127 00.2	03.8
3	355	52.6	191	19.0	+7 59.6	251 34.3	30.0	256 56.4	01.1	142 02.6	03.8
4	10	55.1	206	18.7	58.4	266 35.0	29.9	271 58.3	01.0	157 04.9	03.8
5	25	57.5	221	18.4	+7 57.2	281 35.6	+23 29.8	287 00.2	+23 01.0	172 07.3	-11 03.9
6	41	00.0	236	18.1	+7 56.0	296 36.3	+23 29.6	302 02.1	+23 01.0	187 09.7	-11 03.9
7	56	02.4	251	17.8	54.7	311 37.0	29.5	317 04.0	00.9	202 12.0	04.0
8	71	04.9	266	17.5	53.5	326 37.6	29.3	332 05.9	00.9	217 14.4	04.0
9	86	07.4	281	17.2	52.3	341 38.3	29.2	347 07.8	00.9	232 16.8	04.1
10	101	09.8	296	16.9	51.1	356 39.0	29.1	2 09.7	00.9	247 19.2	04.1
11	116	12.3	311	16.6	+7 49.9	11 39.6	+23 28.9	17 11.6	+23 00.8	262 21.5	-11 04.1
12	131	14.8	326	16.4	+7 48.7	26 40.3	+23 28.8	32 13.5	+23 00.8	277 23.9	-11 04.2
13	146	17.2	341	16.1	47.4	41 41.0	28.6	47 15.4	00.8	292 26.3	04.2
14	161	19.7	356	15.8	46.2	56 41.6	28.5	62 17.3	00.7	307 28.6	04.3
15	176	22.2	11	15.5	45.0	71 42.3	28.4	77 19.2	00.7	322 31.0	04.3
16	191	24.6	26	15.2	43.8	86 43.0	28.2	92 21.1	00.7	337 33.4	04.4
17	206	27.1	41	14.9	+7 42.6	101 43.6	+23 28.1	107 23.0	+23 00.6	352 35.7	-11 04.4
18	221	29.6	56	14.6	+7 41.3	116 44.3	+23 27.9	122 24.9	+23 00.6	7 38.1	-11 04.5
19	236	32.0	71	14.3	40.1	131 45.0	27.8	137 26.8	00.6	22 40.5	04.5
20	251	34.5	86	14.0	38.9	146 45.6	27.6	152 28.7	00.6	37 42.9	04.5
21	266	36.9	101	13.8	37.7	161 46.3	27.5	167 30.6	00.5	52 45.2	04.6
22	281	39.4	116	13.5	36.4	176 47.0	27.4	182 32.5	00.5	67 47.6	04.6
23	296	41.9	131	13.2	35.2	191 47.7	27.2	197 34.3	00.5	82 50.0	04.7
24	311	44.3	146	12.9	+7 34.0	206 48.3	+23 27.1	212 36.2	+23 00.4	97 52.3	-11 04.7
Dif	—		-3 -12		+7 -1		+19 0		+24 0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2				Edad: 25 ^d 7 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 9 ^h 22 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	27.1	+17	30.7	224	05.1	+19	51.7	60 N	0 49	2 47	3 46	0 31	58	18 06	31		
1	193	27.1		30.1	238	36.2 ¹²¹		50.3	58	1 41	3 05	3 58	45	57	17 53	33		
2	208	27.2		29.4	253	07.4 ¹²²		48.8	56	2 10	20	4 08	0 57	56	41	35		
3	223	27.2		28.8	267	38.5 ¹²¹		47.3	54	32	33	17	1 07	56	31	36		
4	238	27.3		28.1	282	09.6 ¹²¹		45.6	52	2 49	44	25	17	54	23	36		
5	253	27.3	+17	27.5	296	40.7 ¹²¹	+19	43.8	50	3 04	3 54	4 32	1 25	54	17 15	37		
6	268	27.4	+17	26.8	311	11.9 ¹²²	+19	42.0	45	3 32	4 14	4 48	1 43	53	16 57	40		
7	283	27.4		26.2	325	43.0 ¹²¹		40.1	40	3 53	30	5 00	1 58	51	44	40		
8	298	27.5		25.5	340	14.2 ¹²²		38.0	35	4 10	43	11	2 10	51	32	42		
9	313	27.5		24.8	354	45.4 ¹²²		35.9	30	23	4 54	20	21	50	21	43		
10	328	27.6		24.2	9	16.6 ¹²²		33.7	20	4 45	5 13	36	39	49	16 03	45		
11	343	27.6	+17	23.5	23	47.8 ¹²²	+19	31.4	10 N	5 02	5 28	5 50	2 55	49	15 48	46		
12	358	27.7	+17	22.9	38	19.0 ¹²²	+19	29.0	0	5 16	5 41	6 03	3 10	48	15 33	47		
13	13	27.8		22.2	52	50.2 ¹²²		26.6	10 S	28	5 53	15	25	47	18	49		
14	28	27.8		21.5	67	21.5 ¹²³		24.0	20	39	6 06	29	3 41	46	15 03	50		
15	43	27.9		20.9	81	52.7 ¹²²		21.4	30	50	19	44	4 00	44	14 45	51		
16	58	27.9		20.2	96	24.0 ¹²³		18.6	35	5 56	26	6 53	10	44	34	52		
17	73	28.0	+17	19.6	110	55.3 ¹²³	+19	15.8	40	6 01	6 34	7 03	4 23	42	14 22	53		
18	88	28.0	+17	18.9	125	26.6 ¹²³	+19	12.9	45	6 08	6 43	7 14	4 37	42	14 08	55		
19	103	28.1		18.2	139	57.9 ¹²³		09.9	50	14	53	28	4 55	40	13 50	57		
20	118	28.1		17.6	154	29.2 ¹²³		06.8	52	17	6 58	35	5 03	40	42	57		
21	133	28.2		16.9	169	00.5 ¹²³		03.6	54	20	7 03	42	13	38	33	58		
22	148	28.2		16.3	183	31.9 ¹²⁴	+19	00.3	56	24	09	50	23	38	22	60		
23	163	28.3		15.6	198	03.3 ¹²⁴	+18	57.0	58	27	15	7 59	35	37	13 11	60		
24	178	28.3	+17	14.9	212	34.6 ¹²³	+18	53.5	60 S	6 31	7 22	8 10	5 49	35	12 57	62		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 12 ^m 5		Mag: -3.9 PMG: 14 ^h 15 ^m				Mag: +1.6 PMG: 10 ^h 12 ^m				Mag: -2.0 PMG: 9 ^h 48 ^m				Mag: +0.7 PMG: 17 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	311	44.3	146	12.9	+7	34.0	206	48.3	+23	27.1	212	36.2	+23	00.4	97	52.3	-11	04.7
1	326	46.8	161	12.6		32.8	221	49.0		26.9	227	38.1		00.4	112	54.7		04.8
2	341	49.3	176	12.3		31.5	236	49.7		26.8	242	40.0		00.4	127	57.1		04.8
3	356	51.7	191	12.0		30.3	251	50.3		26.6	257	41.9		00.4	142	59.4		04.8
4	11	54.2	206	11.8		29.1	266	51.0		26.5	272	43.8		00.3	158	01.8		04.9
5	26	56.7	221	11.5	+7	27.9	281	51.7	+23	26.3	287	45.7	+23	00.3	173	04.2	-11	04.9
6	41	59.1	236	11.2	+7	26.6	296	52.4	+23	26.2	302	47.6	+23	00.3	188	06.5	-11	05.0
7	57	01.6	251	10.9		25.4	311	53.0		26.0	317	49.5		00.2	203	08.9		05.0
8	72	04.1	266	10.6		24.2	326	53.7		25.9	332	51.4		00.2	218	11.3		05.1
9	87	06.5	281	10.3		23.0	341	54.4		25.7	347	53.3		00.2	233	13.6		05.1
10	102	09.0	296	10.0		21.7	356	55.0		25.6	2	55.2		00.1	248	16.0		05.2
11	117	11.4	311	09.8	+7	20.5	11	55.7	+23	25.4	17	57.1	+23	00.1	263	18.4	-11	05.2
12	132	13.9	326	09.5	+7	19.3	26	56.4	+23	25.3	32	59.0	+23	00.1	278	20.7	-11	05.3
13	147	16.4	341	09.2		18.1	41	57.1		25.1	48	00.9	+23	00.1	293	23.1		05.3
14	162	18.8	356	08.9		16.8	56	57.7		25.0	63	02.8	+23	00.0	308	25.5		05.3
15	177	21.3	11	08.6		15.6	71	58.4		24.8	78	04.7		00.0	323	27.8		05.4
16	192	23.8	26	08.4		14.4	86	59.1		24.7	93	06.6	+23	00.0	338	30.2		05.4
17	207	26.2	41	08.1	+7	13.1	101	59.7	+23	24.5	108	08.5	+22	59.9	353	32.6	-11	05.5
18	222	28.7	56	07.8	+7	11.9	117	00.4	+23	24.4	123	10.4	+22	59.9	8	34.9	-11	05.5
19	237	31.2	71	07.5		10.7	132	01.1		24.2	138	12.3		59.9	23	37.3		05.6
20	252	33.6	86	07.2		09.5	147	01.8		24.1	153	14.2		59.8	38	39.7		05.6
21	267	36.1	101	07.0		08.2	162	02.4		23.9	168	16.1		59.8	53	42.0		05.7
22	282	38.6	116	06.7		07.0	177	03.1		23.8	183	18.0		59.8	68	44.4		05.7
23	297	41.0	131	06.4		05.8	192	03.8		23.6	198	19.9		59.8	83	46.8		05.7
24	312	43.5	146	06.1	+7	04.5	207	04.5	+23	23.5	213	21.8	+22	59.7	98	49.1	-11	05.8
Dif	—		-3		-12		+7		-1		+19		0		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1			Edad: 26 ^d 7 PHE { 4 ^h : 54 ¹ 12 ^h : 54 ¹ 20 ^h : 54 ² R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	28.3	+17	14.9	212	34.6	+18 53.5	60 N	20 22	21 20	23 04	1 29 65	18 37 25	
1	193	28.4		14.3	227	06.0 ¹²⁴	50.0 ³⁵	58	11	21 02	22 22	42 63	26 26	
2	208	28.5		13.6	241	37.4 ¹²⁴	46.4 ³⁶	56	20 01	20 48	21 56	1 53 62	16 28	
3	223	28.5		12.9	256	08.9 ¹²⁵	42.7 ³⁷	54	19 52		36 35	2 03 60	18 07 30	
4	238	28.6		12.3	270	40.3 ¹²⁴	38.9 ³⁸	52	45	25	19	11 60	17 59 31	
5	253	28.6	+17	11.6	285	11.8 ¹²⁵	+18 35.0 ³⁹	50	19 38	20 15	21 05	2 19 59	17 52 32	
6	268	28.7	+17	10.9	299	43.3 ¹²⁵	+18 31.1 ³⁹	45	19 23	19 56	20 37	2 36 56	17 37 35	
7	283	28.7		10.3	314	14.8 ¹²⁵	27.1 ⁴⁰	40	10	40	17	2 49 55	24 37	
8	298	28.8		09.6	328	46.3 ¹²⁵	22.9 ⁴²	35	19 00	27	20 01	3 01 53	14 38	
9	313	28.9		08.9	343	17.8 ¹²⁵	18.7 ⁴²	30	18 51	19 17	19 47	11 52	17 04 40	
10	328	28.9		08.3	357	49.3 ¹²⁵	14.4 ⁴³	20	35	18 59	26	28 51	16 48 42	
11	343	29.0	+17	07.6	12	20.9 ¹²⁶	+18 10.1 ⁴³	10 N	18 22	18 44	19 10	3 44 48	16 34 44	
12	358	29.0	+17	06.9	26	52.5 ¹²⁶	+18 05.6 ⁴⁵	0	18 10	18 31	18 56	3 58 46	16 20 47	
13	13	29.1		06.2	41	24.1 ¹²⁶	+18 01.1 ⁴⁵	10 S	17 57	19	44	4 12 45	16 07 48	
14	28	29.2		05.6	55	55.7 ¹²⁶	+17 56.4 ⁴⁷	20	44	18 07	34	27 43	15 53 50	
15	43	29.2		04.9	70	27.3 ¹²⁶	51.7 ⁴⁷	30	29	17 54	23	44 41	36 53	
16	58	29.3		04.2	84	59.0 ¹²⁷	47.0 ⁴⁷	35	21	47	18	4 54 40	26 55	
17	73	29.3	+17	03.6	99	30.7 ¹²⁷	+17 42.1 ⁴⁹	40	17 11	17 40	18 12	5 05 39	15 15 56	
18	88	29.4	+17	02.9	114	02.4 ¹²⁷	+17 37.1 ⁵⁰	45	17 00	17 31	18 06	5 19 37	15 03 57	
19	103	29.5		02.2	128	34.1 ¹²⁷	32.1 ⁵⁰	50	16 46	21	18 00	35 35	14 47 60	
20	118	29.5		01.5	143	05.8 ¹²⁷	27.0 ⁵¹	52	40	16	17 57	43 34	39 62	
21	133	29.6		00.9	157	37.6 ¹²⁸	21.8 ⁵²	54	33	11	54	5 51 33	31 63	
22	148	29.6	+17	00.2	172	09.3 ¹²⁷	16.5 ⁵³	56	25	06	51	6 01 31	22 64	
23	163	29.7	+16	59.5	186	41.1 ¹²⁸	11.2 ⁵³	58	16	17 00	48	12 29	14 11 66	
24	178	29.8	+16	58.8	201	12.9 ¹²⁸	+17 05.8 ⁵⁴	60 S	16 06	16 53	17 44	6 24 28	13 59 68	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 08 ^m 6		Mag: -3.9 PMG: 14 ^h 16 ^m		Mag: +1.6 PMG: 10 ^h 11 ^m		Mag: -2.0 PMG: 9 ^h 45 ^m		Mag: +0.7 PMG: 17 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	312	43.5	146	06.1	+7	04.5	213	21.8	+22	59.7	98	49.1	-11	05.8
1	327	45.9	161	05.8		03.3	228	23.7		59.7	113	51.5		05.8
2	342	48.4	176	05.6		02.1	237	05.8		59.7	128	53.9		05.9
3	357	50.9	191	05.3	+7	00.8	252	06.5		59.6	143	56.2		05.9
4	12	53.3	206	05.0	+6	59.6	267	07.2		59.6	158	58.6		06.0
5	27	55.8	221	04.7	+6	58.4	282	07.8	+23	22.7	288	31.3	+22	59.6
6	42	58.3	236	04.5	+6	57.1	297	08.5	+23	22.6	303	33.2	+22	59.5
7	58	00.7	251	04.2		55.9	312	09.2		22.4	318	35.1		59.5
8	73	03.2	266	03.9		54.7	327	09.8		22.3	333	37.0		59.5
9	88	05.7	281	03.6		53.4	342	10.5		22.1	348	38.9		59.5
10	103	08.1	296	03.4		52.2	357	11.2		21.9	3	40.8		59.4
11	118	10.6	311	03.1	+6	51.0	12	11.9	+23	21.8	18	42.7	+22	59.4
12	133	13.0	326	02.8	+6	49.7	27	12.6	+23	21.6	33	44.6	+22	59.4
13	148	15.5	341	02.5		48.5	42	13.2		21.5	48	46.5		59.3
14	163	18.0	356	02.3		47.3	57	13.9		21.3	63	48.4		59.3
15	178	20.4	11	02.0		46.0	72	14.6		21.2	78	50.3		59.3
16	193	22.9	26	01.7		44.8	87	15.3		21.0	93	52.2		59.2
17	208	25.4	41	01.4	+6	43.5	102	15.9	+23	20.8	108	54.1	+22	59.2
18	223	27.8	56	01.2	+6	42.3	117	16.6	+23	20.7	123	56.0	+22	59.2
19	238	30.3	71	00.9		41.1	132	17.3		20.5	138	57.9		59.1
20	253	32.8	86	00.6		39.8	147	18.0		20.4	153	59.8		59.1
21	268	35.2	101	00.4		38.6	162	18.6		20.2	169	01.7		59.1
22	283	37.7	116	00.1		37.4	177	19.3		20.0	184	03.6		59.1
23	298	40.2	130	59.8		36.1	192	20.0		19.9	199	05.5		59.0
24	313	42.6	145	59.5	+6	34.9	207	20.7	+23	19.7	214	07.4	+22	59.0
Dif	—		-3		-12		+7		-2		+19		0	
													+24	
													0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 0			Edad: 27 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 PMG: 10 ^h 56 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	29.8	+16 58.8	201	12.9	+17 05.8	60 N	1 08	2 53	3 50	2 34 70	19 02 19		
1	193	29.8	58.2	215	44.8 ¹²⁹	+17 00.3	58	1 50	3 10	4 02	45 68	18 52 22		
2	208	29.9	57.5	230	16.6 ¹²⁸	+16 54.7	56	2 17	25	12	2 55 66	44 24		
3	223	29.9	56.8	244	48.5 ¹²⁹	49.0	54	38	37	20	3 03 65	37 26		
4	238	30.0	56.1	259	20.4 ¹²⁹	43.3	52	2 54	48	28	11 63	30 28		
5	253	30.1	+16 55.5	273	52.3 ¹²⁹	+16 37.5	50	3 08	3 57	4 35	3 18 61	18 24 29		
6	268	30.1	+16 54.8	288	24.2 ¹²⁹	+16 31.6	45	3 35	4 17	4 50	3 32 59	18 12 31		
7	283	30.2	54.1	302	56.2 ¹³⁰	25.6	40	3 55	32	5 02	44 57	18 01 34		
8	298	30.3	53.4	317	28.1 ¹²⁹	19.6	35	4 12	45	12	3 54 55	17 52 36		
9	313	30.3	52.7	332	00.1 ¹³⁰	13.5	30	25	4 56	21	4 03 53	44 38		
10	328	30.4	52.1	346	32.1 ¹³⁰	07.3	20	4 46	5 14	37	19 50	30 41		
11	343	30.5	+16 51.4	1	04.2 ¹³¹	+16 01.0	10 N	5 02	5 28	5 50	4 32 48	17 18 43		
12	358	30.5	+16 50.7	15	36.2 ¹³⁰	+15 54.7	0	5 16	5 41	6 03	4 44 46	17 07 45		
13	13	30.6	50.0	30	08.3 ¹³¹	48.3	10 S	28	5 53	15	4 57 44	16 55 48		
14	28	30.6	49.3	44	40.4 ¹³¹	41.8	20	38	6 05	28	5 10 42	43 50		
15	43	30.7	48.6	59	12.5 ¹³¹	35.3	30	49	17	42	25 39	29 53		
16	58	30.8	48.0	73	44.6 ¹³¹	28.6	35	54	24	6 51	34 37	21 55		
17	73	30.8	+16 47.3	88	16.8 ¹³²	+15 22.0	40	5 59	6 32	7 00	5 44 35	16 11 57		
18	88	30.9	+16 46.6	102	49.0 ¹³²	+15 15.2	45	6 05	6 40	7 12	5 56 33	16 00 60		
19	103	31.0	45.9	117	21.1 ¹³¹	08.4	50	12	50	25	6 10 30	15 47 62		
20	118	31.0	45.2	131	53.4 ¹³³	+15 01.4	52	14	6 55	31	17 29	41 64		
21	133	31.1	44.5	146	25.6 ¹³²	+14 54.5	54	17	7 00	38	24 28	34 65		
22	148	31.2	43.8	160	57.8 ¹³²	47.4	56	20	05	46	32 26	26 67		
23	163	31.2	43.2	175	30.1 ¹³³	40.3	58	24	11	7 55	41 24	17 70		
24	178	31.3	+16 42.5	190	02.4 ¹³³	+14 33.1	60 S	6 27	7 18	8 05	6 52 22	15 07 72		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 3 ^h 04 ^m 7		Mag: -3.9 PMG: 14 ^h 16 ^m			Mag: +1.6 PMG: 10 ^h 10 ^m			Mag: -2.0 PMG: 9 ^h 42 ^m			Mag: +0.7 PMG: 17 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	°	°	'	°	°	'	
0	313	42.6	145	59.5	+6 34.9	207	20.7	+23 19.7	214	07.4	+22 59.0	99	45.8	-11 06.9
1	328	45.1	160	59.3	33.6	222	21.3	19.6	229	09.3	59.0	114	48.2	06.9
2	343	47.5	175	59.0	32.4	237	22.0	19.4	244	11.2	58.9	129	50.6	07.0
3	358	50.0	190	58.7	31.2	252	22.7	19.2	259	13.1	58.9	144	52.9	07.0
4	13	52.5	205	58.5	29.9	267	23.4	19.1	274	15.0	58.9	159	55.3	07.1
5	28	54.9	220	58.2	+6 28.7	282	24.1	+23 18.9	289	16.9	+22 58.8	174	57.7	-11 07.1
6	43	57.4	235	57.9	+6 27.4	297	24.7	+23 18.8	304	18.8	+22 58.8	190	00.0	-11 07.2
7	58	59.9	250	57.7	26.2	312	25.4	18.6	319	20.7	58.8	205	02.4	07.2
8	74	02.3	265	57.4	25.0	327	26.1	18.4	334	22.6	58.7	220	04.7	07.3
9	89	04.8	280	57.1	23.7	342	26.8	18.3	349	24.5	58.7	235	07.1	07.3
10	104	07.3	295	56.9	22.5	357	27.5	18.1	4	26.4	58.7	250	09.5	07.4
11	119	09.7	310	56.6	+6 21.2	12	28.1	+23 17.9	19	28.3	+22 58.7	265	11.8	-11 07.4
12	134	12.2	325	56.3	+6 20.0	27	28.8	+23 17.8	34	30.2	+22 58.6	280	14.2	-11 07.5
13	149	14.7	340	56.1	18.8	42	29.5	17.6	49	32.1	58.6	295	16.5	07.5
14	164	17.1	355	55.8	17.5	57	30.2	17.4	64	34.0	58.6	310	18.9	07.6
15	179	19.6	10	55.5	16.3	72	30.9	17.3	79	35.9	58.5	325	21.2	07.6
16	194	22.0	25	55.3	15.0	87	31.5	17.1	94	37.8	58.5	340	23.6	07.7
17	209	24.5	40	55.0	+6 13.8	102	32.2	+23 17.0	109	39.7	+22 58.5	355	26.0	-11 07.7
18	224	27.0	55	54.7	+6 12.5	117	32.9	+23 16.8	124	41.6	+22 58.4	10	28.3	-11 07.7
19	239	29.4	70	54.5	11.3	132	33.6	16.6	139	43.5	58.4	25	30.7	07.8
20	254	31.9	85	54.2	10.1	147	34.3	16.5	154	45.4	58.4	40	33.0	07.8
21	269	34.4	100	53.9	08.8	162	34.9	16.3	169	47.3	58.3	55	35.4	07.9
22	284	36.8	115	53.7	07.6	177	35.6	16.1	184	49.2	58.3	70	37.8	07.9
23	299	39.3	130	53.4	06.3	192	36.3	15.9	199	51.1	58.3	85	40.1	08.0
24	314	41.8	145	53.1	+6 05.1	207	37.0	+23 15.8	214	53.1	+22 58.2	100	42.5	-11 08.0
Dif	—		-3 -12			+7 -2			+19 0			+24 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9			Edad: 28 ^d 7 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/7 Rº: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	178	31.3	+16	42.5	190	02.4	+14	33.1	60 N	20 17	21 13	22 49	3 44 74	19 21 17				
1	193	31.4		41.8	204	34.7 ¹³³		25.9 ⁷²	58	20 06	20 57	22 13	3 53 71	14 19				
2	208	31.5		41.1	219	07.1 ¹³⁴		18.6 ⁷³	56	19 57	43	21 48	4 01 68	08 21				
3	223	31.5		40.4	233	39.4 ¹³³		11.2 ⁷⁴	54	48	31	29	08 66	19 03 22				
4	238	31.6		39.7	248	11.8 ¹³⁴	+14	03.8 ⁷⁴	52	41	21	13	14 65	18 58 24				
5	253	31.7	+16	39.0	262	44.2 ¹³⁴	+13	56.3 ⁷⁵	50	19 34	20 12	21 00	4 19 64	18 53 26				
6	268	31.7	+16	38.3	277	16.6 ¹³⁴	+13	48.7 ⁷⁶	45	19 20	19 53	20 34	4 31 60	18 43 29				
7	283	31.8		37.7	291	49.0 ¹³⁴		41.1 ⁷⁶	40	19 08	38	20 14	41 58	35 32				
8	298	31.9		37.0	306	21.4 ¹³⁴		33.4 ⁷⁷	35	18 58	25	19 58	49 56	28 34				
9	313	31.9		36.3	320	53.9 ¹³⁵		25.6 ⁷⁸	30	49	19 15	45	4 56 54	22 35				
10	328	32.0		35.6	335	26.4 ¹³⁵		17.8 ⁷⁸	20	34	18 58	25	5 09 51	11 39				
11	343	32.1	+16	34.9	349	58.9 ¹³⁵	+13	09.9 ⁷⁹	10 N	18 21	18 43	19 09	5 20 48	18 01 42				
12	358	32.1	+16	34.2	4	31.4 ¹³⁵	+13	01.9 ⁸⁰	0	18 09	18 31	18 56	5 30 46	17 52 45				
13	13	32.2		33.5	19	03.9 ¹³⁵	+12	53.9 ⁸⁰	10 S	17 57	19	45	41 42	43 48				
14	28	32.3		32.8	33	36.5 ¹³⁶		45.9 ⁸⁰	20	45	18 08	34	5 52 39	33 51				
15	43	32.4		32.1	48	09.1 ¹³⁶		37.7 ⁸²	30	30	17 55	24	6 04 37	22 54				
16	58	32.4		31.4	62	41.7 ¹³⁶		29.5 ⁸²	35	22	49	19	11 35	16 56				
17	73	32.5	+16	30.7	77	14.3 ¹³⁶	+12	21.3 ⁸²	40	17 13	17 41	18 14	6 19 33	17 08 59				
18	88	32.6	+16	30.0	91	46.9 ¹³⁶	+12	13.0 ⁸³	45	17 02	17 33	18 08	6 29 30	17 00 61				
19	103	32.7		29.3	106	19.5 ¹³⁶	+12	04.6 ⁸⁴	50	16 49	24	02	40 27	16 49 65				
20	118	32.7		28.6	120	52.2 ¹³⁷	+11	56.2 ⁸⁴	52	43	19	18 00	46 25	45 65				
21	133	32.8		27.9	135	24.9 ¹³⁷		47.7 ⁸⁵	54	36	14	17 57	52 24	39 68				
22	148	32.9		27.2	149	57.5 ¹³⁶		39.2 ⁸⁵	56	28	09	54	6 58 22	33 70				
23	163	32.9		26.5	164	30.2 ¹³⁷		30.6 ⁸⁶	58	20	17 03	51	7 05 20	27 71				
24	178	33.0	+16	25.8	179	03.0 ¹³⁸	+11	22.0 ⁸⁶	60 S	16 10	16 57	17 48	7 14 17	16 19 74				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 00 ^m 7		Mag: -3.9 PMG: 14 ^h 17 ^m			Mag: +1.6 PMG: 10 ^h 09 ^m			Mag: -2.0 PMG: 9 ^h 39 ^m			Mag: +0.7 PMG: 17 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	314	41.8	145	53.1	+6	05.1	207	37.0	+23	15.8	214	53.1	+22	58.2	100	42.5	-11	08.0
1	329	44.2	160	52.9		03.8	222	37.7		15.6	229	55.0		58.2	115	44.8		08.1
2	344	46.7	175	52.6		02.6	237	38.3		15.4	244	56.9		58.2	130	47.2		08.1
3	359	49.2	190	52.4		01.3	252	39.0		15.3	259	58.8		58.2	145	49.5		08.2
4	14	51.6	205	52.1	+6	00.1	267	39.7		15.1	275	00.7		58.1	160	51.9		08.2
5	29	54.1	220	51.8	+5	58.8	282	40.4	+23	14.9	290	02.6	+22	58.1	175	54.3	-11	08.3
6	44	56.5	235	51.6	+5	57.6	297	41.1	+23	14.8	305	04.5	+22	58.1	190	56.6	-11	08.3
7	59	59.0	250	51.3		56.4	312	41.8		14.6	320	06.4		58.0	205	59.0		08.4
8	75	01.5	265	51.1		55.1	327	42.4		14.4	335	08.3		58.0	221	01.3		08.4
9	90	03.9	280	50.8		53.9	342	43.1		14.3	350	10.2		58.0	236	03.7		08.5
10	105	06.4	295	50.5		52.6	357	43.8		14.1	5	12.1		57.9	251	06.0		08.5
11	120	08.9	310	50.3	+5	51.4	12	44.5	+23	13.9	20	14.0	+22	57.9	266	08.4	-11	08.6
12	135	11.3	325	50.0	+5	50.1	27	45.2	+23	13.7	35	15.9	+22	57.9	281	10.8	-11	08.6
13	150	13.8	340	49.8		48.9	42	45.9		13.6	50	17.8		57.8	296	13.1		08.7
14	165	16.3	355	49.5		47.6	57	46.5		13.4	65	19.7		57.8	311	15.5		08.7
15	180	18.7	10	49.2		46.4	72	47.2		13.2	80	21.6		57.8	326	17.8		08.8
16	195	21.2	25	49.0		45.1	87	47.9		13.0	95	23.5		57.7	341	20.2		08.8
17	210	23.6	40	48.7	+5	43.9	102	48.6	+23	12.9	110	25.4	+22	57.7	356	22.5	-11	08.9
18	225	26.1	55	48.5	+5	42.6	117	49.3	+23	12.7	125	27.3	+22	57.7	11	24.9	-11	08.9
19	240	28.6	70	48.2		41.4	132	50.0		12.5	140	29.3		57.6	26	27.2		08.9
20	255	31.0	85	47.9		40.1	147	50.6		12.4	155	31.2		57.6	41	29.6		09.0
21	270	33.5	100	47.7		38.9	162	51.3		12.2	170	33.1		57.6	56	31.9		09.0
22	285	36.0	115	47.4		37.6	177	52.0		12.0	185	35.0		57.5	71	34.3		09.1
23	300	38.4	130	47.2		36.4	192	52.7		11.8	200	36.9		57.5	86	36.7		09.1
24	315	40.9	145	46.9	+5	35.1	207	53.4	+23	11.7	215	38.8	+22	57.5	101	39.0	-11	09.2
Dif	—		-3		-12		+7		-2		+19		0		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			Edad: 0 ^d 1 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0 PMG: 12 ^h 26 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	33.0	+16	25.8	179	03.0	+11	22.0	60 N	1 23	2 59	3 55	4 58	75	19 38	14
1	193	33.1		25.1	193	35.7 ¹³⁷		13.3 ⁸⁷	58	1 59	3 16	4 06	5 04	72	33	17
2	208	33.2		24.4	208	08.4 ¹³⁷	+11	04.6 ⁸⁸	56	2 24		15	09	71	29	19
3	223	33.2		23.7	222	41.2 ¹³⁸	+10	55.8 ⁸⁷	54		43	41	14	69	25	21
4	238	33.3		23.0	237	14.0 ¹³⁸		46.9 ⁸⁹	52	2 59	3 51	31	19	66	22	22
5	253	33.4	+16	22.3	251	46.8 ¹³⁸	+10	38.0 ⁸⁹	50	3 12	4 00	4 38	5 23	65	19 19	24
6	268	33.5	+16	21.6	266	19.6 ¹³⁸	+10	29.1 ⁸⁹	45	3 38	4 19	4 52	5 31	62	19 12	27
7	283	33.5		20.9	280	52.4 ¹³⁸		20.1 ⁹⁰	40	3 58		34	5 04		39	30
8	298	33.6		20.2	295	25.2 ¹³⁸		11.0 ⁹¹	35	4 14		47	14		45	32
9	313	33.7		19.5	309	58.1 ¹³⁹	+10	01.9 ⁹¹	30		26	4 57	23		5 50	35
10	328	33.8		18.8	324	30.9 ¹³⁸	+9	52.8 ⁹¹	20	4 47	5 14	38	6 00	50	50	38
11	343	33.8	+16	18.1	339	03.8 ¹³⁹	+9	43.6 ⁹²	10 N	5 03	5 28	5 50	6 08	47	18 43	42
12	358	33.9	+16	17.4	353	36.6 ¹³⁸	+9	34.3 ⁹³	0	5 16	5 41	6 02	6 16	44	18 37	45
13	13	34.0		16.7	8	09.5 ¹³⁹		25.0 ⁹³	10 S		27	5 52	14		23	47
14	28	34.1		16.0	22	42.4 ¹³⁹		15.7 ⁹³	20		37	6 04	27		31	39
15	43	34.2		15.3	37	15.3 ¹³⁹	+9	06.3 ⁹⁴	30		47	16	41		41	35
16	58	34.2		14.6	51	48.3 ¹⁴⁰	+8	56.9 ⁹⁴	35		52	22	49		46	33
17	73	34.3	+16	13.9	66	21.2 ¹³⁹	+8	47.4 ⁹⁵	40	5 57	6 30	6 58	6 52	31	18 07	59
18	88	34.4	+16	13.2	80	54.1 ¹³⁹	+8	37.9 ⁹⁵	45	6 03	6 38	7 09	6 59	28	18 01	62
19	103	34.5		12.5	95	27.1 ¹⁴⁰		28.4 ⁹⁵	50		09	47	22		7 07	25
20	118	34.6		11.8	110	00.0 ¹³⁹		18.8 ⁹⁶	52		11	52	28		11	24
21	133	34.6		11.1	124	33.0 ¹⁴⁰	+8	09.1 ⁹⁶	54		14	6 56	35		16	21
22	148	34.7		10.4	139	05.9 ¹³⁹	+7	59.5 ⁹⁷	56		17	7 01	42		20	20
23	163	34.8		09.7	153	38.9 ¹⁴⁰		49.7 ⁹⁸	58		20	07	7 50		25	18
24	178	34.9	+16	08.9	168	11.9 ¹⁴⁰	+7	40.0 ⁹⁷	60 S	6 23	7 13	8 00	7 31	16	17 33	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 56 ^m 8		Mag: -3.9 PMG: 14 ^h 17 ^m		Mag: +1.6 PMG: 10 ^h 08 ^m		Mag: -2.0 PMG: 9 ^h 36 ^m		Mag: +0.7 PMG: 17 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	315	40.9	145	46.9	+5	35.1	215	38.8	+22	57.5
1	330	43.4	160	46.7		33.9	230	40.7		57.5
2	345	45.8	175	46.4		32.6	245	42.6		57.4
3	0	48.3	190	46.2		31.4	260	44.5		57.4
4	15	50.8	205	45.9		30.1	275	46.4		57.4
5	30	53.2	220	45.6	+5	28.8	290	48.3	+22	57.3
6	45	55.7	235	45.4	+5	27.6	305	50.2	+22	57.3
7	60	58.1	250	45.1		26.3	320	52.1		57.3
8	76	00.6	265	44.9		25.1	335	54.0		57.2
9	91	03.1	280	44.6		23.8	350	56.0		57.2
10	106	05.5	295	44.4		22.6	5	57.9		57.2
11	121	08.0	310	44.1	+5	21.3	20	59.8	+22	57.1
12	136	10.5	325	43.9	+5	20.1	36	01.7	+22	57.1
13	151	12.9	340	43.6		18.8	51	03.6		57.1
14	166	15.4	355	43.4		17.6	66	05.5		57.0
15	181	17.9	10	43.1		16.3	81	07.4		57.0
16	196	20.3	25	42.9		15.1	96	09.3		57.0
17	211	22.8	40	42.6	+5	13.8	111	11.2	+22	56.9
18	226	25.2	55	42.4	+5	12.5	126	13.1	+22	56.9
19	241	27.7	70	42.1		11.3	141	15.0		56.9
20	256	30.2	85	41.9		10.0	156	16.9		56.8
21	271	32.6	100	41.6		08.8	171	18.9		56.8
22	286	35.1	115	41.4		07.5	186	20.8		56.8
23	301	37.6	130	41.1		06.3	201	22.7		56.7
24	316	40.0	145	40.9	+5	05.0	216	24.6	+22	56.7
Dif	—		-3		-13		+7		0	
									+24	
									0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8		Edad: 1 ^d 1 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'4 R°: 45 ^m	SD: 15'0		Civil			Náutico	Hora		R°	Hora		R°	
	PMG: 12 ^h 05 ^m 6	PMG: 13 ^h 11 ^m		hG ☾	Dec	hG ☾				Dif	Dec		Dif	hG ☾		Dec
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	34.9	+16	08.9	168	11.9	+7 40.0	60 N	20 12	21 07	22 36	6 13	76	19 52	14	
1	193	35.0		08.2	182	44.9 ¹⁴⁰	30.2 ⁹⁸	58	20 02	20 51	22 04	16	74	50	16	
2	208	35.0		07.5	197	17.8 ¹³⁹	20.4 ⁹⁸	56	19 52		38	21	41	20	71	
3	223	35.1		06.8	211	50.8 ¹⁴⁰	10.5 ⁹⁹	54		44	27	23		23	69	
4	238	35.2		06.1	226	23.8 ¹⁴⁰	+7 00.6 ⁹⁹	52		37	17	21	08	25	68	
5	253	35.3	+16	05.4	240	56.8 ¹⁴⁰	+6 50.6 ¹⁰⁰	50	19 31	20 08	20 56	6 28	66	19 43	23	
6	268	35.4	+16	04.7	255	29.8 ¹⁴⁰	+6 40.7 ⁹⁹	45	19 17	19 50	20 30	6 33	63	19 39	27	
7	283	35.4		04.0	270	02.9 ¹⁴¹	30.7 ¹⁰⁰	40	19 06		35	20	11	37	60	
8	298	35.5		03.3	284	35.9 ¹⁴⁰	20.6 ¹⁰¹	35	18 56		23	19	56	41	57	
9	313	35.6		02.5	299	08.9 ¹⁴⁰	10.5 ¹⁰¹	30		48	19 13	43		45	55	
10	328	35.7		01.8	313	41.9 ¹⁴⁰	+6 00.4 ¹⁰¹	20		33	18 56	24		50	51	
11	343	35.8	+16	01.1	328	14.9 ¹⁴⁰	+5 50.3 ¹⁰¹	10 N	18 21	18 43	19 08	6 55	48	19 25	41	
12	358	35.9	+16	00.4	342	47.9 ¹⁴⁰	+5 40.1 ¹⁰²	0	18 09	18 31	18 56	7 00	45	19 22	44	
13	13	35.9	+15	59.7	357	20.9 ¹⁴⁰	29.9 ¹⁰²	10 S	17 58	19	45	05	41	18	48	
14	28	36.0		59.0	11	53.9 ¹⁴⁰	19.7 ¹⁰²	20		45	18 08	35		10	38	
15	43	36.1		58.3	26	27.0 ¹⁴¹	+5 09.4 ¹⁰³	30		32	17 57	25		16	34	
16	58	36.2		57.5	41	00.0 ¹⁴⁰	+4 59.1 ¹⁰³	35		24	50	20		19	32	
17	73	36.3	+15	56.8	55	33.0 ¹⁴⁰	+4 48.8 ¹⁰³	40	17 15	17 43	18 15	7 23	30	19 06	60	
18	88	36.4	+15	56.1	70	06.0 ¹⁴⁰	+4 38.4 ¹⁰⁴	45	17 04	17 35	18 10	7 27	27	19 03	63	
19	103	36.4		55.4	84	39.0 ¹⁴⁰	28.1 ¹⁰³	50	16 52		26	05		32	24	
20	118	36.5		54.7	99	12.0 ¹⁴⁰	17.7 ¹⁰⁴	52		46	22	02		35	22	
21	133	36.6		54.0	113	45.0 ¹⁴⁰	+4 07.3 ¹⁰⁴	54		39	17	18 00		37	21	
22	148	36.7		53.2	128	18.0 ¹⁴⁰	+3 56.8 ¹⁰⁵	56		32	13	17 57		40	19	
23	163	36.8		52.5	142	50.9 ¹³⁹	46.3 ¹⁰⁵	58		24	07	54		43	17	
24	178	36.9	+15	51.8	157	23.9 ¹⁴⁰	+3 35.8 ¹⁰⁵	60 S	16 15	17 01	17 51	7 47	14	18 49	77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 52 ^m 9		Mag: -3.9 PMG: 14 ^h 18 ^m		Mag: +1.6 PMG: 10 ^h 07 ^m		Mag: -2.0 PMG: 9 ^h 33 ^m		Mag: +0.7 PMG: 17 ^h 07 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	316	40.0	145	40.9	+5 05.0	208 09.9	+23 07.3	216 24.6	+22 56.7	102 35.5	-11 10.4
1	331	42.5	160	40.6	03.7	223 10.6	07.2	231 26.5	56.7	117 37.8	10.4
2	346	45.0	175	40.4	02.5	238 11.3	07.0	246 28.4	56.6	132 40.2	10.5
3	1	47.4	190	40.1	+5 01.2	253 12.0	06.8	261 30.3	56.6	147 42.5	10.5
4	16	49.9	205	39.9	+5 00.0	268 12.6	06.6	276 32.2	56.6	162 44.9	10.6
5	31	52.4	220	39.6	+4 58.7	283 13.3	+23 06.4	291 34.1	+22 56.5	177 47.2	-11 10.6
6	46	54.8	235	39.4	+4 57.5	298 14.0	+23 06.2	306 36.0	+22 56.5	192 49.6	-11 10.7
7	61	57.3	250	39.1	56.2	313 14.7	06.1	321 38.0	56.5	207 51.9	10.7
8	76	59.7	265	38.9	54.9	328 15.4	05.9	336 39.9	56.4	222 54.3	10.8
9	92	02.2	280	38.6	53.7	343 16.1	05.7	351 41.8	56.4	237 56.6	10.8
10	107	04.7	295	38.4	52.4	358 16.8	05.5	6 43.7	56.4	252 59.0	10.9
11	122	07.1	310	38.1	+4 51.2	13 17.5	+23 05.3	21 45.6	+22 56.3	268 01.3	-11 10.9
12	137	09.6	325	37.9	+4 49.9	28 18.2	+23 05.1	36 47.5	+22 56.3	283 03.7	-11 11.0
13	152	12.1	340	37.7	48.6	43 18.9	04.9	51 49.4	56.3	298 06.0	11.0
14	167	14.5	355	37.4	47.4	58 19.6	04.8	66 51.3	56.2	313 08.4	11.1
15	182	17.0	10 37.2	46.1	73 20.3	04.6	81 53.2	56.2	328 10.7	11.1	
16	197	19.5	25 36.9	44.9	88 20.9	04.4	96 55.2	56.2	343 13.0	11.2	
17	212	21.9	40 36.7	+4 43.6	103 21.6	+23 04.2	111 57.1	+22 56.1	358 15.4	-11 11.2	
18	227	24.4	55 36.4	+4 42.3	118 22.3	+23 04.0	126 59.0	+22 56.1	13 17.7	-11 11.3	
19	242	26.9	70 36.2	41.1	133 23.0	03.8	142 00.9	56.1	28 20.1	11.3	
20	257	29.3	85 35.9	39.8	148 23.7	03.6	157 02.8	56.0	43 22.4	11.4	
21	272	31.8	100 35.7	38.5	163 24.4	03.4	172 04.7	56.0	58 24.8	11.4	
22	287	34.2	115 35.5	37.3	178 25.1	03.2	187 06.6	56.0	73 27.1	11.5	
23	302	36.7	130 35.2	36.0	193 25.8	03.0	202 08.5	55.9	88 29.5	11.5	
24	317	39.2	145 35.0	+4 34.8	208 26.5	+23 02.9	217 10.5	+22 55.9	103 31.8	-11 11.6	
Dif	—		-2	-13	+7	-2	+19	0	+23	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 5			Edad: 2 ^d 1 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 7 20 ^h : 55 ^m 9 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	178	36.9	+15	51.8	157	23.9	+3 35.8	60 N	1 36	3 05	4 00	7 29	78	20 06	14			
1	193	37.0		51.1	171	56.9 ¹⁴⁰	25.3 ¹⁰⁵	58	2 07	21	10	30	75	06	17			
2	208	37.0		50.4	186	29.8 ¹³⁹	14.8 ¹⁰⁵	56	30	34	19	31	73	06	19			
3	223	37.1		49.6	201	02.8 ¹⁴⁰	+3 04.2 ¹⁰⁶	54	2 48	45	27	32	71	06	22			
4	238	37.2		48.9	215	35.7 ¹³⁹	+2 53.7 ¹⁰⁵	52	3 03	3 55	34	33	69	06	22			
5	253	37.3	+15	48.2	230	08.7 ¹⁴⁰	+2 43.1 ¹⁰⁶	50	3 16	4 04	4 41	7 34	67	20 06	24			
6	268	37.4	+15	47.5	244	41.6 ¹³⁹	+2 32.5 ¹⁰⁶	45	3 41	4 22	4 55	7 36	63	20 06	28			
7	283	37.5		46.7	259	14.5 ¹³⁹	21.8 ¹⁰⁷	40	4 00	36	5 06	37	61	06	30			
8	298	37.6		46.0	273	47.4 ¹³⁹	11.2 ¹⁰⁶	35	15	48	15	38	58	06	33			
9	313	37.7		45.3	288	20.3 ¹³⁹	+2 00.5 ¹⁰⁷	30	28	4 58	24	40	55	06	35			
10	328	37.7		44.6	302	53.2 ¹³⁹	+1 49.8 ¹⁰⁷	20	4 48	5 15	38	41	52	06	39			
11	343	37.8	+15	43.8	317	26.0 ¹³⁸	+1 39.1 ¹⁰⁷	10 N	5 03	5 29	5 51	7 43	49	20 06	43			
12	358	37.9	+15	43.1	331	58.9 ¹³⁹	+1 28.4 ¹⁰⁷	0	5 16	5 41	6 02	7 45	45	20 06	46			
13	13	38.0		42.4	346	31.7 ¹³⁸	17.7 ¹⁰⁷	10 S	26	5 52	13	46	42	06	49			
14	28	38.1		41.7	1	04.5 ¹³⁸	+1 07.0 ¹⁰⁷	20	36	6 03	25	48	39	06	53			
15	43	38.2		40.9	15	37.3 ¹³⁸	+0 56.2 ¹⁰⁸	30	46	14	39	50	35	06	56			
16	58	38.3		40.2	30	10.1 ¹³⁸	45.5 ¹⁰⁷	35	50	20	47	51	33	06	59			
17	73	38.4	+15	39.5	44	42.9 ¹³⁸	+0 34.7 ¹⁰⁸	40	5 55	6 27	6 56	7 53	29	20 06	61			
18	88	38.5	+15	38.8	59	15.7 ¹³⁸	+0 23.9 ¹⁰⁸	45	6 00	6 35	7 06	7 54	27	20 06	64			
19	103	38.6		38.0	73	48.4 ¹³⁷	13.1 ¹⁰⁸	50	06	44	18	56	23	06	68			
20	118	38.7		37.3	88	21.1 ¹³⁷	+0 02.4 ¹⁰⁷	52	08	48	24	57	22	06	69			
21	133	38.7		36.6	102	53.8 ¹³⁷	-0 08.4 ¹⁰⁸	54	10	53	31	58	20	06	71			
22	148	38.8		35.8	117	26.5 ¹³⁷	19.2 ¹⁰⁸	56	13	6 57	38	7 59	18	06	73			
23	163	38.9		35.1	131	59.1 ¹³⁶	30.1 ¹⁰⁹	58	16	7 03	46	8 00	16	06	75			
24	178	39.0	+15	34.4	146	31.8 ¹³⁷	-0 40.9 ¹⁰⁸	60 S	6 19	7 09	7 55	8 01	14	20 06	78			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 2 ^h 48 ^m 9			Mag: -3.9 PMG: 14 ^h 18 ^m			Mag: +1.6 PMG: 10 ^h 06 ^m			Mag: -2.0 PMG: 9 ^h 30 ^m			Mag: +0.7 PMG: 17 ^h 03 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	317	39.2	145	35.0	+4	34.8	208	26.5	+23	02.9	217	10.5	+22	55.9	103	31.8	-11	11.6
1	332	41.6	160	34.7		33.5	223	27.2		02.7	232	12.4		55.9	118	34.2		11.6
2	347	44.1	175	34.5		32.2	238	27.9		02.5	247	14.3		55.8	133	36.5		11.7
3	2	46.6	190	34.2		31.0	253	28.6		02.3	262	16.2		55.8	148	38.9		11.8
4	17	49.0	205	34.0		29.7	268	29.3		02.1	277	18.1		55.8	163	41.2		11.8
5	32	51.5	220	33.8	+4	28.4	283	30.0	+23	01.9	292	20.0	+22	55.7	178	43.6	-11	11.9
6	47	54.0	235	33.5	+4	27.2	298	30.7	+23	01.7	307	21.9	+22	55.7	193	45.9	-11	11.9
7	62	56.4	250	33.3		25.9	313	31.4		01.5	322	23.8		55.7	208	48.2		12.0
8	77	58.9	265	33.0		24.6	328	32.0		01.3	337	25.8		55.6	223	50.6		12.0
9	93	01.3	280	32.8		23.4	343	32.7		01.1	352	27.7		55.6	238	52.9		12.1
10	108	03.8	295	32.6		22.1	358	33.4		00.9	7	29.6		55.6	253	55.3		12.1
11	123	06.3	310	32.3	+4	20.9	13	34.1	+23	00.7	22	31.5	+22	55.5	268	57.6	-11	12.2
12	138	08.7	325	32.1	+4	19.6	28	34.8	+23	00.5	37	33.4	+22	55.5	284	00.0	-11	12.2
13	153	11.2	340	31.8		18.3	43	35.5		00.4	52	35.3		55.5	299	02.3		12.3
14	168	13.7	355	31.6		17.1	58	36.2	+23	00.2	67	37.2		55.4	314	04.7		12.3
15	183	16.1	10	31.4		15.8	73	36.9	+23	00.0	82	39.2		55.4	329	07.0		12.4
16	198	18.6	25	31.1		14.5	88	37.6	+22	59.8	97	41.1		55.4	344	09.4		12.4
17	213	21.1	40	30.9	+4	13.3	103	38.3	+22	59.6	112	43.0	+22	55.3	359	11.7	-11	12.5
18	228	23.5	55	30.6	+4	12.0	118	39.0	+22	59.4	127	44.9	+22	55.3	14	14.0	-11	12.5
19	243	26.0	70	30.4		10.7	133	39.7		59.2	142	46.8		55.3	29	16.4		12.6
20	258	28.5	85	30.2		09.5	148	40.4		59.0	157	48.7		55.2	44	18.7		12.6
21	273	30.9	100	29.9		08.2	163	41.1		58.8	172	50.7		55.2	59	21.1		12.7
22	288	33.4	115	29.7		06.9	178	41.8		58.6	187	52.6		55.2	74	23.4		12.7
23	303	35.8	130	29.5		05.7	193	42.5		58.4	202	54.5		55.1	89	25.8		12.8
24	318	38.3	145	29.2	+4	04.4	208	43.2	+22	58.2	217	56.4	+22	55.1	104	28.1	-11	12.8
Dif	—		-2		-13		+7		-2		+19		0		+23		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 3				Edad: 3 ^d 1 PHE { SD: 15/2 PMG: 14 ^h 41 ^m 4 ^h : 56/1 12 ^h : 56/2 20 ^h : 56/4 R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	39.0	+15	34.4	146	31.8	-0	40.9	60 N	20 07	21 00	22 24	8 47 79		20 20 16			
1	193	39.1		33.7	161	04.4 ¹³⁶	-0	51.7 ¹⁰⁸	58	19 57	20 45	21 56	45 77		23 18			
2	208	39.2		32.9	175	37.0 ¹³⁶	-1	02.5 ¹⁰⁸	56	48	33	34	44 74		25 20			
3	223	39.3		32.2	190	09.5 ¹³⁵		13.3 ¹⁰⁸	54	40	22	17	43 72		27 22			
4	238	39.4		31.5	204	42.1 ¹³⁶		24.2 ¹⁰⁹	52	33	12	21 03	42 70		28 24			
5	253	39.5	+15	30.7	219	14.6 ¹³⁵	-1	35.0 ¹⁰⁸	50	19 27	20 04	20 51	8 41 69		20 30 26			
6	268	39.6	+15	30.0	233	47.1 ¹³⁵	-1	45.8 ¹⁰⁸	45	19 14	19 46	20 27	8 39 65		20 34 29			
7	283	39.7		29.3	248	19.5 ¹³⁴	-1	56.6 ¹⁰⁸	40	19 03	33	20 08	38 62		36 32			
8	298	39.8		28.5	262	52.0 ¹³⁵	-2	07.5 ¹⁰⁹	35	18 54	21	19 54	36 60		39 34			
9	313	39.9		27.8	277	24.4 ¹³⁴		18.3 ¹⁰⁸	30	46	19 11	41	35 57		41 37			
10	328	40.0		27.1	291	56.7 ¹³³		29.1 ¹⁰⁸	20	32	18 55	22	33 53		45 41			
11	343	40.1	+15	26.3	306	29.1 ¹³⁴	-2	39.9 ¹⁰⁸	10 N	18 20	18 42	19 07	8 32 49		20 49 44			
12	358	40.1	+15	25.6	321	01.4 ¹³³	-2	50.7 ¹⁰⁸	0	18 09	18 30	18 55	8 30 46		20 52 47			
13	13	40.2		24.9	335	33.7 ¹³³	-3	01.5 ¹⁰⁸	10 S	17 58	19	45	28 43		55 50			
14	28	40.3		24.1	350	06.0 ¹³³		12.3 ¹⁰⁸	20	46	18 09	35	27 39		20 59 53			
15	43	40.4		23.4	4	38.2 ¹³²		23.1 ¹⁰⁸	30	33	17 58	26	25 35		21 02 58			
16	58	40.5		22.6	19	10.4 ¹³²		33.9 ¹⁰⁸	35	25	52	22	24 33		05 60			
17	73	40.6	+15	21.9	33	42.5 ¹³¹	-3	44.7 ¹⁰⁸	40	17 17	17 45	18 17	8 22 31		21 07 63			
18	88	40.7	+15	21.2	48	14.7 ¹³²	-3	55.4 ¹⁰⁷	45	17 07	17 37	18 12	8 21 28		21 10 66			
19	103	40.8		20.4	62	46.7 ¹³⁰	-4	06.2 ¹⁰⁸	50	16 54	29	07	19 25		14 69			
20	118	40.9		19.7	77	18.8 ¹³¹		16.9 ¹⁰⁷	52	49	25	05	19 23		15 71			
21	133	41.0		19.0	91	50.8 ¹³⁰		27.6 ¹⁰⁷	54	43	21	03	18 21		17 73			
22	148	41.1		18.2	106	22.8 ¹³⁰		38.3 ¹⁰⁷	56	36	16	18 00	17 19		19 75			
23	163	41.2		17.5	120	54.7 ¹²⁹		49.0 ¹⁰⁷	58	28	11	17 58	16 17		21 78			
24	178	41.3	+15	16.7	135	26.6 ¹²⁹	-4	59.7 ¹⁰⁷	60 S	16 19	17 05	17 55	8 15 15		21 24 80			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 45 ^m 0		Mag: -3.9 PMG: 14 ^h 18 ^m				Mag: +1.6 PMG: 10 ^h 05 ^m				Mag: -2.0 PMG: 9 ^h 27 ^m				Mag: +0.7 PMG: 16 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	318	38.3	145	29.2	+4	04.4	208	43.2	+22	58.2	217	56.4	+22	55.1	104	28.1	-11	12.8
1	333	40.8	160	29.0		03.1	223	43.9		58.0	232	58.3		55.1	119	30.4		12.9
2	348	43.2	175	28.8		01.9	238	44.6		57.8	248	00.2		55.0	134	32.8		12.9
3	3	45.7	190	28.5	+4	00.6	253	45.3		57.6	263	02.1		55.0	149	35.1		13.0
4	18	48.2	205	28.3	+3	59.3	268	46.0		57.4	278	04.1		55.0	164	37.5		13.0
5	33	50.6	220	28.0	+3	58.1	283	46.7	+22	57.2	293	06.0	+22	54.9	179	39.8	-11	13.1
6	48	53.1	235	27.8	+3	56.8	298	47.4	+22	57.0	308	07.9	+22	54.9	194	42.2	-11	13.2
7	63	55.6	250	27.6		55.5	313	48.1		56.8	323	09.8		54.9	209	44.5		13.2
8	78	58.0	265	27.3		54.2	328	48.8		56.6	338	11.7		54.8	224	46.8		13.3
9	94	00.5	280	27.1		53.0	343	49.5		56.4	353	13.6		54.8	239	49.2		13.3
10	109	02.9	295	26.9		51.7	358	50.2		56.2	8	15.6		54.8	254	51.5		13.4
11	124	05.4	310	26.6	+3	50.4	13	50.9	+22	56.0	23	17.5	+22	54.7	269	53.9	-11	13.4
12	139	07.9	325	26.4	+3	49.2	28	51.6	+22	55.8	38	19.4	+22	54.7	284	56.2	-11	13.5
13	154	10.3	340	26.2		47.9	43	52.3		55.6	53	21.3		54.7	299	58.6		13.5
14	169	12.8	355	25.9		46.6	58	53.0		55.4	68	23.2		54.6	315	00.9		13.6
15	184	15.3	10	25.7		45.4	73	53.7		55.2	83	25.1		54.6	330	03.2		13.6
16	199	17.7	25	25.5		44.1	88	54.4		55.0	98	27.1		54.6	345	05.6		13.7
17	214	20.2	40	25.2	+3	42.8	103	55.1	+22	54.8	113	29.0	+22	54.5	0	07.9	-11	13.7
18	229	22.7	55	25.0	+3	41.5	118	55.8	+22	54.6	128	30.9	+22	54.5	15	10.3	-11	13.8
19	244	25.1	70	24.8		40.3	133	56.5		54.4	143	32.8		54.5	30	12.6		13.8
20	259	27.6	85	24.5		39.0	148	57.2		54.2	158	34.7		54.4	45	14.9		13.9
21	274	30.1	100	24.3		37.7	163	57.9		54.0	173	36.7		54.4	60	17.3		13.9
22	289	32.5	115	24.1		36.5	178	58.6		53.8	188	38.6		54.4	75	19.6		14.0
23	304	35.0	130	23.8		35.2	193	59.3		53.6	203	40.5		54.3	90	22.0		14.1
24	319	37.4	145	23.6	+3	33.9	209	00.0	+22	53.4	218	42.4	+22	54.3	105	24.3	-11	14.1
Dif	—		-2		-13		+7		-2		+19		0		+23		-1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 2				Edad: 4 ^d 1 PHE { 4 ^h : 56/6 12 ^h : 56/8 20 ^h : 57/0 R°: 48 ^m SD: 15/4 PMG: 15 ^h 28 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	41.3	+15	16.7	135	26.6	-4	59.7	60 N	1	47	3	11	4	05	10	06	
1	193	41.4		16.0	149	58.5 ¹²⁹	-5	10.4 ¹⁰⁷	58	2	15		26	15	10	02		
2	208	41.5		15.2	164	30.3 ¹²⁸		21.0 ¹⁰⁶	56		37		38	23	9	58		
3	223	41.6		14.5	179	02.1 ¹²⁸		31.7 ¹⁰⁷	54	2	54		49	31		55		
4	238	41.7		13.8	193	33.9 ¹²⁸		42.3 ¹⁰⁶	52	3	08	3	59	38		52		
5	253	41.8	+15	13.0	208	05.6 ¹²⁷	-5	52.9 ¹⁰⁶	50	3	20	4	07	4	44	9	50	
6	268	41.9	+15	12.3	222	37.2 ¹²⁶	-6	03.4 ¹⁰⁵	45	3	44	4	25	4	57	9	44	
7	283	42.0		11.5	237	08.8 ¹²⁶		14.0 ¹⁰⁶	40	4	03		38	5	08	40	63	
8	298	42.1		10.8	251	40.4 ¹²⁶		24.5 ¹⁰⁵	35		17	4	50	17		36	61	
9	313	42.2		10.0	266	11.9 ¹²⁵		35.0 ¹⁰⁵	30		29	5	00	25		32	59	
10	328	42.3		09.3	280	43.4 ¹²⁵		45.5 ¹⁰⁵	20	4	49		16	39		26	55	
11	343	42.4	+15	08.6	295	14.9 ¹²⁵	-6	56.0 ¹⁰⁵	10 N	5	03	5	29	5	51	9	21	
12	358	42.5	+15	07.8	309	46.2 ¹²³	-7	06.4 ¹⁰⁴	0	5	15	5	40	6	02	9	16	
13	13	42.6		07.1	324	17.6 ¹²⁴		16.8 ¹⁰⁴	10 S		26	5	51	13		11	45	
14	28	42.7		06.3	338	48.9 ¹²³		27.2 ¹⁰⁴	20	35	6	01		24		06	42	
15	43	42.8		05.6	353	20.1 ¹²²		37.5 ¹⁰³	30	44		12		37		9	00	
16	58	42.9		04.8	7	51.3 ¹²²		47.9 ¹⁰⁴	35	49		19		45		8	57	
17	73	43.0	+15	04.1	22	22.5 ¹²²	-7	58.1 ¹⁰²	40	5	53	6	25	6	53	8	53	
18	88	43.1	+15	03.3	36	53.6 ¹²¹	-8	08.4 ¹⁰³	45	5	58	6	32	7	03	8	49	
19	103	43.2		02.6	51	24.6 ¹²⁰		18.6 ¹⁰²	50	6	03	41	15			44	27	
20	118	43.3		01.8	65	55.6 ¹²⁰		28.8 ¹⁰²	52	05		45		21		42	25	
21	133	43.4		01.1	80	26.5 ¹¹⁹		39.0 ¹⁰²	54	07		49	27			39	24	
22	148	43.5	+15	00.3	94	57.4 ¹¹⁹		49.1 ¹⁰¹	56	09		53		33		36	22	
23	163	43.6	+14	59.6	109	28.2 ¹¹⁸	-8	59.2 ¹⁰¹	58	12	6	58	41			33	20	
24	178	43.8	+14	58.8	123	59.0 ¹¹⁸	-9	09.2 ¹⁰⁰	60 S	6	14	7	04	7	50	8	30	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 41 ^m 1		Mag: -3.9 PMG: 14 ^h 19 ^m				Mag: +1.6 PMG: 10 ^h 04 ^m				Mag: -2.0 PMG: 9 ^h 24 ^m				Mag: +0.7 PMG: 16 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	37.4	145	23.6	+3	33.9	209	00.0	+22	53.4	218	42.4	+22	54.3	105	24.3	-11	14.1
1	334	39.9	160	23.4		32.7	224	00.7		53.1	233	44.3		54.3	120	26.6		14.2
2	349	42.4	175	23.2		31.4	239	01.4		52.9	248	46.3		54.2	135	29.0		14.2
3	4	44.8	190	22.9		30.1	254	02.1		52.7	263	48.2		54.2	150	31.3		14.3
4	19	47.3	205	22.7		28.8	269	02.8		52.5	278	50.1		54.2	165	33.7		14.3
5	34	49.8	220	22.5	+3	27.6	284	03.5	+22	52.3	293	52.0	+22	54.1	180	36.0	-11	14.4
6	49	52.2	235	22.2	+3	26.3	299	04.2	+22	52.1	308	53.9	+22	54.1	195	38.3	-11	14.4
7	64	54.7	250	22.0		25.0	314	04.9		51.9	323	55.8		54.1	210	40.7		14.5
8	79	57.2	265	21.8		23.7	329	05.6		51.7	338	57.8		54.0	225	43.0		14.5
9	94	59.6	280	21.6		22.5	344	06.3		51.5	353	59.7		54.0	240	45.4		14.6
10	110	02.1	295	21.3		21.2	359	07.0		51.3	9	01.6		53.9	255	47.7		14.6
11	125	04.6	310	21.1	+3	19.9	14	07.7	+22	51.1	24	03.5	+22	53.9	270	50.0	-11	14.7
12	140	07.0	325	20.9	+3	18.6	29	08.4	+22	50.9	39	05.4	+22	53.9	285	52.4	-11	14.8
13	155	09.5	340	20.6		17.4	44	09.1		50.7	54	07.4		53.8	300	54.7		14.8
14	170	11.9	355	20.4		16.1	59	09.9		50.5	69	09.3		53.8	315	57.0		14.9
15	185	14.4	10	20.2		14.8	74	10.6		50.2	84	11.2		53.8	330	59.4		14.9
16	200	16.9	25	20.0		13.6	89	11.3		50.0	99	13.1		53.7	346	01.7		15.0
17	215	19.3	40	19.7	+3	12.3	104	12.0	+22	49.8	114	15.1	+22	53.7	1	04.1	-11	15.0
18	230	21.8	55	19.5	+3	11.0	119	12.7	+22	49.6	129	17.0	+22	53.7	16	06.4	-11	15.1
19	245	24.3	70	19.3		09.7	134	13.4		49.4	144	18.9		53.6	31	08.7		15.1
20	260	26.7	85	19.0		08.5	149	14.1		49.2	159	20.8		53.6	46	11.1		15.2
21	275	29.2	100	18.8		07.2	164	14.8		49.0	174	22.7		53.6	61	13.4		15.2
22	290	31.7	115	18.6		05.9	179	15.5		48.8	189	24.7		53.5	76	15.7		15.3
23	305	34.1	130	18.4		04.6	194	16.2		48.6	204	26.6		53.5	91	18.1		15.3
24	320	36.6	145	18.1	+3	03.4	209	16.9	+22	48.3	219	28.5	+22	53.5	106	20.4	-11	15.4
Dif	—		-2		-13		+7		-2		+19		0		+23		-	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 0		Edad: 5 ^d 1 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6 R°: 52 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	178	43.8	+14	58.8	123	59.0	-9 09.2	60 N	20 01	20 54	22 14	11 27	81	
1	193	43.9		58.1	138	29.7 ¹¹⁷	19.2 ¹⁰⁰	58	19 52	39	21 48	20 79	21 02	
2	208	44.0		57.3	153	00.4 ¹¹⁷	29.2 ¹⁰⁰	56	43	28	28	14 77	08 29	
3	223	44.1		56.6	167	31.0 ¹¹⁶	39.1 ⁹⁹	54	36	17	21 12	09 74	14 30	
4	238	44.2		55.8	182	01.6 ¹¹⁶	49.0 ⁹⁹	52	30	08	20 58	04 73	19 33	
5	253	44.3	+14	55.1	196	32.0 ¹¹⁴	-9 58.9 ⁹⁹	50	19 24	20 00	20 46	11 00	71	
6	268	44.4	+14	54.3	211	02.5 ¹¹⁵	-10 08.7 ⁹⁸	45	19 11	19 43	20 23	10 51	67	
7	283	44.5		53.6	225	32.9 ¹¹⁴	18.4 ⁹⁷	40	19 01	30	20 05	43 65	43 40	
8	298	44.6		52.8	240	03.2 ¹¹³	28.1 ⁹⁷	35	18 52	19	19 51	37 62	51 41	
9	313	44.7		52.1	254	33.4 ¹¹²	37.8 ⁹⁷	30	44	19 09	39	31 60	21 57	
10	328	44.8		51.3	269	03.6 ¹¹²	47.4 ⁹⁶	20	31	18 54	21	21 57	22 09	
11	343	44.9	+14	50.5	283	33.8 ¹¹²	-10 57.0 ⁹⁶	10 N	18 19	18 41	19 06	10 12	54	
12	358	45.0	+14	49.8	298	03.8 ¹¹⁰	-11 06.5 ⁹⁵	0	18 08	18 30	18 55	10 04	51	
13	13	45.1		49.0	312	33.8 ¹¹⁰	16.0 ⁹⁵	10 S	17 58	19	45	9 56	48	
14	28	45.2		48.3	327	03.8 ¹¹⁰	25.4 ⁹⁴	20	47	18 09	36	48 45	48 58	
15	43	45.3		47.5	341	33.7 ¹⁰⁹	34.8 ⁹⁴	30	34	17 59	27	39 41	22 59	
16	58	45.5		46.8	356	03.5 ¹⁰⁸	44.1 ⁹³	35	27	53	23	33 39	23 06	
17	73	45.6	+14	46.0	10	33.2 ¹⁰⁷	-11 53.4 ⁹³	40	17 18	17 47	18 19	9 27	37	
18	88	45.7	+14	45.2	25	02.9 ¹⁰⁷	-12 02.6 ⁹²	45	17 09	17 40	18 14	9 20	34	
19	103	45.8		44.5	39	32.6 ¹⁰⁷	11.8 ⁹²	50	16 57	31	10	11 31	33 71	
20	118	45.9		43.7	54	02.1 ¹⁰⁵	20.9 ⁹¹	52	52	28	08	07 30	38 73	
21	133	46.0		43.0	68	31.6 ¹⁰⁵	29.9 ⁹⁰	54	46	24	06	9 03	28	
22	148	46.1		42.2	83	01.0 ¹⁰⁴	38.9 ⁹⁰	56	40	19	04	8 58	26	
23	163	46.2		41.5	97	30.4 ¹⁰⁴	47.8 ⁸⁹	58	32	15	18 01	53 23	23 57	
24	178	46.3	+14	40.7	111	59.7 ¹⁰³	-12 56.6 ⁸⁸	60 S	16 24	17 09	17 59	8 47	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 37 ^m 1		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: +1.6 PMG: 10 ^h 02 ^m		Mag: -2.0 PMG: 9 ^h 21 ^m		Mag: +0.7 PMG: 16 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	320	36.6	145	18.1	+3	03.4	209	16.9	+22	48.3
1	335	39.0	160	17.9		02.1	224	17.6		48.1
2	350	41.5	175	17.7	+3	00.8	239	18.3		47.9
3	5	44.0	190	17.5	+2	59.5	254	19.0		47.7
4	20	46.4	205	17.2		58.2	269	19.7		47.5
5	35	48.9	220	17.0	+2	57.0	284	20.4	+22	47.3
6	50	51.4	235	16.8	+2	55.7	299	21.2	+22	47.1
7	65	53.8	250	16.6		54.4	314	21.9		46.8
8	80	56.3	265	16.3		53.1	329	22.6		46.6
9	95	58.8	280	16.1		51.9	344	23.3		46.4
10	111	01.2	295	15.9		50.6	359	24.0		46.2
11	126	03.7	310	15.7	+2	49.3	14	24.7	+22	46.0
12	141	06.2	325	15.5	+2	48.0	29	25.4	+22	45.8
13	156	08.6	340	15.2		46.8	44	26.1		45.6
14	171	11.1	355	15.0		45.5	59	26.8		45.3
15	186	13.5	10	14.8		44.2	74	27.5		45.1
16	201	16.0	25	14.6		42.9	89	28.2		44.9
17	216	18.5	40	14.3	+2	41.6	104	29.0	+22	44.7
18	231	20.9	55	14.1	+2	40.4	119	29.7	+22	44.5
19	246	23.4	70	13.9		39.1	134	30.4		44.2
20	261	25.9	85	13.7		37.8	149	31.1		44.0
21	276	28.3	100	13.5		36.5	164	31.8		43.8
22	291	30.8	115	13.2		35.3	179	32.5		43.6
23	306	33.3	130	13.0		34.0	194	33.2		43.4
24	321	35.7	145	12.8	+2	32.7	209	33.9	+22	43.2
Dif	—		-2		-13		+7		-2	
							+19		0	
									+23	
									-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 6 ^d 1 PHE { 4 ^h : 57 ^h 8 12 ^h : 58 ^h 0 20 ^h : 58 ^h 2 R°: 54 ^m												
	PMG: 12 ^h 04 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	46.3	+14	40.7	111	59.7	-12	56.6	60 N	1 57	3 17	4 10	12 48	81	21 18	32
1	193	46.4		39.9	126	28.9	-13	05.4	58	2 23	31	19	39	78	28	34
2	208	46.6		39.2	140	58.1		14.2	56	43	43	27	31	75	37	36
3	223	46.7		38.4	155	27.2		22.8	54	2 59	3 53	34	23	74	44	38
4	238	46.8		37.6	169	56.2		31.4	52	3 12	4 02	41	17	72	52	39
5	253	46.9	+14	36.9	184	25.1	-13	40.0	50	3 24	4 10	4 47	12 11	71	21 58	40
6	268	47.0	+14	36.1	198	54.0	-13	48.4	45	3 47	4 27	4 59	11 58	68	22 12	43
7	283	47.1		35.4	213	22.8	-13	56.8	40	4 05	41	5 10	48	65	23	45
8	298	47.2		34.6	227	51.6	-14	05.2	35	19	4 52	19	39	63	32	48
9	313	47.3		33.8	242	20.2		13.4	30	31	5 01	26	31	62	41	49
10	328	47.5		33.1	256	48.8		21.6	20	4 49	16	39	18	58	22 56	51
11	343	47.6	+14	32.3	271	17.3	-14	29.7	10 N	5 04	5 29	5 51	11 06	56	23 08	54
12	358	47.7	+14	31.5	285	45.8	-14	37.7	0	5 15	5 40	6 01	10 55	54	23 21	55
13	13	47.8		30.8	300	14.2		45.7	10 S	25	5 50	12	44	52	33	57
14	28	47.9		30.0	314	42.5	-14	53.6	20	34	6 00	23	33	49	23 46	59
15	43	48.0		29.2	329	10.7	-15	01.4	30	42	11	35	20	46	***	***
16	58	48.1		28.5	343	38.9		09.1	35	47	16	43	12	45	***	***
17	73	48.3	+14	27.7	358	07.0	-15	16.8	40	5 51	6 23	6 51	10 04	42	***	***
18	88	48.4	+14	26.9	12	35.0	-15	24.3	45	5 55	6 30	7 00	9 54	40	***	***
19	103	48.5		26.2	27	03.0		31.8	50	5 59	38	12	42	37	***	***
20	118	48.6		25.4	41	30.9		39.2	52	6 01	41	17	37	35	***	***
21	133	48.7		24.6	55	58.7		46.5	54	03	45	23	31	34	***	***
22	148	48.8		23.9	70	26.4	-15	53.8	56	05	49	29	24	32	***	***
23	163	48.9		23.1	84	54.1	-16	00.9	58	07	54	36	16	30	***	***
24	178	49.1	+14	22.3	99	21.6	-16	08.0	60 S	6 10	6 59	7 44	9 08	27	0 05	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 33 ^m 2		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: +1.6 PMG: 10 ^h 01 ^m		Mag: -2.0 PMG: 9 ^h 18 ^m		Mag: +0.7 PMG: 16 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	321	35.7	145	12.8	+2	32.7	220	14.7	+22	52.6
1	336	38.2	160	12.6		31.4	235	16.6		52.6
2	351	40.6	175	12.4		30.1	250	18.5		52.5
3	6	43.1	190	12.1		28.9	265	20.4		52.5
4	21	45.6	205	11.9		27.6	280	22.4		52.5
5	36	48.0	220	11.7	+2	26.3	295	24.3	+22	52.4
6	51	50.5	235	11.5	+2	25.0	310	26.2	+22	52.4
7	66	53.0	250	11.3		23.7	325	28.1		52.4
8	81	55.4	265	11.0		22.5	340	30.1		52.3
9	96	57.9	280	10.8		21.2	355	32.0		52.3
10	112	00.4	295	10.6		19.9	10	33.9		52.3
11	127	02.8	310	10.4	+2	18.6	14	41.8	+22	52.2
12	142	05.3	325	10.2	+2	17.3	29	42.5	+22	52.2
13	157	07.8	340	09.9		16.1	44	43.2		52.2
14	172	10.2	355	09.7		14.8	59	43.9		52.1
15	187	12.7	10	09.5		13.5	74	44.6		52.1
16	202	15.1	25	09.3		12.2	89	45.3		52.0
17	217	17.6	40	09.1	+2	10.9	104	46.0	+22	52.0
18	232	20.1	55	08.9	+2	09.7	119	46.8	+22	52.0
19	247	22.5	70	08.6		08.4	134	47.5		51.9
20	262	25.0	85	08.4		07.1	149	48.2		51.9
21	277	27.5	100	08.2		05.8	164	48.9		51.9
22	292	29.9	115	08.0		04.5	179	49.6		51.8
23	307	32.4	130	07.8		03.2	194	50.3		51.8
24	322	34.9	145	07.6	+2	02.0	209	51.0	+22	51.8
Dif	—		-2		-13		+7		-2	
							+19		0	
									+23	
									-	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 6				Edad: 7 ^d 1 PHE { 4 ^h : 58/4 12 ^h : 58/6 20 ^h : 58/9 PMG: 18 ^h 02 ^m R°: 58 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	49.1	+14	22.3	99	21.6	-16	08.0	60 N	19 56	20 47	22 03	14 09 75		21 50 43	
1	193	49.2		21.6	113	49.2	86	14.9	58	47	34	21 39	13 57 73		22 02 45	
2	208	49.3		20.8	128	16.6	84	21.8	56	39	22	21	46 72		13 47	
3	223	49.4		20.0	142	44.0	84	28.6	54	32	12	21 06	37 70		22 48	
4	238	49.5		19.2	157	11.3	83	35.3	52	26	20 04	20 53	29 69		31 49	
5	253	49.6	+14	18.5	171	38.5	82	-16 41.9	50	19 20	19 56	20 42	13 22 68		22 38 50	
6	268	49.8	+14	17.7	186	05.6	81	-16 48.4	45	19 08	19 40	20 19	13 06 66		22 55 51	
7	283	49.9		16.9	200	32.7	81	-16 54.9	40	18 58	27	20 02	12 53 64		23 08 53	
8	298	50.0		16.2	214	59.7	80	-17 01.2	35	49	16	19 48	42 63		20 53	
9	313	50.1		15.4	229	26.7	80	07.4	30	42	19 07	37	33 62		30 54	
10	328	50.2		14.6	243	53.5	78	13.5	20	29	18 52	19	16 60		23 47 56	
11	343	50.4	+14	13.8	258	20.3	78	-17 19.6	10 N	18 18	18 40	19 05	12 02 59	**	**	**
12	358	50.5	+14	13.1	272	47.0	77	-17 25.5	0	18 08	18 29	18 54	11 49 57	**	**	**
13	13	50.6		12.3	287	13.7	77	31.3	10 S	17 58	19	45	36 55	**	**	**
14	28	50.7		11.5	301	40.3	76	37.0	20	47	10	36	22 54	**	**	**
15	43	50.8		10.7	316	06.8	75	42.7	30	35	18 00	28	11 06 52		0 00 62	
16	58	51.0		10.0	330	33.2	74	48.2	35	28	17 54	24	10 57 50		09 63	
17	73	51.1	+14	09.2	344	59.6	74	-17 53.6	40	17 20	17 48	18 20	10 46 49		0 19 65	
18	88	51.2	+14	08.4	359	25.9	73	-17 58.9	45	17 11	17 42	18 16	10 34 47		0 30 67	
19	103	51.3		07.6	13	52.1	72	-18 04.1	50	17 00	34	12	19 45		44 70	
20	118	51.4		06.8	28	18.3	72	09.2	52	16 55	31	11	12 44		51 71	
21	133	51.6		06.1	42	44.4	71	14.2	50	50	27	09	10 05 42		0 58 72	
22	148	51.7		05.3	57	10.4	70	19.0	48	43	23	07	9 56 41		1 06 74	
23	163	51.8		04.5	71	36.4	70	23.8	48	36	18	05	46 40		15 76	
24	178	51.9	+14	03.7	86	02.3	69	-18 28.5	47	16 29	17 14	18 03	9 35 38		1 26 78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 29 ^m 3		Mag: -3.9 PMG: 14 ^h 20 ^m			Mag: +1.6 PMG: 10 ^h 00 ^m			Mag: -2.0 PMG: 9 ^h 15 ^m			Mag: +0.7 PMG: 16 ^h 45 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	34.9	145	07.6	+2	02.0	209	51.0	+22	37.8	221	00.9	+22	51.8	108	12.4
1	337	37.3	160	07.3	+2	00.7	224	51.8		37.6	236	02.8		51.7	123	14.7
2	352	39.8	175	07.1	+1	59.4	239	52.5		37.3	251	04.8		51.7	138	17.0
3	7	42.3	190	06.9		58.1	254	53.2		37.1	266	06.7		51.7	153	19.4
4	22	44.7	205	06.7		56.8	269	53.9		36.9	281	08.6		51.6	168	21.7
5	37	47.2	220	06.5	+1	55.6	284	54.6	+22	36.7	296	10.5	+22	51.6	183	24.0
6	52	49.6	235	06.3	+1	54.3	299	55.3	+22	36.4	311	12.5	+22	51.5	198	26.4
7	67	52.1	250	06.1		53.0	314	56.1		36.2	326	14.4		51.5	213	28.7
8	82	54.6	265	05.8		51.7	329	56.8		36.0	341	16.3		51.5	228	31.0
9	97	57.0	280	05.6		50.4	344	57.5		35.7	356	18.3		51.4	243	33.3
10	112	59.5	295	05.4		49.1	359	58.2		35.5	11	20.2		51.4	258	35.7
11	128	02.0	310	05.2	+1	47.9	14	58.9	+22	35.3	26	22.1	+22	51.4	273	38.0
12	143	04.4	325	05.0	+1	46.6	29	59.6	+22	35.1	41	24.1	+22	51.3	288	40.3
13	158	06.9	340	04.8		45.3	45	00.4		34.8	56	26.0		51.3	303	42.7
14	173	09.4	355	04.6		44.0	60	01.1		34.6	71	27.9		51.3	318	45.0
15	188	11.8	10	04.3		42.7	75	01.8		34.4	86	29.8		51.2	333	47.3
16	203	14.3	25	04.1		41.4	90	02.5		34.1	101	31.8		51.2	348	49.6
17	218	16.7	40	03.9	+1	40.2	105	03.2	+22	33.9	116	33.7	+22	51.1	3	52.0
18	233	19.2	55	03.7	+1	38.9	120	04.0	+22	33.7	131	35.6	+22	51.1	18	54.3
19	248	21.7	70	03.5		37.6	135	04.7		33.4	146	37.6		51.1	33	56.6
20	263	24.1	85	03.3		36.3	150	05.4		33.2	161	39.5		51.0	48	58.9
21	278	26.6	100	03.1		35.0	165	06.1		33.0	176	41.4		51.0	64	01.3
22	293	29.1	115	02.9		33.7	180	06.8		32.7	191	43.4		51.0	79	03.6
23	308	31.5	130	02.6		32.5	195	07.6		32.5	206	45.3		50.9	94	05.9
24	323	34.0	145	02.4	+1	31.2	210	08.3	+22	32.3	221	47.2	+22	50.9	109	08.2
Dif	—		-2		-13		+7		-2		+19		0		+23	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 4			Edad: 8 ^d 1 PHE { SD: 16 ^h 1 PMG: 19 ^h 00 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	51.9	+14	03.7	86	02.3	-18	28.5	60 N	2 07	3 23	4 14	15	24	64	22 33 59
1	193	52.0		02.9	100	28.1 68		33.0 45	58	30	36	23	15	10	63	22 47 60
2	208	52.2		02.2	114	53.9 68		37.4 44	56	2 49	48	31	14	58	63	23 00 59
3	223	52.3		01.4	129	19.6 67		41.7 43	54	3 04	3 57	38		47	63	10 60
4	238	52.4	+14	00.6	143	45.2 66		45.9 42	52	17	4 06	44		38	63	20 59
5	253	52.5	+13	59.8	158	10.8 66	-18	50.0 41	50	3 28	4 14	4 50	14	30	62	23 28 60
6	268	52.7	+13	59.0	172	36.3 65	-18	54.0 40	45	3 50	4 30	5 02	14	12	62	23 46 60
7	283	52.8		58.3	187	01.7 64	-18	57.8 37	40	4 07	43	12	13	57	62	** ** *
8	298	52.9		57.5	201	27.1 64	-19	01.5 38	35	21	4 53	20		45	61	** ** *
9	313	53.0		56.7	215	52.5 64		05.1 36	30	32	5 02	27		35	60	** ** *
10	328	53.2		55.9	230	17.7 62		08.6 35	20	4 50	17	40		16	61	** ** *
11	343	53.3	+13	55.1	244	42.9 62	-19	12.0 34	10 N	5 04	5 29	5 51	13	01	59	0 02 57
12	358	53.4	+13	54.3	259	08.1 62	-19	15.2 32	0	5 15	5 40	6 01	12	46	59	0 16 58
13	13	53.5		53.6	273	33.2 61		18.3 31	10 S	24	49	11		31	59	30 59
14	28	53.7		52.8	287	58.2 60		21.3 30	20	33	5 59	22	12	16	58	0 45 60
15	43	53.8		52.0	302	23.2 60		24.2 29	30	41	6 09	34	11	58	57	1 02 62
16	58	53.9		51.2	316	48.2 60		26.9 27	35	44	14	40		47	57	12 62
17	73	54.0	+13	50.4	331	13.1 59	-19	29.5 26	40	5 48	6 20	6 48	11	35	57	1 24 63
18	88	54.2	+13	49.6	345	37.9 58	-19	32.0 25	45	5 52	6 27	6 57	11	21	56	1 37 64
19	103	54.3		48.8	0	02.7 58		34.3 23	50	56	34	7 08	11	04	55	1 54 65
20	118	54.4		48.1	14	27.4 57		36.6 21	52	5 58	38	13	10	56	55	2 02 66
21	133	54.5		47.3	28	52.1 57		38.7 19	54	6 00	41	18		47	54	10 67
22	148	54.7		46.5	43	16.7 56		40.6 21	56	01	45	24		37	54	20 68
23	163	54.8		45.7	57	41.3 56		42.5 19	58	03	49	31		26	52	31 69
24	178	54.9	+13	44.9	72	05.8 55	-19	44.2 17	60 S	6 05	6 54	7 39	10	13	51	2 44 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 25 ^m 3		Mag: -3.9 PMG: 14 ^h 20 ^m		Mag: +1.6 PMG: 9 ^h 59 ^m		Mag: -2.0 PMG: 9 ^h 12 ^m		Mag: +0.7 PMG: 16 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	323	34.0	145	02.4	+1	31.2	210	08.3	+22	32.3	221	47.2	+22	50.9	109	08.2	-11	19.4
1	338	36.5	160	02.2		29.9	225	09.0		32.0	236	49.2		50.9	124	10.6		19.5
2	353	38.9	175	02.0		28.6	240	09.7		31.8	251	51.1		50.8	139	12.9		19.6
3	8	41.4	190	01.8		27.3	255	10.4		31.6	266	53.0		50.8	154	15.2		19.6
4	23	43.9	205	01.6		26.0	270	11.2		31.3	281	55.0		50.7	169	17.5		19.7
5	38	46.3	220	01.4	+1	24.7	285	11.9	+22	31.1	296	56.9	+22	50.7	184	19.9	-11	19.7
6	53	48.8	235	01.2	+1	23.5	300	12.6	+22	30.9	311	58.8	+22	50.7	199	22.2	-11	19.8
7	68	51.2	250	00.9		22.2	315	13.3		30.6	327	00.8		50.6	214	24.5		19.8
8	83	53.7	265	00.7		20.9	330	14.0		30.4	342	02.7		50.6	229	26.9		19.9
9	98	56.2	280	00.5		19.6	345	14.8		30.2	357	04.6		50.6	244	29.2		20.0
10	113	58.6	295	00.3		18.3	0	15.5		29.9	12	06.5		50.5	259	31.5		20.0
11	129	01.1	310	00.1	+1	17.0	15	16.2	+22	29.7	27	08.5	+22	50.5	274	33.8	-11	20.1
12	144	03.6	324	59.9	+1	15.7	30	16.9	+22	29.4	42	10.4	+22	50.5	289	36.1	-11	20.1
13	159	06.0	339	59.7		14.5	45	17.7		29.2	57	12.3		50.4	304	38.5		20.2
14	174	08.5	354	59.5		13.2	60	18.4		29.0	72	14.3		50.4	319	40.8		20.3
15	189	11.0	9	59.3		11.9	75	19.1		28.7	87	16.2		50.3	334	43.1		20.3
16	204	13.4	24	59.1		10.6	90	19.8		28.5	102	18.1		50.3	349	45.4		20.4
17	219	15.9	39	58.9	+1	09.3	105	20.5	+22	28.3	117	20.1	+22	50.3	4	47.8	-11	20.4
18	234	18.4	54	58.6	+1	08.0	120	21.3	+22	28.0	132	22.0	+22	50.2	19	50.1	-11	20.5
19	249	20.8	69	58.4		06.7	135	22.0		27.8	147	24.0		50.2	34	52.4		20.5
20	264	23.3	84	58.2		05.5	150	22.7		27.5	162	25.9		50.2	49	54.7		20.6
21	279	25.7	99	58.0		04.2	165	23.4		27.3	177	27.8		50.1	64	57.1		20.7
22	294	28.2	114	57.8		02.9	180	24.2		27.1	192	29.8		50.1	79	59.4		20.7
23	309	30.7	129	57.6		01.6	195	24.9		26.8	207	31.7		50.1	95	01.7		20.8
24	324	33.1	144	57.4	+1	00.3	210	25.6	+22	26.6	222	33.6	+22	50.0	110	04.0	-11	20.8
Dif	—		-2		-13		+7		-2		+19		0		+23		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 2			Edad: 9 ^d 1 PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 60'0 R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	54.9	+13 44.9	72	05.8	-19 44.2	16	60 N	19 50	20 40	21 54	16 28 50	23 32 75		
1	193	55.1	44.1	86	30.3	55 45.8	16	58	42	28	32	13 52	47 73		
2	208	55.2	43.3	100	54.8	55 47.2	14	56	34	17	14	16 01 53	23 59 72		
3	223	55.3	42.5	115	19.2	54 48.5	13	54	28	20 08	21 00	15 50 54	*** ** **		
4	238	55.4	41.8	129	43.6	54 49.7	12	52	22	19 59	20 48	41 54	*** ** **		
5	253	55.6	+13 41.0	144	07.9	53 -19 50.7	10	50	19 16	19 52	20 37	15 32 55	*** ** **		
6	268	55.7	+13 40.2	158	32.2	53 -19 51.6	9	45	19 05	19 36	20 15	15 14 56	*** ** **		
7	283	55.8	39.4	172	56.5	53 52.4	8	40	18 55	24	19 59	14 59 57	0 01 60		
8	298	56.0	38.6	187	20.7	52 53.1	7	35	47	14	46	46 58	13 60		
9	313	56.1	37.8	201	44.9	52 53.6	5	30	40	19 05	35	35 58	24 60		
10	328	56.2	37.0	216	09.0	51 53.9	3	20	28	18 51	18	17 59	43 59		
11	343	56.4	+13 36.2	230	33.1	51 -19 54.2	3	10 N	18 17	18 39	19 04	14 00 60	0 59 60		
12	358	56.5	+13 35.4	244	57.2	51 -19 54.2	0	0	18 08	18 29	18 54	13 45 60	1 14 60		
13	13	56.6	34.6	259	21.3	51 54.2	0	10 S	17 58	19	44	30 61	29 60		
14	28	56.7	33.8	273	45.3	50 54.0	2	20	48	10	36	13 14 61	1 45 60		
15	43	56.9	33.0	288	09.3	50 53.7	3	30	36	18 01	29	12 55 62	2 04 59		
16	58	57.0	32.2	302	33.3	50 53.3	4	35	30	17 56	25	44 63	14 60		
17	73	57.1	+13 31.4	316	57.3	50 -19 52.7	6	40	17 22	17 50	18 22	12 32 63	2 27 59		
18	88	57.3	+13 30.7	331	21.2	49 -19 51.9	8	45	17 14	17 44	18 18	12 17 64	2 41 59		
19	103	57.4	29.9	345	45.1	49 51.1	8	50	17 03	37	15	11 59 65	2 59 59		
20	118	57.5	29.1	0	09.0	49 50.1	10	52	16 58	34	13	51 65	3 08 58		
21	133	57.7	28.3	14	32.9	49 48.9	12	54	53	30	12	41 66	17 58		
22	148	57.8	27.5	28	56.8	49 47.6	13	56	47	26	10	31 65	28 58		
23	163	57.9	26.7	43	20.6	48 46.2	14	58	41	22	09	18 67	40 58		
24	178	58.1	+13 25.9	57	44.5	49 -19 44.6	16	60 S	16 33	17 18	18 07	11 04 67	3 54 57		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 21 ^m 4		Mag: -4.0 PMG: 14 ^h 20 ^m		Mag: +1.6 PMG: 9 ^h 58 ^m		Mag: -2.0 PMG: 9 ^h 09 ^m		Mag: +0.7 PMG: 16 ^h 37 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	324	33.1	144	57.4	+1 00.3	210 25.6	+22 26.6	222 33.6	+22 50.0	110 04.0	-11 20.8
1	339	35.6	159	57.2	+0 59.0	225 26.3	26.3	237 35.6	50.0	125 06.4	20.9
2	354	38.1	174	57.0	57.7	240 27.1	26.1	252 37.5	49.9	140 08.7	21.0
3	9	40.5	189	56.8	56.5	255 27.8	25.8	267 39.4	49.9	155 11.0	21.0
4	24	43.0	204	56.6	55.2	270 28.5	25.6	282 41.4	49.9	170 13.3	21.1
5	39	45.5	219	56.4	+0 53.9	285 29.2	+22 25.4	297 43.3	+22 49.8	185 15.6	-11 21.1
6	54	47.9	234	56.1	+0 52.6	300 30.0	+22 25.1	312 45.2	+22 49.8	200 18.0	-11 21.2
7	69	50.4	249	55.9	51.3	315 30.7	24.9	327 47.2	49.8	215 20.3	21.3
8	84	52.9	264	55.7	50.0	330 31.4	24.6	342 49.1	49.7	230 22.6	21.3
9	99	55.3	279	55.5	48.7	345 32.1	24.4	357 51.0	49.7	245 24.9	21.4
10	114	57.8	294	55.3	47.4	0 32.9	24.2	12 53.0	49.6	260 27.2	21.4
11	130	00.2	309	55.1	+0 46.2	15 33.6	+22 23.9	27 54.9	+22 49.6	275 29.6	-11 21.5
12	145	02.7	324	54.9	+0 44.9	30 34.3	+22 23.7	42 56.9	+22 49.6	290 31.9	-11 21.5
13	160	05.2	339	54.7	43.6	45 35.1	23.4	57 58.8	49.5	305 34.2	21.6
14	175	07.6	354	54.5	42.3	60 35.8	23.2	73 00.7	49.5	320 36.5	21.7
15	190	10.1	9	54.3	41.0	75 36.5	22.9	88 02.7	49.5	335 38.9	21.7
16	205	12.6	24	54.1	39.7	90 37.2	22.7	103 04.6	49.4	350 41.2	21.8
17	220	15.0	39	53.9	+0 38.4	105 38.0	+22 22.4	118 06.5	+22 49.4	5 43.5	-11 21.8
18	235	17.5	54	53.7	+0 37.2	120 38.7	+22 22.2	133 08.5	+22 49.3	20 45.8	-11 21.9
19	250	20.0	69	53.5	35.9	135 39.4	21.9	148 10.4	49.3	35 48.1	22.0
20	265	22.4	84	53.3	34.6	150 40.1	21.7	163 12.4	49.3	50 50.5	22.0
21	280	24.9	99	53.1	33.3	165 40.9	21.5	178 14.3	49.2	65 52.8	22.1
22	295	27.4	114	52.9	32.0	180 41.6	21.2	193 16.2	49.2	80 55.1	22.1
23	310	29.8	129	52.7	30.7	195 42.3	21.0	208 18.2	49.2	95 57.4	22.2
24	325	32.3	144	52.4	+0 29.4	210 43.1	+22 20.7	223 20.1	+22 49.1	110 59.7	-11 22.3
Dif	—		-2	-13		+7	-2	+19	0	+23	-1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 0				Edad: 10 ^d 1 PHE { 4 ^h : 60 ^l 1 12 ^h : 60 ^l 2 20 ^h : 60 ^l 4 Rº: 59 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	58.1	+13	25.9	57	44.5	-19	44.6	17	60 N	2 15	3 29	4 19	17 18	38	**	**
1	193	58.2		25.1	72	08.3	48	42.9	17	58	37	41	28	17 05	40	**	**
2	208	58.3		24.3	86	32.1	48	41.1	18	56	2 55	3 52	35	16 54	42	**	**
3	223	58.5		23.5	100	55.9	48	39.1	20	54	3 09	4 01	42	44 43		0 10	70
4	238	58.6		22.7	115	19.7	48	37.0	21	52	21	10	47	35 45		19	70
5	253	58.7	+13	21.9	129	43.5	48	-19 34.7	23	50	3 32	4 17	4 53	16 27	46	0 28	69
6	268	58.9	+13	21.1	144	07.3	48	-19 32.3	24	45	3 53	4 32	5 04	16 10	49	0 46	67
7	283	59.0		20.3	158	31.0	47	29.8	25	40	4 10	45	14	15 56	50	1 01	66
8	298	59.1		19.5	172	54.8	48	27.1	27	35	23	4 55	22	44 52		13	65
9	313	59.3		18.7	187	18.6	48	24.3	28	30	34	5 04	29	33 54		24	64
10	328	59.4		17.9	201	42.4	48	21.4	29	20	4 51	18	41	16 56		42	63
11	343	59.6	+13	17.1	216	06.1	47	-19 18.3	31	10 N	5 04	5 29	5 51	15 00	58	1 59	61
12	358	59.7	+13	16.3	230	29.9	48	-19 15.1	32	0	5 15	5 39	6 01	14 45	60	2 14	60
13	13	59.8		15.5	244	53.7	48	11.7	34	10 S	24	49	10	31 62		29	59
14	29	00.0		14.7	259	17.5	48	08.2	35	20	32	5 58	20	14 15	64	2 45	57
15	44	00.1		13.9	273	41.3	48	04.6	36	30	39	6 07	32	13 57	66	3 03	56
16	59	00.2		13.1	288	05.1	48	-19 00.8	38	35	42	12	38	47 67		14	55
17	74	00.4	+13	12.3	302	28.9	48	-18 56.9	39	40	5 46	6 18	6 45	13 35	69	3 26	54
18	89	00.5	+13	11.5	316	52.7	48	-18 52.9	40	45	5 49	6 24	6 54	13 21	70	3 40	53
19	104	00.6		10.7	331	16.6	49	48.7	42	50	53	31	7 04	13 04	73	3 58	50
20	119	00.8		09.8	345	40.4	48	44.4	43	52	54	34	09	12 56	74	4 06	50
21	134	00.9		09.0	0	04.3	49	39.9	45	54	56	37	14	47 75		15	49
22	149	01.1		08.2	14	28.2	49	35.4	45	56	57	41	20	36 77		26	47
23	164	01.2		07.4	28	52.1	49	30.7	47	58	5 59	45	26	25 78		38	45
24	179	01.3	+13	06.6	43	16.0	49	-18 25.8	49	60 S	6 00	6 49	7 34	12 11	81	4 51	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 17 ^m 5		Mag: -4.0 PMG: 14 ^h 21 ^m		Mag: +1.6 PMG: 9 ^h 57 ^m		Mag: -2.0 PMG: 9 ^h 05 ^m		Mag: +0.7 PMG: 16 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	325	32.3	144	52.4	+0	29.4	210	43.1	+22	20.7
1	340	34.7	159	52.2		28.1	225	43.8		20.5
2	355	37.2	174	52.0		26.9	240	44.5		20.2
3	10	39.7	189	51.8		25.6	255	45.3		20.0
4	25	42.1	204	51.6		24.3	270	46.0		19.7
5	40	44.6	219	51.4	+0	23.0	285	46.7	+22	19.5
6	55	47.1	234	51.2	+0	21.7	300	47.4	+22	19.2
7	70	49.5	249	51.0		20.4	315	48.2		19.0
8	85	52.0	264	50.8		19.1	330	48.9		18.7
9	100	54.5	279	50.6		17.8	345	49.6		18.5
10	115	56.9	294	50.4		16.5	0	50.4		18.2
11	130	59.4	309	50.2	+0	15.3	15	51.1	+22	18.0
12	146	01.8	324	50.0	+0	14.0	30	51.8	+22	17.7
13	161	04.3	339	49.8		12.7	45	52.6		17.5
14	176	06.8	354	49.6		11.4	60	53.3		17.2
15	191	09.2	9	49.4		10.1	75	54.0		17.0
16	206	11.7	24	49.2		08.8	90	54.8		16.7
17	221	14.2	39	49.0	+0	07.5	105	55.5	+22	16.5
18	236	16.6	54	48.8	+0	06.2	120	56.2	+22	16.2
19	251	19.1	69	48.6		04.9	135	57.0		16.0
20	266	21.6	84	48.4		03.7	150	57.7		15.7
21	281	24.0	99	48.2		02.4	165	58.4		15.5
22	296	26.5	114	48.0	+0	01.1	180	59.2		15.2
23	311	29.0	129	47.8	-0	00.2	195	59.9		14.9
24	326	31.4	144	47.6	-0	01.5	211	00.6	+22	14.7
Dif	—		-2 -13		+7 -3		+19 0		+23 -1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 1 PHE	4 ^h : 60 ^h /4 12 ^h : 60 ^h /5 20 ^h : 60 ^h /5										
	PMG: 12 ^h 03 ^m 8				SD: 16 ^h 4										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	01.3	+13 06.6	43	16.0	-18 25.8	50	60 N	19 44	20 34	21 44	17 56 28	0 47 85		
1	194	01.5	05.8	57	40.0	20.8	50	58	36	22	24	45 31	1 00 82		
2	209	01.6	05.0	72	04.0	15.7	51	56	29	12	21 08	36 33	11 80		
3	224	01.8	04.2	86	28.0	10.5	52	54	23	20 03	20 54	27 36	20 79		
4	239	01.9	03.4	100	52.0	-18 05.2	53	52	17	19 55	42	20 37	29 77		
5	254	02.0	+13 02.6	115	16.0	-17 59.7	55	50	19 12	19 48	20 32	17 13 39	1 37 76		
6	269	02.2	+13 01.8	129	40.1	-17 54.0	57	45	19 01	19 33	20 12	16 59 42	1 53 73		
7	284	02.3	01.0	144	04.2	48.3	57	40	18 52	21	19 56	46 45	2 07 70		
8	299	02.5	+13 00.2	158	28.3	42.4	59	35	45	11	43	36 48	18 69		
9	314	02.6	+12 59.4	172	52.5	36.4	60	30	38	19 03	33	27 49	28 67		
10	329	02.7	58.5	187	16.7	30.3	61	20	26	18 49	16	16 12 52	2 45 64		
11	344	02.9	+12 57.7	201	40.9	-17 24.1	62	10 N	18 16	18 38	19 03	15 58 56	3 00 62		
12	359	03.0	+12 56.9	216	05.1	-17 17.7	64	0	18 07	18 28	18 53	15 45 59	3 14 59		
13	14	03.2	56.1	230	29.4	11.2	65	10 S	17 58	19	44	33 61	28 57		
14	29	03.3	55.3	244	53.8	-17 04.6	66	20	48	11	37	19 64	42 55		
15	44	03.4	54.5	259	18.1	-16 57.9	67	30	37	18 02	30	15 03 67	3 59 52		
16	59	03.6	53.7	273	42.5	51.0	69	35	31	17 57	27	14 54 69	4 09 50		
17	74	03.7	+12 52.9	288	07.0	-16 44.1	69	40	17 24	17 52	18 24	14 44 71	4 20 48		
18	89	03.9	+12 52.1	302	31.5	-16 37.0	71	45	17 16	17 46	18 21	14 31 75	4 33 45		
19	104	04.0	51.2	316	56.0	29.8	72	50	06	40	17	17 77	48 43		
20	119	04.2	50.4	331	20.5	22.5	73	52	17 01	37	16	10 79	4 56 41		
21	134	04.3	49.6	345	45.1	15.1	74	54	16 56	33	15	14 02 81	5 04 39		
22	149	04.5	48.8	0	09.8	-16 07.5	76	56	51	30	14	13 53 83	13 38		
23	164	04.6	48.0	14	34.5	-15 59.9	76	58	45	26	12	43 86	23 36		
24	179	04.7	+12 47.2	28	59.2	-15 52.1	78	60 S	16 38	17 22	18 11	13 32 88	5 35 33		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 13 ^m 5		Mag: -4.0 PMG: 14 ^h 21 ^m		Mag: +1.6 PMG: 9 ^h 55 ^m		Mag: -2.0 PMG: 9 ^h 02 ^m		Mag: +0.7 PMG: 16 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	326	31.4	144 47.6	-0 01.5	211 00.6	+22 14.7	224 06.7	+22 48.2	111 55.4	-11 23.7
1	341	33.9	159 47.4	02.8	226 01.4	14.4	239 08.6	48.2	126 57.7	23.8
2	356	36.3	174 47.2	04.1	241 02.1	14.2	254 10.6	48.1	142 00.0	23.8
3	11	38.8	189 47.0	05.4	256 02.8	13.9	269 12.5	48.1	157 02.3	23.9
4	26	41.3	204 46.8	06.7	271 03.6	13.7	284 14.4	48.1	172 04.6	23.9
5	41	43.7	219 46.6	-0 07.9	286 04.3	+22 13.4	299 16.4	+22 48.0	187 06.9	-11 24.0
6	56	46.2	234 46.4	-0 09.2	301 05.0	+22 13.2	314 18.3	+22 48.0	202 09.2	-11 24.1
7	71	48.7	249 46.2	10.5	316 05.8	12.9	329 20.3	48.0	217 11.6	24.1
8	86	51.1	264 46.0	11.8	331 06.5	12.6	344 22.2	47.9	232 13.9	24.2
9	101	53.6	279 45.8	13.1	346 07.2	12.4	359 24.2	47.9	247 16.2	24.3
10	116	56.1	294 45.6	14.4	1 08.0	12.1	14 26.1	47.8	262 18.5	24.3
11	131	58.5	309 45.4	-0 15.7	16 08.7	+22 11.9	29 28.0	+22 47.8	277 20.8	-11 24.4
12	147	01.0	324 45.2	-0 17.0	31 09.4	+22 11.6	44 30.0	+22 47.8	292 23.1	-11 24.4
13	162	03.5	339 45.0	18.3	46 10.2	11.4	59 31.9	47.7	307 25.4	24.5
14	177	05.9	354 44.8	19.5	61 10.9	11.1	74 33.9	47.7	322 27.8	24.6
15	192	08.4	9 44.6	20.8	76 11.7	10.8	89 35.8	47.7	337 30.1	24.6
16	207	10.8	24 44.4	22.1	91 12.4	10.6	104 37.8	47.6	352 32.4	24.7
17	222	13.3	39 44.2	-0 23.4	106 13.1	+22 10.3	119 39.7	+22 47.6	7 34.7	-11 24.7
18	237	15.8	54 44.0	-0 24.7	121 13.9	+22 10.1	134 41.6	+22 47.5	22 37.0	-11 24.8
19	252	18.2	69 43.8	26.0	136 14.6	09.8	149 43.6	47.5	37 39.3	24.9
20	267	20.7	84 43.6	27.3	151 15.3	09.5	164 45.5	47.5	52 41.6	24.9
21	282	23.2	99 43.4	28.6	166 16.1	09.3	179 47.5	47.4	67 44.0	25.0
22	297	25.6	114 43.2	29.9	181 16.8	09.0	194 49.4	47.4	82 46.3	25.1
23	312	28.1	129 43.0	31.1	196 17.6	08.8	209 51.4	47.4	97 48.6	25.1
24	327	30.6	144 42.8	-0 32.4	211 18.3	+22 08.5	224 53.3	+22 47.3	112 50.9	-11 25.2
Dif	—		-2	-13	+7	-3	+19	0	+23	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 1 PHE { 4 ^h : 60 ^m 5 12 ^h : 60 ^m 5 20 ^h : 60 ^m 5 Rº: 55 ^m												
	PMG: 12 ^h 03 ^m 6			SD: 16 ^h 5 PMG: 22 ^h 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	04.7	+12 47.2	28	59.2	-15 52.1	78	60 N	2	24	3	34	4	24	18	24
1	194	04.9		43	24.0	58 44.3	80	58	2	44	46	32		16	25	
2	209	05.0		57	48.8	58 36.3	81	56	3	01	3	57	39	09	27	
3	224	05.2		72	13.7	59 28.2	82	54	14	4	05	45	18	03	29	
4	239	05.3		86	38.6	59 20.0	83	52	26		13	51	17	57	31	
5	254	05.5	+12 43.1	101	03.6	60 -15 11.7	84	50	3	36	4	20	4	56	17	52
6	269	05.6	+12 42.3	115	28.6	60 -15 03.3	85	45	3	56	4	35	5	06	17	41
7	284	05.8		129	53.7	61 -14 54.8	86	40	4	12	47	15		31	41	
8	299	05.9		144	18.8	61 46.2	87	35	25	4	56	23	24	42		
9	314	06.0		158	44.0	62 37.5	87	30	35	5	05	30	16	46		
10	329	06.2		173	09.2	62 28.8	87	20	4	52	18	41	17	04	49	
11	344	06.3	+12 38.2	187	34.5	63 -14 19.9	89	10 N	5	04	5	29	5	51	16	54
12	359	06.5	+12 37.4	201	59.8	63 -14 10.9	90	0	5	14	5	39	6	00	16	44
13	14	06.6		216	25.2	64 -14 01.8	91	10 S	23		48	09	34	59		
14	29	06.8		230	50.7	65 -13 52.6	92	20	30	5	56	19	23	63		
15	44	06.9		245	16.2	65 43.4	92	30	37	6	05	30	10	67		
16	59	07.1		259	41.7	65 34.0	94	35	40		10	36	16	03	70	
17	74	07.2	+12 33.3	274	07.3	66 -13 24.6	94	40	5	43	6	15	6	43	15	55
18	89	07.4	+12 32.5	288	33.0	67 -13 15.1	95	45	5	46	6	21	6	51	15	46
19	104	07.5		316	302 58.7	67 -13 05.4	97	50	49	27		7	00	34	79	
20	119	07.7		317	24.4	67 -12 55.7	97	52	50	30		05	29	81		
21	134	07.8		331	50.3	69 46.0	97	54	52	33		10	23	83		
22	149	08.0		29.2	346 16.1	68 36.1	99	56	53	36		15	16	86		
23	164	08.1		28.3	0 42.1	70 26.2	99	58	54	40		21	09	88		
24	179	08.3	+12 27.5	15	08.1	70 -12 16.1	101	60 S	5	55	6	44	7	28	15	00

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 09 ^m 6		Mag: -4.0 PMG: 14 ^h 21 ^m		Mag: +1.6 PMG: 9 ^h 54 ^m		Mag: -2.0 PMG: 8 ^h 59 ^m		Mag: +0.7 PMG: 16 ^h 26 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	327	30.6	144	42.8	-0 32.4	211	18.3	+22 08.5	224	53.3	+22 47.3	112	50.9	-11 25.2	
1	342	33.0	159	42.6	33.7	226	19.0	08.2	239	55.3	47.3	127	53.2	25.2	
2	357	35.5	174	42.4	35.0	241	19.8	08.0	254	57.2	47.2	142	55.5	25.3	
3	12	38.0	189	42.2	36.3	256	20.5	07.7	269	59.2	47.2	157	57.8	25.4	
4	27	40.4	204	42.0	37.6	271	21.2	07.5	285	01.1	47.2	173	00.1	25.4	
5	42	42.9	219	41.8	-0 38.9	286	22.0	+22 07.2	300	03.0	+22 47.1	188	02.5	-11 25.5	
6	57	45.3	234	41.6	-0 40.2	301	22.7	+22 06.9	315	05.0	+22 47.1	203	04.8	-11 25.5	
7	72	47.8	249	41.4	41.5	316	23.5	06.7	330	06.9	47.0	218	07.1	25.6	
8	87	50.3	264	41.2	42.8	331	24.2	06.4	345	08.9	47.0	233	09.4	25.7	
9	102	52.7	279	41.0	44.0	346	24.9	06.1	0	10.8	47.0	248	11.7	25.7	
10	117	55.2	294	40.8	45.3	1	25.7	05.9	15	12.8	46.9	263	14.0	25.8	
11	132	57.7	309	40.6	-0 46.6	16	26.4	+22 05.6	30	14.7	+22 46.9	278	16.3	-11 25.9	
12	148	00.1	324	40.4	-0 47.9	31	27.2	+22 05.4	45	16.7	+22 46.9	293	18.6	-11 25.9	
13	163	02.6	339	40.2	49.2	46	27.9	05.1	60	18.6	46.8	308	21.0	26.0	
14	178	05.1	354	40.0	50.5	61	28.7	04.8	75	20.6	46.8	323	23.3	26.0	
15	193	07.5	9	39.8	51.8	76	29.4	04.6	90	22.5	46.7	338	25.6	26.1	
16	208	10.0	24	39.6	53.1	91	30.1	04.3	105	24.5	46.7	353	27.9	26.2	
17	223	12.4	39	39.4	-0 54.4	106	30.9	+22 04.0	120	26.4	+22 46.7	8	30.2	-11 26.2	
18	238	14.9	54	39.2	-0 55.6	121	31.6	+22 03.8	135	28.4	+22 46.6	23	32.5	-11 26.3	
19	253	17.4	69	39.0	56.9	136	32.4	03.5	150	30.3	46.6	38	34.8	26.4	
20	268	19.8	84	38.8	58.2	151	33.1	03.2	165	32.3	46.6	53	37.1	26.4	
21	283	22.3	99	38.6	-0 59.5	166	33.8	03.0	180	34.2	46.5	68	39.4	26.5	
22	298	24.8	114	38.4	-1 00.8	181	34.6	02.7	195	36.2	46.5	83	41.7	26.5	
23	313	27.2	129	38.2	02.1	196	35.3	02.4	210	38.1	46.4	98	44.1	26.6	
24	328	29.7	144	38.1	-1 03.4	211	36.1	+22 02.2	225	40.1	+22 46.4	113	46.4	-11 26.7	
Dif	—		-2		-13		+7	-3		+19		0		+23	-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 13 ^d 1 PHE	SD: 16 ^h 5		R°: 53 ^m			Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif				Dec	Dif					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	08.3	+12	27.5	15	08.1	-12 16.1	60 N	19 39	20 27	21 35	18 46	18	3 43	91
1	194	08.4		26.7	29	34.1	-12 06.1	58	31	16	16	41	21	50	88
2	209	08.6		25.9	44	00.2	-11 55.9	56	24	20 06	21 01	36	24	3 56	86
3	224	08.7		25.0	58	26.4	-11 45.6	54	19	19 58	20 48	32	26	4 02	83
4	239	08.9		24.2	72	52.6	-11 35.3	52	13	50	37	28	28	07	81
5	254	09.0	+12	23.4	87	18.9	-11 24.9	50	19 08	19 44	20 27	18 25	29	4 11	80
6	269	09.2	+12	22.6	101	45.2	-11 14.5	45	18 58	19 29	20 08	18 18	33	4 21	75
7	284	09.3		21.8	116	11.6	-11 04.0	40	50	18	19 52	12	36	29	72
8	299	09.5		20.9	130	38.1	-10 53.4	35	42	09	40	06	40	36	69
9	314	09.6		20.1	145	04.6	-10 42.7	30	36	19 01	30	18 02	41	42	67
10	329	09.8		19.3	159	31.2	-10 32.0	20	25	18 48	14	17 53	47	4 53	62
11	344	09.9	+12	18.4	173	57.8	-10 21.2	10 N	18 15	18 37	19 02	17 46	50	5 02	58
12	359	10.1	+12	17.6	188	24.5	-10 10.4	0	18 07	18 28	18 52	17 40	53	5 10	55
13	14	10.2		16.8	202	51.2	-9 59.5	10 S	17 58	19	44	33	57	19	51
14	29	10.4		16.0	217	18.0	-9 48.5	20	49	11	37	26	61	28	47
15	44	10.5		15.1	231	44.9	-9 37.5	30	39	18 03	31	17	66	38	43
16	59	10.7		14.3	246	11.8	-9 26.4	35	33	17 58	28	13	68	44	41
17	74	10.8	+12	13.5	260	38.8	-9 15.3	40	17 26	17 54	18 25	17 07	71	5 50	38
18	89	11.0	+12	12.7	275	05.8	-9 04.1	45	17 18	17 48	18 23	17 01	74	5 58	35
19	104	11.1		11.8	289	32.9	-8 52.9	50	09	42	20	16 53	79	6 07	31
20	119	11.3		11.0	304	00.0	-8 41.6	52	05	40	19	50	80	11	29
21	134	11.4		10.2	318	27.2	-8 30.3	54	17 00	37	18	46	82	16	27
22	149	11.6		09.3	332	54.5	-8 18.9	56	16 55	33	17	42	85	21	25
23	164	11.8		08.5	347	21.8	-8 07.5	58	49	30	16	37	87	26	23
24	179	11.9	+12	07.7	1	49.1	-7 56.1	60 S	16 42	17 26	18 15	16 32	90	6 33	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 2 ^h 05 ^m 7		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: +1.6 PMG: 9 ^h 53 ^m		Mag: -2.0 PMG: 8 ^h 56 ^m		Mag: +0.7 PMG: 16 ^h 22 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	328	29.7	144	38.1	-1	03.4	211	36.1	+22	02.2	225	40.1	+22	46.4	113	46.4	-11	26.7	
1	343	32.2	159	37.9		04.7	226	36.8		01.9	240	42.0		46.4	128	48.7		26.7	
2	358	34.6	174	37.7		06.0	241	37.6		01.6	255	43.9		46.3	143	51.0		26.8	
3	13	37.1	189	37.5		07.3	256	38.3		01.4	270	45.9		46.3	158	53.3		26.9	
4	28	39.6	204	37.3		08.5	271	39.0		01.1	285	47.8		46.2	173	55.6		26.9	
5	43	42.0	219	37.1	-1	09.8	286	39.8	+22	00.8	300	49.8	+22	46.2	188	57.9	-11	27.0	
6	58	44.5	234	36.9	-1	11.1	301	40.5	+22	00.6	315	51.7	+22	46.2	204	00.2	-11	27.0	
7	73	46.9	249	36.7		12.4	316	41.3	+22	00.3	330	53.7		46.1	219	02.5		27.1	
8	88	49.4	264	36.5		13.7	331	42.0	+22	00.0	345	55.6		46.1	234	04.8		27.2	
9	103	51.9	279	36.3		15.0	346	42.8	+21	59.7	0	57.6		46.1	249	07.1		27.2	
10	118	54.3	294	36.1		16.3	1	43.5		59.5	15	59.5		46.0	264	09.5		27.3	
11	133	56.8	309	35.9	-1	17.6	16	44.3	+21	59.2	31	01.5	+22	46.0	279	11.8	-11	27.4	
12	148	59.3	324	35.7	-1	18.9	31	45.0	+21	58.9	46	03.5	+22	45.9	294	14.1	-11	27.4	
13	164	01.7	339	35.5		20.1	46	45.8		58.7	61	05.4		45.9	309	16.4		27.5	
14	179	04.2	354	35.3		21.4	61	46.5		58.4	76	07.4		45.9	324	18.7		27.6	
15	194	06.7	9	35.1		22.7	76	47.2		58.1	91	09.3		45.8	339	21.0		27.6	
16	209	09.1	24	34.9		24.0	91	48.0		57.8	106	11.3		45.8	354	23.3		27.7	
17	224	11.6	39	34.7	-1	25.3	106	48.7	+21	57.6	121	13.2	+22	45.7	9	25.6	-11	27.7	
18	239	14.1	54	34.5	-1	26.6	121	49.5	+21	57.3	136	15.2	+22	45.7	24	27.9	-11	27.8	
19	254	16.5	69	34.3		27.9	136	50.2		57.0	151	17.1		45.7	39	30.2		27.9	
20	269	19.0	84	34.1		29.2	151	51.0		56.8	166	19.1		45.6	54	32.5		27.9	
21	284	21.4	99	33.9		30.5	166	51.7		56.5	181	21.0		45.6	69	34.8		28.0	
22	299	23.9	114	33.8		31.7	181	52.5		56.2	196	23.0		45.5	84	37.1		28.1	
23	314	26.4	129	33.6		33.0	196	53.2		55.9	211	24.9		45.5	99	39.4		28.1	
24	329	28.8	144	33.4	-1	34.3	211	54.0	+21	55.7	226	26.9	+22	45.5	114	41.8	-11	28.2	
Dif	—		-2		-13		+7		-3		+20		0		+23			-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 1				Edad: 14 ^d 1 PHE { 4 ^h : 60 ^o 0 12 ^h : 59 ^o 8 20 ^h : 59 ^o 6 R ^o : ***m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	11.9	+12	07.7	1	49.1	-7	56.1	60 N	2	32	3	40	4	29	19	04	
1	194	12.1		06.8	16	16.6 85		44.6 115	58	2	51	3	51	36	02	19	18	
2	209	12.2		06.0	30	44.1 85		33.1 115	56	3	06	4	01	43	19	00	21	
3	224	12.4		05.2	45	11.6 85		21.5 116	54		19		09	49	18	58	23	
4	239	12.5		04.3	59	39.2 86		-7 09.9 116	52		30		17	54	56	25	28	
5	254	12.7	+12	03.5	74	06.8 86		-6 58.2 117	50	3	40	4	24	4	59	18	54	
6	269	12.8	+12	02.7	88	34.5 87		-6 46.6 116	45	3	59	4	38	5	09	18	51	
7	284	13.0		01.8	103	02.3 88		34.9 117	40	4	14		49	17	48	34	41	
8	299	13.2		01.0	117	30.1 88		23.1 118	35		27	4	58	25	46	37	45	
9	314	13.3	+12	00.2	131	57.9 88		-6 11.4 117	30		37	5	06	31	43	40	49	
10	329	13.5	+11	59.3	146	25.9 90		-5 59.6 118	20	4	52		19	42	40	44	5	
11	344	13.6	+11	58.5	160	53.8 89		-5 47.8 118	10 N	5	04	5	30	5	51	18	36	
12	359	13.8	+11	57.7	175	21.8 90		-5 35.9 119	0	5	14	5	39	6	00	18	33	
13	14	13.9		56.8	189	49.9 91		24.0 119	10 S		22		47	08	30	55	10	
14	29	14.1		56.0	204	18.0 91		12.2 118	20		29	5	55	17	27	59	15	
15	44	14.2		55.2	218	46.2 92		-5 00.2 120	30		35	6	03	27	23	63	21	
16	59	14.4		54.3	233	14.4 92		-4 48.3 119	35		38		07	33	21	66	25	
17	74	14.6	+11	53.5	247	42.7 93		-4 36.4 119	40	5	41	6	12	6	40	18	18	
18	89	14.7	+11	52.7	262	11.0 93		-4 24.4 120	45	5	43	6	17	6	47	18	15	
19	104	14.9		51.8	276	39.4 94		12.4 120	50		46	23	6	57	12	76	38	
20	119	15.0		51.0	291	07.8 94		-4 00.5 119	52		47	26	7	01	10	79	40	
21	134	15.2		50.1	305	36.3 95		-3 48.5 120	54		48	29	05	08	81	43	24	
22	149	15.4		49.3	320	04.8 95		36.4 121	56		49	32	10	07	82	46	22	
23	164	15.5		48.5	334	33.4 96		24.4 120	58		49	35	16	04	86	49	20	
24	179	15.7	+11	47.6	349	02.0 96		-3 12.4 120	60 S	5	50	6	39	7	22	18	02	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 01 ^m 7		Mag: -4.0 PMG: 14 ^h 22 ^m				Mag: +1.6 PMG: 9 ^h 52 ^m				Mag: -2.0 PMG: 8 ^h 53 ^m				Mag: +0.7 PMG: 16 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	28.8	144	33.4	-1	34.3	211	54.0	+21	55.7	226	26.9	+22	45.5	114	41.8	-11	28.2
1	344	31.3	159	33.2		35.6	226	54.7		55.4	241	28.8		45.4	129	44.1		28.2
2	359	33.8	174	33.0		36.9	241	55.5		55.1	256	30.8		45.4	144	46.4		28.3
3	14	36.2	189	32.8		38.2	256	56.2		54.8	271	32.7		45.4	159	48.7		28.4
4	29	38.7	204	32.6		39.5	271	57.0		54.6	286	34.7		45.3	174	51.0		28.4
5	44	41.2	219	32.4	-1	40.8	286	57.7	+21	54.3	301	36.6	+22	45.3	189	53.3	-11	28.5
6	59	43.6	234	32.2	-1	42.1	301	58.5	+21	54.0	316	38.6	+22	45.2	204	55.6	-11	28.6
7	74	46.1	249	32.0		43.4	316	59.2		53.7	331	40.5		45.2	219	57.9		28.6
8	89	48.5	264	31.8		44.6	332	00.0		53.5	346	42.5		45.2	235	00.2		28.7
9	104	51.0	279	31.6		45.9	347	00.7		53.2	1	44.5		45.1	250	02.5		28.8
10	119	53.5	294	31.4		47.2	2	01.5		52.9	16	46.4		45.1	265	04.8		28.8
11	134	55.9	309	31.2	-1	48.5	17	02.2	+21	52.6	31	48.4	+22	45.0	280	07.1	-11	28.9
12	149	58.4	324	31.0	-1	49.8	32	03.0	+21	52.3	46	50.3	+22	45.0	295	09.4	-11	29.0
13	165	00.9	339	30.8		51.1	47	03.7		52.1	61	52.3		45.0	310	11.7		29.0
14	180	03.3	354	30.7		52.4	62	04.5		51.8	76	54.2		44.9	325	14.0		29.1
15	195	05.8	9	30.5		53.7	77	05.2		51.5	91	56.2		44.9	340	16.3		29.1
16	210	08.3	24	30.3		55.0	92	06.0		51.2	106	58.1		44.8	355	18.6		29.2
17	225	10.7	39	30.1	-1	56.2	107	06.7	+21	51.0	122	00.1	+22	44.8	10	20.9	-11	29.3
18	240	13.2	54	29.9	-1	57.5	122	07.5	+21	50.7	137	02.0	+22	44.8	25	23.2	-11	29.3
19	255	15.7	69	29.7	-1	58.8	137	08.2		50.4	152	04.0		44.7	40	25.5		29.4
20	270	18.1	84	29.5	-2	00.1	152	09.0		50.1	167	06.0		44.7	55	27.9		29.5
21	285	20.6	99	29.3		01.4	167	09.7		49.8	182	07.9		44.7	70	30.2		29.5
22	300	23.0	114	29.1		02.7	182	10.5		49.6	197	09.9		44.6	85	32.5		29.6
23	315	25.5	129	28.9		04.0	197	11.2		49.3	212	11.8		44.6	100	34.8		29.7
24	330	28.0	144	28.7	-2	05.3	212	12.0	+21	49.0	227	13.8	+22	44.5	115	37.1	-11	29.7
Dif	—		-2		-13		+8		-3		+20		0		+23		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 8			Edad: 15 ^d 1 PHE { 4 ^h : 59'4 12 ^h : 59'1 20 ^h : 58'8 PMG: 0 ^h 45 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	15.7	+11 47.6	349	02.0	-3 12.4	96	60 N	19 33	20 21	21 26	19 20	16	6 44	87	
1	194	15.8	46.8	3	30.6	-3 00.4	120	58	26	10	21 09	21 18		45	84	
2	209	16.0	45.9	17	59.3	-2 48.3	121	56	20	20 01	20 54	21 21		46	81	
3	224	16.2	45.1	32	28.1	36.3	120	54	14	19 53	42	21 23		47	79	
4	239	16.3	44.3	46	56.9	24.2	121	52	09	46	32	21 25		48	77	
5	254	16.5	+11 43.4	61	25.7	-2 12.2	120	50	19 04	19 39	20 22	19 22	26	6 48	76	
6	269	16.6	+11 42.6	75	54.6	-2 00.1	121	45	18 55	19 26	20 04	19 22	30	6 50	71	
7	284	16.8	41.7	90	23.5	-1 48.1	120	40	47	15	19 49	22	34	51	68	
8	299	17.0	40.9	104	52.5	36.1	120	35	40	19 06	37	23	36	52	65	
9	314	17.1	40.1	119	21.5	24.0	121	30	34	18 59	28	23	38	53	63	
10	329	17.3	39.2	133	50.6	-1 12.0	120	20	23	46	13	24	42	55	58	
11	344	17.4	+11 38.4	148	19.7	-1 00.0	120	10 N	18 14	18 36	19 01	19 24	46	6 56	55	
12	359	17.6	+11 37.5	162	48.8	-0 47.9	121	0	18 06	18 27	18 52	19 25	49	6 58	50	
13	14	17.8	36.7	177	18.0	35.9	120	10 S	17 58	19	44	25	53	6 59	47	
14	29	17.9	35.8	191	47.2	23.9	120	20	49	12	38	26	57	7 00	44	
15	44	18.1	35.0	206	16.4	-0 12.0	119	30	40	04	32	26	62	02	39	
16	59	18.2	34.2	220	45.7	+0 00.0	120	35	34	18 00	29	27	64	03	36	
17	74	18.4	+11 33.3	235	15.1	+0 12.0	120	40	17 28	17 55	18 27	19 27	67	7 04	34	
18	89	18.6	+11 32.5	249	44.4	+0 23.9	119	45	17 21	17 51	18 25	19 28	70	7 05	30	
19	104	18.7	31.6	264	13.8	35.8	119	50	12	45	23	28	74	06	27	
20	119	18.9	30.8	278	43.3	47.8	120	52	08	43	22	29	75	07	25	
21	134	19.1	29.9	293	12.7	+0 59.6	118	54	17 03	40	21	29	78	07	24	
22	149	19.2	29.1	307	42.3	+1 11.5	119	56	16 59	37	20	29	80	08	21	
23	164	19.4	28.2	322	11.8	23.4	119	58	53	34	20	30	82	09	19	
24	179	19.5	+11 27.4	336	41.4	+1 35.2	118	60 S	16 47	17 30	18 19	19 30	85	7 10	16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 57 ^m 8		Mag: -4.0 PMG: 14 ^h 22 ^m			Mag: +1.6 PMG: 9 ^h 51 ^m			Mag: -2.0 PMG: 8 ^h 50 ^m			Mag: +0.7 PMG: 16 ^h 15 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	330	28.0	144	28.7	-2 05.3	212	12.0	+21 49.0	227	13.8	+22 44.5	115	37.1	-11 29.7		
1	345	30.4	159	28.5	06.5	227	12.7	48.7	242	15.7	44.5	130	39.4	29.8		
2	0	32.9	174	28.3	07.8	242	13.5	48.4	257	17.7	44.5	145	41.7	29.9		
3	15	35.4	189	28.1	09.1	257	14.2	48.2	272	19.6	44.4	160	44.0	29.9		
4	30	37.8	204	27.9	10.4	272	15.0	47.9	287	21.6	44.4	175	46.3	30.0		
5	45	40.3	219	27.8	-2 11.7	287	15.7	+21 47.6	302	23.6	+22 44.3	190	48.6	-11 30.0		
6	60	42.8	234	27.6	-2 13.0	302	16.5	+21 47.3	317	25.5	+22 44.3	205	50.9	-11 30.1		
7	75	45.2	249	27.4	14.3	317	17.2	47.0	332	27.5	44.3	220	53.2	30.2		
8	90	47.7	264	27.2	15.6	332	18.0	46.7	347	29.4	44.2	235	55.5	30.2		
9	105	50.1	279	27.0	16.9	347	18.8	46.5	2	31.4	44.2	250	57.8	30.3		
10	120	52.6	294	26.8	18.1	2	19.5	46.2	17	33.4	44.1	266	00.1	30.4		
11	135	55.1	309	26.6	-2 19.4	17	20.3	+21 45.9	32	35.3	+22 44.1	281	02.4	-11 30.4		
12	150	57.5	324	26.4	-2 20.7	32	21.0	+21 45.6	47	37.3	+22 44.1	296	04.7	-11 30.5		
13	166	00.0	339	26.2	22.0	47	21.8	45.3	62	39.2	44.0	311	07.0	30.6		
14	181	02.5	354	26.0	23.3	62	22.5	45.0	77	41.2	44.0	326	09.3	30.6		
15	196	04.9	9	25.8	24.6	77	23.3	44.8	92	43.1	43.9	341	11.6	30.7		
16	211	07.4	24	25.6	25.9	92	24.0	44.5	107	45.1	43.9	356	13.9	30.8		
17	226	09.9	39	25.4	-2 27.2	107	24.8	+21 44.2	122	47.1	+22 43.9	11	16.2	-11 30.8		
18	241	12.3	54	25.3	-2 28.4	122	25.5	+21 43.9	137	49.0	+22 43.8	26	18.5	-11 30.9		
19	256	14.8	69	25.1	29.7	137	26.3	43.6	152	51.0	43.8	41	20.8	31.0		
20	271	17.3	84	24.9	31.0	152	27.1	43.3	167	52.9	43.7	56	23.1	31.0		
21	286	19.7	99	24.7	32.3	167	27.8	43.0	182	54.9	43.7	71	25.4	31.1		
22	301	22.2	114	24.5	33.6	182	28.6	42.8	197	56.9	43.7	86	27.7	31.2		
23	316	24.6	129	24.3	34.9	197	29.3	42.5	212	58.8	43.6	101	30.0	31.2		
24	331	27.1	144	24.1	-2 36.2	212	30.1	+21 42.2	228	00.8	+22 43.6	116	32.3	-11 31.3		
Dif	—		-2	-13		+8	-3		+20		0	+23		-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 1	PHE	4 ^h : 58 ^m 6 12 ^h : 58 ^m 3 20 ^h : 58 ^m 0										
	PMG: 12 ^h 02 ^m 6					SD: 16 ^d 0 PMG: 1 ^h 36 ^m R ^o : 50 ^m										
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	179	19.5	+11	27.4	336	41.4	+1	35.2	60 N	2	40	3	46	4	34	19 36 17
1	194	19.7		26.5	351	11.0		47.0	58	2	57	3	56		41	39 20 09 81
2	209	19.9		25.7	5	40.6		58.8	56	3	12	4	05		47	42 21 07 79
3	224	20.0		24.9	20	10.3		10.5	54		24		13		52	44 24 06 77
4	239	20.2		24.0	34	40.0		22.3	52		34		20		4	57 46 26 05 74
5	254	20.4	+11	23.2	49	09.8		34.0	50	3	44	4	27	5	02	19 48 27 8 04 73
6	269	20.5	+11	22.3	63	39.5		45.6	45	4	02	4	40	5	11	19 52 31 8 01 69
7	284	20.7		21.5	78	09.3		57.3	40		17		4		19	56 33 7 59 66
8	299	20.9		20.6	92	39.2		08.9	35		28		5		00	19 59 36 57 63
9	314	21.0		19.8	107	09.0		20.5	30		38				07	20 01 39 56 60
10	329	21.2		18.9	121	38.9		32.0	20	4	53	20			42	06 43 53 57
11	344	21.4	+11	18.1	136	08.8		43.5	10 N	5	05	5	30	5	51	20 10 46 7 51 53
12	359	21.5	+11	17.2	150	38.8		55.0	0	5	14	5	38	5	59	20 14 49 7 48 50
13	14	21.7		16.4	165	08.7		06.4	10 S		21		46		6	07 18 53 46 46
14	29	21.9		15.5	179	38.7		17.8	20		28		5		53	16 23 55 44 42
15	44	22.0		14.7	194	08.8		29.2	30		33		6		01	25 28 59 41 38
16	59	22.2		13.8	208	38.8		40.5	35		36				05	31 31 61 39 36
17	74	22.4	+11	13.0	223	08.9		51.8	40	5	38	6	09	6	37	20 34 64 7 38 33
18	89	22.5	+11	12.1	237	39.0		03.1	45	5	40	6	14	6	44	20 38 67 7 35 31
19	104	22.7		11.3	252	09.1		14.3	50		42		20		53	42 72 33 27
20	119	22.9		10.4	266	39.2		25.4	52		43		22		6	57 44 73 32 25
21	134	23.0		09.5	281	09.4		36.5	54		43		24		7	01 47 75 31 23
22	149	23.2		08.7	295	39.6		47.6	56		44		27		06	49 77 29 21
23	164	23.4		07.8	310	09.8		58.6	58		45		30		11	52 80 28 19
24	179	23.5	+11	07.0	324	40.0		09.6	60 S	5	45	6	34	7	17	20 55 83 7 26 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 53 ^m 9		Mag: -4.0 PMG: 14 ^h 23 ^m		Mag: +1.6 PMG: 9 ^h 49 ^m		Mag: -2.0 PMG: 8 ^h 47 ^m		Mag: +0.7 PMG: 16 ^h 11 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	331	27.1	144	24.1	212	30.1	228	00.8	116	32.3
1	346	29.6	159	23.9	227	30.8	243	02.7	131	34.6
2	1	32.0	174	23.7	242	31.6	258	04.7	146	36.9
3	16	34.5	189	23.5	257	32.4	273	06.7	161	39.2
4	31	37.0	204	23.3	272	33.1	288	08.6	176	41.5
5	46	39.4	219	23.1	287	33.9	303	10.6	191	43.8
6	61	41.9	234	23.0	302	34.6	318	12.5	206	46.1
7	76	44.4	249	22.8	317	35.4	333	14.5	221	48.4
8	91	46.8	264	22.6	332	36.2	348	16.5	236	50.7
9	106	49.3	279	22.4	347	36.9	3	18.4	251	53.0
10	121	51.8	294	22.2	2	37.7	18	20.4	266	55.3
11	136	54.2	309	22.0	17	38.4	33	22.3	281	57.6
12	151	56.7	324	21.8	32	39.2	48	24.3	296	59.9
13	166	59.1	339	21.6	47	39.9	63	26.3	312	02.2
14	182	01.6	354	21.4	62	40.7	78	28.2	327	04.5
15	197	04.1	9	21.2	77	41.5	93	30.2	342	06.8
16	212	06.5	24	21.0	92	42.2	108	32.2	357	09.1
17	227	09.0	39	20.8	107	43.0	123	34.1	12	11.4
18	242	11.5	54	20.7	122	43.8	138	36.1	27	13.7
19	257	13.9	69	20.5	137	44.5	153	38.0	42	16.0
20	272	16.4	84	20.3	152	45.3	168	40.0	57	18.3
21	287	18.9	99	20.1	167	46.0	183	42.0	72	20.6
22	302	21.3	114	19.9	182	46.8	198	43.9	87	22.9
23	317	23.8	129	19.7	197	47.6	213	45.9	102	25.2
24	332	26.2	144	19.5	212	48.3	228	47.9	117	27.5
Dif	—		-2		+8		+20		+23	
			-13		-3		0		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 1 PHE	SD: 15 ^h 8				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 02 ^m 3				PMG: 2 ^h 26 ^m				R°: 49 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	23.5	+11 07.0	324	40.0	+6 09.6		60 N	19 27	20 14	21 18	19 53 20	9 35 80	
1	194	23.7	06.1	339	10.3 ¹¹³	20.6 ¹¹⁰		58	20	20 04	21 02	19 59 21	30 78	
2	209	23.9	05.3	353	40.5 ¹¹²	31.4 ¹⁰⁸		56	15	19 55	20 48	20 03 24	26 76	
3	224	24.0	04.4	8	10.8 ¹¹³	42.3 ¹⁰⁹		54	09	48	36	08 26	23 73	
4	239	24.2	03.6	22	41.1 ¹¹³	+6 53.1 ¹⁰⁸		52	05	41	26	12 27	19 72	
5	254	24.4	+11 02.7	37	11.5 ¹¹⁴	+7 03.8 ¹⁰⁷		50	19 00	19 35	20 18	20 15 29	9 17 69	
6	269	24.5	+11 01.9	51	41.8 ¹¹³	+7 14.5 ¹⁰⁷		45	18 51	19 22	20 00	20 23 32	9 10 67	
7	284	24.7	01.0	66	12.2 ¹¹⁴	25.1 ¹⁰⁶		40	44	12	19 46	29 35	05 63	
8	299	24.9	+11 00.1	80	42.5 ¹¹³	35.7 ¹⁰⁶		35	37	19 03	35	35 37	9 00 61	
9	314	25.0	+10 59.3	95	12.9 ¹¹⁴	46.2 ¹⁰⁵		30	32	18 56	25	40 39	8 56 59	
10	329	25.2	58.4	109	43.3 ¹¹⁴	+7 56.7 ¹⁰⁵		20	22	44	11	49 42	50 55	
11	344	25.4	+10 57.6	124	13.8 ¹¹⁵	+8 07.1 ¹⁰⁴		10 N	18 13	18 35	19 00	20 56 46	8 44 51	
12	359	25.6	+10 56.7	138	44.2 ¹¹⁴	+8 17.5 ¹⁰⁴		0	18 06	18 27	18 51	21 03 49	8 38 49	
13	14	25.7	55.9	153	14.7 ¹¹⁵	27.8 ¹⁰³		10 S	17 58	19	44	11 51	32 46	
14	29	25.9	55.0	167	45.1 ¹¹⁴	38.1 ¹⁰³		20	50	12	38	18 55	26 43	
15	44	26.1	54.1	182	15.6 ¹¹⁵	48.2 ¹⁰¹		30	41	05	33	27 58	19 39	
16	59	26.2	53.3	196	46.1 ¹¹⁵	+8 58.4 ¹⁰²		35	36	18 01	31	32 60	15 37	
17	74	26.4	+10 52.4	211	16.6 ¹¹⁵	+9 08.5 ¹⁰¹		40	17 30	17 57	18 29	21 38 63	8 11 34	
18	89	26.6	+10 51.6	225	47.1 ¹¹⁵	+9 18.5 ¹⁰⁰		45	17 23	17 53	18 27	21 45 65	8 06 31	
19	104	26.8	50.7	240	17.7 ¹¹⁶	28.4 ⁹⁹		50	15	48	25	54 68	8 00 28	
20	119	26.9	49.8	254	48.2 ¹¹⁵	38.3 ⁹⁹		52	11	46	25	21 57 70	7 57 26	
21	134	27.1	49.0	269	18.8 ¹¹⁶	48.1 ⁹⁸		54	07	43	24	22 02 71	54 25	
22	149	27.3	48.1	283	49.3 ¹¹⁵	+9 57.9 ⁹⁸		56	17 02	41	24	06 74	50 23	
23	164	27.4	47.3	298	19.9 ¹¹⁶	+10 07.6 ⁹⁷		58	16 57	38	23	12 75	47 20	
24	179	27.6	+10 46.4	312	50.5 ¹¹⁶	+10 17.2 ⁹⁶		60 S	16 52	17 35	18 23	22 18 78	7 42 18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 49 ^m 9		Mag: -4.0 PMG: 14 ^h 23 ^m		Mag: +1.6 PMG: 9 ^h 48 ^m		Mag: -2.0 PMG: 8 ^h 44 ^m		Mag: +0.7 PMG: 16 ^h 08 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	332	26.2	144	19.5	-3 07.0	212 48.3	+21 35.2	228 47.9	+22 42.6	117 27.5				
1	347	28.7	159	19.3	08.3	227 49.1	34.9	243 49.8	42.6	132 29.8				
2	2	31.2	174	19.1	09.6	242 49.8	34.6	258 51.8	42.6	147 32.1				
3	17	33.6	189	18.9	10.9	257 50.6	34.3	273 53.8	42.5	162 34.4				
4	32	36.1	204	18.7	12.2	272 51.4	34.0	288 55.7	42.5	177 36.6				
5	47	38.6	219	18.6	-3 13.5	287 52.1	+21 33.7	303 57.7	+22 42.4	192 38.9				
6	62	41.0	234	18.4	-3 14.8	302 52.9	+21 33.4	318 59.7	+22 42.4	207 41.2				
7	77	43.5	249	18.2	16.0	317 53.7	33.2	334 01.6	42.4	222 43.5				
8	92	46.0	264	18.0	17.3	332 54.4	32.9	349 03.6	42.3	237 45.8				
9	107	48.4	279	17.8	18.6	347 55.2	32.6	4 05.6	42.3	252 48.1				
10	122	50.9	294	17.6	19.9	2 55.9	32.3	19 07.5	42.2	267 50.4				
11	137	53.4	309	17.4	-3 21.2	17 56.7	+21 32.0	34 09.5	+22 42.2	282 52.7				
12	152	55.8	324	17.2	-3 22.5	32 57.5	+21 31.7	49 11.4	+22 42.2	297 55.0				
13	167	58.3	339	17.0	23.7	47 58.2	31.4	64 13.4	42.1	312 57.3				
14	183	00.7	354	16.8	25.0	62 59.0	31.1	79 15.4	42.1	327 59.6				
15	198	03.2	9	16.6	26.3	77 59.8	30.8	94 17.3	42.0	343 01.9				
16	213	05.7	24	16.5	27.6	93 00.5	30.5	109 19.3	42.0	358 04.2				
17	228	08.1	39	16.3	-3 28.9	108 01.3	+21 30.2	124 21.3	+22 42.0	13 06.5				
18	243	10.6	54	16.1	-3 30.2	123 02.1	+21 29.9	139 23.2	+22 41.9	28 08.8				
19	258	13.1	69	15.9	31.4	138 02.8	29.6	154 25.2	41.9	43 11.1				
20	273	15.5	84	15.7	32.7	153 03.6	29.3	169 27.2	41.8	58 13.4				
21	288	18.0	99	15.5	34.0	168 04.4	29.0	184 29.1	41.8	73 15.7				
22	303	20.5	114	15.3	35.3	183 05.1	28.7	199 31.1	41.8	88 18.0				
23	318	22.9	129	15.1	36.6	198 05.9	28.4	214 33.1	41.7	103 20.3				
24	333	25.4	144	14.9	-3 37.9	213 06.7	+21 28.1	229 35.0	+22 41.7	118 22.6				
Dif	—		-2		-13	+8		+20		0	+23		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 0			Edad: 18 ^d 1 PHE { 4 ^h : 56 ^m 9 12 ^h : 56 ^m 6 20 ^h : 56 ^m 3 SD: 15 ^h 5 PMG: 3 ^h 15 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	27.6	+10 46.4	312	50.5	+10 17.2	60 N	2 47	3 51	4 38		20 13	23	10 55	76
1	194	27.8		327	21.1 ¹¹⁶	26.8 ⁹⁶	58	3 04	4 01	45		20 26		48	74
2	209	28.0		341	51.7 ¹¹⁶	36.3 ⁹⁵	56	17	10	51		27 28		42	71
3	224	28.1		356	22.3 ¹¹⁶	45.8 ⁹⁵	54	29	17	4 56		34 29		36	70
4	239	28.3		10	53.0 ¹¹⁷	+10 55.1 ⁹³	52	39	24	5 00		39 31		31	68
5	254	28.5	+10 42.1	25	23.6 ¹¹⁶	+11 04.4 ⁹³	50	3 47	4 30	5 05		20 44	32	10 26	67
6	269	28.6	+10 41.2	39	54.2 ¹¹⁶	+11 13.7 ⁹³	45	4 05	4 43	5 14		20 55	35	10 17	63
7	284	28.8		54	24.9 ¹¹⁷	22.8 ⁹¹	40	19	4 53	21		21 04	38	08	61
8	299	29.0		68	55.5 ¹¹⁶	31.9 ⁹¹	35	30	5 01	28		12 39		10 01	59
9	314	29.2		83	26.2 ¹¹⁷	41.0 ⁹¹	30	39	08	33		19 41		9 55	57
10	329	29.3		97	56.9 ¹¹⁷	49.9 ⁸⁹	20	4 54	20	43		31 44		45	53
11	344	29.5	+10 36.9	112	27.5 ¹¹⁶	+11 58.8 ⁸⁹	10 N	5 05	5 30	5 51		21 42	46	9 35	51
12	359	29.7	+10 36.0	126	58.2 ¹¹⁷	+12 07.6 ⁸⁸	0	5 13	5 38	5 59		21 52	48	9 27	48
13	14	29.9		141	28.9 ¹¹⁷	16.4 ⁸⁸	10 S	20	45	6 06		22 02	51	18	46
14	29	30.0		155	59.6 ¹¹⁷	25.1 ⁸⁷	20	26	52	14		13 53		9 09	43
15	44	30.2		170	30.3 ¹¹⁷	33.7 ⁸⁶	30	31	5 59	23		25 56		8 58	40
16	59	30.4		185	01.0 ¹¹⁷	42.2 ⁸⁵	35	33	6 03	28		32 58		52	38
17	74	30.6	+10 31.7	199	31.7 ¹¹⁷	+12 50.7 ⁸⁵	40	5 35	6 07	6 34		22 41	59	8 45	36
18	89	30.7	+10 30.8	214	02.4 ¹¹⁷	+12 59.0 ⁸³	45	5 37	6 11	6 41		22 50	62	8 37	34
19	104	30.9		228	33.1 ¹¹⁷	+13 07.3 ⁸³	50	38	16	49		23 02	64	28	30
20	119	31.1		243	03.9 ¹¹⁸	15.6 ⁸³	52	39	18	52		07 66		23	29
21	134	31.3		257	34.6 ¹¹⁷	23.7 ⁸¹	54	39	20	6 56		13 68		19	27
22	149	31.4		272	05.3 ¹¹⁷	31.8 ⁸¹	56	39	23	7 01		20 69		13	26
23	164	31.6		286	36.0 ¹¹⁷	39.8 ⁸⁰	58	40	25	06		27 72		07	24
24	179	31.8	+10 25.6	301	06.8 ¹¹⁸	+13 47.7 ⁷⁹	60 S	5 40	6 28	7 11		23 36	74	8 00	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 46 ^m 0		Mag: -4.0 PMG: 14 ^h 23 ^m		Mag: +1.6 PMG: 9 ^h 47 ^m		Mag: -2.0 PMG: 8 ^h 41 ^m		Mag: +0.7 PMG: 16 ^h 04 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	333	25.4	144	14.9	-3 37.9	213	06.7	+21 28.1	229	35.0	+22 41.7	118	22.6	-11 34.5	
1	348	27.8	159	14.7	39.1	228	07.4	27.8	244	37.0	41.6	133	24.8	34.5	
2	3	30.3	174	14.5	40.4	243	08.2	27.5	259	39.0	41.6	148	27.1	34.6	
3	18	32.8	189	14.4	41.7	258	09.0	27.2	274	41.0	41.6	163	29.4	34.7	
4	33	35.2	204	14.2	43.0	273	09.7	26.9	289	42.9	41.5	178	31.7	34.7	
5	48	37.7	219	14.0	-3 44.3	288	10.5	+21 26.6	304	44.9	+22 41.5	193	34.0	-11 34.8	
6	63	40.2	234	13.8	-3 45.6	303	11.3	+21 26.3	319	46.9	+22 41.4	208	36.3	-11 34.9	
7	78	42.6	249	13.6	46.8	318	12.0	26.0	334	48.8	41.4	223	38.6	34.9	
8	93	45.1	264	13.4	48.1	333	12.8	25.7	349	50.8	41.4	238	40.9	35.0	
9	108	47.6	279	13.2	49.4	348	13.6	25.4	4	52.8	41.3	253	43.2	35.1	
10	123	50.0	294	13.0	50.7	3	14.3	25.1	19	54.7	41.3	268	45.5	35.1	
11	138	52.5	309	12.8	-3 52.0	18	15.1	+21 24.8	34	56.7	+22 41.2	283	47.8	-11 35.2	
12	153	55.0	324	12.6	-3 53.3	33	15.9	+21 24.5	49	58.7	+22 41.2	298	50.1	-11 35.3	
13	168	57.4	339	12.4	54.5	48	16.6	24.2	65	00.6	41.2	313	52.4	35.3	
14	183	59.9	354	12.3	55.8	63	17.4	23.9	80	02.6	41.1	328	54.7	35.4	
15	199	02.3	9	12.1	57.1	78	18.2	23.6	95	04.6	41.1	343	56.9	35.5	
16	214	04.8	24	11.9	58.4	93	19.0	23.3	110	06.6	41.0	358	59.2	35.5	
17	229	07.3	39	11.7	-3 59.7	108	19.7	+21 23.0	125	08.5	+22 41.0	14	01.5	-11 35.6	
18	244	09.7	54	11.5	-4 01.0	123	20.5	+21 22.7	140	10.5	+22 41.0	29	03.8	-11 35.7	
19	259	12.2	69	11.3	02.2	138	21.3	22.4	155	12.5	40.9	44	06.1	35.8	
20	274	14.7	84	11.1	03.5	153	22.0	22.0	170	14.4	40.9	59	08.4	35.8	
21	289	17.1	99	10.9	04.8	168	22.8	21.7	185	16.4	40.8	74	10.7	35.9	
22	304	19.6	114	10.7	06.1	183	23.6	21.4	200	18.4	40.8	89	13.0	36.0	
23	319	22.1	129	10.5	07.4	198	24.4	21.1	215	20.4	40.7	104	15.3	36.0	
24	334	24.5	144	10.3	-4 08.6	213	25.1	+21 20.8	230	22.3	+22 40.7	119	17.6	-11 36.1	
Dif	—		-2		-13	+8		-3	+20		0	+23		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			Edad: 19 ^d 1 PHE { SD: 15 ^h 3 PMG: 4 ^h 03 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m		
0	179	31.8	+10	25.6	301	06.8	+13	47.7	60 N	19 21	20 08	21 10	20 36	29	12 11	71	
1	194	32.0		24.8	315	37.5 ¹¹⁷	+13	55.6	58	15	19 58	20 54	46	31	12 02	68	
2	209	32.1		23.9	330	08.2 ¹¹⁷	+14	03.4	56	10		50	42	20 55	32	11 53	67
3	224	32.3		23.0	344	39.0 ¹¹⁸		11.0	54	05	43	31	21 03	34	46	65	
4	239	32.5		22.2	359	09.7 ¹¹⁷		18.7	52	19 00	36	21	10	35	39	64	
5	254	32.7	+10	21.3	13	40.5 ¹¹⁸	+14	26.2	50	18 56	19 31	20 13	21 16	36	11 33	63	
6	269	32.9	+10	20.4	28	11.2 ¹¹⁷	+14	33.6	45	18 48	19 19	19 56	21 30	38	11 20	60	
7	284	33.0		19.5	42	41.9 ¹¹⁷		41.0	40	41	09	42	42	40		09 58	
8	299	33.2		18.7	57	12.7 ¹¹⁸		48.3	35	35	19 01	32	21 51	42	11 00	57	
9	314	33.4		17.8	71	43.4 ¹¹⁷	+14	55.5	30	29	18 54	23	22 00	43	10 52	55	
10	329	33.6		16.9	86	14.2 ¹¹⁸	+15	02.6	20	20	43	19 09	15	45	38	53	
11	344	33.7	+10	16.1	100	44.9 ¹¹⁷	+15	09.7	10 N	18 12	18 34	18 59	22 28	47	10 26	51	
12	359	33.9	+10	15.2	115	15.7 ¹¹⁸	+15	16.7	0	18 05	18 26	18 50	22 40	49	10 15	48	
13	14	34.1		14.3	129	46.5 ¹¹⁸		23.5	10 S	17 58	19	44	22 53	50	10 04	46	
14	29	34.3		13.4	144	17.2 ¹¹⁷		30.4	20	50	13	38	23 06	51	9 52	44	
15	44	34.5		12.6	158	48.0 ¹¹⁸		37.1	30	42	06	34	21	54	38	42	
16	59	34.6		11.7	173	18.7 ¹¹⁷		43.7	35	37	18 03	32	30	55	30	41	
17	74	34.8	+10	10.8	187	49.5 ¹¹⁸	+15	50.3	40	17 31	17 59	18 30	23 40	56	9 21	39	
18	89	35.0	+10	10.0	202	20.2 ¹¹⁷	+15	56.7	45	17 25	17 55	18 29	23 52	58	9 11	36	
19	104	35.2		09.1	216	51.0 ¹¹⁸	+16	03.1	50	18	51	28	** ** *	**	8 58	34	
20	119	35.4		08.2	231	21.7 ¹¹⁷		09.4	52	14	49	28	** ** *	**	52	33	
21	134	35.5		07.3	245	52.5 ¹¹⁸		15.6	54	10	46	28	** ** *	**	46	31	
22	149	35.7		06.5	260	23.2 ¹¹⁷		21.8	56	06	44	27	** ** *	**	39	30	
23	164	35.9		05.6	274	54.0 ¹¹⁸		27.8	58	17 02	42	27	** ** *	**	31	28	
24	179	36.1	+10	04.7	289	24.8 ¹¹⁸	+16	33.8	60 S	16 56	17 39	18 27	** ** *	**	8 21	26	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 1 ^h 42 ^m 1		Mag: -4.0 PMG: 14 ^h 23 ^m		Mag: +1.6 PMG: 9 ^h 46 ^m		Mag: -2.0 PMG: 8 ^h 37 ^m		Mag: +0.7 PMG: 16 ^h 00 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	334	24.5	144	10.3	-4	08.6	213	25.1	+22	40.7							
1	349	27.0	159	10.1		09.9	228	25.9		40.7							
2	4	29.5	174	10.0		11.2	243	26.7		40.6							
3	19	31.9	189	09.8		12.5	258	27.4		40.6							
4	34	34.4	204	09.6		13.8	273	28.2		40.5							
5	49	36.8	219	09.4	-4	15.0	288	29.0	+21	40.5							
6	64	39.3	234	09.2	-4	16.3	303	29.8	+21	40.5							
7	79	41.8	249	09.0		17.6	318	30.5		40.4							
8	94	44.2	264	08.8		18.9	333	31.3		40.4							
9	109	46.7	279	08.6		20.2	348	32.1		40.3							
10	124	49.2	294	08.4		21.4	3	32.8		40.3							
11	139	51.6	309	08.2	-4	22.7	18	33.6	+21	40.3							
12	154	54.1	324	08.0	-4	24.0	33	34.4	+21	40.2							
13	169	56.6	339	07.9		25.3	48	35.2		40.2							
14	184	59.0	354	07.7		26.6	63	35.9		40.1							
15	200	01.5	9	07.5		27.8	78	36.7		40.1							
16	215	03.9	24	07.3		29.1	93	37.5		40.1							
17	230	06.4	39	07.1	-4	30.4	108	38.3	+21	40.0							
18	245	08.9	54	06.9	-4	31.7	123	39.0	+21	40.0							
19	260	11.3	69	06.7		33.0	138	39.8		39.9							
20	275	13.8	84	06.5		34.2	153	40.6		39.9							
21	290	16.3	99	06.3		35.5	168	41.4		39.9							
22	305	18.7	114	06.1		36.8	183	42.1		39.8							
23	320	21.2	129	05.9		38.1	198	42.9		39.8							
24	335	23.7	144	05.7	-4	39.3	213	43.7	+21	39.7							
Dif	—		-2		-13		+8		-3								
							+20		0								
									+23								
									-1								

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 20 ^d 1	PHE { 4 ^h : 55 ^h /4 12 ^h : 55 ^h /2 20 ^h : 55 ^h /0	Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 12 ^h 01 ^m 4					R ^o : 48 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	36.1	+10	289	24.8	+16	33.8	58	2 54	3 57	4 43	21 05	36	13 22 63
1	194	36.3		303	55.5 ¹¹⁷		39.6	58	3 10	4 06	49	17 37		10 62
2	209	36.4		318	26.3 ¹¹⁸		45.4	58	22	14	55	27 39		13 00 60
3	224	36.6		332	57.0 ¹¹⁷		51.1	57	33	21	4 59	37 39		12 51 59
4	239	36.8		347	27.8 ¹¹⁸	+16	56.7	56	43	28	5 04	45 41		43 58
5	254	37.0	+10	1	58.5 ¹¹⁷	+17	02.2	55	3 51	4 33	5 08	21 52	42	12 36 57
6	269	37.2	+9	16	29.3 ¹¹⁸	+17	07.7	55	4 08	4 45	5 16	22 08	43	12 20 56
7	284	37.3		31	00.0 ¹¹⁷		13.0	53	21	4 55	23	22 43		12 07 55
8	299	37.5		45	30.8 ¹¹⁸		18.3	53	32	5 03	29	33 44		11 57 53
9	314	37.7		60	01.5 ¹¹⁷		23.5	52	30	41	10 34	22 43	45	47 53
10	329	37.9		74	32.3 ¹¹⁸		28.6	51	4 54	21	43	23 00	46	31 51
11	344	38.1	+9	89	03.0 ¹¹⁷	+17	33.6	50	5 05	5 30	5 51	23 15	47	11 17 49
12	359	38.2	+9	103	33.8 ¹¹⁸	+17	38.5	49	5 13	5 37	5 58	23 29	48	11 03 49
13	14	38.4		118	04.6 ¹¹⁸		43.3	48	19	44	6 05	43 49		10 50 47
14	29	38.6		132	35.3 ¹¹⁷		48.0	47	20	25	50 13	23 57	51	36 46
15	44	38.8		147	06.1 ¹¹⁸		52.7	47	30	29	5 57 21	** ** *	**	20 44
16	59	39.0		161	36.8 ¹¹⁷	+17	57.2	45	35	31	6 00 26	** ** *	**	11 43
17	74	39.2	+9	176	07.6 ¹¹⁸	+18	01.7	45	40	5 32	6 04 6 31	** ** *	**	10 00 42
18	89	39.3	+9	190	38.3 ¹¹⁷	+18	06.0	43	45	5 33	6 07 6 37	** ** *	**	9 47 41
19	104	39.5		205	09.1 ¹¹⁸		10.3	43	50	34	12 45	0 06	60	32 39
20	119	39.7		219	39.8 ¹¹⁷		14.5	42	52	35	14 48	13 61		25 38
21	134	39.9		234	10.6 ¹¹⁸		18.6	41	54	35	16 52	21 62		17 37
22	149	40.1		248	41.3 ¹¹⁷		22.6	40	56	35	18 6 56	29 64		9 09 35
23	164	40.3		263	12.1 ¹¹⁸		26.5	39	58	35	20 7 00	39 65		8 59 34
24	179	40.4	+9	277	42.8 ¹¹⁷	+18	30.4	39	60 S	5 35	6 23 7 05	0 50	67	8 47 33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.0		Mag: +1.6		Mag: -2.1		Mag: +0.7	
	1 ^h 38 ^m 2		PMG: 14 ^h 24 ^m		PMG: 9 ^h 45 ^m		PMG: 8 ^h 34 ^m		PMG: 15 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	335	23.7	144	05.7	213	43.7	231	09.7	120	12.5
1	350	26.1	159	05.6	228	44.5	246	11.7	135	14.8
2	5	28.6	174	05.4	243	45.2	261	13.7	150	17.1
3	20	31.1	189	05.2	258	46.0	276	15.6	165	19.4
4	35	33.5	204	05.0	273	46.8	291	17.6	180	21.7
5	50	36.0	219	04.8	288	47.6	306	19.6	195	23.9
6	65	38.4	234	04.6	303	48.4	321	21.6	210	26.2
7	80	40.9	249	04.4	318	49.1	336	23.5	225	28.5
8	95	43.4	264	04.2	333	49.9	351	25.5	240	30.8
9	110	45.8	279	04.0	348	50.7	6 27.5	39.4	255	33.1
10	125	48.3	294	03.8	3	51.5	21 29.5	39.3	270	35.4
11	140	50.8	309	03.6	18	52.2	36 31.4	39.3	285	37.7
12	155	53.2	324	03.4	33	53.0	51 33.4	39.2	300	39.9
13	170	55.7	339	03.2	48	53.8	66 35.4	39.2	315	42.2
14	185	58.2	354	03.1	63	54.6	81 37.4	39.2	330	44.5
15	201	00.6	9 02.9	58.5	78	55.4	96 39.4	39.1	345	46.8
16	216	03.1	24 02.7	-4 59.8	93	56.1	111 41.3	39.1	0 49.1	38.8
17	231	05.6	39 02.5	-5 01.0	108	56.9	126 43.3	39.0	15 51.4	38.9
18	246	08.0	54 02.3	-5 02.3	123	57.7	141 45.3	39.0	30 53.7	39.0
19	261	10.5	69 02.1	03.6	138	58.5	156 47.3	39.0	45 55.9	39.1
20	276	12.9	84 01.9	04.9	153	59.3	171 49.3	38.9	60 58.2	39.1
21	291	15.4	99 01.7	06.1	169	00.0	186 51.2	38.9	76 00.5	39.2
22	306	17.9	114 01.5	07.4	184	00.8	201 53.2	38.8	91 02.8	39.3
23	321	20.3	129 01.3	08.7	199	01.6	216 55.2	38.8	106 05.1	39.3
24	336	22.8	144 01.1	-5 10.0	214	02.4	231 57.2	38.8	121 07.4	39.4
Dif	—		-2	-13	+8	-3	+20	0	+23	-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 01 ^m 2		Edad: 21 ^d 1 PHE { 4 ^h : 54/8 12 ^h : 54/7 20 ^h : 54/5 PMG: 5 ^h 40 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	40.4	+9 43.6	277	42.8	+18 30.4	60 N	19 15	20 01	21 02	21 41 45	14 25 54		
1	194	40.6	42.7	292	13.6 ¹¹⁸	34.1 ³⁷	58	09	19 52	20 47	21 54 46	12 53		
2	209	40.8	41.8	306	44.4 ¹¹⁸	37.8 ³⁷	56	04	44	35	22 06 46	14 00 53		
3	224	41.0	41.0	321	15.1 ¹¹⁷	41.3 ³⁵	54	19 00	38	25	16 47	13 50 52		
4	239	41.2	40.1	335	45.9 ¹¹⁸	44.8 ³⁵	52	18 56	32	16	26 46	41 52		
5	254	41.4	+9 39.2	350	16.7 ¹¹⁸	+18 48.2 ³⁴	50	18 52	19 26	20 08	22 34 46	13 33 52		
6	269	41.5	+9 38.3	4	47.4 ¹¹⁷	+18 51.4 ³²	45	18 44	19 15	19 52	22 51 47	13 16 51		
7	284	41.7	37.4	19	18.2 ¹¹⁸	54.6 ³²	40	38	19 06	39	23 05 48	13 02 51		
8	299	41.9	36.5	33	49.0 ¹¹⁸	+18 57.7 ³¹	35	32	18 58	29	17 48	12 50 50		
9	314	42.1	35.7	48	19.7 ¹¹⁷	+19 00.7 ³⁰	30	27	52	20	28 48	40 50		
10	329	42.3	34.8	62	50.5 ¹¹⁸	03.7 ³⁰	20	19	41	19 07	23 46 48	22 49		
11	344	42.5	+9 33.9	77	21.3 ¹¹⁸	+19 06.5 ²⁸	10 N	18 11	18 33	18 57	** ** *	12 06 49		
12	359	42.7	+9 33.0	91	52.0 ¹¹⁷	+19 09.2 ²⁷	0	18 04	18 25	18 50	** ** *	11 52 48		
13	14	42.8	32.1	106	22.8 ¹¹⁸	11.8 ²⁶	10 S	17 58	19	44	** ** *	37 48		
14	29	43.0	31.2	120	53.6 ¹¹⁸	14.4 ²⁶	20	51	13	39	** ** *	22 47		
15	44	43.2	30.4	135	24.4 ¹¹⁸	16.8 ²⁴	30	43	07	35	0 15 51	11 04 46		
16	59	43.4	29.5	149	55.2 ¹¹⁸	19.2 ²⁴	35	38	04	33	25 52	10 54 46		
17	74	43.6	+9 28.6	164	26.0 ¹¹⁸	+19 21.5 ²³	40	17 33	18 01	18 32	0 36 53	10 42 45		
18	89	43.8	+9 27.7	178	56.8 ¹¹⁸	+19 23.6 ²¹	45	17 28	17 57	18 31	0 50 53	10 28 45		
19	104	44.0	26.8	193	27.6 ¹¹⁸	25.7 ²¹	50	21	53	31	1 06 55	11 44		
20	119	44.2	25.9	207	58.4 ¹¹⁸	27.7 ²⁰	52	17	52	31	14 55	10 03 44		
21	134	44.3	25.0	222	29.2 ¹¹⁸	29.6 ¹⁹	54	14	50	31	23 56	9 54 43		
22	149	44.5	24.1	237	00.0 ¹¹⁸	31.4 ¹⁸	56	10	48	31	33 56	44 43		
23	164	44.7	23.3	251	30.8 ¹¹⁸	33.1 ¹⁷	58	06	46	31	44 57	33 41		
24	179	44.9	+9 22.4	266	01.6 ¹¹⁸	+19 34.8 ¹⁷	60 S	17 01	17 43	18 32	1 57 58	9 20 40		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 34 ^m 2		Mag: -4.0 PMG: 14 ^h 24 ^m		Mag: +1.6 PMG: 9 ^h 43 ^m		Mag: -2.1 PMG: 8 ^h 31 ^m			Mag: +0.7 PMG: 15 ^h 53 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	336	22.8	144 01.1	-5 10.0	214 02.4	+21 05.8	231 57.2	+22 38.8	121 07.4	-11 39.4				
1	351	25.3	159 00.9	11.2	229 03.2	05.5	246 59.1	38.7	136 09.7	39.5				
2	6	27.7	174 00.7	12.5	244 03.9	05.2	262 01.1	38.7	151 11.9	39.5				
3	21	30.2	189 00.6	13.8	259 04.7	04.9	277 03.1	38.6	166 14.2	39.6				
4	36	32.7	204 00.4	15.1	274 05.5	04.6	292 05.1	38.6	181 16.5	39.7				
5	51	35.1	219 00.2	-5 16.3	289 06.3	+21 04.3	307 07.1	+22 38.6	196 18.8	-11 39.8				
6	66	37.6	234 00.0	-5 17.6	304 07.1	+21 03.9	322 09.1	+22 38.5	211 21.1	-11 39.8				
7	81	40.0	248 59.8	18.9	319 07.9	03.6	337 11.0	38.5	226 23.4	39.9				
8	96	42.5	263 59.6	20.2	334 08.6	03.3	352 13.0	38.4	241 25.6	40.0				
9	111	45.0	278 59.4	21.4	349 09.4	03.0	7 15.0	38.4	256 27.9	40.0				
10	126	47.4	293 59.2	22.7	4 10.2	02.7	22 17.0	38.3	271 30.2	40.1				
11	141	49.9	308 59.0	-5 24.0	19 11.0	+21 02.3	37 19.0	+22 38.3	286 32.5	-11 40.2				
12	156	52.4	323 58.8	-5 25.3	34 11.8	+21 02.0	52 20.9	+22 38.3	301 34.8	-11 40.2				
13	171	54.8	338 58.6	26.5	49 12.6	01.7	67 22.9	38.2	316 37.1	40.3				
14	186	57.3	353 58.4	27.8	64 13.3	01.4	82 24.9	38.2	331 39.3	40.4				
15	201	59.8	8 58.2	29.1	79 14.1	01.0	97 26.9	38.1	346 41.6	40.5				
16	217	02.2	23 58.0	30.3	94 14.9	00.7	112 28.9	38.1	1 43.9	40.5				
17	232	04.7	38 57.8	-5 31.6	109 15.7	+21 00.4	127 30.9	+22 38.1	16 46.2	-11 40.6				
18	247	07.2	53 57.7	-5 32.9	124 16.5	+21 00.1	142 32.8	+22 38.0	31 48.5	-11 40.7				
19	262	09.6	68 57.5	34.2	139 17.3	+20 59.8	157 34.8	38.0	46 50.8	40.7				
20	277	12.1	83 57.3	35.4	154 18.0	59.4	172 36.8	37.9	61 53.0	40.8				
21	292	14.5	98 57.1	36.7	169 18.8	59.1	187 38.8	37.9	76 55.3	40.9				
22	307	17.0	113 56.9	38.0	184 19.6	58.8	202 40.8	37.9	91 57.6	41.0				
23	322	19.5	128 56.7	39.2	199 20.4	58.5	217 42.8	37.8	106 59.9	41.0				
24	337	21.9	143 56.5	-5 40.5	214 21.2	+20 58.1	232 44.7	+22 37.8	122 02.2	-11 41.1				
Dif	—	—	-2	-13	+8	-3	+20	0	+23	-1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15'8 PMG: 12 ^h 00 ^m 9			Edad: 22 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 6 ^h 28 ^m R°: 48 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	h	m					
0	179	44.9	+9	22.4	266	01.6	+19	34.8	15	60 N	3	01	4	02	4	48	22	26	55	15	19	44
1	194	45.1		21.5	280	32.5	119	36.3	15	58	16	11	54		40	54	15	05	44			
2	209	45.3		20.6	295	03.3	118	37.7	14	56	28	18	4	58	22	52	53	14	53	45		
3	224	45.5		19.7	309	34.2	119	39.1	14	54	38	25	5	03	23	03	52		42	46		
4	239	45.6		18.8	324	05.0	118	40.3	12	52	47	31	07		12	52		33	46			
5	254	45.8	+9	17.9	338	35.8	118	41.5	12	50	3	55	4	37	5	11	23	20	52	14	25	45
6	269	46.0	+9	17.0	353	06.7	119	42.5	10	45	4	11	4	48	5	18	23	38	51	14	07	46
7	284	46.2		16.1	7	37.6	119	43.5	10	40	23	4	57	25	23	53	50	13	53	46		
8	299	46.4		15.3	22	08.4	118	44.4	9	35	34	5	04	30	**	**	**		40	47		
9	314	46.6		14.4	36	39.3	119	45.2	8	30	42	11	35		**	**	**		30	47		
10	329	46.8		13.5	51	10.2	119	45.9	7	20	4	55	21	44	**	**	**		13	11	48	
11	344	47.0	+9	12.6	65	41.1	119	46.5	6	10 N	5	05	5	30	5	51	0	02	48	12	55	48
12	359	47.2	+9	11.7	80	12.0	119	47.0	5	0	5	12	5	37	5	58	0	17	48	12	40	48
13	14	47.3		10.8	94	42.9	119	47.4	4	10 S	18	43	6	04		32	48		25	48		
14	29	47.5		09.9	109	13.8	119	47.7	3	20	23	49	11		0	48	48	12	09	48		
15	44	47.7		09.0	123	44.7	119	48.0	3	30	27	55	19		1	06	48	11	50	49		
16	59	47.9		08.1	138	15.7	120	48.1	1	35	28	5	58	23		17	48		40	49		
17	74	48.1	+9	07.2	152	46.6	119	48.2	1	40	5	29	6	01	6	28	1	29	48	11	27	49
18	89	48.3	+9	06.3	167	17.5	119	48.1	1	45	5	30	6	04	6	34	1	43	49	11	13	49
19	104	48.5		05.4	181	48.5	120	48.0	1	50	30		08	40	2	01	49	10	55	49		
20	119	48.7		04.5	196	19.5	120	47.8	2	52	30		09	44		09	49		47	49		
21	134	48.9		03.7	210	50.4	119	47.4	4	54	30		11	47		19	49		37	50		
22	149	49.1		02.8	225	21.4	120	47.0	4	56	30		13	51		29	49		27	49		
23	164	49.2		01.9	239	52.4	120	46.5	5	58	30		15	6	55	41	49		14	50		
24	179	49.4	+9	01.0	254	23.4	120	45.9	6	60 S	5	29	6	17	7	00	2	55	49	10	00	50
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 1 ^h 30 ^m 3			Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: +1.6 PMG: 9 ^h 42 ^m			Mag: -2.1 PMG: 8 ^h 28 ^m			Mag: +0.7 PMG: 15 ^h 49 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	337	21.9		143	56.5	-5	40.5	214	21.2	+20	58.1	232	44.7	+22	37.8							
1	352	24.4		158	56.3		41.8	229	22.0		57.8	247	46.7		37.7							
2	7	26.9		173	56.1		43.0	244	22.8		57.5	262	48.7		37.7							
3	22	29.3		188	55.9		44.3	259	23.5		57.2	277	50.7		37.7							
4	37	31.8		203	55.7		45.6	274	24.3		56.8	292	52.7		37.6							
5	52	34.3		218	55.5	-5	46.9	289	25.1	+20	56.5	307	54.7	+22	37.6							
6	67	36.7		233	55.3	-5	48.1	304	25.9	+20	56.2	322	56.6	+22	37.5							
7	82	39.2		248	55.1		49.4	319	26.7		55.9	337	58.6		37.5							
8	97	41.7		263	54.9		50.7	334	27.5		55.5	353	00.6		37.4							
9	112	44.1		278	54.7		51.9	349	28.3		55.2	8	02.6		37.4							
10	127	46.6		293	54.5		53.2	4	29.1		54.9	23	04.6		37.4							
11	142	49.0		308	54.3	-5	54.5	19	29.8	+20	54.6	38	06.6	+22	37.3							
12	157	51.5		323	54.2	-5	55.7	34	30.6	+20	54.2	53	08.6	+22	37.3							
13	172	54.0		338	54.0		57.0	49	31.4		53.9	68	10.5		37.2							
14	187	56.4		353	53.8		58.3	64	32.2		53.6	83	12.5		37.2							
15	202	58.9		8	53.6	-5	59.5	79	33.0		53.3	98	14.5		37.2							
16	218	01.4		23	53.4	-6	00.8	94	33.8		52.9	113	16.5		37.1							
17	233	03.8		38	53.2	-6	02.1	109	34.6	+20	52.6	128	18.5	+22	37.1							
18	248	06.3		53	53.0	-6	03.3	124	35.4	+20	52.3	143	20.5	+22	37.0							
19	263	08.8		68	52.8		04.6	139	36.2		51.9	158	22.5		37.0							
20	278	11.2		83	52.6		05.9	154	36.9		51.6	173	24.5		37.0							
21	293	13.7		98	52.4		07.1	169	37.7		51.3	188	26.4		36.9							
22	308	16.1		113	52.2		08.4	184	38.5		51.0	203	28.4		36.9							
23	323	18.6		128	52.0		09.7	199	39.3		50.6	218	30.4		36.8							
24	338	21.1		143	51.8	-6	10.9	214	40.1	+20	50.3	233	32.4	+22	36.8							
Dif	—			-2		-13		+8		-3		+20		0		+23		-1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 23 ^d 1 PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2											
	PMG: 12 ^h 00 ^m 6			SD: 14 ^h 8 PMG: 7 ^h 16 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	49.4	+9 01.0	254	23.4	+19 45.9	7	60 N	19 09	19 54	20 54	23 21 62		16 03 34	
1	194	49.6	+9 00.1	268	54.4 ¹²⁰	45.2	7	58	19 04	46	40	34 61		15 49 36	
2	209	49.8	+8 59.2	283	25.5 ¹²¹	44.5	9	56	18 59	39	29	45 60		38 37	
3	224	50.0	58.3	297	56.5 ¹²⁰	43.6	7	54	55	33	19	23 55 59		28 38	
4	239	50.2	57.4	312	27.6 ¹²¹	42.6	10	52	51	27	11	** ** *		19 39	
5	254	50.4	+8 56.5	326	58.6 ¹²⁰	+19 41.6	10	50	18 48	19 22	20 03	** ** *		15 10 40	
6	269	50.6	+8 55.6	341	29.7 ¹²¹	+19 40.5	11	45	18 41	19 11	19 48	** ** *		14 53 41	
7	284	50.8	54.7	356	00.8 ¹²¹	39.2	13	40	35	19 02	36	** ** *		39 42	
8	299	51.0	53.8	10	31.9 ¹²¹	37.9	13	35	29	18 55	26	0 05 50		27 43	
9	314	51.2	52.9	25	03.0 ¹²¹	36.5	14	30	25	49	18	16 49		14 17 44	
10	329	51.4	52.0	39	34.1 ¹²¹	35.0	15	20	17	39	19 05	34 49		13 59 45	
11	344	51.5	+8 51.1	54	05.2 ¹²¹	+19 33.4	16	10 N	18 10	18 31	18 56	0 50 48		13 43 46	
12	359	51.7	+8 50.2	68	36.4 ¹²²	+19 31.7	17	0	18 04	18 25	18 49	1 05 48		13 28 47	
13	14	51.9	49.3	83	07.5 ¹²¹	29.9	18	10 S	17 58	19	43	20 47		13 13 49	
14	29	52.1	48.4	97	38.7 ¹²²	28.1	18	20	51	13	39	36 46		12 57 50	
15	44	52.3	47.5	112	09.9 ¹²²	26.1	20	30	44	08	36	1 54 46		39 51	
16	59	52.5	46.6	126	41.1 ¹²²	24.1	20	35	40	05	35	2 05 45		29 51	
17	74	52.7	+8 45.7	141	12.3 ¹²²	+19 22.0	21	40	17 35	18 03	18 34	2 17 45		12 16 52	
18	89	52.9	+8 44.8	155	43.5 ¹²²	+19 19.8	22	45	17 30	17 59	18 34	2 32 44		12 02 53	
19	104	53.1	43.9	170	14.8 ¹²³	17.5	23	50	23	56	34	50 42		11 44 55	
20	119	53.3	43.0	184	46.0 ¹²²	15.1	24	52	21	55	34	2 58 42		36 55	
21	134	53.5	42.1	199	17.3 ¹²³	12.6	25	54	17	53	34	3 08 41		27 55	
22	149	53.7	41.2	213	48.6 ¹²³	10.0	26	56	14	52	35	18 41		16 57	
23	164	53.9	40.3	228	19.9 ¹²³	07.4	26	58	10	50	35	30 40		11 04 58	
24	179	54.1	+8 39.4	242	51.2 ¹²³	+19 04.6	28	60 S	17 06	17 48	18 36	3 44 39		10 50 59	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 26 ^m 4		Mag: -4.0 PMG: 14 ^h 25 ^m			Mag: +1.6 PMG: 9 ^h 41 ^m			Mag: -2.1 PMG: 8 ^h 25 ^m			Mag: +0.7 PMG: 15 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	338	21.1	143	51.8	-6 10.9	214	40.1	+20 50.3	233	32.4	+22 36.8	122	56.9	-11 42.8	
1	353	23.5	158	51.6	12.2	229	40.9	50.0	248	34.4	36.7	137	59.2	42.9	
2	8	26.0	173	51.4	13.5	244	41.7	49.6	263	36.4	36.7	153	01.4	42.9	
3	23	28.5	188	51.2	14.7	259	42.5	49.3	278	38.4	36.7	168	03.7	43.0	
4	38	30.9	203	51.0	16.0	274	43.3	49.0	293	40.4	36.6	183	06.0	43.1	
5	53	33.4	218	50.8	-6 17.3	289	44.1	+20 48.6	308	42.4	+22 36.6	198	08.3	-11 43.2	
6	68	35.9	233	50.6	-6 18.5	304	44.9	+20 48.3	323	44.3	+22 36.5	213	10.6	-11 43.2	
7	83	38.3	248	50.4	19.8	319	45.7	48.0	338	46.3	36.5	228	12.8	43.3	
8	98	40.8	263	50.2	21.1	334	46.4	47.6	353	48.3	36.5	243	15.1	43.4	
9	113	43.3	278	50.0	22.3	349	47.2	47.3	8	50.3	36.4	258	17.4	43.4	
10	128	45.7	293	49.8	23.6	4	48.0	47.0	23	52.3	36.4	273	19.7	43.5	
11	143	48.2	308	49.6	-6 24.9	19	48.8	+20 46.7	38	54.3	+22 36.3	288	21.9	-11 43.6	
12	158	50.6	323	49.5	-6 26.1	34	49.6	+20 46.3	53	56.3	+22 36.3	303	24.2	-11 43.7	
13	173	53.1	338	49.3	27.4	49	50.4	46.0	68	58.3	36.3	318	26.5	43.7	
14	188	55.6	353	49.1	28.7	64	51.2	45.7	84	00.3	36.2	333	28.8	43.8	
15	203	58.0	8	48.9	29.9	79	52.0	45.3	99	02.3	36.2	348	31.1	43.9	
16	219	00.5	23	48.7	31.2	94	52.8	45.0	114	04.3	36.1	3	33.3	44.0	
17	234	03.0	38	48.5	-6 32.4	109	53.6	+20 44.7	129	06.2	+22 36.1	18	35.6	-11 44.0	
18	249	05.4	53	48.3	-6 33.7	124	54.4	+20 44.3	144	08.2	+22 36.0	33	37.9	-11 44.1	
19	264	07.9	68	48.1	35.0	139	55.2	44.0	159	10.2	36.0	48	40.2	44.2	
20	279	10.4	83	47.9	36.2	154	56.0	43.7	174	12.2	36.0	63	42.4	44.2	
21	294	12.8	98	47.7	37.5	169	56.8	43.3	189	14.2	35.9	78	44.7	44.3	
22	309	15.3	113	47.5	38.8	184	57.6	43.0	204	16.2	35.9	93	47.0	44.4	
23	324	17.8	128	47.3	40.0	199	58.4	42.6	219	18.2	35.8	108	49.3	44.5	
24	339	20.2	143	47.1	-6 41.3	214	59.1	+20 42.3	234	20.2	+22 35.8	123	51.5	-11 44.5	
Dif	—		-2	-13		+8	-3		+20		0	+23		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 00 ^m 2			Edad: 24 ^d 1 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 SD: 14/7 PMG: 8 ^h 04 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	54.1	+8	39.4	242	51.2	+19 04.6	60 N	3 08	4 07	4 53	** ** *	16 37	27		
1	194	54.2		38.5	257	22.5 ¹²³	+19 01.8	58	21	16	4 58	** ** *	25	29		
2	209	54.4		37.6	271	53.8 ¹²³	+18 58.9	56	33	23	5 02	** ** *	15	31		
3	224	54.6		36.7	286	25.2 ¹²⁴	55.9	54	42	29	07	** ** *	16 06	32		
4	239	54.8		35.8	300	56.6 ¹²⁴	52.8	52	51	35	10	0 04	58	15 58	33	
5	254	55.0	+8	34.9	315	28.0 ¹²⁴	+18 49.6	50	3 58	4 40	5 14	0 12	57	15 50	35	
6	269	55.2	+8	34.0	329	59.4 ¹²⁴	+18 46.3	45	4 14	4 50	5 21	0 29	55	15 34	37	
7	284	55.4		33.1	344	30.8 ¹²⁴	43.0	40	26	4 59	27	43	54	21	39	
8	299	55.6		32.2	359	02.2 ¹²⁴	39.6	35	35	5 06	32	0 55	52	10	40	
9	314	55.8		31.3	13	33.7 ¹²⁵	36.0	30	43	12	36	1 05	52	15 01	41	
10	329	56.0		30.4	28	05.1 ¹²⁴	32.4	20	4 56	22	44	23	50	14 44	43	
11	344	56.2	+8	29.5	42	36.6 ¹²⁵	+18 28.7	10 N	5 05	5 30	5 51	1 38	49	14 29	45	
12	359	56.4	+8	28.6	57	08.1 ¹²⁵	+18 25.0	0	5 12	5 36	5 57	1 53	47	14 15	47	
13	14	56.6		27.7	71	39.7 ¹²⁶	21.1	10 S	17	42	6 03	2 07	46	14 02	48	
14	29	56.8		26.8	86	11.2 ¹²⁵	17.2	20	21	47	09	22	44	13 47	50	
15	44	57.0		25.9	100	42.7 ¹²⁵	13.1	30	24	52	16	40	42	30	52	
16	59	57.2		25.0	115	14.3 ¹²⁶	09.0	35	26	55	20	2 50	42	20	53	
17	74	57.4	+8	24.1	129	45.9 ¹²⁶	+18 04.8	40	5 26	5 58	6 25	3 02	40	13 08	55	
18	89	57.6	+8	23.2	144	17.5 ¹²⁶	+18 00.6	45	5 27	6 01	6 30	3 16	38	12 55	57	
19	104	57.8		22.3	158	49.1 ¹²⁶	+17 56.2	50	26	04	36	32	37	39	58	
20	119	58.0		21.4	173	20.8 ¹²⁷	51.8	52	26	05	39	40	36	31	60	
21	134	58.2		20.5	187	52.4 ¹²⁶	47.3	54	26	07	42	49	35	22	61	
22	149	58.4		19.6	202	24.1 ¹²⁷	42.7	56	25	08	46	3 59	34	13	62	
23	164	58.6		18.7	216	55.8 ¹²⁷	38.0	58	25	10	49	4 10	32	12	02	64
24	179	58.7	+8	17.7	231	27.5 ¹²⁷	+17 33.2	60 S	5 24	6 12	6 54	4 23	30	11 49	66	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 22 ^m 4		Mag: -4.0 PMG: 14 ^h 25 ^m			Mag: +1.6 PMG: 9 ^h 40 ^m			Mag: -2.1 PMG: 8 ^h 22 ^m			Mag: +0.7 PMG: 15 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	339	20.2	143	47.1	-6	41.3	214	59.1	+20	42.3	234	20.2	+22	35.8	123	51.5	-11	44.5
1	354	22.7	158	46.9		42.5	229	59.9		42.0	249	22.2		35.8	138	53.8		44.6
2	9	25.1	173	46.7		43.8	245	00.7		41.6	264	24.2		35.7	153	56.1		44.7
3	24	27.6	188	46.5		45.1	260	01.5		41.3	279	26.2		35.7	168	58.4		44.7
4	39	30.1	203	46.3		46.3	275	02.3		41.0	294	28.2		35.6	184	00.6		44.8
5	54	32.5	218	46.1	-6	47.6	290	03.1	+20	40.6	309	30.2	+22	35.6	199	02.9	-11	44.9
6	69	35.0	233	45.9	-6	48.8	305	03.9	+20	40.3	324	32.1	+22	35.5	214	05.2	-11	45.0
7	84	37.5	248	45.7		50.1	320	04.7		40.0	339	34.1		35.5	229	07.5		45.0
8	99	39.9	263	45.5		51.4	335	05.5		39.6	354	36.1		35.5	244	09.7		45.1
9	114	42.4	278	45.3		52.6	350	06.3		39.3	9	38.1		35.4	259	12.0		45.2
10	129	44.9	293	45.1		53.9	5	07.1		38.9	24	40.1		35.4	274	14.3		45.3
11	144	47.3	308	44.9	-6	55.1	20	07.9	+20	38.6	39	42.1	+22	35.3	289	16.6	-11	45.3
12	159	49.8	323	44.7	-6	56.4	35	08.7	+20	38.3	54	44.1	+22	35.3	304	18.8	-11	45.4
13	174	52.2	338	44.5		57.7	50	09.5		37.9	69	46.1		35.3	319	21.1		45.5
14	189	54.7	353	44.3	-6	58.9	65	10.3		37.6	84	48.1		35.2	334	23.4		45.5
15	204	57.2	8	44.1	-7	00.2	80	11.1		37.2	99	50.1		35.2	349	25.7		45.6
16	219	59.6	23	43.9		01.4	95	11.9		36.9	114	52.1		35.1	4	27.9		45.7
17	235	02.1	38	43.7	-7	02.7	110	12.7	+20	36.6	129	54.1	+22	35.1	19	30.2	-11	45.8
18	250	04.6	53	43.5	-7	03.9	125	13.5	+20	36.2	144	56.1	+22	35.1	34	32.5	-11	45.8
19	265	07.0	68	43.3		05.2	140	14.3		35.9	159	58.1		35.0	49	34.8		45.9
20	280	09.5	83	43.1		06.5	155	15.1		35.6	175	00.1		35.0	64	37.0		46.0
21	295	12.0	98	42.9		07.7	170	15.9		35.2	190	02.1		34.9	79	39.3		46.1
22	310	14.4	113	42.7		09.0	185	16.7		34.9	205	04.1		34.9	94	41.6		46.1
23	325	16.9	128	42.5		10.2	200	17.5		34.5	220	06.1		34.8	109	43.9		46.2
24	340	19.4	143	42.3	-7	11.5	215	18.3	+20	34.2	235	08.1	+22	34.8	124	46.1	-11	46.3
Dif	—		-2		-13		+8		-3		+20		0		+23		-1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8		Edad: 25 ^d 1 PHE	SD: 14'8		R°: 46 ^m			Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif				Dec	Dif					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	58.7	+8	17.7	231	27.5	+17 33.2	60 N	19 03	19 48	20 46	0 23 68	17 04 22		
1	194	58.9		16.8	245	59.2 ¹²⁷	28.4 48	58	18 58	40	33	35 66	16 54 24		
2	209	59.1		15.9	260	31.0 ¹²⁸	23.5 49	56	54	33	23	45 64	46 25		
3	224	59.3		15.0	275	02.7 ¹²⁷	18.5 50	54	50	27	13	0 54 63	38 27		
4	239	59.5		14.1	289	34.5 ¹²⁸	13.4 51	52	47	22	20 05	1 02 61	31 29		
5	254	59.7	+8	13.2	304	06.3 ¹²⁸	+17 08.2 52	50	18 44	19 17	19 58	1 09 60	16 25 30		
6	269	59.9	+8	12.3	318	38.1 ¹²⁸	+17 03.0 52	45	18 37	19 07	19 44	1 24 58	16 11 33		
7	285	00.1		11.4	333	09.9 ¹²⁸	+16 57.7 53	40	31	18 59	32	37 55	16 00 35		
8	300	00.3		10.5	347	41.8 ¹²⁹	52.3 54	35	27	52	23	47 54	15 50 37		
9	315	00.5		09.6	2	13.7 ¹²⁹	46.8 55	30	22	47	15	1 57 52	42 38		
10	330	00.7		08.7	16	45.5 ¹²⁸	41.2 56	20	15	37	19 04	2 13 50	27 41		
11	345	00.9	+8	07.8	31	17.5 ¹³⁰	+16 35.6 57	10 N	18 09	18 30	18 55	2 27 48	15 14 44		
12	0	01.1	+8	06.9	45	49.4 ¹²⁹	+16 29.9 58	0	18 03	18 24	18 48	2 40 46	15 02 46		
13	15	01.3		05.9	60	21.3 ¹²⁹	24.1 58	10 S	17 58	19	43	2 53 44	14 50 48		
14	30	01.5		05.0	74	53.3 ¹³⁰	18.3 58	20	52	14	39	3 06 43	37 50		
15	45	01.7		04.1	89	25.2 ¹²⁹	12.4 59	30	45	09	37	22 40	22 53		
16	60	01.9		03.2	103	57.2 ¹³⁰	06.4 60	35	41	07	36	32 38	13 55		
17	75	02.1	+8	02.3	118	29.2 ¹³⁰	+16 00.3 61	40	17 37	18 04	18 36	3 42 37	14 03 57		
18	90	02.3	+8	01.4	133	01.3 ¹³¹	+15 54.1 62	45	17 32	18 02	18 36	3 54 35	13 52 58		
19	105	02.5	+8	00.5	147	33.3 ¹³⁰	47.9 62	50	26	17 59	36	4 09 32	37 62		
20	120	02.7	+7	59.6	162	05.4 ¹³¹	41.6 63	52	24	58	37	16 31	31 63		
21	135	02.9		58.7	176	37.4 ¹³⁰	35.2 64	54	21	57	37	24 30	23 65		
22	150	03.1		57.8	191	09.5 ¹³¹	28.8 64	56	18	55	38	33 28	15 66		
23	165	03.3		56.8	205	41.6 ¹³¹	22.3 65	58	14	54	39	42 27	13 06 68		
24	180	03.5	+7	55.9	220	13.8 ¹³²	+15 15.7 66	60 S	17 10	17 52	18 40	4 53 25	12 55 70		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 18 ^m 5		Mag: -4.0 PMG: 14 ^h 25 ^m		Mag: +1.6 PMG: 9 ^h 38 ^m		Mag: -2.1 PMG: 8 ^h 18 ^m		Mag: +0.7 PMG: 15 ^h 39 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	340	19.4	143 42.3	-7 11.5	215 18.3	+20 34.2	235 08.1	+22 34.8	124 46.1	-11 46.3					
1	355	21.8	158 42.1	12.7	230 19.1	33.8	250 10.1	34.8	139 48.4	46.3					
2	10	24.3	173 41.9	14.0	245 19.9	33.5	265 12.1	34.7	154 50.7	46.4					
3	25	26.7	188 41.7	15.3	260 20.7	33.2	280 14.1	34.7	169 52.9	46.5					
4	40	29.2	203 41.5	16.5	275 21.5	32.8	295 16.1	34.6	184 55.2	46.6					
5	55	31.7	218 41.3	-7 17.8	290 22.3	+20 32.5	310 18.1	+22 34.6	199 57.5	-11 46.6					
6	70	34.1	233 41.1	-7 19.0	305 23.1	+20 32.1	325 20.1	+22 34.6	214 59.8	-11 46.7					
7	85	36.6	248 40.9	20.3	320 23.9	31.8	340 22.1	34.5	230 02.0	46.8					
8	100	39.1	263 40.7	21.5	335 24.7	31.5	355 24.1	34.5	245 04.3	46.9					
9	115	41.5	278 40.5	22.8	350 25.5	31.1	10 26.1	34.4	260 06.6	46.9					
10	130	44.0	293 40.3	24.0	5 26.3	30.8	25 28.0	34.4	275 08.8	47.0					
11	145	46.5	308 40.1	-7 25.3	20 27.1	+20 30.4	40 30.0	+22 34.3	290 11.1	-11 47.1					
12	160	48.9	323 39.9	-7 26.5	35 27.9	+20 30.1	55 32.0	+22 34.3	305 13.4	-11 47.2					
13	175	51.4	338 39.7	27.8	50 28.7	29.7	70 34.0	34.3	320 15.7	47.2					
14	190	53.9	353 39.5	29.0	65 29.5	29.4	85 36.0	34.2	335 17.9	47.3					
15	205	56.3	8 39.3	30.3	80 30.3	29.0	100 38.0	34.2	350 20.2	47.4					
16	220	58.8	23 39.1	31.5	95 31.1	28.7	115 40.0	34.1	5 22.5	47.5					
17	236	01.2	38 38.9	-7 32.8	110 32.0	+20 28.4	130 42.0	+22 34.1	20 24.7	-11 47.5					
18	251	03.7	53 38.7	-7 34.1	125 32.8	+20 28.0	145 44.0	+22 34.1	35 27.0	-11 47.6					
19	266	06.2	68 38.5	35.3	140 33.6	27.7	160 46.0	34.0	50 29.3	47.7					
20	281	08.6	83 38.3	36.6	155 34.4	27.3	175 48.0	34.0	65 31.6	47.7					
21	296	11.1	98 38.1	37.8	170 35.2	27.0	190 50.1	33.9	80 33.8	47.8					
22	311	13.6	113 37.9	39.1	185 36.0	26.6	205 52.1	33.9	95 36.1	47.9					
23	326	16.0	128 37.7	40.3	200 36.8	26.3	220 54.1	33.8	110 38.4	48.0					
24	341	18.5	143 37.5	-7 41.6	215 37.6	+20 25.9	235 56.1	+22 33.8	125 40.6	-11 48.0					
Dif	—	-2	-13	+8	-3	+20	0	+23	-1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 6			Edad: 26 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 SD: 14'8 PMG: 9 ^h 37 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.5	+7	55.9	220	13.8	+15	15.7	60 N	3	15	4	13	4	57
1	195	03.7		55.0	234	45.9 ¹³¹		09.0 ⁶⁷	58		27		20	5	02
2	210	03.9		54.1	249	18.1 ¹³²	+15	02.3 ⁶⁷	56		38		27	06	
3	225	04.1		53.2	263	50.2 ¹³¹	+14	55.5 ⁶⁸	54		47		33	10	
4	240	04.3		52.3	278	22.4 ¹³²		48.6 ⁶⁹	52	3	55		38	13	
5	255	04.5	+7	51.4	292	54.6 ¹³²	+14	41.7 ⁶⁹	50	4	02	4	43	5	17
6	270	04.7	+7	50.5	307	26.8 ¹³²	+14	34.7 ⁷⁰	45	4	17	4	53	5	23
7	285	04.9		49.5	321	59.1 ¹³³		27.6 ⁷¹	40		28	5	01	29	
8	300	05.1		48.6	336	31.3 ¹³²		20.5 ⁷¹	35		37		08	33	
9	315	05.3		47.7	351	03.6 ¹³³		13.3 ⁷²	30		45		13	38	
10	330	05.5		46.8	5	35.9 ¹³³	+14	06.0 ⁷³	20	4	56		22	45	
11	345	05.7	+7	45.9	20	08.2 ¹³³	+13	58.6 ⁷⁴	10 N	5	05	5	29	5	51
12	0	05.9	+7	45.0	34	40.5 ¹³³	+13	51.2 ⁷⁴	0	5	11	5	35	5	56
13	15	06.1		44.1	49	12.8 ¹³³		43.7 ⁷⁵	10 S		16	41	6	02	
14	30	06.3		43.1	63	45.2 ¹³⁴		36.2 ⁷⁵	20	20	20	45	08		
15	45	06.5		42.2	78	17.5 ¹³³		28.6 ⁷⁶	30	22		50	14		
16	60	06.7		41.3	92	49.9 ¹³⁴		20.9 ⁷⁷	35	23		52	18		
17	75	06.9	+7	40.4	107	22.3 ¹³⁴	+13	13.2 ⁷⁷	40	5	23	5	55	6	22
18	90	07.1	+7	39.5	121	54.7 ¹³⁴	+13	05.4 ⁷⁸	45	5	23	5	57	6	27
19	105	07.3		38.6	136	27.1 ¹³⁴	+12	57.6 ⁷⁸	50	22		6	00	32	
20	120	07.5		37.7	150	59.5 ¹³⁴		49.6 ⁸⁰	52	22		01	35		
21	135	07.7		36.7	165	32.0 ¹³⁵		41.7 ⁷⁹	54	21		02	38		
22	150	07.9		35.8	180	04.4 ¹³⁴		33.6 ⁸¹	56	20		03	41		
23	165	08.1		34.9	194	36.9 ¹³⁵		25.5 ⁸¹	58	19		05	44		
24	180	08.3	+7	34.0	209	09.4 ¹³⁵	+12	17.4 ⁸¹	60 S	5	18	6	06	6	48
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 1 ^h 14 ^m 6		Mag: -4.0 PMG: 14 ^h 26 ^m			Mag: +1.6 PMG: 9 ^h 37 ^m			Mag: -2.1 PMG: 8 ^h 15 ^m			Mag: +0.7 PMG: 15 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	341	18.5	143	37.5	-7	41.6	215	37.6	+20	25.9	235	56.1	+22	33.8	
1	356	21.0	158	37.2		42.8	230	38.4		25.6	250	58.1		33.8	
2	11	23.4	173	37.0		44.1	245	39.2		25.2	266	00.1		33.7	
3	26	25.9	188	36.8		45.3	260	40.0		24.9	281	02.1		33.7	
4	41	28.4	203	36.6		46.6	275	40.8		24.5	296	04.1		33.6	
5	56	30.8	218	36.4	-7	47.8	290	41.6	+20	24.2	311	06.1	+22	33.6	
6	71	33.3	233	36.2	-7	49.1	305	42.4	+20	23.8	326	08.1	+22	33.6	
7	86	35.7	248	36.0		50.3	320	43.2		23.5	341	10.1		33.5	
8	101	38.2	263	35.8		51.6	335	44.0		23.2	356	12.1		33.5	
9	116	40.7	278	35.6		52.8	350	44.8		22.8	11	14.1		33.4	
10	131	43.1	293	35.4		54.0	5	45.7		22.5	26	16.1		33.4	
11	146	45.6	308	35.2	-7	55.3	20	46.5	+20	22.1	41	18.1	+22	33.4	
12	161	48.1	323	35.0	-7	56.5	35	47.3	+20	21.8	56	20.1	+22	33.3	
13	176	50.5	338	34.8		57.8	50	48.1		21.4	71	22.1		33.3	
14	191	53.0	353	34.6	-7	59.0	65	48.9		21.1	86	24.1		33.2	
15	206	55.5	8	34.4	-8	00.3	80	49.7		20.7	101	26.1		33.2	
16	221	57.9	23	34.2		01.5	95	50.5		20.4	116	28.1		33.1	
17	237	00.4	38	34.0	-8	02.8	110	51.3	+20	20.0	131	30.1	+22	33.1	
18	252	02.8	53	33.8	-8	04.0	125	52.1	+20	19.7	146	32.1	+22	33.1	
19	267	05.3	68	33.6		05.3	140	52.9		19.3	161	34.1		33.0	
20	282	07.8	83	33.4		06.5	155	53.7		19.0	176	36.1		33.0	
21	297	10.2	98	33.2		07.8	170	54.6		18.6	191	38.1		32.9	
22	312	12.7	113	32.9		09.0	185	55.4		18.2	206	40.1		32.9	
23	327	15.2	128	32.7		10.2	200	56.2		17.9	221	42.1		32.9	
24	342	17.6	143	32.5	-8	11.5	215	57.0	+20	17.5	236	44.2	+22	32.8	
Dif	—		-2	-12			+8	-3			+20		0		+23
															-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 59 ^m 3			Edad: 27 ^d 1 SD: 14'9 PMG: 10 ^h 22 ^m	PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 R°: 45 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	08.3	+7	34.0	209	09.4	+12	17.4	60 N	18 57	19 41	20 38	2 43 75	17 44 16				
1	195	08.5		33.1	223	41.8 ¹³⁴		09.1	83	53	34	26	51 72	39 18				
2	210	08.8		32.2	238	14.3 ¹³⁵	+12	00.9	82	56	49	28	16	2 57 70	34 20			
3	225	09.0		31.2	252	46.9 ¹³⁶	+11	52.5	84	54	46	22	08	3 02 68	29 22			
4	240	09.2		30.3	267	19.4 ¹³⁵		44.1	84	52	42	17	20 00	07 67	25 24			
5	255	09.4	+7	29.4	281	51.9 ¹³⁵	+11	35.7	84	50	18 40	19 13	19 53	3 12 65	17 22 25			
6	270	09.6	+7	28.5	296	24.4 ¹³⁵	+11	27.2	85	45	18 33	19 03	19 39	3 22 61	17 14 28			
7	285	09.8		27.6	310	57.0 ¹³⁶		18.6	86	40	28	18 56	29	30 59	08 31			
8	300	10.0		26.6	325	29.6 ¹³⁶		10.0	86	35	24	50	20	37 56	17 02 33			
9	315	10.2		25.7	340	02.1 ¹³⁵	+11	01.3	87	30	20	44	13	43 54	16 57 35			
10	330	10.4		24.8	354	34.7 ¹³⁶	+10	52.6	87	20	13	36	19 02	3 54 51	48 39			
11	345	10.6	+7	23.9	9	07.3 ¹³⁶	+10	43.8	88	10 N	18 08	18 29	18 54	4 03 48	16 40 43			
12	0	10.8	+7	23.0	23	39.9 ¹³⁶	+10	35.0	88	0	18 03	18 23	18 48	4 11 46	16 33 45			
13	15	11.0		22.1	38	12.5 ¹³⁶		26.1	89	10 S	17 57	19	43	20 42	26 48			
14	30	11.2		21.1	52	45.1 ¹³⁶		17.1	90	20	52	14	40	29 40	18 51			
15	45	11.4		20.2	67	17.7 ¹³⁶	+10	08.1	90	30	46	10	38	40 36	09 55			
16	60	11.6		19.3	81	50.4 ¹³⁷	+9	59.1	90	35	43	08	38	46 34	16 04 57			
17	75	11.8	+7	18.4	96	23.0 ¹³⁶	+9	50.0	91	40	17 39	18 06	18 38	4 53 31	15 58 59			
18	90	12.0	+7	17.5	110	55.7 ¹³⁷	+9	40.9	91	45	17 35	18 04	18 38	5 00 30	15 51 62			
19	105	12.2		16.5	125	28.3 ¹³⁶		31.7	92	50	29	02	39	10 26	43 65			
20	120	12.4		15.6	140	01.0 ¹³⁷		22.4	93	52	27	01	40	14 25	39 67			
21	135	12.6		14.7	154	33.6 ¹³⁶		13.1	93	54	24	18 00	41	19 23	35 69			
22	150	12.8		13.8	169	06.3 ¹³⁷	+9	03.8	93	56	22	17 59	42	25 21	30 71			
23	165	13.0		12.8	183	38.9 ¹³⁶	+8	54.4	94	58	18	58	43	30 19	25 73			
24	180	13.2	+7	11.9	198	11.6 ¹³⁷	+8	45.0	94	60 S	17 15	17 57	18 45	5 37 17	15 19 75			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG			Mag: -4.0			Mag: +1.6			Mag: -2.1			Mag: +0.7					
	1 ^h 10 ^m 6			PMG: 14 ^h 26 ^m			PMG: 9 ^h 36 ^m			PMG: 8 ^h 12 ^m			PMG: 15 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	342	17.6	143	32.5	-8	11.5	215	57.0	+20	17.5	236	44.2	+22	32.8	126	35.1	-11	49.8
1	357	20.1	158	32.3		12.7	230	57.8		17.2	251	46.2		32.8	141	37.4		49.9
2	12	22.6	173	32.1		14.0	245	58.6		16.8	266	48.2		32.7	156	39.6		50.0
3	27	25.0	188	31.9		15.2	260	59.4		16.5	281	50.2		32.7	171	41.9		50.0
4	42	27.5	203	31.7		16.5	276	00.2		16.1	296	52.2		32.6	186	44.2		50.1
5	57	30.0	218	31.5	-8	17.7	291	01.0	+20	15.8	311	54.2	+22	32.6	201	46.4	-11	50.2
6	72	32.4	233	31.3	-8	18.9	306	01.9	+20	15.4	326	56.2	+22	32.6	216	48.7	-11	50.3
7	87	34.9	248	31.1		20.2	321	02.7		15.1	341	58.2		32.5	231	51.0		50.3
8	102	37.3	263	30.9		21.4	336	03.5		14.7	357	00.2		32.5	246	53.2		50.4
9	117	39.8	278	30.7		22.7	351	04.3		14.4	12	02.2		32.4	261	55.5		50.5
10	132	42.3	293	30.5		23.9	6	05.1		14.0	27	04.2		32.4	276	57.8		50.6
11	147	44.7	308	30.3	-8	25.2	21	05.9	+20	13.7	42	06.2	+22	32.4	292	00.0	-11	50.6
12	162	47.2	323	30.0	-8	26.4	36	06.7	+20	13.3	57	08.2	+22	32.3	307	02.3	-11	50.7
13	177	49.7	338	29.8		27.6	51	07.5		12.9	72	10.3		32.3	322	04.5		50.8
14	192	52.1	353	29.6		28.9	66	08.4		12.6	87	12.3		32.2	337	06.8		50.9
15	207	54.6	8	29.4		30.1	81	09.2		12.2	102	14.3		32.2	352	09.1		50.9
16	222	57.1	23	29.2		31.4	96	10.0		11.9	117	16.3		32.1	7	11.3		51.0
17	237	59.5	38	29.0	-8	32.6	111	10.8	+20	11.5	132	18.3	+22	32.1	22	13.6	-11	51.1
18	253	02.0	53	28.8	-8	33.8	126	11.6	+20	11.2	147	20.3	+22	32.1	37	15.9	-11	51.2
19	268	04.4	68	28.6		35.1	141	12.4		10.8	162	22.3		32.0	52	18.1		51.2
20	283	06.9	83	28.4		36.3	156	13.2		10.5	177	24.3		32.0	67	20.4		51.3
21	298	09.4	98	28.2		37.6	171	14.1		10.1	192	26.3		31.9	82	22.7		51.4
22	313	11.8	113	28.0		38.8	186	14.9		09.7	207	28.3		31.9	97	24.9		51.5
23	328	14.3	128	27.7		40.0	201	15.7		09.4	222	30.4		31.9	112	27.2		51.6
24	343	16.8	143	27.5	-8	41.3	216	16.5	+20	09.0	237	32.4	+22	31.8	127	29.5	-11	51.6
Dif	—			-2	-12	+8			-4	+20			0	+23			-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 28 ^d 1	PHE { 4 ^h : 55'3 12 ^h : 55'4 20 ^h : 55'6 R°: 46 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	13.2	+7	11.9	198	11.6	+8 45.0	60 N	3 21	4 18	5 02	3 58	77	18 00	14
1	195	13.4		11.0	212	44.3 ¹³⁷	35.5 ⁹⁵	58	33	25	06	4 03	74	17 57	17
2	210	13.7		10.1	227	17.0 ¹³⁷	26.0 ⁹⁵	56	43	31	10	07 71		54 19	
3	225	13.9		09.2	241	49.7 ¹³⁷	16.4 ⁹⁶	54	51	37	14	10 70		51 21	
4	240	14.1		08.2	256	22.3 ¹³⁶	+8 06.8 ⁹⁶	52	3 59	42	17	14 68		49 23	
5	255	14.3	+7	07.3	270	55.0 ¹³⁷	+7 57.2 ⁹⁶	50	4 06	4 46	5 20	4 17 66		17 47 24	
6	270	14.5	+7	06.4	285	27.7 ¹³⁷	+7 47.5 ⁹⁷	45	4 19	4 55	5 26	4 23 63		17 42 28	
7	285	14.7		05.5	300	00.4 ¹³⁷	37.8 ⁹⁷	40	30	5 03	31	29 60		39 30	
8	300	14.9		04.5	314	33.1 ¹³⁷	28.0 ⁹⁸	35	39	09	35	33 58		35 33	
9	315	15.1		03.6	329	05.8 ¹³⁷	18.2 ⁹⁸	30	46	14	39	37 56		32 35	
10	330	15.3		02.7	343	38.5 ¹³⁷	+7 08.3 ⁹⁹	20	4 57	23	45	45 51		27 39	
11	345	15.5	+7	01.8	358	11.2 ¹³⁷	+6 58.4 ⁹⁹	10 N	5 05	5 29	5 51	4 51 48		17 23 42	
12	0	15.7	+7	00.8	12	43.8 ¹³⁶	+6 48.5 ⁹⁹	0	5 11	5 35	5 56	4 57 45		17 18 46	
13	15	15.9	+6	59.9	27	16.5 ¹³⁷	38.6 ⁹⁹	10 S	15	40	6 01	5 02 43		14 48	
14	30	16.1		59.0	41	49.2 ¹³⁷	28.5 ¹⁰¹	20	18	44	06	09 38		09 52	
15	45	16.3		58.1	56	21.9 ¹³⁷	18.5 ¹⁰⁰	30	20	48	12	16 35		04 56	
16	60	16.5		57.1	70	54.6 ¹³⁷	+6 08.4 ¹⁰¹	35	20	50	15	20 33		17 01 58	
17	75	16.7	+6	56.2	85	27.2 ¹³⁶	+5 58.3 ¹⁰¹	40	5 20	5 52	6 19	5 24 31		16 57 61	
18	90	17.0	+6	55.3	99	59.9 ¹³⁷	+5 48.2 ¹⁰¹	45	5 20	5 53	6 23	5 30 27		16 53 64	
19	105	17.2		54.4	114	32.6 ¹³⁷	38.0 ¹⁰²	50	18	56	28	36 24		48 67	
20	120	17.4		53.4	129	05.2 ¹³⁶	27.8 ¹⁰²	52	17	56	30	39 23		46 69	
21	135	17.6		52.5	143	37.9 ¹³⁷	17.6 ¹⁰²	54	16	57	33	42 21		44 70	
22	150	17.8		51.6	158	10.6 ¹³⁷	+5 07.3 ¹⁰³	56	15	58	35	46 19		41 72	
23	165	18.0		50.7	172	43.2 ¹³⁶	+4 57.0 ¹⁰³	58	14	5 59	39	49 18		38 74	
24	180	18.2	+6	49.7	187	15.8 ¹³⁶	+4 46.7 ¹⁰³	60 S	5 12	6 00	6 42	5 54 15		16 34 77	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 06 ^m 7			Mag: -4.0 PMG: 14 ^h 26 ^m			Mag: +1.6 PMG: 9 ^h 34 ^m			Mag: -2.1 PMG: 8 ^h 09 ^m			Mag: +0.7 PMG: 15 ^h 28 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	343	16.8		143	27.5	-8 41.3	216	16.5	+20 09.0	237	32.4	+22 31.8	127	29.5	-11 51.6
1	358	19.2		158	27.3	42.5	231	17.3	08.7	252	34.4	31.8	142	31.7	51.7
2	13	21.7		173	27.1	43.7	246	18.1	08.3	267	36.4	31.7	157	34.0	51.8
3	28	24.2		188	26.9	45.0	261	19.0	08.0	282	38.4	31.7	172	36.3	51.9
4	43	26.6		203	26.7	46.2	276	19.8	07.6	297	40.4	31.6	187	38.5	51.9
5	58	29.1		218	26.5	-8 47.4	291	20.6	+20 07.2	312	42.4	+22 31.6	202	40.8	-11 52.0
6	73	31.6		233	26.3	-8 48.7	306	21.4	+20 06.9	327	44.4	+22 31.6	217	43.0	-11 52.1
7	88	34.0		248	26.1	49.9	321	22.2	06.5	342	46.4	31.5	232	45.3	52.2
8	103	36.5		263	25.9	51.2	336	23.0	06.2	357	48.5	31.5	247	47.6	52.2
9	118	38.9		278	25.6	52.4	351	23.9	05.8	12	50.5	31.4	262	49.8	52.3
10	133	41.4		293	25.4	53.6	6	24.7	05.4	27	52.5	31.4	277	52.1	52.4
11	148	43.9		308	25.2	-8 54.9	21	25.5	+20 05.1	42	54.5	+22 31.4	292	54.4	-11 52.5
12	163	46.3		323	25.0	-8 56.1	36	26.3	+20 04.7	57	56.5	+22 31.3	307	56.6	-11 52.5
13	178	48.8		338	24.8	57.3	51	27.1	04.4	72	58.5	31.3	322	58.9	52.6
14	193	51.3		353	24.6	58.6	66	28.0	04.0	88	00.5	31.2	338	01.2	52.7
15	208	53.7		8	24.4	-8 59.8	81	28.8	03.6	103	02.5	31.2	353	03.4	52.8
16	223	56.2		23	24.2	-9 01.0	96	29.6	03.3	118	04.6	31.1	8	05.7	52.8
17	238	58.7		38	23.9	-9 02.3	111	30.4	+20 02.9	133	06.6	+22 31.1	23	07.9	-11 52.9
18	254	01.1		53	23.7	-9 03.5	126	31.2	+20 02.6	148	08.6	+22 31.1	38	10.2	-11 53.0
19	269	03.6		68	23.5	04.7	141	32.0	02.2	163	10.6	31.0	53	12.5	53.1
20	284	06.1		83	23.3	06.0	156	32.9	01.8	178	12.6	31.0	68	14.7	53.1
21	299	08.5		98	23.1	07.2	171	33.7	01.5	193	14.6	30.9	83	17.0	53.2
22	314	11.0		113	22.9	08.4	186	34.5	01.1	208	16.7	30.9	98	19.3	53.3
23	329	13.4		128	22.7	09.6	201	35.3	00.7	223	18.7	30.9	113	21.5	53.4
24	344	15.9		143	22.5	-9 10.9	216	36.2	+20 00.4	238	20.7	+22 30.8	128	23.8	-11 53.4
Dif	—			-2	-12		+8	-4		+20		0	+23		-1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9		Edad: 29 ^d 1 PHE	SD: 15°2		R°: 45 ^m			Civil		Náutico	Hora	R°	Hora	R°			
	PMG: 11 ^h 58 ^m 6	PMG: 11 ^h 53 ^m		hG ☾	Dec				hG ☾	Dif						Dec	Dif	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	18.2	+6	49.7	187	15.8	+4	46.7	60 N	18 51	19 35	20 31	5 15	78	18 14	15		
1	195	18.4		48.8	201	48.5 ¹³⁷		36.3 ¹⁰⁴	58	47	28	20	17	75	14	16		
2	210	18.6		47.9	216	21.1 ¹³⁶		25.9 ¹⁰⁴	56	44	22	10	18	74	13	19		
3	225	18.8		47.0	230	53.7 ¹³⁶		15.5 ¹⁰⁴	54	41	17	20 02	20	71	12	21		
4	240	19.0		46.0	245	26.3 ¹³⁶	+4	05.1 ¹⁰⁴	52	38	13	19 55	22	69	12	22		
5	255	19.2	+6	45.1	259	58.9 ¹³⁶	+3	54.6 ¹⁰⁵	50	18 35	19 08	19 49	5 23	68	18 11	24		
6	270	19.4	+6	44.2	274	31.5 ¹³⁶	+3	44.1 ¹⁰⁵	45	18 30	19 00	19 35	5 26	64	18 10	28		
7	285	19.7		43.2	289	04.0 ¹³⁵		33.6 ¹⁰⁵	40	25	18 53	25	29	61	09	31		
8	300	19.9		42.3	303	36.6 ¹³⁶		23.0 ¹⁰⁶	35	21	47	17	31	58	08	33		
9	315	20.1		41.4	318	09.2 ¹³⁶		12.5 ¹⁰⁵	30	18	42	10	33	56	07	36		
10	330	20.3		40.5	332	41.7 ¹³⁵	+3	01.9 ¹⁰⁶	20	12	34	19 00	36	52	06	39		
11	345	20.5	+6	39.5	347	14.2 ¹³⁵	+2	51.3 ¹⁰⁶	10 N	18 07	18 28	18 52	5 39	49	18 05	42		
12	0	20.7	+6	38.6	1	46.7 ¹³⁵	+2	40.7 ¹⁰⁶	0	18 02	18 23	18 47	5 42	45	18 04	46		
13	15	20.9		37.7	16	19.2 ¹³⁵		30.0 ¹⁰⁷	10 S	17 57	18	43	45	42	02	50		
14	30	21.1		36.7	30	51.7 ¹³⁵		19.4 ¹⁰⁶	20	53	15	40	47	39	01	53		
15	45	21.3		35.8	45	24.2 ¹³⁵	+2	08.7 ¹⁰⁷	30	47	11	39	51	35	18 00	56		
16	60	21.5		34.9	59	56.6 ¹³⁴	+1	58.0 ¹⁰⁷	35	44	10	39	53	33	17 59	59		
17	75	21.7	+6	34.0	74	29.1 ¹³⁵	+1	47.3 ¹⁰⁷	40	17 41	18 08	18 39	5 55	30	17 58	61		
18	90	22.0	+6	33.0	89	01.5 ¹³⁴	+1	36.5 ¹⁰⁸	45	17 37	18 06	18 40	5 57	28	17 57	64		
19	105	22.2		32.1	103	33.9 ¹³⁴		25.8 ¹⁰⁷	50	32	05	42	6 00	25	55	69		
20	120	22.4		31.2	118	06.3 ¹³⁴		15.0 ¹⁰⁸	52	30	04	43	02	22	55	70		
21	135	22.6		30.2	132	38.7 ¹³⁴	+1	04.2 ¹⁰⁸	54	28	03	44	03	21	54	72		
22	150	22.8		29.3	147	11.0 ¹³³	+0	53.4 ¹⁰⁸	56	25	03	46	05	19	53	74		
23	165	23.0		28.4	161	43.3 ¹³³		42.6 ¹⁰⁸	58	23	02	47	07	17	52	77		
24	180	23.2	+6	27.4	176	15.6 ¹³³	+0	31.8 ¹⁰⁸	60 S	17 19	18 01	18 49	6 09	14	17 51	79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 02 ^m 8		Mag: -4.1 PMG: 14 ^h 27 ^m			Mag: +1.6 PMG: 9 ^h 33 ^m			Mag: -2.1 PMG: 8 ^h 06 ^m			Mag: +0.7 PMG: 15 ^h 24 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	344	15.9	143	22.5	-9	10.9	216	36.2	+20	00.4	238	20.7	+22	30.8	128	23.8	-11	53.4
1	359	18.4	158	22.2		12.1	231	37.0	+20	00.0	253	22.7		30.8	143	26.0		53.5
2	14	20.8	173	22.0		13.3	246	37.8	+19	59.7	268	24.7		30.7	158	28.3		53.6
3	29	23.3	188	21.8		14.6	261	38.6		59.3	283	26.7		30.7	173	30.6		53.7
4	44	25.8	203	21.6		15.8	276	39.4		58.9	298	28.7		30.6	188	32.8		53.8
5	59	28.2	218	21.4	-9	17.0	291	40.3	+19	58.6	313	30.8	+22	30.6	203	35.1	-11	53.8
6	74	30.7	233	21.2	-9	18.2	306	41.1	+19	58.2	328	32.8	+22	30.6	218	37.3	-11	53.9
7	89	33.2	248	21.0		19.5	321	41.9		57.8	343	34.8		30.5	233	39.6		54.0
8	104	35.6	263	20.7		20.7	336	42.7		57.5	358	36.8		30.5	248	41.9		54.1
9	119	38.1	278	20.5		21.9	351	43.5		57.1	13	38.8		30.4	263	44.1		54.1
10	134	40.5	293	20.3		23.2	6	44.4		56.7	28	40.9		30.4	278	46.4		54.2
11	149	43.0	308	20.1	-9	24.4	21	45.2	+19	56.4	43	42.9	+22	30.4	293	48.6	-11	54.3
12	164	45.5	323	19.9	-9	25.6	36	46.0	+19	56.0	58	44.9	+22	30.3	308	50.9	-11	54.4
13	179	47.9	338	19.7		26.8	51	46.8		55.6	73	46.9		30.3	323	53.2		54.4
14	194	50.4	353	19.4		28.1	66	47.7		55.3	88	48.9		30.2	338	55.4		54.5
15	209	52.9	8	19.2		29.3	81	48.5		54.9	103	50.9		30.2	353	57.7		54.6
16	224	55.3	23	19.0		30.5	96	49.3		54.5	118	53.0		30.1	8	59.9		54.7
17	239	57.8	38	18.8	-9	31.7	111	50.1	+19	54.2	133	55.0	+22	30.1	24	02.2	-11	54.7
18	255	00.3	53	18.6	-9	33.0	126	51.0	+19	53.8	148	57.0	+22	30.1	39	04.5	-11	54.8
19	270	02.7	68	18.4		34.2	141	51.8		53.4	163	59.0		30.0	54	06.7		54.9
20	285	05.2	83	18.1		35.4	156	52.6		53.1	179	01.0		30.0	69	09.0		55.0
21	300	07.7	98	17.9		36.6	171	53.4		52.7	194	03.1		29.9	84	11.2		55.1
22	315	10.1	113	17.7		37.9	186	54.3		52.3	209	05.1		29.9	99	13.5		55.1
23	330	12.6	128	17.5		39.1	201	55.1		52.0	224	07.1		29.9	114	15.8		55.2
24	345	15.0	143	17.3	-9	40.3	216	55.9	+19	51.6	239	09.1	+22	29.8	129	18.0	-11	55.3
Dif	—		-2	-12		+8	-4		+20	-4		0			+23	-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15'9 PMG: 11 ^h 58 ^m 3			Edad: 0 ^d 5 PHE { SD: 15'3 PMG: 12 ^h 38 ^m 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6 R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m					
0	180	23.2	+6	176	15.6	+0	31.8	60 N	3	27	4	23	5	07	6	33	79				
1	195	23.4		190	47.9 ¹³³		21.0 ¹⁰⁸	58	38		30	11		32	77		30	18			
2	210	23.6		205	20.2 ¹³³	+0	10.2 ¹⁰⁸	56	48		35	14		32	74		32	20			
3	225	23.8		219	52.4 ¹³²	-0	00.7 ¹⁰⁹	54	3	56	41	17		31	73		33	22			
4	240	24.1		234	24.7 ¹³³		11.5 ¹⁰⁸	52	4	03	45	20		31	71		34	24			
5	255	24.3	+6	248	56.9 ¹³²	-0	22.4 ¹⁰⁹	50	4	09	4	49	5	23	6	31	69	18	35	26	
6	270	24.5	+6	263	29.0 ¹³¹	-0	33.2 ¹⁰⁸	45	4	22	4	58	5	28	6	30	66	18	38	29	
7	285	24.7		278	01.2 ¹³²		44.1 ¹⁰⁹	40	32		5	05	32		30	62		40	31		
8	300	24.9		292	33.3 ¹³¹	-0	55.0 ¹⁰⁹	35		40	11	36		29	60		41	35			
9	315	25.1		307	05.4 ¹³¹	-1	05.8 ¹⁰⁸	30		47	16	40		29	57		43	36			
10	330	25.3		321	37.5 ¹³¹		16.7 ¹⁰⁹	20		4	57	23	45		28	54		45	41		
11	345	25.5	+6	336	09.6 ¹³¹	-1	27.6 ¹⁰⁹	10 N	5	05		5	29	5	50	6	28	50	18	47	44
12	0	25.7	+6	350	41.6 ¹³⁰	-1	38.5 ¹⁰⁹	0	5	10		5	34	5	55	6	27	47	18	50	47
13	15	25.9		5	13.6 ¹³⁰	-1	49.3 ¹⁰⁸	10 S		14	38	5	59		27	43		52	50		
14	30	26.2		19	45.5 ¹²⁹	-2	00.2 ¹⁰⁹	20		16	42	6	04		26	40		54	54		
15	45	26.4		34	17.5 ¹³⁰		11.1 ¹⁰⁹	30		18	45	09		26	36		56	58			
16	60	26.6		48	49.4 ¹²⁹		22.0 ¹⁰⁹	35		18	47	12		26	33		58	60			
17	75	26.8	+6	63	21.3 ¹²⁹	-2	32.8 ¹⁰⁸	40	5	17	5	48	6	15	6	25	32	18	59	63	
18	90	27.0	+6	77	53.1 ¹²⁸	-2	43.7 ¹⁰⁹	45	5	16	5	50	6	19	6	25	28	19	01	66	
19	105	27.2		92	24.9 ¹²⁸	-2	54.5 ¹⁰⁸	50		14	51	24		25	24		04	69			
20	120	27.4		106	56.7 ¹²⁸	-3	05.4 ¹⁰⁹	52		13	52	26		24	24		05	71			
21	135	27.6		121	28.5 ¹²⁸		16.2 ¹⁰⁸	54		12	53	28		24	22		06	73			
22	150	27.9		136	00.2 ¹²⁷		27.1 ¹⁰⁹	56		10	53	30		24	19		07	75			
23	165	28.1		150	31.9 ¹²⁷		37.9 ¹⁰⁸	58		09	54	33		24	17		09	77			
24	180	28.3	+6	165	03.5 ¹²⁶	-3	48.7 ¹⁰⁸	60 S	5	06		5	54	6	36	6	23	15	19	10	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 0 ^h 58 ^m 8		Mag: -4.1 PMG: 14 ^h 27 ^m		Mag: +1.6 PMG: 9 ^h 32 ^m		Mag: -2.1 PMG: 8 ^h 02 ^m		Mag: +0.7 PMG: 15 ^h 20 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	345	15.0	143	17.3	-9	40.3	239	09.1	+22	29.8						
1	0	17.5	158	17.1		41.5	254	11.1		29.8						
2	15	20.0	173	16.8		42.8	269	13.2		29.7						
3	30	22.4	188	16.6		44.0	284	15.2		29.7						
4	45	24.9	203	16.4		45.2	299	17.2		29.6						
5	60	27.4	218	16.2	-9	46.4	314	19.2	+22	29.6						
6	75	29.8	233	16.0	-9	47.6	329	21.2	+22	29.6						
7	90	32.3	248	15.7		48.9	344	23.3		29.5						
8	105	34.8	263	15.5		50.1	359	25.3		29.5						
9	120	37.2	278	15.3		51.3	14	27.3		29.4						
10	135	39.7	293	15.1		52.5	29	29.3		29.4						
11	150	42.1	308	14.9	-9	53.7	44	31.4	+22	29.4						
12	165	44.6	323	14.6	-9	55.0	59	33.4	+22	29.3						
13	180	47.1	338	14.4		56.2	74	35.4		29.3						
14	195	49.5	353	14.2		57.4	89	37.4		29.2						
15	210	52.0	8	14.0		58.6	104	39.5		29.2						
16	225	54.5	23	13.8	-9	59.8	119	41.5		29.1						
17	240	56.9	38	13.5	-10	01.0	134	43.5	+22	29.1						
18	255	59.4	53	13.3	-10	02.3	149	45.5	+22	29.1						
19	271	01.9	68	13.1		03.5	164	47.5		29.0						
20	286	04.3	83	12.9		04.7	179	49.6		29.0						
21	301	06.8	98	12.7		05.9	194	51.6		28.9						
22	316	09.3	113	12.4		07.1	209	53.6		28.9						
23	331	11.7	128	12.2		08.3	224	55.6		28.9						
24	346	14.2	143	12.0	-10	09.6	239	57.7	+22	28.8						
Dif	—		-2		-12		+8		0		+23		-			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9		Edad: 1 ^d 5	PHE { 4 ^h : 56'7 12 ^h : 56'9 20 ^h : 57'1	SD: 15'4				R°: 49 ^m						
	PMG: 11 ^h 57 ^m 9	PMG: 13 ^h 25 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	180	28.3	+6	05.0	165	03.5	-3 48.7	60 N	18 45	19 29	20 23	7 52 81	18 45 18		
1	195	28.5		04.1	179	35.2 ¹²⁷	-3 59.5 ¹⁰⁸	58	42	22	13	49 79	48 21		
2	210	28.7		03.2	194	06.7 ¹²⁵	-4 10.3 ¹⁰⁸	56	39	17	20 04	46 77	52 23		
3	225	28.9		02.2	208	38.3 ¹²⁶	21.1 ¹⁰⁸	54	36	12	19 56	44 74	55 25		
4	240	29.1		01.3	223	09.8 ¹²⁵	31.8 ¹⁰⁷	52	33	08	50	42 72	18 58 27		
5	255	29.3	+6	00.4	237	41.3 ¹²⁵	-4 42.6 ¹⁰⁸	50	18 31	19 04	19 44	7 40 70	19 01 28		
6	270	29.6	+5	59.4	252	12.7 ¹²⁴	-4 53.3 ¹⁰⁷	45	18 26	18 56	19 31	7 36 66	19 07 31		
7	285	29.8		58.5	266	44.1 ¹²⁴	-5 04.0 ¹⁰⁷	40	22	49	22	32 64	11 35		
8	300	30.0		57.6	281	15.5 ¹²⁴	14.7 ¹⁰⁷	35	18	44	14	29 61	16 37		
9	315	30.2		56.6	295	46.8 ¹²³	25.4 ¹⁰⁷	30	15	39	19 08	26 59	19 39		
10	330	30.4		55.7	310	18.1 ¹²³	36.1 ¹⁰⁷	20	10	32	18 58	22 55	26 43		
11	345	30.6	+5	54.7	324	49.3 ¹²²	-5 46.7 ¹⁰⁶	10 N	18 05	18 26	18 51	7 18 51	19 31 47		
12	0	30.8	+5	53.8	339	20.5 ¹²²	-5 57.3 ¹⁰⁶	0	18 01	18 22	18 46	7 14 48	19 37 49		
13	15	31.0		52.9	353	51.7 ¹²²	-6 07.9 ¹⁰⁶	10 S	17 57	18	43	10 45	42 52		
14	30	31.3		51.9	8	22.8 ¹²¹	18.5 ¹⁰⁶	20	53	15	41	06 42	48 56		
15	45	31.5		51.0	22	53.9 ¹²¹	29.1 ¹⁰⁶	30	48	12	40	7 02 38	54 60		
16	60	31.7		50.1	37	24.9 ¹²⁰	39.6 ¹⁰⁵	35	46	11	40	6 59 36	19 58 62		
17	75	31.9	+5	49.1	51	55.9 ¹²⁰	-6 50.1 ¹⁰⁵	40	17 43	18 10	18 41	6 57 33	20 02 65		
18	90	32.1	+5	48.2	66	26.8 ¹¹⁹	-7 00.5 ¹⁰⁴	45	17 39	18 09	18 43	6 53 31	20 07 68		
19	105	32.3		47.2	80	57.7 ¹¹⁹	11.0 ¹⁰⁵	50	35	08	45	49 27	13 71		
20	120	32.5		46.3	95	28.6 ¹¹⁹	21.4 ¹⁰⁴	52	33	07	46	48 25	16 73		
21	135	32.8		45.4	109	59.4 ¹¹⁸	31.8 ¹⁰⁴	54	31	07	48	46 23	19 74		
22	150	33.0		44.4	124	30.2 ¹¹⁸	42.1 ¹⁰³	56	29	06	49	43 22	22 77		
23	165	33.2		43.5	139	00.9 ¹¹⁷	-7 52.4 ¹⁰³	58	27	06	52	41 19	26 79		
24	180	33.4	+5	42.5	153	31.5 ¹¹⁶	-8 02.7 ¹⁰³	60 S	17 24	18 06	18 54	6 38 17	20 30 82		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 54 ^m 9	Mag: -4.1 PMG: 14 ^h 27 ^m	Mag: +1.6 PMG: 9 ^h 30 ^m	Mag: -2.1 PMG: 7 ^h 59 ^m	Mag: +0.7 PMG: 15 ^h 17 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	346	14.2	143	12.0	-10	09.6	217	15.8	+19	42.7
1	1	16.6	158	11.8		10.8	232	16.6		42.3
2	16	19.1	173	11.5		12.0	247	17.5		42.0
3	31	21.6	188	11.3		13.2	262	18.3		41.6
4	46	24.0	203	11.1		14.4	277	19.1		41.2
5	61	26.5	218	10.9	-10	15.6	292	20.0	+19	40.8
6	76	29.0	233	10.7	-10	16.8	307	20.8	+19	40.5
7	91	31.4	248	10.4		18.0	322	21.6		40.1
8	106	33.9	263	10.2		19.3	337	22.5		39.7
9	121	36.4	278	10.0		20.5	352	23.3		39.3
10	136	38.8	293	09.8		21.7	7	24.1		39.0
11	151	41.3	308	09.5	-10	22.9	22	25.0	+19	38.6
12	166	43.7	323	09.3	-10	24.1	37	25.8	+19	38.2
13	181	46.2	338	09.1		25.3	52	26.6		37.8
14	196	48.7	353	08.9		26.5	67	27.5		37.5
15	211	51.1	8	08.6		27.7	82	28.3		37.1
16	226	53.6	23	08.4		28.9	97	29.1		36.7
17	241	56.1	38	08.2	-10	30.1	112	30.0	+19	36.3
18	256	58.5	53	08.0	-10	31.4	127	30.8	+19	36.0
19	272	01.0	68	07.7		32.6	142	31.6		35.6
20	287	03.5	83	07.5		33.8	157	32.5		35.2
21	302	05.9	98	07.3		35.0	172	33.3		34.8
22	317	08.4	113	07.1		36.2	187	34.1		34.4
23	332	10.9	128	06.8		37.4	202	35.0		34.1
24	347	13.3	143	06.6	-10	38.6	217	35.8	+19	33.7
Dif	—		-2	-12		+8	-4	+20		0
									+23	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 57 ^m 6			Edad: 2 ^d 5 SD: 15°6 PMG: 14 ^h 14 ^m	PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6 R°: 51 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	33.4	+5 42.5	153	31.5	-8 02.7	103	60 N	3 33	4 28	5 12	9 13	82	19 03	22			
1	195	33.6		168	02.2	13.0	117	58	44	34	15	08	79	09	25			
2	210	33.8		182	32.7	23.2	102	56	3 52	40	18	9 03	76	15	27			
3	225	34.0		197	03.3	33.4	102	54	4 00	44	21	8 58	75	20	29			
4	240	34.3		211	33.7	43.5	101	52	07	49	23	54	73	25	30			
5	255	34.5	+5 37.8	226	04.2	-8 53.6	101	50	4 13	4 52	5 25	8 50	72	19 29	32			
6	270	34.7	+5 36.9	240	34.5	-9 03.7	101	45	4 25	5 00	5 30	8 42	68	19 38	36			
7	285	34.9		255	04.9	13.7	100	40	34	07	34	36	65	46	38			
8	300	35.1		269	35.1	23.7	100	35	42	12	38	30	62	53	40			
9	315	35.3		284	05.4	33.6	99	30	48	17	41	25	60	19 58	43			
10	330	35.5		298	35.5	43.5	99	20	4 58	24	46	17	56	20 09	46			
11	345	35.8	+5 32.2	313	05.7	-9 53.3	98	10 N	5 05	5 29	5 50	8 09	54	20 18	48			
12	0	36.0	+5 31.3	327	35.7	-10 03.2	99	0	5 09	5 34	5 54	8 02	51	20 26	52			
13	15	36.2		342	05.7	12.9	97	10 S	13	37	5 58	7 55	48	34	55			
14	30	36.4		356	35.7	22.6	97	20	15	40	6 02	48	44	44	57			
15	45	36.6		11	05.6	32.3	97	30	15	43	07	40	41	20 54	60			
16	60	36.8		25	35.5	41.9	96	35	15	44	09	35	39	21 00	62			
17	75	37.0	+5 26.6	40	05.2	-10 51.4	95	40	5 14	5 45	6 12	7 30	36	21 07	65			
18	90	37.3	+5 25.6	54	35.0	-11 01.0	96	45	5 12	5 46	6 15	7 24	33	21 15	67			
19	105	37.5		69	04.7	10.4	94	50	10	47	19	16	30	24	71			
20	120	37.7		83	34.3	19.8	94	52	08	47	21	13	28	29	72			
21	135	37.9		98	03.9	29.1	93	54	07	48	23	09	27	33	75			
22	150	38.1		112	33.4	38.4	93	56	05	48	25	05	25	39	76			
23	165	38.3		127	02.9	47.7	93	58	03	48	27	7 00	23	45	79			
24	180	38.6	+5 20.0	141	32.3	-11 56.8	91	60 S	5 00	5 49	6 30	6 55	20	21 52	81			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 51 ^m 0			Mag: -4.1 PMG: 14 ^h 28 ^m			Mag: +1.6 PMG: 9 ^h 29 ^m			Mag: -2.1 PMG: 7 ^h 56 ^m			Mag: +0.7 PMG: 15 ^h 13 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°		
0	347	13.3		143	06.6	-10 38.6		217	35.8	+19 33.7		240	46.3	+22 27.8		131	06.3	-11 59.0
1	2	15.8		158	06.4	39.8		232	36.7	33.3		255	48.4	27.8		146	08.6	59.1
2	17	18.2		173	06.2	41.0		247	37.5	32.9		270	50.4	27.7		161	10.8	59.2
3	32	20.7		188	05.9	42.2		262	38.3	32.5		285	52.4	27.7		176	13.1	59.2
4	47	23.2		203	05.7	43.4		277	39.2	32.2		300	54.5	27.6		191	15.3	59.3
5	62	25.6		218	05.5	-10 44.6		292	40.0	+19 31.8		315	56.5	+22 27.6		206	17.6	-11 59.4
6	77	28.1		233	05.2	-10 45.8		307	40.8	+19 31.4		330	58.5	+22 27.6		221	19.8	-11 59.5
7	92	30.6		248	05.0	47.0		322	41.7	31.0		346	00.6	27.5		236	22.1	59.6
8	107	33.0		263	04.8	48.2		337	42.5	30.7		1	02.6	27.5		251	24.4	59.6
9	122	35.5		278	04.6	49.4		352	43.4	30.3		16	04.6	27.4		266	26.6	59.7
10	137	38.0		293	04.3	50.6		7	44.2	29.9		31	06.7	27.4		281	28.9	59.8
11	152	40.4		308	04.1	-10 51.8		22	45.0	+19 29.5		46	08.7	+22 27.4		296	31.1	-11 59.9
12	167	42.9		323	03.9	-10 53.0		37	45.9	+19 29.1		61	10.7	+22 27.3		311	33.4	-11 59.9
13	182	45.3		338	03.6	54.2		52	46.7	28.7		76	12.8	27.3		326	35.6	-12 00.0
14	197	47.8		353	03.4	55.4		67	47.6	28.4		91	14.8	27.2		341	37.9	-12 00.1
15	212	50.3		8	03.2	56.6		82	48.4	28.0		106	16.8	27.2		356	40.1	00.2
16	227	52.7		23	02.9	57.8		97	49.2	27.6		121	18.9	27.1		11	42.4	00.3
17	242	55.2		38	02.7	-10 59.0		112	50.1	+19 27.2		136	20.9	+22 27.1		26	44.6	-12 00.3
18	257	57.7		53	02.5	-11 00.2		127	50.9	+19 26.8		151	22.9	+22 27.1		41	46.9	-12 00.4
19	273	00.1		68	02.3	01.4		142	51.8	26.5		166	25.0	27.0		56	49.1	00.5
20	288	02.6		83	02.0	02.6		157	52.6	26.1		181	27.0	27.0		71	51.4	00.6
21	303	05.1		98	01.8	03.8		172	53.4	25.7		196	29.0	26.9		86	53.6	00.7
22	318	07.5		113	01.6	05.0		187	54.3	25.3		211	31.1	26.9		101	55.9	00.7
23	333	10.0		128	01.3	06.2		202	55.1	24.9		226	33.1	26.9		116	58.1	00.8
24	348	12.5		143	01.1	-11 07.4		217	56.0	+19 24.5		241	35.1	+22 26.8		132	00.4	-12 00.9
Dif	—			-2 -12			+8 -4			+20 0			+23 -1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 3			Edad: 3 ^d 5 PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'0 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	38.6	+5 20.0	141	32.3	-11 56.8	92	60 N	18 39	19 22	20 16	10 35 81	19 25 29		
1	195	38.8		156	01.6 ¹⁰³	-12 06.0		58	36	16	20 06	27 78	34 31		
2	210	39.0	18.1	170	30.9 ¹⁰³	15.0	90	56	33	11	19 58	19 76	42 34		
3	225	39.2	17.1	185	00.1 ¹⁰²	24.0	90	54	31	07	51	13 74	49 35		
4	240	39.4	16.2	199	29.3 ¹⁰²	32.9	89	52	29	19 03	44	07 72	19 55 37		
5	255	39.6	+5 15.2	213	58.4 ¹⁰¹	-12 41.8	89	50	18 27	18 59	19 39	10 02 70	20 01 39		
6	270	39.9	+5 14.3	228	27.5 ¹⁰¹	-12 50.6	88	45	18 22	18 52	19 27	9 50 68	20 14 41		
7	285	40.1	13.3	242	56.5 ¹⁰⁰	-12 59.3	87	40	19	46	18	41 65	24 44		
8	300	40.3	12.4	257	25.4 ⁹⁹	-13 08.0	87	35	15	41	11	32 63	33 45		
9	315	40.5	11.5	271	54.3 ⁹⁹	16.6	86	30	13	37	19 05	25 62	41 47		
10	330	40.7	10.5	286	23.1 ⁹⁸	25.1	85	20	08	30	18 56	13 58	20 55 49		
11	345	40.9	+5 09.6	300	51.9 ⁹⁸	-13 33.6	85	10 N	18 04	18 25	18 50	9 03 55	21 06 52		
12	0	41.2	+5 08.6	315	20.6 ⁹⁷	-13 42.0	84	0	18 01	18 21	18 45	8 53 53	21 18 54		
13	15	41.4	07.7	329	49.3 ⁹⁷	50.3	83	10 S	17 57	18	42	43 50	29 56		
14	30	41.6	06.7	344	17.8 ⁹⁵	-13 58.6	83	20	53	15	41	32 48	41 58		
15	45	41.8	05.8	358	46.4 ⁹⁶	-14 06.7	81	30	49	13	41	21 44	21 54 62		
16	60	42.0	04.8	13	14.8 ⁹⁴	14.8	81	35	47	12	42	14 43	22 02 63		
17	75	42.2	+5 03.9	27	43.2 ⁹⁴	-14 22.9	81	40	17 45	18 12	18 43	8 06 41	22 12 64		
18	90	42.5	+5 02.9	42	11.6 ⁹⁴	-14 30.8	79	45	17 42	18 11	18 45	7 57 38	22 22 67		
19	105	42.7	02.0	56	39.9 ⁹³	38.7	79	50	38	10	48	46 36	35 70		
20	120	42.9	01.1	71	08.1 ⁹²	46.5	78	52	37	10	49	41 34	41 71		
21	135	43.1	+5 00.1	85	36.3 ⁹²	-14 54.2	77	54	35	10	51	36 32	48 72		
22	150	43.3	+4 59.2	100	04.4 ⁹¹	-15 01.8	76	56	33	10	53	30 30	22 55 74		
23	165	43.5	58.2	114	32.4 ⁹⁰	09.3	75	58	31	10	56	23 28	23 04 76		
24	180	43.8	+4 57.3	129	00.4 ⁹⁰	-15 16.8	75	60 S	17 29	18 10	18 59	7 15 26	23 13 79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 47 ^m 0		Mag: -4.1 PMG: 14 ^h 28 ^m			Mag: +1.6 PMG: 9 ^h 28 ^m			Mag: -2.1 PMG: 7 ^h 53 ^m			Mag: +0.7 PMG: 15 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	348	12.5	143 01.1	-11 07.4		217 56.0	+19 24.5		241 35.1	+22 26.8		132 00.4	-12 00.9		
1	3	14.9	158 00.9	08.6		232 56.8	24.2		256 37.2	26.8		147 02.6	01.0		
2	18	17.4	173 00.6	09.8		247 57.6	23.8		271 39.2	26.7		162 04.9	01.0		
3	33	19.8	188 00.4	11.0		262 58.5	23.4		286 41.2	26.7		177 07.1	01.1		
4	48	22.3	203 00.2	12.2		277 59.3	23.0		301 43.3	26.6		192 09.4	01.2		
5	63	24.8	217 59.9	-11 13.4		293 00.2	+19 22.6		316 45.3	+22 26.6		207 11.6	-12 01.3		
6	78	27.2	232 59.7	-11 14.6		308 01.0	+19 22.2		331 47.4	+22 26.6		222 13.9	-12 01.4		
7	93	29.7	247 59.5	15.8		323 01.9	21.9		346 49.4	26.5		237 16.1	01.4		
8	108	32.2	262 59.2	17.0		338 02.7	21.5		1	51.4	26.5	252 18.4	01.5		
9	123	34.6	277 59.0	18.2		353 03.5	21.1		16	53.5	26.4	267 20.6	01.6		
10	138	37.1	292 58.8	19.4		8 04.4	20.7		31	55.5	26.4	282 22.9	01.7		
11	153	39.6	307 58.5	-11 20.6		23 05.2	+19 20.3		46	57.5	+22 26.4	297 25.1	-12 01.8		
12	168	42.0	322 58.3	-11 21.8		38 06.1	+19 19.9		61	59.6	+22 26.3	312 27.4	-12 01.8		
13	183	44.5	337 58.1	23.0		53 06.9	19.5		77	01.6	26.3	327 29.6	01.9		
14	198	47.0	352 57.8	24.1		68 07.8	19.2		92	03.7	26.2	342 31.9	02.0		
15	213	49.4	7 57.6	25.3		83 08.6	18.8		107	05.7	26.2	357 34.1	02.1		
16	228	51.9	22 57.4	26.5		98 09.5	18.4		122	07.7	26.1	12 36.4	02.2		
17	243	54.3	37 57.1	-11 27.7		113 10.3	+19 18.0		137	09.8	+22 26.1	27 38.6	-12 02.2		
18	258	56.8	52 56.9	-11 28.9		128 11.1	+19 17.6		152	11.8	+22 26.1	42 40.9	-12 02.3		
19	273	59.3	67 56.7	30.1		143 12.0	17.2		167	13.9	26.0	57 43.1	02.4		
20	289	01.7	82 56.4	31.3		158 12.8	16.8		182	15.9	26.0	72 45.4	02.5		
21	304	04.2	97 56.2	32.5		173 13.7	16.4		197	17.9	25.9	87 47.6	02.6		
22	319	06.7	112 56.0	33.7		188 14.5	16.1		212	20.0	25.9	102 49.9	02.6		
23	334	09.1	127 55.7	34.8		203 15.4	15.7		227	22.0	25.9	117 52.1	02.7		
24	349	11.6	142 55.5	-11 36.0		218 16.2	+19 15.3		242	24.1	+22 25.8	132 54.4	-12 02.8		
Dif	—		-2	-12		+8	-4		+20	0		+22	-1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15'9 PMG: 11 ^h 56 ^m 9			Edad: 4 ^d 5	PHE { 4 ^h : 58'2 12 ^h : 58'3 20 ^h : 58'5 R°: 56 ^m	Dec		Dec			Hora		R°								
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°					
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	180	43.8	+4	57.3	129	00.4	89	-15	16.8	74	60 N	3 39	4 33	5 16	11 56	76	19 54	39			
1	195	44.0		56.3	143	28.3	89		24.2	74	58	49	39	19	45	74	20 05	42			
2	210	44.2		55.4	157	56.2	89		31.5	73	56	3 57	44	22	35	72	16	42			
3	225	44.4		54.4	172	24.0	88		38.7	72	54	4 04	48	24	27	70	24	44			
4	240	44.6		53.5	186	51.7	87		45.8	71	52	10	52	26	19	69	32	46			
5	255	44.8	+4	52.5	201	19.4	87	-15	52.8	70	50	4 16	4 56	5 28	11 12	68	20 40	46			
6	270	45.1	+4	51.6	215	47.0	86	-15	59.8	70	45	4 28	5 03	5 33	10 58	66	20 55	48			
7	285	45.3		50.6	230	14.6	86	-16	06.6	68	40	37	09	36	46	64	21 08	49			
8	300	45.5		49.7	244	42.1	85		13.4	68	35	44	14	39	35	63	18	51			
9	315	45.7		48.7	259	09.6	85		20.1	67	30	50	18	42	27	61	28	52			
10	330	45.9		47.8	273	37.0	84		26.6	65	20	4 58	24	46	10 11	59	44	54			
11	345	46.2	+4	46.8	288	04.3	83	-16	33.1	65	10 N	5 05	5 29	5 50	9 58	57	21 58	55			
12	0	46.4	+4	45.9	302	31.6	83	-16	39.5	64	0	5 09	5 33	5 54	9 46	55	22 12	56			
13	15	46.6		44.9	316	58.8	82		45.8	63	10 S	12	36	5 57	33	54	25	58			
14	30	46.8		44.0	331	25.9	81		52.0	62	20	13	38	6 01	20	52	39	60			
15	45	47.0		43.0	345	53.0	81	-16	58.1	61	30	13	40	04	9 05	50	22 56	61			
16	60	47.3		42.1	0	20.1	81	-17	04.1	60	35	12	41	07	8 57	48	23 05	62			
17	75	47.5	+4	41.2	14	47.1	80	-17	10.0	59	40	5 11	5 42	6 09	8 47	46	23 16	63			
18	90	47.7	+4	40.2	29	14.0	79	-17	15.8	58	45	5 09	5 42	6 12	8 35	45	23 29	64			
19	105	47.9		39.3	43	40.9	79		21.5	57	50	05	43	15	22	42	45	66			
20	120	48.1		38.3	58	07.7	78		27.1	56	52	04	43	16	15	41	23 52	67			
21	135	48.3		37.4	72	34.4	77		32.6	55	54	02	43	18	08	40	** ** *	**			
22	150	48.6		36.4	87	01.2	78		38.0	54	56	5 00	43	20	8 00	38	** ** *	**			
23	165	48.8		35.5	101	27.8	76		43.3	53	58	4 57	43	22	7 51	36	** ** *	**			
24	180	49.0	+4	34.5	115	54.4	76	-17	48.4	51	60 S	4 54	5 43	6 24	7 41	34	** ** *	**			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 0 ^h 43 ^m 1			Mag: -4.1 PMG: 14 ^h 29 ^m			Mag: +1.6 PMG: 9 ^h 26 ^m			Mag: -2.1 PMG: 7 ^h 49 ^m			Mag: +0.7 PMG: 15 ^h 06 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	349	11.6		142	55.5	-11	36.0	218	16.2	+19	15.3	242	24.1	+22	25.8	132	54.4	-12	02.8		
1	4	14.1		157	55.2		37.2	233	17.1		14.9	257	26.1		25.8	147	56.6		02.9		
2	19	16.5		172	55.0		38.4	248	17.9		14.5	272	28.1		25.7	162	58.9		02.9		
3	34	19.0		187	54.8		39.6	263	18.8		14.1	287	30.2		25.7	178	01.1		03.0		
4	49	21.4		202	54.5		40.8	278	19.6		13.7	302	32.2		25.6	193	03.4		03.1		
5	64	23.9		217	54.3	-11	42.0	293	20.5	+19	13.3	317	34.3	+22	25.6	208	05.6	-12	03.2		
6	79	26.4		232	54.1	-11	43.2	308	21.3	+19	13.0	332	36.3	+22	25.6	223	07.9	-12	03.3		
7	94	28.8		247	53.8		44.3	323	22.2		12.6	347	38.3		25.5	238	10.1		03.3		
8	109	31.3		262	53.6		45.5	338	23.0		12.2	2	40.4		25.5	253	12.4		03.4		
9	124	33.8		277	53.3		46.7	353	23.9		11.8	17	42.4		25.4	268	14.6		03.5		
10	139	36.2		292	53.1		47.9	8	24.7		11.4	32	44.5		25.4	283	16.9		03.6		
11	154	38.7		307	52.9	-11	49.1	23	25.5	+19	11.0	47	46.5	+22	25.4	298	19.1	-12	03.7		
12	169	41.2		322	52.6	-11	50.3	38	26.4	+19	10.6	62	48.6	+22	25.3	313	21.3	-12	03.7		
13	184	43.6		337	52.4		51.4	53	27.2		10.2	77	50.6		25.3	328	23.6		03.8		
14	199	46.1		352	52.1		52.6	68	28.1		09.8	92	52.6		25.2	343	25.8		03.9		
15	214	48.6		7	51.9		53.8	83	28.9		09.4	107	54.7		25.2	358	28.1		04.0		
16	229	51.0		22	51.7		55.0	98	29.8		09.0	122	56.7		25.2	13	30.3		04.1		
17	244	53.5		37	51.4	-11	56.2	113	30.6	+19	08.7	137	58.8	+22	25.1	28	32.6	-12	04.1		
18	259	55.9		52	51.2	-11	57.3	128	31.5	+19	08.3	153	00.8	+22	25.1	43	34.8	-12	04.2		
19	274	58.4		67	50.9		58.5	143	32.4		07.9	168	02.9		25.0	58	37.1		04.3		
20	290	00.9		82	50.7	-11	59.7	158	33.2		07.5	183	04.9		25.0	73	39.3		04.4		
21	305	03.3		97	50.5	-12	00.9	173	34.1		07.1	198	07.0		24.9	88	41.6		04.5		
22	320	05.8		112	50.2		02.1	188	34.9		06.7	213	09.0		24.9	103	43.8		04.5		
23	335	08.3		127	50.0		03.2	203	35.8		06.3	228	11.0		24.9	118	46.1		04.6		
24	350	10.7		142	49.7	-12	04.4	218	36.6	+19	05.9	243	13.1	+22	24.8	133	48.3	-12	04.7		
Dif	—			-2			-12	+8			-4			+20			0	+22			-1

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9		Edad: 5 ^d 5	PHE { 4 ^h : 58 ^m /6 12 ^h : 58 ^m /7 20 ^h : 58 ^m /8	SD: 15 ^h 9				R°: 57 ^m	Civil		Náutico	Hora		R°	
	PMG: 11 ^h 56 ^m 6	PMG: 16 ^h 55 ^m			hG ☉	Dec				hG ☾	Dif		Dec	Dif		Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	49.0	+4	34.5	115	54.4	-17	48.4	60 N	18 33	19 16	20 09	13 12	66	20 33	53
1	195	49.2		33.6	130	21.0	76	53.5	51	58	30	10	20 00	12 59	65	47 53
2	210	49.4		32.6	144	47.5	75	-17 58.5	50	56	28	06	19 52	47 65	20 58	54
3	225	49.7		31.7	159	13.9	74	-18 03.3	48	54	26	19 02	45	37 65	21 08	55
4	240	49.9		30.7	173	40.3	74	08.1	48	52	24	18 58	39	28 64	18 54	
5	255	50.1	+4	29.7	188	06.6	73	-18 12.7	46	50	18 22	18 55	19 34	12 20	64	21 26 55
6	270	50.3	+4	28.8	202	32.9	73	-18 17.2	45	45	18 18	18 48	19 23	12 04	62	21 43 56
7	285	50.5		27.8	216	59.2	73	21.7	43	40	15	43	15	11 50	61	21 57 56
8	300	50.8		26.9	231	25.4	72	26.0	43	35	13	38	08	38 61	22 09 57	
9	315	51.0		25.9	245	51.5	71	30.1	41	30	10	34	19 02	28 60	20 56	
10	330	51.2		25.0	260	17.6	71	34.2	41	20	06	28	18 54	11 10	59	38 57
11	345	51.4	+4	24.0	274	43.6	70	-18 38.2	40	10 N	18 03	18 24	18 48	10 55	58	22 53 58
12	0	51.6	+4	23.1	289	09.6	70	-18 42.0	38	0	18 00	18 21	18 45	10 41	57	23 08 58
13	15	51.9		22.1	303	35.6	70	45.8	38	10 S	17 57	18	42	27 56	23 58	
14	30	52.1		21.2	318	01.5	69	49.4	36	20	54	16	41	10 12	55	39 58
15	45	52.3		20.2	332	27.4	69	52.9	35	30	50	14	42	9 55	54	23 57 58
16	60	52.5		19.3	346	53.2	68	56.2	33	35	49	14	43	45 53	** ** *	** ** *
17	75	52.7	+4	18.3	1	19.0	68	-18 59.5	33	40	17 46	18 13	18 45	9 33	53	** ** *
18	90	53.0	+4	17.4	15	44.7	67	-19 02.7	32	45	17 44	18 13	18 47	9 20	52	** ** *
19	105	53.2		16.4	30	10.4	67	05.7	30	50	41	13	51	9 04	50	** ** *
20	120	53.4		15.5	44	36.1	67	08.6	29	52	40	14	53	8 56	50	** ** *
21	135	53.6		14.5	59	01.7	66	11.4	28	54	38	14	55	48 49	0 00	68
22	150	53.8		13.6	73	27.3	66	14.0	26	56	37	14	57	38 49	09	69
23	165	54.1		12.6	87	52.8	65	16.6	26	58	35	14	59	27 48	20	70
24	180	54.3	+4	11.7	102	18.3	65	-19 19.0	24	60 S	17 33	18 15	19 03	8 15	46	0 32 71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 0 ^h 39 ^m 2		Mag: -4.1 PMG: 14 ^h 29 ^m		Mag: +1.6 PMG: 9 ^h 25 ^m		Mag: -2.1 PMG: 7 ^h 46 ^m		Mag: +0.7 PMG: 15 ^h 03 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	350	10.7	142	49.7	-12	04.4	218	36.6	+19	05.9	243	13.1	+22	24.8	133	48.3	-12	04.7	
1	5	13.2	157	49.5		05.6	233	37.5		05.5	258	15.1		24.8	148	50.6		04.8	
2	20	15.7	172	49.3		06.8	248	38.3		05.1	273	17.2		24.7	163	52.8		04.9	
3	35	18.1	187	49.0		07.9	263	39.2		04.7	288	19.2		24.7	178	55.0		04.9	
4	50	20.6	202	48.8		09.1	278	40.0		04.3	303	21.3		24.7	193	57.3		05.0	
5	65	23.1	217	48.5	-12	10.3	293	40.9	+19	03.9	318	23.3	+22	24.6	208	59.5	-12	05.1	
6	80	25.5	232	48.3	-12	11.5	308	41.7	+19	03.5	333	25.4	+22	24.6	224	01.8	-12	05.2	
7	95	28.0	247	48.0		12.6	323	42.6		03.2	348	27.4		24.5	239	04.0		05.3	
8	110	30.4	262	47.8		13.8	338	43.4		02.8	3	29.5		24.5	254	06.3		05.3	
9	125	32.9	277	47.5		15.0	353	44.3		02.4	18	31.5		24.4	269	08.5		05.4	
10	140	35.4	292	47.3		16.2	8	45.1		02.0	33	33.6		24.4	284	10.8		05.5	
11	155	37.8	307	47.1	-12	17.3	23	46.0	+19	01.6	48	35.6	+22	24.4	299	13.0	-12	05.6	
12	170	40.3	322	46.8	-12	18.5	38	46.8	+19	01.2	63	37.7	+22	24.3	314	15.3	-12	05.7	
13	185	42.8	337	46.6		19.7	53	47.7		00.8	78	39.7		24.3	329	17.5		05.8	
14	200	45.2	352	46.3		20.9	68	48.6	+19	00.4	93	41.8		24.2	344	19.7		05.8	
15	215	47.7	7	46.1		22.0	83	49.4	+19	00.0	108	43.8		24.2	359	22.0		05.9	
16	230	50.2	22	45.8		23.2	98	50.3	+18	59.6	123	45.9		24.2	14	24.2		06.0	
17	245	52.6	37	45.6	-12	24.4	113	51.1	+18	59.2	138	47.9	+22	24.1	29	26.5	-12	06.1	
18	260	55.1	52	45.3	-12	25.5	128	52.0	+18	58.8	153	50.0	+22	24.1	44	28.7	-12	06.2	
19	275	57.5	67	45.1		26.7	143	52.8		58.4	168	52.0		24.0	59	31.0		06.2	
20	291	00.0	82	44.8		27.9	158	53.7		58.0	183	54.1		24.0	74	33.2		06.3	
21	306	02.5	97	44.6		29.0	173	54.5		57.6	198	56.1		24.0	89	35.4		06.4	
22	321	04.9	112	44.4		30.2	188	55.4		57.2	213	58.2		23.9	104	37.7		06.5	
23	336	07.4	127	44.1		31.4	203	56.3		56.8	229	00.2		23.9	119	39.9		06.6	
24	351	09.9	142	43.9	-12	32.5	218	57.1	+18	56.4	244	02.3	+22	23.8	134	42.2	-12	06.6	
Dif	—		-2	-12		+9	-4	-4			+20	0			+22		-1		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 55 ^m 9			Edad: 7 ^d 5 SD: 16'1 PMG: 18 ^h 51 ^m	PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'5 R°: 58 ^m										
	hG ☉	Dec		hG ☾		Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	59.6	+3 48.7	88	22.1	-19 39.1	8	60 N	18 27	19 09	20 02	15 12 41	22 33 79		
1	195	59.8	47.8	102	47.0	38.3	9	58	25	05	19 53	14 59 43	46 77		
2	211	00.0	46.8	117	11.9	37.4	10	56	23	19 00	46	47 45	22 58 74		
3	226	00.2	45.9	131	36.8	36.4	11	54	21	18 57	40	37 46	23 08 73		
4	241	00.5	44.9	146	01.7	35.2	12	52	19	53	34	28 47	17 72		
5	256	00.7	+3 44.0	160	26.6	33.9	13	50	18 18	18 50	19 29	14 20 48	23 25 70		
6	271	00.9	+3 43.0	174	51.4	32.5	14	45	18 15	18 44	19 19	14 02 50	23 42 68		
7	286	01.1	42.0	189	16.3	30.9	16	40	12	39	11	13 48 51	23 55 67		
8	301	01.4	41.1	203	41.2	29.3	16	35	10	35	05	36 53	** ** *		
9	316	01.6	40.1	218	06.1	27.5	18	30	08	32	19 00	25 54	** ** *		
10	331	01.8	39.2	232	30.9	25.5	20	20	04	27	18 52	13 07 56	** ** *		
11	346	02.0	+3 38.2	246	55.8	23.4	21	10 N	18 02	18 23	18 47	12 51 57	** ** *		
12	1	02.2	+3 37.3	261	20.7	21.2	22	0	17 59	18 20	18 44	12 37 58	0 06 59		
13	16	02.5	36.3	275	45.6	18.9	23	10 S	57	18	42	22 59	21 58		
14	31	02.7	35.3	290	10.5	16.5	24	20	54	16	42	12 06 61	37 57		
15	46	02.9	34.4	304	35.3	13.9	26	30	51	15	43	11 48 63	0 55 56		
16	61	03.1	33.4	319	00.2	11.1	28	35	50	15	45	38 63	1 06 55		
17	76	03.4	+3 32.5	333	25.1	08.3	28	40	17 48	18 15	18 47	11 26 64	1 18 55		
18	91	03.6	+3 31.5	347	50.0	05.3	30	45	17 46	18 16	18 50	11 11 66	1 33 53		
19	106	03.8	30.6	2	15.0	02.2	31	50	44	16	54	10 54 68	50 52		
20	121	04.0	29.6	16	39.9	18.9	32	52	43	17	56	46 68	1 59 51		
21	136	04.2	28.6	31	04.8	55.6	34	54	42	17	18 58	37 69	2 08 50		
22	151	04.5	27.7	45	29.8	52.2	36	56	41	18	19 01	26 71	18 50		
23	166	04.7	26.7	59	54.7	48.5	37	58	39	19	04	15 71	30 49		
24	181	04.9	+3 25.8	74	19.7	44.8	37	60 S	17 38	18 19	19 08	10 01 73	2 44 47		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.1		Mag: +1.6		Mag: -2.1		Mag: +0.7	
	0 ^h 31 ^m 3		PMG: 14 ^h 30 ^m		PMG: 9 ^h 22 ^m		PMG: 7 ^h 40 ^m		PMG: 14 ^h 55 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	352	09.0	142 37.8	-13 00.4	219 17.8	+18 46.8	244 51.6	+22 22.8	135 36.0	-12 08.6
1	7	11.5	157 37.6	01.6	234 18.6	46.4	259 53.6	22.8	150 38.2	08.7
2	22	13.9	172 37.3	02.7	249 19.5	46.0	274 55.7	22.8	165 40.5	08.7
3	37	16.4	187 37.1	03.9	264 20.3	45.6	289 57.7	22.7	180 42.7	08.8
4	52	18.9	202 36.8	05.0	279 21.2	45.2	304 59.8	22.7	195 45.0	08.9
5	67	21.3	217 36.6	-13 06.2	294 22.1	+18 44.8	320 01.8	+22 22.6	210 47.2	-12 09.0
6	82	23.8	232 36.3	-13 07.3	309 22.9	+18 44.4	335 03.9	+22 22.6	225 49.4	-12 09.1
7	97	26.3	247 36.1	08.5	324 23.8	44.0	350 06.0	22.6	240 51.7	09.2
8	112	28.7	262 35.8	09.7	339 24.7	43.6	5 08.0	22.5	255 53.9	09.2
9	127	31.2	277 35.6	10.8	354 25.5	43.2	20 10.1	22.5	270 56.2	09.3
10	142	33.7	292 35.3	12.0	9 26.4	42.8	35 12.1	22.4	285 58.4	09.4
11	157	36.1	307 35.0	-13 13.1	24 27.3	+18 42.4	50 14.2	+22 22.4	301 00.6	-12 09.5
12	172	38.6	322 34.8	-13 14.3	39 28.1	+18 42.0	65 16.2	+22 22.4	316 02.9	-12 09.6
13	187	41.0	337 34.5	15.4	54 29.0	41.6	80 18.3	22.3	331 05.1	09.6
14	202	43.5	352 34.3	16.6	69 29.9	41.2	95 20.4	22.3	346 07.4	09.7
15	217	46.0	7 34.0	17.7	84 30.7	40.8	110 22.4	22.2	1 09.6	09.8
16	232	48.4	22 33.8	18.9	99 31.6	40.4	125 24.5	22.2	16 11.8	09.9
17	247	50.9	37 33.5	-13 20.0	114 32.5	+18 40.0	140 26.5	+22 22.1	31 14.1	-12 10.0
18	262	53.4	52 33.3	-13 21.2	129 33.3	+18 39.6	155 28.6	+22 22.1	46 16.3	-12 10.1
19	277	55.8	67 33.0	22.3	144 34.2	39.1	170 30.7	22.1	61 18.6	10.1
20	292	58.3	82 32.7	23.4	159 35.1	38.7	185 32.7	22.0	76 20.8	10.2
21	308	00.8	97 32.5	24.6	174 35.9	38.3	200 34.8	22.0	91 23.0	10.3
22	323	03.2	112 32.2	25.7	189 36.8	37.9	215 36.9	21.9	106 25.3	10.4
23	338	05.7	127 32.0	26.9	204 37.7	37.5	230 38.9	21.9	121 27.5	10.5
24	353	08.1	142 31.7	-13 28.0	219 38.5	+18 37.1	245 41.0	+22 21.9	136 29.7	-12 10.5
Dif	—	-3	-12	+9	-4	+21	0	+22	-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15/9 PMG: 11 ^h 55 ^m 5			Edad: 8 ^d 5 PHE { 4 ^h : 59/5 12 ^h : 59/6 20 ^h : 59/6 R°: 56 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	181	04.9	+3	25.8	74	19.7	–18	44.8	60 N	3 51	4 43	5 26	15 53	31	23 52	85								
1	196	05.1		24.8	88	44.7		41.0	58	3 59	48	28	42	33	** ** *	**								
2	211	05.4		23.8	103	09.7		37.0	56	4 06	52	30	32	35	** ** *	**								
3	226	05.6		22.9	117	34.8		32.9	54	12	56	31	23	37	** ** *	**								
4	241	05.8		21.9	131	59.8		28.6	52	18	4 59	33	15	39	** ** *	**								
5	256	06.0	+3	21.0	146	24.9	–18	24.3	50	4 23	5 02	5 34	15 08	40	** ** *	**								
6	271	06.2	+3	20.0	160	50.0	–18	19.8	45	4 33	5 08	5 37	14 52	44	** ** *	**								
7	286	06.5		19.0	175	15.1		15.2	46	41	13	40	39	46	** ** *	**								
8	301	06.7		18.1	189	40.2		10.5	47	47	17	42	29	47	0 07	65								
9	316	06.9		17.1	204	05.4		05.6	49	52	20	44	19	49	17	64								
10	331	07.1		16.2	218	30.5	–18	00.6	50	4 59	25	47	14 03	52	35	62								
11	346	07.4	+3	15.2	232	55.7	–17	55.6	50	5 04	5 29	5 50	13 48	55	0 50	60								
12	1	07.6	+3	14.2	247	21.0	–17	50.3	53	0	5 08	5 32	5 52	13 35	57	1 05	57							
13	16	07.8		13.3	261	46.2		45.0	53	10 S	09	34	55	21	60	19	56							
14	31	08.0		12.3	276	11.5		39.6	54	20	09	35	57	13 07	62	34	54							
15	46	08.3		11.4	290	36.8		34.0	56	30	08	36	5 59	12 51	64	1 51	52							
16	61	08.5		10.4	305	02.1		28.3	57	35	06	36	6 01	41	66	2 01	50							
17	76	08.7	+3	09.4	319	27.5	–17	22.5	58	40	5 04	5 35	6 02	12 30	68	2 13	48							
18	91	08.9	+3	08.5	333	52.9	–17	16.6	59	45	5 01	5 35	6 04	12 17	71	2 26	47							
19	106	09.1		07.5	348	18.3		10.6	60	50	4 57	34	06	12 02	73	42	44							
20	121	09.4		06.6	2	43.8	–17	04.5	61	52	55	34	07	11 54	75	50	43							
21	136	09.6		05.6	17	09.3	–16	58.2	63	54	52	33	08	46	76	2 58	42							
22	151	09.8		04.6	31	34.8		51.9	63	56	49	32	09	37	78	3 08	40							
23	166	10.0		03.7	46	00.4		45.4	65	58	46	32	11	26	80	19	38							
24	181	10.3	+3	02.7	60	26.0	–16	38.8	66	60 S	4 42	5 31	6 12	11 14	83	3 31	36							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 0 ^h 27 ^m 4			Mag: –4.1 PMG: 14 ^h 30 ^m			Mag: +1.6 PMG: 9 ^h 21 ^m			Mag: –2.1 PMG: 7 ^h 36 ^m			Mag: +0.7 PMG: 14 ^h 52 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	353	08.1	142	31.7	–13	28.0	219	38.5	+18	37.1	245	41.0	+22	21.9	136	29.7	–12	10.5						
1	8	10.6	157	31.4		29.2	234	39.4		36.7	260	43.0		21.8	151	32.0		10.6						
2	23	13.1	172	31.2		30.3	249	40.3		36.3	275	45.1		21.8	166	34.2		10.7						
3	38	15.5	187	30.9		31.5	264	41.1		35.9	290	47.2		21.7	181	36.5		10.8						
4	53	18.0	202	30.7		32.6	279	42.0		35.5	305	49.2		21.7	196	38.7		10.9						
5	68	20.5	217	30.4	–13	33.7	294	42.9	+18	35.1	320	51.3	+22	21.7	211	40.9	–12	11.0						
6	83	22.9	232	30.1	–13	34.9	309	43.7	+18	34.7	335	53.3	+22	21.6	226	43.2	–12	11.0						
7	98	25.4	247	29.9		36.0	324	44.6		34.3	350	55.4		21.6	241	45.4		11.1						
8	113	27.9	262	29.6		37.2	339	45.5		33.9	5	57.5		21.5	256	47.7		11.2						
9	128	30.3	277	29.4		38.3	354	46.3		33.4	20	59.5		21.5	271	49.9		11.3						
10	143	32.8	292	29.1		39.4	9	47.2		33.0	36	01.6		21.5	286	52.1		11.4						
11	158	35.3	307	28.8	–13	40.6	24	48.1	+18	32.6	51	03.7	+22	21.4	301	54.4	–12	11.4						
12	173	37.7	322	28.6	–13	41.7	39	48.9	+18	32.2	66	05.7	+22	21.4	316	56.6	–12	11.5						
13	188	40.2	337	28.3		42.9	54	49.8		31.8	81	07.8		21.3	331	58.8		11.6						
14	203	42.6	352	28.0		44.0	69	50.7		31.4	96	09.9		21.3	347	01.1		11.7						
15	218	45.1	7	27.8		45.1	84	51.6		31.0	111	11.9		21.3	2	03.3		11.8						
16	233	47.6	22	27.5		46.3	99	52.4		30.6	126	14.0		21.2	17	05.6		11.9						
17	248	50.0	37	27.3	–13	47.4	114	53.3	+18	30.2	141	16.1	+22	21.2	32	07.8	–12	11.9						
18	263	52.5	52	27.0	–13	48.6	129	54.2	+18	29.8	156	18.1	+22	21.1	47	10.0	–12	12.0						
19	278	55.0	67	26.7		49.7	144	55.0		29.3	171	20.2		21.1	62	12.3		12.1						
20	293	57.4	82	26.5		50.8	159	55.9		28.9	186	22.3		21.0	77	14.5		12.2						
21	308	59.9	97	26.2		52.0	174	56.8		28.5	201	24.3		21.0	92	16.7		12.3						
22	324	02.4	112	25.9		53.1	189	57.7		28.1	216	26.4		21.0	107	19.0		12.4						
23	339	04.8	127	25.7		54.2	204	58.5		27.7	231	28.5		20.9	122	21.2		12.4						
24	354	07.3	142	25.4	–13	55.4	219	59.4	+18	27.3	246	30.5	+22	20.9	137	23.4	–12	12.5						
Dif	—			–3			+9			–4			+21			0			+22			–1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 9 ^d 5	PHE { 4 ^h : 59 ^m /7 12 ^h : 59 ^m /7 20 ^h : 59 ^m /7 R°: 55 ^m	SD: 16 ^h 2				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 55 ^m 1				PMG: 20 ^h 45 ^m				Civil		Náutico		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	10.3	+3	02.7	60	26.0	-16 38.8	60 N	18 21	19 03	19 55	16 24	24	** ** *
1	196	10.5		01.8	74	51.6	32.1 67	58	19	18 59	47	15	27	0 03 83
2	211	10.7	+3	00.8	89	17.3	25.3 68	56	17	55	40	07	29	12 81
3	226	10.9	+2	59.8	103	43.0	18.4 69	54	16	52	34	16	00 31	21 78
4	241	11.2		58.9	118	08.7	11.4 70	52	15	49	29	15	54 33	29 76
5	256	11.4	+2	57.9	132	34.5	-16 04.2 72	50	18 13	18 46	19 25	15	48 35	0 35 76
6	271	11.6	+2	56.9	147	00.3	-15 57.0 72	45	18 11	18 40	19 15	15	36 38	0 50 72
7	286	11.8		56.0	161	26.2	49.7 73	40	09	36	08	25	41	1 02 69
8	301	12.0		55.0	175	52.1	42.2 75	35	07	32	19 02	16	44	12 67
9	316	12.3		54.1	190	18.0	34.7 75	30	05	29	18 57	15	08 46	21 65
10	331	12.5		53.1	204	44.0	27.1 76	20	03	25	50	14	55 49	37 61
11	346	12.7	+2	52.1	219	10.0	-15 19.3 78	10 N	18 00	18 21	18 46	14	43 52	1 50 59
12	1	12.9	+2	51.2	233	36.0	-15 11.5 78	0	17 58	18 19	18 43	14	32 55	2 02 56
13	16	13.2		50.2	248	02.1	-15 03.6 79	10 S	56	17	42	21	58	15 53
14	31	13.4		49.3	262	28.3	-14 55.5 81	20	55	17	42	14	09 61	28 50
15	46	13.6		48.3	276	54.5	47.4 81	30	53	16	44	13	55 65	43 47
16	61	13.8		47.3	291	20.7	39.2 82	35	51	17	46	47	68	2 51 46
17	76	14.1	+2	46.4	305	46.9	-14 30.8 84	40	17 50	18 17	18 49	13	38 70	3 01 43
18	91	14.3	+2	45.4	320	13.2	-14 22.4 84	45	17 49	18 18	18 52	13	28 72	3 13 40
19	106	14.5		44.4	334	39.6	13.9 85	50	47	19	57	15	76	26 38
20	121	14.7		43.5	349	06.0	-14 05.3 86	52	46	20	18 59	09	78	33 36
21	136	15.0		42.5	3	32.4	-13 56.7 86	54	46	21	19 02	13	02 80	40 34
22	151	15.2		41.5	17	58.9	47.9 88	56	45	22	05	12	55 82	48 32
23	166	15.4		40.6	32	25.4	39.0 89	58	44	23	09	46	85	3 57 30
24	181	15.6	+2	39.6	46	52.0	-13 30.1 89	60 S	17 43	18 24	19 13	12	37 87	4 07 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 23 ^m 4		Mag: -4.1 PMG: 14 ^h 31 ^m		Mag: +1.6 PMG: 9 ^h 19 ^m		Mag: -2.1 PMG: 7 ^h 33 ^m		Mag: +0.7 PMG: 14 ^h 48 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	354	07.3	142	25.4	-13	55.4	219	59.4	+18	27.3
1	9	09.8	157	25.1		56.5	235	00.3		26.9
2	24	12.2	172	24.9		57.6	250	01.2		26.5
3	39	14.7	187	24.6		58.8	265	02.0		26.1
4	54	17.1	202	24.3	-13	59.9	280	02.9		25.6
5	69	19.6	217	24.1	-14	01.0	295	03.8	+18	25.2
6	84	22.1	232	23.8	-14	02.1	310	04.6	+18	24.8
7	99	24.5	247	23.5		03.3	325	05.5		24.4
8	114	27.0	262	23.3		04.4	340	06.4		24.0
9	129	29.5	277	23.0		05.5	355	07.3		23.6
10	144	31.9	292	22.7		06.7	10	08.1		23.2
11	159	34.4	307	22.5	-14	07.8	25	09.0	+18	22.8
12	174	36.9	322	22.2	-14	08.9	40	09.9	+18	22.3
13	189	39.3	337	21.9		10.0	55	10.8		21.9
14	204	41.8	352	21.7		11.2	70	11.6		21.5
15	219	44.3	7	21.4		12.3	85	12.5		21.1
16	234	46.7	22	21.1		13.4	100	13.4		20.7
17	249	49.2	37	20.9	-14	14.5	115	14.3	+18	20.3
18	264	51.6	52	20.6	-14	15.7	130	15.2	+18	19.9
19	279	54.1	67	20.3		16.8	145	16.0		19.4
20	294	56.6	82	20.1		17.9	160	16.9		19.0
21	309	59.0	97	19.8		19.0	175	17.8		18.6
22	325	01.5	112	19.5		20.2	190	18.7		18.2
23	340	04.0	127	19.2		21.3	205	19.5		17.8
24	355	06.4	142	19.0	-14	22.4	220	20.4	+18	17.4
Dif	—	—	-3	-11		+9	-4	+21		0
									+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h 9			Edad: 10 ^d 5	PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 6 20 ^h : 59 ^m 6	SD: 16 ^h 3	PMG: 21 ^h 40 ^m	R°: 53 ^m															
	hG ☉	Dec								hG ☾	Dif		Dec	Dif									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m						
0	181	15.6	+2	39.6	46	52.0	-13	30.1	90	60 N	3	56	4	48	5	30	16	48	20	1	17	89	
1	196	15.8			61	18.6	76	21.1	90	58	4	04	52	32			42	22		26	85		
2	211	16.1			75	45.3	77	11.9	92	56	11		56	34			36	25		33	83		
3	226	16.3			90	12.0	77	-13	02.8	91	54	16	4	59	35			31	27		39	81	
4	241	16.5			104	38.8	78	-12	53.5	93	52	22	5	02	36			27	28		45	79	
5	256	16.7	+2	34.8	119	05.6	78	-12	44.1	94	50	4	26	5	05	5	37	16	23	30	1	51	76
6	271	17.0	+2	33.8	133	32.4	78	-12	34.7	94	45	4	36	5	10	5	40	16	14	34	2	02	73
7	286	17.2			147	59.3	79	25.2	95	40	43		15	42			06	37		11	70		
8	301	17.4			162	26.2	79	15.6	96	35	48		18	44			16	00	40	19	67		
9	316	17.6			176	53.2	80	-12	05.9	97	30	4	53	21	45			15	54	42	26	65	
10	331	17.9			191	20.2	80	-11	56.2	97	20	5	00	26	48			44	46		38	61	
11	346	18.1	+2	29.0	205	47.3	81	-11	46.4	98	10 N	5	04	5	29	5	50	15	35	50	2	49	57
12	1	18.3	+2	28.1	220	14.4	81	-11	36.5	99	0	5	07	5	31	5	52	15	27	54	2	58	55
13	16	18.5			234	41.6	82	26.5	100	10 S	08		32	53			19	57		3	08	51	
14	31	18.8			249	08.8	82	16.5	100	20	08		33	55			10	61		18	48		
15	46	19.0			263	36.0	82	-11	06.4	101	30	05		33	57			15	00	65	30	44	
16	61	19.2			278	03.3	83	-10	56.3	101	35	03		33	58			14	55	66	37	41	
17	76	19.4	+2	23.2	292	30.7	84	-10	46.1	102	40	5	01	5	32	5	59	14	48	70	3	44	39
18	91	19.7	+2	22.3	306	58.1	84	-10	35.8	103	45	4	57	5	31	6	00	14	40	73	3	53	36
19	106	19.9			321	25.5	84	25.4	104	50	52		30	02			31	77		4	04	32	
20	121	20.1			335	53.0	85	15.0	104	52	50		29	03			27	78		09	30		
21	136	20.3			350	20.5	85	-10	04.5	105	54	47		28	03			22	81		14	29	
22	151	20.5			4	48.1	86	-9	54.0	105	56	44		27	04			17	83		20	27	
23	166	20.8			19	15.7	86	43.4	106	58	40		26	05			11	85		27	24		
24	181	21.0	+2	16.5	33	43.4	87	-9	32.8	106	60 S	4	36	5	25	6	06	14	04	89	4	34	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.1		Mag: +1.6		Mag: -2.1		Mag: +0.7	
	0 ^h 19 ^m 5		PMG: 14 ^h 31 ^m		PMG: 9 ^h 18 ^m		PMG: 7 ^h 30 ^m		PMG: 14 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	355	06.4	142	19.0	-14	22.4	220	20.4	+18	17.4
1	10	08.9	157	18.7		23.5	235	21.3		17.0
2	25	11.4	172	18.4		24.6	250	22.2		16.5
3	40	13.8	187	18.2		25.8	265	23.0		16.1
4	55	16.3	202	17.9		26.9	280	23.9		15.7
5	70	18.7	217	17.6	-14	28.0	295	24.8	+18	15.3
6	85	21.2	232	17.3	-14	29.1	310	25.7	+18	14.9
7	100	23.7	247	17.1		30.2	325	26.6		14.5
8	115	26.1	262	16.8		31.3	340	27.4		14.0
9	130	28.6	277	16.5		32.5	355	28.3		13.6
10	145	31.1	292	16.2		33.6	10	29.2		13.2
11	160	33.5	307	16.0	-14	34.7	25	30.1	+18	12.8
12	175	36.0	322	15.7	-14	35.8	40	31.0	+18	12.4
13	190	38.5	337	15.4		36.9	55	31.8		12.0
14	205	40.9	352	15.1		38.0	70	32.7		11.5
15	220	43.4	7	14.9		39.1	85	33.6		11.1
16	235	45.9	22	14.6		40.3	100	34.5		10.7
17	250	48.3	37	14.3	-14	41.4	115	35.4	+18	10.3
18	265	50.8	52	14.0	-14	42.5	130	36.3	+18	09.9
19	280	53.2	67	13.8		43.6	145	37.1		09.4
20	295	55.7	82	13.5		44.7	160	38.0		09.0
21	310	58.2	97	13.2		45.8	175	38.9		08.6
22	326	00.6	112	12.9		46.9	190	39.8		08.2
23	341	03.1	127	12.7		48.0	205	40.7		07.8
24	356	05.6	142	12.4	-14	49.1	220	41.5	+18	07.3
Dif	—		-3		-11		+9		-4	
									+21	0
									+22	-1

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 4			Edad: 11 ^d 5 PHE { SD: 16'2 PMG: 22 ^h 33 ^m 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'3 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	181	21.0	+2 16.5	33	43.4	-9 32.8	87	60 N	18 15	18 57	19 48	17 08 17	2 46 88			
1	196	21.2	15.5	48	11.1	22.1	107	58	13	53	41	04 20	51 86			
2	211	21.4	14.5	62	38.8	11.4	107	56	12	49	34	17 01 22	2 56 83			
3	226	21.7	13.6	77	06.6	-9 00.6	108	54	11	46	29	16 58 24	3 00 88			
4	241	21.9	12.6	91	34.4	-8 49.7	109	52	10	44	24	55 26	04 78			
5	256	22.1	+2 11.6	106	02.3	-8 38.8	109	50	18 09	18 41	19 20	16 53 28	3 07 77			
6	271	22.3	+2 10.7	120	30.3	-8 27.8	110	45	18 07	18 36	19 11	16 48 31	3 15 73			
7	286	22.6	09.7	134	58.2	16.9	109	40	05	32	19 04	43 35	21 70			
8	301	22.8	08.7	149	26.2	-8 05.8	111	35	04	29	18 59	40 37	26 67			
9	316	23.0	07.8	163	54.3	-7 54.7	111	30	03	27	55	36 40	31 64			
10	331	23.2	06.8	178	22.4	43.6	111	20	18 01	23	48	30 45	39 60			
11	346	23.5	+2 05.8	192	50.5	-7 32.4	112	10 N	17 59	18 20	18 45	16 25 48	3 46 56			
12	1	23.7	+2 04.9	207	18.7	-7 21.2	112	0	17 58	18 18	18 42	16 21 51	3 53 52			
13	16	23.9	03.9	221	46.9	-7 10.0	112	10 S	56	17	42	16 55	3 59 49			
14	31	24.1	02.9	236	15.2	-6 58.7	113	20	55	17	43	11 59	4 06 45			
15	46	24.4	02.0	250	43.4	47.3	114	30	54	17	45	05 63	14 41			
16	61	24.6	+2 01.0	265	11.8	36.0	113	35	53	18	47	16 01 66	18 39			
17	76	24.8	+2 00.0	279	40.2	-6 24.6	114	40	17 52	18 19	18 51	15 58 68	4 23 36			
18	91	25.0	+1 59.1	294	08.6	-6 13.2	114	45	17 51	18 20	18 55	15 53 72	4 29 33			
19	106	25.2	58.1	308	37.0	-6 01.7	115	50	50	22	19 00	48 76	36 29			
20	121	25.5	57.1	323	05.5	-5 50.2	115	52	50	23	03	45 78	39 28			
21	136	25.7	56.2	337	34.1	38.7	115	54	49	24	06	43 80	43 25			
22	151	25.9	55.2	352	02.6	27.2	115	56	49	26	09	40 82	47 23			
23	166	26.1	54.2	6	31.2	15.6	116	58	48	27	13	36 85	51 21			
24	181	26.4	+1 53.3	20	59.9	-5 04.0	116	60 S	17 47	18 29	19 18	15 33 87	4 56 18			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 15 ^m 6		Mag: -4.1 PMG: 14 ^h 31 ^m		Mag: +1.6 PMG: 9 ^h 17 ^m		Mag: -2.2 PMG: 7 ^h 26 ^m		Mag: +0.7 PMG: 14 ^h 41 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	356	05.6	142	12.4	-14 49.1	220 41.5	+18 07.3	248 10.0	+22 19.0	139 10.7	-12 16.5
1	11	08.0	157	12.1	50.2	235 42.4	06.9	263 12.1	18.9	154 12.9	16.6
2	26	10.5	172	11.8	51.3	250 43.3	06.5	278 14.2	18.9	169 15.1	16.7
3	41	13.0	187	11.5	52.4	265 44.2	06.1	293 16.3	18.8	184 17.4	16.8
4	56	15.4	202	11.3	53.6	280 45.1	05.7	308 18.3	18.8	199 19.6	16.8
5	71	17.9	217	11.0	-14 54.7	295 46.0	+18 05.2	323 20.4	+22 18.8	214 21.8	-12 16.9
6	86	20.3	232	10.7	-14 55.8	310 46.8	+18 04.8	338 22.5	+22 18.7	229 24.1	-12 17.0
7	101	22.8	247	10.4	56.9	325 47.7	04.4	353 24.6	18.7	244 26.3	17.1
8	116	25.3	262	10.2	58.0	340 48.6	04.0	8 26.7	18.6	259 28.5	17.2
9	131	27.7	277	09.9	-14 59.1	355 49.5	03.6	23 28.7	18.6	274 30.8	17.3
10	146	30.2	292	09.6	-15 00.2	10 50.4	03.1	38 30.8	18.6	289 33.0	17.3
11	161	32.7	307	09.3	-15 01.3	25 51.3	+18 02.7	53 32.9	+22 18.5	304 35.2	-12 17.4
12	176	35.1	322	09.0	-15 02.4	40 52.2	+18 02.3	68 35.0	+22 18.5	319 37.5	-12 17.5
13	191	37.6	337	08.7	03.5	55 53.0	01.9	83 37.1	18.4	334 39.7	17.6
14	206	40.1	352	08.5	04.6	70 53.9	01.4	98 39.2	18.4	349 41.9	17.7
15	221	42.5	7 08.2	05.7	05.7	85 54.8	01.0	113 41.2	18.4	4 44.1	17.8
16	236	45.0	22 07.9	06.8	06.8	100 55.7	00.6	128 43.3	18.3	19 46.4	17.8
17	251	47.5	37 07.6	-15 07.9	115 56.6	+18 00.2	143 45.4	+22 18.3	34 48.6	-12 17.9	
18	266	49.9	52 07.3	-15 09.0	130 57.5	+17 59.8	158 47.5	+22 18.2	49 50.8	-12 18.0	
19	281	52.4	67 07.1	10.1	145 58.4	59.3	173 49.6	18.2	64 53.1	18.1	
20	296	54.8	82 06.8	11.2	160 59.3	58.9	188 51.6	18.2	79 55.3	18.2	
21	311	57.3	97 06.5	12.3	176 00.1	58.5	203 53.7	18.1	94 57.5	18.3	
22	326	59.8	112 06.2	13.4	191 01.0	58.1	218 55.8	18.1	109 59.8	18.3	
23	342	02.2	127 05.9	14.5	206 01.9	57.6	233 57.9	18.0	125 02.0	18.4	
24	357	04.7	142 05.6	-15 15.6	221 02.8	+17 57.2	249 00.0	+22 18.0	140 04.2	-12 18.5	
Dif	—		-3	-11	+9	-4	+21	0	+22	-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 12 ^d 5	PHE	SD: 16 ^h 1	4 ^h : 59 ^m /2 12 ^h : 59 ^m /0 20 ^h : 58 ^m /9									
	PMG: 11 ^h 54 ^m 1	PMG: 23 ^h 24 ^m	Rº: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	26.4	+1	53.3		20	59.9	-5	04.0	60 N	4 02	4 53	5 35	17 25	16	4 14 87
1	196	26.6		52.3		35	28.6 97	-4	52.4 116	58	09	4 57	36	24 19		17 84
2	211	26.8		51.3		49	57.3 97		40.8 116	56	15	5 00	38	23 21		19 81
3	226	27.0		50.4		64	26.1 98		29.1 117	54	20	03	39	22 23		21 79
4	241	27.3		49.4		78	54.8 97		17.4 117	52	25	06	40	21 26		22 78
5	256	27.5	+1	48.4		93	23.7 99	-4	05.7 117	50	4 29	5 08	5 40	17 21 27	4 24	76
6	271	27.7	+1	47.5		107	52.5 98	-3	54.0 117	45	4 38	5 13	5 42	17 19 31	4 28	71
7	286	27.9		46.5		122	21.4 99		42.3 117	40	45	17	44	18 34		31 68
8	301	28.2		45.5		136	50.4 100		30.5 118	35	50	20	45	17 37		33 65
9	316	28.4		44.6		151	19.3 99		18.8 117	30	4 54	22	46	16 39		35 63
10	331	28.6		43.6		165	48.3 100	-3	07.0 118	20	5 00	26	48	15 43		39 58
11	346	28.8	+1	42.6		180	17.3 100	-2	55.2 118	10 N	5 04	5 28	5 50	17 13 47	4 42	55
12	1	29.1	+1	41.7		194	46.4 101	-2	43.4 118	0	5 06	5 30	5 51	17 12 51	4 45	51
13	16	29.3		40.7		209	15.5 101		31.7 117	10 S	07	31	52	11 54		48 48
14	31	29.5		39.7		223	44.6 101		19.9 118	20	06	31	53	10 57		51 44
15	46	29.7		38.8		238	13.8 102	-2	08.0 119	30	03	31	54	08 62		55 39
16	61	30.0		37.8		252	42.9 101	-1	56.2 118	35	5 01	30	55	07 65		57 37
17	76	30.2	+1	36.8		267	12.2 103	-1	44.4 118	40	4 57	5 29	5 56	17 06 68	4 59	35
18	91	30.4	+1	35.9		281	41.4 102	-1	32.6 118	45	4 53	5 27	5 57	17 05 71	5 02	31
19	106	30.6		34.9		296	10.7 103		20.8 118	50	48	25	58	04 75		05 27
20	121	30.8		33.9		310	40.0 103	-1	09.0 118	52	45	24	58	03 77		07 25
21	136	31.1		33.0		325	09.3 103	-0	57.2 118	54	42	23	58	03 78		08 24
22	151	31.3		32.0		339	38.6 103		45.4 118	56	38	22	59	02 81		10 21
23	166	31.5		31.0		354	08.0 104		33.6 118	58	34	20	5 59	01 83		12 19
24	181	31.7	+1	30.0		8	37.4 104	-0	21.8 118	60 S	4 29	5 19	6 00	17 00 86	5 14	17

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG		Mag: -4.1			Mag: +1.6			Mag: -2.2			Mag: +0.7					
	0 ^h 11 ^m 7		PMG: 14 ^h 32 ^m			PMG: 9 ^h 15 ^m			PMG: 7 ^h 23 ^m			PMG: 14 ^h 38 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°			
0	357	04.7	142	05.6	-15	15.6		221	02.8	+17	57.2	249	00.0	+22	18.0		
1	12	07.2	157	05.4		16.6		236	03.7		56.8	264	02.1		18.0		
2	27	09.6	172	05.1		17.7		251	04.6		56.4	279	04.2		17.9		
3	42	12.1	187	04.8		18.8		266	05.5		55.9	294	06.2		17.9		
4	57	14.6	202	04.5		19.9		281	06.4		55.5	309	08.3		17.8		
5	72	17.0	217	04.2	-15	21.0		296	07.2	+17	55.1	324	10.4	+22	17.8		
6	87	19.5	232	03.9	-15	22.1		311	08.1	+17	54.7	339	12.5	+22	17.8		
7	102	22.0	247	03.6		23.2		326	09.0		54.2	354	14.6		17.7		
8	117	24.4	262	03.4		24.3		341	09.9		53.8	9	16.7		17.7		
9	132	26.9	277	03.1		25.4		356	10.8		53.4	24	18.8		17.6		
10	147	29.3	292	02.8		26.5		11	11.7		53.0	39	20.8		17.6		
11	162	31.8	307	02.5	-15	27.6		26	12.6	+17	52.5	54	22.9	+22	17.6		
12	177	34.3	322	02.2	-15	28.6		41	13.5	+17	52.1	69	25.0	+22	17.5		
13	192	36.7	337	01.9		29.7		56	14.4		51.7	84	27.1		17.5		
14	207	39.2	352	01.6		30.8		71	15.3		51.3	99	29.2		17.4		
15	222	41.7	7	01.3		31.9		86	16.1		50.8	114	31.3		17.4		
16	237	44.1	22	01.1		33.0		101	17.0		50.4	129	33.4		17.4		
17	252	46.6	37	00.8	-15	34.1		116	17.9	+17	50.0	144	35.4	+22	17.3		
18	267	49.1	52	00.5	-15	35.2		131	18.8	+17	49.6	159	37.5	+22	17.3		
19	282	51.5	67	00.2		36.2		146	19.7		49.1	174	39.6		17.2		
20	297	54.0	81	59.9		37.3		161	20.6		48.7	189	41.7		17.2		
21	312	56.4	96	59.6		38.4		176	21.5		48.3	204	43.8		17.2		
22	327	58.9	111	59.3		39.5		191	22.4		47.8	219	45.9		17.1		
23	343	01.4	126	59.0		40.6		206	23.3		47.4	234	48.0		17.1		
24	358	03.8	141	58.7	-15	41.7		221	24.2	+17	47.0	249	50.1	+22	17.0		
Dif	—		-3		-11			+9		-4		+21		0		+22	-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9		Edad: 13 ^d 5 PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'3 R°: ***m															
	PMG: 11 ^h 53 ^m 7		PMG: ***h ***m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h m	h m	h m		h m m	h m m					
0	181	31.7	+1 30.0	8	37.4	-0 21.8	60 N	18 09	18 50	19 41		17 41 17	5 41 85					
1	196	32.0		23	06.9 ¹⁰⁵	-0 10.0 ¹¹⁸	58	08	47	34		43 19	41 82					
2	211	32.2		37	36.3 ¹⁰⁴	+0 01.8 ¹¹⁸	56	07	44	29		44 22	40 80					
3	226	32.4		52	05.8 ¹⁰⁵	13.6 ¹¹⁸	54	06	41	24		45 24	40 78					
4	241	32.6		66	35.3 ¹⁰⁵	25.3 ¹¹⁷	52	05	39	19		47 25	40 76					
5	256	32.9	+1 25.2	81	04.8 ¹⁰⁵	+0 37.1 ¹¹⁸	50	18 05	18 37	19 15		17 48 27	5 40 74					
6	271	33.1	+1 24.2	95	34.4 ¹⁰⁶	+0 48.8 ¹¹⁷	45	18 03	18 32	19 07		17 50 31	5 39 70					
7	286	33.3		110	04.0 ¹⁰⁶	+1 00.6 ¹¹⁸	40	02	29	19 01		52 34	39 66					
8	301	33.5		124	33.6 ¹⁰⁶	12.3 ¹¹⁷	35	01	26	18 56		54 36	38 64					
9	316	33.8		139	03.2 ¹⁰⁶	24.0 ¹¹⁷	30	18 00	24	52		55 39	38 61					
10	331	34.0		153	32.8 ¹⁰⁶	35.6 ¹¹⁶	20	17 59	21	47		17 58 43	37 58					
11	346	34.2	+1 19.4	168	02.5 ¹⁰⁷	+1 47.3 ¹¹⁷	10 N	17 58	18 19	18 43		18 00 47	5 37 53					
12	1	34.4	+1 18.4	182	32.2 ¹⁰⁷	+1 58.9 ¹¹⁶	0	17 57	18 18	18 42		18 03 49	5 36 50					
13	16	34.6		197	01.9 ¹⁰⁷	+2 10.5 ¹¹⁶	10 S	56	17	42		05 53	36 46					
14	31	34.9		211	31.6 ¹⁰⁷	22.1 ¹¹⁶	20	55	17	43		07 57	35 43					
15	46	35.1		226	01.4 ¹⁰⁸	33.7 ¹¹⁶	30	55	19	46		10 61	34 39					
16	61	35.3		240	31.1 ¹⁰⁷	45.2 ¹¹⁵	35	54	20	49		12 63	34 36					
17	76	35.5	+1 13.6	255	00.9 ¹⁰⁸	+2 56.8 ¹¹⁶	40	17 54	18 21	18 52		18 14 66	5 34 33					
18	91	35.8	+1 12.6	269	30.7 ¹⁰⁸	+3 08.3 ¹¹⁵	45	17 53	18 23	18 57		18 16 69	5 33 31					
19	106	36.0		284	00.5 ¹⁰⁸	19.7 ¹¹⁴	50	53	25	19 03		19 73	32 27					
20	121	36.2		298	30.4 ¹⁰⁹	31.2 ¹¹⁵	52	53	26	06		20 75	32 25					
21	136	36.4		313	00.2 ¹⁰⁸	42.6 ¹¹⁴	54	53	28	10		21 77	32 23					
22	151	36.7		327	30.1 ¹⁰⁹	+3 53.9 ¹¹³	56	52	29	13		23 79	31 22					
23	166	36.9		342	00.0 ¹⁰⁹	+4 05.3 ¹¹⁴	58	52	31	18		24 82	31 19					
24	181	37.1	+1 06.8	356	29.9 ¹⁰⁹	+4 16.6 ¹¹³	60 S	17 52	18 33	19 23		18 26 84	5 31 16					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 0 ^h 07 ^m 7		Mag: -4.1 PMG: 14 ^h 32 ^m		Mag: +1.6 PMG: 9 ^h 14 ^m		Mag: -2.2 PMG: 7 ^h 20 ^m			Mag: +0.7 PMG: 14 ^h 34 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	358	03.8	141	58.7	-15	41.7	221	24.2	+17	47.0	249	50.1	+22	17.0	140	57.7	-12	20.5
1	13	06.3	156	58.4		42.7	236	25.1		46.6	264	52.2		17.0	155	59.9		20.6
2	28	08.8	171	58.2		43.8	251	26.0		46.1	279	54.3		17.0	171	02.2		20.7
3	43	11.2	186	57.9		44.9	266	26.9		45.7	294	56.3		16.9	186	04.4		20.8
4	58	13.7	201	57.6		46.0	281	27.8		45.3	309	58.4		16.9	201	06.6		20.9
5	73	16.2	216	57.3	-15	47.0	296	28.6	+17	44.8	325	00.5	+22	16.8	216	08.8	-12	21.0
6	88	18.6	231	57.0	-15	48.1	311	29.5	+17	44.4	340	02.6	+22	16.8	231	11.1	-12	21.0
7	103	21.1	246	56.7		49.2	326	30.4		44.0	355	04.7		16.8	246	13.3		21.1
8	118	23.6	261	56.4		50.3	341	31.3		43.6	10	06.8		16.7	261	15.5		21.2
9	133	26.0	276	56.1		51.4	356	32.2		43.1	25	08.9		16.7	276	17.7		21.3
10	148	28.5	291	55.8		52.4	11	33.1		42.7	40	11.0		16.6	291	20.0		21.4
11	163	30.9	306	55.5	-15	53.5	26	34.0	+17	42.3	55	13.1	+22	16.6	306	22.2	-12	21.5
12	178	33.4	321	55.2	-15	54.6	41	34.9	+17	41.8	70	15.2	+22	16.6	321	24.4	-12	21.6
13	193	35.9	336	54.9		55.6	56	35.8		41.4	85	17.3		16.5	336	26.6		21.6
14	208	38.3	351	54.6		56.7	71	36.7		41.0	100	19.4		16.5	351	28.9		21.7
15	223	40.8	6	54.3		57.8	86	37.6		40.5	115	21.5		16.5	6	31.1		21.8
16	238	43.3	21	54.0		58.9	101	38.5		40.1	130	23.5		16.4	21	33.3		21.9
17	253	45.7	36	53.7	-15	59.9	116	39.4	+17	39.7	145	25.6	+22	16.4	36	35.5	-12	22.0
18	268	48.2	51	53.5	-16	01.0	131	40.3	+17	39.2	160	27.7	+22	16.3	51	37.8	-12	22.1
19	283	50.7	66	53.2		02.1	146	41.2		38.8	175	29.8		16.3	66	40.0		22.1
20	298	53.1	81	52.9		03.1	161	42.1		38.4	190	31.9		16.3	81	42.2		22.2
21	313	55.6	96	52.6		04.2	176	43.0		38.0	205	34.0		16.2	96	44.4		22.3
22	328	58.0	111	52.3		05.3	191	43.9		37.5	220	36.1		16.2	111	46.7		22.4
23	344	00.5	126	52.0		06.3	206	44.8		37.1	235	38.2		16.1	126	48.9		22.5
24	359	03.0	141	51.7	-16	07.4	221	45.7	+17	36.7	250	40.3	+22	16.1	141	51.1	-12	22.6
Dif	—		-3		-11		+9		-4		+21		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 53 ^m 3			Edad: 14 ^d 5 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'6 SD: 15'8 PMG: 0 ^h 14 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	181	37.1	+1 06.8	356	29.9	+4 16.6	60 N	4 07	4 58	5 40	17 58	19	7 06	83				
1	196	37.3	05.8	10	59.8 ¹⁰⁹	27.9 ¹¹³	58	14	5 01	41	18 02	21	03	80				
2	211	37.5	04.8	25	29.7 ¹⁰⁹	39.1 ¹¹²	56	19	04	41	06	23	7 00	78				
3	226	37.8	03.9	39	59.7 ¹¹⁰	+4 50.3 ¹¹²	54	24	07	42	09	25	6 58	75				
4	241	38.0	02.9	54	29.6 ¹⁰⁹	+5 01.5 ¹¹²	52	29	09	43	12	27	56	73				
5	256	38.2	+1 01.9	68	59.6 ¹¹⁰	+5 12.6 ¹¹¹	50	4 33	5 11	5 43	18 15	28	6 54	71				
6	271	38.4	+1 01.0	83	29.6 ¹¹⁰	+5 23.7 ¹¹¹	45	4 41	5 15	5 45	18 21	32	6 49	68				
7	286	38.7	+1 00.0	97	59.6 ¹¹⁰	34.8 ¹¹¹	40	47	19	46	26	35	45	66				
8	301	38.9	+0 59.0	112	29.6 ¹¹⁰	45.8 ¹¹⁰	35	52	21	47	30	37	42	63				
9	316	39.1	58.0	126	59.6 ¹¹⁰	+5 56.7 ¹⁰⁹	30	4 55	23	47	34	39	39	61				
10	331	39.3	57.1	141	29.6 ¹¹⁰	+6 07.7 ¹¹⁰	20	5 01	26	48	41	43	35	56				
11	346	39.6	+0 56.1	155	59.6 ¹¹⁰	+6 18.5 ¹⁰⁸	10 N	5 04	5 28	5 49	18 47	46	6 30	53				
12	1	39.8	+0 55.1	170	29.7 ¹¹¹	+6 29.4 ¹⁰⁹	0	5 05	5 29	5 50	18 52	50	6 26	50				
13	16	40.0	54.2	184	59.8 ¹¹¹	40.2 ¹⁰⁸	10 S	05	30	51	18 58	52	22	47				
14	31	40.2	53.2	199	29.8 ¹¹⁰	+6 50.9 ¹⁰⁷	20	04	29	51	19 04	56	18	43				
15	46	40.4	52.2	213	59.9 ¹¹¹	+7 01.6 ¹⁰⁷	30	5 00	28	52	11	59	13	39				
16	61	40.7	51.3	228	30.0 ¹¹¹	12.3 ¹⁰⁷	35	4 58	27	52	15	62	10	37				
17	76	40.9	+0 50.3	243	00.1 ¹¹¹	+7 22.9 ¹⁰⁶	40	4 54	5 26	5 53	19 20	64	6 07	35				
18	91	41.1	+0 49.3	257	30.2 ¹¹¹	+7 33.4 ¹⁰⁵	45	4 49	5 24	5 53	19 25	67	6 04	31				
19	106	41.3	48.3	272	00.3 ¹¹¹	43.9 ¹⁰⁵	50	43	21	53	32	70	5 59	28				
20	121	41.6	47.4	286	30.4 ¹¹¹	+7 54.4 ¹⁰⁵	52	40	20	53	35	72	57	26				
21	136	41.8	46.4	301	00.6 ¹¹²	+8 04.7 ¹⁰³	54	37	18	53	38	74	55	24				
22	151	42.0	45.4	315	30.7 ¹¹¹	15.1 ¹⁰⁴	56	33	17	54	42	76	53	22				
23	166	42.2	44.5	330	00.8 ¹¹¹	25.4 ¹⁰³	58	28	15	54	46	78	50	20				
24	181	42.4	+0 43.5	344	31.0 ¹¹²	+8 35.6 ¹⁰²	60 S	4 23	5 12	5 54	19 50	81	5 47	18				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 03 ^m 8		Mag: -4.1 PMG: 14 ^h 33 ^m			Mag: +1.6 PMG: 9 ^h 12 ^m			Mag: -2.2 PMG: 7 ^h 16 ^m			Mag: +0.7 PMG: 14 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	359	03.0	141	51.7	-16	07.4	221	45.7	+17	36.7	250	40.3	+22	16.1	141	51.1	-12	22.6
1	14	05.4	156	51.4		08.5	236	46.6		36.2	265	42.4		16.1	156	53.4		22.7
2	29	07.9	171	51.1		09.5	251	47.5		35.8	280	44.5		16.0	171	55.6		22.7
3	44	10.4	186	50.8		10.6	266	48.4		35.4	295	46.6		16.0	186	57.8		22.8
4	59	12.8	201	50.5		11.7	281	49.3		34.9	310	48.7		15.9	202	00.0		22.9
5	74	15.3	216	50.2	-16	12.7	296	50.2	+17	34.5	325	50.8	+22	15.9	217	02.2	-12	23.0
6	89	17.8	231	49.9	-16	13.8	311	51.1	+17	34.1	340	52.9	+22	15.9	232	04.5	-12	23.1
7	104	20.2	246	49.6		14.9	326	52.0		33.6	355	55.0		15.8	247	06.7		23.2
8	119	22.7	261	49.3		15.9	341	52.9		33.2	10	57.1		15.8	262	08.9		23.3
9	134	25.2	276	49.0		17.0	356	53.8		32.8	25	59.2		15.7	277	11.1		23.3
10	149	27.6	291	48.7		18.0	11	54.7		32.3	41	01.3		15.7	292	13.4		23.4
11	164	30.1	306	48.4	-16	19.1	26	55.6	+17	31.9	56	03.4	+22	15.7	307	15.6	-12	23.5
12	179	32.5	321	48.1	-16	20.2	41	56.5	+17	31.5	71	05.5	+22	15.6	322	17.8	-12	23.6
13	194	35.0	336	47.8		21.2	56	57.4		31.0	86	07.6		15.6	337	20.0		23.7
14	209	37.5	351	47.5		22.3	71	58.3		30.6	101	09.7		15.6	352	22.3		23.8
15	224	39.9	6	47.2		23.3	86	59.2		30.2	116	11.8		15.5	7	24.5		23.8
16	239	42.4	21	46.9		24.4	102	00.1		29.7	131	13.9		15.5	22	26.7		23.9
17	254	44.9	36	46.6	-16	25.5	117	01.0	+17	29.3	146	16.0	+22	15.4	37	28.9	-12	24.0
18	269	47.3	51	46.3	-16	26.5	132	01.9	+17	28.8	161	18.1	+22	15.4	52	31.2	-12	24.1
19	284	49.8	66	46.0		27.6	147	02.8		28.4	176	20.2		15.4	67	33.4		24.2
20	299	52.3	81	45.7		28.6	162	03.7		28.0	191	22.3		15.3	82	35.6		24.3
21	314	54.7	96	45.3		29.7	177	04.6		27.5	206	24.4		15.3	97	37.8		24.4
22	329	57.2	111	45.0		30.7	192	05.5		27.1	221	26.5		15.2	112	40.1		24.4
23	344	59.6	126	44.7		31.8	207	06.4		26.7	236	28.6		15.2	127	42.3		24.5
24	0	02.1	141	44.4	-16	32.8	222	07.3	+17	26.2	251	30.7	+22	15.2	142	44.5	-12	24.6
Dif	—		-3		-11		+9		-4		+21		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 15 ^d 5	PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 1 20 ^h : 56 ^m 9	SD: 15 ^h 7			R°: 49 ^m							
	PMG: 11 ^h 53 ^m 0					PMG: 1 ^h 04 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	181	42.4	+0 43.5	344	31.0	+8 35.6	102	60 N	18 03	18 44	19 34	18 17 21		8 29 79		
1	196	42.7		359	01.2 ¹¹²	45.8 ¹⁰²		58	02	41	28	23 24		23 77		
2	211	42.9		13	31.3 ¹¹¹	+8 55.9 ¹⁰¹		56	01	39	23	29 26		18 74		
3	226	43.1		28	01.5 ¹¹²	+9 05.9 ¹⁰⁰		54	01	36	18	34 28		13 73		
4	241	43.3		42	31.7 ¹¹²	15.9 ¹⁰⁰		52	01	34	14	39 30		09 71		
5	256	43.6	+0 38.6	57	01.8 ¹¹¹	+9 25.9 ¹⁰⁰		50	18 00	18 32	19 10	18 43 32		8 05 69		
6	271	43.8	+0 37.7	71	32.0 ¹¹²	+9 35.8 ⁹⁹		45	17 59	18 29	19 03	18 53 34		7 57 66		
7	286	44.0		86	02.2 ¹¹²	45.6 ⁹⁸		40	59	26	18 57	19 01 36		51 62		
8	301	44.2		100	32.4 ¹¹²	+9 55.3 ⁹⁷		35	58	23	53	07 39		45 60		
9	316	44.4		115	02.6 ¹¹²	+10 05.0 ⁹⁷		30	58	22	49	13 41		40 58		
10	331	44.7		129	32.8 ¹¹²	14.7 ⁹⁷		20	57	19	45	24 44		31 55		
11	346	44.9	+0 32.8	144	03.0 ¹¹²	+10 24.2 ⁹⁵		10 N	17 57	18 18	18 42	19 33 47		7 23 52		
12	1	45.1	+0 31.8	158	33.2 ¹¹²	+10 33.7 ⁹⁵		0	17 56	18 17	18 41	19 42 49		7 16 49		
13	16	45.3		173	03.4 ¹¹²	43.2 ⁹⁵		10 S	56	17	41	19 50 52		09 46		
14	31	45.6		187	33.6 ¹¹²	+10 52.5 ⁹³		20	56	18	43	20 00 54		7 01 43		
15	46	45.8		202	03.8 ¹¹²	+11 01.8 ⁹³		30	56	20	47	10 58		6 52 40		
16	61	46.0		216	34.1 ¹¹³	11.1 ⁹³		35	56	21	50	17 59		47 38		
17	76	46.2	+0 27.0	231	04.3 ¹¹²	+11 20.2 ⁹¹		40	17 56	18 23	18 54	20 24 61		6 42 35		
18	91	46.4	+0 26.0	245	34.5 ¹¹²	+11 29.3 ⁹¹		45	17 56	18 25	19 00	20 32 64		6 35 33		
19	106	46.7		260	04.7 ¹¹²	38.4 ⁹¹		50	56	28	06	42 67		27 30		
20	121	46.9		274	34.9 ¹¹²	47.3 ⁸⁹		52	56	30	10	47 68		23 29		
21	136	47.1		289	05.2 ¹¹³	+11 56.2 ⁸⁹		54	56	31	13	52 70		19 27		
22	151	47.3		303	35.4 ¹¹²	+12 05.0 ⁸⁸		56	56	33	18	20 58 72		15 25		
23	166	47.5		318	05.6 ¹¹²	13.8 ⁸⁸		58	56	36	22	21 04 74		10 23		
24	181	47.8	+0 20.2	332	35.9 ¹¹³	+12 22.5 ⁸⁷		60 S	17 57	18 38	19 28	21 11 77		6 05 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 55 ^m 9		Mag: -4.2 PMG: 14 ^h 33 ^m		Mag: +1.6 PMG: 9 ^h 11 ^m		Mag: -2.2 PMG: 7 ^h 13 ^m		Mag: +0.7 PMG: 14 ^h 27 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	0	02.1	141	44.4	-16	32.8	251	30.7	+22	15.2	142	44.5	-12	24.6		
1	15	04.6	156	44.1		33.9	266	32.8		15.1	157	46.7		24.7		
2	30	07.0	171	43.8		34.9	281	34.9		15.1	172	48.9		24.8		
3	45	09.5	186	43.5		36.0	296	37.0		15.0	187	51.2		24.9		
4	60	12.0	201	43.2		37.0	311	39.1		15.0	202	53.4		25.0		
5	75	14.4	216	42.9	-16	38.1	326	41.2	+22	15.0	217	55.6	-12	25.0		
6	90	16.9	231	42.6	-16	39.1	341	43.3	+22	14.9	232	57.8	-12	25.1		
7	105	19.4	246	42.3		40.2	356	45.4		14.9	248	00.1		25.2		
8	120	21.8	261	42.0		41.2	11	47.5		14.9	263	02.3		25.3		
9	135	24.3	276	41.7		42.3	26	49.6		14.8	278	04.5		25.4		
10	150	26.8	291	41.4		43.3	41	51.7		14.8	293	06.7		25.5		
11	165	29.2	306	41.1	-16	44.4	56	53.8	+22	14.7	308	09.0	-12	25.6		
12	180	31.7	321	40.8	-16	45.4	71	55.9	+22	14.7	323	11.2	-12	25.6		
13	195	34.1	336	40.4		46.5	86	58.0		14.7	338	13.4		25.7		
14	210	36.6	351	40.1		47.5	102	00.1		14.6	353	15.6		25.8		
15	225	39.1	6	39.8		48.5	117	02.2		14.6	8	17.8		25.9		
16	240	41.5	21	39.5		49.6	132	04.3		14.5	23	20.1		26.0		
17	255	44.0	36	39.2	-16	50.6	147	06.4	+22	14.5	38	22.3	-12	26.1		
18	270	46.5	51	38.9	-16	51.7	162	08.5	+22	14.5	53	24.5	-12	26.2		
19	285	48.9	66	38.6		52.7	177	10.7		14.4	68	26.7		26.2		
20	300	51.4	81	38.3		53.7	192	12.8		14.4	83	28.9		26.3		
21	315	53.9	96	38.0		54.8	207	14.9		14.4	98	31.2		26.4		
22	330	56.3	111	37.7		55.8	222	17.0		14.3	113	33.4		26.5		
23	345	58.8	126	37.3		56.9	237	19.1		14.3	128	35.6		26.6		
24	1	01.2	141	37.0	-16	57.9	252	21.2	+22	14.2	143	37.8	-12	26.7		
Dif	—		-3		-10		+9		-4		+21		0		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'9 PMG: 11 ^h 52 ^m 6			Edad: 16 ^d 5 PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'2 PMG: 1 ^h 53 ^m Rº: 50 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	181	47.8	+0	20.2	332	35.9	+12	22.5	60 N	4	12	5	03	5	44	18	38	27			
1	196	48.0			347	06.1 ¹¹²		31.0 ⁸⁵	58	18	06		45		47	29	40	72			
2	211	48.2			1	36.3 ¹¹²		39.6 ⁸⁶	56	24	08		45		18	55	31	32	70		
3	226	48.4			16	06.6 ¹¹³		48.0 ⁸⁴	54	28	10		46		19	02	33	26	68		
4	241	48.7			30	36.8 ¹¹²	+12	56.4 ⁸⁴	52	32	12		46		09	34	20	67			
5	256	48.9	+0	15.3	45	07.0 ¹¹²	+13	04.7 ⁸³	50	4	36	5	14	5	46	19	15	35	9	14	66
6	271	49.1	+0	14.3	59	37.3 ¹¹³	+13	12.9 ⁸²	45	4	43	5	18	5	47	19	27	38	9	03	63
7	286	49.3			74	07.5 ¹¹²		21.1 ⁸⁰	40	49	21		48		37	40	8	53	61		
8	301	49.5			88	37.8 ¹¹³		29.1 ⁸⁰	35	53	23		48		46	42	45	59			
9	316	49.8			103	08.0 ¹¹²		37.1 ⁸⁰	30	4	57	24	48		19	54	43	38	57		
10	331	50.0			117	38.2 ¹¹²		45.0 ⁷⁹	20	5	01	27	49		20	08	45	26	54		
11	346	50.2	+0	09.5	132	08.5 ¹¹³	+13	52.9 ⁷⁹	10 N	5	04	5	28	5	49	20	20	47	8	15	52
12	1	50.4	+0	08.5	146	38.7 ¹¹²	+14	00.6 ⁷⁷	0	5	05	5	29	5	49	20	31	49	8	05	49
13	16	50.6			161	09.0 ¹¹³		08.3 ⁷⁷	10 S	5	04	29	50		42	51	7	55	47		
14	31	50.9			175	39.2 ¹¹²		15.9 ⁷⁶	20	5	02	28	50		20	54	53	44	45		
15	46	51.1			190	09.5 ¹¹³		23.4 ⁷⁵	30	4	58	26	49		21	08	56	32	42		
16	61	51.3			204	39.7 ¹¹²		30.8 ⁷⁴	35	55	24	49			16	57	25	40			
17	76	51.5	+0	03.6	219	09.9 ¹¹²	+14	38.2 ⁷⁴	40	4	51	5	22	5	49	21	25	59	7	17	39
18	91	51.7	+0	02.7	233	40.2 ¹¹³	+14	45.5 ⁷³	45	4	45	5	20	5	49	21	36	61	7	08	36
19	106	52.0			248	10.4 ¹¹²		52.6 ⁷¹	50	39	17	49			49	63	6	57	33		
20	121	52.2	+0	00.7	262	40.7 ¹¹³	+14	59.7 ⁷¹	52	35	15	49			21	55	65	52	31		
21	136	52.4	-0	00.3	277	10.9 ¹¹²	+15	06.8 ⁶⁹	54	31	13	48			22	02	66	46	30		
22	151	52.6			291	41.2 ¹¹³		13.7 ⁶⁸	56	27	11	48			10	67	40	28			
23	166	52.8			306	11.4 ¹¹²		20.5 ⁶⁸	58	22	09	48			18	69	33	26			
24	181	53.1	-0	03.2	320	41.6 ¹¹²	+15	27.3 ⁶⁸	60 S	4	16	5	06	5	48	22	28	71	6	25	24
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 52 ^m 0			Mag: -4.2 PMG: 14 ^h 34 ^m			Mag: +1.6 PMG: 9 ^h 10 ^m			Mag: -2.2 PMG: 7 ^h 10 ^m			Mag: +0.7 PMG: 14 ^h 23 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	1	01.2	141	37.0	-16	57.9	222	29.0	+17	15.7	252	21.2	+22	14.2	143	37.8	-12	26.7			
1	16	03.7	156	36.7	-16	58.9	237	29.9		15.3	267	23.3		14.2	158	40.0		26.8			
2	31	06.2	171	36.4	-17	00.0	252	30.8		14.8	282	25.4		14.2	173	42.3		26.8			
3	46	08.6	186	36.1	-17	01.0	267	31.8		14.4	297	27.5		14.1	188	44.5		26.9			
4	61	11.1	201	35.8		02.0	282	32.7		14.0	312	29.6		14.1	203	46.7		27.0			
5	76	13.6	216	35.5	-17	03.1	297	33.6	+17	13.5	327	31.7	+22	14.0	218	48.9	-12	27.1			
6	91	16.0	231	35.2	-17	04.1	312	34.5	+17	13.1	342	33.8	+22	14.0	233	51.2	-12	27.2			
7	106	18.5	246	34.8		05.1	327	35.4		12.6	357	35.9		14.0	248	53.4		27.3			
8	121	21.0	261	34.5		06.2	342	36.3		12.2	12	38.1		13.9	263	55.6		27.4			
9	136	23.4	276	34.2		07.2	357	37.2		11.7	27	40.2		13.9	278	57.8		27.4			
10	151	25.9	291	33.9		08.2	12	38.1		11.3	42	42.3		13.9	294	00.0		27.5			
11	166	28.4	306	33.6	-17	09.3	27	39.0	+17	10.9	57	44.4	+22	13.8	309	02.3	-12	27.6			
12	181	30.8	321	33.3	-17	10.3	42	39.9	+17	10.4	72	46.5	+22	13.8	324	04.5	-12	27.7			
13	196	33.3	336	33.0		11.3	57	40.9		10.0	87	48.6		13.7	339	06.7		27.8			
14	211	35.7	351	32.6		12.3	72	41.8		09.5	102	50.7		13.7	354	08.9		27.9			
15	226	38.2	6	32.3		13.4	87	42.7		09.1	117	52.8		13.7	9	11.1		28.0			
16	241	40.7	21	32.0		14.4	102	43.6		08.7	132	54.9		13.6	24	13.4		28.0			
17	256	43.1	36	31.7	-17	15.4	117	44.5	+17	08.2	147	57.1	+22	13.6	39	15.6	-12	28.1			
18	271	45.6	51	31.4	-17	16.5	132	45.4	+17	07.8	162	59.2	+22	13.6	54	17.8	-12	28.2			
19	286	48.1	66	31.1		17.5	147	46.3		07.3	178	01.3		13.5	69	20.0		28.3			
20	301	50.5	81	30.7		18.5	162	47.2		06.9	193	03.4		13.5	84	22.2		28.4			
21	316	53.0	96	30.4		19.5	177	48.1		06.4	208	05.5		13.4	99	24.4		28.5			
22	331	55.5	111	30.1		20.5	192	49.1		06.0	223	07.6		13.4	114	26.7		28.6			
23	346	57.9	126	29.8		21.6	207	50.0		05.5	238	09.7		13.4	129	28.9		28.7			
24	2	00.4	141	29.5	-17	22.6	222	50.9	+17	05.1	253	11.8	+22	13.3	144	31.1	-12	28.7			
Dif	—		-3	-10			+9	-4			+21	0			+22	-1					

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9		Edad: 17 ^d 5 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5															
	PMG: 11 ^h 52 ^m 3		SD: 15'3 PMG: 2 ^h 43 ^m R°: 49 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	181	53.1	-0	03.2	320	41.6	+15 27.3	60 N	17 56	18 38	19 28	19 05 34	11 02 68					
1	196	53.3		04.2	335	11.9 ¹¹³	34.0 ⁶⁷	58	56	35	22	16 36	10 52 65					
2	211	53.5		05.1	349	42.1 ¹¹²	40.6 ⁶⁶	56	56	33	17	26 37	42 64					
3	226	53.7		06.1	4	12.4 ¹¹³	47.1 ⁶⁵	54	56	31	13	35 38	34 63					
4	241	53.9		07.1	18	42.6 ¹¹²	53.5 ⁶⁴	52	56	29	09	43 38	27 61					
5	256	54.2	-0	08.0	33	12.9 ¹¹³	+15 59.8 ⁶³	50	17 56	18 28	19 06	19 50 39	10 20 60					
6	271	54.4	-0	09.0	47	43.1 ¹¹²	+16 06.1 ⁶³	45	17 56	18 25	18 59	20 05 41	10 06 58					
7	286	54.6		10.0	62	13.4 ¹¹³	12.3 ⁶²	40	55	22	54	17 43	9 54 57					
8	301	54.8		11.0	76	43.6 ¹¹²	18.3 ⁶⁰	35	55	21	50	28 43	44 55					
9	316	55.0		11.9	91	13.9 ¹¹³	24.3 ⁶⁰	30	55	19	47	37 45	35 54					
10	331	55.3		12.9	105	44.1 ¹¹²	30.2 ⁵⁹	20	55	17	43	20 53 46	20 52					
11	346	55.5	-0	13.9	120	14.4 ¹¹³	+16 36.0 ⁵⁸	10 N	17 55	18 16	18 41	21 07 48	9 07 51					
12	1	55.7	-0	14.9	134	44.7 ¹¹³	+16 41.7 ⁵⁷	0	17 56	18 16	18 40	21 20 49	8 54 50					
13	16	55.9		15.8	149	14.9 ¹¹²	47.4 ⁵⁷	10 S	56	17	41	33 50	42 48					
14	31	56.1		16.8	163	45.2 ¹¹³	52.9 ⁵⁵	20	56	18	44	21 47 52	29 46					
15	46	56.4		17.8	178	15.4 ¹¹²	+16 58.4 ⁵⁵	30	57	21	49	22 04 53	14 44					
16	61	56.6		18.8	192	45.7 ¹¹³	+17 03.7 ⁵³	35	57	23	52	13 54	8 05 43					
17	76	56.8	-0	19.7	207	16.0 ¹¹³	+17 09.0 ⁵³	40	17 58	18 25	18 56	22 24 55	7 56 41					
18	91	57.0	-0	20.7	221	46.2 ¹¹²	+17 14.2 ⁵²	45	17 58	18 28	19 02	22 37 56	7 44 39					
19	106	57.2		21.7	236	16.5 ¹¹³	19.3 ⁵¹	50	59	31	10	22 52 58	30 37					
20	121	57.5		22.6	250	46.8 ¹¹³	24.3 ⁵⁰	52	17 59	33	13	23 00 58	23 37					
21	136	57.7		23.6	265	17.1 ¹¹³	29.2 ⁴⁹	54	18 00	35	17	08 59	16 35					
22	151	57.9		24.6	279	47.4 ¹¹³	34.0 ⁴⁸	56	00	37	22	17 60	7 08 34					
23	166	58.1		25.6	294	17.6 ¹¹²	38.7 ⁴⁷	58	01	40	27	27 62	6 59 32					
24	181	58.3	-0	26.5	308	47.9 ¹¹³	+17 43.3 ⁴⁶	60 S	18 01	18 43	19 33	23 39 63	6 49 30					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 23 ^h 48 ^m 1		Mag: -4.2 PMG: 14 ^h 34 ^m		Mag: +1.6 PMG: 9 ^h 08 ^m		Mag: -2.2 PMG: 7 ^h 06 ^m		Mag: +0.7 PMG: 14 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	2	00.4	141	29.5	-17	22.6	222	50.9	+17	05.1	253	11.8	+22	13.3	144	31.1	-12	28.7
1	17	02.9	156	29.1		23.6	237	51.8		04.7	268	14.0		13.3	159	33.3		28.8
2	32	05.3	171	28.8		24.6	252	52.7		04.2	283	16.1		13.2	174	35.5		28.9
3	47	07.8	186	28.5		25.7	267	53.6		03.8	298	18.2		13.2	189	37.8		29.0
4	62	10.2	201	28.2		26.7	282	54.5		03.3	313	20.3		13.2	204	40.0		29.1
5	77	12.7	216	27.9	-17	27.7	297	55.5	+17	02.9	328	22.4	+22	13.1	219	42.2	-12	29.2
6	92	15.2	231	27.5	-17	28.7	312	56.4	+17	02.4	343	24.5	+22	13.1	234	44.4	-12	29.3
7	107	17.6	246	27.2		29.7	327	57.3		02.0	358	26.6		13.1	249	46.6		29.3
8	122	20.1	261	26.9		30.7	342	58.2		01.5	13	28.8		13.0	264	48.9		29.4
9	137	22.6	276	26.6		31.8	357	59.1		01.1	28	30.9		13.0	279	51.1		29.5
10	152	25.0	291	26.3		32.8	13	00.0		00.7	43	33.0		12.9	294	53.3		29.6
11	167	27.5	306	25.9	-17	33.8	28	00.9	+17	00.2	58	35.1	+22	12.9	309	55.5	-12	29.7
12	182	30.0	321	25.6	-17	34.8	43	01.9	+16	59.8	73	37.2	+22	12.9	324	57.7	-12	29.8
13	197	32.4	336	25.3		35.8	58	02.8		59.3	88	39.3		12.8	339	59.9		29.9
14	212	34.9	351	25.0		36.8	73	03.7		58.9	103	41.5		12.8	355	02.2		29.9
15	227	37.3	6	24.6		37.8	88	04.6		58.4	118	43.6		12.8	10	04.4		30.0
16	242	39.8	21	24.3		38.8	103	05.5		58.0	133	45.7		12.7	25	06.6		30.1
17	257	42.3	36	24.0	-17	39.9	118	06.4	+16	57.5	148	47.8	+22	12.7	40	08.8	-12	30.2
18	272	44.7	51	23.7	-17	40.9	133	07.4	+16	57.1	163	49.9	+22	12.6	55	11.0	-12	30.3
19	287	47.2	66	23.3		41.9	148	08.3		56.6	178	52.0		12.6	70	13.2		30.4
20	302	49.7	81	23.0		42.9	163	09.2		56.2	193	54.2		12.6	85	15.5		30.5
21	317	52.1	96	22.7		43.9	178	10.1		55.7	208	56.3		12.5	100	17.7		30.6
22	332	54.6	111	22.4		44.9	193	11.0		55.3	223	58.4		12.5	115	19.9		30.6
23	347	57.1	126	22.0		45.9	208	11.9		54.8	239	00.5		12.5	130	22.1		30.7
24	2	59.5	141	21.7	-17	46.9	223	12.9	+16	54.4	254	02.6	+22	12.4	145	24.3	-12	30.8
Dif	—		-3		-10		+9		-4		+21		0		+22		-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 18 ^d 5 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 1 20 ^h : 55 ^m 0												
	PMG: 11 ^h 51 ^m 9			SD: 15 ^h 1 PMG: 3 ^h 32 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	58.3	-0 26.5	308	47.9	+17 43.3	46	60 N	4 18	5 07	5 49	19 39	42	12 10	58	
1	196	58.5	27.5	323	18.2 ¹¹³	47.9	46	58	23	10	49	19 52	43	11 57	58	
2	211	58.8	28.5	337	48.5 ¹¹³	52.3	44	56	28	12	49	20 03	44	46	57	
3	226	59.0	29.5	352	18.8 ¹¹³	+17 56.7	44	54	32	14	49	13 44	37	56		
4	241	59.2	30.4	6 49.1 ¹¹³	+18 01.0	43		52	36	16	49	21 45	28	56		
5	256	59.4	-0 31.4	21 19.4 ¹¹³	+18 05.1	41		50	4 39	5 17	5 49	20 29	45	11 20	55	
6	271	59.6	-0 32.4	35 49.7 ¹¹³	+18 09.2	41		45	4 46	5 20	5 49	20 46	46	11 04	54	
7	286	59.9	33.3	50 20.1 ¹¹⁴	13.2	40		40	51	22	49	21 00	46	10 51	53	
8	302	00.1	34.3	64 50.4 ¹¹³	17.1	39		35	55	24	49	11 47	39	53		
9	317	00.3	35.3	79 20.7 ¹¹³	20.9	38		30	4 58	26	49	22 47	29	52		
10	332	00.5	36.3	93 51.0 ¹¹³	24.6	37		20	5 02	27	49	39 48	10 12	51		
11	347	00.7	-0 37.2	108 21.4 ¹¹⁴	+18 28.2	36		10 N	5 04	5 28	5 49	21 55	48	9 58	49	
12	2	00.9	-0 38.2	122 51.7 ¹¹³	+18 31.7	35		0	5 04	5 28	5 49	22 09	49	9 44	49	
13	17	01.2	39.2	137 22.1 ¹¹⁴	35.2	35		10 S	03	27	48	23 50	30	48		
14	32	01.4	40.2	151 52.4 ¹¹³	38.5	33		20	5 00	26	48	39 49	9 15	47		
15	47	01.6	41.1	166 22.8 ¹¹⁴	41.7	32		30	4 55	23	47	22 57	50	8 58	46	
16	62	01.8	42.1	180 53.2 ¹¹⁴	44.9	32		35	52	21	46	23 07	50	48	45	
17	77	02.0	-0 43.1	195 23.6 ¹¹⁴	+18 47.9	30		40	4 47	5 19	5 46	23 19	51	8 37	44	
18	92	02.2	-0 44.1	209 54.0 ¹¹⁴	+18 50.9	30		45	4 41	5 16	5 45	23 33	51	8 23	44	
19	107	02.5	45.0	224 24.4 ¹¹⁴	53.8	29		50	34	12	44	50 52	07	43		
20	122	02.7	46.0	238 54.8 ¹¹⁴	56.5	27		52	30	10	44	23 58	52	8 00	41	
21	137	02.9	47.0	253 25.2 ¹¹⁴	+18 59.2	26		54	26	08	43	** ** *	**	7 51	41	
22	152	03.1	48.0	267 55.6 ¹¹⁴	+19 01.8	26		56	21	06	43	** ** *	**	42	40	
23	167	03.3	48.9	282 26.0 ¹¹⁴	04.3	25		58	16	03	42	** ** *	**	31	39	
24	182	03.5	-0 49.9	296 56.5 ¹¹⁵	+19 06.7	24		60 S	4 10	5 00	5 42	** ** *	**	7 19	38	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 44 ^m 1		Mag: -4.2 PMG: 14 ^h 35 ^m		Mag: +1.6 PMG: 9 ^h 07 ^m		Mag: -2.2 PMG: 7 ^h 03 ^m		Mag: +0.7 PMG: 14 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	2	59.5	141	21.7	-17	46.9	223	12.9	+16	54.4	254	02.6	+22	12.4	145	24.3	-12	30.8
1	18	02.0	156	21.4		47.9	238	13.8		54.0	269	04.8		12.4	160	26.5		30.9
2	33	04.5	171	21.1		48.9	253	14.7		53.5	284	06.9		12.3	175	28.8		31.0
3	48	06.9	186	20.7		49.9	268	15.6		53.1	299	09.0		12.3	190	31.0		31.1
4	63	09.4	201	20.4		50.9	283	16.5		52.6	314	11.1		12.3	205	33.2		31.2
5	78	11.8	216	20.1	-17	51.9	298	17.5	+16	52.2	329	13.2	+22	12.2	220	35.4	-12	31.2
6	93	14.3	231	19.8	-17	52.9	313	18.4	+16	51.7	344	15.4	+22	12.2	235	37.6	-12	31.3
7	108	16.8	246	19.4		53.9	328	19.3		51.3	359	17.5		12.2	250	39.8		31.4
8	123	19.2	261	19.1		54.9	343	20.2		50.8	14	19.6		12.1	265	42.1		31.5
9	138	21.7	276	18.8		55.9	358	21.1		50.4	29	21.7		12.1	280	44.3		31.6
10	153	24.2	291	18.4		56.9	13	22.1		49.9	44	23.9		12.0	295	46.5		31.7
11	168	26.6	306	18.1	-17	57.9	28	23.0	+16	49.5	59	26.0	+22	12.0	310	48.7	-12	31.8
12	183	29.1	321	17.8	-17	58.9	43	23.9	+16	49.0	74	28.1	+22	12.0	325	50.9	-12	31.9
13	198	31.6	336	17.5	-17	59.9	58	24.8		48.6	89	30.2		11.9	340	53.1		31.9
14	213	34.0	351	17.1	-18	00.9	73	25.7		48.1	104	32.3		11.9	355	55.4		32.0
15	228	36.5	6	16.8		01.9	88	26.7		47.7	119	34.5		11.9	10	57.6		32.1
16	243	39.0	21	16.5		02.9	103	27.6		47.2	134	36.6		11.8	25	59.8		32.2
17	258	41.4	36	16.1	-18	03.9	118	28.5	+16	46.8	149	38.7	+22	11.8	41	02.0	-12	32.3
18	273	43.9	51	15.8	-18	04.9	133	29.4	+16	46.3	164	40.8	+22	11.7	56	04.2	-12	32.4
19	288	46.3	66	15.5		05.9	148	30.3		45.9	179	43.0		11.7	71	06.4		32.5
20	303	48.8	81	15.1		06.9	163	31.3		45.4	194	45.1		11.7	86	08.7		32.6
21	318	51.3	96	14.8		07.9	178	32.2		45.0	209	47.2		11.6	101	10.9		32.6
22	333	53.7	111	14.5		08.9	193	33.1		44.5	224	49.3		11.6	116	13.1		32.7
23	348	56.2	126	14.1		09.9	208	34.0		44.1	239	51.5		11.6	131	15.3		32.8
24	3	58.7	141	13.8	-18	10.8	223	35.0	+16	43.6	254	53.6	+22	11.5	146	17.5	-12	32.9
Dif	—		-3	-10			+9	-4			+21	0			+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 19 ^d 5 PHE	SD: 14 ^h 9				R°: 48 ^m									
	PMG: 11 ^h 51 ^m 6																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	182	03.5	-0	49.9	296	56.5	+ 19 06.7	60 N	17 50	18 32	19 21	20 21 51		13 08 48				
1	197	03.8		50.9	311	26.9 ¹¹⁴	09.0 ²³	58	51	30	16	35 51		12 55 48				
2	212	04.0		51.8	325	57.4 ¹¹⁵	11.2 ²²	56	51	28	12	47 50		43 48				
3	227	04.2		52.8	340	27.8 ¹¹⁴	13.3 ²¹	54	51	26	08	20 57 50		33 48				
4	242	04.4		53.8	354	58.3 ¹¹⁵	15.3 ²⁰	52	51	25	04	21 06 50		24 48				
5	257	04.6	-0	54.8	9	28.8 ¹¹⁵	+ 19 17.2 ¹⁹	50	17 51	18 23	19 01	21 14 50		12 15 49				
6	272	04.8	-0	55.7	23	59.3 ¹¹⁵	+ 19 19.0 ¹⁸	45	17 52	18 21	18 55	21 32 49		11 58 48				
7	287	05.1		56.7	38	29.8 ¹¹⁵	20.8 ¹⁸	40	52	19	51	46 49		44 48				
8	302	05.3		57.7	53	00.3 ¹¹⁵	22.4 ¹⁶	35	52	18	47	21 58 49		32 48				
9	317	05.5		58.7	67	30.8 ¹¹⁵	24.0 ¹⁶	30	53	17	44	22 09 49		21 49				
10	332	05.7	-0	59.6	82	01.4 ¹¹⁶	25.4 ¹⁴	20	53	15	41	27 49		11 03 49				
11	347	05.9	-1	00.6	96	31.9 ¹¹⁵	+ 19 26.8 ¹⁴	10 N	17 54	18 15	18 39	22 43 48		10 47 49				
12	2	06.1	-1	01.6	111	02.5 ¹¹⁶	+ 19 28.0 ¹²	0	17 55	18 16	18 40	22 58 48		10 33 48				
13	17	06.4		02.6	125	33.1 ¹¹⁶	29.2 ¹²	10 S	56	17	41	23 13 47		18 48				
14	32	06.6		03.5	140	03.7 ¹¹⁶	30.3 ¹¹	20	57	19	44	28 48		10 02 48				
15	47	06.8		04.5	154	34.3 ¹¹⁶	31.3 ¹⁰	30	58	22	50	47 47		9 44 48				
16	62	07.0		05.5	169	04.9 ¹¹⁶	32.2 ⁹	35	17 59	24	54	23 57 47		33 48				
17	77	07.2	-1	06.4	183	35.5 ¹¹⁶	+ 19 33.0 ⁸	40	18 00	18 27	18 58	** ** *		9 21 48				
18	92	07.4	-1	07.4	198	06.2 ¹¹⁷	+ 19 33.7 ⁷	45	18 01	18 30	19 05	** ** *		9 07 48				
19	107	07.7		08.4	212	36.8 ¹¹⁶	34.3 ⁶	50	02	34	13	** ** *		8 50 47				
20	122	07.9		09.4	227	07.5 ¹¹⁷	34.8 ⁵	52	03	37	17	** ** *		41 48				
21	137	08.1		10.3	241	38.2 ¹¹⁷	35.2 ⁴	54	03	39	21	0 07 52		32 48				
22	152	08.3		11.3	256	08.9 ¹¹⁷	35.5 ³	56	04	41	26	17 53		22 47				
23	167	08.5		12.3	270	39.6 ¹¹⁷	35.8 ³	58	05	44	32	29 53		8 10 47				
24	182	08.7	-1	13.3	285	10.4 ¹¹⁸	+ 19 35.9 ¹	60 S	18 06	18 48	19 39	0 42 54		7 57 46				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 40 ^m 2		Mag: -4.2 PMG: 14 ^h 35 ^m			Mag: +1.6 PMG: 9 ^h 05 ^m			Mag: -2.2 PMG: 6 ^h 59 ^m			Mag: +0.7 PMG: 14 ^h 13 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	3	58.7	141	13.8	-18	10.8	223	35.0	+16	43.6	254	53.6	+22	11.5	146	17.5	-12	32.9
1	19	01.1	156	13.5		11.8	238	35.9		43.2	269	55.7		11.5	161	19.7		33.0
2	34	03.6	171	13.1		12.8	253	36.8		42.7	284	57.8		11.5	176	21.9		33.1
3	49	06.1	186	12.8		13.8	268	37.7		42.3	300	00.0		11.4	191	24.2		33.2
4	64	08.5	201	12.5		14.8	283	38.6		41.8	315	02.1		11.4	206	26.4		33.3
5	79	11.0	216	12.1	-18	15.8	298	39.6	+16	41.4	330	04.2	+22	11.3	221	28.6	-12	33.3
6	94	13.4	231	11.8	-18	16.8	313	40.5	+16	40.9	345	06.4	+22	11.3	236	30.8	-12	33.4
7	109	15.9	246	11.5		17.7	328	41.4		40.4	0	08.5		11.3	251	33.0		33.5
8	124	18.4	261	11.1		18.7	343	42.3		40.0	15	10.6		11.2	266	35.2		33.6
9	139	20.8	276	10.8		19.7	358	43.3		39.5	30	12.7		11.2	281	37.4		33.7
10	154	23.3	291	10.4		20.7	13	44.2		39.1	45	14.9		11.2	296	39.7		33.8
11	169	25.8	306	10.1	-18	21.7	28	45.1	+16	38.6	60	17.0	+22	11.1	311	41.9	-12	33.9
12	184	28.2	321	09.8	-18	22.7	43	46.0	+16	38.2	75	19.1	+22	11.1	326	44.1	-12	33.9
13	199	30.7	336	09.4		23.6	58	47.0		37.7	90	21.3		11.0	341	46.3		34.0
14	214	33.2	351	09.1		24.6	73	47.9		37.3	105	23.4		11.0	356	48.5		34.1
15	229	35.6	6	08.8		25.6	88	48.8		36.8	120	25.5		11.0	11	50.7		34.2
16	244	38.1	21	08.4		26.6	103	49.7		36.4	135	27.6		10.9	26	52.9		34.3
17	259	40.6	36	08.1	-18	27.6	118	50.7	+16	35.9	150	29.8	+22	10.9	41	55.2	-12	34.4
18	274	43.0	51	07.7	-18	28.5	133	51.6	+16	35.5	165	31.9	+22	10.9	56	57.4	-12	34.5
19	289	45.5	66	07.4		29.5	148	52.5		35.0	180	34.0		10.8	71	59.6		34.6
20	304	47.9	81	07.1		30.5	163	53.5		34.6	195	36.2		10.8	87	01.8		34.6
21	319	50.4	96	06.7		31.5	178	54.4		34.1	210	38.3		10.8	102	04.0		34.7
22	334	52.9	111	06.4		32.4	193	55.3		33.6	225	40.4		10.7	117	06.2		34.8
23	349	55.3	126	06.0		33.4	208	56.2		33.2	240	42.6		10.7	132	08.4		34.9
24	4	57.8	141	05.7	-18	34.4	223	57.2	+16	32.7	255	44.7	+22	10.6	147	10.6	-12	35.0
Dif	—		-3 -10			+9 -5			+21 0			+22 -1						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 51 ^m 2			Edad: 20 ^d 5 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	182	08.7	-1	13.3	285	10.4	+19	35.9	60 N	4	23	5	12	5	54	21	12
1	197	08.9		14.2	299	41.1		36.0	58		28	14		53	26	57	
2	212	09.2		15.2	314	11.9		35.9	56		32	16		53	37	57	
3	227	09.4		16.2	328	42.6		35.8	54		36	18		53	47	56	
4	242	09.6		17.2	343	13.4		35.6	52		39	19		53	21	56	
5	257	09.8	-1	18.1	357	44.2	+19	35.3	50	4	42	5	20	5	52	22	04
6	272	10.0	-1	19.1	12	15.1	+19	34.8	45	4	48	5	23	5	52	22	21
7	287	10.2		20.1	26	45.9		34.3	40		53	24		51	35	53	
8	302	10.4		21.1	41	16.8		33.8	35		56	26		51	47	52	
9	317	10.7		22.0	55	47.7		33.1	30	4	59	27		51	22	58	
10	332	10.9		23.0	70	18.6		32.3	20	5	02	28		50	23	16	
11	347	11.1	-1	24.0	84	49.5	+19	31.4	10 N	5	04	5	28	5	49	23	31
12	2	11.3	-1	24.9	99	20.4	+19	30.5	0	5	03	5	27	5	48	23	46
13	17	11.5		25.9	113	51.3		29.4	10 S	5	02	26		47	**	**	
14	32	11.7		26.9	128	22.3		28.3	20	4	58	24		46	**	**	
15	47	11.9		27.9	142	53.3		27.1	30		53	21		44	**	**	
16	62	12.1		28.8	157	24.3		25.7	35		49	18		44	**	**	
17	77	12.4	-1	29.8	171	55.3	+19	24.3	40	4	44	5	16	5	43	0	10
18	92	12.6	-1	30.8	186	26.4	+19	22.8	45	4	37	5	12	5	41	0	24
19	107	12.8		31.8	200	57.4		21.2	50		29	08		40	42	45	
20	122	13.0		32.7	215	28.5		19.6	52		25	05		39	50	45	
21	137	13.2		33.7	229	59.6		17.8	54		21	03		38	0	59	
22	152	13.4		34.7	244	30.7		15.9	56		16	5	00	38	1	10	
23	167	13.6		35.7	259	01.8		14.0	58		10	4	57	37	22	44	
24	182	13.9	-1	36.6	273	33.0	+19	12.0	60 S	4	03	4	54	5	36	1	36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 36 ^m 3		Mag: -4.2 PMG: 14 ^h 36 ^m		Mag: +1.6 PMG: 9 ^h 04 ^m		Mag: -2.2 PMG: 6 ^h 56 ^m		Mag: +0.7 PMG: 14 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	4	57.8	141	05.7	-18	34.4	223	57.2	+16	32.7
1	20	00.3	156	05.4		35.3	238	58.1		32.3
2	35	02.7	171	05.0		36.3	253	59.0		31.8
3	50	05.2	186	04.7		37.3	269	00.0		31.4
4	65	07.7	201	04.3		38.3	284	00.9		30.9
5	80	10.1	216	04.0	-18	39.2	299	01.8	+16	30.5
6	95	12.6	231	03.7	-18	40.2	314	02.7	+16	30.0
7	110	15.1	246	03.3		41.2	329	03.7		29.5
8	125	17.5	261	03.0		42.1	344	04.6		29.1
9	140	20.0	276	02.6		43.1	359	05.5		28.6
10	155	22.4	291	02.3		44.1	14	06.5		28.2
11	170	24.9	306	01.9	-18	45.0	29	07.4	+16	27.7
12	185	27.4	321	01.6	-18	46.0	44	08.3	+16	27.3
13	200	29.8	336	01.2		46.9	59	09.2		26.8
14	215	32.3	351	00.9		47.9	74	10.2		26.4
15	230	34.8	6	00.6		48.9	89	11.1		25.9
16	245	37.2	21	00.2		49.8	104	12.0		25.4
17	260	39.7	35	59.9	-18	50.8	119	13.0	+16	25.0
18	275	42.2	50	59.5	-18	51.8	134	13.9	+16	24.5
19	290	44.6	65	59.2		52.7	149	14.8		24.1
20	305	47.1	80	58.8		53.7	164	15.8		23.6
21	320	49.5	95	58.5		54.6	179	16.7		23.2
22	335	52.0	110	58.1		55.6	194	17.6		22.7
23	350	54.5	125	57.8		56.5	209	18.6		22.2
24	5	56.9	140	57.4	-18	57.5	224	19.5	+16	21.8
Dif	—		-3	-10			+9	-5		
									+21	0
										+22
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 9			Edad: 21 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 5 ^h 57 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	13.9	-1 36.6	273	33.0	+19 12.0		60 N	17 44	18 26	19 15	22 11 66	14 35 30		
1	197	14.1		288	04.2 ¹²²	09.9	21	58	45	24	10	23 64	22 32		
2	212	14.3	38.6	302	35.4 ¹²²	07.6	23	56	46	22	06	34 62	12 33		
3	227	14.5	39.5	317	06.6 ¹²²	05.4	22	54	46	21	19 03	43 61	14 02 35		
4	242	14.7	40.5	331	37.8 ¹²²	03.0	24	52	47	20	18 59	52 59	13 54 35		
5	257	14.9	-1 41.5	346	09.1 ¹²³	+19 00.5	25	50	17 47	18 19	18 57	22 59 58	13 46 36		
6	272	15.1	-1 42.5	0	40.3 ¹²²	+18 57.9	26	45	17 48	18 17	18 51	23 15 56	13 30 38		
7	287	15.3	43.4	15	11.6 ¹²³	55.3	26	40	49	16	47	28 54	16 40		
8	302	15.5	44.4	29	43.0 ¹²⁴	52.6	27	35	50	15	44	39 53	13 05 41		
9	317	15.8	45.4	44	14.3 ¹²³	49.8	28	30	50	14	42	23 48 52	12 55 42		
10	332	16.0	46.4	58	45.7 ¹²⁴	46.9	29	20	52	14	39	*** ** *	38 44		
11	347	16.2	-1 47.3	73	17.0 ¹²³	+18 43.9	30	10 N	17 53	18 14	18 38	*** ** *	12 23 45		
12	2	16.4	-1 48.3	87	48.4 ¹²⁴	+18 40.8	31	0	17 54	18 15	18 39	*** ** *	12 09 46		
13	17	16.6	49.3	102	19.9 ¹²⁵	37.6	32	10 S	56	17	41	0 00 46	11 55 48		
14	32	16.8	50.3	116	51.3 ¹²⁴	34.4	32	20	57	19	45	16 45	39 50		
15	47	17.0	51.2	131	22.8 ¹²⁵	31.1	33	30	17 59	23	51	34 43	22 51		
16	62	17.2	52.2	145	54.2 ¹²⁴	27.7	34	35	18 00	26	18 55	44 43	12 52		
17	77	17.5	-1 53.2	160	25.7 ¹²⁵	+18 24.2	35	40	18 02	18 29	19 01	0 56 42	11 00 54		
18	92	17.7	-1 54.1	174	57.3 ¹²⁶	+18 20.6	36	45	18 03	18 33	19 07	1 10 41	10 47 54		
19	107	17.9	55.1	189	28.8 ¹²⁵	16.9	37	50	05	38	16	27 39	30 56		
20	122	18.1	56.1	204	00.4 ¹²⁶	13.2	37	52	06	40	20	35 38	22 57		
21	137	18.3	57.1	218	32.0 ¹²⁶	09.4	38	54	07	43	25	44 38	13 59		
22	152	18.5	58.0	233	03.6 ¹²⁶	05.5	39	56	08	46	31	1 54 37	10 03 60		
23	167	18.7	-1 59.0	247	35.2 ¹²⁶	+18 01.5	40	58	09	49	37	2 06 35	9 52 61		
24	182	18.9	-2 00.0	262	06.9 ¹²⁷	+17 57.4	41	60 S	18 11	18 53	19 44	2 19 34	9 39 63		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 32 ^m 3		Mag: -4.2 PMG: 14 ^h 37 ^m			Mag: +1.6 PMG: 9 ^h 02 ^m			Mag: -2.2 PMG: 6 ^h 53 ^m			Mag: +0.7 PMG: 14 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	5	56.9	140	57.4	-18 57.5	224	19.5	+16 21.8	256	35.9	+22 09.8	148	03.7	-12 37.1	
1	20	59.4	155	57.1	58.4	239	20.4	21.3	271	38.1	09.7	163	05.9	37.2	
2	36	01.9	170	56.7	-18 59.4	254	21.4	20.9	286	40.2	09.7	178	08.1	37.3	
3	51	04.3	185	56.4	-19 00.4	269	22.3	20.4	301	42.4	09.7	193	10.4	37.4	
4	66	06.8	200	56.0	01.3	284	23.2	19.9	316	44.5	09.6	208	12.6	37.5	
5	81	09.3	215	55.7	-19 02.3	299	24.2	+16 19.5	331	46.6	+22 09.6	223	14.8	-12 37.5	
6	96	11.7	230	55.3	-19 03.2	314	25.1	+16 19.0	346	48.8	+22 09.6	238	17.0	-12 37.6	
7	111	14.2	245	55.0	04.2	329	26.0	18.6	1	50.9	09.5	253	19.2	37.7	
8	126	16.7	260	54.6	05.1	344	27.0	18.1	16	53.1	09.5	268	21.4	37.8	
9	141	19.1	275	54.3	06.1	359	27.9	17.6	31	55.2	09.5	283	23.6	37.9	
10	156	21.6	290	53.9	07.0	14	28.8	17.2	46	57.4	09.4	298	25.8	38.0	
11	171	24.0	305	53.6	-19 08.0	29	29.8	+16 16.7	61	59.5	+22 09.4	313	28.0	-12 38.1	
12	186	26.5	320	53.2	-19 08.9	44	30.7	+16 16.3	77	01.6	+22 09.3	328	30.3	-12 38.2	
13	201	29.0	335	52.9	09.8	59	31.6	15.8	92	03.8	09.3	343	32.5	38.2	
14	216	31.4	350	52.5	10.8	74	32.6	15.3	107	05.9	09.3	358	34.7	38.3	
15	231	33.9	5	52.2	11.7	89	33.5	14.9	122	08.1	09.2	13	36.9	38.4	
16	246	36.4	20	51.8	12.7	104	34.5	14.4	137	10.2	09.2	28	39.1	38.5	
17	261	38.8	35	51.5	-19 13.6	119	35.4	+16 14.0	152	12.3	+22 09.2	43	41.3	-12 38.6	
18	276	41.3	50	51.1	-19 14.6	134	36.3	+16 13.5	167	14.5	+22 09.1	58	43.5	-12 38.7	
19	291	43.8	65	50.8	15.5	149	37.3	13.0	182	16.6	09.1	73	45.7	38.8	
20	306	46.2	80	50.4	16.4	164	38.2	12.6	197	18.8	09.1	88	47.9	38.9	
21	321	48.7	95	50.1	17.4	179	39.1	12.1	212	20.9	09.0	103	50.1	39.0	
22	336	51.2	110	49.7	18.3	194	40.1	11.7	227	23.1	09.0	118	52.3	39.0	
23	351	53.6	125	49.3	19.3	209	41.0	11.2	242	25.2	09.0	133	54.6	39.1	
24	6	56.1	140	49.0	-19 20.2	224	41.9	+16 10.7	257	27.4	+22 08.9	148	56.8	-12 39.2	
Dif	—		-4		-9	+9		-5	+21		0	+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 50 ^m 6			Edad: 22 ^d 5 PHE { SD: 14'8 PMG: 6 ^h 44 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	18.9	-2	00.0	262	06.9	+17	57.4	60 N	4 28	5 17	5 59	23 17	70	15 05	24
1	197	19.1	-2	01.0	276	38.5 ¹²⁶		53.2 42	58	32	19	58	27	68	14 54	26
2	212	19.3		01.9	291	10.2 ¹²⁷		49.0 42	56	36	20	57	36	66	45	28
3	227	19.6		02.9	305	41.9 ¹²⁷		44.7 43	54	40	21	57	44	64	37	29
4	242	19.8		03.9	320	13.7 ¹²⁸		40.3 44	52	43	22	56	51	63	29	31
5	257	20.0	-2	04.8	334	45.4 ¹²⁷	+17	35.8 45	50	4 46	5 23	5 55	23 57	62	14 22	32
6	272	20.2	-2	05.8	349	17.2 ¹²⁸	+17	31.3 45	45	4 51	5 25	5 54	** ** *		14 08	34
7	287	20.4		06.8	3	49.0 ¹²⁸		26.6 47	40	55	26	53	** ** *		13 56	36
8	302	20.6		07.8	18	20.8 ¹²⁸		21.9 47	35	4 58	27	52	** ** *		46	38
9	317	20.8		08.7	32	52.7 ¹²⁹		17.1 48	30	5 00	28	52	** ** *		37	40
10	332	21.0		09.7	47	24.5 ¹²⁸		12.3 48	20	03	28	50	0 05	50	22	42
11	347	21.2	-2	10.7	61	56.4 ¹²⁹	+17	07.3 50	10 N	5 03	5 28	5 49	0 19	49	13 08	44
12	2	21.4	-2	11.6	76	28.3 ¹²⁹	+17	02.3 50	0	5 03	5 27	5 47	0 33	46	12 55	46
13	17	21.6		12.6	91	00.2 ¹²⁹	+16	57.2 51	10 S	5 00	25	46	0 46	45	43	48
14	32	21.9		13.6	105	32.2 ¹³⁰		52.0 52	20	4 56	22	44	1 01	43	29	50
15	47	22.1		14.6	120	04.1 ¹²⁹		46.8 52	30	50	18	42	17	41	13	53
16	62	22.3		15.5	134	36.1 ¹³⁰		41.4 54	35	46	15	41	27	39	12 04	54
17	77	22.5	-2	16.5	149	08.1 ¹³⁰	+16	36.0 54	40	4 40	5 12	5 39	1 38	38	11 54	55
18	92	22.7	-2	17.5	163	40.1 ¹³⁰	+16	30.6 54	45	4 33	5 08	5 38	1 51	36	11 41	58
19	107	22.9		18.5	178	12.2 ¹³¹		25.0 56	50	25	03	35	2 06	34	26	60
20	122	23.1		19.4	192	44.2 ¹³⁰		19.4 56	52	20	5 01	35	13	33	19	62
21	137	23.3		20.4	207	16.3 ¹³¹		13.7 57	54	15	4 58	33	22	31	12	62
22	152	23.5		21.4	221	48.4 ¹³¹		07.9 58	56	10	55	32	31	30	11 03	64
23	167	23.7		22.3	236	20.5 ¹³¹	+16	02.0 59	58	4 04	51	31	41	28	10 53	66
24	182	23.9	-2	23.3	250	52.7 ¹³²	+15	56.1 59	60 S	3 56	4 48	5 29	2 53	26	10 42	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 28 ^m 4		Mag: -4.2 PMG: 14 ^h 37 ^m		Mag: +1.6 PMG: 9 ^h 01 ^m		Mag: -2.2 PMG: 6 ^h 49 ^m		Mag: +0.7 PMG: 14 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	56.1	140	49.0	-19	20.2	224	41.9	+16	08.9
1	21	58.5	155	48.6		21.1	239	42.9		10.3
2	37	01.0	170	48.3		22.1	254	43.8		09.8
3	52	03.5	185	47.9		23.0	269	44.8		09.3
4	67	05.9	200	47.6		23.9	284	45.7		08.9
5	82	08.4	215	47.2	-19	24.9	299	46.6	+16	08.4
6	97	10.9	230	46.9	-19	25.8	314	47.6	+16	08.0
7	112	13.3	245	46.5		26.7	329	48.5		07.5
8	127	15.8	260	46.1		27.7	344	49.5		07.0
9	142	18.3	275	45.8		28.6	359	50.4		06.6
10	157	20.7	290	45.4		29.5	14	51.3		06.1
11	172	23.2	305	45.1	-19	30.5	29	52.3	+16	05.6
12	187	25.7	320	44.7	-19	31.4	44	53.2	+16	05.2
13	202	28.1	335	44.3		32.3	59	54.2		04.7
14	217	30.6	350	44.0		33.2	74	55.1		04.3
15	232	33.0	5	43.6		34.2	89	56.0		03.8
16	247	35.5	20	43.3		35.1	104	57.0		03.3
17	262	38.0	35	42.9	-19	36.0	119	57.9	+16	02.9
18	277	40.4	50	42.5	-19	36.9	134	58.9	+16	02.4
19	292	42.9	65	42.2		37.9	149	59.8		01.9
20	307	45.4	80	41.8		38.8	165	00.7		01.5
21	322	47.8	95	41.5		39.7	180	01.7		01.0
22	337	50.3	110	41.1		40.6	195	02.6		00.5
23	352	52.8	125	40.7		41.5	210	03.6	+16	00.1
24	7	55.2	140	40.4	-19	42.5	225	04.5	+15	59.6
Dif	—		-4		-9		+9		-5	
							+21		0	
									+22	
										-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 2		Edad: 23 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 7 ^h 30 ^m R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	23.9	-2 23.3		250	52.7	+15 56.1	60 N	17 38	18 20	19 08	** ** *	15 29	19
1	197	24.1		24.3	265	24.8 ¹³¹	50.1	60	58	39	18	04	** ** *	20 22
2	212	24.4		25.3	279	57.0 ¹³²	44.0	61	56	40	17	01 01	** ** *	13 23
3	227	24.6		26.2	294	29.2 ¹³²	37.9	61	54	41	16	18 57	** ** *	06 25
4	242	24.8		27.2	309	01.4 ¹³²	31.7	62	52	42	15	55	** ** *	15 00 27
5	257	25.0	-2 28.2		323	33.6 ¹³²	+15 25.4	63	50	17 43	18 15	18 52	** ** *	14 54 29
6	272	25.2	-2 29.1		338	05.9 ¹³³	+15 19.0	64	45	17 44	18 13	18 47	0 11 59	14 42 32
7	287	25.4		30.1	352	38.1 ¹³²	12.6	64	40	46	12	44	22 57	32 34
8	302	25.6		31.1	7	10.4 ¹³³	+15 06.1	65	35	47	12	41	32 55	24 36
9	317	25.8		32.1	21	42.7 ¹³³	+14 59.5	66	30	48	12	39	40 53	17 37
10	332	26.0		33.0	36	15.0 ¹³³	52.9	66	20	50	12	37	0 55 50	14 04 40
11	347	26.2	-2 34.0		50	47.3 ¹³³	+14 46.2	67	10 N	17 52	18 13	18 37	1 08 47	13 52 43
12	2	26.4	-2 35.0		65	19.7 ¹³⁴	+14 39.4	68	0	17 53	18 14	18 38	1 19 46	13 41 46
13	17	26.6		35.9	79	52.1 ¹³⁴	32.6	68	10 S	55	16	41	31 44	31 47
14	32	26.8		36.9	94	24.4 ¹³³	25.7	69	20	17 58	20	45	44 41	19 50
15	47	27.0		37.9	108	56.8 ¹³⁴	18.7	70	30	18 00	24	52	1 58 38	13 06 53
16	62	27.2		38.9	123	29.2 ¹³⁴	11.6	71	35	02	27	18 57	2 06 37	12 58 55
17	77	27.4	-2 39.8		138	01.6 ¹³⁴	+14 04.5	71	40	18 04	18 31	19 03	2 16 35	12 49 57
18	92	27.7	-2 40.8		152	34.1 ¹³⁵	+13 57.4	71	45	18 06	18 35	19 10	2 27 32	12 39 60
19	107	27.9		41.8	167	06.5 ¹³⁴	50.1	73	50	08	41	19	40 30	26 63
20	122	28.1		42.7	181	39.0 ¹³⁵	42.8	73	52	09	43	24	46 29	21 64
21	137	28.3		43.7	196	11.5 ¹³⁵	35.4	74	54	11	46	29	2 53 27	14 66
22	152	28.5		44.7	210	44.0 ¹³⁵	28.0	74	56	12	50	35	3 01 25	12 07 67
23	167	28.7		45.7	225	16.5 ¹³⁵	20.5	75	58	14	53	42	09 24	11 59 69
24	182	28.9	-2 46.6		239	49.0 ¹³⁵	+13 13.0	75	60 S	18 15	18 58	19 50	3 19 22	11 50 71
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 24 ^m 5		Mag: -4.2 PMG: 14 ^h 38 ^m			Mag: +1.6 PMG: 8 ^h 59 ^m			Mag: -2.2 PMG: 6 ^h 46 ^m			Mag: +0.7 PMG: 13 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	7	55.2	140	40.4	-19 42.5	225	04.5	+15 59.6	258	18.9	+22 08.1	149	49.8	-12 41.3
1	22	57.7	155	40.0	43.4	240	05.5	59.2	273	21.1	08.0	164	52.0	41.4
2	38	00.1	170	39.6	44.3	255	06.4	58.7	288	23.2	08.0	179	54.2	41.5
3	53	02.6	185	39.3	45.2	270	07.3	58.2	303	25.4	08.0	194	56.4	41.6
4	68	05.1	200	38.9	46.1	285	08.3	57.8	318	27.5	07.9	209	58.6	41.7
5	83	07.5	215	38.6	-19 47.1	300	09.2	+15 57.3	333	29.7	+22 07.9	225	00.8	-12 41.8
6	98	10.0	230	38.2	-19 48.0	315	10.2	+15 56.8	348	31.8	+22 07.9	240	03.0	-12 41.9
7	113	12.5	245	37.8	48.9	330	11.1	56.4	3	34.0	07.8	255	05.2	42.0
8	128	14.9	260	37.5	49.8	345	12.1	55.9	18	36.1	07.8	270	07.4	42.0
9	143	17.4	275	37.1	50.7	0	13.0	55.4	33	38.3	07.8	285	09.6	42.1
10	158	19.9	290	36.7	51.6	15	14.0	55.0	48	40.5	07.7	300	11.8	42.2
11	173	22.3	305	36.4	-19 52.5	30	14.9	+15 54.5	63	42.6	+22 07.7	315	14.0	-12 42.3
12	188	24.8	320	36.0	-19 53.4	45	15.8	+15 54.0	78	44.8	+22 07.7	330	16.2	-12 42.4
13	203	27.3	335	35.6	54.3	60	16.8	53.6	93	46.9	07.6	345	18.4	42.5
14	218	29.7	350	35.3	55.3	75	17.7	53.1	108	49.1	07.6	0	20.7	42.6
15	233	32.2	5	34.9	56.2	90	18.7	52.6	123	51.2	07.6	15	22.9	42.7
16	248	34.6	20	34.5	57.1	105	19.6	52.2	138	53.4	07.5	30	25.1	42.8
17	263	37.1	35	34.2	-19 58.0	120	20.6	+15 51.7	153	55.5	+22 07.5	45	27.3	-12 42.8
18	278	39.6	50	33.8	-19 58.9	135	21.5	+15 51.2	168	57.7	+22 07.5	60	29.5	-12 42.9
19	293	42.0	65	33.4	-19 59.8	150	22.5	50.8	183	59.9	07.4	75	31.7	43.0
20	308	44.5	80	33.1	-20 00.7	165	23.4	50.3	199	02.0	07.4	90	33.9	43.1
21	323	47.0	95	32.7	01.6	180	24.4	49.8	214	04.2	07.4	105	36.1	43.2
22	338	49.4	110	32.3	02.5	195	25.3	49.4	229	06.3	07.3	120	38.3	43.3
23	353	51.9	125	31.9	03.4	210	26.3	48.9	244	08.5	07.3	135	40.5	43.4
24	8	54.4	140	31.6	-20 04.3	225	27.2	+15 48.4	259	10.6	+22 07.2	150	42.7	-12 43.5
Dif	—		-4		-9	+9		-5	+22		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 49 ^m 9			Edad: 24 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 SD: 14'9 PMG: 8 ^h 16 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	182	28.9	-2	46.6	239	49.0	+13	13.0	77	60 N	4	33	5	22	6	03		
1	197	29.1		47.6	254	21.5 ¹³⁵	+13	05.3	77	58		37		23	02	35		
2	212	29.3		48.6	268	54.0 ¹³⁵	+12	57.6	77	56		41		24	01	42		
3	227	29.5		49.5	283	26.6 ¹³⁶		49.9	77	54		44		25	6	00		
4	242	29.7		50.5	297	59.2 ¹³⁶		42.1	78	52		46		26	5	59		
5	257	29.9	-2	51.5	312	31.7 ¹³⁵	+12	34.2	79	50		4	49	5	26	5		
6	272	30.1	-2	52.5	327	04.3 ¹³⁶	+12	26.3	79	45		4	53	5	28	5		
7	287	30.3		53.4	341	36.9 ¹³⁶		18.3	80	40		57		28	55	1		
8	302	30.5		54.4	356	09.5 ¹³⁶		10.3	80	35		4	59	29	54	27		
9	317	30.7		55.4	10	42.1 ¹³⁶	+12	02.1	82	30		5	01	29	53	33		
10	332	30.9		56.3	25	14.7 ¹³⁶	+11	54.0	81	20		03		29	51	45		
11	347	31.1	-2	57.3	39	47.4 ¹³⁷	+11	45.8	82	10 N		5	03	5	28	5		
12	2	31.3	-2	58.3	54	20.0 ¹³⁶	+11	37.5	83	0		5	02	5	26	5		
13	17	31.5	-2	59.3	68	52.7 ¹³⁷		29.1	84	10 S		4	59	24	45	15		
14	32	31.7	-3	00.2	83	25.3 ¹³⁶		20.7	84	20		55		20	42	25		
15	47	31.9		01.2	97	58.0 ¹³⁷		12.3	84	30		48		16	40	36		
16	62	32.1		02.2	112	30.6 ¹³⁶	+11	03.8	85	35		43		13	38	43		
17	77	32.3	-3	03.1	127	03.3 ¹³⁷	+10	55.2	86	40		4	37	5	09	5		
18	92	32.5	-3	04.1	141	36.0 ¹³⁷	+10	46.6	86	45		4	29	5	04	5		
19	107	32.7		05.1	156	08.7 ¹³⁷		37.9	87	50		20	4	59	31	2		
20	122	33.0		06.0	170	41.4 ¹³⁷		29.2	87	52		15	56		30	15		
21	137	33.2		07.0	185	14.1 ¹³⁷		20.4	88	54		10	53		28	20		
22	152	33.4		08.0	199	46.8 ¹³⁷		11.6	88	56		4	04	49	27	26		
23	167	33.6		09.0	214	19.5 ¹³⁷	+10	02.7	89	58		3	57	46	25	33		
24	182	33.8	-3	09.9	228	52.2 ¹³⁷	+9	53.8	89	60 S		3	49	4	41	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 20 ^m 5		Mag: -4.2 PMG: 14 ^h 38 ^m				Mag: +1.6 PMG: 8 ^h 58 ^m				Mag: -2.2 PMG: 6 ^h 42 ^m				Mag: +0.7 PMG: 13 ^h 55 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	8	54.4	140	31.6	-20	04.3	225	27.2	+15	48.4	259	10.6	+22	07.2	150	42.7	-12	43.5
1	23	56.8	155	31.2		05.2	240	28.1		48.0	274	12.8		07.2	165	44.9		43.6
2	38	59.3	170	30.8		06.1	255	29.1		47.5	289	15.0		07.2	180	47.1		43.6
3	54	01.8	185	30.5		07.0	270	30.0		47.0	304	17.1		07.1	195	49.3		43.7
4	69	04.2	200	30.1		07.9	285	31.0		46.5	319	19.3		07.1	210	51.5		43.8
5	84	06.7	215	29.7	-20	08.8	300	31.9	+15	46.1	334	21.4	+22	07.1	225	53.7	-12	43.9
6	99	09.1	230	29.4	-20	09.7	315	32.9	+15	45.6	349	23.6	+22	07.0	240	55.9	-12	44.0
7	114	11.6	245	29.0		10.6	330	33.8		45.1	4	25.8		07.0	255	58.1		44.1
8	129	14.1	260	28.6		11.5	345	34.8		44.7	19	27.9		07.0	271	00.4		44.2
9	144	16.5	275	28.2		12.4	0	35.7		44.2	34	30.1		06.9	286	02.6		44.3
10	159	19.0	290	27.9		13.3	15	36.7		43.7	49	32.2		06.9	301	04.8		44.4
11	174	21.5	305	27.5	-20	14.2	30	37.6	+15	43.3	64	34.4	+22	06.9	316	07.0	-12	44.4
12	189	23.9	320	27.1	-20	15.0	45	38.6	+15	42.8	79	36.6	+22	06.8	331	09.2	-12	44.5
13	204	26.4	335	26.7		15.9	60	39.5		42.3	94	38.7		06.8	346	11.4		44.6
14	219	28.9	350	26.4		16.8	75	40.5		41.9	109	40.9		06.8	1	13.6		44.7
15	234	31.3	5	26.0		17.7	90	41.4		41.4	124	43.1		06.7	16	15.8		44.8
16	249	33.8	20	25.6		18.6	105	42.4		40.9	139	45.2		06.7	31	18.0		44.9
17	264	36.2	35	25.2	-20	19.5	120	43.3	+15	40.4	154	47.4	+22	06.7	46	20.2	-12	45.0
18	279	38.7	50	24.9	-20	20.4	135	44.3	+15	40.0	169	49.5	+22	06.6	61	22.4	-12	45.1
19	294	41.2	65	24.5		21.3	150	45.2		39.5	184	51.7		06.6	76	24.6		45.2
20	309	43.6	80	24.1		22.1	165	46.2		39.0	199	53.9		06.6	91	26.8		45.3
21	324	46.1	95	23.7		23.0	180	47.1		38.6	214	56.0		06.5	106	29.0		45.3
22	339	48.6	110	23.4		23.9	195	48.1		38.1	229	58.2		06.5	121	31.2		45.4
23	354	51.0	125	23.0		24.8	210	49.1		37.6	245	00.4		06.5	136	33.4		45.5
24	9	53.5	140	22.6	-20	25.7	225	50.0	+15	37.1	260	02.5	+22	06.4	151	35.6	-12	45.6
Dif	—		-4		-9		+10		-5		+22		0		+22		-1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 25 ^d 5 PHE { 4 ^h : 55'2 12 ^h : 55'3 20 ^h : 55'5															
	PMG: 11 ^h 49 ^m 6		SD: 15'0 PMG: 9 ^h 01 ^m R°: 45 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	182	33.8	-3	09.9	228	52.2	+9 53.8	60 N	17 32	18 14	19 02	1 40 75	16 05 15					
1	197	34.0		10.9	243	24.9 ¹³⁷	44.8 90	58	34	13	18 58	45 73	16 01 17					
2	212	34.2		11.9	257	57.6 ¹³⁷	35.8 90	56	35	12	55	50 71	15 57 20					
3	227	34.4		12.8	272	30.3 ¹³⁷	26.7 91	54	36	11	52	55 69	54 21					
4	242	34.6		13.8	287	03.0 ¹³⁷	17.6 91	52	37	11	50	1 59 67	51 23					
5	257	34.8	-3	14.8	301	35.7 ¹³⁷	+9 08.4 92	50	17 38	18 10	18 48	2 02 66	15 48 25					
6	272	35.0	-3	15.7	316	08.4 ¹³⁷	+8 59.1 93	45	17 40	18 10	18 44	2 10 62	15 43 28					
7	287	35.2		16.7	330	41.1 ¹³⁷	49.9 92	40	42	09	41	17 59	38 30					
8	302	35.4		17.7	345	13.8 ¹³⁷	40.5 94	35	44	09	38	22 57	33 34					
9	317	35.6		18.6	359	46.5 ¹³⁷	31.2 93	30	45	09	37	27 55	30 35					
10	332	35.8		19.6	14	19.3 ¹³⁸	21.8 94	20	48	10	36	36 51	23 39					
11	347	36.0	-3	20.6	28	52.0 ¹³⁷	+8 12.3 95	10 N	17 50	18 11	18 36	2 43 48	15 17 42					
12	2	36.2	-3	21.6	43	24.7 ¹³⁷	+8 02.8 95	0	17 53	18 14	18 38	2 50 45	15 12 45					
13	17	36.4		22.5	57	57.4 ¹³⁷	+7 53.2 96	10 S	55	16	41	2 57 42	06 49					
14	32	36.6		23.5	72	30.0 ¹³⁶	43.6 96	20	17 58	20	46	3 04 39	15 00 52					
15	47	36.8		24.5	87	02.7 ¹³⁷	34.0 96	30	18 01	25	53	13 35	14 53 56					
16	62	37.0		25.4	101	35.4 ¹³⁷	24.3 97	35	03	29	18 59	18 33	50 57					
17	77	37.2	-3	26.4	116	08.1 ¹³⁷	+7 14.6 97	40	18 06	18 33	19 05	3 23 31	14 45 60					
18	92	37.4	-3	27.4	130	40.8 ¹³⁷	+7 04.8 98	45	18 08	18 38	19 13	3 29 29	14 40 63					
19	107	37.6		28.3	145	13.4 ¹³⁶	+6 55.0 98	50	11	44	23	37 25	34 66					
20	122	37.8		29.3	159	46.1 ¹³⁷	45.2 98	52	13	47	28	41 23	31 68					
21	137	38.0		30.3	174	18.8 ¹³⁷	35.3 99	54	14	50	33	44 22	27 70					
22	152	38.2		31.2	188	51.4 ¹³⁶	25.4 99	56	16	54	40	49 20	24 72					
23	167	38.4		32.2	203	24.0 ¹³⁶	15.4 ¹⁰⁰ 99	58	18	18 58	47	53 18	20 74					
24	182	38.6	-3	33.2	217	56.7 ¹³⁷	+6 05.5 99	60 S	18 20	19 03	19 55	3 59 15	14 16 76					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 16 ^m 6		Mag: -4.2 PMG: 14 ^h 39 ^m			Mag: +1.6 PMG: 8 ^h 56 ^m			Mag: -2.2 PMG: 6 ^h 39 ^m			Mag: +0.7 PMG: 13 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	9	53.5	140	22.6	-20	25.7	225	50.0	+15	37.1	260	02.5	+22	06.4	151	35.6	-12	45.6
1	24	56.0	155	22.2		26.6	240	51.0		36.7	275	04.7		06.4	166	37.8		45.7
2	39	58.4	170	21.9		27.4	255	51.9		36.2	290	06.9		06.4	181	40.0		45.8
3	55	00.9	185	21.5		28.3	270	52.9		35.7	305	09.0		06.3	196	42.2		45.9
4	70	03.4	200	21.1		29.2	285	53.8		35.3	320	11.2		06.3	211	44.4		46.0
5	85	05.8	215	20.7	-20	30.1	300	54.8	+15	34.8	335	13.4	+22	06.3	226	46.6	-12	46.1
6	100	08.3	230	20.4	-20	31.0	315	55.7	+15	34.3	350	15.5	+22	06.2	241	48.8	-12	46.1
7	115	10.7	245	20.0		31.8	330	56.7		33.8	5	17.7		06.2	256	51.0		46.2
8	130	13.2	260	19.6		32.7	345	57.6		33.4	20	19.9		06.2	271	53.2		46.3
9	145	15.7	275	19.2		33.6	0	58.6		32.9	35	22.0		06.1	286	55.4		46.4
10	160	18.1	290	18.8		34.5	15	59.5		32.4	50	24.2		06.1	301	57.7		46.5
11	175	20.6	305	18.5	-20	35.3	31	00.5	+15	32.0	65	26.4	+22	06.1	316	59.9	-12	46.6
12	190	23.1	320	18.1	-20	36.2	46	01.5	+15	31.5	80	28.5	+22	06.0	332	02.1	-12	46.7
13	205	25.5	335	17.7		37.1	61	02.4		31.0	95	30.7		06.0	347	04.3		46.8
14	220	28.0	350	17.3		37.9	76	03.4		30.5	110	32.9		06.0	2	06.5		46.9
15	235	30.5	5	16.9		38.8	91	04.3		30.1	125	35.0		05.9	17	08.7		46.9
16	250	32.9	20	16.6		39.7	106	05.3		29.6	140	37.2		05.9	32	10.9		47.0
17	265	35.4	35	16.2	-20	40.5	121	06.2	+15	29.1	155	39.4	+22	05.9	47	13.1	-12	47.1
18	280	37.8	50	15.8	-20	41.4	136	07.2	+15	28.6	170	41.5	+22	05.8	62	15.3	-12	47.2
19	295	40.3	65	15.4		42.3	151	08.1		28.2	185	43.7		05.8	77	17.5		47.3
20	310	42.8	80	15.0		43.1	166	09.1		27.7	200	45.9		05.8	92	19.7		47.4
21	325	45.2	95	14.6		44.0	181	10.1		27.2	215	48.1		05.7	107	21.9		47.5
22	340	47.7	110	14.3		44.9	196	11.0		26.8	230	50.2		05.7	122	24.1		47.6
23	355	50.2	125	13.9		45.7	211	12.0		26.3	245	52.4		05.7	137	26.3		47.7
24	10	52.6	140	13.5	-20	46.6	226	12.9	+15	25.8	260	54.6	+22	05.6	152	28.5	-12	47.8
Dif	—		-4		-9		+10		-5		+22		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 49 ^m 3			Edad: 26 ^d 5 PHE { 4 ^h : 55'7 12 ^h : 55'9 20 ^h : 56'1 SD: 15'1 PMG: 9 ^h 46 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	182	38.6	-3	33.2	217	56.7	+6	05.5	60 N	4 38	5 27	6 08	2 55	78	16 20	15		
1	197	38.8		34.1	232	29.3 ¹³⁶	+5	55.4 ¹⁰¹	58	42	27	06	2 58	75	18	18		
2	212	39.0		35.1	247	01.9 ¹³⁶		45.4 ¹⁰⁰	56	45	28	05	3 01	73	17	19		
3	227	39.2		36.1	261	34.5 ¹³⁶		35.2 ¹⁰²	54	47	29	04	04 70		15	22		
4	242	39.4		37.0	276	07.1 ¹³⁶		25.1 ¹⁰¹	52	50	29	03	06 69		14	23		
5	257	39.5	-3	38.0	290	39.6 ¹³⁵	+5	14.9 ¹⁰²	50	4 52	5 29	6 02	3 08	67	16 13	25		
6	272	39.7	-3	39.0	305	12.2 ¹³⁶	+5	04.7 ¹⁰²	45	4 56	5 30	5 59	3 12	64	16 11	27		
7	287	39.9		40.0	319	44.7 ¹³⁵	+4	54.5 ¹⁰²	40	4 59	30	57	16 61		08 31			
8	302	40.1		40.9	334	17.3 ¹³⁶		44.2 ¹⁰³	35	5 01	30	56	19 59		07 33			
9	317	40.3		41.9	348	49.8 ¹³⁵		33.9 ¹⁰³	30	02	30	54	22 56		05 35			
10	332	40.5		42.9	3	22.3 ¹³⁵		23.6 ¹⁰³	20	04	29	51	27 52		16 02	39		
11	347	40.7	-3	43.8	17	54.8 ¹³⁵	+4	13.2 ¹⁰⁴	10 N	5 03	5 28	5 49	3 31	49	15 59	43		
12	2	40.9	-3	44.8	32	27.2 ¹³⁴	+4	02.8 ¹⁰⁴	0	5 01	5 25	5 46	3 35	46	15 57	46		
13	17	41.1		45.8	46	59.7 ¹³⁵	+3	52.4 ¹⁰⁴	10 S	4 58	22	43	39 43		55 49			
14	32	41.3		46.7	61	32.1 ¹³⁴		42.0 ¹⁰⁴	20	53	18	40	43 40		52 53			
15	47	41.5		47.7	76	04.6 ¹³⁵		31.5 ¹⁰⁵	30	45	13	37	48 36		49 57			
16	62	41.7		48.7	90	37.0 ¹³⁴		21.0 ¹⁰⁵	35	40	10	35	51 33		47 59			
17	77	41.9	-3	49.6	105	09.3 ¹³³	+3	10.5 ¹⁰⁵	40	4 33	5 06	5 33	3 54	31	15 45	62		
18	92	42.1	-3	50.6	119	41.7 ¹³⁴	+2	59.9 ¹⁰⁶	45	4 25	5 00	5 30	3 58	28	15 43	64		
19	107	42.3		51.6	134	14.0 ¹³³		49.4 ¹⁰⁵	50	15	4 54	27	4 02	25	40 68			
20	122	42.5		52.5	148	46.4 ¹³⁴		38.8 ¹⁰⁶	52	10	51	25	04 23		39 70			
21	137	42.7		53.5	163	18.7 ¹³³		28.1 ¹⁰⁷	54	4 05	48	24	06 22		37 72			
22	152	42.9		54.5	177	50.9 ¹³²		17.5 ¹⁰⁶	56	3 58	44	22	09 19		36 73			
23	167	43.1		55.4	192	23.2 ¹³³	+2	06.8 ¹⁰⁷	58	51	40	20	11 18		34 76			
24	182	43.3	-3	56.4	206	55.4 ¹³²	+1	56.2 ¹⁰⁶	60 S	3 42	4 35	5 17	4 14	15	15 32	78		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 12 ^m 7		Mag: -4.2 PMG: 14 ^h 39 ^m			Mag: +1.6 PMG: 8 ^h 55 ^m			Mag: -2.2 PMG: 6 ^h 35 ^m			Mag: +0.6 PMG: 13 ^h 48 ^m						
h	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	10	52.6	140	13.5	-20	46.6	226	12.9	+15	25.8	260	54.6	+22	05.6	152	28.5	-12	47.8
1	25	55.1	155	13.1		47.5	241	13.9		25.3	275	56.7		05.6	167	30.7		47.8
2	40	57.6	170	12.7		48.3	256	14.8		24.9	290	58.9		05.6	182	32.9		47.9
3	56	00.0	185	12.3		49.2	271	15.8		24.4	306	01.1		05.5	197	35.1		48.0
4	71	02.5	200	12.0		50.0	286	16.8		23.9	321	03.3		05.5	212	37.3		48.1
5	86	05.0	215	11.6	-20	50.9	301	17.7	+15	23.4	336	05.4	+22	05.5	227	39.5	-12	48.2
6	101	07.4	230	11.2	-20	51.8	316	18.7	+15	23.0	351	07.6	+22	05.4	242	41.7	-12	48.3
7	116	09.9	245	10.8		52.6	331	19.6		22.5	6	09.8		05.4	257	43.9		48.4
8	131	12.3	260	10.4		53.5	346	20.6		22.0	21	12.0		05.4	272	46.1		48.5
9	146	14.8	275	10.0		54.3	1	21.6		21.5	36	14.1		05.3	287	48.3		48.6
10	161	17.3	290	09.6		55.2	16	22.5		21.1	51	16.3		05.3	302	50.5		48.6
11	176	19.7	305	09.3	-20	56.0	31	23.5	+15	20.6	66	18.5	+22	05.3	317	52.7	-12	48.7
12	191	22.2	320	08.9	-20	56.9	46	24.4	+15	20.1	81	20.7	+22	05.2	332	54.9	-12	48.8
13	206	24.7	335	08.5		57.7	61	25.4		19.6	96	22.8		05.2	347	57.1		48.9
14	221	27.1	350	08.1		58.6	76	26.4		19.2	111	25.0		05.2	2	59.3		49.0
15	236	29.6	5	07.7	-20	59.4	91	27.3		18.7	126	27.2		05.1	18	01.5		49.1
16	251	32.1	20	07.3	-21	00.3	106	28.3		18.2	141	29.4		05.1	33	03.7		49.2
17	266	34.5	35	06.9	-21	01.1	121	29.2	+15	17.7	156	31.5	+22	05.1	48	05.9	-12	49.3
18	281	37.0	50	06.5	-21	02.0	136	30.2	+15	17.2	171	33.7	+22	05.1	63	08.1	-12	49.4
19	296	39.4	65	06.2		02.8	151	31.2		16.8	186	35.9		05.0	78	10.3		49.5
20	311	41.9	80	05.8		03.7	166	32.1		16.3	201	38.1		05.0	93	12.5		49.5
21	326	44.4	95	05.4		04.5	181	33.1		15.8	216	40.2		05.0	108	14.7		49.6
22	341	46.8	110	05.0		05.4	196	34.0		15.3	231	42.4		04.9	123	16.9		49.7
23	356	49.3	125	04.6		06.2	211	35.0		14.9	246	44.6		04.9	138	19.1		49.8
24	11	51.8	140	04.2	-21	07.0	226	36.0	+15	14.4	261	46.8	+22	04.9	153	21.3	-12	49.9
Dif	—		-4		-9		+10		-5		+22		0		+22			-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 0			Edad: 27 ^d 5 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'8 SD: 15'3 PMG: 10 ^h 32 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	43.3	-3 56.4	206	55.4	+1 56.2	60 N	17 26	18 08	18 56	4 13	80	16 35	16
1	197	43.5	57.4	221	27.6 ¹³²	45.4 ¹⁰⁸	58	28	07	53	13	78	36	18
2	212	43.7	58.3	235	59.8 ¹³²	34.7 ¹⁰⁷	56	30	07	50	14	75	36	20
3	227	43.9	-3 59.3	250	32.0 ¹³²	24.0 ¹⁰⁷	54	31	06	47	14	73	37	22
4	242	44.1	-4 00.3	265	04.1 ¹³¹	13.2 ¹⁰⁸	52	33	06	45	15	71	37	24
5	257	44.3	-4 01.2	279	36.2 ¹³¹	+1 02.5 ¹⁰⁷	50	17 34	18 06	18 43	4 15	70	16 38	25
6	272	44.4	-4 02.2	294	08.3 ¹³¹	+0 51.7 ¹⁰⁸	45	17 37	18 06	18 40	4 16	66	16 38	29
7	287	44.6	03.2	308	40.4 ¹³¹	40.9 ¹⁰⁸	40	39	06	37	17	62	39	32
8	302	44.8	04.1	323	12.4 ¹³⁰	30.1 ¹⁰⁸	35	41	06	36	18	59	40	34
9	317	45.0	05.1	337	44.4 ¹³⁰	19.2 ¹⁰⁹	30	43	07	35	18	58	40	37
10	332	45.2	06.1	352	16.3 ¹²⁹	+0 08.4 ¹⁰⁸	20	46	08	34	19	54	41	41
11	347	45.4	-4 07.0	6	48.3 ¹³⁰	-0 02.5 ¹⁰⁹	10 N	17 49	18 10	18 35	4 20	50	16 42	44
12	2	45.6	-4 08.0	21	20.2 ¹²⁹	-0 13.3 ¹⁰⁸	0	17 52	18 13	18 37	4 21	47	16 43	48
13	17	45.8	08.9	35	52.1 ¹²⁹	24.2 ¹⁰⁹	10 S	55	16	41	22	43	44	51
14	32	46.0	09.9	50	23.9 ¹²⁸	35.1 ¹⁰⁹	20	17 59	21	47	23	40	45	54
15	47	46.2	10.9	64	55.7 ¹²⁸	46.0 ¹⁰⁹	30	18 03	27	18 55	24	36	46	58
16	62	46.4	11.8	79	27.5 ¹²⁸	-0 56.9 ¹⁰⁹	35	05	30	19 00	24	34	46	61
17	77	46.6	-4 12.8	93	59.2 ¹²⁷	-1 07.8 ¹⁰⁹	40	18 07	18 35	19 07	4 25	31	16 47	63
18	92	46.8	-4 13.8	108	31.0 ¹²⁸	-1 18.7 ¹⁰⁹	45	18 11	18 40	19 16	4 26	28	16 47	67
19	107	47.0	14.7	123	02.6 ¹²⁶	29.6 ¹⁰⁹	50	14	47	26	27	25	48	70
20	122	47.2	15.7	137	34.3 ¹²⁷	40.5 ¹⁰⁹	52	16	50	32	27	24	49	71
21	137	47.3	16.7	152	05.9 ¹²⁶	-1 51.4 ¹⁰⁹	54	18	54	38	28	21	49	74
22	152	47.5	17.6	166	37.5 ¹²⁶	-2 02.3 ¹⁰⁹	56	20	18 58	44	28	20	49	76
23	167	47.7	18.6	181	09.0 ¹²⁵	13.2 ¹⁰⁹	58	22	19 03	19 52	29	17	50	78
24	182	47.9	-4 19.6	195	40.5 ¹²⁵	-2 24.2 ¹¹⁰	60 S	18 25	19 08	20 01	4 29	16	16 50	81
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 23 ^h 08 ^m 7		Mag: -4.3 PMG: 14 ^h 40 ^m			Mag: +1.6 PMG: 8 ^h 53 ^m			Mag: -2.2 PMG: 6 ^h 32 ^m		Mag: +0.6 PMG: 13 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	11	51.8	140 04.2	-21 07.0	226 36.0	+15 14.4	261 46.8	+22 04.9	153 21.3	-12 49.9				
1	26	54.2	155 03.8	07.9	241 36.9	13.9	276 49.0	04.8	168 23.5	50.0				
2	41	56.7	170 03.4	08.7	256 37.9	13.4	291 51.1	04.8	183 25.7	50.1				
3	56	59.2	185 03.0	09.6	271 38.9	13.0	306 53.3	04.8	198 27.9	50.2				
4	72	01.6	200 02.6	10.4	286 39.8	12.5	321 55.5	04.7	213 30.1	50.3				
5	87	04.1	215 02.3	-21 11.2	301 40.8	+15 12.0	336 57.7	+22 04.7	228 32.3	-12 50.3				
6	102	06.6	230 01.9	-21 12.1	316 41.8	+15 11.5	351 59.9	+22 04.7	243 34.5	-12 50.4				
7	117	09.0	245 01.5	12.9	331 42.7	11.0	7 02.0	04.6	258 36.7	50.5				
8	132	11.5	260 01.1	13.8	346 43.7	10.6	22 04.2	04.6	273 38.9	50.6				
9	147	13.9	275 00.7	14.6	1 44.6	10.1	37 06.4	04.6	288 41.1	50.7				
10	162	16.4	290 00.3	15.4	16 45.6	09.6	52 08.6	04.5	303 43.3	50.8				
11	177	18.9	304 59.9	-21 16.3	31 46.6	+15 09.1	67 10.8	+22 04.5	318 45.5	-12 50.9				
12	192	21.3	319 59.5	-21 17.1	46 47.5	+15 08.7	82 12.9	+22 04.5	333 47.7	-12 51.0				
13	207	23.8	334 59.1	17.9	61 48.5	08.2	97 15.1	04.4	348 49.9	51.1				
14	222	26.3	349 58.7	18.8	76 49.5	07.7	112 17.3	04.4	3 52.1	51.2				
15	237	28.7	4 58.3	19.6	91 50.4	07.2	127 19.5	04.4	18 54.3	51.2				
16	252	31.2	19 57.9	20.4	106 51.4	06.7	142 21.7	04.3	33 56.5	51.3				
17	267	33.7	34 57.5	-21 21.2	121 52.4	+15 06.3	157 23.9	+22 04.3	48 58.7	-12 51.4				
18	282	36.1	49 57.1	-21 22.1	136 53.3	+15 05.8	172 26.0	+22 04.3	64 00.9	-12 51.5				
19	297	38.6	64 56.7	22.9	151 54.3	05.3	187 28.2	04.3	79 03.1	51.6				
20	312	41.1	79 56.3	23.7	166 55.3	04.8	202 30.4	04.2	94 05.3	51.7				
21	327	43.5	94 56.0	24.5	181 56.2	04.3	217 32.6	04.2	109 07.5	51.8				
22	342	46.0	109 55.6	25.4	196 57.2	03.9	232 34.8	04.2	124 09.7	51.9				
23	357	48.4	124 55.2	26.2	211 58.2	03.4	247 37.0	04.1	139 11.9	52.0				
24	12	50.9	139 54.8	-21 27.0	226 59.1	+15 02.9	262 39.2	+22 04.1	154 14.1	-12 52.1				
Dif	—		-4	-8	+10		-5	+22		0	+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 11 ^h 48 ^m 7			Edad: 28 ^d 5 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'4 R°: 49 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	h	m										
0	182	47.9	-4	195	40.5	-2	24.2	60 N	4	43	5	31	6	13	5	33	81										
1	197	48.1		210	11.9 ¹²⁴		35.1 ¹⁰⁹	58	46	32	11		31	79		54	20										
2	212	48.3		224	43.4 ¹²⁵		46.0 ¹⁰⁹	56	49	32	09		29	77		56	23										
3	227	48.5		239	14.7 ¹²³	-2	56.9 ¹⁰⁹	54	51	32	07		27	75		16	59	24									
4	242	48.7		253	46.1 ¹²⁴	-3	07.8 ¹⁰⁹	52	53	32	06		26	73		17	01	26									
5	257	48.9	-4	268	17.4 ¹²³	-3	18.7 ¹⁰⁹	50	4	55	5	32	6	05	5	25	71	17	03	28							
6	272	49.1	-4	282	48.6 ¹²²	-3	29.6 ¹⁰⁹	45	4	58	5	32	6	02	5	22	67	17	07	32							
7	287	49.3		297	19.8 ¹²²		40.5 ¹⁰⁹	40	5	01	32	5	59		19	65		11	34								
8	302	49.4		311	51.0 ¹²²	-3	51.4 ¹⁰⁹	35		02	32	57		17	62		14	37									
9	317	49.6		326	22.1 ¹²¹	-4	02.2 ¹⁰⁸	30		03	31	55		16	59		17	39									
10	332	49.8		340	53.2 ¹²¹		13.1 ¹⁰⁹	20		04	30	52		13	55		22	43									
11	347	50.0	-4	355	24.3 ¹²¹	-4	24.0 ¹⁰⁹	10 N	5	03	5	27	5	48	5	10	52	17	26	47							
12	2	50.2	-4	9	55.3 ¹²⁰	-4	34.8 ¹⁰⁸	0	5	01	5	25	5	45	5	08	48	17	31	49							
13	17	50.4		24	26.2 ¹¹⁹		45.6 ¹⁰⁸	10 S	4	57	21	42		05	45		35	52									
14	32	50.6		38	57.1 ¹¹⁹	-4	56.4 ¹⁰⁸	20		51	17	39		03	41		39	56									
15	47	50.8		53	28.0 ¹¹⁹	-5	07.2 ¹⁰⁸	30		42	11	35		5	00	38		44	60								
16	62	51.0		67	58.8 ¹¹⁸		18.0 ¹⁰⁸	35		37	07	32		4	58	36		47	62								
17	77	51.1	-4	82	29.6 ¹¹⁸	-5	28.8 ¹⁰⁸	40	4	30	5	02	5	30	4	56	33	17	50	65							
18	92	51.3	-4	97	00.3 ¹¹⁷	-5	39.5 ¹⁰⁷	45	4	21	4	57	5	26	4	54	30	17	54	68							
19	107	51.5		111	31.0 ¹¹⁷	-5	50.2 ¹⁰⁷	50		10	50	22		52	26		17	58	72								
20	122	51.7		126	01.6 ¹¹⁶	-6	00.9 ¹⁰⁷	52	4	05	46	21		51	24		18	00	74								
21	137	51.9		140	32.2 ¹¹⁶		11.6 ¹⁰⁷	54	3	59	43	19		49	23		03	75									
22	152	52.1		155	02.7 ¹¹⁵		22.3 ¹⁰⁷	56		52	39	16		48	21		05	78									
23	167	52.3		169	33.2 ¹¹⁵		32.9 ¹⁰⁶	58		44	34	14		46	19		08	80									
24	182	52.5	-4	184	03.6 ¹¹⁴	-6	43.5 ¹⁰⁶	60 S	3	35	4	29	5	11	4	45	16	18	11	83							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 23 ^h 04 ^m 8			Mag: -4.3 PMG: 14 ^h 41 ^m			Mag: +1.6 PMG: 8 ^h 51 ^m			Mag: -2.3 PMG: 6 ^h 28 ^m			Mag: +0.6 PMG: 13 ^h 41 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'											
0	12	50.9	139	54.8	-21	27.0	226	59.1	+15	02.9	262	39.2	+22	04.1	154	14.1	-12	52.1									
1	27	53.4	154	54.4		27.8	242	00.1		02.4	277	41.3		04.1	169	16.3		52.1									
2	42	55.8	169	54.0		28.7	257	01.1		01.9	292	43.5		04.0	184	18.5		52.2									
3	57	58.3	184	53.6		29.5	272	02.0		01.5	307	45.7		04.0	199	20.7		52.3									
4	73	00.8	199	53.2		30.3	287	03.0		01.0	322	47.9		04.0	214	22.9		52.4									
5	88	03.2	214	52.8	-21	31.1	302	04.0	+15	00.5	337	50.1	+22	03.9	229	25.1	-12	52.5									
6	103	05.7	229	52.4	-21	31.9	317	04.9	+15	00.0	352	52.3	+22	03.9	244	27.3	-12	52.6									
7	118	08.2	244	52.0		32.7	332	05.9	+14	59.5	7	54.5		03.9	259	29.5		52.7									
8	133	10.6	259	51.6		33.6	347	06.9		59.1	22	56.7		03.8	274	31.7		52.8									
9	148	13.1	274	51.2		34.4	2	07.9		58.6	37	58.8		03.8	289	33.9		52.9									
10	163	15.5	289	50.8		35.2	17	08.8		58.1	53	01.0		03.8	304	36.1		53.0									
11	178	18.0	304	50.4	-21	36.0	32	09.8	+14	57.6	68	03.2	+22	03.8	319	38.3	-12	53.0									
12	193	20.5	319	50.0	-21	36.8	47	10.8	+14	57.1	83	05.4	+22	03.7	334	40.5	-12	53.1									
13	208	22.9	334	49.6		37.6	62	11.7		56.7	98	07.6		03.7	349	42.7		53.2									
14	223	25.4	349	49.2		38.4	77	12.7		56.2	113	09.8		03.7	4	44.9		53.3									
15	238	27.9	4	48.8		39.2	92	13.7		55.7	128	12.0		03.6	19	47.1		53.4									
16	253	30.3	19	48.4		40.1	107	14.6		55.2	143	14.2		03.6	34	49.3		53.5									
17	268	32.8	34	48.0	-21	40.9	122	15.6	+14	54.7	158	16.4	+22	03.6	49	51.5	-12	53.6									
18	283	35.3	49	47.6	-21	41.7	137	16.6	+14	54.2	173	18.6	+22	03.5	64	53.7	-12	53.7									
19	298	37.7	64	47.2		42.5	152	17.6		53.8	188	20.7		03.5	79	55.9		53.8									
20	313	40.2	79	46.8		43.3	167	18.5		53.3	203	22.9		03.5	94	58.1		53.9									
21	328	42.7	94	46.4		44.1	182	19.5		52.8	218	25.1		03.4	110	00.2		53.9									
22	343	45.1	109	46.0		44.9	197	20.5		52.3	233	27.3		03.4	125	02.4		54.0									
23	358	47.6	124	45.6		45.7	212	21.4		51.8	248	29.5		03.4	140	04.6		54.1									
24	13	50.0	139	45.2	-21	46.5	227	22.4	+14	51.4	263	31.7	+22	03.3	155	06.8	-12	54.2									
Dif	—			-4			-8			+10			-5			+22			0			+22			-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 11 ^h 48 ^m 4			Edad: 29 ^d 5 PHE { 4 ^h : 57:6 12 ^h : 57:8 20 ^h : 57:9 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	182	52.5	-4	42.7	184	03.6	-6	43.5	60 N	17 20	18 02	18 50	6 54	84	17 08	22		
1	197	52.7		43.6	198	34.0 ¹¹⁴	-6	54.1 ¹⁰⁶	58	23	02	47	50	80	14	24		
2	212	52.8		44.6	213	04.3 ¹¹³	-7	04.7 ¹⁰⁶	56	25	02	45	46	78	19	26		
3	227	53.0		45.6	227	34.6 ¹¹³		15.2 ¹⁰⁵	54	26	02	42	42	76	23	28		
4	242	53.2		46.5	242	04.8 ¹¹²		25.7 ¹⁰⁵	52	28	02	41	39	74	27	30		
5	257	53.4	-4	47.5	256	34.9 ¹¹¹	-7	36.2 ¹⁰⁵	50	17 30	18 02	18 39	6 36	72	17 31	31		
6	272	53.6	-4	48.5	271	05.1 ¹¹²	-7	46.6 ¹⁰⁴	45	17 33	18 02	18 36	6 29	69	17 39	35		
7	287	53.8		49.4	285	35.1 ¹¹⁰	-7	57.0 ¹⁰⁴	40	36	03	34	24	66	45	38		
8	302	54.0		50.4	300	05.1 ¹¹⁰	-8	07.4 ¹⁰⁴	35	38	04	33	19	63	51	40		
9	317	54.1		51.3	314	35.1 ¹¹⁰		17.7 ¹⁰³	30	41	04	32	15	61	17 56	42		
10	332	54.3		52.3	329	05.0 ¹⁰⁹		28.0 ¹⁰³	20	45	07	32	08	57	18 05	46		
11	347	54.5	-4	53.3	343	34.8 ¹⁰⁸	-8	38.3 ¹⁰³	10 N	17 48	18 09	18 34	6 02	54	18 13	49		
12	2	54.7	-4	54.2	358	04.6 ¹⁰⁸	-8	48.5 ¹⁰²	0	17 52	18 12	18 36	5 56	51	18 20	52		
13	17	54.9		55.2	12	34.3 ¹⁰⁷	-8	58.7 ¹⁰²	10 S	55	16	41	50	48	27	55		
14	32	55.1		56.1	27	04.0 ¹⁰⁷	-9	08.8 ¹⁰¹	20	17 59	21	47	44	45	35	58		
15	47	55.3		57.1	41	33.6 ¹⁰⁶		18.9 ¹⁰¹	30	18 04	28	18 56	38	40	44	62		
16	62	55.4		58.1	56	03.1 ¹⁰⁵		29.0 ¹⁰¹	35	06	32	19 02	34	38	49	64		
17	77	55.6	-4	59.0	70	32.6 ¹⁰⁵	-9	39.0 ¹⁰⁰	40	18 10	18 37	19 09	5 29	36	18 55	66		
18	92	55.8	-5	00.0	85	02.1 ¹⁰⁵	-9	49.0 ¹⁰⁰	45	18 13	18 43	19 18	5 24	33	19 02	69		
19	107	56.0	-5	00.9	99	31.5 ¹⁰⁴	-9	58.9 ⁹⁹	50	17	50	30	18	30	10	73		
20	122	56.2		01.9	114	00.8 ¹⁰³	-10	08.8 ⁹⁹	52	19	54	36	15	28	14	74		
21	137	56.4		02.9	128	30.1 ¹⁰³		18.6 ⁹⁸	54	22	18 58	42	12	27	18	76		
22	152	56.6		03.8	142	59.3 ¹⁰²		28.4 ⁹⁸	56	24	19 02	49	09	24	23	78		
23	167	56.7		04.8	157	28.4 ¹⁰¹		38.2 ⁹⁸	58	27	07	19 58	05	22	28	80		
24	182	56.9	-5	05.7	171	57.5 ¹⁰¹	-10	47.8 ⁹⁶	60 S	18 30	19 13	20 07	5 01	20	19 34	83		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 00 ^m 9			Mag: -4.3 PMG: 14 ^h 41 ^m			Mag: +1.6 PMG: 8 ^h 50 ^m			Mag: -2.3 PMG: 6 ^h 25 ^m			Mag: +0.6 PMG: 13 ^h 38 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	13	50.0	139	45.2	-21	46.5	227	22.4	+14	51.4	263	31.7	+22	03.3	155	06.8	-12	54.2
1	28	52.5	154	44.8		47.3	242	23.4		50.9	278	33.9		03.3	170	09.0		54.3
2	43	55.0	169	44.4		48.1	257	24.4		50.4	293	36.1		03.3	185	11.2		54.4
3	58	57.4	184	44.0		48.9	272	25.3		49.9	308	38.3		03.3	200	13.4		54.5
4	73	59.9	199	43.6		49.7	287	26.3		49.4	323	40.5		03.2	215	15.6		54.6
5	89	02.4	214	43.2	-21	50.5	302	27.3	+14	48.9	338	42.7	+22	03.2	230	17.8	-12	54.7
6	104	04.8	229	42.8	-21	51.3	317	28.3	+14	48.5	353	44.9	+22	03.2	245	20.0	-12	54.8
7	119	07.3	244	42.3		52.1	332	29.2		48.0	8	47.1		03.1	260	22.2		54.9
8	134	09.8	259	41.9		52.9	347	30.2		47.5	23	49.3		03.1	275	24.4		54.9
9	149	12.2	274	41.5		53.7	2	31.2		47.0	38	51.5		03.1	290	26.6		55.0
10	164	14.7	289	41.1		54.5	17	32.2		46.5	53	53.6		03.0	305	28.8		55.1
11	179	17.1	304	40.7	-21	55.2	32	33.1	+14	46.0	68	55.8	+22	03.0	320	31.0	-12	55.2
12	194	19.6	319	40.3	-21	56.0	47	34.1	+14	45.6	83	58.0	+22	03.0	335	33.2	-12	55.3
13	209	22.1	334	39.9		56.8	62	35.1		45.1	99	00.2		03.0	350	35.4		55.4
14	224	24.5	349	39.5		57.6	77	36.1		44.6	114	02.4		02.9	5	37.6		55.5
15	239	27.0	4	39.1		58.4	92	37.0		44.1	129	04.6		02.9	20	39.8		55.6
16	254	29.5	19	38.7	-21	59.2	107	38.0		43.6	144	06.8		02.9	35	42.0		55.7
17	269	31.9	34	38.3	-22	00.0	122	39.0	+14	43.1	159	09.0	+22	02.8	50	44.2	-12	55.8
18	284	34.4	49	37.9	-22	00.8	137	40.0	+14	42.6	174	11.2	+22	02.8	65	46.4	-12	55.8
19	299	36.9	64	37.5		01.6	152	40.9		42.2	189	13.4		02.8	80	48.6		55.9
20	314	39.3	79	37.1		02.3	167	41.9		41.7	204	15.6		02.7	95	50.8		56.0
21	329	41.8	94	36.7		03.1	182	42.9		41.2	219	17.8		02.7	110	53.0		56.1
22	344	44.3	109	36.3		03.9	197	43.9		40.7	234	20.0		02.7	125	55.2		56.2
23	359	46.7	124	35.8		04.7	212	44.8		40.2	249	22.2		02.7	140	57.4		56.3
24	14	49.2	139	35.4	-22	05.5	227	45.8	+14	39.7	264	24.4	+22	02.6	155	59.5	-12	56.4
Dif	—	—	-4	—	-8	—	+10	—	-5	—	+22	—	0	—	+22	—	-1	—

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 48 ^m 1			Edad: 1 ^d 0 PHE { 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'4 R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	182	56.9	-5	05.7	171	57.5	-10 47.8	60 N	4 48	5 36	6 18	8 18	83	17 30	27	
1	197	57.1		06.7	186	26.5 ¹⁰⁰	-10 57.5 ⁹⁷	58	50	36	15	10	81	38	30	
2	212	57.3		07.7	200	55.5 ¹⁰⁰	-11 07.0 ⁹⁵	56	53	36	13	8 04	78	45	32	
3	227	57.5		08.6	215	24.4 ⁹⁹	16.6 ⁹⁶	54	55	36	11	7 58	76	51	36	
4	242	57.7		09.6	229	53.2 ⁹⁸	26.0 ⁹⁴	52	57	36	09	53	74	17 57	36	
5	257	57.8	-5	10.5	244	22.0 ⁹⁸	-11 35.4 ⁹⁴	50	4 58	5 35	6 08	7 48	73	18 02	38	
6	272	58.0	-5	11.5	258	50.8 ⁹⁸	-11 44.8 ⁹⁴	45	5 01	5 35	6 04	7 38	69	18 14	40	
7	287	58.2		12.5	273	19.4 ⁹⁶	-11 54.1 ⁹³	40	03	34	6 01	30	66	23	43	
8	302	58.4		13.4	287	48.0 ⁹⁶	-12 03.3 ⁹²	35	04	33	5 59	22	65	31	45	
9	317	58.6		14.4	302	16.6 ⁹⁶	12.4 ⁹¹	30	05	32	56	16	62	38	47	
10	332	58.8		15.3	316	45.1 ⁹⁵	21.5 ⁹¹	20	05	30	52	7 05	59	18 51	49	
11	347	58.9	-5	16.3	331	13.5 ⁹⁴	-12 30.6 ⁹¹	10 N	5 03	5 27	5 48	6 56	56	19 02	52	
12	2	59.1	-5	17.2	345	41.8 ⁹³	-12 39.5 ⁸⁹	0	5 00	5 24	5 45	6 47	53	19 12	54	
13	17	59.3		18.2	0	10.1 ⁹³	48.4 ⁸⁹	10 S	4 55	20	41	38	51	22	57	
14	32	59.5		19.2	14	38.4 ⁹³	-12 57.3 ⁸⁹	20	49	15	37	29	47	33	60	
15	47	59.7		20.1	29	06.6 ⁹²	-13 06.0 ⁸⁷	30	40	08	32	18	45	46	62	
16	62	59.8		21.1	43	34.7 ⁹¹	14.7 ⁸⁷	35	34	5 04	29	12	43	19 53	64	
17	78	00.0	-5	22.0	58	02.7 ⁹⁰	-13 23.3 ⁸⁶	40	4 27	4 59	5 26	6 05	40	20 01	66	
18	93	00.2	-5	23.0	72	30.7 ⁹⁰	-13 31.9 ⁸⁶	45	4 17	4 53	5 23	5 57	38	20 11	69	
19	108	00.4		24.0	86	58.7 ⁹⁰	40.4 ⁸⁵	50	06	45	18	48	34	23	71	
20	123	00.6		24.9	101	26.5 ⁸⁸	48.8 ⁸⁴	52	4 00	42	16	43	33	28	73	
21	138	00.7		25.9	115	54.3 ⁸⁸	-13 57.1 ⁸³	54	3 54	38	14	39	31	34	75	
22	153	00.9		26.8	130	22.1 ⁸⁸	-14 05.3 ⁸²	56	46	33	11	33	29	41	76	
23	168	01.1		27.8	144	49.8 ⁸⁷	13.5 ⁸²	58	38	28	08	27	27	48	79	
24	183	01.3	-5	28.7	159	17.4 ⁸⁶	-14 21.6 ⁸¹	60 S	3 28	4 22	5 05	5 21	24	20 57	81	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 57 ^m 0		Mag: -4.3 PMG: 14 ^h 42 ^m			Mag: +1.6 PMG: 8 ^h 48 ^m			Mag: -2.3 PMG: 6 ^h 21 ^m			Mag: +0.6 PMG: 13 ^h 34 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	14	49.2	139	35.4	-22	05.5	227	45.8	+14	39.7	264	24.4	+22	02.6	155	59.5	-12	56.4	
1	29	51.6	154	35.0		06.2	242	46.8		39.3	279	26.6		02.6	171	01.7		56.5	
2	44	54.1	169	34.6		07.0	257	47.8		38.8	294	28.8		02.6	186	03.9		56.6	
3	59	56.6	184	34.2		07.8	272	48.7		38.3	309	31.0		02.5	201	06.1		56.7	
4	74	59.0	199	33.8		08.6	287	49.7		37.8	324	33.2		02.5	216	08.3		56.7	
5	90	01.5	214	33.4	-22	09.4	302	50.7	+14	37.3	339	35.4	+22	02.5	231	10.5	-12	56.8	
6	105	04.0	229	33.0	-22	10.1	317	51.7	+14	36.8	354	37.6	+22	02.4	246	12.7	-12	56.9	
7	120	06.4	244	32.6		10.9	332	52.7		36.3	9	39.8		02.4	261	14.9		57.0	
8	135	08.9	259	32.2		11.7	347	53.6		35.9	24	42.0		02.4	276	17.1		57.1	
9	150	11.4	274	31.8		12.4	2	54.6		35.4	39	44.2		02.4	291	19.3		57.2	
10	165	13.8	289	31.3		13.2	17	55.6		34.9	54	46.4		02.3	306	21.5		57.3	
11	180	16.3	304	30.9	-22	14.0	32	56.6	+14	34.4	69	48.6	+22	02.3	321	23.7	-12	57.4	
12	195	18.7	319	30.5	-22	14.8	47	57.6	+14	33.9	84	50.8	+22	02.3	336	25.9	-12	57.5	
13	210	21.2	334	30.1		15.5	62	58.5		33.4	99	53.0		02.2	351	28.1		57.6	
14	225	23.7	349	29.7		16.3	77	59.5		32.9	114	55.3		02.2	6	30.3		57.7	
15	240	26.1	4	29.3		17.1	93	00.5		32.4	129	57.5		02.2	21	32.5		57.7	
16	255	28.6	19	28.9		17.8	108	01.5		32.0	144	59.7		02.1	36	34.7		57.8	
17	270	31.1	34	28.5	-22	18.6	123	02.5	+14	31.5	160	01.9	+22	02.1	51	36.9	-12	57.9	
18	285	33.5	49	28.1	-22	19.4	138	03.4	+14	31.0	175	04.1	+22	02.1	66	39.1	-12	58.0	
19	300	36.0	64	27.6		20.1	153	04.4		30.5	190	06.3		02.1	81	41.2		58.1	
20	315	38.5	79	27.2		20.9	168	05.4		30.0	205	08.5		02.0	96	43.4		58.2	
21	330	40.9	94	26.8		21.7	183	06.4		29.5	220	10.7		02.0	111	45.6		58.3	
22	345	43.4	109	26.4		22.4	198	07.4		29.0	235	12.9		02.0	126	47.8		58.4	
23	0	45.9	124	26.0		23.2	213	08.4		28.5	250	15.1		01.9	141	50.0		58.5	
24	15	48.3	139	25.6	-22	23.9	228	09.3	+14	28.1	265	17.3	+22	01.9	156	52.2	-12	58.6	
Dif	—		-4		-8		+10		-5		+22		0		+22			-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 8			Edad: 2 ^d 0 SD: 15'9 PMG: 13 ^h 53 ^m					PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 R°: 57 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	01.3	-5 28.7	159	17.4	-14 21.6	60 N	17 14	17 56	18 44	9 41 79		17 57 37		
1	198	01.5	29.7	173	45.0	29.6 80	58	17	56	41	31 77		18 08 39		
2	213	01.6	30.7	188	12.5	85 37.5	56	19	56	39	22 75		17 41		
3	228	01.8	31.6	202	39.9	84 45.4	54	22	57	38	14 73		25 42		
4	243	02.0	32.6	217	07.3	84 -14 53.1	52	24	57	36	07 72		33 43		
5	258	02.2	-5 33.5	231	34.6	83 -15 00.8	50	17 25	17 58	18 35	9 01 70		18 40 44		
6	273	02.4	-5 34.5	246	01.9	83 -15 08.4	45	17 29	17 59	18 33	8 47 68		18 54 47		
7	288	02.5	35.4	260	29.1	82 15.9	40	33	18 00	31	36 66		19 06 48		
8	303	02.7	36.4	274	56.3	82 23.3	35	36	01	30	27 64		16 50		
9	318	02.9	37.3	289	23.3	80 30.6	30	38	02	30	18 63		25 51		
10	333	03.1	38.3	303	50.4	81 37.8	20	43	05	30	8 04 60		40 54		
11	348	03.3	-5 39.3	318	17.4	80 -15 45.0	10 N	17 47	18 08	18 33	7 52 58		19 54 55		
12	3	03.4	-5 40.2	332	44.3	79 -15 52.0	0	17 51	18 12	18 36	7 40 56		20 06 57		
13	18	03.6	41.2	347	11.1	78 -15 59.0	10 S	17 55	16	41	29 53		19 59		
14	33	03.8	42.1	1	37.9	78 -16 05.8	20	18 00	22	48	16 52		33 60		
15	48	04.0	43.1	16	04.7	78 12.6	30	05	29	18 57	7 03 48		48 62		
16	63	04.1	44.0	30	31.4	77 19.2	35	08	34	19 04	6 55 47		20 57 64		
17	78	04.3	-5 45.0	44	58.0	76 -16 25.8	40	18 12	18 39	19 12	6 45 46		21 07 65		
18	93	04.5	-5 45.9	59	24.6	76 -16 32.3	45	18 16	18 46	19 21	6 35 43		21 20 66		
19	108	04.7	46.9	73	51.1	75 38.6	50	21	54	34	22 41		34 69		
20	123	04.8	47.9	88	17.6	75 44.9	52	23	18 58	40	16 40		41 70		
21	138	05.0	48.8	102	44.0	74 51.1	54	25	19 02	46	10 38		49 70		
22	153	05.2	49.8	117	10.4	74 -16 57.1	56	28	07	19 54	6 02 37		21 57 72		
23	168	05.4	50.7	131	36.7	73 -17 03.1	58	31	12	20 03	5 54 35		22 07 74		
24	183	05.5	-5 51.7	146	03.0	73 -17 08.9	60 S	18 35	19 18	20 13	5 45 32		22 18 76		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 53 ^m 0		Mag: -4.3 PMG: 14 ^h 43 ^m			Mag: +1.6 PMG: 8 ^h 47 ^m			Mag: -2.3 PMG: 6 ^h 18 ^m			Mag: +0.6 PMG: 13 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	15	48.3	139	25.6	-22 23.9	228	09.3	+14 28.1	265	17.3	+22 01.9	156	52.2	-12 58.6	
1	30	50.8	154	25.2	24.7	243	10.3	27.6	280	19.5	01.9	171	54.4	58.6	
2	45	53.2	169	24.7	25.4	258	11.3	27.1	295	21.7	01.9	186	56.6	58.7	
3	60	55.7	184	24.3	26.2	273	12.3	26.6	310	23.9	01.8	201	58.8	58.8	
4	75	58.2	199	23.9	27.0	288	13.3	26.1	325	26.1	01.8	217	01.0	58.9	
5	91	00.6	214	23.5	-22 27.7	303	14.2	+14 25.6	340	28.3	+22 01.8	232	03.2	-12 59.0	
6	106	03.1	229	23.1	-22 28.5	318	15.2	+14 25.1	355	30.6	+22 01.7	247	05.4	-12 59.1	
7	121	05.6	244	22.7	29.2	333	16.2	24.6	10	32.8	01.7	262	07.6	59.2	
8	136	08.0	259	22.3	30.0	348	17.2	24.2	25	35.0	01.7	277	09.8	59.3	
9	151	10.5	274	21.8	30.7	3	18.2	23.7	40	37.2	01.7	292	12.0	59.4	
10	166	13.0	289	21.4	31.5	18	19.2	23.2	55	39.4	01.6	307	14.2	59.5	
11	181	15.4	304	21.0	-22 32.2	33	20.2	+14 22.7	70	41.6	+22 01.6	322	16.3	-12 59.6	
12	196	17.9	319	20.6	-22 33.0	48	21.1	+14 22.2	85	43.8	+22 01.6	337	18.5	-12 59.6	
13	211	20.4	334	20.2	33.7	63	22.1	21.7	100	46.0	01.5	352	20.7	59.7	
14	226	22.8	349	19.8	34.5	78	23.1	21.2	115	48.2	01.5	7	22.9	59.8	
15	241	25.3	4	19.3	35.2	93	24.1	20.7	130	50.5	01.5	22	25.1	-12 59.9	
16	256	27.7	19	18.9	36.0	108	25.1	20.2	145	52.7	01.4	37	27.3	-13 00.0	
17	271	30.2	34	18.5	-22 36.7	123	26.1	+14 19.8	160	54.9	+22 01.4	52	29.5	-13 00.1	
18	286	32.7	49	18.1	-22 37.4	138	27.1	+14 19.3	175	57.1	+22 01.4	67	31.7	-13 00.2	
19	301	35.1	64	17.7	38.2	153	28.0	18.8	190	59.3	01.4	82	33.9	00.3	
20	316	37.6	79	17.3	38.9	168	29.0	18.3	206	01.5	01.3	97	36.1	00.4	
21	331	40.1	94	16.8	39.7	183	30.0	17.8	221	03.7	01.3	112	38.3	00.5	
22	346	42.5	109	16.4	40.4	198	31.0	17.3	236	05.9	01.3	127	40.5	00.6	
23	1	45.0	124	16.0	41.1	213	32.0	16.8	251	08.2	01.2	142	42.7	00.6	
24	16	47.5	139	15.6	-22 41.9	228	33.0	+14 16.3	266	10.4	+22 01.2	157	44.9	-13 00.7	
Dif	—		-4		-7	+10		-5	+22		0	+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 47 ^m 5			Edad: 3 ^d 0	PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1 R°: 57 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	05.5	-5	51.7	146	03.0	-17	08.9	60 N	4 53	5 41	6 22	11 00	71	18 34	49		
1	198	05.7		52.6	160	29.2	72	14.7	58	55	40	20	10 48	69	47	50		
2	213	05.9		53.6	174	55.4	72	20.3	56	57	40	17	37	68	18 58	51		
3	228	06.1		54.5	189	21.5	71	25.8	55	4 59	39	15	27	68	19 07	52		
4	243	06.2		55.5	203	47.5	70	31.3	55	5 00	39	13	19	66	16	52		
5	258	06.4	-5	56.4	218	13.6	71	-17	36.6	5 01	5 39	6 11	10 11	66	19 24	53		
6	273	06.6	-5	57.4	232	39.5	69	-17	41.8	5 03	5 37	6 07	9 55	64	19 41	54		
7	288	06.8		58.3	247	05.5	70	46.9	51	05	36	03	42	63	19 54	55		
8	303	06.9	-5	59.3	261	31.3	68	51.9	50	06	35	6 00	31	62	20 06	55		
9	318	07.1	-6	00.2	275	57.2	69	-17	56.7	06	34	5 57	21	61	16	56		
10	333	07.3		01.2	290	23.0	68	-18	01.5	05	31	53	9 04	60	34	56		
11	348	07.5	-6	02.1	304	48.7	67	-18	06.1	5 03	5 27	5 48	8 50	58	20 49	57		
12	3	07.6	-6	03.1	319	14.4	67	-18	10.6	4 59	5 23	5 44	8 36	58	21 03	58		
13	18	07.8		04.1	333	40.1	67	15.1	45	54	19	40	22	57	18	58		
14	33	08.0		05.0	348	05.7	66	19.4	43	20	47	13	35	8 08	55	33 59		
15	48	08.2		06.0	2	31.3	66	23.5	41	30	37	06	30	7 51	54	21 50 60		
16	63	08.3		06.9	16	56.8	65	27.6	41	35	31	5 01	27	42	53	22 01 60		
17	78	08.5	-6	07.9	31	22.3	65	-18	31.5	4 23	4 56	5 23	7 31	52	22 12	61		
18	93	08.7	-6	08.8	45	47.8	65	-18	35.4	4 13	4 49	5 19	7 18	51	22 26	62		
19	108	08.8		09.8	60	13.3	65	39.1	37	50	4 01	41	14	7 03	49	43 62		
20	123	09.0		10.7	74	38.7	64	42.6	35	52	3 55	37	11	6 56	48	51 62		
21	138	09.2		11.7	89	04.0	63	46.1	35	54	48	32	09	48	47	22 59 63		
22	153	09.4		12.6	103	29.4	64	49.4	33	56	40	28	06	39	46	23 09 64		
23	168	09.5		13.6	117	54.7	63	52.7	33	58	31	22	5 03	29	44	21 64		
24	183	09.7	-6	14.5	132	19.9	62	-18	55.8	3 21	4 16	4 59	6 17	43	23 34	64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 49 ^m 1		Mag: -4.3 PMG: 14 ^h 43 ^m			Mag: +1.6 PMG: 8 ^h 45 ^m			Mag: -2.3 PMG: 6 ^h 14 ^m			Mag: +0.6 PMG: 13 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	16	47.5	139	15.6	-22	41.9	228	33.0	+14	16.3	266	10.4	+22	01.2	157	44.9	-13	00.7
1	31	49.9	154	15.2		42.6	243	34.0		15.8	281	12.6		01.2	172	47.0		00.8
2	46	52.4	169	14.7		43.4	258	34.9		15.3	296	14.8		01.2	187	49.2		00.9
3	61	54.8	184	14.3		44.1	273	35.9		14.9	311	17.0		01.1	202	51.4		01.0
4	76	57.3	199	13.9		44.8	288	36.9		14.4	326	19.2		01.1	217	53.6		01.1
5	91	59.8	214	13.5	-22	45.6	303	37.9	+14	13.9	341	21.4	+22	01.1	232	55.8	-13	01.2
6	107	02.2	229	13.1	-22	46.3	318	38.9	+14	13.4	356	23.7	+22	01.1	247	58.0	-13	01.3
7	122	04.7	244	12.6		47.0	333	39.9		12.9	11	25.9		01.0	263	00.2		01.4
8	137	07.2	259	12.2		47.7	348	40.9		12.4	26	28.1		01.0	278	02.4		01.5
9	152	09.6	274	11.8		48.5	3	41.9		11.9	41	30.3		01.0	293	04.6		01.6
10	167	12.1	289	11.4		49.2	18	42.9		11.4	56	32.5		00.9	308	06.8		01.6
11	182	14.6	304	11.0	-22	49.9	33	43.8	+14	10.9	71	34.8	+22	00.9	323	09.0	-13	01.7
12	197	17.0	319	10.5	-22	50.7	48	44.8	+14	10.4	86	37.0	+22	00.9	338	11.2	-13	01.8
13	212	19.5	334	10.1		51.4	63	45.8		09.9	101	39.2		00.9	353	13.3		01.9
14	227	22.0	349	09.7		52.1	78	46.8		09.5	116	41.4		00.8	8	15.5		02.0
15	242	24.4	4	09.3		52.8	93	47.8		09.0	131	43.6		00.8	23	17.7		02.1
16	257	26.9	19	08.9		53.6	108	48.8		08.5	146	45.8		00.8	38	19.9		02.2
17	272	29.3	34	08.4	-22	54.3	123	49.8	+14	08.0	161	48.1	+22	00.7	53	22.1	-13	02.3
18	287	31.8	49	08.0	-22	55.0	138	50.8	+14	07.5	176	50.3	+22	00.7	68	24.3	-13	02.4
19	302	34.3	64	07.6		55.7	153	51.8		07.0	191	52.5		00.7	83	26.5		02.5
20	317	36.7	79	07.2		56.4	168	52.8		06.5	206	54.7		00.7	98	28.7		02.6
21	332	39.2	94	06.7		57.2	183	53.8		06.0	221	56.9		00.6	113	30.9		02.6
22	347	41.7	109	06.3		57.9	198	54.7		05.5	236	59.2		00.6	128	33.1		02.7
23	2	44.1	124	05.9		58.6	213	55.7		05.0	252	01.4		00.6	143	35.3		02.8
24	17	46.6	139	05.5	-22	59.3	228	56.7	+14	04.5	267	03.6	+22	00.6	158	37.5	-13	02.9
Dif	—		-4		-7		+10		-5		+22		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 2			Edad: 4 ^d 0 PHE { SD: 16'1 PMG: 15 ^h 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	09.7	-6	14.5	132	19.9	-18 55.8	60 N	17 08	17 50	18 38	12 11 58	19 23 63	
1	198	09.9		15.5	146	45.2	63 -18 58.7	58	11	51	36	11 57 58	37 62	
2	213	10.0		16.4	161	10.4	62 -19 01.6	56	14	51	34	45 58	49 62	
3	228	10.2		17.4	175	35.6	62 04.3	54	17	52	33	35 58	19 59 62	
4	243	10.4		18.3	190	00.7	61 06.9	52	19	53	32	25 59	20 08 62	
5	258	10.6	-6	19.3	204	25.9	62 -19 09.4	50	17 21	17 53	18 31	11 17 59	20 17 61	
6	273	10.7	-6	20.2	218	51.0	61 -19 11.7	45	17 26	17 55	18 29	10 59 59	20 35 60	
7	288	10.9		21.2	233	16.0	60 14.0	40	30	57	28	45 59	20 49 61	
8	303	11.1		22.1	247	41.1	61 16.1	35	33	17 58	28	33 59	21 01 61	
9	318	11.2		23.1	262	06.1	60 18.0	30	36	18 00	28	22 59	12 60	
10	333	11.4		24.0	276	31.2	61 19.9	20	41	03	29	10 04 59	30 60	
11	348	11.6	-6	25.0	290	56.2	60 -19 21.6	10 N	17 46	18 07	18 31	9 48 59	21 46 59	
12	3	11.7	-6	25.9	305	21.2	60 -19 23.2	0	17 51	18 11	18 35	9 34 58	22 01 59	
13	18	11.9		26.9	319	46.1	59 24.6	10 S	17 55	16	41	19 58	16 58	
14	33	12.1		27.8	334	11.1	60 26.0	20	18 00	23	48	9 03 58	32 58	
15	48	12.2		28.8	348	36.0	59 27.2	30	06	30	18 59	8 45 58	22 50 57	
16	63	12.4		29.7	3	00.9	59 28.3	35	10	35	19 06	35 58	23 01 56	
17	78	12.6	-6	30.7	17	25.9	60 -19 29.2	40	18 14	18 41	19 14	8 23 58	23 13 56	
18	93	12.8	-6	31.6	31	50.8	59 -19 30.0	45	18 18	18 48	19 24	8 09 57	23 28 55	
19	108	12.9		32.5	46	15.7	59 30.7	50	24	18 57	37	7 52 57	45 54	
20	123	13.1		33.5	60	40.5	58 31.3	52	26	19 01	44	44 57	23 53 54	
21	138	13.3		34.4	75	05.4	59 31.7	54	29	06	51	35 57	** ** **	
22	153	13.4		35.4	89	30.3	59 32.0	56	32	11	19 59	25 56	** ** **	
23	168	13.6		36.3	103	55.2	59 32.2	58	36	17	20 09	13 56	** ** **	
24	183	13.8	-6	37.3	118	20.0	58 -19 32.2	60 S	18 40	19 24	20 20	7 00 56	** ** **	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 45 ^m 2		Mag: -4.3 PMG: 14 ^h 44 ^m		Mag: +1.6 PMG: 8 ^h 44 ^m		Mag: -2.3 PMG: 6 ^h 11 ^m		Mag: +0.6 PMG: 13 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	17	46.6	139	05.5	-22	59.3	228	56.7	+14	04.5
1	32	49.1	154	05.1	-23	00.0	243	57.7		04.0
2	47	51.5	169	04.6	-23	00.7	258	58.7		03.5
3	62	54.0	184	04.2		01.4	273	59.7		03.1
4	77	56.5	199	03.8		02.2	289	00.7		02.6
5	92	58.9	214	03.4	-23	02.9	304	01.7	+14	02.1
6	108	01.4	229	02.9	-23	03.6	319	02.7	+14	01.6
7	123	03.8	244	02.5		04.3	334	03.7		01.1
8	138	06.3	259	02.1		05.0	349	04.7		00.6
9	153	08.8	274	01.7		05.7	4	05.7	+14	00.1
10	168	11.2	289	01.2		06.4	19	06.7	+13	59.6
11	183	13.7	304	00.8	-23	07.1	34	07.7	+13	59.1
12	198	16.2	319	00.4	-23	07.8	49	08.6	+13	58.6
13	213	18.6	334	00.0		08.5	64	09.6		58.1
14	228	21.1	348	59.5		09.2	79	10.6		57.6
15	243	23.6	3	59.1		09.9	94	11.6		57.1
16	258	26.0	18	58.7		10.6	109	12.6		56.6
17	273	28.5	33	58.3	-23	11.3	124	13.6	+13	56.1
18	288	30.9	48	57.8	-23	12.0	139	14.6	+13	55.6
19	303	33.4	63	57.4		12.7	154	15.6		55.2
20	318	35.9	78	57.0		13.4	169	16.6		54.7
21	333	38.3	93	56.5		14.1	184	17.6		54.2
22	348	40.8	108	56.1		14.8	199	18.6		53.7
23	3	43.3	123	55.7		15.5	214	19.6		53.2
24	18	45.7	138	55.3	-23	16.2	229	20.6	+13	52.7
Dif	—		-4	-7		+10	-5	+22		0
									+22	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 11 ^h 47 ^m 0			Edad: 5 ^d 0 SD: 16:1 PMG: 16 ^h 46 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 Rº: 58 ^m			Hora	Rº		Hora	Rº					
	hG ☉	Dec	hG ☾			Dif							Dec	Dif	Náutico	Civil	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	183	13.8	-6	37.3	118	20.0	-19 32.2	60 N	4 57	5 45	6 27	13 09	44	20 26	74		
1	198	13.9		38.2	132	44.9	32.1	58	4 59	45	24	12 55	46	39	73		
2	213	14.1		39.2	147	09.8	31.9	56	5 01	44	21	43	48	20 51	71		
3	228	14.3		40.1	161	34.6	31.6	54	02	43	19	33	48	21 01	70		
4	243	14.4		41.1	175	59.5	31.1	52	03	42	16	24	49	10	69		
5	258	14.6	-6	42.0	190	24.4	-19 30.5	50	5 04	5 42	6 14	12 16	50	21 18	68		
6	273	14.8	-6	43.0	204	49.2	-19 29.8	45	5 06	5 40	6 09	11 58	52	21 35	67		
7	288	14.9		43.9	219	14.1	28.9	40	07	38	05	44	52	21 50	64		
8	303	15.1		44.9	233	39.0	27.9	35	07	36	6 02	32	53	22 02	63		
9	318	15.2		45.8	248	03.9	26.8	30	07	35	5 59	21	54	12	62		
10	333	15.4		46.7	262	28.8	25.5	20	06	31	53	11 03	56	30	60		
11	348	15.6	-6	47.7	276	53.7	-19 24.1	10 N	5 03	5 27	5 48	10 47	57	22 45	59		
12	3	15.7	-6	48.6	291	18.6	-19 22.6	0	4 59	5 23	5 44	10 32	58	23 00	57		
13	18	15.9		49.6	305	43.5	21.0	10 S	53	18	39	17	59	14	56		
14	33	16.1		50.5	320	08.5	19.2	20	45	11	34	10 01	60	30	54		
15	48	16.2		51.5	334	33.4	17.3	30	35	5 03	28	9 43	61	47	52		
16	63	16.4		52.4	348	58.4	15.3	35	28	4 58	24	33	62	23 57	51		
17	78	16.6	-6	53.4	3	23.4	-19 13.2	40	4 20	4 52	5 20	9 21	62	***	***	***	
18	93	16.7	-6	54.3	17	48.4	-19 10.9	45	4 09	4 45	5 15	9 06	64	***	***	***	
19	108	16.9		55.2	32	13.4	08.5	50	3 56	36	10	8 49	65	***	***	***	
20	123	17.0		56.2	46	38.4	06.0	52	50	32	07	41	65	***	***	***	
21	138	17.2		57.1	61	03.5	03.3	54	42	27	04	32	66	0	02	54	
22	153	17.4		58.1	75	28.6	-19 00.5	56	34	22	5 01	21	67	13	53		
23	168	17.5	-6	59.0	89	53.7	-18 57.6	58	25	16	4 57	8 09	69	25	52		
24	183	17.7	-7	00.0	104	18.8	-18 54.6	60 S	3 13	4 09	4 53	7 56	69	0	38	51	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 22 ^h 41 ^m 2		Mag: -4.3 PMG: 14 ^h 45 ^m			Mag: +1.6 PMG: 8 ^h 42 ^m			Mag: -2.3 PMG: 6 ^h 07 ^m			Mag: +0.6 PMG: 13 ^h 20 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	18	45.7	138	55.3	-23 16.2	229	20.6	+13 52.7	267	57.0	+21 59.9	159	30.0	-13 05.1
1	33	48.2	153	54.8	16.9	244	21.6	52.2	282	59.3	59.9	174	32.2	05.2
2	48	50.7	168	54.4	17.6	259	22.6	51.7	298	01.5	59.8	189	34.4	05.3
3	63	53.1	183	54.0	18.3	274	23.6	51.2	313	03.7	59.8	204	36.6	05.4
4	78	55.6	198	53.6	19.0	289	24.6	50.7	328	05.9	59.8	219	38.8	05.5
5	93	58.1	213	53.1	-23 19.6	304	25.6	+13 50.2	343	08.2	+21 59.8	234	41.0	-13 05.6
6	109	00.5	228	52.7	-23 20.3	319	26.6	+13 49.7	358	10.4	+21 59.7	249	43.2	-13 05.6
7	124	03.0	243	52.3	21.0	334	27.6	49.2	13	12.6	59.7	264	45.3	05.7
8	139	05.4	258	51.8	21.7	349	28.6	48.7	28	14.9	59.7	279	47.5	05.8
9	154	07.9	273	51.4	22.4	4	29.6	48.2	43	17.1	59.7	294	49.7	05.9
10	169	10.4	288	51.0	23.1	19	30.6	47.7	58	19.3	59.6	309	51.9	06.0
11	184	12.8	303	50.6	-23 23.8	34	31.6	+13 47.2	73	21.6	+21 59.6	324	54.1	-13 06.1
12	199	15.3	318	50.1	-23 24.4	49	32.6	+13 46.7	88	23.8	+21 59.6	339	56.3	-13 06.2
13	214	17.8	333	49.7	25.1	64	33.6	46.2	103	26.0	59.6	354	58.5	06.3
14	229	20.2	348	49.3	25.8	79	34.6	45.7	118	28.3	59.5	10	00.7	06.4
15	244	22.7	3	48.8	26.5	94	35.6	45.2	133	30.5	59.5	25	02.9	06.5
16	259	25.2	18	48.4	27.1	109	36.6	44.7	148	32.7	59.5	40	05.0	06.6
17	274	27.6	33	48.0	-23 27.8	124	37.6	+13 44.3	163	35.0	+21 59.5	55	07.2	-13 06.7
18	289	30.1	48	47.6	-23 28.5	139	38.6	+13 43.8	178	37.2	+21 59.4	70	09.4	-13 06.7
19	304	32.6	63	47.1	29.2	154	39.6	43.3	193	39.4	59.4	85	11.6	06.8
20	319	35.0	78	46.7	29.9	169	40.6	42.8	208	41.7	59.4	100	13.8	06.9
21	334	37.5	93	46.3	30.5	184	41.6	42.3	223	43.9	59.4	115	16.0	07.0
22	349	39.9	108	45.8	31.2	199	42.6	41.8	238	46.1	59.3	130	18.2	07.1
23	4	42.4	123	45.4	31.9	214	43.6	41.3	253	48.4	59.3	145	20.4	07.2
24	19	44.9	138	45.0	-23 32.5	229	44.6	+13 40.8	268	50.6	+21 59.3	160	22.6	-13 07.3
Dif	—		-4 -7			+10 -5			+22 0			+22 -1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 46 ^m 7			Edad: 6 ^d 0 SD: 16:1 PMG: 17 ^h 44 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 56 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	17.7	-7 00.0	104	18.8	-18 54.6	60 N	17 02	17 44	18 32	13 53 34	21 40 83			
1	198	17.9	-7 00.9	118	44.0	51.4	58	06	45	31	41 36	21 52 80			
2	213	18.0	01.8	133	09.1	48.2	56	09	46	29	31 37	22 02 78			
3	228	18.2	02.8	147	34.3	44.8	54	12	47	28	21 40	11 76			
4	243	18.3	03.7	161	59.6	41.2	52	15	48	27	13 41	19 74			
5	258	18.5	-7 04.7	176	24.8	-18 37.6	50	17 17	17 49	18 27	13 06 42	22 26 73			
6	273	18.7	-7 05.6	190	50.1	-18 33.8	45	17 22	17 52	18 25	12 50 44	22 42 69			
7	288	18.8	06.6	205	15.4	29.9	40	26	54	25	36 47	22 54 67			
8	303	19.0	07.5	219	40.8	25.9	35	30	56	25	25 49	23 05 65			
9	318	19.1	08.4	234	06.2	21.8	30	34	17 58	25	12 15 50	14 64			
10	333	19.3	09.4	248	31.6	17.5	20	40	18 02	27	11 59 52	30 61			
11	348	19.5	-7 10.3	262	57.0	-18 13.2	10 N	17 45	18 06	18 31	11 44 54	23 44 58			
12	3	19.6	-7 11.3	277	22.5	-18 08.7	0	17 50	18 11	18 35	11 30 57	23 57 56			
13	18	19.8	12.2	291	48.0	-18 04.1	10 S	17 55	16	41	16 59	** ** *			
14	33	19.9	13.1	306	13.6	-17 59.4	20	18 01	23	18 49	11 01 61	** ** *			
15	48	20.1	14.1	320	39.2	54.5	30	07	32	19 00	10 44 64	** ** *			
16	63	20.3	15.0	335	04.8	49.6	35	11	37	07	35 64	** ** *			
17	78	20.4	-7 16.0	349	30.4	-17 44.5	40	18 16	18 43	19 16	10 23 67	0 09 50			
18	93	20.6	-7 16.9	3	56.1	-17 39.3	45	18 21	18 51	19 27	10 10 68	0 23 48			
19	108	20.7	17.8	18	21.9	34.1	50	27	19 00	41	9 54 71	39 46			
20	123	20.9	18.8	32	47.7	28.6	52	30	05	48	46 72	47 45			
21	138	21.0	19.7	47	13.5	23.1	54	33	10	19 56	38 73	0 56 44			
22	153	21.2	20.7	61	39.3	17.5	56	37	16	20 04	28 75	1 06 42			
23	168	21.4	21.6	76	05.2	11.8	58	40	22	14	18 76	17 40			
24	183	21.5	-7 22.5	90	31.2	-17 05.9	60 S	18 45	19 29	20 26	9 05 79	1 29 39			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 37 ^m 3		Mag: -4.3 PMG: 14 ^h 45 ^m		Mag: +1.6 PMG: 8 ^h 40 ^m		Mag: -2.3 PMG: 6 ^h 04 ^m		Mag: +0.6 PMG: 13 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	44.9	138	45.0	-23	32.5	229	44.6	+13	40.8
1	34	47.3	153	44.5		33.2	244	45.6		40.3
2	49	49.8	168	44.1		33.9	259	46.6		39.8
3	64	52.3	183	43.7		34.5	274	47.6		39.3
4	79	54.7	198	43.2		35.2	289	48.6		38.8
5	94	57.2	213	42.8	-23	35.9	304	49.6	+13	38.3
6	109	59.7	228	42.4	-23	36.5	319	50.6	+13	37.8
7	125	02.1	243	42.0		37.2	334	51.6		37.3
8	140	04.6	258	41.5		37.9	349	52.6		36.8
9	155	07.1	273	41.1		38.5	4	53.6		36.3
10	170	09.5	288	40.7		39.2	19	54.6		35.8
11	185	12.0	303	40.2	-23	39.8	34	55.6	+13	35.3
12	200	14.4	318	39.8	-23	40.5	49	56.6	+13	34.8
13	215	16.9	333	39.4		41.2	64	57.6		34.3
14	230	19.4	348	38.9		41.8	79	58.6		33.8
15	245	21.8	3	38.5		42.5	94	59.6		33.3
16	260	24.3	18	38.1		43.1	110	00.7		32.8
17	275	26.8	33	37.6	-23	43.8	125	01.7	+13	32.3
18	290	29.2	48	37.2	-23	44.4	140	02.7	+13	31.8
19	305	31.7	63	36.8		45.1	155	03.7		31.3
20	320	34.2	78	36.3		45.7	170	04.7		30.8
21	335	36.6	93	35.9		46.4	185	05.7		30.3
22	350	39.1	108	35.5		47.0	200	06.7		29.8
23	5	41.5	123	35.0		47.7	215	07.7		29.3
24	20	44.0	138	34.6	-23	48.3	230	08.7	+13	28.8
Dif	—		-4		-7		+10		-5	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 11 ^h 46 ^m 4			Edad: 7 ^d 0 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	21.5	-7	22.5	90	31.2	-17	05.9	60 N	5	02	5	50	6	32	14	27	
1	198	21.7		23.5	104	57.2	70	-17	00.0	59	04	49	29	17	28	23	03	
2	213	21.8		24.4	119	23.2	70	-16	53.9	61	05	48	25	08	31	12	82	
3	228	22.0		25.4	133	49.3	71		47.7	62	06	47	22	14	01	20	80	
4	243	22.1		26.3	148	15.4	71		41.5	62	07	46	20	13	54	27	78	
5	258	22.3	-7	27.2	162	41.6	72	-16	35.1	64	07	45	17	13	48	33	76	
6	273	22.5	-7	28.2	177	07.8	72	-16	28.6	65	08	42	12	23	42	23	39	
7	288	22.6		29.1	191	34.0	72		22.0	66	09	40	07	13	34	23	51	
8	303	22.8		30.0	206	00.3	73		15.3	67	09	38	03	23	42	**	**	
9	318	22.9		31.0	220	26.7	74		08.6	67	08	36	6	14	43	**	**	
10	333	23.1		31.9	234	53.1	74	-16	01.7	69	06	32	5	13	05	**	**	
11	348	23.2	-7	32.9	249	19.5	74	-15	54.7	70	06	32	5	12	51	**	**	
12	3	23.4	-7	33.8	263	46.0	75	-15	47.6	71	06	32	5	12	38	**	**	
13	18	23.5		34.7	278	12.5	75		40.4	72	52	17	38	12	27	15	57	
14	33	23.7		35.7	292	39.1	76		33.1	73	52	17	32	15	57	0	10	
15	48	23.8		36.6	307	05.7	76		25.8	73	44	10	32	12	02	60	24	
16	63	24.0		37.5	321	32.4	77		18.3	75	32	5	25	11	48	63	39	
17	78	24.2	-7	38.5	335	59.1	77	-15	10.7	76	25	4	21	11	48	63	39	
18	93	24.3	-7	39.4	350	25.9	78	-15	03.1	76	25	4	21	11	30	67	0	
19	108	24.5		40.3	4	52.7	78	-14	55.3	78	16	4	21	11	30	67	0	
20	123	24.6		41.3	19	19.6	79		47.5	78	05	4	21	11	18	71	1	
21	138	24.8		42.2	33	46.5	79		39.6	79	32	5	02	11	05	73	25	
22	153	24.9		43.1	48	13.5	80		31.6	80	45	5	02	10	58	75	32	
23	168	25.1		44.1	62	40.5	80		23.5	81	27	5	02	51	77	40	35	
24	183	25.2	-7	45.0	77	07.6	81	-14	15.3	82	28	17	56	43	79	48	34	
											18	10	52	34	81	1	57	
											3	06	4	03	4	47	2	08

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 33 ^m 4		Mag: -4.3 PMG: 14 ^h 46 ^m				Mag: +1.6 PMG: 8 ^h 39 ^m				Mag: -2.3 PMG: 6 ^h 00 ^m				Mag: +0.6 PMG: 13 ^h 13 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	20	44.0	138	34.6	-23	48.3	230	08.7	+13	28.8	269	44.4	+21	58.7	161	15.1	-13	09.5
1	35	46.5	153	34.2		49.0	245	09.7		28.3	284	46.6		58.6	176	17.2		09.6
2	50	48.9	168	33.7		49.6	260	10.7		27.8	299	48.9		58.6	191	19.4		09.7
3	65	51.4	183	33.3		50.3	275	11.7		27.3	314	51.1		58.6	206	21.6		09.8
4	80	53.9	198	32.9		50.9	290	12.7		26.8	329	53.4		58.6	221	23.8		09.8
5	95	56.3	213	32.4	-23	51.6	305	13.7	+13	26.3	344	55.6	+21	58.5	236	26.0	-13	09.9
6	110	58.8	228	32.0	-23	52.2	320	14.7	+13	25.8	359	57.9	+21	58.5	251	28.2	-13	10.0
7	126	01.3	243	31.6		52.8	335	15.8		25.3	15	00.1		58.5	266	30.4		10.1
8	141	03.7	258	31.1		53.5	350	16.8		24.8	30	02.4		58.5	281	32.6		10.2
9	156	06.2	273	30.7		54.1	5	17.8		24.3	45	04.6		58.4	296	34.7		10.3
10	171	08.7	288	30.3		54.7	20	18.8		23.8	60	06.9		58.4	311	36.9		10.4
11	186	11.1	303	29.8	-23	55.4	35	19.8	+13	23.3	75	09.1	+21	58.4	326	39.1	-13	10.5
12	201	13.6	318	29.4	-23	56.0	50	20.8	+13	22.8	90	11.4	+21	58.4	341	41.3	-13	10.6
13	216	16.0	333	28.9		56.7	65	21.8		22.3	105	13.6		58.3	356	43.5		10.7
14	231	18.5	348	28.5		57.3	80	22.8		21.8	120	15.9		58.3	11	45.7		10.8
15	246	21.0	3	28.1		57.9	95	23.8		21.3	135	18.1		58.3	26	47.9		10.9
16	261	23.4	18	27.6		58.5	110	24.8		20.8	150	20.3		58.3	41	50.0		10.9
17	276	25.9	33	27.2	-23	59.2	125	25.8	+13	20.3	165	22.6	+21	58.2	56	52.2	-13	11.0
18	291	28.4	48	26.8	-23	59.8	140	26.9	+13	19.8	180	24.8	+21	58.2	71	54.4	-13	11.1
19	306	30.8	63	26.3	-24	00.4	155	27.9		19.3	195	27.1		58.2	86	56.6		11.2
20	321	33.3	78	25.9		01.1	170	28.9		18.8	210	29.3		58.2	101	58.8		11.3
21	336	35.8	93	25.5		01.7	185	29.9		18.3	225	31.6		58.2	117	01.0		11.4
22	351	38.2	108	25.0		02.3	200	30.9		17.8	240	33.9		58.1	132	03.2		11.5
23	6	40.7	123	24.6		02.9	215	31.9		17.3	255	36.1		58.1	147	05.4		11.6
24	21	43.2	138	24.2	-24	03.6	230	32.9	+13	16.8	270	38.4	+21	58.1	162	07.5	-13	11.7
Dif	—		-4		-6		+10		-5		+22		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 11 ^h 46 ^m 2			Edad: 8 ^d 0 PHE { SD: 16°1 PMG: 19 ^h 34 ^m 4 ^h : 59/1 12 ^h : 59/0 20 ^h : 59/0 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	183	25.2	-7	45.0	77	07.6	-14	15.3	60 N	16 57	17 39	18 27	14 52	20
1	198	25.4		46.0	91	34.7	81	-14	07.0	58	17 01	40	25	45
2	213	25.5		46.9	106	01.9	82	-13	58.6	56	04	42	24	39
3	228	25.7		47.8	120	29.1	82		50.2	54	07	43	24	33
4	243	25.8		48.8	134	56.4	83		41.7	52	10	44	23	28
5	258	26.0	-7	49.7	149	23.7	83	-13	33.1	50	17 13	17 45	18 23	14 23
6	273	26.1	-7	50.6	163	51.1	84	-13	24.4	45	17 19	17 48	18 22	14 13
7	288	26.3		51.6	178	18.5	84		15.6	40	23	51	22	14 05
8	303	26.4		52.5	192	46.0	85	-13	06.8	35	28	53	22	13 57
9	318	26.6		53.4	207	13.5	85	-12	57.9	30	31	17 55	23	51
10	333	26.7		54.4	221	41.0	85		48.9	20	38	18 00	26	40
11	348	26.9	-7	55.3	236	08.7	87	-12	39.8	10 N	17 44	18 05	18 30	13 30
12	3	27.0	-7	56.2	250	36.3	86	-12	30.7	0	17 50	18 10	18 35	13 21
13	18	27.2		57.1	265	04.0	87		21.5	10 S	17 55	16	41	12 56
14	33	27.3		58.1	279	31.8	88		12.2	20	18 02	24	18 50	13 02
15	48	27.5		59.0	293	59.6	88	-12	02.8	30	09	33	19 02	12 51
16	63	27.6	-7	59.9	308	27.5	89	-11	53.4	35	13	39	09	45
17	78	27.8	-8	00.9	322	55.4	89	-11	43.9	40	18 18	18 46	19 19	12 37
18	93	27.9	-8	01.8	337	23.3	89	-11	34.3	45	18 23	18 54	19 30	12 29
19	108	28.1		02.7	351	51.4	91		24.7	50	30	19 04	45	18 75
20	123	28.2		03.7	6	19.4	90		15.0	52	33	09	19 52	13 77
21	138	28.4		04.6	20	47.5	91	-11	05.3	54	37	14	20 00	08 78
22	153	28.5		05.5	35	15.7	92	-10	55.5	56	41	20	09	12 02
23	168	28.7		06.5	49	43.8	91		45.6	58	45	27	20	11 55
24	183	28.8	-8	07.4	64	12.1	93	-10	35.7	60 S	18 50	19 35	20 33	11 48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 29 ^m 4		Mag: -4.3 PMG: 14 ^h 47 ^m		Mag: +1.6 PMG: 8 ^h 37 ^m		Mag: -2.3 PMG: 5 ^h 57 ^m		Mag: +0.6 PMG: 13 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	21	43.2	138	24.2	-24	03.6	230	32.9	+13	16.8
1	36	45.6	153	23.7		04.2	245	33.9		16.3
2	51	48.1	168	23.3		04.8	260	35.0		15.8
3	66	50.5	183	22.8		05.4	275	36.0		15.3
4	81	53.0	198	22.4		06.0	290	37.0		14.8
5	96	55.5	213	22.0	-24	06.7	305	38.0	+13	14.3
6	111	57.9	228	21.5	-24	07.3	320	39.0	+13	13.8
7	127	00.4	243	21.1		07.9	335	40.0		13.3
8	142	02.9	258	20.7		08.5	350	41.0		12.8
9	157	05.3	273	20.2		09.1	5	42.0		12.3
10	172	07.8	288	19.8		09.7	20	43.1		11.8
11	187	10.3	303	19.4	-24	10.4	35	44.1	+13	11.3
12	202	12.7	318	18.9	-24	11.0	50	45.1	+13	10.8
13	217	15.2	333	18.5		11.6	65	46.1		10.3
14	232	17.7	348	18.0		12.2	80	47.1		09.8
15	247	20.1	3	17.6		12.8	95	48.1		09.3
16	262	22.6	18	17.2		13.4	110	49.1		08.8
17	277	25.0	33	16.7	-24	14.0	125	50.2	+13	08.3
18	292	27.5	48	16.3	-24	14.6	140	51.2	+13	07.8
19	307	30.0	63	15.9		15.2	155	52.2		07.3
20	322	32.4	78	15.4		15.8	170	53.2		06.8
21	337	34.9	93	15.0		16.4	185	54.2		06.3
22	352	37.4	108	14.5		17.0	200	55.2		05.8
23	7	39.8	123	14.1		17.6	215	56.3		05.3
24	22	42.3	138	13.7	-24	18.2	230	57.3	+13	04.8
Dif	—		-4		-6		+10		-5	
							</			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 0			Edad: 9 ^d 0 PHE { SD: 16'1 PMG: 20 ^h 26 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	183	28.8	-8	07.4	64	12.1	-10	35.7	60 N	5 07	5 55	6 37	15 12	18
1	198	28.9		08.3	78	40.4		25.7	58	08	53	33	08 20	34 83
2	213	29.1		09.2	93	08.7		15.6	56	09	52	29	04 22	40 80
3	228	29.2		10.2	107	37.1	-10	05.5	54	09	50	26	15 00	25 45 78
4	243	29.4		11.1	122	05.5		94	52	10	49	23	14 57	26 49 77
5	258	29.5	-8	12.0	136	34.0		95	50	5 10	5 48	6 20	14 54	28 0 53 75
6	273	29.7	-8	13.0	151	02.5		95	45	5 11	5 45	6 14	14 47	32 1 02 71
7	288	29.8		13.9	165	31.0		95	40	11	42	09	42 35	09 68
8	303	30.0		14.8	179	59.6		96	35	10	40	05	37 38	16 65
9	318	30.1		15.7	194	28.3		97	30	09	37	6 01	33 40	21 63
10	333	30.3		16.7	208	57.0		97	20	07	32	5 54	26 44	31 58
11	348	30.4	-8	17.6	223	25.7		97	10 N	5 03	5 27	5 48	14 20	47 1 39 55
12	3	30.5	-8	18.5	237	54.5		98	0	4 58	5 22	5 43	14 14	50 1 46 52
13	18	30.7		19.5	252	23.3		98	10 S	51	16	37	08 54	1 54 48
14	33	30.8		20.4	266	52.1		98	20	42	5 08	30	14 01	58 2 02 45
15	48	31.0		21.3	281	21.0		99	30	30	4 59	23	13 54	62 11 41
16	63	31.1		22.2	295	50.0		100	35	22	53	19	50 64	16 39
17	78	31.3	-8	23.2	310	18.9		99	40	4 13	4 46	5 14	13 45	67 2 22 36
18	93	31.4	-8	24.1	324	47.9		100	45	4 01	4 38	5 08	13 39	71 2 29 33
19	108	31.5		25.0	339	17.0		101	50	3 47	28	5 01	33 74	37 29
20	123	31.7		25.9	353	46.1		101	52	39	23	4 58	30 76	41 27
21	138	31.8		26.9	8	15.2		101	54	31	17	54	26 78	45 26
22	153	32.0		27.8	22	44.4		102	56	22	11	51	22 81	49 24
23	168	32.1		28.7	37	13.6		102	58	3 11	4 04	46	18 83	2 54 22
24	183	32.2	-8	29.6	51	42.8		102	60 S	2 58	3 56	4 41	13 13	86 3 00 19
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 22 ^h 25 ^m 5		Mag: -4.4 PMG: 14 ^h 48 ^m			Mag: +1.6 PMG: 8 ^h 36 ^m			Mag: -2.3 PMG: 5 ^h 53 ^m			Mag: +0.6 PMG: 13 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	22	42.3	138	13.7	-24	18.2	230	57.3	+13	04.8	271	32.5	+21	57.5
1	37	44.8	153	13.2		18.8	245	58.3		04.3	286	34.8		57.5
2	52	47.2	168	12.8		19.4	260	59.3		03.7	301	37.0		57.5
3	67	49.7	183	12.4		20.0	276	00.3		03.2	316	39.3		57.5
4	82	52.1	198	11.9		20.6	291	01.3		02.7	331	41.5		57.4
5	97	54.6	213	11.5	-24	21.2	306	02.4	+13	02.2	346	43.8	+21	57.4
6	112	57.1	228	11.0	-24	21.8	321	03.4	+13	01.7	1	46.1	+21	57.4
7	127	59.5	243	10.6		22.4	336	04.4		01.2	16	48.3		57.4
8	143	02.0	258	10.2		23.0	351	05.4		00.7	31	50.6		57.3
9	158	04.5	273	09.7		23.6	6	06.4	+13	00.2	46	52.8		57.3
10	173	06.9	288	09.3		24.2	21	07.4	+12	59.7	61	55.1		57.3
11	188	09.4	303	08.9	-24	24.8	36	08.5	+12	59.2	76	57.4	+21	57.3
12	203	11.9	318	08.4	-24	25.4	51	09.5	+12	58.7	91	59.6	+21	57.2
13	218	14.3	333	08.0		25.9	66	10.5		58.2	107	01.9		57.2
14	233	16.8	348	07.5		26.5	81	11.5		57.7	122	04.2		57.2
15	248	19.3	3	07.1		27.1	96	12.5		57.2	137	06.4		57.2
16	263	21.7	18	06.7		27.7	111	13.6		56.7	152	08.7		57.2
17	278	24.2	33	06.2	-24	28.3	126	14.6	+12	56.2	167	11.0	+21	57.1
18	293	26.6	48	05.8	-24	28.9	141	15.6	+12	55.7	182	13.2	+21	57.1
19	308	29.1	63	05.3		29.4	156	16.6		55.2	197	15.5		57.1
20	323	31.6	78	04.9		30.0	171	17.6		54.7	212	17.8		57.1
21	338	34.0	93	04.5		30.6	186	18.7		54.2	227	20.0		57.0
22	353	36.5	108	04.0		31.2	201	19.7		53.7	242	22.3		57.0
23	8	39.0	123	03.6		31.8	216	20.7		53.2	257	24.6		57.0
24	23	41.4	138	03.2	-24	32.3	231	21.7	+12	52.7	272	26.8	+21	57.0
Dif	—		-4		-6		+10		-5		+23		0	
													+22	
													-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 45 ^m 7			Edad: 10 ^d 0 PHE { 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'4 Rº: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m			
0	183	32.2	-8	29.6	51	42.8	-6 22.2	60 N	16 51	17 33	18 21	15 30	16	1 54	85			
1	198	32.4		30.6	66	12.1 ¹⁰³	11.2 ¹¹⁰	58	55	35	20	28	19	1 57	83			
2	213	32.5		31.5	80	41.4 ¹⁰³	-6 00.1 ¹¹¹	56	16 59	37	20	26	21	2 00	80			
3	228	32.7		32.4	95	10.7 ¹⁰³	-5 49.0 ¹¹¹	54	17 03	38	19	25	23	03	78			
4	243	32.8		33.3	109	40.1 ¹⁰⁴	37.8 ¹¹²	52	06	40	19	23	25	06	75			
5	258	32.9	-8	34.3	124	09.5 ¹⁰⁴	-5 26.7 ¹¹¹	50	17 09	17 41	18 19	15 22	26	2 08	74			
6	273	33.1	-8	35.2	138	39.0 ¹⁰⁵	-5 15.5 ¹¹²	45	17 15	17 45	18 19	15 19	30	2 13	70			
7	288	33.2		36.1	153	08.5 ¹⁰⁵	-5 04.2 ¹¹³	40	20	48	19	17	33	17	67			
8	303	33.4		37.0	167	38.0 ¹⁰⁵	-4 53.0 ¹¹²	35	25	51	20	15	36	21	64			
9	318	33.5		38.0	182	07.5 ¹⁰⁵	41.7 ¹¹³	30	29	53	21	13	38	24	61			
10	333	33.6		38.9	196	37.1 ¹⁰⁶	30.4 ¹¹³	20	36	17 59	24	10	42	29	57			
11	348	33.8	-8	39.8	211	06.7 ¹⁰⁶	-4 19.1 ¹¹³	10 N	17 43	18 04	18 29	15 07	46	2 34	53			
12	3	33.9	-8	40.7	225	36.3 ¹⁰⁶	-4 07.8 ¹¹³	0	17 49	18 10	18 34	15 04	50	2 38	50			
13	18	34.1		41.6	240	06.0 ¹⁰⁷	-3 56.4 ¹¹⁴	10 S	17 55	17	41	15 02	53	42	47			
14	33	34.2		42.6	254	35.7 ¹⁰⁷	45.1 ¹¹³	20	18 02	25	18 51	14 59	57	47	43			
15	48	34.3		43.5	269	05.4 ¹⁰⁷	33.7 ¹¹⁴	30	10	34	19 03	56	61	52	39			
16	63	34.5		44.4	283	35.1 ¹⁰⁷	22.3 ¹¹⁴	35	15	41	11	54	64	55	36			
17	78	34.6	-8	45.3	298	04.9 ¹⁰⁸	-3 10.9 ¹¹⁴	40	18 20	18 48	19 21	14 52	66	2 58	34			
18	93	34.7	-8	46.3	312	34.7 ¹⁰⁸	-2 59.5 ¹¹⁴	45	18 26	18 57	19 33	14 50	69	3 02	31			
19	108	34.9		47.2	327	04.5 ¹⁰⁸	48.0 ¹¹⁵	50	33	19 07	49	47	73	06	28			
20	123	35.0		48.1	341	34.4 ¹⁰⁹	36.6 ¹¹⁴	52	37	12	19 56	46	75	08	26			
21	138	35.1		49.0	356	04.3 ¹⁰⁹	25.2 ¹¹⁴	54	41	18	20 05	44	77	11	23			
22	153	35.3		49.9	10	34.2 ¹⁰⁹	13.7 ¹¹⁵	56	45	25	15	43	79	13	22			
23	168	35.4		50.9	25	04.1 ¹⁰⁹	-2 02.2 ¹¹⁵	58	50	32	26	41	82	16	19			
24	183	35.6	-8	51.8	39	34.1 ¹¹⁰	-1 50.8 ¹¹⁴	60 S	18 55	19 40	20 40	14 39	84	3 19	17			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 21 ^m 6		Mag: -4.4 PMG: 14 ^h 48 ^m			Mag: +1.6 PMG: 8 ^h 34 ^m			Mag: -2.3 PMG: 5 ^h 49 ^m			Mag: +0.6 PMG: 13 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	23	41.4	138	03.2	-24	32.3	231	21.7	+12	52.7	272	26.8	+21	57.0	163	52.4	-13	16.1
1	38	43.9	153	02.7		32.9	246	22.7		52.1	287	29.1		57.0	178	54.6		16.2
2	53	46.4	168	02.3		33.5	261	23.8		51.6	302	31.4		56.9	193	56.8		16.3
3	68	48.8	183	01.8		34.1	276	24.8		51.1	317	33.6		56.9	208	59.0		16.3
4	83	51.3	198	01.4		34.6	291	25.8		50.6	332	35.9		56.9	224	01.1		16.4
5	98	53.7	213	01.0	-24	35.2	306	26.8	+12	50.1	347	38.2	+21	56.9	239	03.3	-13	16.5
6	113	56.2	228	00.5	-24	35.8	321	27.9	+12	49.6	2	40.4	+21	56.8	254	05.5	-13	16.6
7	128	58.7	243	00.1		36.3	336	28.9		49.1	17	42.7		56.8	269	07.7		16.7
8	144	01.1	257	59.6		36.9	351	29.9		48.6	32	45.0		56.8	284	09.9		16.8
9	159	03.6	272	59.2		37.5	6	30.9		48.1	47	47.2		56.8	299	12.0		16.9
10	174	06.1	287	58.8		38.0	21	31.9		47.6	62	49.5		56.8	314	14.2		17.0
11	189	08.5	302	58.3	-24	38.6	36	33.0	+12	47.1	77	51.8	+21	56.7	329	16.4	-13	17.1
12	204	11.0	317	57.9	-24	39.2	51	34.0	+12	46.6	92	54.1	+21	56.7	344	18.6	-13	17.2
13	219	13.5	332	57.4		39.7	66	35.0		46.1	107	56.3		56.7	359	20.8		17.3
14	234	15.9	347	57.0		40.3	81	36.0		45.6	122	58.6		56.7	14	23.0		17.4
15	249	18.4	2	56.6		40.8	96	37.1		45.1	138	00.9		56.7	29	25.1		17.4
16	264	20.9	17	56.1		41.4	111	38.1		44.6	153	03.1		56.6	44	27.3		17.5
17	279	23.3	32	55.7	-24	42.0	126	39.1	+12	44.1	168	05.4	+21	56.6	59	29.5	-13	17.6
18	294	25.8	47	55.2	-24	42.5	141	40.1	+12	43.5	183	07.7	+21	56.6	74	31.7	-13	17.7
19	309	28.2	62	54.8		43.1	156	41.2		43.0	198	10.0		56.6	89	33.9		17.8
20	324	30.7	77	54.4		43.6	171	42.2		42.5	213	12.2		56.5	104	36.1		17.9
21	339	33.2	92	53.9		44.2	186	43.2		42.0	228	14.5		56.5	119	38.2		18.0
22	354	35.6	107	53.5		44.7	201	44.2		41.5	243	16.8		56.5	134	40.4		18.1
23	9	38.1	122	53.1		45.3	216	45.3		41.0	258	19.1		56.5	149	42.6		18.2
24	24	40.6	137	52.6	-24	45.8	231	46.3	+12	40.5	273	21.3	+21	56.5	164	44.8	-13	18.3
Dif	—		-4		-6		+10		-5		+23		0		+22		-1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 5			Edad: 11 ^d 0 PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 58'0 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	35.6	-8	51.8	39	34.1	-1	50.8	60 N	5 11	6 00	6 42	15 46	17	3 19	84
1	198	35.7		52.7	54	04.0 ¹⁰⁹		39.3 ¹¹⁵	58	12	5 58	38	47	19	20	81
2	213	35.8		53.6	68	34.0 ¹¹⁰		27.8 ¹¹⁵	56	13	56	33	47	21	20	79
3	228	36.0		54.5	83	04.0 ¹¹⁰		16.4 ¹¹⁴	54	13	54	30	48	23	21	76
4	243	36.1		55.5	97	34.1 ¹¹¹	-1	04.9 ¹¹⁵	52	13	52	27	48	25	21	75
5	258	36.2	-8	56.4	112	04.1 ¹¹⁰	-0	53.4 ¹¹⁵	50	5 13	5 51	6 24	15 48	27	3 22	73
6	273	36.4	-8	57.3	126	34.2 ¹¹¹	-0	41.9 ¹¹⁵	45	5 13	5 47	6 17	15 49	30	3 23	69
7	288	36.5		58.2	141	04.3 ¹¹¹		30.5 ¹¹⁴	40	13	44	12	50	33	24	66
8	303	36.6	-8	59.1	155	34.4 ¹¹¹		19.0 ¹¹⁵	35	12	41	07	51	35	25	63
9	318	36.8	-9	00.0	170	04.5 ¹¹¹	-0	07.5 ¹¹⁵	30	11	38	6 03	51	38	25	61
10	333	36.9	-9	01.0	184	34.7 ¹¹²	+0	03.9 ¹¹⁴	20	07	33	5 55	52	42	26	57
11	348	37.0	-9	01.9	199	04.9 ¹¹²	+0	15.4 ¹¹⁵	10 N	5 03	5 27	5 49	15 53	46	3 27	53
12	3	37.2	-9	02.8	213	35.0 ¹¹¹	+0	26.8 ¹¹⁴	0	4 57	5 21	5 42	15 54	49	3 28	49
13	18	37.3		03.7	228	05.2 ¹¹²		38.3 ¹¹⁵	10 S	50	15	36	55	52	29	46
14	33	37.4		04.6	242	35.5 ¹¹³	+0	49.7 ¹¹⁴	20	40	5 06	29	56	56	30	42
15	48	37.6		05.5	257	05.7 ¹¹²	+1	01.1 ¹¹⁴	30	28	4 56	21	57	60	31	38
16	63	37.7		06.5	271	35.9 ¹¹²		12.5 ¹¹⁴	35	19	50	16	58	62	31	36
17	78	37.8	-9	07.4	286	06.2 ¹¹³	+1	23.9 ¹¹⁴	40	4 10	4 43	5 11	15 58	66	3 32	33
18	93	37.9	-9	08.3	300	36.5 ¹¹³	+1	35.3 ¹¹⁴	45	3 57	4 34	5 05	15 59	69	3 33	30
19	108	38.1		09.2	315	06.7 ¹¹²		46.7 ¹¹⁴	50	42	23	4 57	16 00	72	34	26
20	123	38.2		10.1	329	37.0 ¹¹³	+1	58.0 ¹¹³	52	34	18	54	01	74	34	25
21	138	38.3		11.0	344	07.3 ¹¹³	+2	09.3 ¹¹³	54	25	12	50	01	76	34	23
22	153	38.5		12.0	358	37.7 ¹¹⁴		20.7 ¹¹⁴	56	16	4 06	45	02	78	35	21
23	168	38.6		12.9	13	08.0 ¹¹³		32.0 ¹¹³	58	3 04	3 58	41	03	80	35	19
24	183	38.7	-9	13.8	27	38.3 ¹¹³	+2	43.2 ¹¹²	60 S	2 50	3 50	4 35	16 03	83	3 36	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 17 ^m 6		Mag: -4.4 PMG: 14 ^h 49 ^m		Mag: +1.6 PMG: 8 ^h 32 ^m		Mag: -2.3 PMG: 5 ^h 46 ^m		Mag: +0.6 PMG: 12 ^h 59 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	24	40.6	137	52.6	-24	45.8	231	46.3	+12	40.5	273	21.3	+21	56.5	164	44.8	-13	18.3
1	39	43.0	152	52.2		46.4	246	47.3		40.0	288	23.6		56.4	179	47.0		18.4
2	54	45.5	167	51.7		46.9	261	48.3		39.5	303	25.9		56.4	194	49.2		18.4
3	69	48.0	182	51.3		47.5	276	49.4		39.0	318	28.2		56.4	209	51.3		18.5
4	84	50.4	197	50.9		48.0	291	50.4		38.5	333	30.4		56.4	224	53.5		18.6
5	99	52.9	212	50.4	-24	48.6	306	51.4	+12	38.0	348	32.7	+21	56.4	239	55.7	-13	18.7
6	114	55.4	227	50.0	-24	49.1	321	52.4	+12	37.5	3	35.0	+21	56.3	254	57.9	-13	18.8
7	129	57.8	242	49.5		49.7	336	53.5		37.0	18	37.3		56.3	270	00.1		18.9
8	145	00.3	257	49.1		50.2	351	54.5		36.4	33	39.5		56.3	285	02.2		19.0
9	160	02.7	272	48.7		50.8	6	55.5		35.9	48	41.8		56.3	300	04.4		19.1
10	175	05.2	287	48.2		51.3	21	56.6		35.4	63	44.1		56.3	315	06.6		19.2
11	190	07.7	302	47.8	-24	51.8	36	57.6	+12	34.9	78	46.4	+21	56.2	330	08.8	-13	19.3
12	205	10.1	317	47.3	-24	52.4	51	58.6	+12	34.4	93	48.7	+21	56.2	345	11.0	-13	19.4
13	220	12.6	332	46.9		52.9	66	59.6		33.9	108	50.9		56.2	0	13.2		19.5
14	235	15.1	347	46.5		53.5	82	00.7		33.4	123	53.2		56.2	15	15.3		19.5
15	250	17.5	2	46.0		54.0	97	01.7		32.9	138	55.5		56.2	30	17.5		19.6
16	265	20.0	17	45.6		54.5	112	02.7		32.4	153	57.8		56.1	45	19.7		19.7
17	280	22.5	32	45.1	-24	55.1	127	03.8	+12	31.9	169	00.1	+21	56.1	60	21.9	-13	19.8
18	295	24.9	47	44.7	-24	55.6	142	04.8	+12	31.4	184	02.3	+21	56.1	75	24.1	-13	19.9
19	310	27.4	62	44.3		56.1	157	05.8		30.9	199	04.6		56.1	90	26.2		20.0
20	325	29.8	77	43.8		56.7	172	06.8		30.4	214	06.9		56.1	105	28.4		20.1
21	340	32.3	92	43.4		57.2	187	07.9		29.8	229	09.2		56.0	120	30.6		20.2
22	355	34.8	107	43.0		57.7	202	08.9		29.3	244	11.5		56.0	135	32.8		20.3
23	10	37.2	122	42.5		58.2	217	09.9		28.8	259	13.8		56.0	150	35.0		20.4
24	25	39.7	137	42.1	-24	58.8	232	11.0	+12	28.3	274	16.0	+21	56.0	165	37.2	-13	20.5
Dif	—		-4	-5			+10	-5			+23	0			+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 3			Edad: 12 ^d 0 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'5 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	183	38.7	-9 13.8	27	38.3	+2 43.2		60 N	16 45	17 27	18 16	16 03 17	4 43 82		
1	198	38.9	14.7	42	08.7 ¹¹⁴	+2 54.5 ¹¹³	113	58	50	30	15	06 20	41 79		
2	213	39.0	15.6	56	39.0 ¹¹³	+3 05.7 ¹¹²	112	56	54	32	15	08 23	39 77		
3	228	39.1	16.5	71	09.4 ¹¹⁴	16.9 ¹¹²	112	54	16 58	34	15	11 24	37 76		
4	243	39.2	17.4	85	39.8 ¹¹⁴	28.1 ¹¹²	112	52	17 01	36	15	13 26	36 73		
5	258	39.4	-9 18.4	100	10.1 ¹¹³	+3 39.3 ¹¹²	112	50	17 05	17 37	18 15	16 15 28	4 35 71		
6	273	39.5	-9 19.3	114	40.5 ¹¹⁴	+3 50.4 ¹¹¹	111	45	17 12	17 41	18 15	16 19 31	4 32 68		
7	288	39.6	20.2	129	10.9 ¹¹⁴	+4 01.5 ¹¹¹	111	40	17	45	16	23 34	30 64		
8	303	39.8	21.1	143	41.3 ¹¹⁴	12.6 ¹¹¹	111	35	23	48	17	26 37	28 62		
9	318	39.9	22.0	158	11.7 ¹¹⁴	23.6 ¹¹⁰	110	30	27	51	19	29 39	26 60		
10	333	40.0	22.9	172	42.1 ¹¹⁴	34.6 ¹¹⁰	110	20	35	17 57	23	34 43	23 55		
11	348	40.1	-9 23.8	187	12.6 ¹¹⁵	+4 45.6 ¹¹⁰	110	10 N	17 42	18 03	18 28	16 39 46	4 20 52		
12	3	40.3	-9 24.7	201	43.0 ¹¹⁴	+4 56.6 ¹¹⁰	110	0	17 49	18 10	18 34	16 43 49	4 17 49		
13	18	40.4	25.6	216	13.4 ¹¹⁴	+5 07.5 ¹⁰⁹	109	10 S	17 55	17	42	47 52	15 45		
14	33	40.5	26.6	230	43.8 ¹¹⁴	18.4 ¹⁰⁹	109	20	18 03	25	18 52	52 55	12 42		
15	48	40.6	27.5	245	14.3 ¹¹⁵	29.2 ¹⁰⁸	108	30	11	36	19 05	16 57 59	09 38		
16	63	40.8	28.4	259	44.7 ¹¹⁴	40.0 ¹⁰⁸	108	35	16	42	13	17 00 62	07 36		
17	78	40.9	-9 29.3	274	15.1 ¹¹⁴	+5 50.8 ¹⁰⁸	108	40	18 22	18 50	19 24	17 04 64	4 05 34		
18	93	41.0	-9 30.2	288	45.6 ¹¹⁵	+6 01.5 ¹⁰⁷	107	45	18 29	18 59	19 36	17 08 67	4 03 30		
19	108	41.1	31.1	303	16.0 ¹¹⁴	12.2 ¹⁰⁷	107	50	37	19 11	19 53	12 71	4 00 27		
20	123	41.3	32.0	317	46.5 ¹¹⁵	22.9 ¹⁰⁷	107	52	40	16	20 01	15 72	3 59 25		
21	138	41.4	32.9	332	16.9 ¹¹⁴	33.5 ¹⁰⁶	106	54	45	22	10	17 74	57 24		
22	153	41.5	33.8	346	47.3 ¹¹⁴	44.1 ¹⁰⁶	106	56	49	29	20	20 76	56 21		
23	168	41.6	34.7	1	17.8 ¹¹⁵	+6 54.6 ¹⁰⁵	105	58	18 54	37	33	23 79	54 19		
24	183	41.8	-9 35.7	15	48.2 ¹¹⁴	+7 05.1 ¹⁰⁵	105	60 S	19 00	19 46	20 47	17 26 82	3 52 17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 13 ^m 7		Mag: -4.4 PMG: 14 ^h 50 ^m		Mag: +1.6 PMG: 8 ^h 31 ^m		Mag: -2.3 PMG: 5 ^h 42 ^m		Mag: +0.6 PMG: 12 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	25	39.7	137	42.1	-24	58.8	232	11.0	+12	28.3
1	40	42.2	152	41.6		59.3	247	12.0		27.8
2	55	44.6	167	41.2	-24	59.8	262	13.0		27.3
3	70	47.1	182	40.8	-25	00.4	277	14.1		26.8
4	85	49.6	197	40.3		00.9	292	15.1		26.3
5	100	52.0	212	39.9	-25	01.4	307	16.1	+12	25.8
6	115	54.5	227	39.4	-25	01.9	322	17.2	+12	25.3
7	130	57.0	242	39.0		02.4	337	18.2		24.8
8	145	59.4	257	38.6		03.0	352	19.2		24.2
9	161	01.9	272	38.1		03.5	7	20.3		23.7
10	176	04.3	287	37.7		04.0	22	21.3		23.2
11	191	06.8	302	37.2	-25	04.5	37	22.3	+12	22.7
12	206	09.3	317	36.8	-25	05.0	52	23.4	+12	22.2
13	221	11.7	332	36.4		05.5	67	24.4		21.7
14	236	14.2	347	35.9		06.0	82	25.4		21.2
15	251	16.7	2	35.5		06.6	97	26.5		20.7
16	266	19.1	17	35.1		07.1	112	27.5		20.2
17	281	21.6	32	34.6	-25	07.6	127	28.5	+12	19.7
18	296	24.1	47	34.2	-25	08.1	142	29.6	+12	19.1
19	311	26.5	62	33.7		08.6	157	30.6		18.6
20	326	29.0	77	33.3		09.1	172	31.6		18.1
21	341	31.4	92	32.9		09.6	187	32.7		17.6
22	356	33.9	107	32.4		10.1	202	33.7		17.1
23	11	36.4	122	32.0		10.6	217	34.7		16.6
24	26	38.8	137	31.5	-25	11.1	232	35.8	+12	16.1
Dif	—		-4		-5		+10		-5	
							+23		0	
									+22	
									-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 13 ^d 0 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 1 20 ^h : 56 ^m 9 R°: 49 ^m													
	PMG: 11 ^h 45 ^m 1			SD: 15 ^h 6 PMG: 23 ^h 44 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	183	41.8	-9 35.7	15	48.2	+7 05.1	105	58	60 N	5 16	6 04	6 47	16 20	21	6 05	80	
1	198	41.9	36.6	30	18.7 ¹¹⁵	15.6 ¹⁰⁵		58		16	02	42	26 23		6 00	78	
2	213	42.0	37.5	44	49.1 ¹¹⁴	26.0 ¹⁰⁴		56		17	6 00	38	31 25		5 56	76	
3	228	42.1	38.4	59	19.5 ¹¹⁴	36.3 ¹⁰³		54		17	5 58	34	35 27		53	73	
4	243	42.2	39.3	73	50.0 ¹¹⁵	46.7 ¹⁰⁴		52		17	56	30	39 28		49	72	
5	258	42.4	-9 40.2	88	20.4 ¹¹⁴	+7 56.9 ¹⁰²		50		5 16	5 54	6 27	16 43	30	5 46	70	
6	273	42.5	-9 41.1	102	50.8 ¹¹⁴	+8 07.1 ¹⁰²		45		5 16	5 50	6 20	16 50	34	5 40	66	
7	288	42.6	42.0	117	21.3 ¹¹⁵	17.3 ¹⁰²		40		15	46	14	16 57	36	34	64	
8	303	42.7	42.9	131	51.7 ¹¹⁴	27.4 ¹⁰¹		35		13	43	08	17 03	38	30	61	
9	318	42.8	43.8	146	22.1 ¹¹⁴	37.5 ¹⁰¹		30		12	40	6 04	08 40		26	58	
10	333	43.0	44.7	160	52.5 ¹¹⁴	47.5 ¹⁰⁰		20		08	34	5 56	17 43		18	56	
11	348	43.1	-9 45.6	175	22.9 ¹¹⁴	+8 57.4 ⁹⁹		10 N		5 03	5 27	5 49	17 25	46	5 12	52	
12	3	43.2	-9 46.5	189	53.4 ¹¹⁵	+9 07.3 ⁹⁹		0		4 56	5 21	5 42	17 32	49	5 06	49	
13	18	43.3	47.4	204	23.8 ¹¹⁴	17.2 ⁹⁹		10 S		49	14	35	39 52		5 00	47	
14	33	43.4	48.4	218	54.2 ¹¹⁴	27.0 ⁹⁸		20		39	5 05	27	47 55		4 54	43	
15	48	43.6	49.3	233	24.6 ¹¹⁴	36.7 ⁹⁷		30		25	4 54	19	17 56	59	47	40	
16	63	43.7	50.2	247	55.0 ¹¹⁴	46.4 ⁹⁷		35		17	48	14	18 02	60	43	37	
17	78	43.8	-9 51.1	262	25.3 ¹¹³	+9 56.0 ⁹⁶		40		4 06	4 40	5 08	18 08	62	4 39	34	
18	93	43.9	-9 52.0	276	55.7 ¹¹⁴	+10 05.6 ⁹⁶		45		3 53	4 30	5 01	18 15	65	4 33	32	
19	108	44.0	52.9	291	26.1 ¹¹⁴	15.1 ⁹⁵		50		37	19	4 53	23 69		27	29	
20	123	44.2	53.8	305	56.5 ¹¹⁴	24.5 ⁹⁴		52		29	13	49	27 70		24	27	
21	138	44.3	54.7	320	26.8 ¹¹³	33.9 ⁹⁴		54		20	07	45	31 72		21	25	
22	153	44.4	55.6	334	57.2 ¹¹⁴	43.2 ⁹³		56		3 09	4 00	40	36 74		17	24	
23	168	44.5	56.5	349	27.5 ¹¹³	+10 52.5 ⁹³		58		2 57	3 52	35	42 76		13	22	
24	183	44.6	-9 57.4	3	57.9 ¹¹⁴	+11 01.7 ⁹²		60 S		2 42	3 43	4 29	18 48	78	4 09	19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 09 ^m 8		Mag: -4.4 PMG: 14 ^h 50 ^m			Mag: +1.5 PMG: 8 ^h 29 ^m			Mag: -2.3 PMG: 5 ^h 38 ^m			Mag: +0.6 PMG: 12 ^h 52 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	26	38.8	137 31.5	-25 11.1		232 35.8	+12 16.1		275 10.9	+21 55.5		166 29.5	-13 22.7				
1	41	41.3	152 31.1	11.6		247 36.8	15.6		290 13.2	55.5		181 31.7	22.8				
2	56	43.8	167 30.7	12.1		262 37.8	15.1		305 15.5	55.5		196 33.9	22.8				
3	71	46.2	182 30.2	12.6		277 38.9	14.6		320 17.8	55.4		211 36.0	22.9				
4	86	48.7	197 29.8	13.1		292 39.9	14.0		335 20.1	55.4		226 38.2	23.0				
5	101	51.2	212 29.4	-25 13.6		307 40.9	+12 13.5		350 22.4	+21 55.4		241 40.4	-13 23.1				
6	116	53.6	227 28.9	-25 14.1		322 42.0	+12 13.0		5 24.7	+21 55.4		256 42.6	-13 23.2				
7	131	56.1	242 28.5	14.6		337 43.0	12.5		20 27.0	55.4		271 44.8	23.3				
8	146	58.6	257 28.0	15.1		352 44.0	12.0		35 29.3	55.4		286 46.9	23.4				
9	162	01.0	272 27.6	15.6		7 45.1	11.5		50 31.6	55.3		301 49.1	23.5				
10	177	03.5	287 27.2	16.1		22 46.1	11.0		65 33.9	55.3		316 51.3	23.6				
11	192	05.9	302 26.7	-25 16.6		37 47.2	+12 10.5		80 36.1	+21 55.3		331 53.5	-13 23.7				
12	207	08.4	317 26.3	-25 17.1		52 48.2	+12 10.0		95 38.4	+21 55.3		346 55.7	-13 23.8				
13	222	10.9	332 25.9	17.6		67 49.2	09.4		110 40.7	55.3		1 57.8	23.9				
14	237	13.3	347 25.4	18.0		82 50.3	08.9		125 43.0	55.2		17 00.0	23.9				
15	252	15.8	2 25.0	18.5		97 51.3	08.4		140 45.3	55.2		32 02.2	24.0				
16	267	18.3	17 24.5	19.0		112 52.4	07.9		155 47.6	55.2		47 04.4	24.1				
17	282	20.7	32 24.1	-25 19.5		127 53.4	+12 07.4		170 49.9	+21 55.2		62 06.6	-13 24.2				
18	297	23.2	47 23.7	-25 20.0		142 54.4	+12 06.9		185 52.2	+21 55.2		77 08.7	-13 24.3				
19	312	25.7	62 23.2	20.5		157 55.5	06.4		200 54.5	55.2		92 10.9	24.4				
20	327	28.1	77 22.8	20.9		172 56.5	05.9		215 56.8	55.1		107 13.1	24.5				
21	342	30.6	92 22.4	21.4		187 57.5	05.4		230 59.1	55.1		122 15.3	24.6				
22	357	33.0	107 21.9	21.9		202 58.6	04.8		246 01.4	55.1		137 17.5	24.7				
23	12	35.5	122 21.5	22.4		217 59.6	04.3		261 03.7	55.1		152 19.6	24.8				
24	27	38.0	137 21.1	-25 22.9		233 00.7	+12 03.8		276 06.0	+21 55.1		167 21.8	-13 24.9				
Dif	—		-4	-5		+10	-5		+23	0		+22	-1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 44 ^m 9			Edad: 14 ^d 0 PHE { SD: 15:5 PMG: **h **m R°: **m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	183	44.6	-9	3	57.9	+11	01.7	60 N	16 39	17 22	18 10	16 41	24	7 25	77			
1	198	44.7		18	28.2 ¹¹³		10.8	58	45	25	10	49	27	18	74			
2	213	44.9	-9	32	58.6 ¹¹⁴		19.9	56	49	27	10	16	56	29	12 72			
3	228	45.0	-10	47	28.9 ¹¹³		28.9	54	53	29	10	17	02	30	06 70			
4	243	45.1		61	59.2 ¹¹³		37.8	52	16 57	32	11	07	33	7 01	68			
5	258	45.2	-10	76	29.5 ¹¹³	+11	46.7	50	17 01	17 34	18 11	17 13	33	6 56	67			
6	273	45.3	-10	90	59.8 ¹¹³	+11	55.5	45	17 08	17 38	18 12	17 24	36	6 46	64			
7	288	45.4		105	30.1 ¹¹³	+12	04.2	40	15	42	13	33	38	38	61			
8	303	45.5		120	00.4 ¹¹³		12.9	35	20	46	15	41	40	31	59			
9	318	45.7		134	30.7 ¹¹³		21.5	30	25	49	17	17	48	42	24 58			
10	333	45.8		149	01.0 ¹¹³		30.0	20	33	17 56	22	18 00	45	14	54			
11	348	45.9	-10	163	31.2 ¹¹²	+12	38.4	10 N	17 41	18 02	18 27	18 11	47	6 04	52			
12	3	46.0	-10	178	01.5 ¹¹³	+12	46.8	0	17 48	18 09	18 34	18 21	49	5 55	50			
13	18	46.1		192	31.7 ¹¹²	+12	55.1	10 S	17 56	17	42	31	52	47	46			
14	33	46.2		207	02.0 ¹¹³	+13	03.3	20	18 04	26	18 52	42	54	37	44			
15	48	46.3		221	32.2 ¹¹²		11.5	30	13	37	19 06	18 55	56	27	41			
16	63	46.5		236	02.5 ¹¹³		19.6	35	18	44	15	19 02	58	20	40			
17	78	46.6	-10	250	32.7 ¹¹²	+13	27.6	40	18 24	18 52	19 26	19 10	60	5 13	38			
18	93	46.7	-10	265	02.9 ¹¹²	+13	35.5	45	18 31	19 02	19 40	19 20	62	5 05	35			
19	108	46.8		279	33.1 ¹¹²		43.4	50	40	14	19 57	32	65	4 56	31			
20	123	46.9		294	03.3 ¹¹²		51.2	52	44	20	20 05	37	67	51	30			
21	138	47.0		308	33.5 ¹¹²	+13	58.9	54	48	27	15	43	68	46	29			
22	153	47.1		323	03.7 ¹¹²	+14	06.5	56	53	34	26	50	70	41	27			
23	168	47.2		337	33.9 ¹¹²		14.0	58	18 59	42	39	19 58	71	35	24			
24	183	47.3	-10	352	04.0 ¹¹¹	+14	21.5	60 S	19 05	19 52	20 55	20 06	74	4 28	22			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 05 ^m 8		Mag: -4.4 PMG: 14 ^h 51 ^m			Mag: +1.5 PMG: 8 ^h 27 ^m			Mag: -2.4 PMG: 5 ^h 35 ^m			Mag: +0.6 PMG: 12 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	27	38.0	137	21.1	-25	22.9	233	00.7	+12	03.8	276	06.0	+21	55.1	167	21.8	-13	24.9
1	42	40.4	152	20.6		23.3	248	01.7		03.3	291	08.3		55.0	182	24.0		25.0
2	57	42.9	167	20.2		23.8	263	02.7		02.8	306	10.6		55.0	197	26.2		25.0
3	72	45.4	182	19.7		24.3	278	03.8		02.3	321	12.9		55.0	212	28.3		25.1
4	87	47.8	197	19.3		24.8	293	04.8		01.8	336	15.2		55.0	227	30.5		25.2
5	102	50.3	212	18.9	-25	25.2	308	05.9	+12	01.3	351	17.5	+21	55.0	242	32.7	-13	25.3
6	117	52.8	227	18.4	-25	25.7	323	06.9	+12	00.7	6	19.8	+21	55.0	257	34.9	-13	25.4
7	132	55.2	242	18.0		26.2	338	07.9	+12	00.2	21	22.1		54.9	272	37.1		25.5
8	147	57.7	257	17.6		26.6	353	09.0	+11	59.7	36	24.4		54.9	287	39.2		25.6
9	163	00.2	272	17.1		27.1	8	10.0		59.2	51	26.7		54.9	302	41.4		25.7
10	178	02.6	287	16.7		27.6	23	11.1		58.7	66	29.0		54.9	317	43.6		25.8
11	193	05.1	302	16.3	-25	28.0	38	12.1	+11	58.2	81	31.3	+21	54.9	332	45.8	-13	25.9
12	208	07.5	317	15.8	-25	28.5	53	13.2	+11	57.7	96	33.6	+21	54.8	347	48.0	-13	26.0
13	223	10.0	332	15.4		29.0	68	14.2		57.2	111	35.9		54.8	2	50.1		26.1
14	238	12.5	347	15.0		29.4	83	15.2		56.6	126	38.2		54.8	17	52.3		26.1
15	253	14.9	2	14.5		29.9	98	16.3		56.1	141	40.5		54.8	32	54.5		26.2
16	268	17.4	17	14.1		30.4	113	17.3		55.6	156	42.8		54.8	47	56.7		26.3
17	283	19.9	32	13.6	-25	30.8	128	18.4	+11	55.1	171	45.1	+21	54.8	62	58.9	-13	26.4
18	298	22.3	47	13.2	-25	31.3	143	19.4	+11	54.6	186	47.4	+21	54.7	78	01.0	-13	26.5
19	313	24.8	62	12.8		31.7	158	20.5		54.1	201	49.7		54.7	93	03.2		26.6
20	328	27.3	77	12.3		32.2	173	21.5		53.6	216	52.1		54.7	108	05.4		26.7
21	343	29.7	92	11.9		32.6	188	22.5		53.0	231	54.4		54.7	123	07.6		26.8
22	358	32.2	107	11.5		33.1	203	23.6		52.5	246	56.7		54.7	138	09.7		26.9
23	13	34.7	122	11.0		33.5	218	24.6		52.0	261	59.0		54.7	153	11.9		27.0
24	28	37.1	137	10.6	-25	34.0	233	25.7	+11	51.5	277	01.3	+21	54.6	168	14.1	-13	27.1
Dif	—		-4		-5		+10		-5		+23		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 15 ^d 0 PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'8										
	PMG: 11 ^h 44 ^m 8			SD: 15'3 PMG: 0 ^h 33 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	183	47.3	-10	19.0	352	04.0	+14	21.5	58	5 21	6 09	6 52	17 05	31
1	198	47.5		19.9	6	34.2 ¹¹²		28.9	74	21	06	47	16	32
2	213	47.6		20.8	21	04.4 ¹¹²		36.2	73	20	04	42	25	34
3	228	47.7		21.7	35	34.5 ¹¹¹		43.4	72	20	6 01	37	32	36
4	243	47.8		22.6	50	04.7 ¹¹²		50.6	72	20	5 59	34	40	37
5	258	47.9	-10	23.5	64	34.8 ¹¹¹	+14	57.7	71	5 19	5 57	6 30	17 46	38
6	273	48.0	-10	24.4	79	04.9 ¹¹¹	+15	04.6	69	5 18	5 52	6 22	18 00	40
7	288	48.1		25.3	93	35.1 ¹¹²		11.5	69	17	48	16	11	42
8	303	48.2		26.1	108	05.2 ¹¹¹		18.4	69	15	45	10	21	43
9	318	48.3		27.0	122	35.3 ¹¹¹		25.1	67	13	41	6 05	30	44
10	333	48.4		27.9	137	05.4 ¹¹¹		31.7	66	08	34	5 57	45	46
11	348	48.5	-10	28.8	151	35.5 ¹¹¹	+15	38.3	66	5 03	5 27	5 49	18 58	48
12	3	48.6	-10	29.7	166	05.6 ¹¹¹	+15	44.8	65	4 56	5 20	5 41	19 10	50
13	18	48.7		30.6	180	35.7 ¹¹¹		51.2	64	48	13	34	23	51
14	33	48.9		31.5	195	05.8 ¹¹¹	+15	57.5	63	37	5 03	26	36	53
15	48	49.0		32.4	209	35.9 ¹¹¹	+16	03.7	62	23	4 52	17	19	51
16	63	49.1		33.3	224	05.9 ¹¹⁰		09.8	61	14	45	11	20	00
17	78	49.2	-10	34.2	238	36.0 ¹¹¹	+16	15.9	61	4 03	4 37	5 05	20 10	57
18	93	49.3	-10	35.1	253	06.1 ¹¹¹	+16	21.8	59	3 50	4 27	4 58	20 22	59
19	108	49.4		36.0	267	36.2 ¹¹¹		27.7	59	32	15	49	37	61
20	123	49.5		36.9	282	06.2 ¹¹⁰		33.5	58	24	09	45	44	61
21	138	49.6		37.8	296	36.3 ¹¹¹		39.2	57	14	4 02	40	20	51
22	153	49.7		38.6	311	06.3 ¹¹⁰		44.8	56	3 03	3 55	35	21	00
23	168	49.8		39.5	325	36.4 ¹¹¹		50.3	55	2 50	47	30	09	66
24	183	49.9	-10	40.4	340	06.4 ¹¹⁰	+16	55.7	54	2 34	3 37	4 24	21 20	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 01 ^m 9		Mag: -4.4 PMG: 14 ^h 52 ^m		Mag: +1.5 PMG: 8 ^h 26 ^m		Mag: -2.4 PMG: 5 ^h 31 ^m		Mag: +0.6 PMG: 12 ^h 45 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	37.1	137	10.6	-25	34.0	277	01.3	+21	54.6
1	43	39.6	152	10.2		34.5	292	03.6		54.6
2	58	42.0	167	09.7		34.9	307	05.9		54.6
3	73	44.5	182	09.3		35.4	322	08.2		54.6
4	88	47.0	197	08.9		35.8	337	10.5		54.6
5	103	49.4	212	08.4	-25	36.2	352	12.8	+21	54.6
6	118	51.9	227	08.0	-25	36.7	7	15.1	+21	54.5
7	133	54.4	242	07.6		37.1	22	17.4		54.5
8	148	56.8	257	07.1		37.6	37	19.7		54.5
9	163	59.3	272	06.7		38.0	52	22.1		54.5
10	179	01.8	287	06.3		38.5	67	24.4		54.5
11	194	04.2	302	05.8	-25	38.9	82	26.7	+21	54.5
12	209	06.7	317	05.4	-25	39.3	97	29.0	+21	54.4
13	224	09.1	332	05.0		39.8	112	31.3		54.4
14	239	11.6	347	04.5		40.2	127	33.6		54.4
15	254	14.1	2	04.1		40.7	142	35.9		54.4
16	269	16.5	17	03.7		41.1	157	38.2		54.4
17	284	19.0	32	03.2	-25	41.5	172	40.5	+21	54.4
18	299	21.5	47	02.8	-25	42.0	187	42.9	+21	54.3
19	314	23.9	62	02.4		42.4	202	45.2		54.3
20	329	26.4	77	01.9		42.8	217	47.5		54.3
21	344	28.9	92	01.5		43.3	232	49.8		54.3
22	359	31.3	107	01.1		43.7	247	52.1		54.3
23	14	33.8	122	00.7		44.1	262	54.4		54.3
24	29	36.3	137	00.2	-25	44.5	277	56.7	+21	54.3
Dif	—		-4	-4	+10	-5	+23	0	+22	-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 6			Edad: 16 ^d 0 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/3 PMG: 1 ^h 22 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	49.9	-10	40.4	340	06.4	+16 55.7	60 N	16 34	17 17	18 05	17 36 39	9 53 63		
1	198	50.0		41.3	354	36.5 ¹¹¹	+17 01.1 ⁵⁴	58	39	20	05	48 40	41 62		
2	213	50.1		42.2	9	06.5 ¹¹⁰	06.3 ⁵²	56	44	23	06	17 59 41	31 60		
3	228	50.2		43.1	23	36.6 ¹¹¹	11.5 ⁵²	54	49	25	06	18 08 42	22 55		
4	243	50.3		44.0	38	06.6 ¹¹⁰	16.5 ⁵⁰	52	53	28	07	17 42	14 58		
5	258	50.4	-10	44.9	52	36.7 ¹¹¹	+17 21.5 ⁵⁰	50	16 57	17 30	18 07	18 24 43	9 06 58		
6	273	50.5	-10	45.8	67	06.7 ¹¹⁰	+17 26.4 ⁴⁹	45	17 05	17 35	18 09	18 40 44	8 51 56		
7	288	50.6		46.6	81	36.8 ¹¹¹	31.2 ⁴⁸	40	12	39	11	18 53 45	38 55		
8	303	50.7		47.5	96	06.8 ¹¹⁰	35.9 ⁴⁷	35	18	43	13	19 04 46	27 55		
9	318	50.8		48.4	110	36.9 ¹¹¹	40.5 ⁴⁶	30	23	47	15	14 47	18 53		
10	333	50.9		49.3	125	06.9 ¹¹⁰	45.0 ⁴⁵	20	32	17 54	20	31 48	8 02 52		
11	348	51.0	-10	50.2	139	36.9 ¹¹⁰	+17 49.4 ⁴⁴	10 N	17 40	18 02	18 26	19 46 49	7 47 51		
12	3	51.1	-10	51.1	154	07.0 ¹¹¹	+17 53.8 ⁴⁴	0	17 48	18 09	18 33	20 00 49	7 34 50		
13	18	51.2		52.0	168	37.0 ¹¹⁰	+17 58.0 ⁴²	10 S	17 56	17	42	14 50	21 48		
14	33	51.3		52.9	183	07.1 ¹¹¹	+18 02.1 ⁴¹	20	18 04	27	18 53	29 51	7 07 47		
15	48	51.4		53.7	197	37.1 ¹¹⁰	06.2 ⁴¹	30	14	39	19 08	46 52	6 51 45		
16	63	51.5		54.6	212	07.2 ¹¹¹	10.2 ⁴⁰	35	20	46	17	20 56 52	41 45		
17	78	51.6	-10	55.5	226	37.3 ¹¹¹	+18 14.0 ³⁸	40	18 26	18 55	19 29	21 07 54	6 31 43		
18	93	51.7	-10	56.4	241	07.3 ¹¹⁰	+18 17.8 ³⁸	45	18 34	19 05	19 43	21 21 54	6 18 42		
19	108	51.8		57.3	255	37.4 ¹¹¹	21.5 ³⁷	50	43	18	20 01	38 54	6 03 40		
20	123	51.9		58.2	270	07.5 ¹¹¹	25.0 ³⁵	52	48	24	10	45 56	5 56 40		
21	138	52.0		59.1	284	37.5 ¹¹⁰	28.5 ³⁵	54	52	31	20	21 54 56	48 39		
22	153	52.1	-10	59.9	299	07.6 ¹¹¹	31.9 ³⁴	56	18 58	39	32	22 04 56	39 38		
23	168	52.2	-11	00.8	313	37.7 ¹¹¹	35.2 ³³	58	19 04	47	20 46	15 57	29 36		
24	183	52.3	-11	01.7	328	07.8 ¹¹¹	+18 38.4 ³²	60 S	19 10	19 58	21 02	22 28 58	5 18 34		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 58 ^m 0		Mag: -4.4 PMG: 14 ^h 52 ^m			Mag: +1.5 PMG: 8 ^h 24 ^m			Mag: -2.4 PMG: 5 ^h 27 ^m			Mag: +0.6 PMG: 12 ^h 42 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	29	36.3	137	00.2	-25	44.5	233	50.8	+11	39.2	277	56.7	+21	54.3	
1	44	38.7	151	59.8		45.0	248	51.8		38.7	292	59.1		54.2	
2	59	41.2	166	59.4		45.4	263	52.9		38.1	308	01.4		54.2	
3	74	43.6	181	58.9		45.8	278	53.9		37.6	323	03.7		54.2	
4	89	46.1	196	58.5		46.2	293	55.0		37.1	338	06.0		54.2	
5	104	48.6	211	58.1	-25	46.7	308	56.0	+11	36.6	353	08.3	+21	54.2	
6	119	51.0	226	57.6	-25	47.1	323	57.1	+11	36.1	8	10.6	+21	54.2	
7	134	53.5	241	57.2		47.5	338	58.1		35.6	23	13.0		54.1	
8	149	56.0	256	56.8		47.9	353	59.2		35.0	38	15.3		54.1	
9	164	58.4	271	56.4		48.3	9	00.2		34.5	53	17.6		54.1	
10	180	00.9	286	55.9		48.7	24	01.3		34.0	68	19.9		54.1	
11	195	03.4	301	55.5	-25	49.2	39	02.3	+11	33.5	83	22.2	+21	54.1	
12	210	05.8	316	55.1	-25	49.6	54	03.4	+11	33.0	98	24.5	+21	54.1	
13	225	08.3	331	54.6		50.0	69	04.4		32.5	113	26.9		54.0	
14	240	10.8	346	54.2		50.4	84	05.5		31.9	128	29.2		54.0	
15	255	13.2	1	53.8		50.8	99	06.6		31.4	143	31.5		54.0	
16	270	15.7	16	53.4		51.2	114	07.6		30.9	158	33.8		54.0	
17	285	18.1	31	52.9	-25	51.6	129	08.7	+11	30.4	173	36.1	+21	54.0	
18	300	20.6	46	52.5	-25	52.0	144	09.7	+11	29.9	188	38.5	+21	54.0	
19	315	23.1	61	52.1		52.4	159	10.8		29.4	203	40.8		54.0	
20	330	25.5	76	51.6		52.9	174	11.8		28.9	218	43.1		53.9	
21	345	28.0	91	51.2		53.3	189	12.9		28.3	233	45.4		53.9	
22	0	30.5	106	50.8		53.7	204	13.9		27.8	248	47.8		53.9	
23	15	32.9	121	50.4		54.1	219	15.0		27.3	263	50.1		53.9	
24	30	35.4	136	49.9	-25	54.5	234	16.0	+11	26.8	278	52.4	+21	53.9	
Dif	—		-4			-4	+11			-5			+23 0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 4			Edad: 17 ^d 0 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 SD: 15'0 PMG: 2 ^h 12 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	52.3	-11	01.7	328	07.8	+18	38.4	60 N	5	25	6	14	6	57	18	15
1	198	52.4		02.6	342	37.9 ¹¹¹		41.5	58	25	11		51		28	48	
2	213	52.5		03.5	357	08.0 ¹¹¹		44.5	56	24	08		46		40	48	
3	228	52.6		04.4	11	38.1 ¹¹¹		47.4	54	24	05		41		50	48	
4	243	52.7		05.2	26	08.3 ¹¹²		50.2	52	23	02		37		18	59	
5	258	52.8	-11	06.1	40	38.4 ¹¹¹	+18	53.0	50	5	23	6	00	6	33	19	07
6	273	52.9	-11	07.0	55	08.5 ¹¹¹	+18	55.6	45	5	21	5	55	6	25	19	24
7	288	53.0		07.9	69	38.7 ¹¹²	+18	58.1	40	19		50	18		38	49	
8	303	53.0		08.8	84	08.8 ¹¹¹	+19	00.6	35	17	46		12		19	50	
9	318	53.1		09.6	98	39.0 ¹¹²		02.9	30	14	42	6	07		20	01	
10	333	53.2		10.5	113	09.2 ¹¹²		05.2	20	09	35	5	57		19	49	
11	348	53.3	-11	11.4	127	39.4 ¹¹²	+19	07.3	10 N	5	03	5	28	5	49	20	35
12	3	53.4	-11	12.3	142	09.6 ¹¹²	+19	09.4	0	4	56	5	20	5	41	20	49
13	18	53.5		13.2	156	39.8 ¹¹²		11.3	10 S	47	12		33		21	04	
14	33	53.6		14.0	171	10.0 ¹¹²		13.2	20	35	5	02	24		20	48	
15	48	53.7		14.9	185	40.2 ¹¹²		15.0	30	21	4	50	14		38	48	
16	63	53.8		15.8	200	10.5 ¹¹³		16.6	35	11	42		09		21	48	
17	78	53.9	-11	16.7	214	40.7 ¹¹²	+19	18.2	40	4	00	4	34	5	02	22	01
18	93	54.0	-11	17.6	229	11.0 ¹¹³	+19	19.7	45	3	46	4	23	4	54	22	15
19	108	54.1		18.4	243	41.3 ¹¹³		21.1	50	27	10		45		32	49	
20	123	54.2		19.3	258	11.6 ¹¹³		22.4	52	19	4	04	41		41	48	
21	138	54.2		20.2	272	41.9 ¹¹³		23.6	54	3	08	3	57	36		22	50
22	153	54.3		21.1	287	12.2 ¹¹³		24.7	56	2	57		50	31		23	00
23	168	54.4		22.0	301	42.6 ¹¹⁴		25.7	58	43	41		25		12	48	
24	183	54.5	-11	22.8	316	12.9 ¹¹³	+19	26.6	60 S	2	26	3	30	4	18	23	26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 54 ^m 0		Mag: -4.4 PMG: 14 ^h 53 ^m		Mag: +1.5 PMG: 8 ^h 22 ^m		Mag: -2.4 PMG: 5 ^h 24 ^m		Mag: +0.6 PMG: 12 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	35.4	136	49.9	-25	54.5	234	16.0	+11	26.8
1	45	37.9	151	49.5		54.9	249	17.1		26.3
2	60	40.3	166	49.1		55.3	264	18.1		25.8
3	75	42.8	181	48.6		55.7	279	19.2		25.2
4	90	45.2	196	48.2		56.1	294	20.2		24.7
5	105	47.7	211	47.8	-25	56.5	309	21.3	+11	24.2
6	120	50.2	226	47.4	-25	56.9	324	22.4	+11	23.7
7	135	52.6	241	46.9		57.2	339	23.4		23.2
8	150	55.1	256	46.5		57.6	354	24.5		22.7
9	165	57.6	271	46.1		58.0	9	25.5		22.1
10	181	00.0	286	45.7		58.4	24	26.6		21.6
11	196	02.5	301	45.2	-25	58.8	39	27.6	+11	21.1
12	211	05.0	316	44.8	-25	59.2	54	28.7	+11	20.6
13	226	07.4	331	44.4	-25	59.6	69	29.7		20.1
14	241	09.9	346	44.0	-26	00.0	84	30.8		19.6
15	256	12.4	1	43.5	-26	00.4	99	31.9		19.0
16	271	14.8	16	43.1		00.7	114	32.9		18.5
17	286	17.3	31	42.7	-26	01.1	129	34.0	+11	18.0
18	301	19.7	46	42.3	-26	01.5	144	35.0	+11	17.5
19	316	22.2	61	41.9		01.9	159	36.1		17.0
20	331	24.7	76	41.4		02.3	174	37.1		16.4
21	346	27.1	91	41.0		02.7	189	38.2		15.9
22	1	29.6	106	40.6		03.0	204	39.2		15.4
23	16	32.1	121	40.2		03.4	219	40.3		14.9
24	31	34.5	136	39.7	-26	03.8	234	41.4	+11	14.4
Dif	—		-4		-4		+11		-5	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 3			Edad: 18 ^d 0 PHE { SD: 14 ^h 9 PMG: 3 ^h 01 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	54.5	-11	22.8	316	12.9	+19	26.6	60 N	16 28	17 11	18 00	19 03	56	11 49	42		
1	198	54.6		23.7	330	43.3 ¹¹⁴		27.4	58	34	15	01	16	56	35	43		
2	213	54.7		24.6	345	13.7 ¹¹⁴		28.2	56	40	18	01	28	55	23	44		
3	228	54.8		25.5	359	44.1 ¹¹⁴		28.8	54	44	21	02	38	54	13	44		
4	243	54.9		26.3	14	14.5 ¹¹⁴		29.3	52	49	24	03	47	54	11 04	45		
5	258	54.9	-11	27.2	28	45.0 ¹¹⁵	+19	29.8	50	16 53	17 26	18 04	19 56	53	10 56	45		
6	273	55.0	-11	28.1	43	15.4 ¹¹⁴	+19	30.1	45	17 02	17 32	18 06	20 13	52	10 38	46		
7	288	55.1		29.0	57	45.9 ¹¹⁵		30.4	40	09	37	08	27	51	24	46		
8	303	55.2		29.8	72	16.4 ¹¹⁵		30.5	35	15	41	11	39	51	12	47		
9	318	55.3		30.7	86	46.9 ¹¹⁵		30.6	30	21	45	13	20	50	10	02	47	
10	333	55.4		31.6	101	17.5 ¹¹⁶		30.6	20	31	17 53	19	21	08	9	43	48	
11	348	55.5	-11	32.5	115	48.0 ¹¹⁵	+19	30.5	10 N	17 39	18 01	18 26	21 23	49	9	28	48	
12	3	55.6	-11	33.3	130	18.6 ¹¹⁶	+19	30.2	0	17 48	18 09	18 33	21 38	48	9	13	48	
13	18	55.6		34.2	144	49.2 ¹¹⁶		29.9	10 S	17 56	18	43	21	53	8	58	49	
14	33	55.7		35.1	159	19.8 ¹¹⁶		29.5	20	18 05	28	18 54	22	08	47	42	49	
15	48	55.8		35.9	173	50.4 ¹¹⁶		29.1	30	16	40	19 10	26	46	24	50		
16	63	55.9		36.8	188	21.1 ¹¹⁷		28.5	35	22	48	19	37	45	13	50		
17	78	56.0	-11	37.7	202	51.8 ¹¹⁷	+19	27.8	40	18 29	18 57	19 31	22	49	8	01	50	
18	93	56.1	-11	38.6	217	22.5 ¹¹⁷	+19	27.0	45	18 37	19 08	19 46	23	03	7	47	50	
19	108	56.1		39.4	231	53.2 ¹¹⁷		26.2	50	47	22	20 05	21	41	29	51		
20	123	56.2		40.3	246	24.0 ¹¹⁸		25.2	52	51	28	14	29	41	21	51		
21	138	56.3		41.2	260	54.7 ¹¹⁷		24.2	54	18 56	35	25	38	40	12	51		
22	153	56.4		42.0	275	25.5 ¹¹⁸		23.0	56	19 02	43	38	23	48	7	01	52	
23	168	56.5		42.9	289	56.3 ¹¹⁸		21.8	58	08	19 53	20 52	** ** *	**	6	50	51	
24	183	56.6	-11	43.8	304	27.2 ¹¹⁹	+19	20.5	60 S	19 15	20 04	21 10	** ** *	**	6	36	52	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 21 ^h 50 ^m 1		Mag: -4.4 PMG: 14 ^h 54 ^m			Mag: +1.5 PMG: 8 ^h 21 ^m			Mag: -2.4 PMG: 5 ^h 20 ^m				Mag: +0.6 PMG: 12 ^h 35 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♊	Dec		hG ♏	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	31	34.5	136	39.7	-26	03.8	234	41.4	+11	14.4	279	48.3	+21	53.5	170	50.8	-13	33.7
1	46	37.0	151	39.3		04.2	249	42.4		13.9	294	50.6		53.5	185	53.0		33.8
2	61	39.5	166	38.9		04.5	264	43.5		13.3	309	52.9		53.5	200	55.2		33.8
3	76	41.9	181	38.5		04.9	279	44.5		12.8	324	55.3		53.5	215	57.4		33.9
4	91	44.4	196	38.1		05.3	294	45.6		12.3	339	57.6		53.5	230	59.6		34.0
5	106	46.9	211	37.6	-26	05.6	309	46.7	+11	11.8	354	59.9	+21	53.5	246	01.7	-13	34.1
6	121	49.3	226	37.2	-26	06.0	324	47.7	+11	11.3	10	02.3	+21	53.5	261	03.9	-13	34.2
7	136	51.8	241	36.8		06.4	339	48.8		10.8	25	04.6		53.5	276	06.1		34.3
8	151	54.2	256	36.4		06.8	354	49.8		10.2	40	06.9		53.4	291	08.3		34.4
9	166	56.7	271	35.9		07.1	9	50.9		09.7	55	09.3		53.4	306	10.4		34.5
10	181	59.2	286	35.5		07.5	24	52.0		09.2	70	11.6		53.4	321	12.6		34.6
11	197	01.6	301	35.1	-26	07.9	39	53.0	+11	08.7	85	13.9	+21	53.4	336	14.8	-13	34.7
12	212	04.1	316	34.7	-26	08.2	54	54.1	+11	08.2	100	16.3	+21	53.4	351	17.0	-13	34.8
13	227	06.6	331	34.3		08.6	69	55.1		07.6	115	18.6		53.4	6	19.1		34.8
14	242	09.0	346	33.9		08.9	84	56.2		07.1	130	20.9		53.4	21	21.3		34.9
15	257	11.5	1	33.4		09.3	99	57.3		06.6	145	23.3		53.3	36	23.5		35.0
16	272	14.0	16	33.0		09.7	114	58.3		06.1	160	25.6		53.3	51	25.7		35.1
17	287	16.4	31	32.6	-26	10.0	129	59.4	+11	05.6	175	27.9	+21	53.3	66	27.8	-13	35.2
18	302	18.9	46	32.2	-26	10.4	145	00.4	+11	05.1	190	30.3	+21	53.3	81	30.0	-13	35.3
19	317	21.3	61	31.8		10.7	160	01.5		04.5	205	32.6		53.3	96	32.2		35.4
20	332	23.8	76	31.3		11.1	175	02.6		04.0	220	35.0		53.3	111	34.4		35.5
21	347	26.3	91	30.9		11.4	190	03.6		03.5	235	37.3		53.3	126	36.5		35.6
22	2	28.7	106	30.5		11.8	205	04.7		03.0	250	39.6		53.3	141	38.7		35.7
23	17	31.2	121	30.1		12.1	220	05.7		02.5	265	42.0		53.2	156	40.9		35.8
24	32	33.7	136	29.7	-26	12.5	235	06.8	+11	01.9	280	44.3	+21	53.2	171	43.1	-13	35.9
Dif	—		-4		-4		+11		-5		+23		0		+22		-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 19 ^d 0 PHE { SD: 14'8 PMG: 3 ^h 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	183	56.6	-11	43.8	304	27.2	+19 20.5	60 N	5 30	6 18	7 02	19 59	63	12 31	34			
1	198	56.6		44.6	318	58.0 ¹¹⁸	19.1	58	29	15	6 56	20 12	61	18	35			
2	213	56.7		45.5	333	28.9 ¹¹⁹	17.6	56	28	12	50	23	60	12 07	36			
3	228	56.8		46.4	347	59.8 ¹¹⁹	16.0	54	27	09	45	32	59	11 57	38			
4	243	56.9		47.3	2	30.8 ¹²⁰	14.3	52	26	06	41	41	58	49	38			
5	258	57.0	-11	48.1	17	01.7 ¹¹⁹	+19 12.6	50	5 26	6 03	6 37	20 49	57	11 41	39			
6	273	57.0	-11	49.0	31	32.7 ¹²⁰	+19 10.7	45	5 23	5 58	6 28	21 05	55	11 24	41			
7	288	57.1		49.9	46	03.7 ¹²⁰	08.8	40	21	52	20	18	54	11 10	42			
8	303	57.2		50.7	60	34.7 ¹²⁰	06.8	35	18	48	14	30	52	10 59	42			
9	318	57.3		51.6	75	05.8 ¹²¹	04.6	30	16	44	6 08	40	51	49	43			
10	333	57.4		52.5	89	36.9 ¹²¹	02.4	20	10	36	5 58	21 57	49	31	45			
11	348	57.4	-11	53.3	104	08.0 ¹²¹	+19 00.2	10 N	5 03	5 28	5 49	22 12	48	10 16	46			
12	3	57.5	-11	54.2	118	39.1 ¹²¹	+18 57.8	0	4 55	5 20	5 41	22 26	46	10 01	47			
13	18	57.6		55.1	133	10.3 ¹²²	55.3	10 S	46	11	32	40	45	9 47	48			
14	33	57.7		55.9	147	41.5 ¹²²	52.8	20	34	5 00	23	22 55	43	31	50			
15	48	57.7		56.8	162	12.7 ¹²²	50.1	30	18	4 48	13	23 12	41	14	50			
16	63	57.8		57.6	176	44.0 ¹²³	47.4	35	4 09	40	5 06	22	40	9 03	52			
17	78	57.9	-11	58.5	191	15.2 ¹²²	+18 44.6	40	3 57	4 31	4 59	23 33	39	8 51	53			
18	93	58.0	-11	59.4	205	46.5 ¹²³	+18 41.7	45	3 42	4 20	4 51	23 46	38	8 37	54			
19	108	58.0	-12	00.2	220	17.8 ¹²³	38.7	50	23	06	41	** ** *	**	20	55			
20	123	58.1		01.1	234	49.2 ¹²⁴	35.6	52	13	4 00	36	** ** *	**	12	56			
21	138	58.2		02.0	249	20.6 ¹²⁴	32.5	54	3 03	3 52	31	** ** *	**	8 03	57			
22	153	58.3		02.8	263	52.0 ¹²⁴	29.3	56	2 50	44	26	** ** *	**	7 53	58			
23	168	58.3		03.7	278	23.4 ¹²⁴	25.9	58	35	35	19	0 00	39	41	59			
24	183	58.4	-12	04.5	292	54.9 ¹²⁵	+18 22.5	60 S	2 17	3 24	4 12	0 13	38	7 28	60			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 46 ^m 2			Mag: -4.5 PMG: 14 ^h 54 ^m			Mag: +1.5 PMG: 8 ^h 19 ^m			Mag: -2.4 PMG: 5 ^h 16 ^m			Mag: +0.6 PMG: 12 ^h 31 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	32	33.7	136	29.7	-26	12.5	235	06.8	+11	01.9	280	44.3	+21	53.2	171	43.1		
1	47	36.1	151	29.3		12.8	250	07.9		01.4	295	46.7		53.2	186	45.2		
2	62	38.6	166	28.8		13.2	265	08.9		00.9	310	49.0		53.2	201	47.4		
3	77	41.1	181	28.4		13.5	280	10.0	+11	00.4	325	51.3		53.2	216	49.6		
4	92	43.5	196	28.0		13.9	295	11.1	+10	59.9	340	53.7		53.2	231	51.8		
5	107	46.0	211	27.6	-26	14.2	310	12.1	+10	59.3	355	56.0	+21	53.2	246	53.9		
6	122	48.5	226	27.2	-26	14.6	325	13.2	+10	58.8	10	58.4	+21	53.2	261	56.1		
7	137	50.9	241	26.8		14.9	340	14.3		58.3	26	00.7		53.1	276	58.3		
8	152	53.4	256	26.3		15.3	355	15.3		57.8	41	03.0		53.1	292	00.5		
9	167	55.8	271	25.9		15.6	10	16.4		57.3	56	05.4		53.1	307	02.6		
10	182	58.3	286	25.5		15.9	25	17.4		56.7	71	07.7		53.1	322	04.8		
11	198	00.8	301	25.1	-26	16.3	40	18.5	+10	56.2	86	10.1	+21	53.1	337	07.0		
12	213	03.2	316	24.7	-26	16.6	55	19.6	+10	55.7	101	12.4	+21	53.1	352	09.2		
13	228	05.7	331	24.3		16.9	70	20.6		55.2	116	14.8		53.1	7	11.3		
14	243	08.2	346	23.9		17.3	85	21.7		54.7	131	17.1		53.1	22	13.5		
15	258	10.6	1	23.5		17.6	100	22.8		54.2	146	19.5		53.1	37	15.7		
16	273	13.1	16	23.0		17.9	115	23.8		53.6	161	21.8		53.0	52	17.9		
17	288	15.6	31	22.6	-26	18.3	130	24.9	+10	53.1	176	24.1	+21	53.0	67	20.0		
18	303	18.0	46	22.2	-26	18.6	145	26.0	+10	52.6	191	26.5	+21	53.0	82	22.2		
19	318	20.5	61	21.8		18.9	160	27.0		52.1	206	28.8		53.0	97	24.4		
20	333	23.0	76	21.4		19.3	175	28.1		51.6	221	31.2		53.0	112	26.6		
21	348	25.4	91	21.0		19.6	190	29.2		51.0	236	33.5		53.0	127	28.7		
22	3	27.9	106	20.6		19.9	205	30.2		50.5	251	35.9		53.0	142	30.9		
23	18	30.3	121	20.2		20.2	220	31.3		50.0	266	38.2		53.0	157	33.1		
24	33	32.8	136	19.8	-26	20.6	235	32.4	+10	49.5	281	40.6	+21	52.9	172	35.2		
Dif	—			-4			-3			+11			-5			+23		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 44 ^m 0			Edad: 20 ^d 0 PHE { 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:2 PMG: 4 ^h 37 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	58.4	-12	04.5	292	54.9	+18	22.5	60 N	16 23	17 06	17 55	21 02 68	13 05 26				
1	198	58.5		05.4	307	26.3 ¹²⁴		19.1 ³⁴	58	29	10	56	13 66	12 53 28				
2	213	58.6		06.3	321	57.9 ¹²⁶		15.5 ³⁶	56	35	14	57	23 64	43 30				
3	228	58.6		07.1	336	29.4 ¹²⁵		11.9 ³⁶	54	40	17	58	31 62	35 31				
4	243	58.7		08.0	351	01.0 ¹²⁶		08.1 ³⁸	52	45	20	17 59	39 61	27 32				
5	258	58.8	-12	08.9	5	32.6 ¹²⁶	+18	04.3 ³⁸	50	16 49	17 22	18 00	21 46 59	12 20 33				
6	273	58.9	-12	09.7	20	04.2 ¹²⁶	+18	00.4 ³⁹	45	16 59	17 29	18 03	22 00 57	12 05 35				
7	288	58.9		10.6	34	35.8 ¹²⁶	+17	56.4 ⁴⁰	40	17 06	34	06	12 55	11 52 38				
8	303	59.0		11.4	49	07.5 ¹²⁷		52.4 ⁴⁰	35	13	39	09	22 54	41 39				
9	318	59.1		12.3	63	39.2 ¹²⁷		48.3 ⁴¹	30	19	43	11	31 52	32 40				
10	333	59.1		13.2	78	11.0 ¹²⁸		44.1 ⁴²	20	29	17 52	18	22 46 50	16 42				
11	348	59.2	-12	14.0	92	42.7 ¹²⁷	+17	39.8 ⁴³	10 N	17 39	18 00	18 25	23 00 47	11 02 44				
12	3	59.3	-12	14.9	107	14.5 ¹²⁸	+17	35.4 ⁴⁴	0	17 47	18 09	18 33	23 12 46	10 48 46				
13	18	59.4		15.7	121	46.3 ¹²⁸		30.9 ⁴⁵	10 S	17 56	18	43	25 43	35 48				
14	33	59.4		16.6	136	18.2 ¹²⁹		26.4 ⁴⁵	20	18 06	29	18 55	38 42	21 49				
15	48	59.5		17.4	150	50.0 ¹²⁸		21.8 ⁴⁶	30	17	42	19 11	23 53 39	10 04 52				
16	63	59.6		18.3	165	21.9 ¹²⁹		17.1 ⁴⁷	35	23	50	22	** ** *	9 55 53				
17	78	59.6	-12	19.2	179	53.8 ¹²⁹	+17	12.4 ⁴⁷	40	18 31	18 59	19 34	** ** *	9 44 54				
18	93	59.7	-12	20.0	194	25.8 ¹³⁰	+17	07.5 ⁴⁹	45	18 40	19 11	19 49	** ** *	9 31 56				
19	108	59.8		20.9	208	57.8 ¹³⁰	+17	02.6 ⁴⁹	50	50	25	20 09	0 02 36	15 59				
20	123	59.8		21.7	223	29.8 ¹³⁰	+16	57.6 ⁵⁰	52	18 55	32	19	10 35	08 59				
21	138	59.9		22.6	238	01.8 ¹³⁰		52.6 ⁵⁰	54	19 00	40	30	18 34	9 00 60				
22	154	00.0		23.4	252	33.9 ¹³¹		47.4 ⁵²	56	06	48	44	28 32	8 51 62				
23	169	00.0		24.3	267	05.9 ¹³⁰		42.2 ⁵²	58	13	19 58	20 59	39 31	40 64				
24	184	00.1	-12	25.1	281	38.1 ¹³²	+16	36.9 ⁵³	60 S	19 21	20 10	21 19	0 51 29	8 28 66				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 21 ^h 42 ^m 2		Mag: -4.5 PMG: 14 ^h 55 ^m				Mag: +1.5 PMG: 8 ^h 17 ^m				Mag: -2.4 PMG: 5 ^h 12 ^m				Mag: +0.6 PMG: 12 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	33	32.8	136	19.8	-26	20.6	235	32.4	+10	49.5	281	40.6	+21	52.9	172	35.2	-13	38.1
1	48	35.3	151	19.3		20.9	250	33.4		49.0	296	42.9		52.9	187	37.4		38.1
2	63	37.7	166	18.9		21.2	265	34.5		48.4	311	45.3		52.9	202	39.6		38.2
3	78	40.2	181	18.5		21.5	280	35.6		47.9	326	47.6		52.9	217	41.8		38.3
4	93	42.7	196	18.1		21.9	295	36.6		47.4	341	50.0		52.9	232	43.9		38.4
5	108	45.1	211	17.7	-26	22.2	310	37.7	+10	46.9	356	52.3	+21	52.9	247	46.1	-13	38.5
6	123	47.6	226	17.3	-26	22.5	325	38.8	+10	46.4	11	54.7	+21	52.9	262	48.3	-13	38.6
7	138	50.1	241	16.9		22.8	340	39.8		45.8	26	57.0		52.9	277	50.5		38.7
8	153	52.5	256	16.5		23.1	355	40.9		45.3	41	59.4		52.9	292	52.6		38.8
9	168	55.0	271	16.1		23.4	10	42.0		44.8	57	01.7		52.8	307	54.8		38.9
10	183	57.5	286	15.7		23.8	25	43.0		44.3	72	04.1		52.8	322	57.0		39.0
11	198	59.9	301	15.3	-26	24.1	40	44.1	+10	43.8	87	06.4	+21	52.8	337	59.2	-13	39.1
12	214	02.4	316	14.9	-26	24.4	55	45.2	+10	43.2	102	08.8	+21	52.8	353	01.3	-13	39.1
13	229	04.8	331	14.5		24.7	70	46.3		42.7	117	11.1		52.8	8	03.5		39.2
14	244	07.3	346	14.0		25.0	85	47.3		42.2	132	13.5		52.8	23	05.7		39.3
15	259	09.8	1	13.6		25.3	100	48.4		41.7	147	15.8		52.8	38	07.9		39.4
16	274	12.2	16	13.2		25.6	115	49.5		41.1	162	18.2		52.8	53	10.0		39.5
17	289	14.7	31	12.8	-26	25.9	130	50.5	+10	40.6	177	20.5	+21	52.8	68	12.2	-13	39.6
18	304	17.2	46	12.4	-26	26.2	145	51.6	+10	40.1	192	22.9	+21	52.8	83	14.4	-13	39.7
19	319	19.6	61	12.0		26.5	160	52.7		39.6	207	25.3		52.7	98	16.6		39.8
20	334	22.1	76	11.6		26.8	175	53.7		39.1	222	27.6		52.7	113	18.7		39.9
21	349	24.6	91	11.2		27.1	190	54.8		38.5	237	30.0		52.7	128	20.9		40.0
22	4	27.0	106	10.8		27.4	205	55.9		38.0	252	32.3		52.7	143	23.1		40.1
23	19	29.5	121	10.4		27.7	220	57.0		37.5	267	34.7		52.7	158	25.2		40.2
24	34	31.9	136	10.0	-26	28.0	235	58.0	+10	37.0	282	37.0	+21	52.7	173	27.4	-13	40.2
Dif	—		-4		-3		+11		-5		+24		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 21 ^d 0	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /3										
	PMG: 11 ^h 43 ^m 9					SD: 14 ^h 8		PMG: 5 ^h 23 ^m			R°: 46 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	184	00.1	-12	25.1	281	38.1	+16 36.9	60 N	5 34	6 23	7 07	22 10	71	13 31	21
1	199	00.2		26.0	296	10.2 ¹³¹	31.6 ⁵³	58	33	19	7 00	19	68	21	24
2	214	00.2		26.8	310	42.3 ¹³¹	26.1 ⁵⁵	56	32	16	6 54	27	66	13	25
3	229	00.3		27.7	325	14.5 ¹³²	20.6 ⁵⁵	54	31	12	49	33	65	13 06	26
4	244	00.4		28.6	339	46.7 ¹³²	15.1 ⁵⁵	52	30	09	44	40	63	12 59	28
5	259	00.4	-12	29.4	354	19.0 ¹³³	+16 09.4 ⁵⁷	50	5 29	6 06	6 40	22 45	62	12 53	30
6	274	00.5	-12	30.3	8	51.2 ¹³²	+16 03.7 ⁵⁷	45	5 26	6 00	6 30	22 57	59	12 40	32
7	289	00.6		31.1	23	23.5 ¹³³	+15 57.9 ⁵⁸	40	23	5 55	22	23 07	57	30	34
8	304	00.6		32.0	37	55.8 ¹³³	52.0 ⁵⁹	35	20	50	15	16	54	20	36
9	319	00.7		32.8	52	28.2 ¹³⁴	46.1 ⁵⁹	30	17	45	6 09	23	53	12 12	38
10	334	00.7		33.7	67	00.5 ¹³³	40.1 ⁶⁰	20	10	36	5 59	36	50	11 58	41
11	349	00.8	-12	34.5	81	32.9 ¹³⁴	+15 34.0 ⁶¹	10 N	5 03	5 28	5 49	23 47	48	11 46	43
12	4	00.9	-12	35.4	96	05.3 ¹³⁴	+15 27.9 ⁶¹	0	4 55	5 19	5 41	23 58	45	11 34	46
13	19	00.9		36.2	110	37.7 ¹³⁴	21.7 ⁶²	10 S	45	5 10	32	** ** *	**	23	47
14	34	01.0		37.1	125	10.2 ¹³⁵	15.4 ⁶³	20	32	4 59	22	** ** *	**	11 10	50
15	49	01.1		37.9	139	42.7 ¹³⁵	09.0 ⁶⁴	30	16	46	11	** ** *	**	10 56	53
16	64	01.1		38.8	154	15.2 ¹³⁵	+15 02.6 ⁶⁴	35	4 06	38	5 04	0 02	38	48	54
17	79	01.2	-12	39.6	168	47.7 ¹³⁵	+14 56.1 ⁶⁵	40	3 53	4 28	4 57	0 12	36	10 38	56
18	94	01.2	-12	40.5	183	20.2 ¹³⁵	+14 49.6 ⁶⁵	45	3 38	4 16	4 48	0 24	34	10 27	58
19	109	01.3		41.3	197	52.8 ¹³⁶	42.9 ⁶⁷	50	18	4 02	37	38	32	14	61
20	124	01.4		42.1	212	25.4 ¹³⁶	36.3 ⁶⁶	52	3 08	3 55	32	45	30	07	63
21	139	01.4		43.0	226	58.0 ¹³⁶	29.5 ⁶⁸	54	2 57	48	27	0 52	29	10 00	64
22	154	01.5		43.8	241	30.6 ¹³⁶	22.7 ⁶⁸	56	44	39	21	1 00	28	9 53	65
23	169	01.5		44.7	256	03.2 ¹³⁶	15.8 ⁶⁹	58	28	29	14	10	25	44	67
24	184	01.6	-12	45.5	270	35.9 ¹³⁷	+14 08.9 ⁶⁹	60 S	2 08	3 17	4 06	1 20	23	9 34	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 38 ^m 3		Mag: -4.5 PMG: 14 ^h 56 ^m		Mag: +1.5 PMG: 8 ^h 16 ^m		Mag: -2.4 PMG: 5 ^h 09 ^m		Mag: +0.6 PMG: 12 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	34	31.9	136	10.0	-26	28.0	235	58.0	+10	37.0
1	49	34.4	151	09.6		28.3	250	59.1		36.5
2	64	36.9	166	09.2		28.6	266	00.2		35.9
3	79	39.3	181	08.8		28.9	281	01.2		35.4
4	94	41.8	196	08.4		29.2	296	02.3		34.9
5	109	44.3	211	08.0	-26	29.5	311	03.4	+10	34.4
6	124	46.7	226	07.6	-26	29.8	326	04.5	+10	33.9
7	139	49.2	241	07.2		30.1	341	05.5		33.3
8	154	51.7	256	06.8		30.4	356	06.6		32.8
9	169	54.1	271	06.4		30.7	11	07.7		32.3
10	184	56.6	286	06.0		31.0	26	08.8		31.8
11	199	59.1	301	05.6	-26	31.3	41	09.8	+10	31.2
12	215	01.5	316	05.2	-26	31.5	56	10.9	+10	30.7
13	230	04.0	331	04.8		31.8	71	12.0		30.2
14	245	06.4	346	04.4		32.1	86	13.0		29.7
15	260	08.9	1	04.0		32.4	101	14.1		29.2
16	275	11.4	16	03.6		32.7	116	15.2		28.6
17	290	13.8	31	03.2	-26	33.0	131	16.3	+10	28.1
18	305	16.3	46	02.8	-26	33.2	146	17.3	+10	27.6
19	320	18.8	61	02.4		33.5	161	18.4		27.1
20	335	21.2	76	02.0		33.8	176	19.5		26.6
21	350	23.7	91	01.6		34.1	191	20.6		26.0
22	5	26.2	106	01.2		34.3	206	21.6		25.5
23	20	28.6	121	00.8		34.6	221	22.7		25.0
24	35	31.1	136	00.4	-26	34.9	236	23.8	+10	24.5
Dif	—		-4	-3		-3	+11	-5		-5
									+24	0
										+22
										-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1				Edad: 22 ^d 0	PHE {	4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6												
	PMG: 11 ^h 43 ^m 8										SD: 14'8	PMG: 6 ^h 09 ^m	Rº: 44 ^m						
	hG ☉		Dec		hG ☾		Dif							Dec		Dif		Civil	Náutico
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	01.6	-12	45.5	270	35.9	+14	08.9	70	60 N	16	17	17	01	17	50	23	21	
1	199	01.7		46.4	285	08.6 ¹³⁷	+14	01.9	70	58	24	05	51		51	27	71		
2	214	01.7		47.2	299	41.3 ¹³⁷	+13	54.8	71	56	30	09	53		53	33	69		
3	229	01.8		48.1	314	14.0 ¹³⁷		47.7	71	54	36	13	54		54	38	67		
4	244	01.8		48.9	328	46.7 ¹³⁷		40.5	72	52	41	16	55		55	43	65		
5	259	01.9	-12	49.8	343	19.5 ¹³⁸	+13	33.2	73	50	16	45	17	19	17	57	23		
6	274	01.9	-12	50.6	357	52.2 ¹³⁷	+13	25.9	73	45	16	55	17	26	18	00	23		
7	289	02.0		51.4	12	25.0 ¹³⁸		18.5	74	40	17	04	32	03	**	**	**		
8	304	02.0		52.3	26	57.8 ¹³⁸		11.1	74	35	11	37	06		06	**	**		
9	319	02.1		53.1	41	30.7 ¹³⁹	+13	03.6	75	30	17	42	10		10	**	**		
10	334	02.2		54.0	56	03.5 ¹³⁸	+12	56.0	76	20	28	51	17		17	**	**		
11	349	02.2	-12	54.8	70	36.4 ¹³⁹	+12	48.4	76	10 N	17	38	17	59	18	24	**		
12	4	02.3	-12	55.7	85	09.2 ¹³⁸	+12	40.7	77	0	17	47	18	08	18	33	**		
13	19	02.3		56.5	99	42.1 ¹³⁹		33.0	77	10 S	17	57	18	44		44	0		
14	34	02.4		57.3	114	15.0 ¹³⁹		25.2	78	20	18	07	30	18	56	20	39		
15	49	02.4		58.2	128	47.9 ¹³⁹		17.3	79	30	18	43	19	13		13	32		
16	64	02.5		59.0	143	20.8 ¹³⁹		09.4	79	35	25	18	52	24		24	40		
17	79	02.5	-12	59.9	157	53.8 ¹⁴⁰	+12	01.4	80	40	18	33	19	02	19	37	0		
18	94	02.6	-13	00.7	172	26.7 ¹³⁹	+11	53.4	80	45	18	42	19	14	19	53	0		
19	109	02.6		01.5	186	59.7 ¹⁴⁰		45.3	81	50	53	29	20	14		14	1		
20	124	02.7		02.4	201	32.6 ¹³⁹		37.2	81	52	18	59	36	24		24	15		
21	139	02.7		03.2	216	05.6 ¹⁴⁰		29.0	82	54	19	04	44	36		36	21		
22	154	02.8		04.1	230	38.6 ¹⁴⁰		20.7	83	56	11	19	53	20	50		50		
23	169	02.8		04.9	245	11.6 ¹⁴⁰		12.4	83	58	18	20	04	21	07		07		
24	184	02.9	-13	05.7	259	44.6 ¹⁴⁰	+11	04.1	83	60 S	19	26	20	16	21	28	1		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 21 ^h 34 ^m 4		Mag: -4.5 PMG: 14 ^h 56 ^m				Mag: +1.5 PMG: 8 ^h 14 ^m				Mag: -2.4 PMG: 5 ^h 05 ^m				Mag: +0.6 PMG: 12 ^h 21 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	35	31.1	136	00.4	-26	34.9	236	23.8	+10	24.5	283	33.7	+21	52.5	174	19.6	-13	42.4	
1	50	33.6	151	00.0		35.2	251	24.9		23.9	298	36.1		52.5	189	21.8		42.5	
2	65	36.0	165	59.7		35.4	266	25.9		23.4	313	38.4		52.4	204	23.9		42.6	
3	80	38.5	180	59.3		35.7	281	27.0		22.9	328	40.8		52.4	219	26.1		42.7	
4	95	40.9	195	58.9		36.0	296	28.1		22.4	343	43.2		52.4	234	28.3		42.8	
5	110	43.4	210	58.5	-26	36.2	311	29.2	+10	21.9	358	45.5	+21	52.4	249	30.4	-13	42.9	
6	125	45.9	225	58.1	-26	36.5	326	30.3	+10	21.3	13	47.9	+21	52.4	264	32.6	-13	43.0	
7	140	48.3	240	57.7		36.8	341	31.3		20.8	28	50.3		52.4	279	34.8		43.1	
8	155	50.8	255	57.3		37.0	356	32.4		20.3	43	52.6		52.4	294	37.0		43.2	
9	170	53.3	270	56.9		37.3	11	33.5		19.8	58	55.0		52.4	309	39.1		43.3	
10	185	55.7	285	56.5		37.6	26	34.6		19.2	73	57.4		52.4	324	41.3		43.3	
11	200	58.2	300	56.1	-26	37.8	41	35.6	+10	18.7	88	59.7	+21	52.4	339	43.5	-13	43.4	
12	216	00.7	315	55.7	-26	38.1	56	36.7	+10	18.2	104	02.1	+21	52.4	354	45.6	-13	43.5	
13	231	03.1	330	55.4		38.3	71	37.8		17.7	119	04.5		52.4	9	47.8		43.6	
14	246	05.6	345	55.0		38.6	86	38.9		17.2	134	06.8		52.3	24	50.0		43.7	
15	261	08.0	0	54.6		38.9	101	40.0		16.6	149	09.2		52.3	39	52.2		43.8	
16	276	10.5	15	54.2		39.1	116	41.0		16.1	164	11.6		52.3	54	54.3		43.9	
17	291	13.0	30	53.8	-26	39.4	131	42.1	+10	15.6	179	14.0	+21	52.3	69	56.5	-13	44.0	
18	306	15.4	45	53.4	-26	39.6	146	43.2	+10	15.1	194	16.3	+21	52.3	84	58.7	-13	44.1	
19	321	17.9	60	53.0		39.9	161	44.3		14.5	209	18.7		52.3	100	00.9		44.2	
20	336	20.4	75	52.6		40.1	176	45.4		14.0	224	21.1		52.3	115	03.0		44.3	
21	351	22.8	90	52.3		40.4	191	46.4		13.5	239	23.4		52.3	130	05.2		44.3	
22	6	25.3	105	51.9		40.6	206	47.5		13.0	254	25.8		52.3	145	07.4		44.4	
23	21	27.8	120	51.5		40.9	221	48.6		12.5	269	28.2		52.3	160	09.5		44.5	
24	36	30.2	135	51.1	-26	41.1	236	49.7	+10	11.9	284	30.6	+21	52.3	175	11.7	-13	44.6	
Dif	—		-4		-3		+11		-5		+24		0		+22		-		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 23 ^d 0 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 SD: 14'9 PMG: 6 ^h 53 ^m R°: 45 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m					
0	184	02.9	-13	05.7	259	44.6	+11	04.1	60 N	5	39	6	28	7	12	**	**	**			
1	199	02.9		06.6	274	17.6 ¹⁴⁰	+10	55.7 ⁸⁴	58	37	23	7	05	**	**	**	**	14 09 16			
2	214	03.0		07.4	288	50.7 ¹⁴¹		47.2 ⁸⁵	56	36	20	6	59	**	**	**	**	04 18			
3	229	03.0		08.2	303	23.7 ¹⁴⁰		38.7 ⁸⁵	54	34	16	53		**	**	**	**	14 00 20			
4	244	03.1		09.1	317	56.7 ¹⁴⁰		30.1 ⁸⁶	52	33	13	48		**	**	**	**	13 56 22			
5	259	03.1	-13	09.9	332	29.8 ¹⁴¹	+10	21.5 ⁸⁶	50	5	32	6	10	6	43	**	**	**			
6	274	03.2	-13	10.8	347	02.8 ¹⁴⁰	+10	12.9 ⁸⁶	45	5	28	6	03	6	33	**	**	**			
7	289	03.2		11.6	1	35.9 ¹⁴¹	+10	04.2 ⁸⁷	40	25	5	57	25	0	04	58		13 42 28			
8	304	03.3		12.4	16	08.9 ¹⁴⁰	+9	55.4 ⁸⁸	35	22	51	17		10	56		36 30				
9	319	03.3		13.3	30	42.0 ¹⁴¹		46.6 ⁸⁸	30	18	46	11		16	54		31 32				
10	334	03.4		14.1	45	15.1 ¹⁴¹		37.7 ⁸⁹	20	11	37	6	00	26	50		26 35				
11	349	03.4	-13	14.9	59	48.2 ¹⁴¹	+9	28.8 ⁸⁹	10 N	5	03	5	28	5	50	0	35	18 38			
12	4	03.5	-13	15.8	74	21.2 ¹⁴⁰	+9	19.8 ⁹⁰	0	4	54	5	19	5	40	0	43	13 11 41			
13	19	03.5		16.6	88	54.3 ¹⁴¹		10.8 ⁹⁰	10 S	44	5	09	31	51	41		44	13 04 45			
14	34	03.6		17.4	103	27.4 ¹⁴¹	+9	01.8 ⁹⁰	20	31	4	58	21	0	59	39		12 57 48			
15	49	03.6		18.3	118	00.5 ¹⁴¹	+8	52.7 ⁹¹	30	14	44	09		1	09	35		50 51			
16	64	03.7		19.1	132	33.5 ¹⁴⁰		43.5 ⁹²	35	4	03	35	5	02	15	33		42 54			
17	79	03.7	-13	19.9	147	06.6 ¹⁴¹	+8	34.3 ⁹²	40	3	50	4	25	4	54	1	21	37 56			
18	94	03.8	-13	20.8	161	39.7 ¹⁴¹	+8	25.1 ⁹²	45	3	34	4	13	4	45	1	28	12 32 58			
19	109	03.8		21.6	176	12.8 ¹⁴¹		15.8 ⁹³	50	13		3	58	34		37	26	12 25 61			
20	124	03.8		22.4	190	45.8 ¹⁴⁰	+8	06.5 ⁹³	52	3	03	51	28	41	25		18	64			
21	139	03.9		23.2	205	18.9 ¹⁴¹	+7	57.1 ⁹⁴	54	2	51	43	23	46	22		10	66			
22	154	03.9		24.1	219	52.0 ¹⁴¹		47.7 ⁹⁴	56		37	34	16	51	21		06	68			
23	169	04.0		24.9	234	25.0 ¹⁴⁰		38.3 ⁹⁴	58	2	20	23	09	1	56	19		06 69			
24	184	04.0	-13	25.7	248	58.1 ¹⁴¹	+7	28.8 ⁹⁵	60 S	1	59	3	11	4	01	2	03	12 01 72			
																		11 55 75			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 21 ^h 30 ^m 5			Mag: -4.5 PMG: 14 ^h 57 ^m			Mag: +1.5 PMG: 8 ^h 12 ^m			Mag: -2.4 PMG: 5 ^h 01 ^m			Mag: +0.6 PMG: 12 ^h 17 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	36	30.2	135	51.1	-26	41.1	236	49.7	+10	11.9	284	30.6	+21	52.3	175	11.7	-13	44.6			
1	51	32.7	150	50.7		41.4	251	50.8		11.4	299	32.9		52.3	190	13.9		44.7			
2	66	35.2	165	50.3		41.6	266	51.8		10.9	314	35.3		52.3	205	16.1		44.8			
3	81	37.6	180	49.9		41.9	281	52.9		10.4	329	37.7		52.2	220	18.2		44.9			
4	96	40.1	195	49.6		42.1	296	54.0		09.8	344	40.1		52.2	235	20.4		45.0			
5	111	42.5	210	49.2	-26	42.3	311	55.1	+10	09.3	359	42.4	+21	52.2	250	22.6	-13	45.1			
6	126	45.0	225	48.8	-26	42.6	326	56.2	+10	08.8	14	44.8	+21	52.2	265	24.8	-13	45.2			
7	141	47.5	240	48.4		42.8	341	57.2		08.3	29	47.2		52.2	280	26.9		45.3			
8	156	49.9	255	48.0		43.1	356	58.3		07.8	44	49.6		52.2	295	29.1		45.4			
9	171	52.4	270	47.7		43.3	11	59.4		07.2	59	51.9		52.2	310	31.3		45.5			
10	186	54.9	285	47.3		43.5	27	00.5		06.7	74	54.3		52.2	325	33.4		45.6			
11	201	57.3	300	46.9	-26	43.8	42	01.6	+10	06.2	89	56.7	+21	52.2	340	35.6	-13	45.6			
12	216	59.8	315	46.5	-26	44.0	57	02.7	+10	05.7	104	59.1	+21	52.2	355	37.8	-13	45.7			
13	232	02.3	330	46.1		44.2	72	03.7		05.1	120	01.4		52.2	10	40.0		45.8			
14	247	04.7	345	45.8		44.5	87	04.8		04.6	135	03.8		52.2	25	42.1		45.9			
15	262	07.2	0	45.4		44.7	102	05.9		04.1	150	06.2		52.2	40	44.3		46.0			
16	277	09.7	15	45.0		44.9	117	07.0		03.6	165	08.6		52.2	55	46.5		46.1			
17	292	12.1	30	44.6	-26	45.2	132	08.1	+10	03.0	180	11.0	+21	52.1	70	48.6	-13	46.2			
18	307	14.6	45	44.2	-26	45.4	147	09.2	+10	02.5	195	13.3	+21	52.1	85	50.8	-13	46.3			
19	322	17.0	60	43.9		45.6	162	10.2		02.0	210	15.7		52.1	100	53.0		46.4			
20	337	19.5	75	43.5		45.8	177	11.3		01.5	225	18.1		52.1	115	55.2		46.5			
21	352	22.0	90	43.1		46.1	192	12.4		00.9	240	20.5		52.1	130	57.3		46.6			
22	7	24.4	105	42.7		46.3	207	13.5	+10	00.4	255	22.9		52.1	145	59.5		46.7			
23	22	26.9	120	42.4		46.5	222	14.6	+9	59.9	270	25.2		52.1	161	01.7		46.8			
24	37	29.4	135	42.0	-26	46.7	237	15.7	+9	59.4	285	27.6	+21	52.1	176	03.8	-13	46.8			
Dif	—			-4			-2			+11			-5			+24			0		
																+22			-		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 24 ^d 0 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/7					Civil		Náutico		Hora R°			
	PMG: 11 ^h 43 ^m 7	SD: 15 ^h 0		PMG: 7 ^h 38 ^m	R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	04.0	-13	25.7	248	58.1	+7 28.8	60 N	16	12	16	56	17	45	0	34
1	199	04.1		26.6	263	31.1 ¹⁴⁰	19.2 ⁹⁶	58	19		17	01		47	38	73
2	214	04.1		27.4	278	04.2 ¹⁴¹	+7 09.7 ⁹⁵	56	26		05		49		42	71
3	229	04.1		28.2	292	37.2 ¹⁴⁰	+7 00.0 ⁹⁷	54	32		09		50		45	69
4	244	04.2		29.0	307	10.2 ¹⁴⁰	+6 50.4 ⁹⁶	52	37		12		52		48	67
5	259	04.2	-13	29.9	321	43.2 ¹⁴⁰	+6 40.7 ⁹⁷	50	16	42	17	16	17	54	0	51
6	274	04.3	-13	30.7	336	16.2 ¹⁴⁰	+6 30.9 ⁹⁸	45	16	52	17	23	17	57	0	57
7	289	04.3		31.5	350	49.2 ¹⁴⁰	21.2 ⁹⁷	40	17	01	29		18	01	1	02
8	304	04.3		32.4	5	22.2 ¹⁴⁰	11.4 ⁹⁸	35	09		35		05		06	57
9	319	04.4		33.2	19	55.2 ¹⁴⁰	+6 01.5 ⁹⁹	30	15		40		08		10	54
10	334	04.4		34.0	34	28.2 ¹⁴⁰	+5 51.6 ⁹⁹	20	27		50		16		16	51
11	349	04.5	-13	34.8	49	01.1 ¹³⁹	+5 41.7 ⁹⁹	10 N	17	37	17	59	18	24	1	22
12	4	04.5	-13	35.7	63	34.1 ¹⁴⁰	+5 31.8 ⁹⁹	0	17	47	18	08	18	33	1	27
13	19	04.5		36.5	78	07.0 ¹³⁹	21.8 ¹⁰⁰	10 S	17	57	19		44		32	42
14	34	04.6		37.3	92	39.9 ¹³⁹	11.8 ¹⁰⁰	20	18	08	31	18	57		38	39
15	49	04.6		38.1	107	12.8 ¹³⁹	+5 01.7 ¹⁰¹	30	20		45		19	15	44	35
16	64	04.6		39.0	121	45.7 ¹³⁹	+4 51.6 ¹⁰¹	35	27		18	54		26	48	33
17	79	04.7	-13	39.8	136	18.6 ¹³⁹	+4 41.5 ¹⁰¹	40	18	35	19	04	19	39	1	52
18	94	04.7	-13	40.6	150	51.4 ¹³⁸	+4 31.3 ¹⁰²	45	18	45	19	17	19	56	1	57
19	109	04.8		41.4	165	24.2 ¹³⁸	21.1 ¹⁰²	50	18	57	33	20	18		2	03
20	124	04.8		42.2	179	57.1 ¹³⁹	10.9 ¹⁰²	52	19	02	40		29		06	22
21	139	04.8		43.1	194	29.8 ¹³⁷	+4 00.7 ¹⁰²	54	08		49		41		08	22
22	154	04.9		43.9	209	02.6 ¹³⁸	+3 50.4 ¹⁰³	56	15		19	58	20	56	12	19
23	169	04.9		44.7	223	35.4 ¹³⁸	40.1 ¹⁰³	58	23		20	09	21	14	15	18
24	184	04.9	-13	45.5	238	08.1 ¹³⁷	+3 29.8 ¹⁰³	60 S	19	31	20	22	21	37	2	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 26 ^m 5		Mag: -4.5		Mag: +1.5		Mag: -2.4		Mag: +0.6	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	37	29.4	135	42.0	237	15.7	+9	59.4	285	27.6
1	52	31.8	150	41.6	252	16.7		58.9	300	30.0
2	67	34.3	165	41.2	267	17.8		58.3	315	32.4
3	82	36.8	180	40.9	282	18.9		57.8	330	34.8
4	97	39.2	195	40.5	297	20.0		57.3	345	37.2
5	112	41.7	210	40.1	312	21.1	+9	56.8	0	39.5
6	127	44.1	225	39.8	327	22.2	+9	56.2	15	41.9
7	142	46.6	240	39.4	342	23.3		55.7	30	44.3
8	157	49.1	255	39.0	357	24.3		55.2	45	46.7
9	172	51.5	270	38.6	12	25.4		54.7	60	49.1
10	187	54.0	285	38.3	27	26.5		54.1	75	51.5
11	202	56.5	300	37.9	42	27.6	+9	53.6	90	53.9
12	217	58.9	315	37.5	57	28.7	+9	53.1	105	56.2
13	233	01.4	330	37.2	72	29.8		52.6	120	58.6
14	248	03.9	345	36.8	87	30.9		52.0	136	01.0
15	263	06.3	0	36.4	102	32.0		51.5	151	03.4
16	278	08.8	15	36.1	117	33.0		51.0	166	05.8
17	293	11.3	30	35.7	132	34.1	+9	50.5	181	08.2
18	308	13.7	45	35.3	147	35.2	+9	50.0	196	10.6
19	323	16.2	60	35.0	162	36.3		49.4	211	13.0
20	338	18.6	75	34.6	177	37.4		48.9	226	15.3
21	353	21.1	90	34.2	192	38.5		48.4	241	17.7
22	8	23.6	105	33.9	207	39.6		47.9	256	20.1
23	23	26.0	120	33.5	222	40.7		47.3	271	22.5
24	38	28.5	135	33.1	237	41.7	+9	46.8	286	24.9
Dif	—		-4		-2		+11		+24	
									0	
									+22	
									-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 25 ^d 0 PHE { 4 ^h : 55:9 12 ^h : 56:2 20 ^h : 56:4 R°: 46 ^m	hG ☾ Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
	hG ☉	Dec	hG ☾															
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m			
0	184	04.9	-13	238	08.1	+3 29.8	60 N	5 43	6 33	7 17		1 50	78	14 40	15			
1	199	05.0		252	40.8 ¹³⁷	19.4 ¹⁰⁴	58	41	28	10		51	76	39	18			
2	214	05.0		267	13.5 ¹³⁷	+3 09.0 ¹⁰⁴	56	40	23	7 03		53	73	39	20			
3	229	05.0		281	46.2 ¹³⁷	+2 58.6 ¹⁰⁴	54	38	20	6 57		54	71	39	21			
4	244	05.1		296	18.8 ¹³⁶	48.2 ¹⁰⁴	52	36	16	51		55	70	38	23			
5	259	05.1	-13	310	51.4 ¹³⁶	+2 37.7 ¹⁰⁵	50	5 35	6 13	6 46	1 57	67	14 38	25				
6	274	05.1	-13	325	24.0 ¹³⁶	+2 27.3 ¹⁰⁴	45	5 31	6 05	6 36	1 59	64	14 37	29				
7	289	05.2		339	56.5 ¹³⁵	16.8 ¹⁰⁵	40	27	5 59	27	2 01	61	37	31				
8	304	05.2		354	29.1 ¹³⁶	+2 06.2 ¹⁰⁶	35	23	53	19	03	59	36	34				
9	319	05.2		9	01.6 ¹³⁵	+1 55.7 ¹⁰⁵	30	20	48	12	04	57	36	36				
10	334	05.2		23	34.1 ¹³⁵	45.1 ¹⁰⁶	20	12	38	6 01	07	53	35	40				
11	349	05.3	-13	38	06.5 ¹³⁴	+1 34.5 ¹⁰⁶	10 N	5 04	5 29	5 50	2 10	49	14 34	44				
12	4	05.3	-13	52	38.9 ¹³⁴	+1 23.9 ¹⁰⁶	0	4 54	5 19	5 40	2 12	46	14 34	46				
13	19	05.3		67	11.3 ¹³⁴	13.3 ¹⁰⁶	10 S	43	5 09	30	14	43	33	50				
14	34	05.4		81	43.6 ¹³³	+1 02.6 ¹⁰⁷	20	30	4 57	19	17	39	32	53				
15	49	05.4		96	16.0 ¹³⁴	+0 52.0 ¹⁰⁶	30	12	42	07	19	36	31	58				
16	64	05.4		110	48.3 ¹³³	41.3 ¹⁰⁷	35	4 01	33	5 00	21	33	31	59				
17	79	05.5	-13	125	20.5 ¹³²	+0 30.6 ¹⁰⁷	40	3 47	4 22	4 51	2 23	30	14 30	62				
18	94	05.5	-14	139	52.7 ¹³²	+0 19.9 ¹⁰⁷	45	3 31	4 10	4 42	2 25	28	14 30	65				
19	109	05.5		154	24.9 ¹³²	+0 09.1 ¹⁰⁸	50	3 09	3 54	30	27	25	29	68				
20	124	05.5		168	57.1 ¹³²	-0 01.6 ¹⁰⁷	52	2 58	46	24	28	23	28	71				
21	139	05.6		183	29.2 ¹³¹	12.4 ¹⁰⁸	54	45	38	18	30	21	28	72				
22	154	05.6		198	01.2 ¹³⁰	23.1 ¹⁰⁷	56	30	28	12	31	19	27	75				
23	169	05.6		212	33.3 ¹³¹	33.9 ¹⁰⁸	58	2 12	17	4 04	33	17	27	76				
24	184	05.6	-14	227	05.3 ¹³⁰	-0 44.7 ¹⁰⁸	60 S	1 49	3 04	3 55	2 34	15	14 26	79				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 22 ^m 6		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: +1.5 PMG: 8 ^h 09 ^m			Mag: -2.4 PMG: 4 ^h 54 ^m			Mag: +0.5 PMG: 12 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	38	28.5	135	33.1	-26	51.7	237	41.7	+9	46.8	286	24.9	+21	52.0	176	56.0	-13	49.0
1	53	31.0	150	32.8		51.9	252	42.8		46.3	301	27.3		52.0	191	58.1		49.1
2	68	33.4	165	32.4		52.1	267	43.9		45.8	316	29.7		51.9	207	00.3		49.2
3	83	35.9	180	32.1		52.3	282	45.0		45.2	331	32.1		51.9	222	02.5		49.3
4	98	38.4	195	31.7		52.5	297	46.1		44.7	346	34.5		51.9	237	04.6		49.3
5	113	40.8	210	31.3	-26	52.7	312	47.2	+9	44.2	1	36.9	+21	51.9	252	06.8	-13	49.4
6	128	43.3	225	31.0	-26	52.9	327	48.3	+9	43.7	16	39.3	+21	51.9	267	09.0	-13	49.5
7	143	45.7	240	30.6		53.1	342	49.4		43.1	31	41.7		51.9	282	11.2		49.6
8	158	48.2	255	30.3		53.2	357	50.5		42.6	46	44.0		51.9	297	13.3		49.7
9	173	50.7	270	29.9		53.4	12	51.6		42.1	61	46.4		51.9	312	15.5		49.8
10	188	53.1	285	29.5		53.6	27	52.7		41.6	76	48.8		51.9	327	17.7		49.9
11	203	55.6	300	29.2	-26	53.8	42	53.7	+9	41.0	91	51.2	+21	51.9	342	19.8	-13	50.0
12	218	58.1	315	28.8	-26	54.0	57	54.8	+9	40.5	106	53.6	+21	51.9	357	22.0	-13	50.1
13	234	00.5	330	28.5		54.2	72	55.9		40.0	121	56.0		51.9	12	24.2		50.2
14	249	03.0	345	28.1		54.3	87	57.0		39.5	136	58.4		51.9	27	26.4		50.3
15	264	05.5	0	27.8		54.5	102	58.1		38.9	152	00.8		51.9	42	28.5		50.3
16	279	07.9	15	27.4		54.7	117	59.2		38.4	167	03.2		51.9	57	30.7		50.4
17	294	10.4	30	27.1	-26	54.9	133	00.3	+9	37.9	182	05.6	+21	51.9	72	32.9	-13	50.5
18	309	12.9	45	26.7	-26	55.0	148	01.4	+9	37.4	197	08.0	+21	51.9	87	35.0	-13	50.6
19	324	15.3	60	26.3		55.2	163	02.5		36.8	212	10.4		51.9	102	37.2		50.7
20	339	17.8	75	26.0		55.4	178	03.6		36.3	227	12.8		51.9	117	39.4		50.8
21	354	20.2	90	25.6		55.6	193	04.7		35.8	242	15.2		51.9	132	41.5		50.9
22	9	22.7	105	25.3		55.7	208	05.8		35.3	257	17.6		51.9	147	43.7		51.0
23	24	25.2	120	24.9		55.9	223	06.9		34.7	272	20.0		51.9	162	45.9		51.1
24	39	27.6	135	24.6	-26	56.1	238	08.0	+9	34.2	287	22.4	+21	51.8	177	48.1	-13	51.2
Dif	—		-4	-2		+11	-5		+24		0		+22		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 26 ^d 0 PHE { SD: 15:4 PMG: 9 ^h 09 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	184	05.6	-14 05.1	227	05.3	-0 44.7	108	60 N	16 06	16 51	17 41	3 08	80	14 55	17
1	199	05.7	05.9	241	37.2 ¹²⁹	-0 55.5 ¹⁰⁸	108	58	14	16 56	43	07	78	57	19
2	214	05.7	06.7	256	09.1 ¹²⁹	-1 06.3 ¹⁰⁸	108	56	21	17 01	45	06	76	14 59	21
3	229	05.7	07.5	270	41.0 ¹²⁹	17.1 ¹⁰⁸	108	54	28	05	47	05	74	15 00	21
4	244	05.7	08.3	285	12.8 ¹²⁸	27.9 ¹⁰⁸	108	52	33	09	49	05	72	01	26
5	259	05.8	-14 09.1	299	44.6 ¹²⁸	-1 38.8 ¹⁰⁹	109	50	16 38	17 12	17 50	3 04	70	15 03	26
6	274	05.8	-14 09.9	314	16.4 ¹²⁸	-1 49.6 ¹⁰⁸	108	45	16 49	17 20	17 55	3 03	67	15 06	30
7	289	05.8	10.8	328	48.1 ¹²⁷	-2 00.4 ¹⁰⁸	108	40	16 59	27	17 59	02	64	08	33
8	304	05.8	11.6	343	19.7 ¹²⁶	11.3 ¹⁰⁹	109	35	17 07	33	18 03	02	60	10	36
9	319	05.9	12.4	357	51.3 ¹²⁶	22.1 ¹⁰⁸	108	30	14	38	07	01	58	12	38
10	334	05.9	13.2	12	22.9 ¹²⁶	33.0 ¹⁰⁹	109	20	26	49	15	3 00	54	15	42
11	349	05.9	-14 14.0	26	54.4 ¹²⁵	-2 43.8 ¹⁰⁸	108	10 N	17 37	17 58	18 23	2 59	50	15 18	45
12	4	05.9	-14 14.8	41	25.9 ¹²⁵	-2 54.7 ¹⁰⁹	109	0	17 47	18 08	18 33	2 58	47	15 20	49
13	19	05.9	15.6	55	57.3 ¹²⁴	-3 05.5 ¹⁰⁸	108	10 S	17 57	19	45	57	44	23	52
14	34	06.0	16.4	70	28.7 ¹²⁴	16.4 ¹⁰⁹	109	20	18 09	32	18 59	56	41	25	56
15	49	06.0	17.2	85	00.0 ¹²³	27.2 ¹⁰⁸	108	30	22	47	19 17	55	37	29	59
16	64	06.0	18.0	99	31.2 ¹²²	38.1 ¹⁰⁹	109	35	29	18 56	28	54	35	30	62
17	79	06.0	-14 18.8	114	02.5 ¹²³	-3 48.9 ¹⁰⁸	108	40	18 38	19 07	19 42	2 53	33	15 32	65
18	94	06.1	-14 19.6	128	33.6 ¹²¹	-3 59.7 ¹⁰⁸	108	45	18 48	19 20	20 00	2 53	29	15 35	67
19	109	06.1	20.4	143	04.7 ¹²¹	-4 10.6 ¹⁰⁹	109	50	19 00	36	22	52	25	37	72
20	124	06.1	21.2	157	35.8 ¹²¹	21.4 ¹⁰⁸	108	52	06	44	34	51	24	39	73
21	139	06.1	22.0	172	06.8 ¹²⁰	32.2 ¹⁰⁸	108	54	12	19 53	20 47	51	22	40	75
22	154	06.1	22.8	186	37.8 ¹²⁰	43.0 ¹⁰⁸	108	56	19	20 03	21 03	50	21	42	77
23	169	06.1	23.6	201	08.7 ¹¹⁹	-4 53.8 ¹⁰⁸	108	58	27	15	22	50	18	43	80
24	184	06.2	-14 24.4	215	39.5 ¹¹⁸	-5 04.5 ¹⁰⁷	107	60 S	19 37	20 29	21 47	2 49	16	15 45	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 18 ^m 7		Mag: -4.5 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 8 ^h 07 ^m		Mag: -2.4 PMG: 4 ^h 50 ^m		Mag: +0.5 PMG: 12 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	27.6	135	24.6	238	08.0	287	22.4	177	48.1
1	54	30.1	150	24.2	253	09.0	302	24.8	192	50.2
2	69	32.6	165	23.9	268	10.1	317	27.2	207	52.4
3	84	35.0	180	23.5	283	11.2	332	29.6	222	54.6
4	99	37.5	195	23.2	298	12.3	347	32.0	237	56.7
5	114	40.0	210	22.8	313	13.4	2	34.4	252	58.9
6	129	42.4	225	22.5	328	14.5	17	36.8	268	01.1
7	144	44.9	240	22.2	343	15.6	32	39.2	283	03.3
8	159	47.4	255	21.8	358	16.7	47	41.6	298	05.4
9	174	49.8	270	21.5	13	17.8	62	44.0	313	07.6
10	189	52.3	285	21.1	28	18.9	77	46.4	328	09.8
11	204	54.7	300	20.8	43	20.0	92	48.8	343	11.9
12	219	57.2	315	20.4	58	21.1	107	51.2	358	14.1
13	234	59.7	330	20.1	73	22.2	122	53.6	13	16.3
14	250	02.1	345	19.7	88	23.3	137	56.0	28	18.4
15	265	04.6	0	19.4	103	24.4	152	58.4	43	20.6
16	280	07.1	15	19.1	118	25.5	168	00.8	58	22.8
17	295	09.5	30	18.7	133	26.6	183	03.2	73	25.0
18	310	12.0	45	18.4	148	27.7	198	05.6	88	27.1
19	325	14.5	60	18.0	163	28.8	213	08.1	103	29.3
20	340	16.9	75	17.7	178	29.9	228	10.5	118	31.5
21	355	19.4	90	17.4	193	31.0	243	12.9	133	33.6
22	10	21.8	105	17.0	208	32.1	258	15.3	148	35.8
23	25	24.3	120	16.7	223	33.2	273	17.7	163	38.0
24	40	26.8	135	16.4	238	34.3	288	20.1	178	40.2
Dif	—		-3	-2	+11	-5	+24	0	+22	-1

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 27 ^d 0 PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'0												
	PMG: 11 ^h 43 ^m 6			SD: 15'6 PMG: 9 ^h 57 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.2	-14	24.4	215	39.5	-5	04.5	60 N	5 48	6 37	7 22	4 28	84	15 12	19
1	199	06.2		25.2	230	10.3 ¹¹⁸		15.3 ¹⁰⁸	58	45	32	14	25	81	16	22
2	214	06.2		26.0	244	41.0 ¹¹⁷		26.1 ¹⁰⁸	56	43	27	07	22	78	20	24
3	229	06.2		26.8	259	11.7 ¹¹⁷		36.8 ¹⁰⁷	54	41	23	7 01	19	76	23	27
4	244	06.2		27.6	273	42.3 ¹¹⁶		47.5 ¹⁰⁷	52	39	19	6 55	17	74	27	28
5	259	06.2	-14	28.4	288	12.8 ¹¹⁵	-5	58.2 ¹⁰⁷	50	5 38	6 16	6 50	4 14	73	15 29	31
6	274	06.3	-14	29.2	302	43.3 ¹¹⁵	-6	08.9 ¹⁰⁷	45	5 33	6 08	6 38	4 10	68	15 36	33
7	289	06.3		30.0	317	13.7 ¹¹⁴		19.6 ¹⁰⁷	40	29	6 01	29	06	65	41	37
8	304	06.3		30.8	331	44.1 ¹¹⁴		30.2 ¹⁰⁶	35	25	5 55	21	4 02	63	46	39
9	319	06.3		31.6	346	14.4 ¹¹³		40.9 ¹⁰⁷	30	21	49	14	3 59	61	50	41
10	334	06.3		32.4	0	44.7 ¹¹³	-6	51.5 ¹⁰⁶	20	13	39	6 01	54	57	15 57	45
11	349	06.3	-14	33.2	15	14.8 ¹¹¹	-7	02.1 ¹⁰⁶	10 N	5 04	5 29	5 51	3 49	54	16 03	48
12	4	06.3	-14	34.0	29	45.0 ¹¹²	-7	12.6 ¹⁰⁵	0	4 54	5 19	5 40	3 45	50	16 09	51
13	19	06.4		34.8	44	15.0 ¹¹⁰		23.2 ¹⁰⁶	10 S	42	5 08	30	41	47	15	54
14	34	06.4		35.6	58	45.0 ¹¹⁰		33.7 ¹⁰⁵	20	28	4 55	18	37	43	21	58
15	49	06.4		36.4	73	14.9 ¹⁰⁹		44.1 ¹⁰⁴	30	4 10	40	5 05	32	39	28	62
16	64	06.4		37.2	87	44.8 ¹⁰⁹	-7	54.6 ¹⁰⁵	35	3 58	31	4 58	29	37	32	64
17	79	06.4	-14	38.0	102	14.6 ¹⁰⁸	-8	05.0 ¹⁰⁴	40	3 44	4 20	4 49	3 26	34	16 37	66
18	94	06.4	-14	38.8	116	44.3 ¹⁰⁷	-8	15.4 ¹⁰⁴	45	3 27	4 07	4 39	3 22	32	16 42	70
19	109	06.4		39.6	131	14.0 ¹⁰⁷		25.8 ¹⁰⁴	50	3 04	3 50	26	17	29	49	73
20	124	06.4		40.4	145	43.6 ¹⁰⁶		36.1 ¹⁰³	52	2 53	42	21	15	27	52	74
21	139	06.4		41.2	160	13.1 ¹⁰⁵		46.4 ¹⁰³	54	39	33	14	13	25	55	77
22	154	06.5		42.0	174	42.5 ¹⁰⁴	-8	56.6 ¹⁰²	56	24	23	4 07	11	23	16 59	79
23	169	06.5		42.8	189	11.9 ¹⁰⁴	-9	06.9 ¹⁰³	58	2 04	3 11	3 59	08	21	17 03	81
24	184	06.5	-14	43.6	203	41.2 ¹⁰³	-9	17.0 ¹⁰¹	60 S	1 39	2 58	3 50	3 05	18	17 07	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 14 ^m 7		Mag: -4.5 PMG: 14 ^h 59 ^m		Mag: +1.5 PMG: 8 ^h 05 ^m		Mag: -2.4 PMG: 4 ^h 46 ^m		Mag: +0.5 PMG: 12 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	40	26.8	135	16.4	-26	59.8	238	34.3	+9	21.6	288	20.1	+21	51.8	178	40.2	-13	53.3
1	55	29.2	150	16.0	-27	00.0	253	35.4		21.1	303	22.5		51.8	193	42.3		53.4
2	70	31.7	165	15.7	-27	00.1	268	36.5		20.6	318	24.9		51.8	208	44.5		53.5
3	85	34.2	180	15.3		00.3	283	37.6		20.0	333	27.3		51.8	223	46.7		53.6
4	100	36.6	195	15.0		00.4	298	38.7		19.5	348	29.7		51.8	238	48.8		53.7
5	115	39.1	210	14.7	-27	00.5	313	39.8	+9	19.0	3	32.1	+21	51.8	253	51.0	-13	53.8
6	130	41.6	225	14.3	-27	00.7	328	40.9	+9	18.5	18	34.5	+21	51.8	268	53.2	-13	53.9
7	145	44.0	240	14.0		00.8	343	42.0		17.9	33	37.0		51.7	283	55.3		54.0
8	160	46.5	255	13.7		00.9	358	43.1		17.4	48	39.4		51.7	298	57.5		54.0
9	175	49.0	270	13.3		01.1	373	44.2		16.9	63	41.8		51.7	313	59.7		54.1
10	190	51.4	285	13.0		01.2	388	45.3		16.4	78	44.2		51.7	329	61.9		54.2
11	205	53.9	300	12.7	-27	01.3	403	46.4	+9	15.8	93	46.6	+21	51.7	344	64.0	-13	54.3
12	220	56.3	315	12.4	-27	01.5	418	47.5	+9	15.3	108	49.0	+21	51.7	359	66.2	-13	54.4
13	235	58.8	330	12.0		01.6	433	48.6		14.8	123	51.4		51.7	374	68.4		54.5
14	251	01.3	345	11.7		01.7	448	49.7		14.3	138	53.8		51.7	389	70.5		54.6
15	266	03.7	0	11.4		01.9	463	50.8		13.7	153	56.3		51.7	404	72.7		54.7
16	281	06.2	15	11.0		02.0	478	51.9		13.2	168	58.7		51.7	419	74.9		54.8
17	296	08.7	30	10.7	-27	02.1	493	53.0	+9	12.7	184	01.1	+21	51.7	434	77.0	-13	54.9
18	311	11.1	45	10.4	-27	02.2	508	54.1	+9	12.2	199	03.5	+21	51.7	449	79.2	-13	55.0
19	326	13.6	60	10.1		02.4	523	55.2		11.6	214	05.9		51.7	464	81.4		55.0
20	341	16.1	75	09.7		02.5	538	56.3		11.1	229	08.3		51.7	479	83.6		55.1
21	356	18.5	90	09.4		02.6	553	57.4		10.6	244	10.7		51.7	494	85.7		55.2
22	11	21.0	105	09.1		02.7	568	58.5		10.1	259	13.2		51.7	509	87.9		55.3
23	26	23.4	120	08.8		02.8	583	59.6		09.5	274	15.6		51.7	524	90.1		55.4
24	41	25.9	135	08.5	-27	03.0	598	60.7	+9	09.0	289	18.0	+21	51.7	539	92.2	-13	55.5
Dif	—		-3		-1		+11		-5		+24		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 28 ^d 0 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 5 20 ^h : 58 ^h 7 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	184	06.5	-14	43.6	203	41.2	-9 17.0	60 N	16 01	16 47	17 36	5 52 85	15 31 25		
1	199	06.5		44.3	218	10.5 ¹⁰³	27.2 ¹⁰²	58	10	52	39	46 82	38 28		
2	214	06.5		45.1	232	39.7 ¹⁰²	37.3 ¹⁰¹	56	17	16 57	41	40 80	44 30		
3	229	06.5		45.9	247	08.8 ¹⁰¹	47.3 ¹⁰⁰	54	24	17 01	43	35 78	50 32		
4	244	06.5		46.7	261	37.8 ¹⁰⁰	-9 57.3 ¹⁰⁰	52	30	05	45	31 76	15 55 34		
5	259	06.5	-14	47.5	276	06.8 ¹⁰⁰	-10 07.3 ¹⁰⁰	50	16 35	17 09	17 47	5 27 74	16 00 35		
6	274	06.5	-14	48.3	290	35.7 ⁹⁹	-10 17.2 ⁹⁹	45	16 47	17 17	17 52	5 18 71	16 09 39		
7	289	06.5		49.1	305	04.5 ⁹⁸	27.1 ⁹⁹	40	16 56	25	17 57	11 68	18 41		
8	304	06.5		49.9	319	33.2 ⁹⁷	36.9 ⁹⁸	35	17 05	31	18 01	05 65	25 43		
9	319	06.5		50.7	334	01.9 ⁹⁷	46.7 ⁹⁸	30	12	37	05	5 00 63	31 45		
10	334	06.5		51.4	348	30.5 ⁹⁶	-10 56.5 ⁹⁸	20	25	48	14	4 51 59	42 49		
11	349	06.6	-14	52.2	2	59.0 ⁹⁵	-11 06.1 ⁹⁶	10 N	17 36	17 58	18 23	4 43 56	16 51 52		
12	4	06.6	-14	53.0	17	27.5 ⁹⁵	-11 15.8 ⁹⁷	0	17 47	18 08	18 33	4 35 53	17 00 55		
13	19	06.6		53.8	31	55.9 ⁹⁴	25.3 ⁹⁵	10 S	17 58	20	18 45	28 50	09 57		
14	34	06.6		54.6	46	24.2 ⁹³	34.8 ⁹⁵	20	18 10	33	19 00	20 47	19 60		
15	49	06.6		55.4	60	52.4 ⁹²	44.3 ⁹⁵	30	23	48	19	11 44	30 63		
16	64	06.6		56.2	75	20.6 ⁹²	-11 53.7 ⁹⁴	35	31	18 58	31	06 41	36 66		
17	79	06.6	-14	56.9	89	48.7 ⁹¹	-12 03.0 ⁹³	40	18 40	19 09	19 45	4 00 39	17 43 68		
18	94	06.6	-14	57.7	104	16.7 ⁹⁰	-12 12.3 ⁹³	45	18 51	19 23	20 03	3 54 36	17 52 70		
19	109	06.6		58.5	118	44.6 ⁸⁹	21.5 ⁹²	50	19 04	40	27	46 32	18 02 74		
20	124	06.6	-14	59.3	133	12.5 ⁸⁹	30.7 ⁹²	52	10	48	39	42 31	06 76		
21	139	06.6	-15	00.1	147	40.3 ⁸⁸	39.8 ⁹¹	54	16	19 58	20 53	38 29	12 77		
22	154	06.6		00.9	162	08.0 ⁸⁷	48.8 ⁹⁰	56	24	20 08	21 09	34 27	18 79		
23	169	06.6		01.6	176	35.6 ⁸⁶	-12 57.7 ⁸⁹	58	32	21	30	29 25	24 82		
24	184	06.6	-15	02.4	191	03.2 ⁸⁶	-13 06.6 ⁸⁹	60 S	19 42	20 35	21 58	3 23 23	18 31 85		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 10 ^m 8		Mag: -4.6 PMG: 15 ^h 00 ^m		Mag: +1.5 PMG: 8 ^h 03 ^m		Mag: -2.4 PMG: 4 ^h 42 ^m		Mag: +0.5 PMG: 12 ^h 00 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	41	25.9	135	08.5	239	00.7	289	18.0	179	32.2					
1	56	28.4	150	08.1	254	01.8	304	20.4	194	34.4					
2	71	30.8	165	07.8	269	02.9	319	22.8	209	36.6					
3	86	33.3	180	07.5	284	04.0	334	25.3	224	38.7					
4	101	35.8	195	07.2	299	05.1	349	27.7	239	40.9					
5	116	38.2	210	06.9	314	06.2	4	30.1	254	43.1					
6	131	40.7	225	06.5	329	07.3	19	32.5	269	45.3					
7	146	43.2	240	06.2	344	08.4	34	34.9	284	47.4					
8	161	45.6	255	05.9	359	09.5	49	37.3	299	49.6					
9	176	48.1	270	05.6	14	10.6	64	39.8	314	51.8					
10	191	50.6	285	05.3	29	11.7	79	42.2	329	53.9					
11	206	53.0	300	05.0	44	12.8	94	44.6	344	56.1					
12	221	55.5	315	04.6	59	13.9	109	47.0	359	58.3					
13	236	57.9	330	04.3	74	15.0	124	49.5	15	00.4					
14	252	00.4	345	04.0	89	16.1	139	51.9	30	02.6					
15	267	02.9	0	03.7	104	17.2	154	54.3	45	04.8					
16	282	05.3	15	03.4	119	18.4	169	56.7	60	06.9					
17	297	07.8	30	03.1	134	19.5	184	59.1	75	09.1					
18	312	10.3	45	02.8	149	20.6	200	01.6	90	11.3					
19	327	12.7	60	02.5	164	21.7	215	04.0	105	13.5					
20	342	15.2	75	02.2	179	22.8	230	06.4	120	15.6					
21	357	17.7	90	01.8	194	23.9	245	08.8	135	17.8					
22	12	20.1	105	01.5	209	25.0	260	11.3	150	20.0					
23	27	22.6	120	01.2	224	26.1	275	13.7	165	22.1					
24	42	25.1	135	00.9	239	27.2	290	16.1	180	24.3					
Dif	—		-3		+11		+24		+22						
							0								
									-1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 29 ^d 0 PHE { 4 ^h : 59'0 12 ^h : 59'2 20 ^h : 59'3 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	184	06.6	-15 02.4	191	03.2	-13 06.6	88	60 N	5 52	6 42	7 28		7 17	83	15 56 34
1	199	06.6	03.2	205	30.7	15.4	88	58	49	36	19		08 81		16 06 36
2	214	06.6	04.0	219	58.1	24.2	88	56	47	31	11		7 00	78	14 38
3	229	06.6	04.8	234	25.4	32.9	87	54	45	27	7 05		6 53	77	22 39
4	244	06.6	05.5	248	52.7	41.5	86	52	43	23	6 59		47 75		29 41
5	259	06.6	-15 06.3	263	19.9	-13 50.0	85	50	5 41	6 19	6 53		6 41	73	16 35 42
6	274	06.6	-15 07.1	277	47.0	-13 58.4	84	45	5 36	6 10	6 41		6 29	70	16 48 45
7	289	06.6	07.9	292	14.0	-14 06.8	84	40	31	6 03	31		19 68		16 59 47
8	304	06.6	08.7	306	41.0	15.1	83	35	27	5 57	23		10 66		17 08 49
9	319	06.6	09.4	321	07.9	23.3	82	30	22	51	15		6 03	64	16 51
10	334	06.6	10.2	335	34.7	31.4	81	20	13	40	6 02		5 50	61	31 53
11	349	06.6	-15 11.0	350	01.5	-14 39.4	80	10 N	5 04	5 29	5 51		5 39	58	17 43 56
12	4	06.6	-15 11.8	4	28.1	-14 47.4	80	0	4 54	5 19	5 40		5 28	57	17 55 57
13	19	06.6	12.6	18	54.7	-14 55.3	79	10 S	42	5 07	29		18 54		18 06 60
14	34	06.6	13.3	33	21.3	-15 03.1	78	20	27	4 54	17		5 07	51	19 62
15	49	06.6	14.1	47	47.7	10.8	77	30	4 08	38	5 04		4 55	48	33 65
16	64	06.5	14.9	62	14.1	18.4	76	35	3 56	29	4 56		47 47		42 65
17	79	06.5	-15 15.7	76	40.4	-15 25.9	75	40	3 42	4 17	4 47		4 39	44	18 51 68
18	94	06.5	-15 16.4	91	06.7	-15 33.3	74	45	3 23	4 04	4 36		4 30	42	19 02 70
19	109	06.5	17.2	105	32.9	40.6	73	50	3 00	3 46	23		18 39		16 72
20	124	06.5	18.0	119	59.0	47.9	73	52	2 48	38	17		13 37		22 73
21	139	06.5	18.7	134	25.0	-15 55.0	71	54	34	29	10		07 36		29 75
22	154	06.5	19.5	148	51.0	-16 02.1	70	56	2 17	18	4 03		4 01	34	37 76
23	169	06.5	20.3	163	16.9	09.0	69	58	1 56	3 06	3 54		3 54	31	46 78
24	184	06.5	-15 21.1	177	42.7	-16 15.9	69	60 S	1 29	2 51	3 44		3 46	29	19 56 80
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 06 ^m 9		Mag: -4.6 PMG: 15 ^h 00 ^m			Mag: +1.5 PMG: 8 ^h 02 ^m			Mag: -2.5 PMG: 4 ^h 38 ^m			Mag: +0.5 PMG: 11 ^h 57 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	42	25.1	135 00.9	-27 05.5	239 27.2	+8 56.4	290 16.1	+21 51.7	180 24.3	-13 57.7			180 24.3	-13 57.7	
1	57	27.5	150 00.6	05.6	254 28.3	55.9	305 18.5	51.7	195 26.5	57.7			195 26.5	57.7	
2	72	30.0	165 00.3	05.7	269 29.4	55.3	320 21.0	51.7	210 28.6	57.8			210 28.6	57.8	
3	87	32.4	180 00.0	05.8	284 30.5	54.8	335 23.4	51.7	225 30.8	57.9			225 30.8	57.9	
4	102	34.9	194 59.7	05.9	299 31.6	54.3	350 25.8	51.7	240 33.0	58.0			240 33.0	58.0	
5	117	37.4	209 59.4	-27 05.9	314 32.7	+8 53.8	5 28.3	+21 51.7	255 35.2	-13 58.1			255 35.2	-13 58.1	
6	132	39.8	224 59.1	-27 06.0	329 33.9	+8 53.2	20 30.7	+21 51.7	270 37.3	-13 58.2			270 37.3	-13 58.2	
7	147	42.3	239 58.8	06.1	344 35.0	52.7	35 33.1	51.7	285 39.5	58.3			285 39.5	58.3	
8	162	44.8	254 58.5	06.2	359 36.1	52.2	50 35.5	51.7	300 41.7	58.4			300 41.7	58.4	
9	177	47.2	269 58.2	06.3	14 37.2	51.7	65 38.0	51.7	315 43.8	58.5			315 43.8	58.5	
10	192	49.7	284 57.9	06.4	29 38.3	51.1	80 40.4	51.7	330 46.0	58.6			330 46.0	58.6	
11	207	52.2	299 57.6	-27 06.4	44 39.4	+8 50.6	95 42.8	+21 51.7	345 48.2	-13 58.6			345 48.2	-13 58.6	
12	222	54.6	314 57.3	-27 06.5	59 40.5	+8 50.1	110 45.3	+21 51.7	0 50.3	-13 58.7			0 50.3	-13 58.7	
13	237	57.1	329 57.0	06.6	74 41.6	49.6	125 47.7	51.7	15 52.5	58.8			15 52.5	58.8	
14	252	59.5	344 56.7	06.7	89 42.7	49.0	140 50.1	51.7	30 54.7	58.9			30 54.7	58.9	
15	268	02.0	359 56.4	06.8	104 43.8	48.5	155 52.5	51.7	45 56.8	59.0			45 56.8	59.0	
16	283	04.5	14 56.1	06.8	119 45.0	48.0	170 55.0	51.7	60 59.0	59.1			60 59.0	59.1	
17	298	06.9	29 55.8	-27 06.9	134 46.1	+8 47.5	185 57.4	+21 51.7	76 01.2	-13 59.2			76 01.2	-13 59.2	
18	313	09.4	44 55.5	-27 07.0	149 47.2	+8 46.9	200 59.8	+21 51.7	91 03.4	-13 59.3			91 03.4	-13 59.3	
19	328	11.9	59 55.3	07.1	164 48.3	46.4	216 02.3	51.7	106 05.5	59.4			106 05.5	59.4	
20	343	14.3	74 55.0	07.1	179 49.4	45.9	231 04.7	51.7	121 07.7	59.4			121 07.7	59.4	
21	358	16.8	89 54.7	07.2	194 50.5	45.3	246 07.1	51.7	136 09.9	59.5			136 09.9	59.5	
22	13	19.3	104 54.4	07.3	209 51.6	44.8	261 09.6	51.7	151 12.0	59.6			151 12.0	59.6	
23	28	21.7	119 54.1	07.3	224 52.7	44.3	276 12.0	51.7	166 14.2	59.7			166 14.2	59.7	
24	43	24.2	134 53.8	-27 07.4	239 53.8	+8 43.8	291 14.4	+21 51.7	181 16.4	-13 59.8			181 16.4	-13 59.8	
Dif	—		-3	-1	+11	-5	+24	0	+22	-1					

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6				Edad: 30 ^d 0 PHE { 4 ^h : 59'5 12 ^h : 59'6 20 ^h : 59'8 R°: 60 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	184	06.5	-15	21.1	177	42.7	-16	15.9	60 N	15 56	16 42	17 32	8 40 77		16 30 45		
1	199	06.5		21.8	192	08.5		22.6	58	16 05	48	35	29 75		42 47		
2	214	06.5		22.6	206	34.2		29.2	56	13	53	37	18 74		16 52 49		
3	229	06.5		23.4	220	59.8		35.8	54	20	16 58	40	10 72		17 01 50		
4	244	06.5		24.1	235	25.4		42.2	52	26	17 02	42	8 02 71		10 50		
5	259	06.4	-15	24.9	249	50.9	-16	48.5	50	16 32	17 06	17 44	7 54 71		17 17 51		
6	274	06.4	-15	25.7	264	16.3	-16	54.8	45	16 44	17 15	17 50	7 39 68		17 33 53		
7	289	06.4		26.4	278	41.7	-17	00.9	40	16 54	22	55	27 66		46 54		
8	304	06.4		27.2	293	07.0		06.9	35	17 03	29	17 59	16 65		17 57 55		
9	319	06.4		28.0	307	32.3		12.8	30	11	35	18 04	7 07 64		18 07 56		
10	334	06.4		28.7	321	57.5		18.6	20	24	47	13	6 51 62		24 57		
11	349	06.4	-15	29.5	336	22.6	-17	24.3	10 N	17 36	17 58	18 23	6 37 61		18 39 58		
12	4	06.4	-15	30.3	350	47.7	-17	29.8	0	17 47	18 09	18 33	6 25 58		18 52 60		
13	19	06.4		31.0	5	12.7		35.3	10 S	17 58	20	18 46	6 12 57		19 06 61		
14	34	06.3		31.8	19	37.7		40.6	20	18 11	34	19 01	5 58 56		21 62		
15	49	06.3		32.6	34	02.6		45.8	30	25	18 50	21	43 53		38 63		
16	64	06.3		33.3	48	27.5		50.9	35	33	19 00	33	34 52		47 64		
17	79	06.3	-15	34.1	62	52.3	-17	55.9	40	18 42	19 12	19 48	5 23 51		19 59 64		
18	94	06.3	-15	34.9	77	17.0	-18	00.8	45	18 54	19 26	20 07	5 12 49		20 12 66		
19	109	06.3		35.6	91	41.7		05.5	50	19 07	44	32	4 57 47		28 67		
20	124	06.3		36.4	106	06.4		10.2	52	13	19 53	44	50 46		35 68		
21	139	06.2		37.2	120	31.0		14.7	54	20	20 02	20 59	43 45		44 68		
22	154	06.2		37.9	134	55.6		19.0	56	28	13	21 16	35 43		20 53 69		
23	169	06.2		38.7	149	20.1		23.3	58	37	26	21 39	25 42		21 04 70		
24	184	06.2	-15	39.4	163	44.5	-18	27.4	60 S	19 47	20 42	22 09	4 15 39		21 16 72		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 21 ^h 02 ^m 9		Mag: -4.6 PMG: 15 ^h 01 ^m		Mag: +1.5 PMG: 8 ^h 00 ^m		Mag: -2.5 PMG: 4 ^h 34 ^m		Mag: +0.5 PMG: 11 ^h 53 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	43	24.2	134	53.8	239	53.8	291	14.4	181	16.4							
1	58	26.7	149	53.5	254	55.0	306	16.9	196	18.5							
2	73	29.1	164	53.2	269	56.1	321	19.3	211	20.7							
3	88	31.6	179	52.9	284	57.2	336	21.8	226	22.9							
4	103	34.0	194	52.7	299	58.3	351	24.2	241	25.0							
5	118	36.5	209	52.4	314	59.4	6	26.6	256	27.2							
6	133	39.0	224	52.1	330	00.5	21	29.1	271	29.4							
7	148	41.4	239	51.8	345	01.6	36	31.5	286	31.6							
8	163	43.9	254	51.5	0	02.7	51	33.9	301	33.7							
9	178	46.4	269	51.2	15	03.9	66	36.4	316	35.9							
10	193	48.8	284	51.0	30	05.0	81	38.8	331	38.1							
11	208	51.3	299	50.7	45	06.1	96	41.3	346	40.2							
12	223	53.8	314	50.4	60	07.2	111	43.7	1	42.4							
13	238	56.2	329	50.1	75	08.3	126	46.1	16	44.6							
14	253	58.7	344	49.8	90	09.4	141	48.6	31	46.7							
15	269	01.2	359	49.6	105	10.5	156	51.0	46	48.9							
16	284	03.6	14	49.3	120	11.7	171	53.5	61	51.1							
17	299	06.1	29	49.0	135	12.8	186	55.9	76	53.2							
18	314	08.5	44	48.7	150	13.9	201	58.3	91	55.4							
19	329	11.0	59	48.5	165	15.0	217	00.8	106	57.6							
20	344	13.5	74	48.2	180	16.1	232	03.2	121	59.8							
21	359	15.9	89	47.9	195	17.2	247	05.7	137	01.9							
22	14	18.4	104	47.7	210	18.4	262	08.1	152	04.1							
23	29	20.9	119	47.4	225	19.5	277	10.5	167	06.3							
24	44	23.3	134	47.1	240	20.6	292	13.0	182	08.4							
Dif	—		-3		+11		+24		+22								
			-1		-5		0		-1								

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 1 ^d 5 SD: 16'3 PMG: 13 ^h 38 ^m													
				PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 60'0 R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	06.2	-15	39.4	163	44.5	-18	27.4	58	56	6	47	7	33	9	57	
1	199	06.2		40.2	178	09.0		31.5	53		41		24	44	64	29	
2	214	06.2		41.0	192	33.4		35.3	51		35		16	32	64	41	
3	229	06.1		41.7	206	57.7		39.1	48		30		09	22	64	17	
4	244	06.1		42.5	221	22.0		42.7	46		26	7	02	13	63	18	
5	259	06.1	-15	43.2	235	46.3	-18	46.2	54	44	6	22	6	56	9	05	
6	274	06.1	-15	44.0	250	10.5	-18	49.6	45	38	6	13	6	44	8	47	
7	289	06.1		44.8	264	34.7		52.8	40	33	6	05	34	33	63	40	
8	304	06.0		45.5	278	58.9		56.0	35	28	5	58	25	21	63	18	
9	319	06.0		46.3	293	23.0	-18	59.0	30	24		52	17	8	11	62	
10	334	06.0		47.0	307	47.1	-19	01.8	20	14		41	6	03	7	53	
11	349	06.0	-15	47.8	322	11.1	-19	04.5	10 N	5	05	5	30	5	51	7	38
12	4	06.0	-15	48.5	336	35.2	-19	07.1	0	4	54	5	19	5	40	7	23
13	19	05.9		49.3	350	59.2		09.6	10 S		41	5	07	29	7	09	
14	34	05.9		50.0	5	23.2		11.9	20	26	4	53	16	6	54	59	
15	49	05.9		50.8	19	47.1		14.1	22	4	06	37	5	02	36	58	
16	64	05.9		51.5	34	11.1		16.2	35	3	54	27	4	54	26	58	
17	79	05.9	-15	52.3	48	35.0	-19	18.1	40	3	39	4	15	4	44	6	14
18	94	05.8	-15	53.1	62	58.9	-19	19.9	45	3	20	4	01	4	33	6	01
19	109	05.8		53.8	77	22.8		21.5	50	2	55	3	43	19	5	44	
20	124	05.8		54.6	91	46.6		23.0	52		43	34	13	36	56	43	
21	139	05.8		55.3	106	10.5		24.4	54		28	24	4	06	28	54	
22	154	05.7		56.1	120	34.3		25.7	56	2	10	13	3	58	18	54	
23	169	05.7		56.8	134	58.1		26.8	58	1	48	3	00	49	5	07	
24	184	05.7	-15	57.6	149	21.9	-19	27.8	60 S	1	17	2	45	3	39	4	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 59 ^m 0		Mag: -4.6 PMG: 15 ^h 01 ^m		Mag: +1.5 PMG: 7 ^h 58 ^m		Mag: -2.5 PMG: 4 ^h 30 ^m		Mag: +0.5 PMG: 11 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	44	23.3	134	47.1	240	20.6	292	13.0	182	08.4
1	59	25.8	149	46.8	255	21.7	307	15.4	197	10.6
2	74	28.3	164	46.6	270	22.8	322	17.9	212	12.8
3	89	30.7	179	46.3	285	23.9	337	20.3	227	14.9
4	104	33.2	194	46.0	300	25.1	352	22.8	242	17.1
5	119	35.6	209	45.8	315	26.2	7	25.2	257	19.3
6	134	38.1	224	45.5	330	27.3	22	27.7	272	21.4
7	149	40.6	239	45.2	345	28.4	37	30.1	287	23.6
8	164	43.0	254	45.0	0	29.5	52	32.5	302	25.8
9	179	45.5	269	44.7	15	30.7	67	35.0	317	27.9
10	194	48.0	284	44.5	30	31.8	82	37.4	332	30.1
11	209	50.4	299	44.2	45	32.9	97	39.9	347	32.3
12	224	52.9	314	43.9	60	34.0	112	42.3	2	34.5
13	239	55.4	329	43.7	75	35.1	127	44.8	17	36.6
14	254	57.8	344	43.4	90	36.2	142	47.2	32	38.8
15	270	00.3	359	43.2	105	37.4	157	49.7	47	41.0
16	285	02.8	14	42.9	120	38.5	172	52.1	62	43.1
17	300	05.2	29	42.6	135	39.6	187	54.6	77	45.3
18	315	07.7	44	42.4	150	40.7	202	57.0	92	47.5
19	330	10.1	59	42.1	165	41.8	217	59.5	107	49.6
20	345	12.6	74	41.9	180	43.0	233	01.9	122	51.8
21	0	15.1	89	41.6	195	44.1	248	04.4	137	54.0
22	15	17.5	104	41.4	210	45.2	263	06.8	152	56.1
23	30	20.0	119	41.1	225	46.3	278	09.3	167	58.3
24	45	22.5	134	40.9	240	47.5	293	11.7	183	00.5
Dif	—		-3		+11		+24		+22	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 2 ^d 5	PHE { 4 ^h : 60'0 12 ^h : 60'0 20 ^h : 60'0	SD: 16'3			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 43 ^m 6					PMG: 14 ^h 38 ^m			R°: 60 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	184	05.7	-15 57.6	149	21.9	-19 27.8	8	60 N	15 51	16 38	17 28	11 02 51	18 15 73		
1	199	05.7	58.3	163	45.7	28.6	8	58	16 00	44	31	10 48 52	29 71		
2	214	05.6	59.1	178	09.5	29.3	7	56	09	49	34	36 53	41 70		
3	229	05.6	-15 59.8	192	33.3	29.9	6	54	16	54	37	26 53	18 51 70		
4	244	05.6	-16 00.6	206	57.1	30.3	4	52	23	16 59	39	16 54	19 00 69		
5	259	05.6	-16 01.3	221	20.9	30.6	3	50	16 29	17 03	17 42	10 08 54	19 09 68		
6	274	05.5	-16 02.0	235	44.7	30.8	2	45	16 41	17 12	17 47	9 50 56	19 26 67		
7	289	05.5	02.8	250	08.5	30.8	0	40	16 52	20	53	36 56	41 65		
8	304	05.5	03.5	264	32.2	30.7	1	35	17 01	28	17 58	24 57	19 53 64		
9	319	05.4	04.3	278	56.0	30.4	3	30	09	34	18 03	9 13 57	20 03 64		
10	334	05.4	05.0	293	19.8	30.0	4	20	23	46	12	8 54 59	22 61		
11	349	05.4	-16 05.8	307	43.6	29.5	5	10 N	17 35	17 57	18 22	8 38 60	20 37 61		
12	4	05.4	-16 06.5	322	07.4	28.8	7	0	17 47	18 09	18 34	8 23 60	20 52 60		
13	19	05.3	07.3	336	31.3	28.0	8	10 S	17 59	21	18 47	8 09 60	21 07 58		
14	34	05.3	08.0	350	55.1	27.1	9	20	18 12	35	19 02	7 53 61	23 56		
15	49	05.3	08.7	5	18.9	26.0	11	30	26	18 52	22	34 63	41 55		
16	64	05.2	09.5	19	42.8	24.8	12	35	35	19 02	35	24 62	21 51 54		
17	79	05.2	-16 10.2	34	06.7	23.4	14	40	18 45	19 14	19 51	7 12 63	22 03 53		
18	94	05.2	-16 11.0	48	30.5	22.0	14	45	18 56	19 29	20 10	6 57 64	22 17 52		
19	109	05.1	11.7	62	54.5	20.3	17	50	19 10	48	36	40 64	34 50		
20	124	05.1	12.5	77	18.4	18.6	17	52	17	19 57	20 49	32 64	42 49		
21	139	05.1	13.2	91	42.3	16.7	19	54	24	20 07	21 05	22 66	22 51 48		
22	154	05.0	13.9	106	06.3	14.7	20	56	33	19	23	12 66	23 01 47		
23	169	05.0	14.7	120	30.3	12.5	22	58	42	32	21 48	6 00 67	12 46		
24	184	05.0	-16 15.4	134	54.3	10.2	23	60 S	19 53	20 48	22 22	5 47 67	23 26 43		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 55 ^m 1		Mag: -4.6 PMG: 15 ^h 02 ^m		Mag: +1.4 PMG: 7 ^h 56 ^m		Mag: -2.5 PMG: 4 ^h 26 ^m		Mag: +0.5 PMG: 11 ^h 46 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	45	22.5	134	40.9	240	47.5	293	11.7	183	00.5					
1	60	24.9	149	40.6	255	48.6	308	14.2	198	02.7					
2	75	27.4	164	40.4	270	49.7	323	16.6	213	04.8					
3	90	29.9	179	40.1	285	50.8	338	19.1	228	07.0					
4	105	32.3	194	39.9	300	51.9	353	21.6	243	09.2					
5	120	34.8	209	39.6	315	53.1	8	24.0	258	11.3					
6	135	37.3	224	39.4	330	54.2	23	26.5	273	13.5					
7	150	39.7	239	39.2	345	55.3	38	28.9	288	15.7					
8	165	42.2	254	38.9	0	56.4	53	31.4	303	17.8					
9	180	44.6	269	38.7	15	57.6	68	33.8	318	20.0					
10	195	47.1	284	38.4	30	58.7	83	36.3	333	22.2					
11	210	49.6	299	38.2	45	59.8	98	38.7	348	24.3					
12	225	52.0	314	38.0	61	00.9	113	41.2	3	26.5					
13	240	54.5	329	37.7	76	02.0	128	43.7	18	28.7					
14	255	57.0	344	37.5	91	03.2	143	46.1	33	30.8					
15	270	59.4	359	37.2	106	04.3	158	48.6	48	33.0					
16	286	01.9	14	37.0	121	05.4	173	51.0	63	35.2					
17	301	04.4	29	36.8	136	06.5	188	53.5	78	37.4					
18	316	06.8	44	36.5	151	07.7	203	56.0	93	39.5					
19	331	09.3	59	36.3	166	08.8	218	58.4	108	41.7					
20	346	11.8	74	36.1	181	09.9	234	00.9	123	43.9					
21	1	14.2	89	35.8	196	11.0	249	03.3	138	46.0					
22	16	16.7	104	35.6	211	12.2	264	05.8	153	48.2					
23	31	19.1	119	35.4	226	13.3	279	08.3	168	50.4					
24	46	21.6	134	35.1	241	14.4	294	10.7	183	52.5					
Dif	—		-2	0	+11	-5	+25	0	+22	-1					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 43 ^m 7				Edad: 3 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8 R°: 57 ^m																
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	184	05.0	-16	15.4	134	54.3	-19	10.2	60 N	6 01	6 51	7 38	11 53	37	19 28	82					
1	199	04.9		16.2	149	18.4	51	07.8	58	5 57	45	28	40	39	40	80					
2	214	04.9		16.9	163	42.5	51	05.3	56	54	39	20	29	41	19 51	77					
3	229	04.9		17.6	178	06.6	51	-19 02.6	54	52	34	12	19	43	20 01	75					
4	244	04.8		18.4	192	30.7	51	-18 59.8	52	49	29	06	10	45	09	74					
5	259	04.8	-16	19.1	206	54.9	52	-18 56.8	50	5 46	6 25	7 00	11 02	46	20 17	72					
6	274	04.8	-16	19.8	221	19.1	52	-18 53.8	45	5 41	6 16	6 47	10 46	48	20 33	70					
7	289	04.7		20.6	235	43.3	52	50.6	40	35	07	36	32	50	46	68					
8	304	04.7		21.3	250	07.6	53	47.2	35	30	6 00	27	21	51	20 57	66					
9	319	04.7		22.0	264	31.9	53	43.8	30	25	5 54	19	10 10	53	21 07	64					
10	334	04.6		22.8	278	56.3	54	40.2	20	15	42	6 04	9 53	55	23	62					
11	349	04.6	-16	23.5	293	20.7	54	-18 36.5	10 N	5 05	5 30	5 52	9 38	56	21 38	59					
12	4	04.6	-16	24.2	307	45.1	54	-18 32.6	0	4 54	5 19	5 40	9 23	59	21 52	57					
13	19	04.5		25.0	322	09.6	55	28.6	10 S	41	5 06	28	9 09	60	22 05	55					
14	34	04.5		25.7	336	34.1	55	24.6	20	25	4 52	15	8 54	62	19	53					
15	49	04.4		26.4	350	58.7	56	20.3	30	4 05	35	5 01	37	64	36	50					
16	64	04.4		27.2	5	23.3	56	16.0	35	3 52	25	4 52	26	66	45	49					
17	79	04.4	-16	27.9	19	48.0	57	-18 11.5	40	3 36	4 12	4 42	8 15	66	22 56	46					
18	94	04.3	-16	28.6	34	12.7	57	-18 07.0	45	3 17	3 58	4 30	8 01	68	23 09	44					
19	109	04.3		29.4	48	37.4	57	-18 02.3	50	2 51	39	16	7 44	71	24	41					
20	124	04.2		30.1	63	02.2	58	-17 57.4	52	38	30	10	36	72	31	40					
21	139	04.2		30.8	77	27.1	59	52.5	54	22	20	4 02	28	72	39	39					
22	154	04.2		31.5	91	52.0	59	47.4	56	2 03	3 08	3 54	18	74	48	37					
23	169	04.1		32.3	106	16.9	59	42.3	58	1 39	2 54	45	7 07	75	23 58	35					
24	184	04.1	-16	33.0	120	41.9	60	-17 37.0	60 S	1 04	2 38	3 34	6 54	77	** ** *	**					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 51 ^m 1		Mag: -4.6 PMG: 15 ^h 02 ^m		Mag: +1.4 PMG: 7 ^h 54 ^m		Mag: -2.5 PMG: 4 ^h 23 ^m		Mag: +0.5 PMG: 11 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	46	21.6	134	35.1	241	14.4	294	10.7	183	52.5
1	61	24.1	149	34.9	256	15.5	309	13.2	198	54.7
2	76	26.5	164	34.7	271	16.7	324	15.6	213	56.9
3	91	29.0	179	34.5	286	17.8	339	18.1	228	59.0
4	106	31.5	194	34.2	301	18.9	354	20.6	244	01.2
5	121	33.9	209	34.0	316	20.1	9	23.0	259	03.4
6	136	36.4	224	33.8	331	21.2	24	25.5	274	05.5
7	151	38.9	239	33.6	346	22.3	39	28.0	289	07.7
8	166	41.3	254	33.4	1	23.4	54	30.4	304	09.9
9	181	43.8	269	33.1	16	24.6	69	32.9	319	12.1
10	196	46.3	284	32.9	31	25.7	84	35.3	334	14.2
11	211	48.7	299	32.7	46	26.8	99	37.8	349	16.4
12	226	51.2	314	32.5	61	27.9	114	40.3	4	18.6
13	241	53.6	329	32.3	76	29.1	129	42.7	19	20.7
14	256	56.1	344	32.0	91	30.2	144	45.2	34	22.9
15	271	58.6	359	31.8	106	31.3	159	47.7	49	25.1
16	287	01.0	14	31.6	121	32.5	174	50.1	64	27.2
17	302	03.5	29	31.4	136	33.6	189	52.6	79	29.4
18	317	06.0	44	31.2	151	34.7	204	55.1	94	31.6
19	332	08.4	59	31.0	166	35.8	219	57.5	109	33.7
20	347	10.9	74	30.8	181	37.0	235	00.0	124	35.9
21	2	13.4	89	30.6	196	38.1	250	02.5	139	38.1
22	17	15.8	104	30.4	211	39.2	265	05.0	154	40.2
23	32	18.3	119	30.2	226	40.4	280	07.4	169	42.4
24	47	20.7	134	29.9	241	41.5	295	09.9	184	44.6
Dif	—		-2	0	+11	-5	+25	0	+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 4 ^d 5 PHE { 4 ^h : 59'7 12 ^h : 59'6 20 ^h : 59'5 R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	184	04.1	-16	33.0	120	41.9	-17	37.0	60 N	15 46	16 33	17 24	12 30 28	20 50 85
1	199	04.0		33.7	135	07.0	61	31.6	58	15 56	40	27	19 31	21 00 82
2	214	04.0		34.4	149	32.1	61	26.1	56	16 05	46	30	10 33	08 81
3	229	03.9		35.2	163	57.3	62	20.4	54	12	51	33	12 02 34	16 78
4	244	03.9		35.9	178	22.5	62	14.7	52	19	16 56	36	11 55 36	23 76
5	259	03.9	-16	36.6	192	47.8	63	-17 08.8	50	16 25	17 00	17 39	11 48 38	21 29 75
6	274	03.8	-16	37.3	207	13.1	63	-17 02.8	45	16 39	17 10	17 45	11 34 41	21 43 71
7	289	03.8		38.1	221	38.5	64	-16 56.8	40	50	18	51	22 43	21 54 68
8	304	03.7		38.8	236	04.0	65	50.6	35	16 59	26	17 56	12 45	22 03 66
9	319	03.7		39.5	250	29.5	65	44.3	30	17 08	33	18 01	11 03 47	11 64
10	334	03.6		40.2	264	55.1	66	37.9	20	22	45	12	10 48 50	25 60
11	349	03.6	-16	41.0	279	20.7	66	-16 31.4	10 N	17 35	17 57	18 22	10 34 54	22 37 58
12	4	03.5	-16	41.7	293	46.4	67	-16 24.8	0	17 47	18 09	18 34	10 22 56	22 49 54
13	19	03.5		42.4	308	12.2	68	18.1	10 S	18 00	22	18 47	10 09 59	23 00 52
14	34	03.4		43.1	322	38.0	68	11.3	20	13	36	19 04	9 56 61	12 49
15	49	03.4		43.8	337	03.9	69	-16 04.4	30	28	18 54	24	41 64	26 45
16	64	03.3		44.6	351	29.8	69	-15 57.3	35	37	19 04	38	32 66	34 43
17	79	03.3	-16	45.3	5	55.8	70	-15 50.2	40	18 47	19 17	19 54	9 21 69	23 42 41
18	94	03.2	-16	46.0	20	21.9	71	-15 43.0	45	18 59	19 32	20 14	9 09 71	23 53 38
19	109	03.2		46.7	34	48.0	71	35.7	50	19 14	19 52	41	8 55 74	** ** *
20	124	03.1		47.4	49	14.2	72	28.3	52	21	20 01	20 54	48 75	** ** *
21	139	03.1		48.2	63	40.5	73	20.8	54	28	12	21 11	40 77	** ** *
22	154	03.0		48.9	78	06.8	73	13.2	56	37	24	31	32 79	** ** *
23	169	03.0		49.6	92	33.2	74	-15 05.6	58	47	38	21 57	22 82	** ** *
24	184	02.9	-16	50.3	106	59.6	74	-14 57.8	60 S	19 58	20 55	22 37	8 11 84	0 09 33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 47 ^m 2		Mag: -4.6 PMG: 15 ^h 02 ^m		Mag: +1.4 PMG: 7 ^h 53 ^m		Mag: -2.5 PMG: 4 ^h 19 ^m		Mag: +0.5 PMG: 11 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	47	20.7	134	29.9	241	41.5	295	09.9	184	44.6
1	62	23.2	149	29.7	256	42.6	310	12.4	199	46.8
2	77	25.7	164	29.5	271	43.8	325	14.8	214	48.9
3	92	28.1	179	29.3	286	44.9	340	17.3	229	51.1
4	107	30.6	194	29.1	301	46.0	355	19.8	244	53.3
5	122	33.1	209	28.9	316	47.2	10	22.3	259	55.4
6	137	35.5	224	28.7	331	48.3	25	24.7	274	57.6
7	152	38.0	239	28.5	346	49.4	40	27.2	289	59.8
8	167	40.5	254	28.3	1	50.6	55	29.7	305	01.9
9	182	42.9	269	28.1	16	51.7	70	32.1	320	04.1
10	197	45.4	284	27.9	31	52.8	85	34.6	335	06.3
11	212	47.9	299	27.7	46	53.9	100	37.1	350	08.4
12	227	50.3	314	27.6	61	55.1	115	39.6	5	10.6
13	242	52.8	329	27.4	76	56.2	130	42.0	20	12.8
14	257	55.2	344	27.2	91	57.3	145	44.5	35	14.9
15	272	57.7	359	27.0	106	58.5	160	47.0	50	17.1
16	288	00.2	14	26.8	121	59.6	175	49.5	65	19.3
17	303	02.6	29	26.6	137	00.7	190	51.9	80	21.5
18	318	05.1	44	26.4	152	01.9	205	54.4	95	23.6
19	333	07.6	59	26.2	167	03.0	220	56.9	110	25.8
20	348	10.0	74	26.0	182	04.2	235	59.4	125	28.0
21	3	12.5	89	25.9	197	05.3	251	01.9	140	30.1
22	18	15.0	104	25.7	212	06.4	266	04.3	155	32.3
23	33	17.4	119	25.5	227	07.6	281	06.8	170	34.5
24	48	19.9	134	25.3	242	08.7	296	09.3	185	36.6
Dif	—		-2	0	+11	-5	+25	0	+22	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 5 ^d 5 PHE { 4 ^h : 59'4 12 ^h : 59'3 20 ^h : 59'1 R°: 53 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	184	02.9	-16	50.3	106	59.6	-14	57.8	60 N	6 05	6 56	7 43	12 58	21	22	15	86		
1	199	02.9		51.0	121	26.1	75	49.9	58	6 01	49	33	50	24	22	83			
2	214	02.8		51.7	135	52.7	76	42.0	56	5 58	43	24	43	26	29	80			
3	229	02.8		52.4	150	19.3	76	33.9	54	55	38	16	36	29	34	78			
4	244	02.7		53.2	164	46.1	78	25.8	52	52	33	09	31	30	39	76			
5	259	02.7	-16	53.9	179	12.8	77	-14 17.6	50	5 49	6 28	7 03	12 26	32	22	44	74		
6	274	02.6	-16	54.6	193	39.7	79	-14 09.3	45	5 43	6 18	6 50	12 15	35	22	54	70		
7	289	02.6		55.3	208	06.6	79	-14 01.0	40	37	10	38	12 05	39	23	02	67		
8	304	02.5		56.0	222	33.5	79	-13 52.5	35	32	6 02	29	11 57	41		09	65		
9	319	02.5		56.7	237	00.6	81	44.0	30	27	5 55	20	50	43		15	62		
10	334	02.4		57.4	251	27.7	81	35.4	20	16	43	6 06	38	47		25	59		
11	349	02.4	-16	58.1	265	54.8	81	-13 26.7	10 N	5 05	5 31	5 53	11 28	50	23	35	55		
12	4	02.3	-16	58.8	280	22.0	82	-13 17.9	0	4 54	5 19	5 40	11 18	53	23	43	52		
13	19	02.3	-16	59.6	294	49.3	83	09.1	10 S	40	5 06	28	11 08	56	23	52	48		
14	34	02.2	-17	00.3	309	16.7	84	-13 00.2	20	24	4 51	5 15	10 57	59	**	**	**		
15	49	02.1		01.0	323	44.1	84	-12 51.2	30	4 03	34	4 59	45	63	**	**	**		
16	64	02.1		01.7	338	11.6	85	42.1	35	3 50	23	50	38	65	**	**	**		
17	79	02.0	-17	02.4	352	39.1	85	-12 33.0	40	3 34	4 10	4 40	10 30	67	**	**	**		
18	94	02.0	-17	03.1	7	06.7	86	-12 23.8	45	3 13	3 55	4 28	10 20	71	**	**	**		
19	109	01.9		03.8	21	34.4	87	14.5	50	2 46	35	13	9	74	0	05	35		
20	124	01.9		04.5	36	02.1	87	-12 05.2	52	33	26	4 06	10 03	76		11	33		
21	139	01.8		05.2	50	29.9	88	-11 55.8	54	2 16	15	3 58	9	57	78		18	31	
22	154	01.7		05.9	64	57.8	89	46.3	56	1 56	3 03	50	51	80		25	29		
23	169	01.7		06.6	79	25.7	89	36.8	58	1 30	2 49	40	44	82		33	27		
24	184	01.6	-17	07.3	93	53.7	90	-11 27.2	60 S	0 50	2 32	3 29	9	35	86		0	42	24
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 20 ^h 43 ^m 3			Mag: -4.6 PMG: 15 ^h 02 ^m			Mag: +1.4 PMG: 7 ^h 51 ^m			Mag: -2.5 PMG: 4 ^h 15 ^m			Mag: +0.5 PMG: 11 ^h 36 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	48	19.9	134	25.3	-27	08.0	242	08.7	+7	40.6	296	09.3	+21	52.2	185	36.6	-14	10.5	
1	63	22.4	149	25.1		08.0	257	09.8		40.1	311	11.8		52.2	200	38.8		10.6	
2	78	24.8	164	25.0		07.9	272	11.0		39.6	326	14.2		52.2	215	41.0		10.7	
3	93	27.3	179	24.8		07.9	287	12.1		39.0	341	16.7		52.2	230	43.1		10.8	
4	108	29.7	194	24.6		07.8	302	13.2		38.5	356	19.2		52.2	245	45.3		10.8	
5	123	32.2	209	24.4	-27	07.8	317	14.4	+7	38.0	11	21.7	+21	52.3	260	47.5	-14	10.9	
6	138	34.7	224	24.2	-27	07.7	332	15.5	+7	37.5	26	24.2	+21	52.3	275	49.6	-14	11.0	
7	153	37.1	239	24.1		07.6	347	16.6		36.9	41	26.7		52.3	290	51.8		11.1	
8	168	39.6	254	23.9		07.6	2	17.8		36.4	56	29.1		52.3	305	54.0		11.2	
9	183	42.1	269	23.7		07.5	17	18.9		35.9	71	31.6		52.3	320	56.1		11.3	
10	198	44.5	284	23.6		07.4	32	20.1		35.3	86	34.1		52.3	335	58.3		11.4	
11	213	47.0	299	23.4	-27	07.4	47	21.2	+7	34.8	101	36.6	+21	52.3	351	00.5	-14	11.5	
12	228	49.5	314	23.2	-27	07.3	62	22.3	+7	34.3	116	39.1	+21	52.3	6	02.7	-14	11.5	
13	243	51.9	329	23.0		07.2	77	23.5		33.8	131	41.6		52.3	21	04.8		11.6	
14	258	54.4	344	22.9		07.2	92	24.6		33.2	146	44.0		52.3	36	07.0		11.7	
15	273	56.9	359	22.7		07.1	107	25.7		32.7	161	46.5		52.3	51	09.2		11.8	
16	288	59.3	14	22.6		07.0	122	26.9		32.2	176	49.0		52.3	66	11.3		11.9	
17	304	01.8	29	22.4	-27	07.0	137	28.0	+7	31.7	191	51.5	+21	52.4	81	13.5	-14	12.0	
18	319	04.2	44	22.2	-27	06.9	152	29.2	+7	31.1	206	54.0	+21	52.4	96	15.7	-14	12.1	
19	334	06.7	59	22.1		06.8	167	30.3		30.6	221	56.5		52.4	111	17.8		12.2	
20	349	09.2	74	21.9		06.7	182	31.4		30.1	236	58.9		52.4	126	20.0		12.3	
21	4	11.6	89	21.7		06.7	197	32.6		29.6	252	01.4		52.4	141	22.2		12.3	
22	19	14.1	104	21.6		06.6	212	33.7		29.0	267	03.9		52.4	156	24.3		12.4	
23	34	16.6	119	21.4		06.5	227	34.8		28.5	282	06.4		52.4	171	26.5		12.5	
24	49	19.0	134	21.3	-27	06.4	242	36.0	+7	28.0	297	08.9	+21	52.4	186	28.7	-14	12.6	
Dif	—		-2		+1		+11		-5		+25		0		+22		-		-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 5	PHE { 4 ^h : 59'0 12 ^h : 58'8 20 ^h : 58'6									
	PMG: 11 ^h 43 ^m 9					SD: 16 ^h 1			PMG: 18 ^h 23 ^m		Rº: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	184	01.6	-17 07.3	93	53.7	-11 27.2	96	60 N	15 42	16 29	17 20	13 19 18	23 41 84	
1	199	01.6	08.0	108	21.8	17.6	96	58	15 52	36	24	14 20	45 81	
2	214	01.5	08.7	122	49.9	07.8	98	56	16 01	42	27	09 23	49 79	
3	229	01.4	09.4	137	18.0	58.1	97	54	09	48	30	05 25	52 77	
4	244	01.4	10.1	151	46.3	48.3	98	52	16	53	34	13 01 27	55 75	
5	259	01.3	-17 10.8	166	14.5	38.4	99	50	16 23	16 58	17 36	12 58 28	23 58 73	
6	274	01.3	-17 11.5	180	42.9	28.4	100	45	16 36	17 08	17 43	12 50 32	*** ** *	
7	289	01.2	12.2	195	11.3	18.4	100	40	48	17	49	44 35	*** ** *	
8	304	01.1	12.9	209	39.8	08.4	100	35	16 58	25	17 55	38 38	*** ** *	
9	319	01.1	13.6	224	08.3	58.3	101	30	17 07	32	18 00	33 40	*** ** *	
10	334	01.0	14.3	238	36.9	48.2	101	20	22	45	11	25 44	*** ** *	
11	349	00.9	-17 15.0	253	05.5	38.0	102	10 N	17 35	17 57	18 22	12 18 47	*** ** *	
12	4	00.9	-17 15.7	267	34.2	27.7	103	0	17 47	18 09	18 34	12 11 50	*** ** *	
13	19	00.8	16.4	282	02.9	17.4	103	10 S	18 00	22	18 48	12 04 54	*** ** *	
14	34	00.8	17.1	296	31.7	07.1	103	20	14	37	19 05	11 56 58	0 01 45	
15	49	00.7	17.8	311	00.6	56.7	104	30	30	18 55	26	48 61	11 41	
16	64	00.6	18.5	325	29.5	46.3	104	35	39	19 07	40	43 64	17 39	
17	79	00.6	-17 19.2	339	58.5	35.8	105	40	18 49	19 20	19 57	11 37 67	0 23 37	
18	94	00.5	-17 19.9	354	27.5	25.3	105	45	19 02	19 35	20 17	11 31 70	0 31 34	
19	109	00.4	20.6	8	56.6	14.8	105	50	17	19 55	20 45	23 74	40 30	
20	124	00.4	21.3	23	25.7	04.2	106	52	24	20 05	21 00	19 76	44 29	
21	139	00.3	22.0	37	54.9	53.6	106	54	32	16	17	15 78	49 27	
22	154	00.2	22.7	52	24.1	42.9	107	56	41	29	21 38	11 80	0 54 25	
23	169	00.2	23.3	66	53.4	32.2	107	58	19 52	20 44	22 07	06 82	1 00 22	
24	184	00.1	-17 24.0	81	22.7	21.5	107	60 S	20 03	21 02	22 56	11 01 84	1 06 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 39 ^m 3		Mag: -4.6 PMG: 15 ^h 03 ^m		Mag: +1.4 PMG: 7 ^h 49 ^m		Mag: -2.5 PMG: 4 ^h 11 ^m		Mag: +0.5 PMG: 11 ^h 32 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	49	19.0	134	21.3	-27	06.4	242	36.0	+7	28.0				
1	64	21.5	149	21.1	06.3	257	37.1	27.5	312	11.4				
2	79	24.0	164	21.0	06.3	272	38.3	26.9	327	13.9				
3	94	26.4	179	20.8	06.2	287	39.4	26.4	342	16.4				
4	109	28.9	194	20.7	06.1	302	40.5	25.9	357	18.9				
5	124	31.3	209	20.5	-27	06.0	317	41.7	+7	25.4				
6	139	33.8	224	20.4	-27	05.9	332	42.8	+7	24.8				
7	154	36.3	239	20.2	05.9	347	44.0	24.3	42	26.3				
8	169	38.7	254	20.1	05.8	2	45.1	23.8	57	28.8				
9	184	41.2	269	19.9	05.7	17	46.3	23.3	72	31.3				
10	199	43.7	284	19.8	05.6	32	47.4	22.7	87	33.8				
11	214	46.1	299	19.6	-27	05.5	47	48.5	+7	22.2				
12	229	48.6	314	19.5	-27	05.4	62	49.7	+7	21.7				
13	244	51.1	329	19.4	05.3	77	50.8	21.1	132	41.3				
14	259	53.5	344	19.2	05.2	92	52.0	20.6	147	43.8				
15	274	56.0	359	19.1	05.1	107	53.1	20.1	162	46.3				
16	289	58.5	14	18.9	05.0	122	54.2	19.6	177	48.8				
17	305	00.9	29	18.8	-27	04.9	137	55.4	+7	19.0				
18	320	03.4	44	18.7	-27	04.8	152	56.5	+7	18.5				
19	335	05.8	59	18.5	04.7	167	57.7	18.0	222	56.2				
20	350	08.3	74	18.4	04.6	182	58.8	17.5	237	58.7				
21	5	10.8	89	18.3	04.6	198	00.0	16.9	253	01.2				
22	20	13.2	104	18.1	04.5	213	01.1	16.4	268	03.7				
23	35	15.7	119	18.0	04.3	228	02.3	15.9	283	06.2				
24	50	18.2	134	17.9	-27	04.2	243	03.4	+7	15.4				
Dif	—		-1	+1		+11	-5		+25	0		+22	-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 7 ^d 5 PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'2 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	184	00.1	-17	24.0	81	22.7	-7	21.5	60 N	6 09	7 00	7 48	13 37	16	***	***	***	
1	199	00.0		24.7	95	52.1 ¹⁰⁴	-7	10.7 ¹⁰⁸	58	05	6 53	38	34	19	***	***	***	
2	213	59.9		25.4	110	21.5 ¹⁰⁴	-6	59.9 ¹⁰⁸	56	6 02	47	28	32	21	***	***	***	
3	228	59.9		26.1	124	51.0 ¹⁰⁵		49.1 ¹⁰⁸	54	5 58	41	20	30	23	***	***	***	
4	243	59.8		26.8	139	20.5 ¹⁰⁵		38.2 ¹⁰⁹	52	55	36	13	28	25	***	***	***	
5	258	59.7	-17	27.5	153	50.0 ¹⁰⁵	-6	27.3 ¹⁰⁹	50	5 52	6 31	7 06	13 26	26	***	***	***	
6	273	59.7	-17	28.2	168	19.6 ¹⁰⁶	-6	16.4 ¹⁰⁹	45	5 45	6 21	6 52	13 22	30	0 04	69		
7	288	59.6		28.9	182	49.3 ¹⁰⁷	-6	05.5 ¹⁰⁹	40	39	12	41	19	33	09	66		
8	303	59.5		29.5	197	19.0 ¹⁰⁷	-5	54.5 ¹¹⁰	35	34	6 04	31	16	36	14	63		
9	318	59.5		30.2	211	48.7 ¹⁰⁷		43.5 ¹¹⁰	30	28	5 57	22	13	38	17	61		
10	333	59.4		30.9	226	18.5 ¹⁰⁸		32.5 ¹¹⁰	20	17	44	6 07	09	42	24	57		
11	348	59.3	-17	31.6	240	48.3 ¹⁰⁸	-5	21.5 ¹¹⁰	10 N	5 06	5 31	5 53	13 05	46	0 30	53		
12	3	59.2	-17	32.3	255	18.2 ¹⁰⁹	-5	10.4 ¹¹¹	0	4 54	5 19	5 41	13 01	49	0 35	50		
13	18	59.2		33.0	269	48.1 ¹⁰⁹	-4	59.3 ¹¹¹	10 S	40	5 06	28	12 58	52	40	47		
14	33	59.1		33.7	284	18.1 ¹¹⁰		48.2 ¹¹¹	20	23	4 51	5 14	54	56	46	43		
15	48	59.0		34.3	298	48.1 ¹¹⁰		37.1 ¹¹¹	30	4 01	32	4 58	49	61	52	39		
16	63	58.9		35.0	313	18.1 ¹¹⁰		26.0 ¹¹¹	35	3 48	21	49	47	63	0 56	37		
17	78	58.9	-17	35.7	327	48.1 ¹¹⁰	-4	14.8 ¹¹²	40	3 31	4 08	4 38	12 44	65	1 00	34		
18	93	58.8	-17	36.4	342	18.2 ¹¹¹	-4	03.7 ¹¹¹	45	3 10	3 52	4 25	12 41	68	1 05	31		
19	108	58.7		37.1	356	48.4 ¹¹²	-3	52.5 ¹¹²	50	2 42	32	10	37	72	10	28		
20	123	58.7		37.7	11	18.6 ¹¹²		41.3 ¹¹²	52	28	22	4 03	35	74	13	26		
21	138	58.6		38.4	25	48.8 ¹¹²		30.1 ¹¹²	54	2 10	3 11	3 55	33	76	16	24		
22	153	58.5		39.1	40	19.0 ¹¹²		18.9 ¹¹²	56	1 49	2 58	46	31	78	19	22		
23	168	58.4		39.8	54	49.3 ¹¹³	-3	07.6 ¹¹³	58	1 20	43	36	28	81	22	20		
24	183	58.3	-17	40.5	69	19.6 ¹¹³	-2	56.4 ¹¹²	60 S	0 31	2 25	3 24	12 25	83	1 26	17		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 35 ^m 4			Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.4 PMG: 7 ^h 47 ^m			Mag: -2.5 PMG: 4 ^h 07 ^m			Mag: +0.5 PMG: 11 ^h 29 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	50	18.2	134	17.9	-27	04.2	243	03.4	+7	15.4	298	08.7	+21	52.6	187	20.7	-14	14.7
1	65	20.6	149	17.7		04.1	258	04.5		14.8	313	11.2		52.7	202	22.9		14.8
2	80	23.1	164	17.6		04.0	273	05.7		14.3	328	13.7		52.7	217	25.1		14.9
3	95	25.6	179	17.5		03.9	288	06.8		13.8	343	16.2		52.7	232	27.2		15.0
4	110	28.0	194	17.4		03.8	303	08.0		13.3	358	18.7		52.7	247	29.4		15.1
5	125	30.5	209	17.2	-27	03.7	318	09.1	+7	12.7	13	21.2	+21	52.7	262	31.6	-14	15.1
6	140	33.0	224	17.1	-27	03.6	333	10.3	+7	12.2	28	23.7	+21	52.7	277	33.7	-14	15.2
7	155	35.4	239	17.0		03.5	348	11.4		11.7	43	26.2		52.7	292	35.9		15.3
8	170	37.9	254	16.9		03.4	3	12.6		11.2	58	28.7		52.7	307	38.1		15.4
9	185	40.3	269	16.8		03.3	18	13.7		10.6	73	31.2		52.7	322	40.2		15.5
10	200	42.8	284	16.7		03.2	33	14.8		10.1	88	33.7		52.7	337	42.4		15.6
11	215	45.3	299	16.5	-27	03.1	48	16.0	+7	09.6	103	36.2	+21	52.8	352	44.6	-14	15.7
12	230	47.7	314	16.4	-27	02.9	63	17.1	+7	09.1	118	38.7	+21	52.8	7	46.8	-14	15.8
13	245	50.2	329	16.3		02.8	78	18.3		08.5	133	41.2		52.8	22	48.9		15.8
14	260	52.7	344	16.2		02.7	93	19.4		08.0	148	43.7		52.8	37	51.1		15.9
15	275	55.1	359	16.1		02.6	108	20.6		07.5	163	46.2		52.8	52	53.3		16.0
16	290	57.6	14	16.0		02.5	123	21.7		07.0	178	48.7		52.8	67	55.4		16.1
17	306	00.1	29	15.9	-27	02.4	138	22.9	+7	06.4	193	51.2	+21	52.8	82	57.6	-14	16.2
18	321	02.5	44	15.8	-27	02.2	153	24.0	+7	05.9	208	53.7	+21	52.8	97	59.8	-14	16.3
19	336	05.0	59	15.7		02.1	168	25.2		05.4	223	56.2		52.8	113	01.9		16.4
20	351	07.4	74	15.5		02.0	183	26.3		04.9	238	58.7		52.9	128	04.1		16.5
21	6	09.9	89	15.4		01.9	198	27.5		04.3	254	01.2		52.9	143	06.3		16.5
22	21	12.4	104	15.3		01.8	213	28.6		03.8	269	03.7		52.9	158	08.4		16.6
23	36	14.8	119	15.2		01.6	228	29.8		03.3	284	06.2		52.9	173	10.6		16.7
24	51	17.3	134	15.1	-27	01.5	243	30.9	+7	02.8	299	08.8	+21	52.9	188	12.8	-14	16.8
Dif	—		-1		+1		+11		-5		+25		0		+22		-	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 44 ^m 2		Edad: 8 ^d 5 PHE { 4 ^h : 58/0 12 ^h : 57/8 20 ^h : 57/6 PMG: 20 ^h 02 ^m R°: 48 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	183	58.3	-17	40.5	69	19.6	-2 56.4	60 N	15 37	16 25	17 16	13 53 16	1 05 82					
1	198	58.3		41.1	83	49.9 ¹¹³	45.2 ¹¹²	58	48	32	20	53 18	06 80					
2	213	58.2		41.8	98	20.3 ¹¹⁴	33.9 ¹¹³	56	15 57	39	24	53 20	08 77					
3	228	58.1		42.5	112	50.7 ¹¹⁴	22.7 ¹¹²	54	16 06	45	28	53 22	09 75					
4	243	58.0		43.2	127	21.1 ¹¹⁴	11.4 ¹¹³	52	13	50	31	53 24	10 74					
5	258	58.0	-17	43.8	141	51.6 ¹¹⁵	-2 00.1 ¹¹³	50	16 20	16 55	17 34	13 52 26	1 11 72					
6	273	57.9	-17	44.5	156	22.1 ¹¹⁵	-1 48.9 ¹¹²	45	16 34	17 06	17 41	13 52 29	1 13 68					
7	288	57.8		45.2	170	52.6 ¹¹⁵	37.6 ¹¹³	40	46	15	48	52 32	15 65					
8	303	57.7		45.9	185	23.2 ¹¹⁶	26.3 ¹¹³	35	16 56	23	54	52 34	17 62					
9	318	57.6		46.5	199	53.7 ¹¹⁵	15.1 ¹¹²	30	17 05	31	17 59	51 38	18 60					
10	333	57.6		47.2	214	24.3 ¹¹⁶	-1 03.8 ¹¹³	20	21	44	18 11	51 41	21 55					
11	348	57.5	-17	47.9	228	55.0 ¹¹⁷	-0 52.5 ¹¹³	10 N	17 35	17 57	18 22	13 51 44	1 23 52					
12	3	57.4	-17	48.6	243	25.6 ¹¹⁶	-0 41.3 ¹¹²	0	17 48	18 09	18 35	13 50 49	1 25 48					
13	18	57.3		49.2	257	56.3 ¹¹⁷	30.0 ¹¹³	10 S	18 01	23	18 49	50 52	27 45					
14	33	57.2		49.9	272	27.0 ¹¹⁷	18.7 ¹¹³	20	15	38	19 06	50 55	29 41					
15	48	57.2		50.6	286	57.7 ¹¹⁷	-0 07.5 ¹¹²	30	31	18 57	28	50 59	31 38					
16	63	57.1		51.2	301	28.4 ¹¹⁷	+0 03.8 ¹¹³	35	41	19 09	42	50 61	33 35					
17	78	57.0	-17	51.9	315	59.2 ¹¹⁸	+0 15.0 ¹¹²	40	18 52	19 22	19 59	13 49 65	1 34 33					
18	93	56.9	-17	52.6	330	30.0 ¹¹⁸	+0 26.2 ¹¹²	45	19 05	19 38	20 21	13 49 68	1 36 29					
19	108	56.8		53.2	345	00.8 ¹¹⁸	37.4 ¹¹²	50	21	19 59	20 50	49 71	38 26					
20	123	56.7		53.9	359	31.6 ¹¹⁸	48.7 ¹¹³	52	28	20 09	21 05	49 73	39 24					
21	138	56.7		54.6	14	02.4 ¹¹⁸	+0 59.8 ¹¹¹	54	36	21	23	49 75	40 22					
22	153	56.6		55.2	28	33.2 ¹¹⁸	+1 11.0 ¹¹²	56	46	34	21 46	49 77	41 20					
23	168	56.5		55.9	43	04.1 ¹¹⁹	22.2 ¹¹²	58	19 57	20 50	22 18	49 79	42 18					
24	183	56.4	-17	56.6	57	35.0 ¹¹⁹	+1 33.4 ¹¹²	60 S	20 09	21 09	** **	13 48 82	1 43 16					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 31 ^m 5		Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.4 PMG: 7 ^h 45 ^m			Mag: -2.5 PMG: 4 ^h 03 ^m			Mag: +0.5 PMG: 11 ^h 25 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	51	17.3	134	15.1	-27	01.5	243	30.9	+7	02.8	299	08.8	+21	52.9	188	12.8	-14	16.8
1	66	19.8	149	15.0		01.4	258	32.1		02.2	314	11.3		52.9	203	14.9		16.9
2	81	22.2	164	14.9		01.3	273	33.2		01.7	329	13.8		52.9	218	17.1		17.0
3	96	24.7	179	14.8		01.1	288	34.4		01.2	344	16.3		52.9	233	19.3		17.1
4	111	27.2	194	14.8		01.0	303	35.5		00.7	359	18.8		52.9	248	21.5		17.2
5	126	29.6	209	14.7	-27	00.9	318	36.7	+7	00.1	14	21.3	+21	53.0	263	23.6	-14	17.2
6	141	32.1	224	14.6	-27	00.7	333	37.8	+6	59.6	29	23.8	+21	53.0	278	25.8	-14	17.3
7	156	34.6	239	14.5		00.6	348	39.0		59.1	44	26.3		53.0	293	28.0		17.4
8	171	37.0	254	14.4		00.5	3	40.1		58.6	59	28.8		53.0	308	30.1		17.5
9	186	39.5	269	14.3		00.3	18	41.3		58.0	74	31.3		53.0	323	32.3		17.6
10	201	41.9	284	14.2		00.2	33	42.4		57.5	89	33.8		53.0	338	34.5		17.7
11	216	44.4	299	14.1	-27	00.1	48	43.6	+6	57.0	104	36.3	+21	53.0	353	36.6	-14	17.8
12	231	46.9	314	14.0	-26	59.9	63	44.7	+6	56.5	119	38.9	+21	53.0	8	38.8	-14	17.9
13	246	49.3	329	14.0		59.8	78	45.9		55.9	134	41.4		53.0	23	41.0		17.9
14	261	51.8	344	13.9		59.7	93	47.0		55.4	149	43.9		53.1	38	43.1		18.0
15	276	54.3	359	13.8		59.5	108	48.2		54.9	164	46.4		53.1	53	45.3		18.1
16	291	56.7	14	13.7		59.4	123	49.3		54.4	179	48.9		53.1	68	47.5		18.2
17	306	59.2	29	13.6	-26	59.2	138	50.5	+6	53.8	194	51.4	+21	53.1	83	49.6	-14	18.3
18	322	01.7	44	13.6	-26	59.1	153	51.6	+6	53.3	209	53.9	+21	53.1	98	51.8	-14	18.4
19	337	04.1	59	13.5		59.0	168	52.8		52.8	224	56.4		53.1	113	54.0		18.5
20	352	06.6	74	13.4		58.8	183	53.9		52.3	239	58.9		53.1	128	56.2		18.5
21	7	09.0	89	13.3		58.7	198	55.1		51.7	255	01.5		53.1	143	58.3		18.6
22	22	11.5	104	13.3		58.5	213	56.2		51.2	270	04.0		53.2	159	00.5		18.7
23	37	14.0	119	13.2		58.4	228	57.4		50.7	285	06.5		53.2	174	02.7		18.8
24	52	16.4	134	13.1	-26	58.2	243	58.5	+6	50.2	300	09.0	+21	53.2	189	04.8	-14	18.9
Dif	—		-1		+1		+12		-5		+25		0		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 44 ^m 3			Edad: 9 ^d 5 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 PMG: 20 ^h 50 ^m R°: 48 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	56.4	-17	56.6	57	35.0	+1	33.4	60 N	6	13	7	05	7	53	14	09		
1	198	56.3		57.2	72	05.9 ¹¹⁹		44.5 ¹¹¹	58	09	6	57	42		11	19	26		
2	213	56.2		57.9	86	36.8 ¹¹⁹	+1	55.6 ¹¹¹	56	05	51	33		13	22	25	76		
3	228	56.1		58.6	101	07.7 ¹¹⁹	+2	06.7 ¹¹¹	54	6	02	45	24		15	23	24	75	
4	243	56.1		59.2	115	38.7 ¹²⁰		17.8 ¹¹¹	52	5	58	39	17		17	25	24	72	
5	258	56.0	-17	59.9	130	09.6 ¹¹⁹	+2	28.9 ¹¹¹	50	5	55	6	34	7	10	14	18	27	
6	273	55.9	-18	00.6	144	40.6 ¹²⁰	+2	40.0 ¹¹¹	45	5	48	6	23	6	55	14	21	30	
7	288	55.8		01.2	159	11.5 ¹¹⁹	+2	51.0 ¹¹⁰	40	41	14	43		24	33	20	64		
8	303	55.7		01.9	173	42.5 ¹²⁰	+3	02.0 ¹¹⁰	35	35	6	06	33		26	36	19	61	
9	318	55.6		02.5	188	13.5 ¹²⁰		13.0 ¹¹⁰	30	29	5	58	23		29	37	18	59	
10	333	55.5		03.2	202	44.5 ¹²⁰		24.0 ¹¹⁰	20	18	45	6	08		32	41	16	55	
11	348	55.4	-18	03.9	217	15.5 ¹²⁰	+3	34.9 ¹⁰⁹	10 N	5	06	5	32	5	54	14	35	45	
12	3	55.3	-18	04.5	231	46.6 ¹²¹	+3	45.8 ¹⁰⁹	0	4	54	5	19	5	41	14	39	47	
13	18	55.3		05.2	246	17.6 ¹²⁰	+3	56.7 ¹⁰⁹	10 S	39	5	05	28		42	51	12	45	
14	33	55.2		05.8	260	48.6 ¹²⁰	+4	07.6 ¹⁰⁹	20	22	4	50	5	13	45	54	10	42	
15	48	55.1		06.5	275	19.6 ¹²⁰		18.4 ¹⁰⁸	30	4	00	31	4	57	49	58	09	37	
16	63	55.0		07.1	289	50.7 ¹²¹		29.2 ¹⁰⁸	35	3	46	19	47		51	61	08	35	
17	78	54.9	-18	07.8	304	21.7 ¹²⁰	+4	40.0 ¹⁰⁸	40	3	29	4	06	4	36	14	54	63	
18	93	54.8	-18	08.5	318	52.8 ¹²¹	+4	50.7 ¹⁰⁷	45	3	07	3	50	4	23	14	57	66	
19	108	54.7		09.1	333	23.8 ¹²⁰	+5	01.5 ¹⁰⁸	50	2	38	29	07		15	00	70	04	26
20	123	54.6		09.8	347	54.9 ¹²¹		12.1 ¹⁰⁶	52	23	19	4	00		02	71	03	24	
21	138	54.5		10.4	2	26.0 ¹²¹		22.8 ¹⁰⁷	54	2	05	3	07	3	51	04	73	02	23
22	153	54.4		11.1	16	57.0 ¹²⁰		33.4 ¹⁰⁶	56	1	42	2	54	42		06	75	01	21
23	168	54.3		11.7	31	28.1 ¹²¹		44.0 ¹⁰⁶	58	1	10	38	31		08	77	2	00	19
24	183	54.2	-18	12.4	45	59.2 ¹²¹	+5	54.5 ¹⁰⁵	60 S	** *	2	19	3	19	15	10	81	1	59

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 27 ^m 5		Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.4 PMG: 7 ^h 44 ^m			Mag: -2.5 PMG: 3 ^h 59 ^m			Mag: +0.5 PMG: 11 ^h 22 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	52	16.4	134	13.1	-26	58.2	243	58.5	+6	50.2	300	09.0	+21	53.2	189	04.8	-14	18.9
1	67	18.9	149	13.0		58.1	258	59.7		49.6	315	11.5		53.2	204	07.0		19.0
2	82	21.4	164	13.0		57.9	274	00.8		49.1	330	14.0		53.2	219	09.2		19.1
3	97	23.8	179	12.9		57.8	289	02.0		48.6	345	16.5		53.2	234	11.3		19.2
4	112	26.3	194	12.9		57.6	304	03.2		48.1	0	19.1		53.2	249	13.5		19.2
5	127	28.8	209	12.8	-26	57.5	319	04.3	+6	47.5	15	21.6	+21	53.2	264	15.7	-14	19.3
6	142	31.2	224	12.7	-26	57.3	334	05.5	+6	47.0	30	24.1	+21	53.3	279	17.8	-14	19.4
7	157	33.7	239	12.7		57.2	349	06.6		46.5	45	26.6		53.3	294	20.0		19.5
8	172	36.2	254	12.6		57.0	4	07.8		46.0	60	29.1		53.3	309	22.2		19.6
9	187	38.6	269	12.5		56.8	19	08.9		45.4	75	31.6		53.3	324	24.4		19.7
10	202	41.1	284	12.5		56.7	34	10.1		44.9	90	34.2		53.3	339	26.5		19.8
11	217	43.5	299	12.4	-26	56.5	49	11.2	+6	44.4	105	36.7	+21	53.3	354	28.7	-14	19.9
12	232	46.0	314	12.4	-26	56.4	64	12.4	+6	43.9	120	39.2	+21	53.3	9	30.9	-14	19.9
13	247	48.5	329	12.3		56.2	79	13.6		43.3	135	41.7		53.4	24	33.0		20.0
14	262	50.9	344	12.3		56.1	94	14.7		42.8	150	44.2		53.4	39	35.2		20.1
15	277	53.4	359	12.2		55.9	109	15.9		42.3	165	46.8		53.4	54	37.4		20.2
16	292	55.9	14	12.2		55.7	124	17.0		41.8	180	49.3		53.4	69	39.5		20.3
17	307	58.3	29	12.1	-26	55.6	139	18.2	+6	41.2	195	51.8	+21	53.4	84	41.7	-14	20.4
18	323	00.8	44	12.1	-26	55.4	154	19.3	+6	40.7	210	54.3	+21	53.4	99	43.9	-14	20.5
19	338	03.3	59	12.0		55.2	169	20.5		40.2	225	56.8		53.4	114	46.0		20.5
20	353	05.7	74	12.0		55.1	184	21.6		39.7	240	59.4		53.4	129	48.2		20.6
21	8	08.2	89	12.0		54.9	199	22.8		39.1	256	01.9		53.5	144	50.4		20.7
22	23	10.7	104	11.9		54.7	214	24.0		38.6	271	04.4		53.5	159	52.5		20.8
23	38	13.1	119	11.9		54.6	229	25.1		38.1	286	06.9		53.5	174	54.7		20.9
24	53	15.6	134	11.8	-26	54.4	244	26.3	+6	37.6	301	09.5	+21	53.5	189	56.9	-14	21.0
Dif	—		-1		+2		+12		-5		+25		0		+22		-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 5				Edad: 10 ^d 5 PHE { 4 ^h : 57:0 12 ^h : 56:8 20 ^h : 56:7 R°: 48 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	54.2	-18	12.4	45	59.2	+5	54.5	60 N	15 32	16 21	17 13	14 26	19	3 48	80			
1	198	54.1		13.0	60	30.2 ¹²⁰	+6	05.1 ¹⁰⁶	58		44	29	17	30	22	45	77		
2	213	54.1		13.7	75	01.3 ¹²¹		15.5 ¹⁰⁴	56	15 54	36	21	35	23	41	75			
3	228	54.0		14.3	89	32.4 ¹²¹		26.0 ¹⁰⁵	54	16 02	42	25	38	25	39	72			
4	243	53.9		15.0	104	03.4 ¹²⁰		36.4 ¹⁰⁴	52		10	47	28	42	26	36	71		
5	258	53.8	-18	15.6	118	34.5 ¹²¹	+6	46.7 ¹⁰³	50	16 17	16 53	17 32	14 45	28	3 33	70			
6	273	53.7	-18	16.3	133	05.6 ¹²¹	+6	57.1 ¹⁰⁴	45	16 32	17 04	17 39	14 51	32	3 28	66			
7	288	53.6		16.9	147	36.6 ¹²⁰	+7	07.3 ¹⁰²	40		44	13	46	14	57	34	24	63	
8	303	53.5		17.6	162	07.7 ¹²¹		17.6 ¹⁰³	35	16 55	22	52	15	02	36	20	60		
9	318	53.4		18.2	176	38.7 ¹²⁰		27.8 ¹⁰²	30	17 04	30	17 58	06	39	17	58			
10	333	53.3		18.9	191	09.8 ¹²¹		37.9 ¹⁰¹	20		44	18 10	13	43	11	54			
11	348	53.2	-18	19.5	205	40.8 ¹²⁰	+7	48.0 ¹⁰¹	10 N	17 35	17 57	18 22	15 20	45	3 06	51			
12	3	53.1	-18	20.2	220	11.9 ¹²¹	+7	58.1 ¹⁰¹	0	17 48	18 10	18 35	15 26	48	3 01	48			
13	18	53.0		20.8	234	42.9 ¹²⁰	+8	08.1 ¹⁰⁰	10 S	18 02	24	18 50	33	51	2 57	45			
14	33	52.9		21.4	249	13.9 ¹²⁰		18.1 ¹⁰⁰	20		16	40	19	08	39	54	52	41	
15	48	52.8		22.1	263	44.9 ¹²⁰		28.0 ⁹⁹	30	33	18 59	30	47	58	46	38			
16	63	52.7		22.7	278	15.9 ¹²⁰		37.9 ⁹⁹	35	43	19 11	19 45	52	59	43	36			
17	78	52.6	-18	23.4	292	47.0 ¹²¹	+8	47.7 ⁹⁸	40	18 54	19 25	20 02	15 57	62	2 39	33			
18	93	52.5	-18	24.0	307	18.0 ¹²⁰	+8	57.5 ⁹⁸	45	19 08	19 42	20 25	16 03	64	2 35	30			
19	108	52.4		24.7	321	48.9 ¹¹⁹	+9	07.2 ⁹⁷	50		24	20 03	20	55	10	68	30	27	
20	123	52.3		25.3	336	19.9 ¹²⁰		16.9 ⁹⁷	52	32	14	21 11	13	70	27	26			
21	138	52.2		25.9	350	50.9 ¹²⁰		26.5 ⁹⁶	54	40	25	30	17	71	25	24			
22	153	52.1		26.6	5	21.9 ¹²⁰		36.1 ⁹⁶	56	19 50	39	21 54	21	73	22	22			
23	168	52.0		27.2	19	52.8 ¹¹⁹		45.6 ⁹⁵	58	20 01	20 56	22 30	25	76	19	20			
24	183	51.9	-18	27.9	34	23.8 ¹²⁰	+9	55.0 ⁹⁴	60 S	20 14	21 16	** **	16 31	78	2 15	18			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 20 ^h 23 ^m 6		Mag: -4.7 PMG: 15 ^h 03 ^m				Mag: +1.4 PMG: 7 ^h 42 ^m				Mag: -2.5 PMG: 3 ^h 55 ^m				Mag: +0.5 PMG: 11 ^h 19 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	53	15.6	134	11.8	-26	54.4	244	26.3	+6	37.6	301	09.5	+21	53.5	189	56.9	-14	21.0		
1	68	18.0	149	11.8		54.2	259	27.4		37.0	316	12.0		53.5	204	59.1		21.1		
2	83	20.5	164	11.8		54.1	274	28.6		36.5	331	14.5		53.5	220	01.2		21.1		
3	98	23.0	179	11.7		53.9	289	29.7		36.0	346	17.0		53.5	235	03.4		21.2		
4	113	25.4	194	11.7		53.7	304	30.9		35.5	1	19.6		53.6	250	05.6		21.3		
5	128	27.9	209	11.7	-26	53.5	319	32.1	+6	34.9	16	22.1	+21	53.6	265	07.7	-14	21.4		
6	143	30.4	224	11.6	-26	53.4	334	33.2	+6	34.4	31	24.6	+21	53.6	280	09.9	-14	21.5		
7	158	32.8	239	11.6		53.2	349	34.4		33.9	46	27.1		53.6	295	12.1		21.6		
8	173	35.3	254	11.6		53.0	4	35.5		33.4	61	29.7		53.6	310	14.2		21.7		
9	188	37.8	269	11.6		52.8	19	36.7		32.8	76	32.2		53.6	325	16.4		21.8		
10	203	40.2	284	11.5		52.6	34	37.9		32.3	91	34.7		53.6	340	18.6		21.8		
11	218	42.7	299	11.5	-26	52.5	49	39.0	+6	31.8	106	37.2	+21	53.7	355	20.7	-14	21.9		
12	233	45.1	314	11.5	-26	52.3	64	40.2	+6	31.3	121	39.8	+21	53.7	10	22.9	-14	22.0		
13	248	47.6	329	11.5		52.1	79	41.3		30.8	136	42.3		53.7	25	25.1		22.1		
14	263	50.1	344	11.4		51.9	94	42.5		30.2	151	44.8		53.7	40	27.3		22.2		
15	278	52.5	359	11.4		51.7	109	43.7		29.7	166	47.4		53.7	55	29.4		22.3		
16	293	55.0	14	11.4		51.6	124	44.8		29.2	181	49.9		53.7	70	31.6		22.4		
17	308	57.5	29	11.4	-26	51.4	139	46.0	+6	28.7	196	52.4	+21	53.7	85	33.8	-14	22.4		
18	323	59.9	44	11.4	-26	51.2	154	47.1	+6	28.1	211	54.9	+21	53.8	100	35.9	-14	22.5		
19	339	02.4	59	11.4		51.0	169	48.3		27.6	226	57.5		53.8	115	38.1		22.6		
20	354	04.9	74	11.4		50.8	184	49.5		27.1	242	00.0		53.8	130	40.3		22.7		
21	9	07.3	89	11.3		50.6	199	50.6		26.6	257	02.5		53.8	145	42.4		22.8		
22	24	09.8	104	11.3		50.4	214	51.8		26.0	272	05.1		53.8	160	44.6		22.9		
23	39	12.3	119	11.3		50.2	229	53.0		25.5	287	07.6		53.8	175	46.8		23.0		
24	54	14.7	134	11.3	-26	50.0	244	54.1	+6	25.0	302	10.1	+21	53.8	190	48.9	-14	23.0		
Dif	—		0		+2		+12		-5		+25		0		+22		-		-1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16/2 PMG: 11 ^h 44 ^m 6			Edad: 11 ^d 5 PHE { 4 ^h : 56/5 12 ^h : 56/3 20 ^h : 56/2 Rº: 49 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m												
0	183	51.9	-18	27.9	34	23.8	+9	55.0	60 N	6 17	7 09	7 58	14	45	22	5 08	77										
1	198	51.8		28.5	48	54.7 ¹¹⁹	+10	04.4	58	13	7 01	47		52	24	5 02	74										
2	213	51.7		29.1	63	25.6 ¹¹⁹		13.8	56	09	6 54	37	14	58	27	4 56	72										
3	228	51.6		29.8	77	56.6 ¹²⁰		23.1	54	05	48	28	15	03	29	51	70										
4	243	51.5		30.4	92	27.5 ¹¹⁹		32.3	52	6 01	43	20		08	31	47	68										
5	258	51.4	-18	31.0	106	58.4 ¹¹⁹	+10	41.5	50	5 58	6 37	7 13	15	13	32	4 43	67										
6	273	51.3	-18	31.7	121	29.3 ¹¹⁹	+10	50.6	45	5 50	6 26	6 58	15	23	34	4 34	64										
7	288	51.2		32.3	136	00.1 ¹¹⁸	+10	59.7	40	43	16	45		31	37	27	61										
8	303	51.0		33.0	150	31.0 ¹¹⁹	+11	08.7	35	37	08	34		38	39	20	59										
9	318	50.9		33.6	165	01.8 ¹¹⁸		17.6	30	31	6 00	25		45	40	15	57										
10	333	50.8		34.2	179	32.7 ¹¹⁹		26.5	20	19	5 46	6 09	15	56	43	4 05	54										
11	348	50.7	-18	34.8	194	03.5 ¹¹⁸	+11	35.3	10 N	5 07	5 32	5 55	16	05	47	3 57	51										
12	3	50.6	-18	35.5	208	34.3 ¹¹⁸	+11	44.1	0	4 54	5 19	5 41	16	14	49	3 49	49										
13	18	50.5		36.1	223	05.1 ¹¹⁸	+11	52.8	10 S	39	5 05	27		24	51	42	45										
14	33	50.4		36.7	237	35.9 ¹¹⁸	+12	01.4	20	4 21	4 49	5 13		33	54	33	43										
15	48	50.3		37.4	252	06.7 ¹¹⁸		09.9	30	3 59	30	4 56		45	56	24	40										
16	63	50.2		38.0	266	37.4 ¹¹⁷		18.4	35	44	18	46		51	59	19	37										
17	78	50.1	-18	38.6	281	08.2 ¹¹⁸	+12	26.9	40	3 26	4 04	4 35	16	59	60	3 12	36										
18	93	50.0	-18	39.3	295	38.9 ¹¹⁷	+12	35.2	45	3 04	3 47	4 21	17	07	63	3 05	33										
19	108	49.9		39.9	310	09.6 ¹¹⁷		43.5	50	2 34	25	4 05		18	66	2 57	30										
20	123	49.8		40.5	324	40.4 ¹¹⁸		51.7	52	2 18	15	3 57		23	67	53	28										
21	138	49.6		41.1	339	11.1 ¹¹⁷	+12	59.9	82	1 59	3 03	48		28	69	49	26										
22	153	49.5		41.8	353	41.7 ¹¹⁶	+13	08.0	81	1 34	2 49	38		34	71	44	25										
23	168	49.4		42.4	8	12.4 ¹¹⁷		16.0	80	0 59	33	27		41	73	39	23										
24	183	49.3	-18	43.0	22	43.1 ¹¹⁷	+13	24.0	80	** **	2 12	3 14	17	49	75	2 33	20										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 19 ^m 7			Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.4 PMG: 7 ^h 40 ^m			Mag: -2.5 PMG: 3 ^h 51 ^m			Mag: +0.5 PMG: 11 ^h 15 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'											
0	54	14.7	134	11.3	-26	50.0	244	54.1	+6	25.0	302	10.1	+21	53.8	190	48.9	-14	23.0									
1	69	17.2	149	11.3		49.8	259	55.3		24.5	317	12.7		53.9	205	51.1		23.1									
2	84	19.6	164	11.3		49.7	274	56.4		23.9	332	15.2		53.9	220	53.3		23.2									
3	99	22.1	179	11.3		49.5	289	57.6		23.4	347	17.7		53.9	235	55.5		23.3									
4	114	24.6	194	11.3		49.3	304	58.8		22.9	2	20.3		53.9	250	57.6		23.4									
5	129	27.0	209	11.3	-26	49.1	319	59.9	+6	22.4	17	22.8	+21	53.9	265	59.8	-14	23.5									
6	144	29.5	224	11.3	-26	48.9	335	01.1	+6	21.8	32	25.3	+21	53.9	281	02.0	-14	23.6									
7	159	32.0	239	11.3		48.7	350	02.3		21.3	47	27.9		54.0	296	04.1		23.6									
8	174	34.4	254	11.3		48.5	5	03.4		20.8	62	30.4		54.0	311	06.3		23.7									
9	189	36.9	269	11.3		48.3	20	04.6		20.3	77	32.9		54.0	326	08.5		23.8									
10	204	39.4	284	11.4		48.1	35	05.7		19.8	92	35.5		54.0	341	10.6		23.9									
11	219	41.8	299	11.4	-26	47.9	50	06.9	+6	19.2	107	38.0	+21	54.0	356	12.8	-14	24.0									
12	234	44.3	314	11.4	-26	47.7	65	08.1	+6	18.7	122	40.5	+21	54.0	11	15.0	-14	24.1									
13	249	46.8	329	11.4		47.5	80	09.2		18.2	137	43.1		54.0	26	17.2		24.2									
14	264	49.2	344	11.4		47.3	95	10.4		17.7	152	45.6		54.1	41	19.3		24.2									
15	279	51.7	359	11.4		47.1	110	11.6		17.1	167	48.2		54.1	56	21.5		24.3									
16	294	54.1	14	11.4		46.9	125	12.7		16.6	182	50.7		54.1	71	23.7		24.4									
17	309	56.6	29	11.5	-26	46.6	140	13.9	+6	16.1	197	53.2	+21	54.1	86	25.8	-14	24.5									
18	324	59.1	44	11.5	-26	46.4	155	15.1	+6	15.6	212	55.8	+21	54.1	101	28.0	-14	24.6									
19	340	01.5	59	11.5		46.2	170	16.2		15.0	227	58.3		54.1	116	30.2		24.7									
20	355	04.0	74	11.5		46.0	185	17.4		14.5	243	00.9		54.2	131	32.3		24.8									
21	10	06.5	89	11.6		45.8	200	18.6		14.0	258	03.4		54.2	146	34.5		24.9									
22	25	08.9	104	11.6		45.6	215	19.7		13.5	273	05.9		54.2	161	36.7		24.9									
23	40	11.4	119	11.6		45.4	230	20.9		13.0	288	08.5		54.2	176	38.8		25.0									
24	55	13.9	134	11.6	-26	45.2	245	22.1	+6	12.4	303	11.0	+21	54.2	191	41.0	-14	25.1									
Dif	—			0			+2			+12			-5			+25			0			+22			-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 12 ^d 5	PHE { 4 ^h : 56 ^m 0 12 ^h : 55 ^m 8 20 ^h : 55 ^m 7									
	PMG: 11 ^h 44 ^m 8					SD: 15 ^h 3			PMG: 23 ^h 15 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	183	49.3	-18 43.0	22	43.1	+13 24.0	78	60 N	15 28	16 18	17 10	15 07 28	6 25 73	
1	198	49.2	43.6	37	13.7 ¹¹⁶	31.8	78	58	40	26	14	16 31	16 71	
2	213	49.1	44.3	51	44.3 ¹¹⁶	39.6	78	56	50	33	19	25 32	08 69	
3	228	49.0	44.9	66	14.9 ¹¹⁶	47.4	78	54	15 59	39	23	32 33	6 01 67	
4	243	48.9	45.5	80	45.5 ¹¹⁶	+13 55.0	76	52	16 07	45	26	39 34	5 55 66	
5	258	48.7	-18 46.1	95	16.1 ¹¹⁶	+14 02.6	76	50	16 15	16 50	17 30	15 45 35	5 50 64	
6	273	48.6	-18 46.8	109	46.7 ¹¹⁶	+14 10.1	75	45	16 30	17 02	17 38	15 57 39	5 38 61	
7	288	48.5	47.4	124	17.2 ¹¹⁵	17.5	74	40	43	12	45	16 08 40	28 59	
8	303	48.4	48.0	138	47.8 ¹¹⁶	24.9	74	35	16 54	21	51	17 42	19 58	
9	318	48.3	48.6	153	18.3 ¹¹⁵	32.2	73	30	17 03	29	17 58	25 43	5 12 56	
10	333	48.2	49.2	167	48.8 ¹¹⁵	39.4	72	20	20	43	18 10	39 46	4 59 54	
11	348	48.1	-18 49.9	182	19.3 ¹¹⁵	+14 46.5	71	10 N	17 35	17 57	18 22	16 52 47	4 48 51	
12	3	47.9	-18 50.5	196	49.8 ¹¹⁵	+14 53.6	71	0	17 48	18 10	18 36	17 03 49	4 38 49	
13	18	47.8	51.1	211	20.3 ¹¹⁵	+15 00.5	69	10 S	18 02	25	18 51	15 51	27 47	
14	33	47.7	51.7	225	50.7 ¹¹⁴	07.4	69	20	17	18 41	19 09	27 53	16 45	
15	48	47.6	52.3	240	21.2 ¹¹⁵	14.2	68	30	35	19 01	32	41 56	4 04 41	
16	63	47.5	52.9	254	51.6 ¹¹⁴	21.0	68	35	45	13	19 47	50 56	3 56 41	
17	78	47.4	-18 53.6	269	22.0 ¹¹⁴	+15 27.6	66	40	18 57	19 27	20 05	17 59 58	3 48 38	
18	93	47.2	-18 54.2	283	52.4 ¹¹⁴	+15 34.2	66	45	19 10	19 45	20 28	18 10 60	3 38 37	
19	108	47.1	54.8	298	22.8 ¹¹⁴	40.7	65	50	27	20 07	21 00	24 62	27 33	
20	123	47.0	55.4	312	53.2 ¹¹⁴	47.1	64	52	35	18	16	30 64	21 33	
21	138	46.9	56.0	327	23.6 ¹¹⁴	53.4	63	54	44	30	21 36	37 65	15 31	
22	153	46.8	56.6	341	54.0 ¹¹⁴	+15 59.6	62	56	19 54	20 45	22 03	45 66	09 29	
23	168	46.6	57.2	356	24.3 ¹¹³	+16 05.8	62	58	20 06	21 02	22 44	18 54 68	3 02 27	
24	183	46.5	-18 57.8	10	54.6 ¹¹³	+16 11.9	61	60 S	20 20	21 23	** **	19 04 70	2 53 25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 15 ^m 7		Mag: -4.7 PMG: 15 ^h 03 ^m		Mag: +1.4 PMG: 7 ^h 38 ^m		Mag: -2.5 PMG: 3 ^h 47 ^m		Mag: +0.5 PMG: 11 ^h 12 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	55	13.9	134	11.6	-26 45.2	245 22.1	+6 12.4	303 11.0	+21 54.2	191 41.0	-14 25.1
1	70	16.3	149	11.7	45.0	260 23.2	11.9	318 13.6	54.2	206 43.2	25.2
2	85	18.8	164	11.7	44.7	275 24.4	11.4	333 16.1	54.3	221 45.4	25.3
3	100	21.2	179	11.7	44.5	290 25.6	10.9	348 18.6	54.3	236 47.5	25.4
4	115	23.7	194	11.8	44.3	305 26.7	10.3	3	21.2	54.3	251 49.7
5	130	26.2	209	11.8	-26 44.1	320 27.9	+6 09.8	18 23.7	+21 54.3	266 51.9	-14 25.5
6	145	28.6	224	11.8	-26 43.9	335 29.1	+6 09.3	33 26.3	+21 54.3	281 54.0	-14 25.6
7	160	31.1	239	11.9	43.7	350 30.2	08.8	48 28.8	54.3	296 56.2	25.7
8	175	33.6	254	11.9	43.4	5 31.4	08.2	63 31.4	54.4	311 58.4	25.8
9	190	36.0	269	12.0	43.2	20 32.6	07.7	78 33.9	54.4	327 00.5	25.9
10	205	38.5	284	12.0	43.0	35 33.7	07.2	93 36.4	54.4	342 02.7	26.0
11	220	41.0	299	12.1	-26 42.8	50 34.9	+6 06.7	108 39.0	+21 54.4	357 04.9	-14 26.0
12	235	43.4	314	12.1	-26 42.5	65 36.1	+6 06.2	123 41.5	+21 54.4	12 07.1	-14 26.1
13	250	45.9	329	12.2	42.3	80 37.3	05.6	138 44.1	54.4	27 09.2	26.2
14	265	48.4	344	12.2	42.1	95 38.4	05.1	153 46.6	54.5	42 11.4	26.3
15	280	50.8	359	12.3	41.9	110 39.6	04.6	168 49.2	54.5	57 13.6	26.4
16	295	53.3	14 12.3	41.6	41.6	125 40.8	04.1	183 51.7	54.5	72 15.7	26.5
17	310	55.7	29 12.4	-26 41.4	41.4	140 41.9	+6 03.5	198 54.3	+21 54.5	87 17.9	-14 26.6
18	325	58.2	44 12.4	-26 41.2	41.2	155 43.1	+6 03.0	213 56.8	+21 54.5	102 20.1	-14 26.6
19	341	00.7	59 12.5	41.0	41.0	170 44.3	02.5	228 59.4	54.5	117 22.2	26.7
20	356	03.1	74 12.5	40.7	40.7	185 45.4	02.0	244 01.9	54.6	132 24.4	26.8
21	11	05.6	89 12.6	40.5	40.5	200 46.6	01.5	259 04.5	54.6	147 26.6	26.9
22	26	08.1	104 12.7	40.3	40.3	215 47.8	00.9	274 07.0	54.6	162 28.8	27.0
23	41	10.5	119 12.7	40.0	40.0	230 49.0	+6 00.4	289 09.6	54.6	177 30.9	27.1
24	56	13.0	134 12.8	-26 39.8	39.8	245 50.1	+5 59.9	304 12.1	+21 54.6	192 33.1	-14 27.2
Dif	—		0	+2		+12	-5	+25	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 45 ^m 0			Edad: 13 ^d 5 PHE { 4 ^h : 55/5 12 ^h : 55/4 20 ^h : 55/2 R°: ***														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	46.5	-18	57.8	10	54.6	+16	11.9	60 N	6	21	7	13	8	03	15	35	
1	198	46.4		58.5	25	25.0 ¹¹⁴		17.9	60	58	16	7	05	7	51	47	36	
2	213	46.3		59.1	39	55.3 ¹¹³		23.8	59	56	12	6	58	41	15	57	38	
3	228	46.2	-18	59.7	54	25.6 ¹¹³		29.6	58	54	08		52	32	16	05	40	
4	243	46.0	-19	00.3	68	55.9 ¹¹³		35.3	57	52	04		46	23	13	40	7	
5	258	45.9	-19	00.9	83	26.1 ¹¹²	+16	41.0	57	50	6	01	6	40	7	16	16	
6	273	45.8	-19	01.5	97	56.4 ¹¹³	+16	46.5	55	45	5	53	6	28	7	00	16	
7	288	45.7		02.1	112	26.7 ¹¹³		52.0	55	40	45		18	6	47	48	44	
8	303	45.6		02.7	126	56.9 ¹¹²	+16	57.4	54	35	39		09		36	16	59	
9	318	45.4		03.3	141	27.2 ¹¹³	+17	02.7	53	30	32		6	01	27	17	08	
10	333	45.3		03.9	155	57.4 ¹¹²		07.9	52	20	20		5	47	6	10	25	
11	348	45.2	-19	04.5	170	27.6 ¹¹²	+17	13.0	51	10 N	5	08	5	33	5	55	17	
12	3	45.1	-19	05.1	184	57.8 ¹¹²	+17	18.1	51	0	4	54	5	20	5	41	17	
13	18	44.9		05.7	199	28.0 ¹¹²		23.0	49	10 S	39		5	05	27	18	06	
14	33	44.8		06.3	213	58.2 ¹¹²		27.9	49	20	4	21	4	49	5	12	20	
15	48	44.7		06.9	228	28.4 ¹¹²		32.6	47	30	3	57	29		4	55	37	
16	63	44.6		07.5	242	58.6 ¹¹²		37.3	47	35	42		17		45	46	54	
17	78	44.4	-19	08.1	257	28.8 ¹¹²	+17	41.9	46	40	3	24	4	02	4	33	18	
18	93	44.3	-19	08.7	271	59.0 ¹¹²	+17	46.4	45	45	3	01	3	45	4	19	19	
19	108	44.2		09.3	286	29.1 ¹¹¹		50.8	44	50	2	30	22		4	02	26	
20	123	44.1		09.9	300	59.3 ¹¹²		55.1	43	52	2	13	3	12	3	54	34	
21	138	43.9		10.5	315	29.4 ¹¹¹	+17	59.3	42	54	1	53	2	59		45	42	
22	153	43.8		11.1	329	59.6 ¹¹²	+18	03.5	42	56	1	27		45	35	19	51	
23	168	43.7		11.7	344	29.8 ¹¹²		07.5	40	58	0	46	27		23	20	02	
24	183	43.5	-19	12.3	358	59.9 ¹¹¹	+18	11.5	40	60 S	** *	2	06	3	10	20	14	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 11 ^m 8			Mag: -4.7 PMG: 15 ^h 03 ^m			Mag: +1.4 PMG: 7 ^h 36 ^m			Mag: -2.5 PMG: 3 ^h 43 ^m			Mag: +0.5 PMG: 11 ^h 08 ^m					
	hG ☿		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	56	13.0	134	12.8	-26	39.8	245	50.1	+5	59.9	304	12.1	+21	54.6	192	33.1		
1	71	15.5	149	12.9		39.6	260	51.3		59.4	319	14.7		54.6	207	35.3		
2	86	17.9	164	12.9		39.3	275	52.5		58.8	334	17.2		54.7	222	37.4		
3	101	20.4	179	13.0		39.1	290	53.6		58.3	349	19.8		54.7	237	39.6		
4	116	22.9	194	13.1		38.8	305	54.8		57.8	4	22.3		54.7	252	41.8		
5	131	25.3	209	13.1	-26	38.6	320	56.0	+5	57.3	19	24.9	+21	54.7	267	43.9		
6	146	27.8	224	13.2	-26	38.4	335	57.2	+5	56.8	34	27.4	+21	54.7	282	46.1		
7	161	30.2	239	13.3		38.1	350	58.3		56.2	49	30.0		54.8	297	48.3		
8	176	32.7	254	13.4		37.9	5	59.5		55.7	64	32.5		54.8	312	50.5		
9	191	35.2	269	13.5		37.6	21	00.7		55.2	79	35.1		54.8	327	52.6		
10	206	37.6	284	13.5		37.4	36	01.8		54.7	94	37.6		54.8	342	54.8		
11	221	40.1	299	13.6	-26	37.2	51	03.0	+5	54.1	109	40.2	+21	54.8	357	57.0		
12	236	42.6	314	13.7	-26	36.9	66	04.2	+5	53.6	124	42.7	+21	54.8	12	59.1		
13	251	45.0	329	13.8		36.7	81	05.4		53.1	139	45.3		54.9	28	01.3		
14	266	47.5	344	13.9		36.4	96	06.5		52.6	154	47.8		54.9	43	03.5		
15	281	50.0	359	14.0		36.2	111	07.7		52.1	169	50.4		54.9	58	05.6		
16	296	52.4	14	14.1		35.9	126	08.9		51.5	184	53.0		54.9	73	07.8		
17	311	54.9	29	14.2	-26	35.7	141	10.1	+5	51.0	199	55.5	+21	54.9	88	10.0		
18	326	57.3	44	14.2	-26	35.4	156	11.2	+5	50.5	214	58.1	+21	55.0	103	12.2		
19	341	59.8	59	14.3		35.2	171	12.4		50.0	230	00.6		55.0	118	14.3		
20	357	02.3	74	14.4		34.9	186	13.6		49.4	245	03.2		55.0	133	16.5		
21	12	04.7	89	14.5		34.7	201	14.8		48.9	260	05.7		55.0	148	18.7		
22	27	07.2	104	14.6		34.4	216	15.9		48.4	275	08.3		55.0	163	20.8		
23	42	09.7	119	14.7		34.2	231	17.1		47.9	290	10.8		55.0	178	23.0		
24	57	12.1	134	14.8	-26	33.9	246	18.3	+5	47.4	305	13.4	+21	55.1	193	25.2		
Dif	—			+1			+12			-5			+26			0		
				+2									+22			-1		

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°2 PMG: 11 ^h 45 ^m 2				Edad: 14 ^d 5 PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'8 PMG: 0 ^h 04 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	43.5	-19	12.3	358	59.9	+18	11.5	60 N	15 24	16 14	17 06	16 10 45		8 44 57			
1	198	43.4		12.9	13	30.0 ¹¹¹		15.3 ³⁸	58	36	22	11	23 45		31 57			
2	213	43.3		13.5	28	00.2 ¹¹²		19.1 ³⁸	56	47	30	16	35 45		20 56			
3	228	43.1		14.1	42	30.3 ¹¹¹		22.7 ³⁶	54	15 56	37	20	45 45		10 56			
4	243	43.0		14.7	57	00.4 ¹¹¹		26.3 ³⁶	52	16 05	43	24	16 53 46		8 02 54			
5	258	42.9	-19	15.3	71	30.6 ¹¹²	+18	29.8 ³⁵	50	16 12	16 48	17 28	17 01 47		7 54 54			
6	273	42.8	-19	15.9	86	00.7 ¹¹¹	+18	33.2 ³⁴	45	16 28	17 00	17 36	17 18 47		7 37 54			
7	288	42.6		16.5	100	30.8 ¹¹¹		36.5 ³³	40	41	11	44	32 47		24 53			
8	303	42.5		17.1	115	01.0 ¹¹²		39.7 ³²	35	16 53	20	50	44 47		12 53			
9	318	42.4		17.7	129	31.1 ¹¹¹		42.8 ³¹	30	17 03	28	17 57	17 54 48		7 02 52			
10	333	42.2		18.3	144	01.2 ¹¹¹		45.8 ³⁰	20	20	43	18 10	18 12 48		6 45 51			
11	348	42.1	-19	18.9	158	31.4 ¹¹²	+18	48.7 ²⁹	10 N	17 35	17 57	18 22	18 27 49		6 30 50			
12	3	42.0	-19	19.5	173	01.5 ¹¹¹	+18	51.5 ²⁸	0	17 49	18 11	18 36	18 42 49		6 16 49			
13	18	41.8		20.0	187	31.7 ¹¹²		54.3 ²⁸	10 S	18 03	25	18 52	18 56 50		6 02 49			
14	33	41.7		20.6	202	01.8 ¹¹¹		56.9 ²⁶	20	18	18 42	19 10	19 12 49		5 47 48			
15	48	41.6		21.2	216	32.0 ¹¹²	+18	59.4 ²⁵	30	36	19 03	34	30 50		30 47			
16	63	41.4		21.8	231	02.1 ¹¹¹	+19	01.9 ²⁵	35	47	15	19 49	40 50		20 46			
17	78	41.3	-19	22.4	245	32.3 ¹¹²	+19	04.2 ²³	40	18 59	19 30	20 08	19 52 51		5 08 46			
18	93	41.2	-19	23.0	260	02.4 ¹¹¹	+19	06.5 ²³	45	19 13	19 48	20 32	20 06 51		4 55 45			
19	108	41.0		23.6	274	32.6 ¹¹²		08.6 ²¹	50	31	20 11	21 04	23 51		39 43			
20	123	40.9		24.1	289	02.8 ¹¹²		10.7 ²¹	52	39	22	21	31 52		31 43			
21	138	40.8		24.7	303	32.9 ¹¹¹		12.7 ²⁰	54	48	35	21 43	41 51		22 43			
22	153	40.6		25.3	318	03.1 ¹¹²		14.6 ¹⁹	56	19 59	20 50	22 11	20 51 51		13 42			
23	168	40.5		25.9	332	33.3 ¹¹²		16.3 ¹⁷	58	20 11	21 08	23 00	21 02 52		4 02 41			
24	183	40.3	-19	26.5	347	03.5 ¹¹²	+19	18.0 ¹⁷	60 S	20 25	21 31	** **	21 16 52		3 50 39			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 07 ^m 9		Mag: -4.7 PMG: 15 ^h 03 ^m				Mag: +1.4 PMG: 7 ^h 34 ^m				Mag: -2.5 PMG: 3 ^h 38 ^m				Mag: +0.5 PMG: 11 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	12.1	134	14.8	-26	33.9	246	18.3	+5	47.4	305	13.4	+21	55.1	193	25.2	-14	29.2
1	72	14.6	149	15.0		33.7	261	19.5		46.8	320	16.0		55.1	208	27.4		29.3
2	87	17.1	164	15.1		33.4	276	20.6		46.3	335	18.5		55.1	223	29.5		29.4
3	102	19.5	179	15.2		33.2	291	21.8		45.8	350	21.1		55.1	238	31.7		29.5
4	117	22.0	194	15.3		32.9	306	23.0		45.3	5	23.6		55.1	253	33.9		29.5
5	132	24.5	209	15.4	-26	32.6	321	24.2	+5	44.8	20	26.2	+21	55.2	268	36.0	-14	29.6
6	147	26.9	224	15.5	-26	32.4	336	25.3	+5	44.2	35	28.8	+21	55.2	283	38.2	-14	29.7
7	162	29.4	239	15.6		32.1	351	26.5		43.7	50	31.3		55.2	298	40.4		29.8
8	177	31.8	254	15.7		31.9	6	27.7		43.2	65	33.9		55.2	313	42.5		29.9
9	192	34.3	269	15.8		31.6	21	28.9		42.7	80	36.5		55.2	328	44.7		30.0
10	207	36.8	284	16.0		31.3	36	30.1		42.1	95	39.0		55.3	343	46.9		30.0
11	222	39.2	299	16.1	-26	31.1	51	31.2	+5	41.6	110	41.6	+21	55.3	358	49.1	-14	30.1
12	237	41.7	314	16.2	-26	30.8	66	32.4	+5	41.1	125	44.1	+21	55.3	13	51.2	-14	30.2
13	252	44.2	329	16.3		30.5	81	33.6		40.6	140	46.7		55.3	28	53.4		30.3
14	267	46.6	344	16.5		30.3	96	34.8		40.1	155	49.3		55.3	43	55.6		30.4
15	282	49.1	359	16.6		30.0	111	35.9		39.5	170	51.8		55.4	58	57.7		30.5
16	297	51.6	14	16.7		29.7	126	37.1		39.0	185	54.4		55.4	73	59.9		30.6
17	312	54.0	29	16.9	-26	29.5	141	38.3	+5	38.5	200	57.0	+21	55.4	89	02.1	-14	30.6
18	327	56.5	44	17.0	-26	29.2	156	39.5	+5	38.0	215	59.5	+21	55.4	104	04.3	-14	30.7
19	342	59.0	59	17.1		28.9	171	40.7		37.5	231	02.1		55.4	119	06.4		30.8
20	358	01.4	74	17.3		28.7	186	41.8		36.9	246	04.7		55.5	134	08.6		30.9
21	13	03.9	89	17.4		28.4	201	43.0		36.4	261	07.2		55.5	149	10.8		31.0
22	28	06.3	104	17.5		28.1	216	44.2		35.9	276	09.8		55.5	164	12.9		31.1
23	43	08.8	119	17.7		27.8	231	45.4		35.4	291	12.4		55.5	179	15.1		31.1
24	58	11.3	134	17.8	-26	27.6	246	46.6	+5	34.9	306	14.9	+21	55.5	194	17.3	-14	31.2
Dif	—		+1		+3		+12		-5		+26		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 15 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5												
	PMG: 11 ^h 45 ^m 4			SD: 14'9 PMG: 0 ^h 54 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	40.3	-19 26.5	347	03.5	+19 18.0	16	60 N	6 25	7 18	8 08	16 55	53	9 41	47	
1	198	40.2	27.1	1	33.7 ¹¹²	19.6	16	58	20	09	7 56	17 08	53	28	47	
2	213	40.1	27.6	16	03.9 ¹¹²	21.1	15	56	15	7 02	45	20 52		16	47	
3	228	39.9	28.2	30	34.2 ¹¹³	22.5	14	54	11	6 55	35	30 52		9 06	47	
4	243	39.8	28.8	45	04.4 ¹¹²	23.8	13	52	07	49	27	39 52		8 56	48	
5	258	39.6	-19 29.4	59	34.7 ¹¹³	+19 25.0	12	50	6 03	6 43	7 19	17 48	51	8 48	48	
6	273	39.5	-19 30.0	74	04.9 ¹¹²	+19 26.1	11	45	5 55	6 31	7 03	18 05	51	8 31	48	
7	288	39.4	30.5	88	35.2 ¹¹³	27.1	10	40	47	20	6 50	19 51		17	48	
8	303	39.2	31.1	103	05.5 ¹¹³	28.1	10	35	40	11	38	31 51		8 05	48	
9	318	39.1	31.7	117	35.8 ¹¹³	28.9	8	30	34	6 03	28	18 42	50	7 54	49	
10	333	38.9	32.3	132	06.1 ¹¹³	29.6	7	20	21	5 48	6 11	19 00	49	36	49	
11	348	38.8	-19 32.8	146	36.4 ¹¹³	+19 30.3	7	10 N	5 08	5 34	5 56	19 16	49	7 20	49	
12	3	38.7	-19 33.4	161	06.8 ¹¹⁴	+19 30.8	5	0	4 54	5 20	5 42	19 31	48	7 05	49	
13	18	38.5	34.0	175	37.1 ¹¹³	31.2	4	10 S	39	5 05	27	19 46	48	6 51	49	
14	33	38.4	34.6	190	07.5 ¹¹⁴	31.6	4	20	4 20	4 48	5 12	20 01	48	35	49	
15	48	38.2	35.1	204	37.9 ¹¹⁴	31.9	3	30	3 56	28	4 54	20 46		17	49	
16	63	38.1	35.7	219	08.3 ¹¹⁴	32.0	1	35	41	15	44	30 47		6 06	49	
17	78	38.0	-19 36.3	233	38.7 ¹¹⁴	+19 32.1	1	40	3 22	4 01	4 31	20 43	45	5 54	49	
18	93	37.8	-19 36.9	248	09.1 ¹¹⁴	+19 32.1	0	45	2 58	3 43	4 17	20 57	45	5 40	49	
19	108	37.7	37.4	262	39.6 ¹¹⁵	32.0	1	50	26	20	4 00	21 14	45	22	49	
20	123	37.5	38.0	277	10.1 ¹¹⁵	31.7	3	52	2 09	3 08	3 51	23 44		14	49	
21	138	37.4	38.6	291	40.5 ¹¹⁴	31.4	3	54	1 47	2 55	42	32 44		5 05	49	
22	153	37.2	39.1	306	11.1 ¹¹⁶	31.0	4	56	1 19	40	31	42 43		4 55	49	
23	168	37.1	39.7	320	41.6 ¹¹⁵	30.6	4	58	0 30	2 22	19	21 54	43	43	49	
24	183	36.9	-19 40.3	335	12.1 ¹¹⁵	+19 30.0	6	60 S	** **	1 59	3 05	22 08	42	4 29	49	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 20 ^h 04 ^m 0		Mag: -4.7 PMG: 15 ^h 03 ^m		Mag: +1.3 PMG: 7 ^h 32 ^m		Mag: -2.5 PMG: 3 ^h 34 ^m		Mag: +0.5 PMG: 11 ^h 01 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	58	11.3	134	17.8	-26 27.6	246 46.6	+5 34.9	306 14.9	+21 55.5	194 17.3	-14 31.2
1	73	13.7	149	18.0	27.3	261 47.7	34.3	321 17.5	55.6	209 19.4	31.3
2	88	16.2	164	18.1	27.0	276 48.9	33.8	336 20.1	55.6	224 21.6	31.4
3	103	18.7	179	18.3	26.7	291 50.1	33.3	351 22.6	55.6	239 23.8	31.5
4	118	21.1	194	18.4	26.5	306 51.3	32.8	6 25.2	55.6	254 26.0	31.6
5	133	23.6	209	18.6	-26 26.2	321 52.5	+5 32.2	21 27.8	+21 55.6	269 28.1	-14 31.7
6	148	26.1	224	18.7	-26 25.9	336 53.6	+5 31.7	36 30.3	+21 55.7	284 30.3	-14 31.7
7	163	28.5	239	18.9	25.6	351 54.8	31.2	51 32.9	55.7	299 32.5	31.8
8	178	31.0	254	19.0	25.3	6 56.0	30.7	66 35.5	55.7	314 34.6	31.9
9	193	33.5	269	19.2	25.1	21 57.2	30.2	81 38.0	55.7	329 36.8	32.0
10	208	35.9	284	19.3	24.8	36 58.4	29.6	96 40.6	55.7	344 39.0	32.1
11	223	38.4	299	19.5	-26 24.5	51 59.6	+5 29.1	111 43.2	+21 55.8	359 41.2	-14 32.2
12	238	40.8	314	19.7	-26 24.2	67 00.7	+5 28.6	126 45.8	+21 55.8	14 43.3	-14 32.2
13	253	43.3	329	19.8	23.9	82 01.9	28.1	141 48.3	55.8	29 45.5	32.3
14	268	45.8	344	20.0	23.6	97 03.1	27.6	156 50.9	55.8	44 47.7	32.4
15	283	48.2	359	20.2	23.4	112 04.3	27.0	171 53.5	55.8	59 49.8	32.5
16	298	50.7	14 20.3	23.1	127 05.5	26.5	186 56.0	55.9	55.9	74 52.0	32.6
17	313	53.2	29 20.5	-26 22.8	142 06.6	+5 26.0	201 58.6	+21 55.9		89 54.2	-14 32.7
18	328	55.6	44 20.7	-26 22.5	157 07.8	+5 25.5	217 01.2	+21 55.9		104 56.4	-14 32.7
19	343	58.1	59 20.9	22.2	172 09.0	25.0	232 03.8	55.9		119 58.5	32.8
20	359	00.6	74 21.0	21.9	187 10.2	24.4	247 06.3	55.9		135 00.7	32.9
21	14	03.0	89 21.2	21.6	202 11.4	23.9	262 08.9	56.0		150 02.9	33.0
22	29	05.5	104 21.4	21.3	217 12.6	23.4	277 11.5	56.0		165 05.0	33.1
23	44	07.9	119 21.6	21.0	232 13.8	22.9	292 14.1	56.0		180 07.2	33.2
24	59	10.4	134 21.8	-26 20.7	247 14.9	+5 22.4	307 16.6	+21 56.0		195 09.4	-14 33.2

Dif	—	+2	+3	+12	-5	+26	0	+22	-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 45 ^m 7			Edad: 16 ^d 5 PHE { SD: 14 ^h 8 PMG: 1 ^h 43 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	183	36.9	−19	40.3	335	12.1	+19	30.0	60 N	15 20	16 11	17 04	17 48 60	10 28 37
1	198	36.8		40.8	349	42.7 ¹¹⁶		29.3	58	33	20	09	18 01 59	15 38
2	213	36.6		41.4	4	13.3 ¹¹⁶		28.5	56	44	27	14	12 58	10 03 40
3	228	36.5		42.0	18	43.9 ¹¹⁶		27.7	54	15 54	34	18	22 57	9 53 40
4	243	36.4		42.5	33	14.5 ¹¹⁶		26.7	52	16 02	40	22	31 56	44 41
5	258	36.2	−19	43.1	47	45.2 ¹¹⁷	+19	25.7	50	16 10	16 46	17 26	18 39 56	9 36 42
6	273	36.1	−19	43.7	62	15.9 ¹¹⁷	+19	24.5	45	16 27	16 59	17 35	18 56 54	9 19 43
7	288	35.9		44.2	76	46.6 ¹¹⁷		23.3	40	17 09	42		19 10 53	9 05 43
8	303	35.8		44.8	91	17.3 ¹¹⁷		22.0	35	16 52	19	50	22 51	8 53 44
9	318	35.6		45.4	105	48.0 ¹¹⁷		20.6	30	17 02	27	17 56	32 51	43 45
10	333	35.5		45.9	120	18.8 ¹¹⁸		19.1	20	19	43	18 10	19 49 50	25 46
11	348	35.3	−19	46.5	134	49.6 ¹¹⁸	+19	17.5	10 N	17 35	17 57	18 23	20 05 48	8 09 47
12	3	35.2	−19	47.0	149	20.4 ¹¹⁸	+19	15.8	0	17 49	18 11	18 37	20 19 47	7 54 48
13	18	35.0		47.6	163	51.3 ¹¹⁹		14.0	10 S	18 04	26	18 53	34 46	40 48
14	33	34.9		48.2	178	22.2 ¹¹⁹		12.2	20	20	18 44	19 12	20 49 45	24 49
15	48	34.7		48.7	192	53.0 ¹¹⁸		10.2	20	38	19 04	36	21 06 44	7 06 50
16	63	34.6		49.3	207	24.0 ¹²⁰		08.2	35	18 49	17	19 52	17 42	6 55 51
17	78	34.4	−19	49.8	221	54.9 ¹¹⁹	+19	06.1	40	19 01	19 32	20 11	21 28 42	6 43 52
18	93	34.3	−19	50.4	236	25.9 ¹²⁰	+19	03.9	45	19 16	19 51	20 35	21 42 40	6 29 52
19	108	34.1		50.9	250	56.9 ¹²⁰	+19	01.6	50	34	20 14	21 09	21 59 38	11 54
20	123	33.9		51.5	265	27.9 ¹²⁰	+18	59.2	52	42	26	27	22 07 37	6 03 54
21	138	33.8		52.1	279	59.0 ¹²¹		56.7	54	19 52	39	21 49	16 36	5 54 55
22	153	33.6		52.6	294	30.1 ¹²¹		54.1	56	20 03	20 55	22 20	25 36	44 55
23	168	33.5		53.2	309	01.2 ¹²¹		51.5	58	15	21 14	23 26	37 34	32 56
24	183	33.3	−19	53.7	323	32.4 ¹²²	+18	48.7	60 S	20 30	21 38	** **	22 50 32	5 18 57
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 20 ^h 00 ^m 0		Mag: −4.8 PMG: 15 ^h 02 ^m			Mag: +1.3 PMG: 7 ^h 30 ^m			Mag: −2.6 PMG: 3 ^h 30 ^m			Mag: +0.5 PMG: 10 ^h 58 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	59	10.4	134	21.8	−26	20.7	247	14.9	+5	22.4	307	16.6	+21	56.0
1	74	12.9	149	21.9		20.4	262	16.1		21.8	322	19.2		56.0
2	89	15.3	164	22.1		20.2	277	17.3		21.3	337	21.8		56.1
3	104	17.8	179	22.3		19.9	292	18.5		20.8	352	24.4		56.1
4	119	20.3	194	22.5		19.6	307	19.7		20.3	7	26.9		56.1
5	134	22.7	209	22.7	−26	19.3	322	20.9	+5	19.8	22	29.5	+21	56.1
6	149	25.2	224	22.9	−26	19.0	337	22.0	+5	19.2	37	32.1	+21	56.2
7	164	27.7	239	23.1		18.7	352	23.2		18.7	52	34.7		56.2
8	179	30.1	254	23.3		18.4	7	24.4		18.2	67	37.3		56.2
9	194	32.6	269	23.5		18.1	22	25.6		17.7	82	39.8		56.2
10	209	35.1	284	23.7		17.8	37	26.8		17.2	97	42.4		56.2
11	224	37.5	299	23.9	−26	17.5	52	28.0	+5	16.7	112	45.0	+21	56.3
12	239	40.0	314	24.1	−26	17.2	67	29.2	+5	16.1	127	47.6	+21	56.3
13	254	42.4	329	24.3		16.9	82	30.4		15.6	142	50.2		56.3
14	269	44.9	344	24.5		16.6	97	31.5		15.1	157	52.7		56.3
15	284	47.4	359	24.7		16.2	112	32.7		14.6	172	55.3		56.3
16	299	49.8	14	24.9		15.9	127	33.9		14.1	187	57.9		56.4
17	314	52.3	29	25.1	−26	15.6	142	35.1	+5	13.5	203	00.5	+21	56.4
18	329	54.8	44	25.4	−26	15.3	157	36.3	+5	13.0	218	03.1	+21	56.4
19	344	57.2	59	25.6		15.0	172	37.5		12.5	233	05.7		56.4
20	359	59.7	74	25.8		14.7	187	38.7		12.0	248	08.2		56.5
21	15	02.2	89	26.0		14.4	202	39.9		11.5	263	10.8		56.5
22	30	04.6	104	26.2		14.1	217	41.0		10.9	278	13.4		56.5
23	45	07.1	119	26.5		13.8	232	42.2		10.4	293	16.0		56.5
24	60	09.6	134	26.7	−26	13.5	247	43.4	+5	09.9	308	18.6	+21	56.5
Dif	—		+2		+3		+12		−5		+26		0	
													+22	−1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 45 ^m 9			Edad: 17 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1 PMG: 2 ^h 31 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	33.3	-19	53.7	323	32.4	+18	48.7	60 N	6	29	7	22	8	13	18	48
1	198	33.2		54.3	338	03.5		45.9	58		24		13	8	00	19	00
2	213	33.0		54.8	352	34.7		43.0	56		19	7	05	7	49	10	63
3	228	32.9		55.4	7	06.0		40.0	54		14	6	58	39		19	61
4	243	32.7		55.9	21	37.2		36.9	52		10		52	30		27	60
5	258	32.6	-19	56.5	36	08.5	+18	33.8	50	6	06	6	46	7	22	19	35
6	273	32.4	-19	57.0	50	39.8	+18	30.5	45	5	57	6	33	7	06	19	50
7	288	32.2		57.6	65	11.2		27.2	40	49		23		6	52	20	03
8	303	32.1		58.1	79	42.6		23.8	35	42		13		40		13	54
9	318	31.9		58.7	94	14.0		20.3	30	35	6	04		30		23	52
10	333	31.8		59.2	108	45.4		16.7	20	22	5	49	6	12		39	50
11	348	31.6	-19	59.8	123	16.9	+18	13.1	10 N	5	09	5	35	5	57	20	53
12	3	31.4	-20	00.3	137	48.4	+18	09.3	0	4	55	5	20	5	42	21	06
13	18	31.3		00.8	152	20.0		05.5	10 S	39		5	05	28		20	44
14	33	31.1		01.4	166	51.5	+18	01.6	20	4	20	4	48	5	12	34	42
15	48	31.0		01.9	181	23.1	+17	57.6	30	3	55	27		4	53	50	40
16	63	30.8		02.5	195	54.8		53.5	35	39	4	14		42		21	59
17	78	30.7	-20	03.0	210	26.4	+17	49.4	40	3	20	3	59	4	30	22	10
18	93	30.5	-20	03.6	224	58.1	+17	45.2	45	2	56	3	41	4	15	22	22
19	108	30.3		04.1	239	29.8		40.9	50	22		17		3	57	37	33
20	123	30.2		04.6	254	01.6		36.5	52	2	04	3	05	49		44	32
21	138	30.0		05.2	268	33.4		32.0	54	1	42	2	52	39		22	52
22	153	29.8		05.7	283	05.2		27.5	56	1	11		36	28		23	01
23	168	29.7		06.3	297	37.1		22.9	58	0	05	2	17	16		11	27
24	183	29.5	-20	06.8	312	08.9	+17	18.2	60 S	**	**	1	53	3	01	23	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 56 ^m 1		Mag: -4.8 PMG: 15 ^h 02 ^m		Mag: +1.3 PMG: 7 ^h 29 ^m		Mag: -2.6 PMG: 3 ^h 26 ^m		Mag: +0.6 PMG: 10 ^h 54 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	60	09.6	134	26.7	-26	13.5	247	43.4	+5	09.9
1	75	12.0	149	26.9		13.1	262	44.6		09.4
2	90	14.5	164	27.1		12.8	277	45.8		08.9
3	105	16.9	179	27.4		12.5	292	47.0		08.3
4	120	19.4	194	27.6		12.2	307	48.2		07.8
5	135	21.9	209	27.8	-26	11.9	322	49.4	+5	07.3
6	150	24.3	224	28.1	-26	11.6	337	50.6	+5	06.8
7	165	26.8	239	28.3		11.3	352	51.8		06.3
8	180	29.3	254	28.6		10.9	7	52.9		05.8
9	195	31.7	269	28.8		10.6	22	54.1		05.2
10	210	34.2	284	29.1		10.3	37	55.3		04.7
11	225	36.7	299	29.3	-26	10.0	52	56.5	+5	04.2
12	240	39.1	314	29.5	-26	09.7	67	57.7	+5	03.7
13	255	41.6	329	29.8		09.3	82	58.9		03.2
14	270	44.1	344	30.0		09.0	98	00.1		02.6
15	285	46.5	359	30.3		08.7	113	01.3		02.1
16	300	49.0	14	30.6		08.4	128	02.5		01.6
17	315	51.4	29	30.8	-26	08.0	143	03.7	+5	01.1
18	330	53.9	44	31.1	-26	07.7	158	04.9	+5	00.6
19	345	56.4	59	31.3		07.4	173	06.1	+5	00.1
20	0	58.8	74	31.6		07.1	188	07.2	+4	59.5
21	16	01.3	89	31.9		06.7	203	08.4		59.0
22	31	03.8	104	32.1		06.4	218	09.6		58.5
23	46	06.2	119	32.4		06.1	233	10.8		58.0
24	61	08.7	134	32.7	-26	05.7	248	12.0	+4	57.5
Dif	—		+2 +3		+12 -5		+26 0		+22 -1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 18 ^d 5 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 1					Civil			Hora		Hora	
	PMG: 11 ^h 46 ^m 2			PMG: 3 ^h 18 ^m R°: 45 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	183	29.5	-20 06.8	312	08.9	+17 18.2	48	60 N	15 16	16 08	17 01	19 54 70	11 34 23		
1	198	29.4	07.3	326	40.9 ¹³⁰	13.4	48	58	30	17	06	20 04 67	24 24	24	
2	213	29.2	07.9	341	12.8 ¹²⁹	08.6	48	56	41	25	11	13 65	15 26		
3	228	29.0	08.4	355	44.8 ¹³⁰	+17 03.7	49	54	15 51	32	16	20 64	07 28		
4	243	28.9	08.9	10	16.8 ¹³⁰	+16 58.7	50	52	16 00	38	20	27 62	11 00 29		
5	258	28.7	-20 09.5	24	48.8 ¹³⁰	+16 53.6	51	50	16 08	16 44	17 24	20 33 61	10 53 31		
6	273	28.5	-20 10.0	39	20.9 ¹³¹	+16 48.5	51	45	16 25	16 57	17 33	20 46 58	10 39 33		
7	288	28.4	10.5	53	53.0 ¹³¹	43.3	52	40	39	17 08	42	20 57 56	28 35		
8	303	28.2	11.1	68	25.1 ¹³¹	38.0	53	35	16 51	18	49	21 07 53	18 37		
9	318	28.0	11.6	82	57.3 ¹³²	32.6	54	30	17 01	27	17 56	15 52	10 09 39		
10	333	27.9	12.1	97	29.5 ¹³²	27.2	54	20	19	43	18 10	29 49	9 54 41		
11	348	27.7	-20 12.7	112	01.7 ¹³²	+16 21.7	55	10 N	17 35	17 57	18 23	21 41 47	9 41 43		
12	3	27.5	-20 13.2	126	34.0 ¹³³	+16 16.1	56	0	17 50	18 12	18 37	21 52 45	9 29 45		
13	18	27.4	13.7	141	06.3 ¹³³	10.5	56	10 S	18 05	27	18 54	22 04 42	16 48		
14	33	27.2	14.3	155	38.6 ¹³³	+16 04.8	57	20	21	18 45	19 13	16 40	9 03 50		
15	48	27.0	14.8	170	11.0 ¹³⁴	+15 59.0	58	30	40	19 06	38	30 37	8 48 52		
16	63	26.9	15.3	184	43.3 ¹³³	53.1	59	35	18 51	19	19 54	38 35	39 53		
17	78	26.7	-20 15.8	199	15.8 ¹³⁵	+15 47.2	59	40	19 03	19 35	20 14	22 47 33	8 29 55		
18	93	26.5	-20 16.4	213	48.2 ¹³⁴	+15 41.2	60	45	19 18	19 54	20 39	22 57 32	8 17 57		
19	108	26.4	16.9	228	20.7 ¹³⁵	35.1	61	50	37	20 18	21 13	23 10 29	8 02 60		
20	123	26.2	17.4	242	53.2 ¹³⁵	29.0	61	52	46	30	32	16 28	7 56 61		
21	138	26.0	17.9	257	25.7 ¹³⁵	22.8	62	54	19 56	20 44	21 56	23 26	48 62		
22	153	25.8	18.5	271	58.3 ¹³⁶	16.6	62	56	20 07	21 00	22 30	30 24	40 64		
23	168	25.7	19.0	286	30.9 ¹³⁶	10.2	64	58	20	20	** ** *	38 23	30 66		
24	183	25.5	-20 19.5	301	03.5 ¹³⁶	+15 03.8	64	60 S	20 35	21 45	** ** *	23 48 20	7 19 68		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 52 ^m 2		Mag: -4.8 PMG: 15 ^h 02 ^m		Mag: +1.3 PMG: 7 ^h 27 ^m		Mag: -2.6 PMG: 3 ^h 22 ^m		Mag: +0.6 PMG: 10 ^h 51 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	61	08.7	134	32.7	248	12.0	309	20.7	196	53.6					
1	76	11.2	149	32.9	263	13.2	324	23.3	211	55.8					
2	91	13.6	164	33.2	278	14.4	339	25.9	226	58.0					
3	106	16.1	179	33.5	293	15.6	354	28.5	242	00.1					
4	121	18.5	194	33.8	308	16.8	9	31.1	257	02.3					
5	136	21.0	209	34.0	323	18.0	24	33.7	272	04.5					
6	151	23.5	224	34.3	338	19.2	39	36.3	287	06.7					
7	166	25.9	239	34.6	353	20.4	54	38.9	302	08.8					
8	181	28.4	254	34.9	8	21.6	69	41.5	317	11.0					
9	196	30.9	269	35.2	23	22.8	84	44.1	332	13.2					
10	211	33.3	284	35.5	38	24.0	99	46.7	347	15.4					
11	226	35.8	299	35.8	53	25.2	114	49.3	2	17.5					
12	241	38.3	314	36.1	68	26.4	129	51.8	17	19.7					
13	256	40.7	329	36.4	83	27.6	144	54.4	32	21.9					
14	271	43.2	344	36.6	98	28.8	159	57.0	47	24.0					
15	286	45.7	359	36.9	113	29.9	174	59.6	62	26.2					
16	301	48.1	14	37.2	128	31.1	190	02.2	77	28.4					
17	316	50.6	29	37.5	143	32.3	205	04.8	92	30.6					
18	331	53.0	44	37.9	158	33.5	220	07.4	107	32.7					
19	346	55.5	59	38.2	173	34.7	235	10.0	122	34.9					
20	1	58.0	74	38.5	188	35.9	250	12.6	137	37.1					
21	17	00.4	89	38.8	203	37.1	265	15.2	152	39.3					
22	32	02.9	104	39.1	218	38.3	280	17.8	167	41.4					
23	47	05.4	119	39.4	233	39.5	295	20.4	182	43.6					
24	62	07.8	134	39.7	248	40.7	310	23.0	197	45.8					
Dif	—		+3	+3	+12	-5	+26	0	+22	-1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 46 ^m 4			Edad: 19 ^d 5 PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/2 SD: 14/7 PMG: 4 ^h 03 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	25.5	-20	19.5	301	03.5	+15 03.8	60 N	6 33	7 26	8 18	21 04	71	11 57	18
1	198	25.3		20.0	315	36.1 ¹³⁶	+14 57.4 ⁶⁴	58	27	17	8 04	11 69		48 21	
2	213	25.2		20.5	330	08.8 ¹³⁷	50.9 ⁶⁵	56	22	09	7 53	18 67		41 23	
3	228	25.0		21.1	344	41.5 ¹³⁷	44.3 ⁶⁶	54	17	7 01	43	24 65		35 24	
4	243	24.8		21.6	359	14.2 ¹³⁷	37.6 ⁶⁷	52	13	6 55	34	29 64		29 26	
5	258	24.6	-20	22.1	13	47.0 ¹³⁸	+14 30.9 ⁶⁷	50	6 09	6 49	7 25	21 34	62	11 24	27
6	273	24.5	-20	22.6	28	19.8 ¹³⁸	+14 24.1 ⁶⁸	45	6 00	6 36	7 08	21 44	59	11 12	31
7	288	24.3		23.1	42	52.6 ¹³⁸	17.3 ⁶⁸	40	5 51	25	6 54	21 53	57	11 03	32
8	303	24.1		23.7	57	25.4 ¹³⁸	10.4 ⁶⁹	35	44	15	42	22 00	55	10 55	34
9	318	23.9		24.2	71	58.3 ¹³⁹	+14 03.4 ⁷⁰	30	37	6 06	32	07 52		48 36	
10	333	23.8		24.7	86	31.2 ¹³⁹	+13 56.4 ⁷⁰	20	23	5 50	6 14	18 49		35 39	
11	348	23.6	-20	25.2	101	04.1 ¹³⁹	+13 49.3 ⁷¹	10 N	5 10	5 35	5 58	22 28	46	10 24	42
12	3	23.4	-20	25.7	115	37.0 ¹³⁹	+13 42.2 ⁷¹	0	4 55	5 21	5 43	22 37	44	10 14	44
13	18	23.2		26.2	130	10.0 ¹⁴⁰	35.0 ⁷²	10 S	39	5 05	28	46 41		10 04	46
14	33	23.1		26.7	144	43.0 ¹⁴⁰	27.7 ⁷³	20	4 19	4 48	5 11	22 56	38	9 53	49
15	48	22.9		27.3	159	16.0 ¹⁴⁰	20.4 ⁷³	30	3 54	26	4 53	23 07	35	40 52	
16	63	22.7		27.8	173	49.0 ¹⁴⁰	13.0 ⁷⁴	35	38	4 13	42	13 34		32 55	
17	78	22.5	-20	28.3	188	22.1 ¹⁴¹	+13 05.6 ⁷⁴	40	3 19	3 58	4 29	23 20	32	9 24	56
18	93	22.4	-20	28.8	202	55.1 ¹⁴⁰	+12 58.1 ⁷⁵	45	2 54	3 39	4 14	23 29	29	9 14	59
19	108	22.2		29.3	217	28.3 ¹⁴²	50.5 ⁷⁶	50	19	14	3 55	39 26		9 02	62
20	123	22.0		29.8	232	01.4 ¹⁴¹	42.9 ⁷⁶	52	2 00	3 02	46	44 24		8 57	62
21	138	21.8		30.3	246	34.5 ¹⁴¹	35.3 ⁷⁶	54	1 36	2 49	36	49 23		50 65	
22	153	21.6		30.8	261	07.7 ¹⁴²	27.5 ⁷⁸	56	1 02	32	25	23 54	22	44 66	
23	168	21.5		31.3	275	40.9 ¹⁴²	19.8 ⁷⁷	58	** **	2 12	3 12	** **	** *	36 68	
24	183	21.3	-20	31.8	290	14.1 ¹⁴²	+12 11.9 ⁷⁹	60 S	** **	1 47	2 57	** **	** *	8 27	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 48 ^m 2		Mag: -4.8 PMG: 15 ^h 01 ^m		Mag: +1.3 PMG: 7 ^h 25 ^m		Mag: -2.6 PMG: 3 ^h 18 ^m		Mag: +0.6 PMG: 10 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	62	07.8	134	39.7	-25	57.6	248	40.7	+4	45.1	310	23.0	+21	57.7	197	45.8	-14	39.2
1	77	10.3	149	40.0		57.2	263	41.9		44.5	325	25.6		57.7	212	47.9		39.3
2	92	12.8	164	40.4		56.9	278	43.1		44.0	340	28.3		57.7	227	50.1		39.4
3	107	15.2	179	40.7		56.5	293	44.3		43.5	355	30.9		57.8	242	52.3		39.5
4	122	17.7	194	41.0		56.2	308	45.5		43.0	10	33.5		57.8	257	54.5		39.6
5	137	20.2	209	41.3	-25	55.8	323	46.7	+4	42.5	25	36.1	+21	57.8	272	56.6	-14	39.7
6	152	22.6	224	41.7	-25	55.5	338	47.9	+4	42.0	40	38.7	+21	57.8	287	58.8	-14	39.7
7	167	25.1	239	42.0		55.1	353	49.1		41.5	55	41.3		57.9	303	01.0		39.8
8	182	27.5	254	42.3		54.8	8	50.3		40.9	70	43.9		57.9	318	03.2		39.9
9	197	30.0	269	42.7		54.4	23	51.5		40.4	85	46.5		57.9	333	05.3		40.0
10	212	32.5	284	43.0		54.1	38	52.7		39.9	100	49.1		57.9	348	07.5		40.1
11	227	34.9	299	43.3	-25	53.7	53	53.9	+4	39.4	115	51.7	+21	58.0	3	09.7	-14	40.1
12	242	37.4	314	43.7	-25	53.4	68	55.1	+4	38.9	130	54.3	+21	58.0	18	11.9	-14	40.2
13	257	39.9	329	44.0		53.0	83	56.3		38.4	145	56.9		58.0	33	14.0		40.3
14	272	42.3	344	44.4		52.6	98	57.5		37.8	160	59.5		58.0	48	16.2		40.4
15	287	44.8	359	44.7		52.3	113	58.7		37.3	176	02.1		58.1	63	18.4		40.5
16	302	47.3	14	45.0		51.9	128	59.9		36.8	191	04.7		58.1	78	20.5		40.6
17	317	49.7	29	45.4	-25	51.6	144	01.1	+4	36.3	206	07.3	+21	58.1	93	22.7	-14	40.6
18	332	52.2	44	45.7	-25	51.2	159	02.3	+4	35.8	221	09.9	+21	58.1	108	24.9	-14	40.7
19	347	54.7	59	46.1		50.8	174	03.5		35.3	236	12.5		58.2	123	27.1		40.8
20	2	57.1	74	46.5		50.5	189	04.7		34.7	251	15.2		58.2	138	29.2		40.9
21	17	59.6	89	46.8		50.1	204	05.9		34.2	266	17.8		58.2	153	31.4		41.0
22	33	02.0	104	47.2		49.7	219	07.1		33.7	281	20.4		58.2	168	33.6		41.1
23	48	04.5	119	47.5		49.4	234	08.3		33.2	296	23.0		58.3	183	35.8		41.1
24	63	07.0	134	47.9	-25	49.0	249	09.5	+4	32.7	311	25.6	+21	58.3	198	37.9	-14	41.2
Dif	—		+3	+4			+12	-5			+26	0			+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 46 ^m 7			Edad: 20 ^d 5 PHE { 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:5 SD: 14:8 PMG: 4 ^h 48 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	21.3	-20	31.8	290	14.1	+12	11.9	60 N	15 13	16 05	16 59	22 15 73	12 15 16				
1	198	21.1		32.3	304	47.3 ¹⁴²	+12	04.1	58	27	14	17 04	20 71	09 18				
2	213	20.9		32.9	319	20.5 ¹⁴²	+11	56.1	56	38	23	09	25 69	12 04 20				
3	228	20.7		33.4	333	53.8 ¹⁴³		48.1	54	49	30	14	29 67	11 59 22				
4	243	20.6		33.9	348	27.1 ¹⁴³		40.1	52	15 58	37	19	33 65	55 23				
5	258	20.4	-20	34.4	3	00.4 ¹⁴³	+11	32.0	50	16 06	16 43	17 23	22 36 64	11 51 25				
6	273	20.2	-20	34.9	17	33.7 ¹⁴³	+11	23.8	45	16 24	16 56	17 32	22 43 61	11 43 27				
7	288	20.0		35.4	32	07.0 ¹⁴³		15.7	40	38	17 07	41	50 57	35 31				
8	303	19.8		35.9	46	40.4 ¹⁴⁴	+11	07.4	35	16 50	17	48	55 55	29 33				
9	318	19.7		36.4	61	13.7 ¹⁴³	+10	59.1	30	17 01	26	17 56	22 59 54	24 34				
10	333	19.5		36.9	75	47.1 ¹⁴⁴		50.8	20	19	43	18 10	23 07 50	14 38				
11	348	19.3	-20	37.4	90	20.5 ¹⁴⁴	+10	42.4	10 N	17 35	17 58	18 23	23 14 47	11 06 41				
12	3	19.1	-20	37.9	104	53.9 ¹⁴⁴	+10	33.9	0	17 50	18 12	18 38	23 21 44	10 58 44				
13	18	18.9		38.4	119	27.3 ¹⁴⁴		25.4	10 S	18 06	28	18 55	27 41	50 47				
14	33	18.7		38.9	134	00.7 ¹⁴⁴		16.9	20	22	18 46	19 15	34 38	42 49				
15	48	18.6		39.4	148	34.2 ¹⁴⁵	+10	08.3	30	41	19 08	40	42 34	32 53				
16	63	18.4		39.9	163	07.6 ¹⁴⁴	+9	59.7	35	18 53	21	19 56	47 32	27 54				
17	78	18.2	-20	40.4	177	41.1 ¹⁴⁵	+9	51.0	40	19 06	19 37	20 16	23 52 30	10 20 57				
18	93	18.0	-20	40.8	192	14.6 ¹⁴⁵	+9	42.3	45	19 21	19 56	20 42	23 58 27	10 13 59				
19	108	17.8		41.3	206	48.1 ¹⁴⁵		33.5	50	40	20 21	21 18	** ** *	10 04 62				
20	123	17.6		41.8	221	21.5 ¹⁴⁴		24.7	52	49	34	21 38	** ** *	9 59 65				
21	138	17.4		42.3	235	55.0 ¹⁴⁵		15.8	54	19 59	20 48	22 03	** ** *	55 66				
22	153	17.3		42.8	250	28.6 ¹⁴⁶	+9	06.9	56	20 11	21 05	22 40	** ** *	50 67				
23	168	17.1		43.3	265	02.1 ¹⁴⁵	+8	58.0	58	24	26	** ** *	0 01 19	44 70				
24	183	16.9	-20	43.8	279	35.6 ¹⁴⁵	+8	49.0	60 S	20 40	21 53	** ** *	0 08 17	9 37 73				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 19 ^h 44 ^m 3		Mag: -4.8 PMG: 15 ^h 00 ^m				Mag: +1.3 PMG: 7 ^h 23 ^m				Mag: -2.6 PMG: 3 ^h 14 ^m				Mag: +0.6 PMG: 10 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	63	07.0	134	47.9	-25	49.0	249	09.5	+4	32.7	311	25.6	+21	58.3	198	37.9	-14	41.2
1	78	09.4	149	48.3		48.6	264	10.7		32.2	326	28.2		58.3	213	40.1		41.3
2	93	11.9	164	48.6		48.3	279	11.9		31.7	341	30.8		58.3	228	42.3		41.4
3	108	14.4	179	49.0		47.9	294	13.2		31.1	356	33.4		58.4	243	44.5		41.5
4	123	16.8	194	49.4		47.5	309	14.4		30.6	11	36.0		58.4	258	46.6		41.5
5	138	19.3	209	49.7	-25	47.2	324	15.6	+4	30.1	26	38.6	+21	58.4	273	48.8	-14	41.6
6	153	21.8	224	50.1	-25	46.8	339	16.8	+4	29.6	41	41.3	+21	58.4	288	51.0	-14	41.7
7	168	24.2	239	50.5		46.4	354	18.0		29.1	56	43.9		58.5	303	53.1		41.8
8	183	26.7	254	50.9		46.1	9	19.2		28.6	71	46.5		58.5	318	55.3		41.9
9	198	29.1	269	51.3		45.7	24	20.4		28.1	86	49.1		58.5	333	57.5		42.0
10	213	31.6	284	51.6		45.3	39	21.6		27.5	101	51.7		58.6	348	59.7		42.0
11	228	34.1	299	52.0	-25	45.0	54	22.8	+4	27.0	116	54.3	+21	58.6	4	01.8	-14	42.1
12	243	36.5	314	52.4	-25	44.6	69	24.0	+4	26.5	131	56.9	+21	58.6	19	04.0	-14	42.2
13	258	39.0	329	52.8		44.2	84	25.2		26.0	146	59.6		58.6	34	06.2		42.3
14	273	41.5	344	53.2		43.8	99	26.4		25.5	162	02.2		58.7	49	08.4		42.4
15	288	43.9	359	53.6		43.5	114	27.6		25.0	177	04.8		58.7	64	10.5		42.4
16	303	46.4	14	54.0		43.1	129	28.8		24.5	192	07.4		58.7	79	12.7		42.5
17	318	48.9	29	54.4	-25	42.7	144	30.0	+4	23.9	207	10.0	+21	58.7	94	14.9	-14	42.6
18	333	51.3	44	54.8	-25	42.3	159	31.2	+4	23.4	222	12.6	+21	58.8	109	17.1	-14	42.7
19	348	53.8	59	55.2		41.9	174	32.4		22.9	237	15.3		58.8	124	19.2		42.8
20	3	56.3	74	55.6		41.6	189	33.6		22.4	252	17.9		58.8	139	21.4		42.8
21	18	58.7	89	56.0		41.2	204	34.8		21.9	267	20.5		58.8	154	23.6		42.9
22	34	01.2	104	56.4		40.8	219	36.1		21.4	282	23.1		58.9	169	25.8		43.0
23	49	03.6	119	56.8		40.4	234	37.3		20.9	297	25.7		58.9	184	27.9		43.1
24	64	06.1	134	57.2	-25	40.0	249	38.5	+4	20.3	312	28.3	+21	58.9	199	30.1	-14	43.2
Dif	—		+4		+4		+12		-5		+26		0		+22		-	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 47 ^m 0			Edad: 21 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 55'0 SD: 14'9 PMG: 5 ^h 31 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	16.9	-20	43.8	279	35.6	+8	49.0	60 N	6 36	7 30	8 22	23 28	75	12 31	15
1	198	16.7		44.3	294	09.1 ¹⁴⁵		40.0	58	30	20	8 08	31 73		27	17
2	213	16.5		44.8	308	42.6 ¹⁴⁵		30.9	56	25	12	7 56	34 70		24	19
3	228	16.3		45.3	323	16.2 ¹⁴⁶		21.8	54	20	7 05	46	36 68		21	21
4	243	16.1		45.8	337	49.7 ¹⁴⁵		12.6	52	16	6 58	37	38 67		18	23
5	258	15.9	-20	46.2	352	23.3 ¹⁴⁶	+8	03.4	50	6 11	6 52	7 28	23 40	65	12 16	24
6	273	15.7	-20	46.7	6	56.8 ¹⁴⁵	+7	54.2	45	6 02	6 38	7 11	23 44	61	12 10	27
7	288	15.6		47.2	21	30.4 ¹⁴⁶		44.9	40	5 53	27	6 56	47 59		06	30
8	303	15.4		47.7	36	03.9 ¹⁴⁵		35.6	35	46	17	44	50 56		12 02	32
9	318	15.2		48.2	50	37.5 ¹⁴⁶		26.2	30	38	6 08	33	53 54		11 58	35
10	333	15.0		48.7	65	11.0 ¹⁴⁵		16.8	20	24	5 51	6 15	23 57	50	52	38
11	348	14.8	-20	49.2	79	44.6 ¹⁴⁶	+7	07.4	10 N	5 10	5 36	5 59	** ** *	**	11 47	41
12	3	14.6	-20	49.6	94	18.1 ¹⁴⁵	+6	57.9	0	4 56	5 21	5 43	** ** *	**	11 42	44
13	18	14.4		50.1	108	51.6 ¹⁴⁵		48.4	10 S	39	5 05	28	** ** *	**	37	46
14	33	14.2		50.6	123	25.2 ¹⁴⁶		38.9	20	4 19	4 47	5 11	** ** *	**	31	50
15	48	14.0		51.1	137	58.7 ¹⁴⁵		29.3	30	3 53	25	4 52	** ** *	**	25	53
16	63	13.8		51.6	152	32.3 ¹⁴⁶		19.7	35	37	4 12	41	** ** *	**	21	56
17	78	13.6	-20	52.0	167	05.8 ¹⁴⁵	+6	10.1	40	3 17	3 56	4 28	** ** *	**	11 17	58
18	93	13.4	-20	52.5	181	39.3 ¹⁴⁵	+6	00.4	45	2 51	3 37	4 12	** ** *	**	11 12	61
19	108	13.3		53.0	196	12.8 ¹⁴⁵	+5	50.7	50	2 15	12	3 53	0 05	24	06	65
20	123	13.1		53.5	210	46.3 ¹⁴⁵		40.9	52	1 56	3 00	44	08 23		04	66
21	138	12.9		53.9	225	19.8 ¹⁴⁵		31.2	54	1 31	2 45	34	12 21		11 01	67
22	153	12.7		54.4	239	53.3 ¹⁴⁵		21.4	56	0 53	28	22	16 19		10 57	70
23	168	12.5		54.9	254	26.8 ¹⁴⁵		11.5	58	** ** *	2 08	3 09	20 18		54	71
24	183	12.3	-20	55.4	269	00.3 ¹⁴⁵	+5	01.6	60 S	** ** *	1 41	2 53	0 25	15	10 50	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 40 ^m 4		Mag: -4.8 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 7 ^h 21 ^m		Mag: -2.6 PMG: 3 ^h 10 ^m		Mag: +0.6 PMG: 10 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	64	06.1	134	57.2	-25	40.0	249	38.5	+4	20.3
1	79	08.6	149	57.7		39.7	264	39.7		19.8
2	94	11.0	164	58.1		39.3	279	40.9		19.3
3	109	13.5	179	58.5		38.9	294	42.1		18.8
4	124	16.0	194	58.9		38.5	309	43.3		18.3
5	139	18.4	209	59.3	-25	38.1	324	44.5	+4	17.8
6	154	20.9	224	59.8	-25	37.7	339	45.7	+4	17.3
7	169	23.4	240	00.2		37.4	354	46.9		16.8
8	184	25.8	255	00.6		37.0	9	48.1		16.2
9	199	28.3	270	01.1		36.6	24	49.3		15.7
10	214	30.8	285	01.5		36.2	39	50.6		15.2
11	229	33.2	300	01.9	-25	35.8	54	51.8	+4	14.7
12	244	35.7	315	02.4	-25	35.4	69	53.0	+4	14.2
13	259	38.1	330	02.8		35.0	84	54.2		13.7
14	274	40.6	345	03.2		34.6	99	55.4		13.2
15	289	43.1	0	03.7		34.2	114	56.6		12.6
16	304	45.5	15	04.1		33.9	129	57.8		12.1
17	319	48.0	30	04.6	-25	33.5	144	59.0	+4	11.6
18	334	50.5	45	05.0	-25	33.1	160	00.2	+4	11.1
19	349	52.9	60	05.5		32.7	175	01.5		10.6
20	4	55.4	75	05.9		32.3	190	02.7		10.1
21	19	57.9	90	06.4		31.9	205	03.9		09.6
22	35	00.3	105	06.9		31.5	220	05.1		09.1
23	50	02.8	120	07.3		31.1	235	06.3		08.5
24	65	05.2	135	07.8	-25	30.7	250	07.5	+4	08.0
Dif	—		+4		+4		+12		-5	
							+26		0	
									+22	
									-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2				Edad: 22 ^d 5 PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 4 20 ^h : 55 ^m 7											
	PMG: 11 ^h 47 ^m 3				SD: 15 ^m 0 PMG: 6 ^h 15 ^m R°: 44 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	12.3	-20	55.4	269	00.3	+5	01.6	60 N	15 10	16 02	16 56	** ** *		12 46	14
1	198	12.1		55.8	283	33.7 ¹⁴⁴	+4	51.7 ⁹⁹	58	24	12	17 02	** ** *		44	17
2	213	11.9		56.3	298	07.2 ¹⁴⁵		41.8 ⁹⁹	56	36	20	08	** ** *		43	19
3	228	11.7		56.8	312	40.6 ¹⁴⁴		31.9 ⁹⁹	54	47	28	13	** ** *		42	20
4	243	11.5		57.3	327	14.0 ¹⁴⁴		21.9 ¹⁰⁰	52	15 56	35	17	** ** *		41	22
5	258	11.3	-20	57.7	341	47.4 ¹⁴⁴	+4	11.9 ¹⁰⁰	50	16 04	16 41	17 22	** ** *		12 40	23
6	273	11.1	-20	58.2	356	20.8 ¹⁴⁴	+4	01.8 ¹⁰¹	45	16 22	16 55	17 31	** ** *		12 37	28
7	288	10.9		58.7	10	54.2 ¹⁴⁴	+3	51.7 ¹⁰¹	40	37	17 07	40	** ** *		36	29
8	303	10.7		59.1	25	27.5 ¹⁴³		41.6 ¹⁰¹	35	16 49	17	48	** ** *		34	32
9	318	10.5	-20	59.6	40	00.9 ¹⁴⁴		31.5 ¹⁰¹	30	17 00	26	17 55	** ** *		33	34
10	333	10.3	-21	00.1	54	34.2 ¹⁴³		21.4 ¹⁰¹	20	19	43	18 10	** ** *		30	38
11	348	10.1	-21	00.5	69	07.5 ¹⁴³	+3	11.2 ¹⁰²	10 N	17 35	17 58	18 24	0 01 47		12 28	41
12	3	09.9	-21	01.0	83	40.8 ¹⁴³	+3	01.0 ¹⁰²	0	17 51	18 13	18 39	0 05 44		12 26	44
13	18	09.7		01.5	98	14.0 ¹⁴²	+2	50.8 ¹⁰²	10 S	18 07	29	18 56	08 41		23	48
14	33	09.5		01.9	112	47.3 ¹⁴³		40.5 ¹⁰³	20	24	18 48	19 16	12 38		21	51
15	48	09.3		02.4	127	20.5 ¹⁴²		30.3 ¹⁰²	30	43	19 10	42	16 35		18	55
16	63	09.1		02.9	141	53.7 ¹⁴²		20.0 ¹⁰³	35	18 55	23	19 59	19 32		17	57
17	78	08.9	-21	03.3	156	26.9 ¹⁴²	+2	09.7 ¹⁰³	40	19 08	19 39	20 19	0 22 30		12 15	60
18	93	08.7	-21	03.8	171	00.0 ¹⁴¹	+1	59.4 ¹⁰³	45	19 24	19 59	20 45	0 25 27		12 13	63
19	108	08.5		04.3	185	33.1 ¹⁴¹		49.0 ¹⁰⁴	50	43	20 25	21 22	29 24		11	66
20	123	08.3		04.7	200	06.2 ¹⁴¹		38.6 ¹⁰⁴	52	19 52	37	21 43	31 22		10	67
21	138	08.1		05.2	214	39.3 ¹⁴¹		28.3 ¹⁰³	54	20 03	20 52	22 10	33 21		08	70
22	153	07.9		05.6	229	12.3 ¹⁴⁰		17.9 ¹⁰⁴	56	15	21 10	22 52	35 19		07	71
23	168	07.7		06.1	243	45.3 ¹⁴⁰	+1	07.4 ¹⁰⁵	58	29	21 31	** ** *	38 16		05	74
24	183	07.5	-21	06.6	258	18.3 ¹⁴⁰	+0	57.0 ¹⁰⁴	60 S	20 45	22 00	** ** *	0 40 15		12 04	76
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 19 ^h 36 ^m 4		Mag: -4.8 PMG: 14 ^h 59 ^m		Mag: +1.3 PMG: 7 ^h 19 ^m		Mag: -2.6 PMG: 3 ^h 05 ^m		Mag: +0.6 PMG: 10 ^h 37 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	65	05.2	135	07.8	250	07.5	313	31.3	200	22.3						
1	80	07.7	150	08.3	265	08.7	328	33.9	215	24.5						
2	95	10.2	165	08.7	280	09.9	343	36.5	230	26.7						
3	110	12.6	180	09.2	295	11.1	358	39.2	245	28.8						
4	125	15.1	195	09.7	310	12.4	13	41.8	260	31.0						
5	140	17.6	210	10.1	325	13.6	28	44.4	275	33.2						
6	155	20.0	225	10.6	340	14.8	43	47.1	290	35.4						
7	170	22.5	240	11.1	355	16.0	58	49.7	305	37.5						
8	185	25.0	255	11.6	10	17.2	73	52.3	320	39.7						
9	200	27.4	270	12.1	25	18.4	88	55.0	335	41.9						
10	215	29.9	285	12.5	40	19.6	103	57.6	350	44.1						
11	230	32.4	300	13.0	55	20.9	119	00.2	5	46.2						
12	245	34.8	315	13.5	70	22.1	134	02.8	20	48.4						
13	260	37.3	330	14.0	85	23.3	149	05.5	35	50.6						
14	275	39.7	345	14.5	100	24.5	164	08.1	50	52.8						
15	290	42.2	0	15.0	115	25.7	179	10.7	65	54.9						
16	305	44.7	15	15.5	130	26.9	194	13.4	80	57.1						
17	320	47.1	30	16.0	145	28.1	209	16.0	95	59.3						
18	335	49.6	45	16.5	160	29.4	224	18.6	111	01.5						
19	350	52.1	60	17.0	175	30.6	239	21.3	126	03.6						
20	5	54.5	75	17.5	190	31.8	254	23.9	141	05.8						
21	20	57.0	90	18.0	205	33.0	269	26.5	156	08.0						
22	35	59.5	105	18.6	220	34.2	284	29.2	171	10.2						
23	51	01.9	120	19.1	235	35.4	299	31.8	186	12.3						
24	66	04.4	135	19.6	250	36.7	314	34.4	201	14.5						
Dif	—		+5		+12		+26		0							
			+4		-5				+22							

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 47 ^m 7			Edad: 23 ^d 5 PHE { 4 ^h : 55'9 12 ^h : 56'2 20 ^h : 56'4 PMG: 6 ^h 59 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	07.5	-21	06.6	258	18.3	+0	57.0	60 N	6 39	7 34	8 27	0 43	78	13 00 16
1	198	07.3		07.0	272	51.2 ¹³⁹		46.5 ¹⁰⁵	58	33	24	12	44	75	01 18
2	213	07.1		07.5	287	24.2 ¹⁴⁰		36.1 ¹⁰⁴	56	28	15	8 00	44	73	02 19
3	228	06.9		07.9	301	57.0 ¹³⁸		25.6 ¹⁰⁵	54	23	08	7 49	44	71	02 22
4	243	06.7		08.4	316	29.9 ¹³⁹		15.1 ¹⁰⁵	52	18	7 01	40	45	69	03 23
5	258	06.5	-21	08.8	331	02.7 ¹³⁸	+0	04.6 ¹⁰⁵	50	6 14	6 54	7 31	0 45	67	13 03 25
6	273	06.3	-21	09.3	345	35.5 ¹³⁸	-0	06.0 ¹⁰⁶	45	6 04	6 40	7 13	0 45	64	13 05 28
7	288	06.0		09.7	0	08.2 ¹³⁷		16.5 ¹⁰⁵	40	5 55	29	6 59	46	61	05 32
8	303	05.8		10.2	14	40.9 ¹³⁷		27.0 ¹⁰⁵	35	47	18	46	46	59	06 34
9	318	05.6		10.6	29	13.6 ¹³⁷		37.6 ¹⁰⁶	30	40	6 09	35	47	56	07 36
10	333	05.4		11.1	43	46.2 ¹³⁶		48.2 ¹⁰⁶	20	25	5 53	16	47	53	08 40
11	348	05.2	-21	11.5	58	18.8 ¹³⁶	-0	58.8 ¹⁰⁶	10 N	5 11	5 37	6 00	0 48	49	13 09 43
12	3	05.0	-21	12.0	72	51.4 ¹³⁶	-1	09.4 ¹⁰⁶	0	4 56	5 22	5 44	0 49	45	13 10 47
13	18	04.8		12.4	87	23.9 ¹³⁵		19.9 ¹⁰⁵	10 S	39	5 06	28	49	43	11 50
14	33	04.6		12.9	101	56.4 ¹³⁵		30.6 ¹⁰⁷	20	4 19	4 47	5 11	50	39	12 53
15	48	04.4		13.3	116	28.8 ¹³⁴		41.2 ¹⁰⁶	30	3 53	25	4 52	51	35	13 57
16	63	04.2		13.8	131	01.2 ¹³⁴	-1	51.8 ¹⁰⁶	35	36	4 11	40	51	33	14 59
17	78	04.0	-21	14.2	145	33.5 ¹³³	-2	02.4 ¹⁰⁶	40	3 16	3 55	4 27	0 52	30	13 15 62
18	93	03.8	-21	14.7	160	05.8 ¹³³	-2	13.0 ¹⁰⁶	45	2 49	3 35	4 11	0 52	28	13 16 65
19	108	03.6		15.1	174	38.0 ¹³²		23.7 ¹⁰⁷	50	2 12	3 10	3 51	53	24	17 68
20	123	03.3		15.6	189	10.2 ¹³²		34.3 ¹⁰⁶	52	1 52	2 57	42	53	23	17 70
21	138	03.1		16.0	203	42.4 ¹³²		44.9 ¹⁰⁶	54	1 25	42	32	54	21	18 72
22	153	02.9		16.5	218	14.5 ¹³¹	-2	55.6 ¹⁰⁷	56	0 43	25	20	54	19	18 74
23	168	02.7		16.9	232	46.6 ¹³¹	-3	06.2 ¹⁰⁶	58	** **	2 03	3 06	54	17	19 76
24	183	02.5	-21	17.3	247	18.6 ¹³⁰	-3	16.8 ¹⁰⁶	60 S	** **	1 34	2 50	0 55	15	13 20 78

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 32 ^m 5		Mag: -4.8 PMG: 14 ^h 58 ^m			Mag: +1.3 PMG: 7 ^h 17 ^m			Mag: -2.6 PMG: 3 ^h 01 ^m			Mag: +0.6 PMG: 10 ^h 34 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	66	04.4	135	19.6	-25	21.0	250	36.7	+3	55.8	314	34.4	+22	00.3
1	81	06.9	150	20.1		20.6	265	37.9		55.3	329	37.1		00.3
2	96	09.3	165	20.6		20.1	280	39.1		54.7	344	39.7		00.3
3	111	11.8	180	21.1		19.7	295	40.3		54.2	359	42.4		00.4
4	126	14.2	195	21.7		19.3	310	41.5		53.7	14	45.0		00.4
5	141	16.7	210	22.2	-25	18.9	325	42.8	+3	53.2	29	47.6	+22	00.4
6	156	19.2	225	22.7	-25	18.5	340	44.0	+3	52.7	44	50.3	+22	00.5
7	171	21.6	240	23.3		18.1	355	45.2		52.2	59	52.9		00.5
8	186	24.1	255	23.8		17.7	10	46.4		51.7	74	55.5		00.5
9	201	26.6	270	24.3		17.2	25	47.6		51.2	89	58.2		00.5
10	216	29.0	285	24.9		16.8	40	48.8		50.7	105	00.8		00.6
11	231	31.5	300	25.4	-25	16.4	55	50.1	+3	50.1	120	03.5	+22	00.6
12	246	34.0	315	26.0	-25	16.0	70	51.3	+3	49.6	135	06.1	+22	00.6
13	261	36.4	330	26.5		15.6	85	52.5		49.1	150	08.7		00.7
14	276	38.9	345	27.1		15.1	100	53.7		48.6	165	11.4		00.7
15	291	41.3	0	27.6		14.7	115	54.9		48.1	180	14.0		00.7
16	306	43.8	15	28.2		14.3	130	56.2		47.6	195	16.7		00.8
17	321	46.3	30	28.7	-25	13.9	145	57.4	+3	47.1	210	19.3	+22	00.8
18	336	48.7	45	29.3	-25	13.4	160	58.6	+3	46.6	225	21.9	+22	00.8
19	351	51.2	60	29.8		13.0	175	59.8		46.1	240	24.6		00.8
20	6	53.7	75	30.4		12.6	191	01.0		45.6	255	27.2		00.9
21	21	56.1	90	31.0		12.2	206	02.3		45.1	270	29.9		00.9
22	36	58.6	105	31.5		11.7	221	03.5		44.5	285	32.5		00.9
23	52	01.1	120	32.1		11.3	236	04.7		44.0	300	35.2		01.0
24	67	03.5	135	32.7	-25	10.9	251	05.9	+3	43.5	315	37.8	+22	01.0

Dif	—	+5	+4	+12	-5	+26	0	+22	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 0				Edad: 24 ^d 5 PHE { 4 ^h : 56 ^m 7 12 ^h : 57 ^m 0 20 ^h : 57 ^m 3 PMG: 7 ^h 45 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	02.5	-21	17.3	247	18.6	-3	16.8	60 N	15 07	16 00	16 54	2 01 80	13 16 17		
1	198	02.3		17.8	261	50.5 ¹²⁹		27.5 ¹⁰⁷	58	21	10	17 00	1 59 78	19 20		
2	213	02.1		18.2	276	22.4 ¹²⁹		38.1 ¹⁰⁶	56	34	19	06	57 75	21 23		
3	228	01.9		18.7	290	54.3 ¹²⁹		48.7 ¹⁰⁶	54	45	26	11	55 74	24 24		
4	243	01.7		19.1	305	26.0 ¹²⁷		-3 59.4 ¹⁰⁷	52	15 54	34	16	54 71	26 26		
5	258	01.4	-21	19.5	319	57.8 ¹²⁸		-4 10.0 ¹⁰⁶	50	16 03	16 40	17 21	1 52 70	13 28 28		
6	273	01.2	-21	20.0	334	29.5 ¹²⁷		-4 20.6 ¹⁰⁶	45	16 21	16 54	17 31	1 49 67	13 33 31		
7	288	01.0		20.4	349	01.1 ¹²⁶		31.2 ¹⁰⁶	40	36	17 06	39	47 63	37 34		
8	303	00.8		20.8	3	32.7 ¹²⁶		41.8 ¹⁰⁶	35	16 49	16	48	45 60	40 36		
9	318	00.6		21.3	18	04.2 ¹²⁵		-4 52.4 ¹⁰⁶	30	17 00	26	17 55	43 58	43 39		
10	333	00.4		21.7	32	35.6 ¹²⁴		-5 03.0 ¹⁰⁶	20	19	43	18 10	40 54	48 43		
11	348	00.2	-21	22.1	47	07.0 ¹²⁴		-5 13.6 ¹⁰⁶	10 N	17 36	17 58	18 24	1 37 51	13 52 46		
12	2	59.9	-21	22.6	61	38.3 ¹²³		-5 24.1 ¹⁰⁵	0	17 52	18 14	18 40	1 34 48	13 57 49		
13	17	59.7		23.0	76	09.6 ¹²³		34.7 ¹⁰⁶	10 S	18 08	30	18 57	32 44	14 01 52		
14	32	59.5		23.4	90	40.8 ¹²²		45.2 ¹⁰⁵	20	25	18 49	19 18	29 41	05 56		
15	47	59.3		23.9	105	12.0 ¹²²		-5 55.8 ¹⁰⁶	30	45	19 12	19 44	26 37	10 60		
16	62	59.1		24.3	119	43.0 ¹²⁰		-6 06.3 ¹⁰⁵	35	18 56	25	20 01	24 35	13 62		
17	77	58.9	-21	24.7	134	14.1 ¹²¹		-6 16.8 ¹⁰⁵	40	19 10	19 42	20 22	1 22 33	14 17 64		
18	92	58.6	-21	25.2	148	45.0 ¹¹⁹		-6 27.2 ¹⁰⁴	45	19 26	20 02	20 49	1 20 30	14 21 67		
19	107	58.4		25.6	163	15.9 ¹¹⁹		37.7 ¹⁰⁵	50	46	28	21 27	17 26	25 71		
20	122	58.2		26.0	177	46.7 ¹¹⁸		48.2 ¹⁰⁵	52	19 56	41	21 48	16 25	27 73		
21	137	58.0		26.4	192	17.5 ¹¹⁸		-6 58.6 ¹⁰⁴	54	20 06	20 56	22 16	15 22	30 74		
22	152	57.8		26.9	206	48.1 ¹¹⁶		-7 09.0 ¹⁰⁴	56	18	21 14	23 05	13 21	32 77		
23	167	57.6		27.3	221	18.8 ¹¹⁷		19.4 ¹⁰⁴	58	33	21 37	** ** *	11 19	35 79		
24	182	57.3	-21	27.7	235	49.3 ¹¹⁵		-7 29.7 ¹⁰³	60 S	20 50	22 07	** ** *	1 10 16	14 38 82		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 19 ^h 28 ^m 6		Mag: -4.8 PMG: 14 ^h 57 ^m		Mag: +1.3 PMG: 7 ^h 15 ^m		Mag: -2.6 PMG: 2 ^h 57 ^m		Mag: +0.6 PMG: 10 ^h 30 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	67	03.5	135	32.7	251	05.9	+3	43.5	315	37.8	+22	01.0	202	06.7	-14	49.0
1	82	06.0	150	33.2		10.5		43.0	330	40.4		01.0	217	08.9		49.1
2	97	08.5	165	33.8		10.0		42.5	345	43.1		01.1	232	11.1		49.1
3	112	10.9	180	34.4		09.6		42.0	0	45.7		01.1	247	13.3		49.2
4	127	13.4	195	35.0		09.2		41.5	15	48.4		01.1	262	15.4		49.3
5	142	15.8	210	35.6	-25	08.8		41.0	30	51.0	+22	01.2	277	17.6	-14	49.4
6	157	18.3	225	36.2	-25	08.3		40.5	45	53.7	+22	01.2	292	19.8	-14	49.5
7	172	20.8	240	36.7		07.9		40.0	60	56.3		01.2	307	22.0		49.5
8	187	23.2	255	37.3		07.5		39.5	75	59.0		01.2	322	24.2		49.6
9	202	25.7	270	37.9		07.0		38.9	91	01.6		01.3	337	26.3		49.7
10	217	28.2	285	38.5		06.6		38.4	106	04.3		01.3	352	28.5		49.8
11	232	30.6	300	39.1	-25	06.2		37.9	121	06.9	+22	01.3	7	30.7	-14	49.9
12	247	33.1	315	39.7	-25	05.7		37.4	136	09.5	+22	01.4	22	32.9	-14	49.9
13	262	35.6	330	40.3		05.3		36.9	151	12.2		01.4	37	35.0		50.0
14	277	38.0	345	40.9		04.9		36.4	166	14.8		01.4	52	37.2		50.1
15	292	40.5	0	41.5		04.4		35.9	181	17.5		01.5	67	39.4		50.2
16	307	42.9	15	42.1		04.0		35.4	196	20.1		01.5	82	41.6		50.3
17	322	45.4	30	42.8	-25	03.6		34.9	211	22.8	+22	01.5	97	43.8	-14	50.3
18	337	47.9	45	43.4	-25	03.1		34.4	226	25.4	+22	01.6	112	45.9	-14	50.4
19	352	50.3	60	44.0		02.7		33.9	241	28.1		01.6	127	48.1		50.5
20	7	52.8	75	44.6		02.2		33.4	256	30.7		01.6	142	50.3		50.6
21	22	55.3	90	45.2		01.8		32.9	271	33.4		01.6	157	52.5		50.7
22	37	57.7	105	45.9		01.4		32.3	286	36.0		01.7	172	54.6		50.7
23	53	00.2	120	46.5		00.9		31.8	301	38.7		01.7	187	56.8		50.8
24	68	02.7	135	47.1	-25	00.5		31.3	316	41.3	+22	01.7	202	59.0	-14	50.9
Dif	—		+6		+4		+12		+26		0		+22		-1	

UT	SOL		☉ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2		Edad: 25 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 58/0 20 ^h : 58/3											
	PMG: 11 ^h 48 ^m 4		PMG: 8 ^h 34 ^m R°: 51 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	182	57.3	-21	27.7	235	49.3	-7 29.7	60 N	6 43	7 37	8 31	3 21	84	13 33 22
1	197	57.1		28.1	250	19.8 ¹¹⁵	40.1 ¹⁰⁴	58	37	27	16	17	80	39 24
2	212	56.9		28.6	264	50.2 ¹¹⁴	-7 50.4 ¹⁰³	56	31	18	8 04	12	79	44 26
3	227	56.7		29.0	279	20.5 ¹¹³	-8 00.7 ¹⁰³	54	26	11	7 53	09	76	48 29
4	242	56.5		29.4	293	50.8 ¹¹³	10.9 ¹⁰²	52	21	7 03	43	05	74	52 31
5	257	56.2	-21	29.8	308	20.9 ¹¹¹	-8 21.2 ¹⁰³	50	6 16	6 57	7 34	3 02	73	13 56 32
6	272	56.0	-21	30.2	322	51.0 ¹¹¹	-8 31.4 ¹⁰²	45	6 06	6 43	7 16	2 56	68	14 04 35
7	287	55.8		30.7	337	21.1 ¹¹¹	41.5 ¹⁰¹	40	5 57	31	7 01	50	66	11 38
8	302	55.6		31.1	351	51.0 ¹⁰⁹	-8 51.7 ¹⁰²	35	49	20	6 48	45	64	16 41
9	317	55.4		31.5	6	20.9 ¹⁰⁹	-9 01.8 ¹⁰¹	30	41	6 11	37	41	61	22 42
10	332	55.1		31.9	20	50.7 ¹⁰⁸	11.9 ¹⁰¹	20	27	5 54	17	34	57	31 46
11	347	54.9	-21	32.3	35	20.4 ¹⁰⁷	-9 21.9 ¹⁰⁰	10 N	5 12	5 38	6 01	2 28	54	14 38 50
12	2	54.7	-21	32.8	49	50.1 ¹⁰⁷	-9 31.9 ¹⁰⁰	0	4 57	5 22	5 45	2 22	51	14 46 52
13	17	54.5		33.2	64	19.7 ¹⁰⁶	41.9 ¹⁰⁰	10 S	39	5 06	29	16	48	14 53 55
14	32	54.2		33.6	78	49.1 ¹⁰⁴	-9 51.8 ⁹⁹	20	4 19	4 47	5 11	10	44	15 01 59
15	47	54.0		34.0	93	18.6 ¹⁰⁵	-10 01.7 ⁹⁹	30	3 52	25	4 51	2 03	41	10 62
16	62	53.8		34.4	107	47.9 ¹⁰³	11.6 ⁹⁹	35	35	4 11	40	1 59	39	15 65
17	77	53.6	-21	34.8	122	17.1 ¹⁰²	-10 21.4 ⁹⁸	40	3 14	3 54	4 26	1 55	36	15 21 67
18	92	53.4	-21	35.2	136	46.3 ¹⁰²	-10 31.1 ⁹⁷	45	2 47	3 34	4 10	1 50	33	15 28 70
19	107	53.1		35.6	151	15.4 ¹⁰¹	40.9 ⁹⁸	50	2 09	3 08	3 50	43	30	36 73
20	122	52.9		36.1	165	44.4 ¹⁰⁰	-10 50.5 ⁹⁶	52	1 48	2 55	40	41	28	40 75
21	137	52.7		36.5	180	13.3 ⁹⁹	-11 00.2 ⁹⁷	54	1 20	40	30	37	27	44 77
22	152	52.5		36.9	194	42.1 ⁹⁸	09.8 ⁹⁶	56	0 31	2 22	17	34	24	49 79
23	167	52.2		37.3	209	10.9 ⁹⁸	19.3 ⁹⁵	58	** **	1 59	3 03	30	23	15 54 82
24	182	52.0	-21	37.7	223	39.5 ⁹⁶	-11 28.8 ⁹⁵	60 S	** **	1 28	2 46	1 26	20	16 00 84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 24 ^m 6		Mag: -4.8 PMG: 14 ^h 56 ^m		Mag: +1.3 PMG: 7 ^h 13 ^m		Mag: -2.6 PMG: 2 ^h 53 ^m		Mag: +0.6 PMG: 10 ^h 27 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	68	02.7	135	47.1	-25 00.5	251	35.3	+3 31.3	202	59.0	-14 50.9			
1	83	05.1	150	47.7	-25 00.0	266	36.5	30.8	218	01.2	51.0			
2	98	07.6	165	48.4	-24 59.6	281	37.8	30.3	233	03.3	51.0			
3	113	10.1	180	49.0	59.2	296	39.0	29.8	248	05.5	51.1			
4	128	12.5	195	49.6	58.7	311	40.2	29.3	263	07.7	51.2			
5	143	15.0	210	50.3	-24 58.3	326	41.5	+3 28.8	278	09.9	-14 51.3			
6	158	17.4	225	50.9	-24 57.8	341	42.7	+3 28.3	293	12.1	-14 51.4			
7	173	19.9	240	51.6	57.4	356	43.9	27.8	308	14.2	51.4			
8	188	22.4	255	52.2	56.9	11	45.1	27.3	323	16.4	51.5			
9	203	24.8	270	52.9	56.5	26	46.4	26.8	338	18.6	51.6			
10	218	27.3	285	53.5	56.1	41	47.6	26.3	353	20.8	51.7			
11	233	29.8	300	54.2	-24 55.6	56	48.8	+3 25.8	8	22.9	-14 51.8			
12	248	32.2	315	54.8	-24 55.2	71	50.1	+3 25.2	23	25.1	-14 51.8			
13	263	34.7	330	55.5	54.7	86	51.3	24.7	38	27.3	51.9			
14	278	37.2	345	56.2	54.3	101	52.5	24.2	53	29.5	52.0			
15	293	39.6	0	56.8	53.8	116	53.7	23.7	68	31.7	52.1			
16	308	42.1	15	57.5	53.4	131	55.0	23.2	83	33.8	52.2			
17	323	44.6	30	58.2	-24 52.9	146	56.2	+3 22.7	98	36.0	-14 52.2			
18	338	47.0	45	58.8	-24 52.5	161	57.4	+3 22.2	113	38.2	-14 52.3			
19	353	49.5	60	59.5	52.0	176	58.7	21.7	128	40.4	52.4			
20	8	51.9	76	00.2	51.6	191	59.9	21.2	143	42.6	52.5			
21	23	54.4	91	00.9	51.1	207	01.1	20.7	158	44.7	52.5			
22	38	56.9	106	01.6	50.7	222	02.4	20.2	173	46.9	52.6			
23	53	59.3	121	02.2	50.2	237	03.6	19.7	188	49.1	52.7			
24	69	01.8	136	02.9	-24 49.8	252	04.8	+3 19.2	203	51.3	-14 52.8			
Dif	—		+7		+4	+12		-5	+27		0	+22		-1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2		Edad: 26 ^d 5 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 9 20 ^h : 59 ^m 2														
	PMG: 11 ^h 48 ^m 7		SD: 15 ^h 9 PMG: 9 ^h 25 ^m R°: 56 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	182	52.0	-21 37.7		223	39.5	-11 28.8	60 N	15 04	15 58	16 53	4 45	84	13 55	28		
1	197	51.8		38.1	238	08.1	38.2	58	19	16 08	16 59	37	82	14 03	31		
2	212	51.6		38.5	252	36.6	95 47.6	56	32	17	17 05	31	79	10	34		
3	227	51.3		38.9	267	05.0	94 -11 56.9	54	43	25	10	25	77	17	35		
4	242	51.1		39.3	281	33.3	93 -12 06.2	52	15 53	32	15	19	76	23	37		
5	257	50.9	-21 39.7		296	01.6	93 -12 15.4	50	16 02	16 39	17 20	4 15	74	14 28	38		
6	272	50.6	-21 40.1		310	29.7	91 -12 24.6	45	16 20	16 53	17 30	4 04	71	14 39	42		
7	287	50.4		40.5	324	57.8	91 33.7	40	36	17 06	39	3 56	68	49	44		
8	302	50.2		40.9	339	25.8	90 42.7	35	16 48	16	47	49	65	14 57	46		
9	317	50.0		41.3	353	53.7	89 -12 51.7	30	17 00	26	17 55	42	64	15 04	48		
10	332	49.7		41.7	8	21.5	88 -13 00.6	20	19	43	18 10	31	60	17	51		
11	347	49.5	-21 42.1		22	49.2	87 -13 09.4	10 N	17 36	17 59	18 25	3 22	57	15 28	54		
12	2	49.3	-21 42.5		37	16.8	86 -13 18.2	0	17 52	18	15	18	41	15 38	56		
13	17	49.0		42.9	51	44.3	85 26.9	10 S	18 09	31	18 58	3 04	52	15 48	59		
14	32	48.8		43.3	66	11.8	85 35.6	20	26	18 50	19 19	2 54	49	16 00	61		
15	47	48.6		43.7	80	39.1	83 44.1	30	46	19 13	19 46	44	45	12	65		
16	62	48.4		44.1	95	06.4	83 -13 52.6	35	18 58	27	20 03	38	43	20	66		
17	77	48.1	-21 44.5		109	33.6	82 -14 01.1	40	19 12	19 44	20 24	2 31	41	16 28	68		
18	92	47.9	-21 44.9		124	00.7	81 -14 09.4	45	19 28	20 05	20 52	2 23	38	16 38	70		
19	107	47.7		45.3	138	27.7	80 17.7	50	49	31	21 31	13	35	49	74		
20	122	47.4		45.7	152	54.6	79 25.9	52	19 59	20 45	21 53	09	33	16 55	75		
21	137	47.2		46.1	167	21.4	78 34.0	54	20 10	21 00	22 23	2 04	32	17 01	77		
22	152	47.0		46.5	181	48.1	77 42.1	56	22	19	23 22	1 58	30	08	79		
23	167	46.7		46.9	196	14.8	77 50.0	58	37	21 42	** **	53	27	16	81		
24	182	46.5	-21 47.3		210	41.3	75 -14 57.9	60 S	20 54	22 15	** **	1 46	25	17 24	84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 20 ^m 7		Mag: -4.8 PMG: 14 ^h 55 ^m			Mag: +1.2 PMG: 7 ^h 11 ^m			Mag: -2.6 PMG: 2 ^h 48 ^m			Mag: +0.6 PMG: 10 ^h 23 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	69	01.8	136	02.9	-24	49.8	252	04.8	+3	19.2	317	45.1	+22	02.5	203	51.3	
1	84	04.3	151	03.6		49.3	267	06.1		18.7	332	47.7		02.5	218	53.4	
2	99	06.7	166	04.3		48.8	282	07.3		18.2	347	50.4		02.6	233	55.6	
3	114	09.2	181	05.0		48.4	297	08.5		17.7	2	53.1		02.6	248	57.8	
4	129	11.7	196	05.7		47.9	312	09.7		17.2	17	55.7		02.6	264	00.0	
5	144	14.1	211	06.4	-24	47.5	327	11.0	+3	16.7	32	58.4	+22	02.7	279	02.2	
6	159	16.6	226	07.1	-24	47.0	342	12.2	+3	16.1	48	01.1	+22	02.7	294	04.3	
7	174	19.0	241	07.8		46.6	357	13.4		15.6	63	03.7		02.7	309	06.5	
8	189	21.5	256	08.5		46.1	12	14.7		15.1	78	06.4		02.8	324	08.7	
9	204	24.0	271	09.2		45.7	27	15.9		14.6	93	09.0		02.8	339	10.9	
10	219	26.4	286	09.9		45.2	42	17.1		14.1	108	11.7		02.8	354	13.1	
11	234	28.9	301	10.7	-24	44.7	57	18.4	+3	13.6	123	14.4	+22	02.9	9	15.2	
12	249	31.4	316	11.4	-24	44.3	72	19.6	+3	13.1	138	17.0	+22	02.9	24	17.4	
13	264	33.8	331	12.1		43.8	87	20.9		12.6	153	19.7		02.9	39	19.6	
14	279	36.3	346	12.8		43.4	102	22.1		12.1	168	22.4		03.0	54	21.8	
15	294	38.8	1	13.5		42.9	117	23.3		11.6	183	25.0		03.0	69	24.0	
16	309	41.2	16	14.3		42.4	132	24.6		11.1	198	27.7		03.0	84	26.1	
17	324	43.7	31	15.0	-24	42.0	147	25.8	+3	10.6	213	30.4	+22	03.1	99	28.3	
18	339	46.2	46	15.7	-24	41.5	162	27.0	+3	10.1	228	33.0	+22	03.1	114	30.5	
19	354	48.6	61	16.5		41.0	177	28.3		09.6	243	35.7		03.1	129	32.7	
20	9	51.1	76	17.2		40.6	192	29.5		09.1	258	38.3		03.2	144	34.8	
21	24	53.5	91	17.9		40.1	207	30.7		08.6	273	41.0		03.2	159	37.0	
22	39	56.0	106	18.7		39.7	222	32.0		08.1	288	43.7		03.2	174	39.2	
23	54	58.5	121	19.4		39.2	237	33.2		07.6	303	46.3		03.3	189	41.4	
24	70	00.9	136	20.2	-24	38.7	252	34.4	+3	07.1	318	49.0	+22	03.3	204	43.6	
Dif	—		+7		+5		+12		-5		+27		0		+22		-1

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 49 ^m 1			Edad: 27 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 59/9 R°: 59 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	182	46.5	-21	210	41.3	-14	57.9	78	60 N	6	46	7	41	8	35	6	09		
1	197	46.3		225	07.8	-15	05.7	78	58	39	31		20	5	59	80	34		
2	212	46.0		239	34.2		13.4	77	56	34	21		8	07	50	78	44		
3	227	45.8		254	00.5		21.0	76	54	28	13		7	56	42	76	14		
4	242	45.6		268	26.7		28.6	76	52	23	7	06		46	35	75	15		
5	257	45.3	-21	282	52.8	-15	36.0	74	50	6	19	6	59	7	37	5	29		
6	272	45.1	-21	297	18.9	-15	43.4	74	45	6	08	6	45	7	18	5	15		
7	287	44.9		311	44.8		50.6	72	40	5	59	33		7	03	5	04		
8	302	44.6		326	10.7	-15	57.8	72	35	51	22		6	50	4	54	67		
9	317	44.4		340	36.4	-16	04.9	71	30	43	6	12		38	46	65	15		
10	332	44.2		355	02.1		11.9	70	20	28	5	55		19	31	63	16		
11	347	43.9	-21	9	27.7	-16	18.8	69	10 N	5	13	5	39	6	02	4	19		
12	2	43.7	-21	23	53.2	-16	25.5	67	0	4	57	5	23	5	45	4	07		
13	17	43.4		38	18.7		32.2	67	10 S	40	5	06		29	3	56	56		
14	32	43.2		52	44.0		38.8	66	20	4	19	4	47	5	12	43	54		
15	47	43.0		67	09.3		45.3	65	30	3	52	24		4	51	29	51		
16	62	42.7		81	34.5		51.7	64	35	34	4	10		39	21	50	26		
17	77	42.5	-21	95	59.6	-16	57.9	62	40	3	13	3	53	4	25	3	12		
18	92	42.3	-21	110	24.6	-17	04.1	62	45	2	46	3	33	4	09	3	01		
19	107	42.0		124	49.6		10.1	60	50	2	07	3	06	3	49	2	48		
20	122	41.8		139	14.4		16.1	60	52	1	44	2	53		39	42	42		
21	137	41.5		153	39.2		21.9	58	54	1	14		37	28		36	40		
22	152	41.3		168	04.0		27.6	57	56	0	16	2	19	15		28	39		
23	167	41.1		182	28.6		33.3	57	58	**	**	1	55	3	01	20	36		
24	182	40.8	-21	196	53.2	-17	38.7	54	60 S	**	**	1	22	2	43	2	11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 16 ^m 8		Mag: -4.9 PMG: 14 ^h 54 ^m			Mag: +1.2 PMG: 7 ^h 09 ^m			Mag: -2.6 PMG: 2 ^h 44 ^m			Mag: +0.6 PMG: 10 ^h 20 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	70	00.9	136	20.2	-24	38.7		252	34.4	+3	07.1	318	49.0	+22	03.3	204	43.6	-14	54.7
1	85	03.4	151	20.9		38.3		267	35.7		06.6	333	51.7		03.3	219	45.7		54.7
2	100	05.9	166	21.7		37.8		282	36.9		06.1	348	54.4		03.4	234	47.9		54.8
3	115	08.3	181	22.4		37.3		297	38.2		05.6	3	57.0		03.4	249	50.1		54.9
4	130	10.8	196	23.2		36.9		312	39.4		05.1	18	59.7		03.4	264	52.3		55.0
5	145	13.3	211	24.0	-24	36.4		327	40.6	+3	04.6	34	02.4	+22	03.5	279	54.5	-14	55.1
6	160	15.7	226	24.7	-24	35.9		342	41.9	+3	04.0	49	05.0	+22	03.5	294	56.6	-14	55.1
7	175	18.2	241	25.5		35.5		357	43.1		03.5	64	07.7		03.5	309	58.8		55.2
8	190	20.7	256	26.3		35.0		12	44.3		03.0	79	10.4		03.6	325	01.0		55.3
9	205	23.1	271	27.0		34.5		27	45.6		02.5	94	13.0		03.6	340	03.2		55.4
10	220	25.6	286	27.8		34.0		42	46.8		02.0	109	15.7		03.6	355	05.4		55.4
11	235	28.0	301	28.6	-24	33.6		57	48.1	+3	01.5	124	18.4	+22	03.7	10	07.5	-14	55.5
12	250	30.5	316	29.4	-24	33.1		72	49.3	+3	01.0	139	21.1	+22	03.7	25	09.7	-14	55.6
13	265	33.0	331	30.1		32.6		87	50.5	+3	00.5	154	23.7		03.7	40	11.9		55.7
14	280	35.4	346	30.9		32.2		102	51.8	+3	00.0	169	26.4		03.8	55	14.1		55.8
15	295	37.9	1	31.7		31.7		117	53.0	+2	59.5	184	29.1		03.8	70	16.3		55.8
16	310	40.4	16	32.5		31.2		132	54.3		59.0	199	31.7		03.8	85	18.4		55.9
17	325	42.8	31	33.3	-24	30.7		147	55.5	+2	58.5	214	34.4	+22	03.9	100	20.6	-14	56.0
18	340	45.3	46	34.1	-24	30.3		162	56.7	+2	58.0	229	37.1	+22	03.9	115	22.8	-14	56.1
19	355	47.8	61	34.9		29.8		177	58.0		57.5	244	39.8		03.9	130	25.0		56.1
20	10	50.2	76	35.7		29.3		192	59.2		57.0	259	42.4		04.0	145	27.2		56.2
21	25	52.7	91	36.5		28.8		208	00.5		56.5	274	45.1		04.0	160	29.3		56.3
22	40	55.2	106	37.3		28.4		223	01.7		56.0	289	47.8		04.0	175	31.5		56.4
23	55	57.6	121	38.1		27.9		238	02.9		55.5	304	50.5		04.1	190	33.7		56.5
24	71	00.1	136	38.9	-24	27.4		253	04.2	+2	55.0	319	53.1	+22	04.1	205	35.9	-14	56.5
Dif	—		+8		+5	+12		-5	+27		0	+22		-1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 28 ^d 5 PHE { 4 ^h : 60°2 12 ^h : 60°4 20 ^h : 60°5										
	PMG: 11 ^h 49 ^m 5			SD: 16°4 PMG: 11 ^h 20 ^m R°: 61 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	40.8	-21 56.4	196	53.2	-17 38.7	54	60 N	15 01	15 56	16 51	7 32 73	15 02 54	54
1	197	40.6	56.8	211	17.6	44.1	54	58	17	16 06	16 58	19 72	15 55	55
2	212	40.3	57.1	225	42.1	49.4	53	56	30	16	17 04	7 08 71	27 55	55
3	227	40.1	57.5	240	06.4	54.5	51	54	41	24	09	6 58 70	37 56	56
4	242	39.9	57.9	254	30.7	-17 59.6	51	52	15 51	31	14	50 69	46 56	56
5	257	39.6	-21 58.3	268	54.9	-18 04.5	49	50	16 01	16 38	17 19	6 42 69	15 53 58	58
6	272	39.4	-21 58.6	283	19.0	-18 09.3	48	45	16 20	16 53	17 29	6 26 67	16 10 59	59
7	287	39.1	59.0	297	43.1	13.9	46	40	35	17 05	39	12 66	24 59	59
8	302	38.9	59.4	312	07.1	18.5	46	35	16 48	16	47	6 01 65	36 60	60
9	317	38.7	-21 59.7	326	31.0	22.9	44	30	17 00	26	17 55	5 51 64	16 46 60	60
10	332	38.4	-22 00.1	340	54.9	27.2	43	20	20	43	18 11	34 63	17 04 61	61
11	347	38.2	-22 00.5	355	18.7	-18 31.3	41	10 N	17 37	17 59	18 26	5 19 62	17 20 61	61
12	2	37.9	-22 00.8	9	42.4	-18 35.4	41	0	17 53	18 15	18 41	5 05 61	17 34 62	62
13	17	37.7	01.2	24	06.1	39.3	39	10 S	18 10	32	18 59	4 52 59	17 48 63	63
14	32	37.4	01.5	38	29.7	43.0	37	20	27	18 52	19 20	37 59	18 04 63	63
15	47	37.2	01.9	52	53.3	46.7	37	30	18 48	19 15	19 48	20 57	22 63	63
16	62	37.0	02.3	67	16.8	50.2	35	35	19 00	29	20 05	11 56	32 64	64
17	77	36.7	-22 02.6	81	40.3	-18 53.6	34	40	19 14	19 46	20 27	4 00 55	18 44 64	64
18	92	36.5	-22 03.0	96	03.7	-18 56.8	32	45	19 31	20 07	20 55	3 47 54	18 58 64	64
19	107	36.2	03.3	110	27.0	-18 59.9	31	50	19 52	34	21 35	31 52	19 15 65	65
20	122	36.0	03.7	124	50.3	-19 02.9	30	52	20 01	20 48	21 58	24 51	23 65	65
21	137	35.7	04.1	139	13.6	05.8	29	54	20 13	21 04	22 30	16 50	31 66	66
22	152	35.5	04.4	153	36.8	08.5	27	56	26	23	** **	3 07 49	41 66	66
23	167	35.2	04.8	168	00.0	11.0	25	58	40	21 48	** **	2 56 48	19 53 66	66
24	182	35.0	-22 05.1	182	23.1	-19 13.5	25	60 S	20 58	22 22	** **	2 45 46	20 06 67	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 12 ^m 8		Mag: -4.9 PMG: 14 ^h 53 ^m		Mag: +1.2 PMG: 7 ^h 07 ^m		Mag: -2.6 PMG: 2 ^h 40 ^m		Mag: +0.6 PMG: 10 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	71	00.1	136	38.9	253	04.2	319	53.1	205	35.9
1	86	02.5	151	39.7	268	05.4	334	55.8	220	38.1
2	101	05.0	166	40.6	283	06.7	349	58.5	235	40.2
3	116	07.5	181	41.4	298	07.9	5	01.2	250	42.4
4	131	09.9	196	42.2	313	09.2	20	03.8	265	44.6
5	146	12.4	211	43.0	328	10.4	35	06.5	280	46.8
6	161	14.9	226	43.9	343	11.6	50	09.2	295	49.0
7	176	17.3	241	44.7	358	12.9	65	11.9	310	51.2
8	191	19.8	256	45.5	13	14.1	80	14.6	325	53.3
9	206	22.3	271	46.4	28	15.4	95	17.2	340	55.5
10	221	24.7	286	47.2	43	16.6	110	19.9	355	57.7
11	236	27.2	301	48.0	58	17.9	125	22.6	10	59.9
12	251	29.6	316	48.9	73	19.1	140	25.3	26	02.1
13	266	32.1	331	49.7	88	20.4	155	27.9	41	04.2
14	281	34.6	346	50.6	103	21.6	170	30.6	56	06.4
15	296	37.0	1	51.4	118	22.8	185	33.3	71	08.6
16	311	39.5	16	52.3	133	24.1	200	36.0	86	10.8
17	326	42.0	31	53.1	148	25.3	215	38.7	101	13.0
18	341	44.4	46	54.0	163	26.6	230	41.4	116	15.1
19	356	46.9	61	54.9	178	27.8	245	44.0	131	17.3
20	11	49.4	76	55.7	193	29.1	260	46.7	146	19.5
21	26	51.8	91	56.6	208	30.3	275	49.4	161	21.7
22	41	54.3	106	57.5	223	31.6	290	52.1	176	23.9
23	56	56.8	121	58.3	238	32.8	305	54.8	191	26.1
24	71	59.2	136	59.2	253	34.1	320	57.4	206	28.2
Dif	—		+8	+5	+12	-5	+27	0	+22	-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 49 ^m 9				Edad: 29 ^d 5 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'8 R°: 62 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	35.0	-22	05.1	182	23.1	-19	13.5	60 N	6 49	7 44	8 39	8 45	59		15 56	70	
1	197	34.7		05.5	196	46.2	41	15.8	58	42	34	23	31	60		16 10	69	
2	212	34.5		05.8	211	09.2	40	17.9	56	36	24	8 10	19	60		22	69	
3	227	34.3		06.2	225	32.2	40	19.9	54	31	16	7 59	8 08	61		33	68	
4	242	34.0		06.5	239	55.2	40	21.8	52	26	09	48	7 59	61		42	68	
5	257	33.8	-22	06.9	254	18.2	40	-19 23.5	50	6 21	7 02	7 39	7 51	61		16 51	67	
6	272	33.5	-22	07.2	268	41.1	39	-19 25.1	45	6 10	6 47	7 20	7 33	61		17 09	66	
7	287	33.3		07.6	283	03.9	38	26.6	40	6 01	34	7 05	18	62		23	66	
8	302	33.0		07.9	297	26.8	39	27.9	35	5 52	24	6 51	7 06	62		36	64	
9	317	32.8		08.3	311	49.6	38	29.1	30	44	6 14	40	6 55	62		17 46	65	
10	332	32.5		08.6	326	12.4	38	30.1	20	29	5 56	20	37	62		18 05	63	
11	347	32.3	-22	09.0	340	35.2	38	-19 31.0	10 N	5 14	5 40	6 03	6 21	62		18 21	63	
12	2	32.0	-22	09.3	354	57.9	37	-19 31.7	0	4 58	5 24	5 46	6 06	63		18 36	62	
13	17	31.8		09.7	9	20.6	37	32.3	10 S	40	5 07	30	5 51	63		18 51	61	
14	32	31.5		10.0	23	43.3	37	32.7	20	4 19	4 48	5 12	36	62		19 07	60	
15	47	31.3		10.4	38	06.0	37	33.0	30	3 51	24	4 51	17	63		25	60	
16	62	31.0		10.7	52	28.7	37	33.2	35	34	4 10	39	5 07	62		36	59	
17	77	30.8	-22	11.1	66	51.4	37	-19 33.2	40	3 12	3 53	4 25	4 55	62		19 48	58	
18	92	30.5	-22	11.4	81	14.0	36	-19 33.1	45	2 44	3 32	4 08	4 41	62		20 02	58	
19	107	30.3		11.7	95	36.7	37	32.8	50	2 04	3 05	3 47	23	63		20 56		
20	122	30.0		12.1	109	59.3	36	32.4	52	1 41	2 51	38	15	63		28	56	
21	137	29.8		12.4	124	22.0	37	31.8	54	1 09	35	26	4 06	63		37	55	
22	152	29.5		12.8	138	44.6	36	31.1	56	** **	2 16	3 13	3 56	62		47	55	
23	167	29.3		13.1	153	07.3	37	30.2	58	** **	1 51	2 58	44	63		20 59	53	
24	182	29.0	-22	13.4	167	29.9	36	-19 29.2	60 S	** **	1 17	2 41	3 31	62		21 13	52	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 08 ^m 9		Mag: -4.9 PMG: 14 ^h 51 ^m				Mag: +1.2 PMG: 7 ^h 05 ^m				Mag: -2.6 PMG: 2 ^h 36 ^m				Mag: +0.6 PMG: 10 ^h 13 ^m			
h	°	'	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
0	71	59.2	136	59.2	-24	15.8	253	34.1	+2	43.0	320	57.4	+22	04.9	206	28.2	-14	58.4
1	87	01.7	152	00.1		15.3	268	35.3		42.5	336	00.1		05.0	221	30.4		58.5
2	102	04.1	167	01.0		14.9	283	36.6		42.0	351	02.8		05.0	236	32.6		58.5
3	117	06.6	182	01.9		14.4	298	37.8		41.5	6	05.5		05.0	251	34.8		58.6
4	132	09.1	197	02.8		13.9	313	39.0		41.0	21	08.2		05.1	266	37.0		58.7
5	147	11.5	212	03.6	-24	13.4	328	40.3	+2	40.5	36	10.9	+22	05.1	281	39.1	-14	58.8
6	162	14.0	227	04.5	-24	12.9	343	41.5	+2	40.0	51	13.6	+22	05.2	296	41.3	-14	58.8
7	177	16.5	242	05.4		12.4	358	42.8		39.5	66	16.2		05.2	311	43.5		58.9
8	192	18.9	257	06.3		11.9	373	44.0		39.0	81	18.9		05.2	326	45.7		59.0
9	207	21.4	272	07.2		11.4	388	45.3		38.5	96	21.6		05.3	341	47.9		59.1
10	222	23.9	287	08.1		10.9	403	46.5		38.0	111	24.3		05.3	356	50.1		59.1
11	237	26.3	302	09.0	-24	10.4	418	47.8	+2	37.5	126	27.0	+22	05.3	11	52.2	-14	59.2
12	252	28.8	317	10.0	-24	10.0	73	49.0	+2	37.0	141	29.7	+22	05.4	26	54.4	-14	59.3
13	267	31.3	332	10.9		09.5	88	50.3		36.5	156	32.4		05.4	41	56.6		59.4
14	282	33.7	347	11.8		09.0	103	51.5		36.0	171	35.0		05.4	56	58.8		59.5
15	297	36.2	2	12.7		08.5	118	52.8		35.5	186	37.7		05.5	72	01.0		59.5
16	312	38.6	17	13.6		08.0	133	54.0		35.0	201	40.4		05.5	87	03.1		59.6
17	327	41.1	32	14.5	-24	07.5	148	55.3	+2	34.5	216	43.1	+22	05.5	102	05.3	-14	59.7
18	342	43.6	47	15.5	-24	07.0	163	56.5	+2	34.0	231	45.8	+22	05.6	117	07.5	-14	59.8
19	357	46.0	62	16.4		06.5	178	57.8		33.5	246	48.5		05.6	132	09.7		59.8
20	12	48.5	77	17.3		06.0	193	59.0		33.0	261	51.2		05.7	147	11.9	-14	59.9
21	27	51.0	92	18.3		05.5	209	00.3		32.5	276	53.9		05.7	162	14.1	-15	00.0
22	42	53.4	107	19.2		05.0	224	01.5		32.0	291	56.6		05.7	177	16.2	-15	00.1
23	57	55.9	122	20.2		04.5	239	02.8		31.5	306	59.2		05.8	192	18.4		00.1
24	72	58.4	137	21.1	-24	04.0	254	04.0	+2	31.0	322	01.9	+22	05.8	207	20.6	-15	00.2
Dif	—		+9		+5		+12		-5		+27		0		+22		-1	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 50 ^m 3			Edad: 30 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 60'9 20 ^h : 60'9 R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	29.0	-22	13.4	167	29.9	-19	29.2	60 N	14 59	15 54	16 50	9 44 45	17 06 82	
1	197	28.8		13.8	181	52.5 ³⁶		28.1 ¹¹	58	15 15	16 05	16 57	31 46	19 80	
2	212	28.5		14.1	196	15.2 ³⁷		26.8 ¹³	56	28	14	17 03	19 48	31 78	
3	227	28.3		14.4	210	37.8 ³⁶		25.4 ¹⁴	54	40	23	08	09 49	41 76	
4	242	28.0		14.8	225	00.5 ³⁷		23.8 ¹⁶	52	15 50	30	13	9 00 50	50 75	
5	257	27.7	-22	15.1	239	23.2 ³⁷	-19	22.0 ¹⁸	50	16 00	16 37	17 18	8 52 51	17 58 74	
6	272	27.5	-22	15.4	253	45.9 ³⁷	-19	20.2 ¹⁸	45	16 19	16 52	17 29	8 34 53	18 15 71	
7	287	27.2		15.8	268	08.6 ³⁷		18.2 ²⁰	40	35	17 05	39	20 55	29 69	
8	302	27.0		16.1	282	31.3 ³⁷		16.0 ²²	35	16 48	16	47	8 08 56	40 69	
9	317	26.7		16.4	296	54.0 ³⁷		13.7 ²³	30	17 00	26	17 56	7 57 57	18 51 66	
10	332	26.5		16.8	311	16.8 ³⁸		11.3 ²⁴	20	20	17 44	18 11	39 59	19 08 65	
11	347	26.2	-22	17.1	325	39.6 ³⁸	-19	08.7 ²⁶	10 N	17 37	18 00	18 26	7 23 60	19 24 62	
12	2	26.0	-22	17.4	340	02.4 ³⁸	-19	06.0 ²⁷	0	17 54	18 16	18 42	7 09 61	19 38 61	
13	17	25.7		17.7	354	25.2 ³⁸		03.1 ²⁹	10 S	18 11	34	19 00	6 54 63	19 52 59	
14	32	25.5		18.1	8	48.0 ³⁸	-19	00.1 ³⁰	20	29	18 53	22	38 64	20 07 57	
15	47	25.2		18.4	23	10.9 ³⁹	-18	56.9 ³²	30	18 50	19 17	19 50	20 66	25 54	
16	62	24.9		18.7	37	33.8 ³⁹		53.7 ³⁵	35	19 02	31	20 07	6 09 67	35 53	
17	77	24.7	-22	19.0	51	56.8 ⁴⁰	-18	50.2 ³⁵	40	19 16	19 48	20 29	5 57 68	20 46 51	
18	92	24.4	-22	19.4	66	19.8 ⁴⁰	-18	46.7 ³⁵	45	19 33	20 10	20 58	5 43 69	21 00 49	
19	107	24.2		19.7	80	42.8 ⁴⁰		43.0 ³⁷	50	19 54	37	21 39	26 71	16 47	
20	122	23.9		20.0	95	05.8 ⁴⁰		39.1 ³⁹	52	20 04	20 51	22 03	18 71	24 45	
21	137	23.7		20.3	109	28.9 ⁴¹		35.2 ³⁹	54	16	21 08	22 36	5 09 72	32 44	
22	152	23.4		20.7	123	52.1 ⁴²		31.1 ⁴¹	56	29	27	** **	4 58 74	42 42	
23	167	23.1		21.0	138	15.2 ⁴¹		26.8 ⁴³	58	20 44	21 53	** **	47 74	21 52 41	
24	182	22.9	-22	21.3	152	38.5 ⁴³	-18	22.4 ⁴⁴	60 S	21 02	22 29	** **	4 33 76	22 05 38	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 05 ^m 0		Mag: -4.9 PMG: 14 ^h 50 ^m		Mag: +1.2 PMG: 7 ^h 03 ^m		Mag: -2.6 PMG: 2 ^h 31 ^m		Mag: +0.6 PMG: 10 ^h 09 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	72	58.4	137	21.1	254	04.0	322	01.9	207	20.6					
1	88	00.8	152	22.0	269	05.3	337	04.6	222	22.8					
2	103	03.3	167	23.0	284	06.6	352	07.3	237	25.0					
3	118	05.8	182	24.0	299	07.8	7	10.0	252	27.2					
4	133	08.2	197	24.9	314	09.1	22	12.7	267	29.3					
5	148	10.7	212	25.9	329	10.3	37	15.4	282	31.5					
6	163	13.1	227	26.8	344	11.6	52	18.1	297	33.7					
7	178	15.6	242	27.8	359	12.8	67	20.8	312	35.9					
8	193	18.1	257	28.8	14	14.1	82	23.5	327	38.1					
9	208	20.5	272	29.7	29	15.3	97	26.2	342	40.3					
10	223	23.0	287	30.7	44	16.6	112	28.9	357	42.4					
11	238	25.5	302	31.7	59	17.8	127	31.6	12	44.6					
12	253	27.9	317	32.7	74	19.1	142	34.2	27	46.8					
13	268	30.4	332	33.6	89	20.3	157	36.9	42	49.0					
14	283	32.9	347	34.6	104	21.6	172	39.6	57	51.2					
15	298	35.3	2	35.6	119	22.9	187	42.3	72	53.4					
16	313	37.8	17	36.6	134	24.1	202	45.0	87	55.5					
17	328	40.3	32	37.6	149	25.4	217	47.7	102	57.7					
18	343	42.7	47	38.6	164	26.6	232	50.4	117	59.9					
19	358	45.2	62	39.6	179	27.9	247	53.1	133	02.1					
20	13	47.6	77	40.6	194	29.1	262	55.8	148	04.3					
21	28	50.1	92	41.6	209	30.4	277	58.5	163	06.5					
22	43	52.6	107	42.6	224	31.7	293	01.2	178	08.6					
23	58	55.0	122	43.6	239	32.9	308	03.9	193	10.8					
24	73	57.5	137	44.6	254	34.2	323	06.6	208	13.0					
Dif	—		+10		+5		+27		0						
									+22						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 50 ^m 7			Edad: 2 ^d 0 PHE { SD: 16'6 PMG: 14 ^h 24 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	182	22.9	-22	21.3	152	38.5	-18	22.4	45	60 N	6 52	7 47	8 43	10 29	32	18 28	87
1	197	22.6		21.6	167	01.7	42	17.9	45	58	45	37	27	17 35	39	85	
2	212	22.4		21.9	181	25.0	43	13.3	46	56	39	27	13	10 07	37	49	82
3	227	22.1		22.3	195	48.4	44	08.5	48	54	33	19	8 01	9 58	39	18 57	80
4	242	21.8		22.6	210	11.8	44	-18	03.6	49	52	28	11	7 51	50	41	19 05
5	257	21.6	-22	22.9	224	35.3	45	-17	58.6	50	50	6 23	7 04	7 42	9 43	42	19 12
6	272	21.3	-22	23.2	238	58.8	45	-17	53.5	51	45	6 12	6 49	7 22	9 27	46	19 26
7	287	21.1		23.5	253	22.3	45	48.2	53	40	6 03	36	7 07	15 47	38	71	
8	302	20.8		23.8	267	45.9	46	42.8	54	35	5 54	25	6 53	9 04	49	49	68
9	317	20.6		24.1	282	09.6	47	37.2	56	30	46	6 15	41	8 54	52	19 57	67
10	332	20.3		24.5	296	33.3	47	31.6	56	20	30	5 57	21	38 54	20 13	63	
11	347	20.0	-22	24.8	310	57.1	48	-17	25.8	58	10 N	5 15	5 41	6 04	8 23	57	20 26
12	2	19.8	-22	25.1	325	21.0	49	-17	19.9	59	0	4 59	5 25	5 47	8 10	59	20 39
13	17	19.5		25.4	339	44.9	49	13.9	60	10 S	41	5 07	30	7 57	61	20 51	55
14	32	19.2		25.7	354	08.8	49	07.8	61	20	4 19	4 48	5 12	42 64	21 04	52	
15	47	19.0		26.0	8	32.9	51	-17	01.5	63	30	3 51	24	4 51	26 67	19 49	
16	62	18.7		26.3	22	57.0	51	-16	55.1	64	35	34	4 10	39	16 69	28 46	
17	77	18.5	-22	26.6	37	21.1	51	-16	48.6	65	40	3 12	3 52	4 25	7 05	71	21 37
18	92	18.2	-22	26.9	51	45.3	52	-16	42.0	66	45	2 43	3 31	4 08	6 52	73	21 49
19	107	17.9		27.2	66	09.6	53	35.3	67	50	2 02	3 03	3 47	37 75	22 03	38	
20	122	17.7		27.5	80	34.0	54	28.5	68	52	1 38	2 49	36	29 77	09 37		
21	137	17.4		27.8	94	58.4	54	21.6	69	54	1 04	33	25	21 79	16 35		
22	152	17.1		28.1	109	22.9	55	14.5	71	56	** **	2 13	3 12	12 80	24 33		
23	167	16.9		28.4	123	47.4	55	07.4	71	58	** **	1 48	2 57	6 01	83	33 31	
24	182	16.6	-22	28.7	138	12.1	57	-16	00.1	73	60 S	** **	1 11	2 38	5 49	85	22 43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 19 ^h 01 ^m 0		Mag: -4.9 PMG: 14 ^h 48 ^m		Mag: +1.2 PMG: 7 ^h 01 ^m		Mag: -2.6 PMG: 2 ^h 27 ^m		Mag: +0.6 PMG: 10 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	73	57.5	137	44.6	-23	52.0	254	34.2	+2	19.1	323	06.6	+22	06.7	208	13.0	-15	02.0
1	89	00.0	152	45.7		51.5	269	35.4		18.6	338	09.3		06.7	223	15.2		02.1
2	104	02.4	167	46.7		51.0	284	36.7		18.1	353	12.0		06.8	238	17.4		02.2
3	119	04.9	182	47.7		50.4	299	37.9		17.6	8	14.7		06.8	253	19.6		02.3
4	134	07.4	197	48.7		49.9	314	39.2		17.1	23	17.4		06.8	268	21.8		02.3
5	149	09.8	212	49.8	-23	49.4	329	40.5	+2	16.6	38	20.1	+22	06.9	283	23.9	-15	02.4
6	164	12.3	227	50.8	-23	48.9	344	41.7	+2	16.1	53	22.8	+22	06.9	298	26.1	-15	02.5
7	179	14.8	242	51.8		48.4	359	43.0		15.7	68	25.5		06.9	313	28.3		02.6
8	194	17.2	257	52.9		47.9	14	44.2		15.2	83	28.2		07.0	328	30.5		02.6
9	209	19.7	272	53.9		47.4	29	45.5		14.7	98	30.9		07.0	343	32.7		02.7
10	224	22.1	287	55.0		46.9	44	46.8		14.2	113	33.6		07.1	358	34.9		02.8
11	239	24.6	302	56.0	-23	46.4	59	48.0	+2	13.7	128	36.3	+22	07.1	13	37.0	-15	02.9
12	254	27.1	317	57.1	-23	45.9	74	49.3	+2	13.2	143	39.0	+22	07.1	28	39.2	-15	02.9
13	269	29.5	332	58.1		45.4	89	50.5		12.7	158	41.7		07.2	43	41.4		03.0
14	284	32.0	347	59.2		44.8	104	51.8		12.2	173	44.4		07.2	58	43.6		03.1
15	299	34.5	3	00.2		44.3	119	53.1		11.7	188	47.1		07.2	73	45.8		03.2
16	314	36.9	18	01.3		43.8	134	54.3		11.2	203	49.8		07.3	88	48.0		03.2
17	329	39.4	33	02.4	-23	43.3	149	55.6	+2	10.7	218	52.5	+22	07.3	103	50.2	-15	03.3
18	344	41.9	48	03.4	-23	42.8	164	56.8	+2	10.2	233	55.2	+22	07.4	118	52.3	-15	03.4
19	359	44.3	63	04.5		42.3	179	58.1		09.7	248	57.9		07.4	133	54.5		03.5
20	14	46.8	78	05.6		41.8	194	59.4		09.2	264	00.6		07.4	148	56.7		03.5
21	29	49.3	93	06.6		41.3	210	00.6		08.7	279	03.3		07.5	163	58.9		03.6
22	44	51.7	108	07.7		40.7	225	01.9		08.2	294	06.0		07.5	179	01.1		03.7
23	59	54.2	123	08.8		40.2	240	03.2		07.8	309	08.7		07.5	194	03.3		03.8
24	74	56.6	138	09.9	-23	39.7	255	04.4	+2	07.3	324	11.5	+22	07.6	209	05.5	-15	03.8
Dif	—		+11		+5		+13		-5		+27		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 51 ^m 1			Edad: 3 ^d 0 SD: 16:5 PMG: 15 ^h 23 ^m	PHE { 4 ^h : 60:5 12 ^h : 60:3 20 ^h : 60:1 R°: 55 ^m									
	hG ☉	Dec	hG ☾			Dif			Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	16.6	-22	28.7	138	12.1	-16 00.1	60 N	14 57	15 53	16 49	11 01 25	19 55 89	
1	197	16.4		29.0	152	36.8	57 -15 52.8	58	15 14	16 04	16 56	10 52 27	20 04 85	
2	212	16.1		29.3	167	01.5	57 45.3	56	27	13	17 02	44 30	11 83	
3	227	15.8		29.6	181	26.4	59 37.7	54	39	22	08	37 32	17 8	
4	242	15.6		29.9	195	51.3	59 30.0	52	50	30	13	31 33	23 79	
5	257	15.3	-22	30.2	210	16.3	60 -15 22.3	50	15 59	16 37	17 18	10 25 35	20 29 76	
6	272	15.0	-22	30.5	224	41.3	60 -15 14.4	45	16 19	16 52	17 29	10 13 38	20 40 73	
7	287	14.8		30.8	239	06.5	62 -15 06.4	40	35	17 05	39	10 02 42	49 70	
8	302	14.5		31.1	253	31.7	62 -14 58.4	35	16 48	16	48	9 53 45	20 57 67	
9	317	14.2		31.4	267	57.0	63 50.2	30	17 00	26	17 56	46 46	21 04 65	
10	332	14.0		31.7	282	22.3	63 42.0	20	20	17 44	18 11	32 50	16 61	
11	347	13.7	-22	32.0	296	47.7	64 -14 33.6	10 N	17 38	18 01	18 27	9 20 53	21 27 57	
12	2	13.4	-22	32.3	311	13.3	66 -14 25.2	0	17 55	18 17	18 43	9 09 56	21 36 55	
13	17	13.2		32.6	325	38.8	65 16.7	10 S	18 12	35	19 02	8 58 59	46 51	
14	32	12.9		32.9	340	04.5	67 -14 08.1	20	30	18 54	23	46 62	21 56 48	
15	47	12.6		33.2	354	30.2	67 -13 59.4	30	18 51	19 18	19 51	33 65	22 08 44	
16	62	12.4		33.5	8	56.0	68 50.6	35	19 04	33	20 09	25 68	14 42	
17	77	12.1	-22	33.7	23	21.9	69 -13 41.7	40	19 18	19 50	20 31	8 16 70	22 22 39	
18	92	11.8	-22	34.0	37	47.9	70 -13 32.8	45	19 35	20 12	21 00	8 05 74	22 31 36	
19	107	11.6		34.3	52	13.9	70 23.8	50	19 57	40	21 42	7 52 77	41 33	
20	122	11.3		34.6	66	40.0	71 14.7	52	20 07	20 54	22 07	46 79	46 31	
21	137	11.0		34.9	81	06.2	72 -13 05.5	54	18	21 11	22 43	40 80	51 30	
22	152	10.8		35.2	95	32.5	73 -12 56.2	56	32	31	** **	32 83	22 57 27	
23	167	10.5		35.5	109	58.9	74 46.9	58	20 47	21 58	** **	24 85	23 04 25	
24	182	10.2	-22	35.7	124	25.3	74 -12 37.5	60 S	21 06	22 36	** **	7 14 89	23 11 22	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 57 ^m 1		Mag: -4.9 PMG: 14 ^h 46 ^m		Mag: +1.2 PMG: 6 ^h 59 ^m		Mag: -2.6 PMG: 2 ^h 23 ^m		Mag: +0.6 PMG: 10 ^h 02 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	74	56.6	138	09.9	255	04.4	324	11.5	209	05.5				
1	89	59.1	153	11.0	270	05.7	339	14.2	224	07.6				
2	105	01.6	168	12.1	285	06.9	354	16.9	239	09.8				
3	120	04.0	183	13.2	300	08.2	9	19.6	254	12.0				
4	135	06.5	198	14.3	315	09.5	24	22.3	269	14.2				
5	150	09.0	213	15.4	330	10.7	39	25.0	284	16.4				
6	165	11.4	228	16.5	345	12.0	54	27.7	299	18.6				
7	180	13.9	243	17.6	0	13.3	69	30.4	314	20.8				
8	195	16.4	258	18.7	15	14.5	84	33.1	329	22.9				
9	210	18.8	273	19.8	30	15.8	99	35.8	344	25.1				
10	225	21.3	288	20.9	45	17.1	114	38.5	359	27.3				
11	240	23.7	303	22.1	-23	34.0	60	18.3	14	29.5				
12	255	26.2	318	23.2	-23	33.5	75	19.6	29	31.7				
13	270	28.7	333	24.3	33.0	20.9	90	20.9	44	33.9				
14	285	31.1	348	25.5	32.5	22.1	105	22.1	59	36.1				
15	300	33.6	3	26.6	32.0	23.4	120	23.4	74	38.2				
16	315	36.1	18	27.7	31.4	24.7	135	24.7	89	40.4				
17	330	38.5	33	28.9	-23	30.9	150	25.9	104	42.6				
18	345	41.0	48	30.0	-23	30.4	165	27.2	119	44.8				
19	0	43.5	63	31.2	29.9	28.5	180	28.5	134	47.0				
20	15	45.9	78	32.3	29.4	29.7	195	29.7	149	49.2				
21	30	48.4	93	33.5	28.8	31.0	210	31.0	164	51.4				
22	45	50.9	108	34.6	28.3	32.3	225	32.3	179	53.5				
23	60	53.3	123	35.8	27.8	33.5	240	33.5	194	55.7				
24	75	55.8	138	36.9	-23	27.3	255	34.8	209	57.9				
Dif	—		+11		+5		+13		+27					
					-5				0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 51 ^m 5				Edad: 4 ^d 0 PHE { 4 ^h : 59/9 12 ^h : 59/7 20 ^h : 59/5 Rº: 52 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	10.2	-22	35.7	124	25.3	-12	37.5	60 N	6 54	7 50	8 46	11 26	19	21 24	86		
1	197	10.0		36.0	138	51.8	75	28.0	58	47	39	30	19	23	29	84		
2	212	09.7		36.3	153	18.4	76	18.5	56	41	30	16	14	24	34	81		
3	227	09.4		36.6	167	45.0	76	-12 08.9	54	35	21	8 04	09	27	38	79		
4	242	09.2		36.9	182	11.7	77	-11 59.2	52	30	13	7 54	04	29	42	77		
5	257	08.9	-22	37.1	196	38.6	79	-11 49.4	50	6 25	7 06	7 44	11 00	31	21 45	76		
6	272	08.6	-22	37.4	211	05.4	78	-11 39.6	45	6 14	6 51	7 24	10 51	34	21 53	71		
7	287	08.3		37.7	225	32.4	80	29.7	40	6 04	38	7 08	44	37	21 59	68		
8	302	08.1		38.0	239	59.4	80	19.8	35	5 55	27	6 55	38	39	22 04	66		
9	317	07.8		38.2	254	26.5	81	-11 09.8	30	47	6 17	43	32	42	09	63		
10	332	07.5		38.5	268	53.7	82	-10 59.7	20	31	5 59	22	22	46	17	59		
11	347	07.3	-22	38.8	283	21.0	83	-10 49.6	10 N	5 16	5 42	6 05	10 13	50	22 24	55		
12	2	07.0	-22	39.1	297	48.3	83	-10 39.4	0	4 59	5 25	5 48	10 05	53	22 31	51		
13	17	06.7		39.3	312	15.7	84	29.2	10 S	41	5 08	31	9 57	56	37	48		
14	32	06.4		39.6	326	43.2	85	18.9	20	4 19	4 48	5 13	48	60	44	45		
15	47	06.2		39.9	341	10.7	85	-10 08.6	30	3 51	24	4 51	38	64	52	40		
16	62	05.9		40.2	355	38.4	87	-9 58.2	35	33	4 10	39	33	66	22 56	38		
17	77	05.6	-22	40.4	10	06.1	87	-9 47.8	40	3 11	3 52	4 25	9 26	69	23 01	36		
18	92	05.4	-22	40.7	24	33.8	87	-9 37.3	45	2 42	3 31	4 07	9 19	72	23 07	32		
19	107	05.1		41.0	39	01.7	89	26.8	50	2 00	3 02	3 46	09	76	14	29		
20	122	04.8		41.2	53	29.6	89	16.2	52	1 35	2 48	36	05	78	17	27		
21	137	04.5		41.5	67	57.6	90	-9 05.6	54	1 00	31	24	9 00	80	21	25		
22	152	04.3		41.8	82	25.6	90	-8 54.9	56	** ** *	2 11	3 11	8 55	82	24	23		
23	167	04.0		42.0	96	53.7	91	44.2	58	** ** *	1 45	2 55	49	85	29	20		
24	182	03.7	-22	42.3	111	21.9	92	-8 33.5	60 S	** ** *	1 06	2 36	8 43	87	23 33	19		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 53 ^m 2		Mag: -4.9 PMG: 14 ^h 44 ^m				Mag: +1.2 PMG: 6 ^h 57 ^m				Mag: -2.6 PMG: 2 ^h 18 ^m				Mag: +0.6 PMG: 9 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	75	55.8	138	36.9	-23	27.3	255	34.8	+1	55.5	325	16.5	+22	08.5	209	57.9	-15	05.6
1	90	58.2	153	38.1		26.8	270	36.1		55.0	340	19.2		08.5	225	00.1		05.7
2	106	00.7	168	39.3		26.2	285	37.3		54.5	355	21.9		08.6	240	02.3		05.8
3	121	03.2	183	40.4		25.7	300	38.6		54.0	10	24.6		08.6	255	04.5		05.9
4	136	05.6	198	41.6		25.2	315	39.9		53.5	25	27.3		08.7	270	06.7		05.9
5	151	08.1	213	42.8	-23	24.7	330	41.1	+1	53.0	40	30.0	+22	08.7	285	08.9	-15	06.0
6	166	10.6	228	44.0	-23	24.1	345	42.4	+1	52.5	55	32.7	+22	08.7	300	11.0	-15	06.1
7	181	13.0	243	45.2		23.6	0	43.7		52.0	70	35.5		08.8	315	13.2		06.2
8	196	15.5	258	46.4		23.1	15	44.9		51.5	85	38.2		08.8	330	15.4		06.2
9	211	18.0	273	47.5		22.6	30	46.2		51.1	100	40.9		08.8	345	17.6		06.3
10	226	20.4	288	48.7		22.0	45	47.5		50.6	115	43.6		08.9	0	19.8		06.4
11	241	22.9	303	49.9	-23	21.5	60	48.8	+1	50.1	130	46.3	+22	08.9	15	22.0	-15	06.4
12	256	25.4	318	51.1	-23	21.0	75	50.0	+1	49.6	145	49.0	+22	09.0	30	24.2	-15	06.5
13	271	27.8	333	52.3		20.5	90	51.3		49.1	160	51.8		09.0	45	26.4		06.6
14	286	30.3	348	53.6		19.9	105	52.6		48.6	175	54.5		09.0	60	28.5		06.7
15	301	32.7	3	54.8		19.4	120	53.8		48.1	190	57.2		09.1	75	30.7		06.7
16	316	35.2	18	56.0		18.9	135	55.1		47.6	205	59.9		09.1	90	32.9		06.8
17	331	37.7	33	57.2	-23	18.4	150	56.4	+1	47.1	221	02.6	+22	09.2	105	35.1	-15	06.9
18	346	40.1	48	58.4	-23	17.8	165	57.7	+1	46.6	236	05.3	+22	09.2	120	37.3	-15	07.0
19	1	42.6	63	59.6		17.3	180	58.9		46.2	251	08.1		09.2	135	39.5		07.0
20	16	45.1	79	00.9		16.8	196	00.2		45.7	266	10.8		09.3	150	41.7		07.1
21	31	47.5	94	02.1		16.3	211	01.5		45.2	281	13.5		09.3	165	43.9		07.2
22	46	50.0	109	03.3		15.7	226	02.8		44.7	296	16.2		09.4	180	46.0		07.3
23	61	52.5	124	04.6		15.2	241	04.0		44.2	311	18.9		09.4	195	48.2		07.3
24	76	54.9	139	05.8	-23	14.7	256	05.3	+1	43.7	326	21.7	+22	09.4	210	50.4	-15	07.4
Dif	—		+12		+5		+13		-5		+27		0		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 52 ^m 0			Edad: 5 ^d 0 SD: 16'2 PMG: 17 ^h 10 ^m					PHE { 4 ^h : 59'3 12 ^h : 59'0 20 ^h : 58'8 R°: 50 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	182	03.7	-22	42.3	111	21.9	-8	33.5	60 N	14 56	15 52	16 48	11 45	17	22 50	85		
1	197	03.4		42.6	125	50.2	93	22.7	58	15 12	16 03	16 55	42	19	53	81		
2	212	03.2		42.8	140	18.5	93	11.9	56	26	13	17 01	38	22	55	79		
3	227	02.9		43.1	154	46.9	94	-8	01.0	54	38	21	07	36	23	57	77	
4	242	02.6		43.3	169	15.3	94	-7	50.1	52	49	29	13	33	26	22	59	75
5	257	02.4	-22	43.6	183	43.8	95	-7	39.2	50	15 58	16 36	17 18	11 31	27	23	01	73
6	272	02.1	-22	43.9	198	12.4	96	-7	28.3	45	16 18	16 52	17 29	11 25	31	23	04	69
7	287	01.8		44.1	212	41.1	97	17.3	40	35	17 05	39	21	34		07	66	
8	302	01.5		44.4	227	09.8	97	-7	06.3	35	16 48	16	48	17	37	10	63	
9	317	01.3		44.6	241	38.6	98	-6	55.2	30	17 00	26	17 56	14	39	12	61	
10	332	01.0		44.9	256	07.4	98	44.1	20	21	17 45	18 12	08	43		16	56	
11	347	00.7	-22	45.1	270	36.3	99	-6	33.0	10 N	17 39	18 01	18 28	11 03	47	23	19	53
12	2	00.4	-22	45.4	285	05.3	100	-6	21.9	0	17 56	18 18	18 44	10 58	50	23	22	50
13	17	00.1		45.7	299	34.3	100	-6	10.8	10 S	18 13	36	19 03	53	54	25	46	
14	31	59.9		45.9	314	03.4	101	-5	59.6	20	31	18 56	25	48	58	29	42	
15	46	59.6		46.2	328	32.5	101	48.4	30	18 53	19 20	19 53	42	62		32	39	
16	61	59.3		46.4	343	01.7	102	37.2	35	19 05	35	20 11	39	64		34	36	
17	76	59.0	-22	46.7	357	31.0	103	-5	26.0	40	19 20	19 52	20 33	10 35	67	23	37	33
18	91	58.8	-22	46.9	12	00.3	103	-5	14.7	45	19 37	20 14	21 03	10 31	70	23	39	31
19	106	58.5		47.2	26	29.6	103	-5	03.4	50	19 59	43	21 46	25	74	43	26	
20	121	58.2		47.4	40	59.0	104	-4	52.2	52	20 09	20 57	22 11	23	76	44	25	
21	136	57.9		47.7	55	28.5	105	40.9	54	21	21 14	22 49	20	78		46	23	
22	151	57.7		47.9	69	58.0	105	29.6	56	35	21 35	** **	17	80		47	21	
23	166	57.4		48.2	84	27.6	106	18.2	58	20 51	22 02	** **	14	82		49	19	
24	181	57.1	-22	48.4	98	57.3	107	-4	06.9	60 S	21 10	22 43	** **	10 10	85	23	52	16
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 49 ^m 2		Mag: -4.9 PMG: 14 ^h 42 ^m			Mag: +1.2 PMG: 6 ^h 55 ^m			Mag: -2.6 PMG: 2 ^h 14 ^m			Mag: +0.6 PMG: 9 ^h 55 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	76	54.9	139	05.8	-23	14.7	256	05.3	+1	43.7	326	21.7	+22	09.4	210	50.4	-15	07.4
1	91	57.4	154	07.1		14.1	271	06.6		43.2	341	24.4		09.5	225	52.6		07.5
2	106	59.9	169	08.3		13.6	286	07.8		42.7	356	27.1		09.5	240	54.8		07.6
3	122	02.3	184	09.6		13.1	301	09.1		42.3	11	29.8		09.6	255	57.0		07.6
4	137	04.8	199	10.8		12.6	316	10.4		41.8	26	32.5		09.6	270	59.2		07.7
5	152	07.2	214	12.1	-23	12.0	331	11.7	+1	41.3	41	35.3	+22	09.6	286	01.4	-15	07.8
6	167	09.7	229	13.3	-23	11.5	346	12.9	+1	40.8	56	38.0	+22	09.7	301	03.5	-15	07.8
7	182	12.2	244	14.6		11.0	1	14.2		40.3	71	40.7		09.7	316	05.7		07.9
8	197	14.6	259	15.9		10.4	16	15.5		39.8	86	43.4		09.8	331	07.9		08.0
9	212	17.1	274	17.1		09.9	31	16.8		39.3	101	46.1		09.8	346	10.1		08.1
10	227	19.6	289	18.4		09.4	46	18.1		38.8	116	48.9		09.8	1	12.3		08.1
11	242	22.0	304	19.7	-23	08.8	61	19.3	+1	38.4	131	51.6	+22	09.9	16	14.5	-15	08.2
12	257	24.5	319	21.0	-23	08.3	76	20.6	+1	37.9	146	54.3	+22	09.9	31	16.7	-15	08.3
13	272	27.0	334	22.2		07.8	91	21.9		37.4	161	57.0		09.9	46	18.9		08.4
14	287	29.4	349	23.5		07.3	106	23.2		36.9	176	59.8		10.0	61	21.1		08.4
15	302	31.9	4	24.8		06.7	121	24.4		36.4	192	02.5		10.0	76	23.2		08.5
16	317	34.3	19	26.1		06.2	136	25.7		35.9	207	05.2		10.1	91	25.4		08.6
17	332	36.8	34	27.4	-23	05.7	151	27.0	+1	35.4	222	07.9	+22	10.1	106	27.6	-15	08.7
18	347	39.3	49	28.7	-23	05.1	166	28.3	+1	35.0	237	10.6	+22	10.1	121	29.8	-15	08.7
19	2	41.7	64	30.0		04.6	181	29.5		34.5	252	13.4		10.2	136	32.0		08.8
20	17	44.2	79	31.3		04.1	196	30.8		34.0	267	16.1		10.2	151	34.2		08.9
21	32	46.7	94	32.6		03.5	211	32.1		33.5	282	18.8		10.3	166	36.4		08.9
22	47	49.1	109	34.0		03.0	226	33.4		33.0	297	21.5		10.3	181	38.6		09.0
23	62	51.6	124	35.3		02.5	241	34.7		32.5	312	24.3		10.3	196	40.8		09.1
24	77	54.1	139	36.6	-23	01.9	256	35.9	+1	32.0	327	27.0	+22	10.4	211	42.9	-15	09.2
Dif	—		+13		+5		+13		-5		+27		0		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 52 ^m 4			Edad: 6 ^d 0 SD: 16'0 PMG: 18 ^h 00 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	181	57.1	-22 48.4	98	57.3	-4 06.9	113	6 57	7 53	8 49	12 02	16	***	***	***	***
1	196	56.8	48.6	113	26.9 ¹⁰⁶	-3 55.6	44.2 ¹¹⁴	50	42	33	01	18	***	***	***	***
2	211	56.5	48.9	127	56.7 ¹⁰⁸	44.2	56	43	32	19	12 00	21	***	***	***	***
3	226	56.3	49.1	142	26.5 ¹⁰⁸	32.8	54	37	23	8 07	11 59	23	***	***	***	***
4	241	56.0	49.4	156	56.3 ¹⁰⁸	21.5	52	32	15	7 56	59	24	***	***	***	***
5	256	55.7	-22 49.6	171	26.2 ¹⁰⁹	-3 10.1	50	6 27	7 08	7 46	11 58	26	***	***	***	***
6	271	55.4	-22 49.9	185	56.1 ¹⁰⁹	-2 58.7	45	6 16	6 53	7 26	11 56	30	***	***	***	***
7	286	55.1	50.1	200	26.1 ¹¹⁰	47.3	40	6 06	40	7 10	55	33	***	***	***	***
8	301	54.9	50.3	214	56.1 ¹¹⁰	36.0	35	5 57	28	6 56	54	35	***	***	***	***
9	316	54.6	50.6	229	26.2 ¹¹¹	24.6	30	48	18	44	53	37	***	***	***	***
10	331	54.3	50.8	243	56.3 ¹¹¹	13.2	20	32	6 00	24	51	42	***	***	***	***
11	346	54.0	-22 51.1	258	26.4 ¹¹¹	-2 01.8	10 N	5 17	5 43	6 06	11 50	45	***	***	***	***
12	1	53.7	-22 51.3	272	56.6 ¹¹²	-1 50.4	0	5 00	5 26	5 49	11 48	49	***	***	***	***
13	16	53.5	51.5	287	26.8 ¹¹²	39.0	10 S	4 42	5 09	32	47	52	***	***	***	***
14	31	53.2	51.8	301	57.1 ¹¹³	27.6	20	4 20	4 49	5 13	46	55	***	***	***	***
15	46	52.9	52.0	316	27.4 ¹¹³	16.3	30	3 51	24	4 52	44	60	***	***	***	***
16	61	52.6	52.2	330	57.8 ¹¹⁴	-1 04.9	35	33	4 10	39	43	62	***	***	***	***
17	76	52.3	-22 52.5	345	28.2 ¹¹⁴	-0 53.5	40	3 11	3 52	4 24	11 42	65	***	***	***	***
18	91	52.1	-22 52.7	359	58.6 ¹¹⁴	-0 42.2	45	2 41	3 30	4 07	11 41	68	***	***	***	***
19	106	51.8	52.9	14	29.1 ¹¹⁵	30.8	50	1 58	3 02	3 45	39	72	***	***	***	***
20	121	51.5	53.2	28	59.6 ¹¹⁵	19.5	52	1 33	2 47	35	39	73	***	***	***	***
21	136	51.2	53.4	43	30.1 ¹¹⁵	-0 08.2	54	0 55	30	23	38	75	***	***	***	***
22	151	50.9	53.6	58	00.7 ¹¹⁶	+0 03.1	56	***	2 09	3 09	37	78	***	***	***	***
23	166	50.7	53.8	72	31.3 ¹¹⁶	14.5	58	***	1 42	2 54	36	80	***	***	***	***
24	181	50.4	-22 54.1	87	01.9 ¹¹⁶	+0 25.7	60 S	***	1 01	2 34	11 35	83	***	***	***	***

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 45 ^m 3		Mag: -4.9 PMG: 14 ^h 40 ^m		Mag: +1.1 PMG: 6 ^h 53 ^m		Mag: -2.6 PMG: 2 ^h 10 ^m		Mag: +0.6 PMG: 9 ^h 52 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	77	54.1	139	36.6	-23 01.9	256	35.9	+1 32.0	327	27.0	+22 10.4	211	42.9	-15 09.2
1	92	56.5	154	37.9	01.4	271	37.2	31.6	342	29.7	10.4	226	45.1	09.2
2	107	59.0	169	39.2	00.9	286	38.5	31.1	357	32.5	10.5	241	47.3	09.3
3	123	01.5	184	40.6	-23 00.3	301	39.8	30.6	12	35.2	10.5	256	49.5	09.4
4	138	03.9	199	41.9	-22 59.8	316	41.1	30.1	27	37.9	10.5	271	51.7	09.5
5	153	06.4	214	43.3	-22 59.3	331	42.3	+1 29.6	42	40.6	+22 10.6	286	53.9	-15 09.5
6	168	08.8	229	44.6	-22 58.7	346	43.6	+1 29.1	57	43.4	+22 10.6	301	56.1	-15 09.6
7	183	11.3	244	45.9	58.2	1	44.9	28.6	72	46.1	10.7	316	58.3	09.7
8	198	13.8	259	47.3	57.6	16	46.2	28.2	87	48.8	10.7	332	00.5	09.7
9	213	16.2	274	48.6	57.1	31	47.5	27.7	102	51.5	10.8	347	02.7	09.8
10	228	18.7	289	50.0	56.6	46	48.7	27.2	117	54.3	10.8	2	04.8	09.9
11	243	21.2	304	51.4	-22 56.0	61	50.0	+1 26.7	132	57.0	+22 10.8	17	07.0	-15 10.0
12	258	23.6	319	52.7	-22 55.5	76	51.3	+1 26.2	147	59.7	+22 10.9	32	09.2	-15 10.0
13	273	26.1	334	54.1	55.0	91	52.6	25.7	163	02.5	10.9	47	11.4	10.1
14	288	28.6	349	55.5	54.4	106	53.9	25.2	178	05.2	11.0	62	13.6	10.2
15	303	31.0	4	56.8	53.9	121	55.2	24.8	193	07.9	11.0	77	15.8	10.3
16	318	33.5	19	58.2	53.4	136	56.4	24.3	208	10.7	11.0	92	18.0	10.3
17	333	36.0	34	59.6	-22 52.8	151	57.7	+1 23.8	223	13.4	+22 11.1	107	20.2	-15 10.4
18	348	38.4	50	01.0	-22 52.3	166	59.0	+1 23.3	238	16.1	+22 11.1	122	22.4	-15 10.5
19	3	40.9	65	02.4	51.7	182	00.3	22.8	253	18.8	11.2	137	24.6	10.5
20	18	43.3	80	03.7	51.2	197	01.6	22.3	268	21.6	11.2	152	26.8	10.6
21	33	45.8	95	05.1	50.7	212	02.9	21.9	283	24.3	11.2	167	28.9	10.7
22	48	48.3	110	06.5	50.1	227	04.1	21.4	298	27.0	11.3	182	31.1	10.8
23	63	50.7	125	07.9	49.6	242	05.4	20.9	313	29.8	11.3	197	33.3	10.8
24	78	53.2	140	09.3	-22 49.1	257	06.7	+1 20.4	328	32.5	+22 11.4	212	35.5	-15 10.9
Dif	—		+14	+5		+13	-5		+27	0		+22	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2			Edad: 7 ^d 0	PHE { 4 ^h : 57/8 12 ^h : 57/6 20 ^h : 57/3	Puesta de Sol			Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 52 ^m 9					R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	181	50.4	-22 54.1	87	01.9	+0 25.7		60 N	14 55	15 51	16 47	12 18 16	0 15 81					
1	196	50.1	54.3	101	32.6 ¹¹⁷	37.0 ¹¹³		58	15 11	16 02	16 55	19 19	14 79					
2	211	49.8	54.5	116	03.3 ¹¹⁷	48.3 ¹¹³		56	26	12	17 01	21 20	14 77					
3	226	49.5	54.7	130	34.0 ¹¹⁷	+0 59.5 ¹¹²		54	38	21	07	22 22	14 75					
4	241	49.2	55.0	145	04.7 ¹¹⁷	+1 10.8 ¹¹³		52	49	29	13	23 24	14 73					
5	256	49.0	-22 55.2	159	35.5 ¹¹⁸	+1 22.0 ¹¹²		50	15 58	16 36	17 18	12 24 26	0 14 71					
6	271	48.7	-22 55.4	174	06.3 ¹¹⁸	+1 33.2 ¹¹²		45	16 18	16 52	17 29	12 26 29	0 13 68					
7	286	48.4	55.6	188	37.2 ¹¹⁹	44.3 ¹¹¹		40	35	17 05	39	28 32	13 64					
8	301	48.1	55.9	203	08.0 ¹¹⁸	+1 55.5 ¹¹²		35	16 49	17	48	29 35	13 61					
9	316	47.8	56.1	217	38.9 ¹¹⁹	+2 06.6 ¹¹¹		30	17 01	27	17 57	30 38	13 59					
10	331	47.5	56.3	232	09.8 ¹¹⁹	17.7 ¹¹¹		20	21	17 45	18 13	33 41	12 55					
11	346	47.3	-22 56.5	246	40.8 ¹²⁰	+2 28.8 ¹¹¹		10 N	17 40	18 02	18 29	12 35 44	0 12 51					
12	1	47.0	-22 56.7	261	11.7 ¹¹⁹	+2 39.9 ¹¹¹		0	17 57	18 19	18 45	12 37 48	0 12 48					
13	16	46.7	56.9	275	42.7 ¹²⁰	+2 50.9 ¹¹⁰		10 S	18 14	37	19 04	39 51	11 45					
14	31	46.4	57.2	290	13.7 ¹²⁰	+3 02.0 ¹¹¹		20	32	18 57	26	41 54	11 41					
15	46	46.1	57.4	304	44.7 ¹²⁰	13.0 ¹¹⁰		30	18 54	19 21	19 54	44 58	11 37					
16	61	45.8	57.6	319	15.8 ¹²¹	23.9 ¹⁰⁹		35	19 07	36	20 13	45 61	10 35					
17	76	45.5	-22 57.8	333	46.8 ¹²⁰	+3 34.8 ¹⁰⁹		40	19 21	19 54	20 35	12 47 63	0 10 32					
18	91	45.3	-22 58.0	348	17.9 ¹²¹	+3 45.8 ¹¹⁰		45	19 39	20 16	21 05	12 49 66	0 10 29					
19	106	45.0	58.2	2	49.0 ¹²¹	+3 56.6 ¹⁰⁸		50	20 01	20 45	21 49	51 70	09 26					
20	121	44.7	58.4	17	20.1 ¹²¹	+4 07.5 ¹⁰⁹		52	12	21 00	22 15	52 72	09 24					
21	136	44.4	58.6	31	51.3 ¹²²	18.3 ¹⁰⁸		54	24	17	22 55	53 74	09 22					
22	151	44.1	58.9	46	22.4 ¹²¹	29.1 ¹⁰⁸		56	37	21 38	** **	55 75	08 21					
23	166	43.8	59.1	60	53.6 ¹²²	39.8 ¹⁰⁷		58	20 53	22 06	** **	56 78	08 19					
24	181	43.5	-22 59.3	75	24.7 ¹²¹	+4 50.6 ¹⁰⁸		60 S	21 13	22 49	** **	12 58 80	0 08 16					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 41 ^m 4		Mag: -4.9 PMG: 14 ^h 38 ^m			Mag: +1.1 PMG: 6 ^h 51 ^m			Mag: -2.7 PMG: 2 ^h 05 ^m			Mag: +0.6 PMG: 9 ^h 48 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	78	53.2	140	09.3	-22	49.1	257	06.7	+1	20.4	328	32.5	+22	11.4	212	35.5	-15	10.9
1	93	55.7	155	10.8		48.5	272	08.0		19.9	343	35.2		11.4	227	37.7		11.0
2	108	58.1	170	12.2		48.0	287	09.3		19.4	358	38.0		11.4	242	39.9		11.0
3	124	00.6	185	13.6		47.4	302	10.6		19.0	13	40.7		11.5	257	42.1		11.1
4	139	03.1	200	15.0		46.9	317	11.9		18.5	28	43.4		11.5	272	44.3		11.2
5	154	05.5	215	16.4	-22	46.4	332	13.1	+1	18.0	43	46.2	+22	11.6	287	46.5	-15	11.3
6	169	08.0	230	17.8	-22	45.8	347	14.4	+1	17.5	58	48.9	+22	11.6	302	48.7	-15	11.3
7	184	10.4	245	19.3		45.3	2	15.7		17.0	73	51.6		11.6	317	50.9		11.4
8	199	12.9	260	20.7		44.7	17	17.0		16.6	88	54.4		11.7	332	53.0		11.5
9	214	15.4	275	22.1		44.2	32	18.3		16.1	103	57.1		11.7	347	55.2		11.5
10	229	17.8	290	23.6		43.7	47	19.6		15.6	118	59.8		11.8	2	57.4		11.6
11	244	20.3	305	25.0	-22	43.1	62	20.9	+1	15.1	134	02.6	+22	11.8	17	59.6	-15	11.7
12	259	22.8	320	26.5	-22	42.6	77	22.1	+1	14.6	149	05.3	+22	11.9	33	01.8	-15	11.8
13	274	25.2	335	27.9		42.0	92	23.4		14.1	164	08.1		11.9	48	04.0		11.8
14	289	27.7	350	29.4		41.5	107	24.7		13.7	179	10.8		11.9	63	06.2		11.9
15	304	30.2	5	30.8		41.0	122	26.0		13.2	194	13.5		12.0	78	08.4		12.0
16	319	32.6	20	32.3		40.4	137	27.3		12.7	209	16.3		12.0	93	10.6		12.1
17	334	35.1	35	33.8	-22	39.9	152	28.6	+1	12.2	224	19.0	+22	12.1	108	12.8	-15	12.1
18	349	37.6	50	35.2	-22	39.3	167	29.9	+1	11.7	239	21.7	+22	12.1	123	15.0	-15	12.2
19	4	40.0	65	36.7		38.8	182	31.2		11.3	254	24.5		12.1	138	17.2		12.3
20	19	42.5	80	38.2		38.2	197	32.5		10.8	269	27.2		12.2	153	19.4		12.3
21	34	44.9	95	39.7		37.7	212	33.7		10.3	284	30.0		12.2	168	21.5		12.4
22	49	47.4	110	41.1		37.2	227	35.0		09.8	299	32.7		12.3	183	23.7		12.5
23	64	49.9	125	42.6		36.6	242	36.3		09.3	314	35.4		12.3	198	25.9		12.6
24	79	52.3	140	44.1	-22	36.1	257	37.6	+1	08.9	329	38.2	+22	12.3	213	28.1	-15	12.6
Dif	—		+14		+5		+13		-5		+27		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 53 ^m 3			Edad: 8 ^d 0	PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'7 R°: 47 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	43.5	-22	75	24.7	+4	50.6	6	59	7	56	8	52	12	34
1	196	43.3		89	55.9 ¹²²	+5	01.2 ¹⁰⁶	52		44		35		38	20
2	211	43.0		104	27.1 ¹²²		11.9 ¹⁰⁷	45		34		21		41	22
3	226	42.7	-22	118	58.3 ¹²²		22.5 ¹⁰⁶	39		25		8	09	44	24
4	241	42.4	-23	133	29.6 ¹²³		33.1 ¹⁰⁶	34		17		7	58	47	26
5	256	42.1	-23	148	00.8 ¹²²	+5	43.6 ¹⁰⁵	6	29	7	10	7	48	12	50
6	271	41.8	-23	162	32.0 ¹²²	+5	54.1 ¹⁰⁵	6	17	6	54	7	28	12	55
7	286	41.5		177	03.3 ¹²³	+6	04.6 ¹⁰⁵	6	07	41		7	12	13	00
8	301	41.2		191	34.6 ¹²³		15.0 ¹⁰⁴	5	58	30		6	58	04	36
9	316	41.0		206	05.8 ¹²²		25.4 ¹⁰⁴	50		19		46		08	37
10	331	40.7		220	37.1 ¹²³		35.8 ¹⁰⁴	34		6	01	25		14	41
11	346	40.4	-23	235	08.4 ¹²³	+6	46.1 ¹⁰³	5	18	5	44	6	07	13	19
12	1	40.1	-23	249	39.7 ¹²³	+6	56.3 ¹⁰²	5	01	5	27	5	50	13	25
13	16	39.8		264	11.0 ¹²³	+7	06.5 ¹⁰²	4	42	5	09	32		30	50
14	31	39.5		278	42.3 ¹²³		16.7 ¹⁰²	4	20	4	49	5	14	35	54
15	46	39.2		293	13.6 ¹²³		26.8 ¹⁰¹	3	52	25		4	52	42	57
16	61	38.9		307	44.9 ¹²³		36.9 ¹⁰¹	33		4	10	39		46	59
17	76	38.6	-23	322	16.2 ¹²³	+7	47.0 ¹⁰¹	3	11	3	52	4	25	13	50
18	91	38.4	-23	336	47.5 ¹²³	+7	57.0 ¹⁰⁰	2	41	3	30	4	07	13	55
19	106	38.1		351	18.8 ¹²³	+8	06.9 ⁹⁹	1	57	3	01	3	45	14	01
20	121	37.8		5	50.1 ¹²³		16.8 ⁹⁹	1	31	2	46	34		04	69
21	136	37.5		20	21.5 ¹²⁴		26.7 ⁹⁹	0	51	29		22		07	71
22	151	37.2		34	52.8 ¹²³		36.5 ⁹⁸	** ** *	2	08		3	09	10	74
23	166	36.9		49	24.1 ¹²³		46.2 ⁹⁷	** ** *	1	40		2	53	14	76
24	181	36.6	-23	63	55.4 ¹²³	+8	55.9 ⁹⁷	** ** *	0	57		2	33	14	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 37 ^m 5		Mag: -4.9 PMG: 14 ^h 36 ^m			Mag: +1.1 PMG: 6 ^h 49 ^m			Mag: -2.7 PMG: 2 ^h 01 ^m			Mag: +0.6 PMG: 9 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	79	52.3	140	44.1	-22	36.1	257	37.6	+1	08.9	329	38.2	+22	12.3	
1	94	54.8	155	45.6		35.5	272	38.9		08.4	344	40.9		12.4	
2	109	57.3	170	47.1		35.0	287	40.2		07.9	359	43.7		12.4	
3	124	59.7	185	48.6		34.5	302	41.5		07.4	14	46.4		12.5	
4	140	02.2	200	50.1		33.9	317	42.8		06.9	29	49.1		12.5	
5	155	04.7	215	51.6	-22	33.4	332	44.1	+1	06.5	44	51.9	+22	12.6	
6	170	07.1	230	53.1	-22	32.8	347	45.4	+1	06.0	59	54.6	+22	12.6	
7	185	09.6	245	54.7		32.3	2	46.7		05.5	74	57.4		12.6	
8	200	12.0	260	56.2		31.7	17	47.9		05.0	90	00.1		12.7	
9	215	14.5	275	57.7		31.2	32	49.2		04.5	105	02.8		12.7	
10	230	17.0	290	59.2		30.6	47	50.5		04.1	120	05.6		12.8	
11	245	19.4	306	00.8	-22	30.1	62	51.8	+1	03.6	135	08.3	+22	12.8	
12	260	21.9	321	02.3	-22	29.6	77	53.1	+1	03.1	150	11.1	+22	12.8	
13	275	24.4	336	03.8		29.0	92	54.4		02.6	165	13.8		12.9	
14	290	26.8	351	05.4		28.5	107	55.7		02.1	180	16.5		12.9	
15	305	29.3	6	06.9		27.9	122	57.0		01.7	195	19.3		13.0	
16	320	31.8	21	08.5		27.4	137	58.3		01.2	210	22.0		13.0	
17	335	34.2	36	10.0	-22	26.8	152	59.6	+1	00.7	225	24.8	+22	13.1	
18	350	36.7	51	11.6	-22	26.3	168	00.9	+1	00.2	240	27.5	+22	13.1	
19	5	39.2	66	13.1		25.7	183	02.2	+0	59.7	255	30.3		13.1	
20	20	41.6	81	14.7		25.2	198	03.5		59.3	270	33.0		13.2	
21	35	44.1	96	16.3		24.7	213	04.8		58.8	285	35.8		13.2	
22	50	46.5	111	17.8		24.1	228	06.1		58.3	300	38.5		13.3	
23	65	49.0	126	19.4		23.6	243	07.4		57.8	315	41.2		13.3	
24	80	51.5	141	21.0	-22	23.0	258	08.7	+0	57.4	330	44.0	+22	13.3	
Dif	—		+15		+5		+13		-5		+27		0		+22
															-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 53 ^m 8			Edad: 9 ^d 0 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 3 20 ^h : 56 ^s 1 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m
0	181	36.6	-23	04.0	63	55.4	+8	55.9	60 N	14 54	15 51	16 47	12 52	20	2 56	76
1	196	36.3		04.2	78	26.7 ¹²³	+9	05.6 ⁹⁷	58	15 11	16 02	16 54	12 58	23	50	75
2	211	36.0		04.4	92	58.0 ¹²³		15.2 ⁹⁶	56	25	12	17 01	13 03	25	45	73
3	226	35.8		04.6	107	29.3 ¹²³		24.7 ⁹⁵	54	37	21	07	08 27		41	70
4	241	35.5		04.8	122	00.6 ¹²³		34.2 ⁹⁵	52	48	29	13	13 28		37	69
5	256	35.2	-23	05.0	136	31.9 ¹²³	+9	43.6 ⁹⁴	50	15 58	16 36	17 18	13 17	30	2 34	67
6	271	34.9	-23	05.1	151	03.2 ¹²³	+9	53.0 ⁹⁴	45	16 18	16 52	17 29	13 26	33	2 26	64
7	286	34.6		05.3	165	34.5 ¹²³	+10	02.4 ⁹⁴	40	35	17 05	39	33 36		20	61
8	301	34.3		05.5	180	05.8 ¹²³		11.6 ⁹²	35	16 49	17	49	40 37		14	59
9	316	34.0		05.7	194	37.1 ¹²³		20.8 ⁹²	30	17 01	27	17 57	45 40		10	56
10	331	33.7		05.9	209	08.4 ¹²³		30.0 ⁹²	20	22	17 46	18 13	13 55	43	2 01	54
11	346	33.4	-23	06.1	223	39.6 ¹²²	+10	39.1 ⁹¹	10 N	17 40	18 03	18 29	14 04	45	1 54	50
12	1	33.1	-23	06.2	238	10.9 ¹²³	+10	48.1 ⁹⁰	0	17 58	18 20	18 46	14 12	48	1 47	48
13	16	32.8		06.4	252	42.2 ¹²³	+10	57.1 ⁹⁰	10 S	18 15	38	19 05	20 50		40	45
14	31	32.5		06.6	267	13.4 ¹²²	+11	06.1 ⁹⁰	20	34	18 58	27	29 53		33	42
15	46	32.3		06.8	281	44.7 ¹²³		14.9 ⁸⁸	30	18 55	19 23	19 56	39 56		25	39
16	61	32.0		06.9	296	15.9 ¹²²		23.7 ⁸⁸	35	19 08	38	20 14	45 58		20	37
17	76	31.7	-23	07.1	310	47.1 ¹²²	+11	32.5 ⁸⁸	40	19 23	19 56	20 37	14 52	60	1 15	34
18	91	31.4	-23	07.3	325	18.3 ¹²²	+11	41.1 ⁸⁶	45	19 41	20 18	21 07	15 00	62	1 09	32
19	106	31.1		07.5	339	49.5 ¹²²		49.8 ⁸⁷	50	20 03	20 47	21 52	09 66		1 02	28
20	121	30.8		07.6	354	20.7 ¹²²	+11	58.3 ⁸⁵	52	14	21 02	22 18	13 68		0 58	27
21	136	30.5		07.8	8	51.9 ¹²²	+12	06.8 ⁸⁵	54	26	20	23 00	18 69		54	26
22	151	30.2		08.0	23	23.1 ¹²²		15.2 ⁸⁴	56	40	21 41	** **	24 70		50	24
23	166	29.9		08.2	37	54.3 ¹²²		23.6 ⁸⁴	58	20 56	22 10	** **	30 73		46	21
24	181	29.6	-23	08.3	52	25.4 ¹²¹	+12	31.9 ⁸³	60 S	21 16	22 55	** **	15 36	76	0 41	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 33 ^m 5		Mag: -4.9 PMG: 14 ^h 33 ^m		Mag: +1.1 PMG: 6 ^h 47 ^m		Mag: -2.7 PMG: 1 ^h 57 ^m		Mag: +0.6 PMG: 9 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	51.5	141	21.0	-22	23.0	258	08.7	+0	57.4
1	95	53.9	156	22.6		22.5	273	09.9		56.9
2	110	56.4	171	24.2		21.9	288	11.2		56.4
3	125	58.9	186	25.8		21.4	303	12.5		55.9
4	141	01.3	201	27.4		20.8	318	13.8		55.4
5	156	03.8	216	29.0	-22	20.3	333	15.1	+0	55.0
6	171	06.3	231	30.6	-22	19.7	348	16.4	+0	54.5
7	186	08.7	246	32.2		19.2	3	17.7		54.0
8	201	11.2	261	33.8		18.6	18	19.0		53.5
9	216	13.7	276	35.4		18.1	33	20.3		53.1
10	231	16.1	291	37.0		17.6	48	21.6		52.6
11	246	18.6	306	38.6	-22	17.0	63	22.9	+0	52.1
12	261	21.0	321	40.2	-22	16.5	78	24.2	+0	51.6
13	276	23.5	336	41.9		15.9	93	25.5		51.2
14	291	26.0	351	43.5		15.4	108	26.8		50.7
15	306	28.4	6	45.1		14.8	123	28.1		50.2
16	321	30.9	21	46.8		14.3	138	29.4		49.7
17	336	33.4	36	48.4	-22	13.7	153	30.7	+0	49.3
18	351	35.8	51	50.1	-22	13.2	168	32.0	+0	48.8
19	6	38.3	66	51.7		12.6	183	33.3		48.3
20	21	40.8	81	53.4		12.1	198	34.6		47.8
21	36	43.2	96	55.0		11.5	213	35.9		47.4
22	51	45.7	111	56.7		11.0	228	37.2		46.9
23	66	48.1	126	58.4		10.4	243	38.5		46.4
24	81	50.6	142	00.0	-22	09.9	258	39.8	+0	45.9
Dif	—		+16		+5		+13		-5	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 54 ^m 3			Edad: 10 ^d 0 PHE { 4 ^h : 55/9 12 ^h : 55/7 20 ^h : 55/5 R°: 49 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	29.6	-23	08.3	52	25.4	+12	31.9	82	60 N	7	01	7	58	8	55	13	12	
1	196	29.3		08.5	66	56.6		40.1	82	58	6	54		46	38		21	27	
2	211	29.0		08.7	81	27.7		48.3	81	56		47		36	23		28	30	
3	226	28.7		08.8	95	58.9	+12	56.4	82	54		41		27	11		35	31	
4	241	28.4		09.0	110	30.0	+13	04.4	80	52		36		19	8	00	41	33	
5	256	28.1	-23	09.2	125	01.1	+13	12.4	80	50		6	30	7	12	7	50	13	47
6	271	27.9	-23	09.3	139	32.2	+13	20.2	78	45		6	19	6	56	7	30	13	59
7	286	27.6		09.5	154	03.2		28.1	79	40			09		43	7	13	14	09
8	301	27.3		09.7	168	34.3		35.8	77	35		6	00		31	6	59		17
9	316	27.0		09.8	183	05.4		43.5	77	30		5	51		21	47		25	41
10	331	26.7		10.0	197	36.4		51.1	76	20			35	6	02	26		38	44
11	346	26.4	-23	10.1	212	07.4	+13	58.6	75	10 N		5	19	5	45	6	08	14	49
12	1	26.1	-23	10.3	226	38.4	+14	06.1	75	0		5	02	5	28	5	51	15	00
13	16	25.8		10.5	241	09.4		13.5	74	10 S		4	43	5	10	33		10	51
14	31	25.5		10.6	255	40.4		20.8	73	20		4	21	4	50	5	14	22	53
15	46	25.2		10.8	270	11.4		28.1	73	30		3	52		25	4	53	35	55
16	61	24.9		10.9	284	42.4		35.2	71	35			34	4	10	40		43	57
17	76	24.6	-23	11.1	299	13.3	+14	42.3	71	40		3	11	3	52	4	25	15	52
18	91	24.3	-23	11.2	313	44.2	+14	49.4	71	45		2	41	3	30	4	07	16	02
19	106	24.0		11.4	328	15.2	+14	56.3	69	50		1	56	3	01	3	45		15
20	121	23.7		11.6	342	46.1	+15	03.2	69	52		1	30	2	46	34		21	64
21	136	23.4		11.7	357	17.0		10.0	68	54			0	48		28	22	27	66
22	151	23.1		11.9	11	47.8		16.7	67	56		** ** *	2	07		3	08	34	67
23	166	22.8		12.0	26	18.7		23.3	66	58		** ** *	1	38		2	52	43	68
24	181	22.5	-23	12.2	40	49.5	+15	29.9	66	60 S		** ** *	0	53		2	32	16	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 29 ^m 6		Mag: -4.9 PMG: 14 ^h 30 ^m		Mag: +1.1 PMG: 6 ^h 45 ^m		Mag: -2.7 PMG: 1 ^h 52 ^m		Mag: +0.6 PMG: 9 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	50.6	142	00.0	-22	09.9	258	39.8	+0	45.9
1	96	53.1	157	01.7		09.3	273	41.1		45.5
2	111	55.5	172	03.4		08.8	288	42.4		45.0
3	126	58.0	187	05.1		08.2	303	43.7		44.5
4	142	00.5	202	06.8		07.7	318	45.0		44.0
5	157	02.9	217	08.4	-22	07.2	333	46.3	+0	43.6
6	172	05.4	232	10.1	-22	06.6	348	47.6	+0	43.1
7	187	07.9	247	11.8		06.1	3	48.9		42.6
8	202	10.3	262	13.5		05.5	18	50.2		42.1
9	217	12.8	277	15.2		05.0	33	51.6		41.7
10	232	15.3	292	16.9		04.4	48	52.9		41.2
11	247	17.7	307	18.7	-22	03.9	63	54.2	+0	40.7
12	262	20.2	322	20.4	-22	03.3	78	55.5	+0	40.2
13	277	22.6	337	22.1		02.8	93	56.8		39.8
14	292	25.1	352	23.8		02.2	108	58.1		39.3
15	307	27.6		25.6		01.7	123	59.4		38.8
16	322	30.0	22	27.3		01.1	139	00.7		38.3
17	337	32.5	37	29.0	-22	00.6	154	02.0	+0	37.9
18	352	35.0	52	30.8	-22	00.0	169	03.3	+0	37.4
19	7	37.4	67	32.5	-21	59.5	184	04.6		36.9
20	22	39.9	82	34.3		58.9	199	05.9		36.5
21	37	42.4	97	36.0		58.4	214	07.2		36.0
22	52	44.8	112	37.8		57.8	229	08.5		35.5
23	67	47.3	127	39.5		57.3	244	09.8		35.0
24	82	49.8	142	41.3	-21	56.7	259	11.1	+0	34.6
Dif	—		+17		+5		+13		-5	
									+28	
									0	
									+22	
									-	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 54 ^m 7				Edad: 11 ^d 0 PHE { SD: 15:1 PMG: 22 ^h 00 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora		Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	181	22.5	-23	12.2	40	49.5	+15	29.9	60 N	14 53	15 50	16 47	13 38 32		5 26 68			
1	196	22.2		12.3	55	20.4 ¹¹⁹		36.4 ⁶⁵	58	15 10	16 02	16 54	48 34		16 66			
2	211	21.9		12.5	69	51.2 ¹¹⁸		42.8 ⁶⁴	56	25	12	17 01	13 58 35		5 07 64			
3	226	21.6		12.6	84	22.0 ¹¹⁸		49.1 ⁶³	54	37	21	07	14 06 37		4 59 63			
4	241	21.3		12.8	98	52.8 ¹¹⁸	+15	55.3 ⁶²	52	48	29	13	14 37		52 62			
5	256	21.1	-23	12.9	113	23.6 ¹¹⁸	+16	01.5 ⁶²	50	15 58	16 37	17 18	14 20 39		4 45 61			
6	271	20.8	-23	13.1	127	54.4 ¹¹⁸	+16	07.6 ⁶¹	45	16 19	16 53	17 30	14 35 40		4 31 59			
7	286	20.5		13.2	142	25.1 ¹¹⁷		13.6 ⁶⁰	40	35	17 06	40	47 42		20 57			
8	301	20.2		13.3	156	55.9 ¹¹⁸		19.5 ⁵⁹	35	16 49	18	49	14 57 43		10 56			
9	316	19.9		13.5	171	26.6 ¹¹⁷		25.3 ⁵⁸	30	17 02	28	17 58	15 06 44		4 02 54			
10	331	19.6		13.6	185	57.3 ¹¹⁷		31.1 ⁵⁸	20	23	17 47	18 14	22 45		3 47 53			
11	346	19.3	-23	13.8	200	28.0 ¹¹⁷	+16	36.7 ⁵⁶	10 N	17 41	18 04	18 30	15 35 48		3 35 50			
12	1	19.0	-23	13.9	214	58.7 ¹¹⁷	+16	42.3 ⁵⁶	0	17 58	18 21	18 47	15 48 49		3 23 48			
13	16	18.7		14.0	229	29.4 ¹¹⁷		47.8 ⁵⁵	10 S	18 16	39	19 06	16 01 50		3 11 47			
14	31	18.4		14.2	244	00.1 ¹¹⁷		53.2 ⁵⁴	20	35	18 59	28	15 51		2 58 45			
15	46	18.1		14.3	258	30.7 ¹¹⁶	+16	58.6 ⁵⁴	30	18 57	19 24	19 57	30 54		44 43			
16	61	17.8		14.5	273	01.4 ¹¹⁷	+17	03.8 ⁵²	35	19 10	39	20 16	40 54		36 41			
17	76	17.5	-23	14.6	287	32.0 ¹¹⁶	+17	09.0 ⁵²	40	19 25	19 57	20 39	16 50 56		2 26 40			
18	91	17.2	-23	14.7	302	02.6 ¹¹⁶	+17	14.1 ⁵¹	45	19 42	20 20	21 09	17 03 56		2 15 38			
19	106	16.9		14.9	316	33.2 ¹¹⁶		19.1 ⁵⁰	50	20 05	20 49	21 54	18 58		2 02 35			
20	121	16.6		15.0	331	03.8 ¹¹⁶		24.0 ⁴⁹	52	15	21 04	22 21	25 59		1 55 35			
21	136	16.3		15.1	345	34.4 ¹¹⁶		28.8 ⁴⁸	54	28	22	23 05	33 60		48 34			
22	151	16.0		15.3	0	05.0 ¹¹⁶		33.5 ⁴⁷	56	42	21 44	** ** *	41 62		41 32			
23	166	15.7		15.4	14	35.5 ¹¹⁵		38.2 ⁴⁷	58	20 58	22 13	** ** *	17 51 63		32 30			
24	181	15.4	-23	15.5	29	06.1 ¹¹⁶	+17	42.7 ⁴⁵	60 S	21 18	23 01	** ** *	18 03 65		1 22 29			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 25 ^m 7		Mag: -4.9 PMG: 14 ^h 28 ^m				Mag: +1.1 PMG: 6 ^h 43 ^m				Mag: -2.7 PMG: 1 ^h 48 ^m				Mag: +0.6 PMG: 9 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	49.8	142	41.3	-21	56.7	259	11.1	+0	34.6	332	56.1	+22	15.4	216	06.2	-15	17.7
1	97	52.2	157	43.1		56.2	274	12.4		34.1	347	58.8		15.4	231	08.4		17.8
2	112	54.7	172	44.8		55.6	289	13.8		33.6	3	01.6		15.5	246	10.6		17.8
3	127	57.1	187	46.6		55.1	304	15.1		33.2	18	04.3		15.5	261	12.8		17.9
4	142	59.6	202	48.4		54.5	319	16.4		32.7	33	07.1		15.6	276	15.0		18.0
5	158	02.1	217	50.2	-21	54.0	334	17.7	+0	32.2	48	09.8	+22	15.6	291	17.1	-15	18.0
6	173	04.5	232	52.0	-21	53.4	349	19.0	+0	31.7	63	12.6	+22	15.7	306	19.3	-15	18.1
7	188	07.0	247	53.7		52.9	4	20.3		31.3	78	15.4		15.7	321	21.5		18.2
8	203	09.5	262	55.5		52.3	19	21.6		30.8	93	18.1		15.7	336	23.7		18.2
9	218	11.9	277	57.3		51.8	34	22.9		30.3	108	20.9		15.8	351	25.9		18.3
10	233	14.4	292	59.1		51.2	49	24.2		29.9	123	23.6		15.8	6	28.1		18.4
11	248	16.9	308	00.9	-21	50.7	64	25.5	+0	29.4	138	26.4	+22	15.9	21	30.3	-15	18.4
12	263	19.3	323	02.8	-21	50.1	79	26.8	+0	28.9	153	29.2	+22	15.9	36	32.5	-15	18.5
13	278	21.8	338	04.6		49.6	94	28.2		28.4	168	31.9		16.0	51	34.7		18.6
14	293	24.3	353	06.4		49.0	109	29.5		28.0	183	34.7		16.0	66	36.9		18.7
15	308	26.7	8	08.2		48.5	124	30.8		27.5	198	37.4		16.0	81	39.1		18.7
16	323	29.2	23	10.0		47.9	139	32.1		27.0	213	40.2		16.1	96	41.3		18.8
17	338	31.6	38	11.9	-21	47.4	154	33.4	+0	26.6	228	43.0	+22	16.1	111	43.5	-15	18.9
18	353	34.1	53	13.7	-21	46.8	169	34.7	+0	26.1	243	45.7	+22	16.2	126	45.7	-15	18.9
19	8	36.6	68	15.6		46.3	184	36.0		25.6	258	48.5		16.2	141	47.9		19.0
20	23	39.0	83	17.4		45.7	199	37.3		25.2	273	51.2		16.3	156	50.1		19.1
21	38	41.5	98	19.2		45.2	214	38.7		24.7	288	54.0		16.3	171	52.3		19.1
22	53	44.0	113	21.1		44.6	229	40.0		24.2	303	56.8		16.3	186	54.5		19.2
23	68	46.4	128	23.0		44.1	244	41.3		23.7	318	59.5		16.4	201	56.7		19.3
24	83	48.9	143	24.8	-21	43.5	259	42.6	+0	23.3	334	02.3	+22	16.4	216	58.9	-15	19.3
Dif	—		+18		+5		+13		-5		+28		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 12 ^d 0	PHE {										
	PMG: 11 ^h 55 ^m 2					SD: 15'0		SD: 15'0			Rº: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	181	15.4	-23	15.5	29	06.1	+17 42.7	45	60 N	7 03	8 00	8 57	14 10	40	6 34 60
1	196	15.1		15.7	43	36.6	47.2	45	58	6 56	7 48	40	22	41	22 59
2	211	14.8		15.8	58	07.2	51.6	44	56	49	38	25	33	42	11 58
3	226	14.5		15.9	72	37.7	55.9	43	54	43	29	13	43	42	6 02 57
4	241	14.2		16.1	87	08.2	00.1	42	52	37	21	8 02	51	43	5 54 56
5	256	13.9	-23	16.2	101	38.7	04.2	41	50	6 32	7 14	7 52	14 59	44	5 46 56
6	271	13.6	-23	16.3	116	09.2	08.2	40	45	6 20	6 58	7 31	15 15	45	5 30 55
7	286	13.3		16.4	130	39.7	12.1	39	40	10	44	15	29	45	17 54
8	301	13.0		16.6	145	10.2	16.0	39	35	6 01	32	7 01	40	46	5 06 53
9	316	12.7		16.7	159	40.7	19.8	38	30	5 52	22	6 48	15 50	47	4 56 52
10	331	12.4		16.8	174	11.1	23.4	36	20	36	6 03	27	16 07	48	40 51
11	346	12.1	-23	16.9	188	41.6	27.0	36	10 N	5 20	5 46	6 09	16 23	48	4 25 50
12	1	11.8	-23	17.1	203	12.0	30.5	35	0	5 03	5 29	5 51	16 37	49	4 11 49
13	16	11.5		17.2	217	42.5	33.9	34	10 S	4 44	5 11	34	16 51	49	3 58 48
14	31	11.2		17.3	232	12.9	37.2	33	20	4 21	4 51	5 15	17 06	50	43 47
15	46	10.9		17.4	246	43.4	40.4	32	30	3 53	26	4 53	24	51	27 45
16	61	10.6		17.5	261	13.8	43.5	31	35	34	4 11	40	34	51	17 45
17	76	10.3	-23	17.7	275	44.2	46.5	30	40	3 11	3 53	4 25	17 46	51	3 06 44
18	91	10.0	-23	17.8	290	14.7	49.5	30	45	2 41	3 30	4 07	17 59	53	2 53 43
19	106	09.7		17.9	304	45.1	52.3	28	50	1 56	3 01	3 45	18 16	53	37 42
20	121	09.4		18.0	319	15.5	55.1	28	52	1 29	2 46	34	24	54	30 40
21	136	09.1		18.1	333	45.9	57.7	26	54	0 45	28	22	33	54	22 39
22	151	08.8		18.2	348	16.4	00.3	26	56	** **	2 06	3 08	43	54	13 38
23	166	08.5		18.3	2	46.8	02.7	24	58	** **	1 37	2 51	18 54	55	2 02 38
24	181	08.2	-23	18.5	17	17.2	05.1	24	60 S	** **	0 49	2 31	19 08	55	1 51 35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 18 ^h 21 ^m 7		Mag: -4.9 PMG: 14 ^h 25 ^m		Mag: +1.1 PMG: 6 ^h 41 ^m		Mag: -2.7 PMG: 1 ^h 44 ^m		Mag: +0.6 PMG: 9 ^h 31 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	83	48.9	143	24.8	-21	43.5	259	42.6	+0	23.3	334	02.3	+22	16.4	216	58.9	-15	19.3	
1	98	51.4	158	26.7		43.0	274	43.9		22.8	349	05.1		16.5	232	01.1		19.4	
2	113	53.8	173	28.5		42.4	289	45.2		22.3	4	07.8		16.5	247	03.3		19.5	
3	128	56.3	188	30.4		41.9	304	46.5		21.9	19	10.6		16.6	262	05.5		19.5	
4	143	58.7	203	32.3		41.3	319	47.8		21.4	34	13.3		16.6	277	07.7		19.6	
5	159	01.2	218	34.2	-21	40.8	334	49.2	+0	20.9	49	16.1	+22	16.7	292	09.9	-15	19.7	
6	174	03.7	233	36.1	-21	40.2	349	50.5	+0	20.5	64	18.9	+22	16.7	307	12.1	-15	19.7	
7	189	06.1	248	37.9		39.7	4	51.8		20.0	79	21.6		16.7	322	14.3		19.8	
8	204	08.6	263	39.8		39.1	19	53.1		19.5	94	24.4		16.8	337	16.5		19.9	
9	219	11.1	278	41.7		38.6	34	54.4		19.1	109	27.2		16.8	352	18.7		20.0	
10	234	13.5	293	43.6		38.0	49	55.7		18.6	124	29.9		16.9	7	20.9		20.0	
11	249	16.0	308	45.5	-21	37.5	64	57.1	+0	18.1	139	32.7	+22	16.9	22	23.1	-15	20.1	
12	264	18.5	323	47.5	-21	36.9	79	58.4	+0	17.7	154	35.5	+22	17.0	37	25.3	-15	20.2	
13	279	20.9	338	49.4		36.4	94	59.7		17.2	169	38.2		17.0	52	27.5		20.2	
14	294	23.4	353	51.3		35.8	110	01.0		16.7	184	41.0		17.0	67	29.7		20.3	
15	309	25.9	8	53.2		35.3	125	02.3		16.3	199	43.8		17.1	82	31.9		20.4	
16	324	28.3	23	55.1		34.7	140	03.6		15.8	214	46.5		17.1	97	34.1		20.4	
17	339	30.8	38	57.1	-21	34.2	155	05.0	+0	15.3	229	49.3	+22	17.2	112	36.3	-15	20.5	
18	354	33.2	53	59.0	-21	33.6	170	06.3	+0	14.8	244	52.1	+22	17.2	127	38.5	-15	20.6	
19	9	35.7	69	00.9		33.1	185	07.6		14.4	259	54.8		17.3	142	40.7		20.6	
20	24	38.2	84	02.9		32.5	200	08.9		13.9	274	57.6		17.3	157	42.9		20.7	
21	39	40.6	99	04.8		32.0	215	10.2		13.4	290	00.4		17.4	172	45.1		20.8	
22	54	43.1	114	06.8		31.4	230	11.5		13.0	305	03.1		17.4	187	47.3		20.8	
23	69	45.6	129	08.7		30.9	245	12.9		12.5	320	05.9		17.4	202	49.5		20.9	
24	84	48.0	144	10.7	-21	30.3	260	14.2	+0	12.1	335	08.7	+22	17.5	217	51.7	-15	21.0	
Dif	—		+19		+6		+13		-5		+28		0		+22			-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 7				Edad: 13 ^d 0 PHE { 4 ^h : 54:6 12 ^h : 54:5 20 ^h : 54:4 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	h m	m
0	181	08.2	-23	18.5	17	17.2	+19	05.1	60 N	14 53	15 51	16 47	14 50	49	7 34	51		
1	196	07.9		18.6	31	47.6 ¹¹⁴		07.4 ²³	58	15 10	16 02	16 55	15 03	50	21	51		
2	211	07.6		18.7	46	18.0 ¹¹⁴		09.6 ²²	56	25	12	17 02	15 50		7 09	51		
3	226	07.3		18.8	60	48.4 ¹¹⁴		11.7 ²¹	54	38	21	08	25 50		6 59	50		
4	241	07.0		18.9	75	18.9 ¹¹⁵		13.7 ²⁰	52	49	30	13	34 50		50 50			
5	256	06.7	-23	19.0	89	49.3 ¹¹⁴	+19	15.6 ¹⁹	50	15 59	16 37	17 19	15 43	49	6 42	50		
6	271	06.4	-23	19.1	104	19.7 ¹¹⁴	+19	17.4 ¹⁸	45	16 19	16 53	17 30	16 00	49	6 25	50		
7	286	06.1		19.2	118	50.1 ¹¹⁴		19.2 ¹⁸	40	36	17 07	41	14 49		6 11	50		
8	301	05.7		19.3	133	20.5 ¹¹⁴		20.8 ¹⁶	35	16 50	18	50	26 49		5 59	50		
9	316	05.4		19.4	147	51.0 ¹¹⁵		22.3 ¹⁵	30	17 02	29	17 59	37 49		48 50			
10	331	05.1		19.5	162	21.4 ¹¹⁴		23.8 ¹⁵	20	24	17 48	18 15	16 55	49	31	49		
11	346	04.8	-23	19.6	176	51.8 ¹¹⁴	+19	25.1 ¹³	10 N	17 42	18 05	18 31	17 11	48	5 15	49		
12	1	04.5	-23	19.7	191	22.3 ¹¹⁵	+19	26.4 ¹²	0	17 59	18 22	18 48	17 26	48	5 00	49		
13	16	04.2		19.8	205	52.7 ¹¹⁴		27.6 ¹³	10 S	18 17	18 40	19 07	40 49		4 46	48		
14	31	03.9		19.9	220	23.2 ¹¹⁵		28.6 ¹⁰	20	36	19 00	30	17 56	48	30	48		
15	46	03.6		20.0	234	53.6 ¹¹⁴		29.6 ¹⁰	30	18 58	25	19 59	18 15	47	12	48		
16	61	03.3		20.1	249	24.1 ¹¹⁵		30.5 ⁹	35	19 11	41	20 17	25 48		4 02	47		
17	76	03.0	-23	20.2	263	54.6 ¹¹⁵	+19	31.3 ⁸	40	19 26	19 59	20 40	18 37	48	3 50	47		
18	91	02.7	-23	20.3	278	25.1 ¹¹⁵	+19	32.0 ⁷	45	19 44	20 21	21 11	18 52	47	3 36	47		
19	106	02.4		20.4	292	55.5 ¹¹⁴		32.6 ⁶	50	20 06	20 51	21 56	19 09	47	19 46			
20	121	02.1		20.5	307	26.0 ¹¹⁵		33.1 ⁵	52	17	21 06	22 24	18 46		10 47			
21	136	01.8		20.6	321	56.6 ¹¹⁶		33.5 ⁴	54	29	24	23 09	27 47		3 01	47		
22	151	01.5		20.7	336	27.1 ¹¹⁵		33.8 ³	56	20 44	21 46	** **	37 47		2 51	46		
23	166	01.2		20.8	350	57.6 ¹¹⁵		34.0 ²	58	21 00	22 16	** **	19 49	46	40 45			
24	181	00.9	-23	20.9	5	28.1 ¹¹⁵	+19	34.2 ²	60 S	21 21	23 05	** **	20 03	46	2 26	45		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 17 ^m 8		Mag: -4.9 PMG: 14 ^h 21 ^m				Mag: +1.1 PMG: 6 ^h 38 ^m				Mag: -2.7 PMG: 1 ^h 39 ^m				Mag: +0.6 PMG: 9 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	48.0	144	10.7	-21	30.3	260	14.2	+0	12.1	335	08.7	+22	17.5	217	51.7	-15	21.0
1	99	50.5	159	12.6		29.8	275	15.5		11.6	350	11.4		17.5	232	53.9		21.0
2	114	53.0	174	14.6		29.2	290	16.8		11.1	5	14.2		17.6	247	56.1		21.1
3	129	55.4	189	16.6		28.7	305	18.1		10.7	20	17.0		17.6	262	58.3		21.2
4	144	57.9	204	18.6		28.1	320	19.5		10.2	35	19.7		17.7	278	00.5		21.2
5	160	00.4	219	20.5	-21	27.6	335	20.8	+0	09.7	50	22.5	+22	17.7	293	02.7	-15	21.3
6	175	02.8	234	22.5	-21	27.0	350	22.1	+0	09.3	65	25.3	+22	17.8	308	04.9	-15	21.4
7	190	05.3	249	24.5		26.5	5	23.4		08.8	80	28.0		17.8	323	07.1		21.4
8	205	07.7	264	26.5		25.9	20	24.7		08.3	95	30.8		17.8	338	09.3		21.5
9	220	10.2	279	28.5		25.4	35	26.1		07.9	110	33.6		17.9	353	11.5		21.6
10	235	12.7	294	30.5		24.8	50	27.4		07.4	125	36.4		17.9	8	13.7		21.6
11	250	15.1	309	32.5	-21	24.3	65	28.7	+0	06.9	140	39.1	+22	18.0	23	15.9	-15	21.7
12	265	17.6	324	34.5	-21	23.7	80	30.0	+0	06.5	155	41.9	+22	18.0	38	18.1	-15	21.8
13	280	20.1	339	36.5		23.2	95	31.3		06.0	170	44.7		18.1	53	20.3		21.9
14	295	22.5	354	38.5		22.6	110	32.7		05.5	185	47.4		18.1	68	22.5		21.9
15	310	25.0	9	40.6		22.1	125	34.0		05.1	200	50.2		18.1	83	24.7		22.0
16	325	27.5	24	42.6		21.5	140	35.3		04.6	215	53.0		18.2	98	26.9		22.1
17	340	29.9	39	44.6	-21	21.0	155	36.6	+0	04.1	230	55.8	+22	18.2	113	29.1	-15	22.1
18	355	32.4	54	46.7	-21	20.4	170	38.0	+0	03.7	245	58.5	+22	18.3	128	31.4	-15	22.2
19	10	34.9	69	48.7		19.9	185	39.3		03.2	261	01.3		18.3	143	33.6		22.3
20	25	37.3	84	50.7		19.3	200	40.6		02.8	276	04.1		18.4	158	35.8		22.3
21	40	39.8	99	52.8		18.8	215	41.9		02.3	291	06.8		18.4	173	38.0		22.4
22	55	42.2	114	54.8		18.2	230	43.3		01.8	306	09.6		18.5	188	40.2		22.5
23	70	44.7	129	56.9		17.7	245	44.6		01.4	321	12.4		18.5	203	42.4		22.5
24	85	47.2	144	58.9	-21	17.1	260	45.9	+0	00.9	336	15.2	+22	18.5	218	44.6	-15	22.6
Dif	—		+20		+5		+13		-5		+28		0		+22		-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 56 ^m 2			Edad: 14 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	181	00.9	-23	5	28.1	+19	34.2	0	7 05	8 02	8 59	15 39	58	8 25	41
1	196	00.6		19	58.7 ¹¹⁶		34.2	0	6 57	7 50	42	15 53	57	12	41
2	211	00.3		34	29.3 ¹¹⁶		34.2	2	51	40	27	16 05	56	8 00	42
3	226	00.0		48	59.8 ¹¹⁵		34.0	2	54	44	31	14	55	7 50	43
4	240	59.7		63	30.4 ¹¹⁶		33.8	2	52	39	22	8 03	24	54	40
5	255	59.4	-23	78	01.0 ¹¹⁶	+19	33.5	3	50	6 33	7 15	7 53	16 32	54	7 32
6	270	59.1	-23	92	31.7 ¹¹⁷	+19	33.0	5	45	6 22	6 59	7 33	16 49	53	7 15
7	285	58.8		107	02.3 ¹¹⁶		32.5	5	40	11	45	16	17 03	52	7 01
8	300	58.5		121	32.9 ¹¹⁶		31.9	6	35	6 02	34	7 02	15	52	6 49
9	315	58.2		136	03.6 ¹¹⁷		31.2	7	30	5 53	23	6 50	26	51	38
10	330	57.9		150	34.3 ¹¹⁷		30.4	8	20	37	6 04	28	44	49	20
11	345	57.5	-23	165	05.0 ¹¹⁷	+19	29.5	9	10 N	5 21	5 47	6 10	17 59	49	6 04
12	0	57.2	-23	179	35.7 ¹¹⁷	+19	28.6	9	0	5 04	5 30	5 52	18 14	48	5 49
13	15	56.9		194	06.4 ¹¹⁷		27.5	11	10 S	4 45	5 12	35	29	47	34
14	30	56.6		208	37.2 ¹¹⁸		26.3	12	20	4 22	4 51	5 16	18 44	46	18
15	45	56.3		223	07.9 ¹¹⁷		25.1	12	30	3 53	27	4 54	19 02	45	5 00
16	60	56.0		237	38.7 ¹¹⁸		23.7	14	35	35	4 11	41	13	44	4 49
17	75	55.7	-23	252	09.5 ¹¹⁸	+19	22.3	14	40	3 11	3 53	4 26	19 25	43	4 37
18	90	55.4	-23	266	40.4 ¹¹⁹	+19	20.8	15	45	2 41	3 31	4 08	19 39	42	4 23
19	105	55.1		281	11.2 ¹¹⁸		19.2	16	50	1 56	3 01	3 45	19 56	41	4 05
20	120	54.8		295	42.1 ¹¹⁹		17.5	17	52	1 28	2 46	35	20 04	40	3 57
21	135	54.5		310	13.0 ¹¹⁹		15.7	18	54	0 43	28	22	14	39	48
22	150	54.2		324	43.9 ¹¹⁹		13.8	19	56	** ** *	2 06	3 08	24	38	37
23	165	53.9		339	14.8 ¹¹⁹		11.8	20	58	** ** *	1 36	2 51	35	38	25
24	180	53.6	-23	353	45.7 ¹¹⁹	+19	09.8	20	60 S	** ** *	0 47	2 31	20 49	36	3 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 18 ^h 13 ^m 9		Mag: -4.9 PMG: 14 ^h 18 ^m		Mag: +1.0 PMG: 6 ^h 36 ^m		Mag: -2.7 PMG: 1 ^h 35 ^m		Mag: +0.6 PMG: 9 ^h 24 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	85	47.2	144	58.9	-21	17.1	260	45.9	+0	00.9	336	15.2	+22	18.5	218	44.6	-15	22.6	
1	100	49.6	160	01.0		16.6	275	47.2	+0	00.4	351	17.9		18.6	233	46.8		22.7	
2	115	52.1	175	03.1		16.0	290	48.6	+0	00.0	6	20.7		18.6	248	49.0		22.7	
3	130	54.6	190	05.1		15.5	305	49.9	-0	00.5	21	23.5		18.7	263	51.2		22.8	
4	145	57.0	205	07.2		14.9	320	51.2		01.0	36	26.3		18.7	278	53.4		22.9	
5	160	59.5	220	09.3	-21	14.4	335	52.5	-0	01.4	51	29.0	+22	18.8	293	55.6	-15	22.9	
6	176	02.0	235	11.4	-21	13.8	350	53.9	-0	01.9	66	31.8	+22	18.8	308	57.8	-15	23.0	
7	191	04.4	250	13.5		13.3	5	55.2		02.3	81	34.6		18.9	324	00.0		23.1	
8	206	06.9	265	15.6		12.7	20	56.5		02.8	96	37.4		18.9	339	02.2		23.1	
9	221	09.4	280	17.7		12.2	35	57.8		03.3	111	40.1		19.0	354	04.4		23.2	
10	236	11.8	295	19.8		11.6	50	59.2		03.7	126	42.9		19.0	9	06.6		23.3	
11	251	14.3	310	21.9	-21	11.1	66	00.5	-0	04.2	141	45.7	+22	19.0	24	08.8	-15	23.3	
12	266	16.7	325	24.0	-21	10.6	81	01.8	-0	04.6	156	48.5	+22	19.1	39	11.0	-15	23.4	
13	281	19.2	340	26.1		10.0	96	03.2		05.1	171	51.2		19.1	54	13.2		23.5	
14	296	21.7	355	28.2		09.5	111	04.5		05.6	186	54.0		19.2	69	15.4		23.5	
15	311	24.1	10	30.3		08.9	126	05.8		06.0	201	56.8		19.2	84	17.6		23.6	
16	326	26.6	25	32.5		08.4	141	07.1		06.5	216	59.6		19.3	99	19.8		23.7	
17	341	29.1	40	34.6	-21	07.8	156	08.5	-0	07.0	232	02.3	+22	19.3	114	22.0	-15	23.7	
18	356	31.5	55	36.7	-21	07.3	171	09.8	-0	07.4	247	05.1	+22	19.4	129	24.2	-15	23.8	
19	11	34.0	70	38.9		06.7	186	11.1		07.9	262	07.9		19.4	144	26.4		23.9	
20	26	36.5	85	41.0		06.2	201	12.5		08.3	277	10.7		19.4	159	28.6		23.9	
21	41	38.9	100	43.2		05.6	216	13.8		08.8	292	13.5		19.5	174	30.8		24.0	
22	56	41.4	115	45.3		05.1	231	15.1		09.3	307	16.2		19.5	189	33.0		24.1	
23	71	43.8	130	47.5		04.5	246	16.5		09.7	322	19.0		19.6	204	35.2		24.1	
24	86	46.3	145	49.7	-21	04.0	261	17.8	-0	10.2	337	21.8	+22	19.6	219	37.5	-15	24.2	
Dif	—		+21		+5		+13		-5		+28		0		+22		-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 15 ^d 0	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0									
	PMG: 11 ^h 56 ^m 7					SD: 14'8			PMG: 0 ^h 26 ^m		R°: 47 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	53.6	-23 22.9	353	45.7	+19 09.8	22	60 N	14 53	15 51	16 48	16 37 65	9 06 32	
1	195	53.3	23.0	8	16.7 ¹²⁰	07.6	22	58	15 11	16 03	16 55	16 50 62	8 53 34	
2	210	53.0	23.0	22	47.7 ¹²⁰	05.4	22	56	25	13	17 02	17 01 60	42 35	
3	225	52.7	23.1	37	18.7 ¹²⁰	03.1	23	54	38	22	08	10 60	33 35	
4	240	52.4	23.2	51	49.8 ¹²¹	+19 00.7	24	52	49	30	14	18 59	24 37	
5	255	52.0	-23 23.2	66	20.9 ¹²¹	+18 58.2	25	50	15 59	16 38	17 19	17 26 58	8 16 38	
6	270	51.7	-23 23.3	80	52.0 ¹²¹	+18 55.6	26	45	16 20	16 54	17 31	17 42 56	8 00 39	
7	285	51.4	23.4	95	23.1 ¹²¹	52.9	27	40	37	17 07	41	17 55 55	7 46 41	
8	300	51.1	23.4	109	54.2 ¹²¹	50.2	27	35	16 51	19	51	18 07 52	34 42	
9	315	50.8	23.5	124	25.4 ¹²²	47.3	29	30	17 03	30	17 59	17 51	24 43	
10	330	50.5	23.6	138	56.6 ¹²²	44.4	29	20	24	17 48	18 16	33 50	7 07 44	
11	345	50.2	-23 23.6	153	27.8 ¹²²	+18 41.4	30	10 N	17 43	18 06	18 32	18 48 48	6 52 46	
12	0	49.9	-23 23.7	167	59.1 ¹²³	+18 38.3	31	0	18 00	18 23	18 49	19 02 46	6 37 48	
13	15	49.6	23.8	182	30.4 ¹²³	35.1	32	10 S	18	18 41	19 08	16 45	23 48	
14	30	49.3	23.8	197	01.7 ¹²³	31.8	33	20	37	19 02	19 31	30 44	6 08 49	
15	45	49.0	23.9	211	33.0 ¹²³	28.5	33	30	18 59	27	20 00	47 41	5 50 51	
16	60	48.7	23.9	226	04.4 ¹²⁴	25.1	34	35	19 12	19 42	19	19 57 40	40 52	
17	75	48.4	-23 24.0	240	35.8 ¹²⁴	+18 21.5	36	40	19 27	20 00	20 42	20 08 39	5 28 53	
18	90	48.1	-23 24.1	255	07.2 ¹²⁴	+18 17.9	36	45	19 45	20 23	21 12	20 21 37	5 14 55	
19	105	47.8	24.1	269	38.7 ¹²⁵	14.3	36	50	20 08	20 52	21 58	37 35	4 57 56	
20	120	47.4	24.2	284	10.1 ¹²⁴	10.5	38	52	19	21 07	22 26	44 34	49 57	
21	135	47.1	24.2	298	41.6 ¹²⁵	06.6	39	54	31	25	23 12	20 53 33	40 58	
22	150	46.8	24.3	313	13.2 ¹²⁶	+18 02.7	39	56	20 45	21 48	** **	21 02 32	30 59	
23	165	46.5	24.3	327	44.8 ¹²⁶	+17 58.7	40	58	21 02	22 18	** **	13 29	19 60	
24	180	46.2	-23 24.4	342	16.3 ¹²⁵	+17 54.6	41	60 S	21 22	23 08	** **	21 25 28	4 05 62	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 18 ^h 09 ^m 9	Mag: -4.8 PMG: 14 ^h 15 ^m	Mag: +1.0 PMG: 6 ^h 34 ^m	Mag: -2.7 PMG: 1 ^h 30 ^m	Mag: +0.6 PMG: 9 ^h 20 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'					
0	86	46.3	145 49.7	-21 04.0	261 17.8	-0 10.2	337 21.8	+22 19.6	219 37.5	-15 24.2				
1	101	48.8	160 51.8	03.4	276 19.1	10.6	352 24.6	19.7	234 39.7	24.3				
2	116	51.2	175 54.0	02.9	291 20.5	11.1	7 27.3	19.7	249 41.9	24.3				
3	131	53.7	190 56.2	02.3	306 21.8	11.6	22 30.1	19.8	264 44.1	24.4				
4	146	56.2	205 58.3	01.8	321 23.1	12.0	37 32.9	19.8	279 46.3	24.5				
5	161	58.6	221 00.5	-21 01.2	336 24.4	-0 12.5	52 35.7	+22 19.8	294 48.5	-15 24.5				
6	177	01.1	236 02.7	-21 00.7	351 25.8	-0 12.9	67 38.5	+22 19.9	309 50.7	-15 24.6				
7	192	03.6	251 04.9	-21 00.1	6 27.1	13.4	82 41.2	19.9	324 52.9	24.6				
8	207	06.0	266 07.1	-20 59.6	21 28.4	13.8	97 44.0	20.0	339 55.1	24.7				
9	222	08.5	281 09.3	59.1	36 29.8	14.3	112 46.8	20.0	354 57.3	24.8				
10	237	11.0	296 11.5	58.5	51 31.1	14.8	127 49.6	20.1	9 59.5	24.8				
11	252	13.4	311 13.7	-20 58.0	66 32.4	-0 15.2	142 52.4	+22 20.1	25 01.7	-15 24.9				
12	267	15.9	326 15.9	-20 57.4	81 33.8	-0 15.7	157 55.1	+22 20.2	40 03.9	-15 25.0				
13	282	18.3	341 18.2	56.9	96 35.1	16.1	172 57.9	20.2	55 06.1	25.0				
14	297	20.8	356 20.4	56.3	111 36.5	16.6	188 00.7	20.3	70 08.3	25.1				
15	312	23.3	11 22.6	55.8	126 37.8	17.1	203 03.5	20.3	85 10.5	25.2				
16	327	25.7	26 24.8	55.2	141 39.1	17.5	218 06.3	20.3	100 12.7	25.2				
17	342	28.2	41 27.1	-20 54.7	156 40.5	-0 18.0	233 09.1	+22 20.4	115 14.9	-15 25.3				
18	357	30.7	56 29.3	-20 54.1	171 41.8	-0 18.4	248 11.8	+22 20.4	130 17.1	-15 25.4				
19	12	33.1	71 31.6	53.6	186 43.1	18.9	263 14.6	20.5	145 19.4	25.4				
20	27	35.6	86 33.8	53.1	201 44.5	19.3	278 17.4	20.5	160 21.6	25.5				
21	42	38.1	101 36.1	52.5	216 45.8	19.8	293 20.2	20.6	175 23.8	25.6				
22	57	40.5	116 38.3	52.0	231 47.1	20.3	308 23.0	20.6	190 26.0	25.6				
23	72	43.0	131 40.6	51.4	246 48.5	20.7	323 25.7	20.7	205 28.2	25.7				
24	87	45.5	146 42.9	-20 50.9	261 49.8	-0 21.2	338 28.5	+22 20.7	220 30.4	-15 25.8				
Dif	—		+22	+5	+13	-5	+28	0	+22	-1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 16 ^d 0 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0												
	PMG: 11 ^h 57 ^m 2			SD: 14:7 PMG: 1 ^h 13 ^m R ^o : 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	46.2	-23	342	16.3	+17	54.6	41	60 N	7 06	8 03	9 01	17 42	68	9 38	25
1	195	45.9		356	48.0		50.5	41	58	6 59	7 51	8 43	17 52	66	27	27
2	210	45.6		11	19.6		46.2	43	56	52	41	29	18 01	65	17	29
3	225	45.3		25	51.3		41.9	43	54	46	32	16	10	62	08	3
4	240	45.0		40	23.0		37.5	44	52	40	24	8 05	17	61	9 01	31
5	255	44.7	-23	54	54.8	+17	33.0	45	50	6 35	7 16	7 55	18 24	60	8 54	32
6	270	44.4	-23	69	26.6	+17	28.4	46	45	6 23	7 00	7 34	18 38	57	8 39	35
7	285	44.1		83	58.4		23.8	46	40	13	6 47	17	50	55	27	37
8	300	43.8		98	30.2		19.1	47	35	6 03	35	7 03	18 59	54	16	39
9	315	43.4		113	02.1		14.3	48	30	5 54	24	6 51	19 08	52	8 07	40
10	330	43.1		127	34.0		09.4	49	20	38	6 05	29	23	50	7 51	42
11	345	42.8	-23	142	06.0	+17	04.5	49	10 N	5 22	5 48	6 11	19 36	47	7 38	44
12	0	42.5	-23	156	37.9	+16	59.5	50	0	5 05	5 31	5 53	19 48	46	7 25	45
13	15	42.2		171	09.9		54.4	51	10 S	4 46	5 13	36	20 01	43	7 11	48
14	30	41.9		185	42.0		49.2	52	20	4 23	4 52	5 17	14	40	6 57	50
15	45	41.6		200	14.0		44.0	52	30	3 54	27	4 55	28	39	41	52
16	60	41.3		214	46.1		38.7	53	35	35	4 12	42	37	37	32	53
17	75	41.0	-23	229	18.3	+16	33.3	54	40	3 12	3 54	4 27	20 47	35	6 21	55
18	90	40.7	-23	243	50.4	+16	27.8	55	45	2 41	3 31	4 09	20 58	33	6 09	56
19	105	40.4		258	22.6		22.3	55	50	1 56	3 01	3 46	21 12	30	5 53	59
20	120	40.1		272	54.9		16.7	56	52	1 28	2 46	35	18	30	46	60
21	135	39.7		287	27.1		11.0	57	54	0 41	28	23	26	27	38	61
22	150	39.4		301	59.4	+16	05.3	57	56	** **	2 06	3 09	34	26	29	63
23	165	39.1		316	31.7	+15	59.5	58	58	** **	1 36	2 52	42	25	19	64
24	180	38.8	-23	331	04.1	+15	53.6	59	60 S	** **	0 46	2 31	21 53	22	5 07	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 06 ^m 0		Mag: -4.8 PMG: 14 ^h 11 ^m		Mag: +1.0 PMG: 6 ^h 32 ^m		Mag: -2.7 PMG: 1 ^h 26 ^m		Mag: +0.6 PMG: 9 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	87	45.5	146	42.9	-20	50.9	261	49.8	-0	21.2	338	28.5	+22	20.7	220	30.4	-15	25.8
1	102	47.9	161	45.1		50.3	276	51.1		21.6	353	31.3		20.7	235	32.6		25.8
2	117	50.4	176	47.4		49.8	291	52.5		22.1	8	34.1		20.8	250	34.8		25.9
3	132	52.8	191	49.7		49.2	306	53.8		22.5	23	36.9		20.8	265	37.0		26.0
4	147	55.3	206	52.0		48.7	321	55.2		23.0	38	39.7		20.9	280	39.2		26.0
5	162	57.8	221	54.3	-20	48.1	336	56.5	-0	23.5	53	42.4	+22	20.9	295	41.4	-15	26.1
6	178	00.2	236	56.6	-20	47.6	351	57.8	-0	23.9	68	45.2	+22	21.0	310	43.6	-15	26.2
7	193	02.7	251	58.9		47.1	6	59.2		24.4	83	48.0		21.0	325	45.8		26.2
8	208	05.2	267	01.2		46.5	22	00.5		24.8	98	50.8		21.1	340	48.0		26.3
9	223	07.6	282	03.5		46.0	37	01.9		25.3	113	53.6		21.1	355	50.2		26.4
10	238	10.1	297	05.8		45.4	52	03.2		25.7	128	56.4		21.2	10	52.5		26.4
11	253	12.6	312	08.1	-20	44.9	67	04.5	-0	26.2	143	59.2	+22	21.2	25	54.7	-15	26.5
12	268	15.0	327	10.4	-20	44.3	82	05.9	-0	26.6	159	01.9	+22	21.2	40	56.9	-15	26.5
13	283	17.5	342	12.7		43.8	97	07.2		27.1	174	04.7		21.3	55	59.1		26.6
14	298	20.0	357	15.1		43.3	112	08.6		27.6	189	07.5		21.3	71	01.3		26.7
15	313	22.4	12	17.4		42.7	127	09.9		28.0	204	10.3		21.4	86	03.5		26.7
16	328	24.9	27	19.7		42.2	142	11.2		28.5	219	13.1		21.4	101	05.7		26.8
17	343	27.3	42	22.1	-20	41.6	157	12.6	-0	28.9	234	15.9	+22	21.5	116	07.9	-15	26.9
18	358	29.8	57	24.4	-20	41.1	172	13.9	-0	29.4	249	18.7	+22	21.5	131	10.1	-15	26.9
19	13	32.3	72	26.8		40.5	187	15.3		29.8	264	21.4		21.6	146	12.3		27.0
20	28	34.7	87	29.1		40.0	202	16.6		30.3	279	24.2		21.6	161	14.5		27.1
21	43	37.2	102	31.5		39.5	217	18.0		30.7	294	27.0		21.7	176	16.7		27.1
22	58	39.7	117	33.9		38.9	232	19.3		31.2	309	29.8		21.7	191	18.9		27.2
23	73	42.1	132	36.2		38.4	247	20.6		31.6	324	32.6		21.7	206	21.2		27.3
24	88	44.6	147	38.6	-20	37.8	262	22.0	-0	32.1	339	35.4	+22	21.8	221	23.4	-15	27.3
Dif	—		+23		+5		+13		-5		+28		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 11 ^h 57 ^m 7			Edad: 17 ^d 0 PHE { SD: 14/7 PMG: 1 ^h 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	38.8	-23	25.4	331	04.1	+15	53.6	60 N	14 54	15 52	16 49	18 50	70	10 03	20		
1	195	38.5		25.5	345	36.5 ¹³⁴		47.7 ⁵⁹	58	15 11	16 03	16 56	18 58	68	9 54	22		
2	210	38.2		25.5	0	08.9 ¹³⁴		41.7 ⁶⁰	56		26	14	17 03	19 06	66	46	24	
3	225	37.9		25.5	14	41.3 ¹³⁴		35.6 ⁶¹	54		39	23	09	12 65	39	25		
4	240	37.6		25.6	29	13.8 ¹³⁵		29.4 ⁶²	52	15 50		31	15	18 63	32	27		
5	255	37.3	-23	25.6	43	46.3 ¹³⁵	+15	23.2 ⁶²	50	16 00	16 38	17 20	19 24	61	9 26	29		
6	270	37.0	-23	25.6	58	18.9 ¹³⁶	+15	16.9 ⁶³	45	16 21	16 55	17 32	19 35	59	9 14	31		
7	285	36.7		25.6	72	51.4 ¹³⁵		10.6 ⁶³	40		38	17 08	42	45 56	9 04	33		
8	300	36.3		25.7	87	24.0 ¹³⁶	+15	04.2 ⁶⁴	35	16 52		20	17 52	19 53	54	8 55	35	
9	315	36.0		25.7	101	56.7 ¹³⁷	+14	57.7 ⁶⁵	30	17 04		31	18 00	20 00	52	47	37	
10	330	35.7		25.7	116	29.3 ¹³⁶		51.1 ⁶⁶	20		25	17 49	17	13 49		33	40	
11	345	35.4	-23	25.8	131	02.0 ¹³⁷	+14	44.5 ⁶⁶	10 N	17 44	18 07	18 33	20 23	47	8 22	42		
12	0	35.1	-23	25.8	145	34.8 ¹³⁸	+14	37.9 ⁶⁸	0	18 01	18 24	18 50	20 34	44	8 10	45		
13	15	34.8		25.8	160	07.5 ¹³⁷		31.1 ⁶⁸	10 S		19	18 42	19 09	44 41	7 59	47		
14	30	34.5		25.8	174	40.3 ¹³⁸		24.4 ⁶⁷	20	18 38	19 03	19 32	20 54	39	47	49		
15	45	34.2		25.8	189	13.1 ¹³⁸		17.5 ⁶⁹	30	19 00		28	20 01	21 07	36	33	52	
16	60	33.9		25.9	203	46.0 ¹³⁹		10.6 ⁶⁹	35		13	19 43	20	14 34	25	54		
17	75	33.6	-23	25.9	218	18.8 ¹³⁸	+14	03.6 ⁷⁰	40	19 28	20 01	20 43	21 22	32	7 16	56		
18	90	33.3	-23	25.9	232	51.7 ¹³⁹	+13	56.6 ⁷⁰	45	19 46	20 24	21 14	21 31	30	7 05	58		
19	105	32.9		25.9	247	24.7 ¹⁴⁰		49.5 ⁷¹	50	20 09	20 54	21 59	42	27	6 52	61		
20	120	32.6		25.9	261	57.6 ¹³⁹		42.3 ⁷²	52		20	21 09	22 27	48 25	46	62		
21	135	32.3		26.0	276	30.6 ¹⁴⁰		35.1 ⁷²	54		32	27	23 14	21 53	24	39	64	
22	150	32.0		26.0	291	03.7 ¹⁴¹		27.9 ⁷²	56	20 46	21 49	** ** *	22 00	22	32	65		
23	165	31.7		26.0	305	36.7 ¹⁴⁰		20.5 ⁷⁴	58	21 03	22 19	** ** *	07 20	23	68			
24	180	31.4	-23	26.0	320	09.8 ¹⁴¹	+13	13.1 ⁷⁴	60 S	21 24	23 10	** ** *	22 15	18	6 14	69		
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 18 ^h 02 ^m 1			Mag: -4.8 PMG: 14 ^h 07 ^m			Mag: +1.0 PMG: 6 ^h 30 ^m			Mag: -2.7 PMG: 1 ^h 21 ^m				Mag: +0.6 PMG: 9 ^h 13 ^m				
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec				hG ♄ Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	88	44.6	147	38.6	-20	37.8	262	22.0	-0	32.1	339	35.4	+22	21.8	221	23.4	-15	27.3
1	103	47.1	162	41.0		37.3	277	23.3		32.5	354	38.2		21.8	236	25.6		27.4
2	118	49.5	177	43.4		36.8	292	24.7		33.0	9	41.0		21.9	251	27.8		27.5
3	133	52.0	192	45.7		36.2	307	26.0		33.5	24	43.7		21.9	266	30.0		27.5
4	148	54.4	207	48.1		35.7	322	27.4		33.9	39	46.5		22.0	281	32.2		27.6
5	163	56.9	222	50.5	-20	35.1	337	28.7	-0	34.4	54	49.3	+22	22.0	296	34.4	-15	27.6
6	178	59.4	237	52.9	-20	34.6	352	30.1	-0	34.8	69	52.1	+22	22.1	311	36.6	-15	27.7
7	194	01.8	252	55.3		34.0	7	31.4		35.3	84	54.9		22.1	326	38.8		27.8
8	209	04.3	267	57.7		33.5	22	32.7		35.7	99	57.7		22.2	341	41.0		27.8
9	224	06.8	283	00.2		33.0	37	34.1		36.2	115	00.5		22.2	356	43.2		27.9
10	239	09.2	298	02.6		32.4	52	35.4		36.6	130	03.3		22.2	11	45.5		28.0
11	254	11.7	313	05.0	-20	31.9	67	36.8	-0	37.1	145	06.1	+22	22.3	26	47.7	-15	28.0
12	269	14.2	328	07.4	-20	31.3	82	38.1	-0	37.5	160	08.9	+22	22.3	41	49.9	-15	28.1
13	284	16.6	343	09.9		30.8	97	39.5		38.0	175	11.6		22.4	56	52.1		28.2
14	299	19.1	358	12.3		30.3	112	40.8		38.4	190	14.4		22.4	71	54.3		28.2
15	314	21.6	13	14.7		29.7	127	42.2		38.9	205	17.2		22.5	86	56.5		28.3
16	329	24.0	28	17.2		29.2	142	43.5		39.3	220	20.0		22.5	101	58.7		28.4
17	344	26.5	43	19.6	-20	28.7	157	44.9	-0	39.8	235	22.8	+22	22.6	117	00.9	-15	28.4
18	359	28.9	58	22.1	-20	28.1	172	46.2	-0	40.2	250	25.6	+22	22.6	132	03.1	-15	28.5
19	14	31.4	73	24.5		27.6	187	47.6		40.7	265	28.4		22.7	147	05.3		28.5
20	29	33.9	88	27.0		27.0	202	48.9		41.1	280	31.2		22.7	162	07.6		28.6
21	44	36.3	103	29.5		26.5	217	50.3		41.6	295	34.0		22.8	177	09.8		28.7
22	59	38.8	118	32.0		26.0	232	51.6		42.0	310	36.8		22.8	192	12.0		28.7
23	74	41.3	133	34.4		25.4	247	53.0		42.5	325	39.6		22.8	207	14.2		28.8
24	89	43.7	148	36.9	-20	24.9	262	54.3	-0	42.9	340	42.3	+22	22.9	222	16.4	-15	28.9
Dif	—			+24 +5			+13 -5			+28 0				+22 -1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 58 ^m 2			Edad: 18 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 PMG: 2 ^h 44 ^m R ^o : 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	31.4	-23	26.0	320	09.8	+13	13.1	60 N	7 07	8 04	9 02	20 00	72	10 23	16	
1	195	31.1		26.0	334	42.9 ¹⁴¹	+13	05.7	58	7 00	7 52	8 44		06	70	16	19
2	210	30.8		26.0	349	16.0 ¹⁴¹	+12	58.2	56	6 53	42	30		12	67	10	21
3	225	30.5		26.0	3	49.2 ¹⁴²		50.7	54	47	33	17		17	65	10	04
4	240	30.2		26.1	18	22.3 ¹⁴¹		43.1	52	41	25	8 06		21	64	9	59
5	255	29.9	-23	26.1	32	55.5 ¹⁴²	+12	35.4	50	6 36	7 17	7 56	20 25	63	9 55	25	
6	270	29.5	-23	26.1	47	28.8 ¹⁴³	+12	27.7	45	6 24	7 01	7 35	20 34	59	9 45	29	
7	285	29.2		26.1	62	02.0 ¹⁴²		19.9	40	14	6 48	18		41	56	37	31
8	300	28.9		26.1	76	35.3 ¹⁴³		12.1	35	6 04	36	7 04		47	54	30	33
9	315	28.6		26.1	91	08.6 ¹⁴³	+12	04.2	30	5 55	25	6 52	20 52	53	24	35	
10	330	28.3		26.1	105	41.9 ¹⁴³	+11	56.3	20	39	6 06	30	21 02	49	13	38	
11	345	28.0	-23	26.1	120	15.3 ¹⁴⁴	+11	48.3	10 N	5 23	5 49	6 12	21 10	46	9 04	41	
12	0	27.7	-23	26.1	134	48.7 ¹⁴⁴	+11	40.3	0	5 06	5 32	5 54	21 18	43	8 55	43	
13	15	27.4		26.1	149	22.1 ¹⁴⁴		32.2	10 S	4 47	5 14	37		25	41	46	46
14	30	27.1		26.1	163	55.5 ¹⁴⁴		24.1	20	4 24	4 53	5 18		33	38	36	49
15	45	26.8		26.1	178	28.9 ¹⁴⁴		15.9	30	3 55	28	4 56		43	34	25	53
16	60	26.4		26.1	193	02.4 ¹⁴⁵	+11	07.7	35	36	4 13	43		48	32	19	54
17	75	26.1	-23	26.1	207	35.9 ¹⁴⁵	+10	59.5	40	3 13	3 55	4 28	21 54	30	8 12	56	
18	90	25.8	-23	26.1	222	09.4 ¹⁴⁵	+10	51.1	45	2 42	3 32	4 10	22 01	27	8 03	59	
19	105	25.5		26.1	236	42.9 ¹⁴⁵		42.8	50	1 57	3 02	3 47		09	25	7	53
20	120	25.2		26.1	251	16.5 ¹⁴⁶		34.4	52	1 29	2 47	36		13	23	48	64
21	135	24.9		26.1	265	50.0 ¹⁴⁵		25.9	54	0 41	29	24		17	22	43	65
22	150	24.6		26.1	280	23.6 ¹⁴⁶		17.4	56	** **	2 07	3 09		22	20	37	67
23	165	24.3		26.1	294	57.2 ¹⁴⁶		08.9	58	** **	1 37	2 53		27	18	31	68
24	180	24.0	-23	26.1	309	30.8 ¹⁴⁶	+10	00.3	60 S	** **	0 45	2 32	22 33	16	7 23	71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 58 ^m 1		Mag: -4.8 PMG: 14 ^h 03 ^m		Mag: +1.0 PMG: 6 ^h 28 ^m		Mag: -2.7 PMG: 1 ^h 17 ^m		Mag: +0.6 PMG: 9 ^h 10 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	89	43.7	148	36.9	-20	24.9	262	54.3	-0	42.9	340	42.3	+22	22.9	222	16.4	-15	28.9
1	104	46.2	163	39.4		24.3	277	55.7		43.4	355	45.1		22.9	237	18.6		28.9
2	119	48.7	178	41.9		23.8	292	57.0		43.8	10	47.9		23.0	252	20.8		29.0
3	134	51.1	193	44.4		23.3	307	58.4		44.3	25	50.7		23.0	267	23.0		29.1
4	149	53.6	208	46.9		22.7	322	59.7		44.7	40	53.5		23.1	282	25.2		29.1
5	164	56.1	223	49.4	-20	22.2	338	01.1	-0	45.2	55	56.3	+22	23.1	297	27.4	-15	29.2
6	179	58.5	238	51.9	-20	21.7	353	02.4	-0	45.6	70	59.1	+22	23.2	312	29.7	-15	29.2
7	195	01.0	253	54.4		21.1	8	03.8		46.1	86	01.9		23.2	327	31.9		29.3
8	210	03.4	268	56.9		20.6	23	05.1		46.5	101	04.7		23.3	342	34.1		29.4
9	225	05.9	283	59.5		20.1	38	06.5		47.0	116	07.5		23.3	357	36.3		29.4
10	240	08.4	299	02.0		19.5	53	07.8		47.4	131	10.3		23.3	12	38.5		29.5
11	255	10.8	314	04.5	-20	19.0	68	09.2	-0	47.9	146	13.1	+22	23.4	27	40.7	-15	29.6
12	270	13.3	329	07.0	-20	18.4	83	10.5	-0	48.3	161	15.9	+22	23.4	42	42.9	-15	29.6
13	285	15.8	344	09.6		17.9	98	11.9		48.8	176	18.7		23.5	57	45.1		29.7
14	300	18.2	359	12.1		17.4	113	13.2		49.2	191	21.5		23.5	72	47.3		29.8
15	315	20.7	14	14.7		16.8	128	14.6		49.7	206	24.3		23.6	87	49.6		29.8
16	330	23.2	29	17.2		16.3	143	15.9		50.1	221	27.0		23.6	102	51.8		29.9
17	345	25.6	44	19.8	-20	15.8	158	17.3	-0	50.6	236	29.8	+22	23.7	117	54.0	-15	29.9
18	0	28.1	59	22.4	-20	15.2	173	18.7	-0	51.0	251	32.6	+22	23.7	132	56.2	-15	30.0
19	15	30.6	74	24.9		14.7	188	20.0		51.5	266	35.4		23.8	147	58.4		30.1
20	30	33.0	89	27.5		14.2	203	21.4		51.9	281	38.2		23.8	163	00.6		30.1
21	45	35.5	104	30.1		13.6	218	22.7		52.3	296	41.0		23.9	178	02.8		30.2
22	60	37.9	119	32.7		13.1	233	24.1		52.8	311	43.8		23.9	193	05.0		30.3
23	75	40.4	134	35.2		12.6	248	25.4		53.2	326	46.6		23.9	208	07.3		30.3
24	90	42.9	149	37.8	-20	12.0	263	26.8	-0	53.7	341	49.4	+22	24.0	223	09.5	-15	30.4
Dif	—		+25		+5		+14		-4		+28		0		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°3			Edad: 19 ^d 0 PHE { 4 ^h : 54°3 12 ^h : 54°4 20 ^h : 54°5											
	PMG: 11 ^h 58 ^m 7			SD: 14°8 PMG: 3 ^h 28 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	24.0	-23	26.1	309	30.8	+10 00.3	60 N	14 55	15 53	16 50	21 12 73		10 39 15	
1	195	23.7		26.1	324	04.5 ¹⁴⁷	+9 51.7 ⁸⁶	58	15 12	16 04	16 57	16 70		35 17	
2	210	23.3		26.1	338	38.1 ¹⁴⁶	43.0 ⁸⁷	56	27	15	17 04	19 69		31 19	
3	225	23.0		26.1	353	11.8 ¹⁴⁷	34.3 ⁸⁷	54	40	24	10	22 67		27 2	
4	240	22.7		26.1	7	45.5 ¹⁴⁷	25.5 ⁸⁸	52	15 51	32	16	25 65		24 22	
5	255	22.4	-23	26.1	22	19.2 ¹⁴⁷	+9 16.7 ⁸⁸	50	16 01	16 39	17 21	21 28 63		10 20 24	
6	270	22.1	-23	26.1	36	52.9 ¹⁴⁷	+9 07.9 ⁸⁸	45	16 22	16 56	17 33	21 33 60		10 14 27	
7	285	21.8		26.0	51	26.6 ¹⁴⁷	+8 59.0 ⁸⁹	40	39	17 09	43	37 58		08 30	
8	300	21.5		26.0	66	00.3 ¹⁴⁷	50.1 ⁸⁹	35	16 53	21	17 53	41 55		10 03 32	
9	315	21.2		26.0	80	34.1 ¹⁴⁸	41.1 ⁹⁰	30	17 05	32	18 01	45 53		9 59 34	
10	330	20.9		26.0	95	07.9 ¹⁴⁸	32.1 ⁹⁰	20	26	17 50	18	51 49		51 38	
11	345	20.5	-23	26.0	109	41.6 ¹⁴⁷	+8 23.1 ⁹⁰	10 N	17 45	18 08	18 34	21 56 46		9 45 40	
12	0	20.2	-23	26.0	124	15.4 ¹⁴⁸	+8 14.0 ⁹¹	0	18 02	18 25	18 51	22 01 43		9 38 44	
13	15	19.9		26.0	138	49.2 ¹⁴⁸	+8 04.9 ⁹¹	10 S	20	18 43	19 10	06 40		32 46	
14	30	19.6		25.9	153	23.0 ¹⁴⁸	+7 55.7 ⁹²	20	18 39	19 04	19 33	11 37		25 49	
15	45	19.3		25.9	167	56.8 ¹⁴⁸	46.5 ⁹²	30	19 01	29	20 02	17 33		18 52	
16	60	19.0		25.9	182	30.7 ¹⁴⁹	37.3 ⁹²	35	14	19 44	21	20 32		13 55	
17	75	18.7	-23	25.9	197	04.5 ¹⁴⁸	+7 28.0 ⁹³	40	19 29	20 02	20 44	22 24 29		9 08 57	
18	90	18.4	-23	25.9	211	38.3 ¹⁴⁸	+7 18.8 ⁹²	45	19 47	20 25	21 15	22 28 27		9 02 60	
19	105	18.1		25.9	226	12.2 ¹⁴⁹	09.4 ⁹⁴	50	20 10	20 55	22 00	34 23		8 55 63	
20	120	17.8		25.8	240	46.0 ¹⁴⁸	+7 00.1 ⁹³	52	21	21 10	22 28	36 22		52 64	
21	135	17.4		25.8	255	19.9 ¹⁴⁹	+6 50.7 ⁹⁴	54	33	28	23 15	39 20		48 66	
22	150	17.1		25.8	269	53.8 ¹⁴⁹	41.2 ⁹⁵	56	20 47	21 50	** **	42 18		44 68	
23	165	16.8		25.8	284	27.6 ¹⁴⁸	31.8 ⁹⁴	58	21 04	22 20	** **	45 17		39 70	
24	180	16.5	-23	25.7	299	01.5 ¹⁴⁹	+6 22.3 ⁹⁵	60 S	21 25	23 11	** **	22 49 14		8 34 73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 54 ^m 2		Mag: -4.8 PMG: 13 ^h 59 ^m		Mag: +1.0 PMG: 6 ^h 26 ^m		Mag: -2.7 PMG: 1 ^h 12 ^m		Mag: +0.6 PMG: 9 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	42.9	149	37.8	-20	12.0	263	26.8	-0	53.7
1	105	45.3	164	40.4		11.5	278	28.1		54.1
2	120	47.8	179	43.0		11.0	293	29.5		54.6
3	135	50.3	194	45.6		10.4	308	30.9		55.0
4	150	52.7	209	48.2		09.9	323	32.2		55.5
5	165	55.2	224	50.9	-20	09.4	338	33.6	-0	55.9
6	180	57.7	239	53.5	-20	08.8	353	34.9	-0	56.4
7	196	00.1	254	56.1		08.3	8	36.3		56.8
8	211	02.6	269	58.7		07.8	23	37.6		57.3
9	226	05.0	285	01.4		07.3	38	39.0		57.7
10	241	07.5	300	04.0		06.7	53	40.4		58.1
11	256	10.0	315	06.6	-20	06.2	68	41.7	-0	58.6
12	271	12.4	330	09.3	-20	05.7	83	43.1	-0	59.0
13	286	14.9	345	11.9		05.1	98	44.4		59.5
14	301	17.4	0	14.6		04.6	113	45.8	-0	59.9
15	316	19.8	15	17.2		04.1	128	47.2	-1	00.4
16	331	22.3	30	19.9		03.5	143	48.5		00.8
17	346	24.8	45	22.6	-20	03.0	158	49.9	-1	01.3
18	1	27.2	60	25.2	-20	02.5	173	51.3	-1	01.7
19	16	29.7	75	27.9		02.0	188	52.6		02.1
20	31	32.2	90	30.6		01.4	203	54.0		02.6
21	46	34.6	105	33.3		00.9	218	55.3		03.0
22	61	37.1	120	36.0	-20	00.4	233	56.7		03.5
23	76	39.5	135	38.7	-19	59.8	248	58.1		03.9
24	91	42.0	150	41.4	-19	59.3	263	59.4	-1	04.4
Dif	—		+26		+5		+14		-4	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 59 ^m 1			Edad: 20 ^d 0 PHE { 4 ^h : 54:6 12 ^h : 54:7 20 ^h : 54:9 PMG: 4 ^h 11 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	16.5	-23	25.7	299	01.5	+6	22.3	60 N	7 08	8 05	9 03	22 25	75	10 54	14
1	195	16.2		25.7	313	35.4		12.8	58	7 01	7 53	8 45	26	73	52	16
2	210	15.9		25.7	328	09.2	+6	03.2	56	6 54	43	31	28	70	50	18
3	225	15.6		25.7	342	43.1	+5	53.6	54	48	34	18	29	68	48	20
4	240	15.3		25.6	357	17.0		44.0	52	42	26	8 07	30	66	46	21
5	255	15.0	-23	25.6	11	50.9	+5	34.4	50	6 37	7 18	7 57	22 31	65	10 44	23
6	270	14.7	-23	25.6	26	24.7	+5	24.7	45	6 25	7 02	7 36	22 33	61	10 41	26
7	285	14.3		25.5	40	58.6		15.0	40	15	6 49	19	35	58	38	29
8	300	14.0		25.5	55	32.5	+5	05.3	35	6 05	37	7 05	36	56	35	31
9	315	13.7		25.5	70	06.4	+4	55.6	30	5 56	26	6 53	38	54	33	33
10	330	13.4		25.4	84	40.2		45.8	20	40	6 07	31	40	50	29	37
11	345	13.1	-23	25.4	99	14.1	+4	36.0	10 N	5 24	5 50	6 13	22 42	47	10 25	40
12	0	12.8	-23	25.4	113	47.9	+4	26.2	0	5 07	5 33	5 55	22 44	44	10 22	43
13	15	12.5		25.3	128	21.8		16.3	10 S	4 48	5 15	38	46	41	18	46
14	30	12.2		25.3	142	55.6	+4	06.4	20	4 25	4 54	5 19	48	37	14	50
15	45	11.9		25.3	157	29.5	+3	56.5	30	3 56	29	4 57	50	34	10	53
16	60	11.5		25.2	172	03.3		46.6	35	37	4 14	44	52	31	08	55
17	75	11.2	-23	25.2	186	37.1	+3	36.7	40	3 14	3 56	4 29	22 53	29	10 05	58
18	90	10.9	-23	25.2	201	10.9	+3	26.7	45	2 43	3 33	4 11	22 55	26	10 02	60
19	105	10.6		25.1	215	44.7		16.7	50	1 58	3 03	3 48	57	23	9 58	64
20	120	10.3		25.1	230	18.5	+3	06.7	52	1 30	2 48	37	58	22	56	66
21	135	10.0		25.0	244	52.3	+2	56.7	54	0 43	30	25	22 59	20	54	67
22	150	09.7		25.0	259	26.1		46.6	56	** **	2 08	3 10	23 00	19	52	69
23	165	09.4		24.9	273	59.8		36.6	58	** **	1 38	2 54	02	16	49	72
24	180	09.1	-23	24.9	288	33.5	+2	26.5	60 S	** **	0 47	2 33	23 03	14	9 47	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 50 ^m 3		Mag: -4.7 PMG: 13 ^h 55 ^m		Mag: +1.0 PMG: 6 ^h 23 ^m		Mag: -2.7 PMG: 1 ^h 08 ^m		Mag: +0.6 PMG: 9 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	91	42.0	150	41.4	-19	59.3	263	59.4	-1	04.4
1	106	44.5	165	44.1		58.8	279	00.8		04.8
2	121	46.9	180	46.8		58.3	294	02.2		05.2
3	136	49.4	195	49.5		57.7	309	03.5		05.7
4	151	51.9	210	52.2		57.2	324	04.9		06.1
5	166	54.3	225	55.0	-19	56.7	339	06.2	-1	06.6
6	181	56.8	240	57.7	-19	56.2	354	07.6	-1	07.0
7	196	59.3	256	00.4		55.6	9	09.0		07.5
8	212	01.7	271	03.2		55.1	24	10.3		07.9
9	227	04.2	286	05.9		54.6	39	11.7		08.3
10	242	06.7	301	08.6		54.1	54	13.1		08.8
11	257	09.1	316	11.4	-19	53.5	69	14.4	-1	09.2
12	272	11.6	331	14.1	-19	53.0	84	15.8	-1	09.7
13	287	14.0	346	16.9		52.5	99	17.2		10.1
14	302	16.5	1	19.7		52.0	114	18.5		10.5
15	317	19.0	16	22.4		51.4	129	19.9		11.0
16	332	21.4	31	25.2		50.9	144	21.3		11.4
17	347	23.9	46	28.0	-19	50.4	159	22.6	-1	11.9
18	2	26.4	61	30.8	-19	49.9	174	24.0	-1	12.3
19	17	28.8	76	33.6		49.3	189	25.4		12.7
20	32	31.3	91	36.4		48.8	204	26.7		13.2
21	47	33.8	106	39.2		48.3	219	28.1		13.6
22	62	36.2	121	42.0		47.8	234	29.5		14.1
23	77	38.7	136	44.8		47.3	249	30.9		14.5
24	92	41.1	151	47.6	-19	46.7	264	32.2	-1	14.9
Dif	—		+28		+5		+14		-4	
							+28		0	
									+22	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3			Edad: 21 ^d 0	PHE {	4 ^h : 55:1 12 ^h : 55:3 20 ^h : 55:5			Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 59 ^m 6								Final del crepúsculo			Salida de Luna		Puesta de Luna				
	hG ☉	Dec							Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	09.1	-23	24.9	288	33.5	+2 26.5	60 N	14 56	15 54	16 51	23 40	76	11 08	15			
1	195	08.8		24.9	303	07.3 ¹⁴⁸	16.4 ¹⁰¹	58	15 14	16 06	16 58	39 74		08 17				
2	210	08.4		24.8	317	41.0 ¹⁴⁷	+2 06.2 ¹⁰²	56	28	16	17 05	38 72		08 18				
3	225	08.1		24.8	332	14.6 ¹⁴⁶	+1 56.1 ¹⁰¹	54	41	25	11	37 70		08 20				
4	240	07.8		24.7	346	48.3 ¹⁴⁷	46.0 ¹⁰¹	52	15 52	33	17	36 69		07 23				
5	255	07.5	-23	24.7	1	22.0 ¹⁴⁷	+1 35.8 ¹⁰²	50	16 02	16 41	17 22	23 36	66	11 07	24			
6	270	07.2	-23	24.6	15	55.6 ¹⁴⁶	+1 25.6 ¹⁰²	45	16 23	16 57	17 34	23 34	64	11 07	27			
7	285	06.9		24.6	30	29.2 ¹⁴⁶	15.4 ¹⁰²	40	40	17 10	44	33 61		07 29				
8	300	06.6		24.5	45	02.8 ¹⁴⁶	+1 05.2 ¹⁰²	35	16 54	22	17 54	32 58		06 32				
9	315	06.3		24.5	59	36.4 ¹⁴⁶	+0 55.0 ¹⁰²	30	17 06	33	18 02	32 55		06 34				
10	330	06.0		24.4	74	09.9 ¹⁴⁵	44.7 ¹⁰³	20	27	17 51	19	30 52		06 38				
11	345	05.6	-23	24.4	88	43.5 ¹⁴⁶	+0 34.5 ¹⁰²	10 N	17 46	18 09	18 35	23 29	48	11 05	41			
12	0	05.3	-23	24.3	103	17.0 ¹⁴⁵	+0 24.2 ¹⁰³	0	18 03	18 26	18 52	23 28	45	11 05	44			
13	15	05.0		24.2	117	50.4 ¹⁴⁴	13.9 ¹⁰³	10 S	21	18 44	19 11	27 42		04 48				
14	30	04.7		24.2	132	23.9 ¹⁴⁵	+0 03.7 ¹⁰²	20	18 40	19 05	19 34	25 39		04 51				
15	45	04.4		24.1	146	57.3 ¹⁴⁴	-0 06.6 ¹⁰³	30	19 02	29	20 03	24 35		03 55				
16	60	04.1		24.1	161	30.7 ¹⁴⁴	16.9 ¹⁰³	35	15	19 45	21	23 33		03 57				
17	75	03.8	-23	24.0	176	04.1 ¹⁴⁴	-0 27.3 ¹⁰⁴	40	19 30	20 03	20 45	23 22	31	11 03	59			
18	90	03.5	-23	24.0	190	37.4 ¹⁴³	-0 37.6 ¹⁰³	45	19 48	20 26	21 15	23 21	28	11 02	62			
19	105	03.2		23.9	205	10.7 ¹⁴³	47.9 ¹⁰³	50	20 11	20 55	22 01	20 25		02 65				
20	120	02.9		23.8	219	44.0 ¹⁴³	-0 58.2 ¹⁰³	52	21	21 10	22 29	20 23		02 67				
21	135	02.5		23.8	234	17.2 ¹⁴²	-1 08.6 ¹⁰⁴	54	34	28	23 15	19 21		01 69				
22	150	02.2		23.7	248	50.4 ¹⁴²	18.9 ¹⁰³	56	20 48	21 51	** **	19 19		01 71				
23	165	01.9		23.6	263	23.6 ¹⁴²	29.3 ¹⁰⁴	58	21 05	22 20	** **	18 17		01 73				
24	180	01.6	-23	23.6	277	56.8 ¹⁴²	-1 39.6 ¹⁰³	60 S	21 25	23 11	** **	23 17	15	11 00	76			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.7				Mag: +1.0				Mag: -2.7				Mag: +0.6			
	17 ^h 46 ^m 3		PMG: 13 ^h 50 ^m				PMG: 6 ^h 21 ^m				PMG: 1 ^h 04 ^m				PMG: 8 ^h 59 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	92	41.1	151	47.6	-19	46.7	264	32.2	-1	14.9	344	03.8	+22	26.2	224	55.8		
1	107	43.6	166	50.4		46.2	279	33.6		15.4	359	06.6		26.3	239	58.0		
2	122	46.1	181	53.2		45.7	294	35.0		15.8	14	09.4		26.3	255	00.2		
3	137	48.5	196	56.0		45.2	309	36.3		16.3	29	12.2		26.3	270	02.4		
4	152	51.0	211	58.9		44.6	324	37.7		16.7	44	15.0		26.4	285	04.6		
5	167	53.5	227	01.7	-19	44.1	339	39.1	-1	17.1	59	17.9	+22	26.4	300	06.9		
6	182	55.9	242	04.5	-19	43.6	354	40.4	-1	17.6	74	20.7	+22	26.5	315	09.1		
7	197	58.4	257	07.4		43.1	9	41.8		18.0	89	23.5		26.5	330	11.3		
8	213	00.9	272	10.2		42.6	24	43.2		18.5	104	26.3		26.6	345	13.5		
9	228	03.3	287	13.1		42.0	39	44.6		18.9	119	29.1		26.6	0	15.7		
10	243	05.8	302	15.9		41.5	54	45.9		19.3	134	31.9		26.7	15	17.9		
11	258	08.3	317	18.8	-19	41.0	69	47.3	-1	19.8	149	34.7	+22	26.7	30	20.2		
12	273	10.7	332	21.7	-19	40.5	84	48.7	-1	20.2	164	37.5	+22	26.8	45	22.4		
13	288	13.2	347	24.5		40.0	99	50.1		20.6	179	40.3		26.8	60	24.6		
14	303	15.6	2	27.4		39.5	114	51.4		21.1	194	43.1		26.9	75	26.8		
15	318	18.1	17	30.3		38.9	129	52.8		21.5	209	45.9		26.9	90	29.0		
16	333	20.6	32	33.2		38.4	144	54.2		21.9	224	48.7		27.0	105	31.2		
17	348	23.0	47	36.1	-19	37.9	159	55.6	-1	22.4	239	51.5	+22	27.0	120	33.5		
18	3	25.5	62	38.9	-19	37.4	174	56.9	-1	22.8	254	54.3	+22	27.0	135	35.7		
19	18	28.0	77	41.8		36.9	189	58.3		23.3	269	57.1		27.1	150	37.9		
20	33	30.4	92	44.8		36.4	204	59.7		23.7	284	59.9		27.1	165	40.1		
21	48	32.9	107	47.7		35.8	220	01.1		24.1	300	02.7		27.2	180	42.3		
22	63	35.4	122	50.6		35.3	235	02.4		24.6	315	05.6		27.2	195	44.6		
23	78	37.8	137	53.5		34.8	250	03.8		25.0	330	08.4		27.3	210	46.8		
24	93	40.3	152	56.4	-19	34.3	265	05.2	-1	25.4	345	11.2	+22	27.3	225	49.0		
Dif	—		+29		+5		+14		-4		+28		0		+22			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 00 ^m 1			Edad: 22 ^d 0 PHE { 4 ^h : 55'7 12 ^h : 56'0 20 ^h : 56'3 SD: 15'1 PMG: 5 ^h 38 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	01.6	-23	23.6	277	56.8	-1	39.6	60 N	7 09	8 06	9 03	** ** *	** ** *	11 23	15
1	195	01.3		23.5	292	29.9 ¹⁴¹	-1	50.0 ¹⁰⁴	58	7 01	7 54	8 46	** ** *	** ** *	25	18
2	210	01.0		23.5	307	03.0 ¹⁴¹	-2	00.3 ¹⁰³	56	6 55	44	31	** ** *	** ** *	26	21
3	225	00.7		23.4	321	36.0 ¹⁴⁰		10.7 ¹⁰⁴	54	48	35	19	** ** *	** ** *	28	22
4	240	00.4		23.3	336	09.0 ¹⁴⁰		21.0 ¹⁰³	52	43	27	8 07	** ** *	** ** *	30	23
5	255	00.1	-23	23.3	350	41.9 ¹³⁹	-2	31.4 ¹⁰⁴	50	6 38	7 19	7 58	** ** *	** ** *	11 31	25
6	269	59.8	-23	23.2	5	14.9 ¹⁴⁰	-2	41.8 ¹⁰⁴	45	6 26	7 03	7 37	** ** *	** ** *	11 34	28
7	284	59.4		23.1	19	47.7 ¹³⁸	-2	52.1 ¹⁰³	40	15	6 50	20	** ** *	** ** *	36	32
8	299	59.1		23.0	34	20.6 ¹³⁹	-3	02.5 ¹⁰⁴	35	6 06	38	7 06	** ** *	** ** *	38	34
9	314	58.8		23.0	48	53.4 ¹³⁸		12.8 ¹⁰³	30	5 57	27	6 54	** ** *	** ** *	40	36
10	329	58.5		22.9	63	26.1 ¹³⁷		23.2 ¹⁰⁴	20	41	6 08	32	** ** *	** ** *	44	39
11	344	58.2	-23	22.8	77	58.8 ¹³⁷	-3	33.6 ¹⁰⁴	10 N	5 25	5 51	6 14	** ** *	** ** *	11 46	44
12	359	57.9	-23	22.8	92	31.5 ¹³⁷	-3	43.9 ¹⁰³	0	5 08	5 34	5 56	** ** *	** ** *	11 49	46
13	14	57.6		22.7	107	04.1 ¹³⁶	-3	54.2 ¹⁰³	10 S	4 49	5 16	39	** ** *	** ** *	52	49
14	29	57.3		22.6	121	36.7 ¹³⁶	-4	04.6 ¹⁰⁴	20	4 26	4 55	5 20	** ** *	** ** *	55	52
15	44	57.0		22.5	136	09.2 ¹³⁵		14.9 ¹⁰³	30	3 57	30	4 58	23 59	38	11 58	56
16	59	56.7		22.4	150	41.7 ¹³⁵		25.2 ¹⁰³	35	38	4 15	45	56 36		12 00	58
17	74	56.4	-23	22.4	165	14.1 ¹³⁴	-4	35.5 ¹⁰³	40	3 15	3 57	4 30	23 53	33	12 02	61
18	89	56.0	-23	22.3	179	46.5 ¹³⁴	-4	45.9 ¹⁰⁴	45	2 45	3 34	4 12	23 49	30	12 04	65
19	104	55.7		22.2	194	18.8 ¹³³	-4	56.1 ¹⁰²	50	1 59	3 05	3 49	45 27		07 68	
20	119	55.4		22.1	208	51.1 ¹³³	-5	06.4 ¹⁰³	52	1 31	2 50	38	43 25		09 69	
21	134	55.1		22.1	223	23.3 ¹³²		16.7 ¹⁰³	54	0 45	32	26	40 24		10 71	
22	149	54.8		22.0	237	55.5 ¹³²		27.0 ¹⁰³	56	** ** *	2 09	3 12	38 22		12 73	
23	164	54.5		21.9	252	27.6 ¹³¹		37.2 ¹⁰²	58	** ** *	1 39	2 55	35 20		14 75	
24	179	54.2	-23	21.8	266	59.7 ¹³¹	-5	47.5 ¹⁰³	60 S	** ** *	0 49	2 35	23 32	17	12 16	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 42 ^m 4		Mag: -4.7 PMG: 13 ^h 46 ^m		Mag: +0.9 PMG: 6 ^h 19 ^m		Mag: -2.7 PMG: 0 ^h 59 ^m		Mag: +0.6 PMG: 8 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	93	40.3	152	56.4	-19	34.3	265	05.2	-1	25.4
1	108	42.8	167	59.3		33.8	280	06.6		25.9
2	123	45.2	183	02.3		33.3	295	07.9		26.3
3	138	47.7	198	05.2		32.8	310	09.3		26.7
4	153	50.1	213	08.1		32.2	325	10.7		27.2
5	168	52.6	228	11.1	-19	31.7	340	12.1	-1	27.6
6	183	55.1	243	14.0	-19	31.2	355	13.5	-1	28.0
7	198	57.5	258	17.0		30.7	10	14.8		28.5
8	214	00.0	273	19.9		30.2	25	16.2		28.9
9	229	02.5	288	22.9		29.7	40	17.6		29.4
10	244	04.9	303	25.9		29.2	55	19.0		29.8
11	259	07.4	318	28.8	-19	28.7	70	20.4	-1	30.2
12	274	09.9	333	31.8	-19	28.1	85	21.7	-1	30.7
13	289	12.3	348	34.8		27.6	100	23.1		31.1
14	304	14.8	3	37.8		27.1	115	24.5		31.5
15	319	17.2	18	40.8		26.6	130	25.9		32.0
16	334	19.7	33	43.8		26.1	145	27.3		32.4
17	349	22.2	48	46.8	-19	25.6	160	28.6	-1	32.8
18	4	24.6	63	49.8	-19	25.1	175	30.0	-1	33.3
19	19	27.1	78	52.8		24.6	190	31.4		33.7
20	34	29.6	93	55.8		24.1	205	32.8		34.1
21	49	32.0	108	58.8		23.6	220	34.2		34.5
22	64	34.5	124	01.8		23.1	235	35.6		35.0
23	79	37.0	139	04.8		22.5	250	36.9		35.4
24	94	39.4	154	07.9	-19	22.0	265	38.3	-1	35.8
Dif	—		+30		+5		+14		-4	
							+28		0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16/3			Edad: 23 ^d 0	PHE { 4 ^h : 56.5 12 ^h : 56.8 20 ^h : 57.1															
	PMG: 12 ^h 00 ^m 6					PMG: 6 ^h 24 ^m			R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m						
0	179	54.2	-23	21.8	266	59.7	-5	47.5	60 N	14 58	15 55	16 52	0 56 80	11 38 19						
1	194	53.9		21.7	281	31.7 ¹³⁰	-5	57.7 ¹⁰²	58	15 15	16 07	17 00	53 77	43 21						
2	209	53.6		21.6	296	03.6 ¹²⁹	-6	07.9 ¹⁰²	56	30	17	06	50 74	47 23						
3	224	53.3		21.5	310	35.5 ¹²⁹		18.1 ¹⁰²	54	43	26	13	47 73	50 25						
4	239	53.0		21.5	325	07.3 ¹²⁸		28.3 ¹⁰²	52	15 54	35	18	45 70	53 27						
5	254	52.6	-23	21.4	339	39.1 ¹²⁸	-6	38.4 ¹⁰¹	50	16 03	16 42	17 23	0 42 69	11 56 29						
6	269	52.3	-23	21.3	354	10.8 ¹²⁷	-6	48.6 ¹⁰²	45	16 24	16 58	17 35	0 38 65	12 02 32						
7	284	52.0		21.2	8	42.4 ¹²⁶	-6	58.7 ¹⁰¹	40	41	17 11	46	34 62	08 34						
8	299	51.7		21.1	23	14.0 ¹²⁶	-7	08.8 ¹⁰¹	35	16 55	23	17 55	30 60	12 37						
9	314	51.4		21.0	37	45.5 ¹²⁵		18.9 ¹⁰¹	30	17 07	34	18 04	27 58	16 40						
10	329	51.1		20.9	52	17.0 ¹²⁵		28.9 ¹⁰⁰	20	29	17 53	20	22 54	23 43						
11	344	50.8	-23	20.8	66	48.4 ¹²⁴	-7	38.9 ¹⁰⁰	10 N	17 47	18 10	18 36	0 17 51	12 30 46						
12	359	50.5	-23	20.7	81	19.7 ¹²³	-7	49.0 ¹⁰¹	0	18 04	18 27	18 53	0 13 48	12 35 49						
13	14	50.2		20.6	95	51.0 ¹²³	-7	58.9 ⁹⁹	10 S	22	18 45	19 12	09 44	41 52						
14	29	49.9		20.5	110	22.1 ¹²¹	-8	08.9 ¹⁰⁰	20	18 41	19 05	19 35	0 04 41	47 56						
15	44	49.6		20.4	124	53.3 ¹²²		18.8 ⁹⁹	30	19 03	30	20 04	** ** *	54 59						
16	59	49.2		20.4	139	24.3 ¹²⁰		28.7 ⁹⁹	35	16	19 45	22	** ** *	12 58 62						
17	74	48.9	-23	20.3	153	55.3 ¹²⁰	-8	38.6 ⁹⁹	40	19 31	20 04	20 45	** ** *	13 03 64						
18	89	48.6	-23	20.2	168	26.2 ¹¹⁹	-8	48.5 ⁹⁹	45	19 49	20 26	21 16	** ** *	13 09 66						
19	104	48.3		20.1	182	57.0 ¹¹⁸	-8	58.3 ⁹⁸	50	20 11	20 56	22 01	** ** *	15 70						
20	119	48.0		20.0	197	27.8 ¹¹⁸	-9	08.1 ⁹⁸	52	22	21 11	22 28	** ** *	18 72						
21	134	47.7		19.9	211	58.5 ¹¹⁷		17.8 ⁹⁷	54	34	29	23 14	** ** *	21 74						
22	149	47.4		19.8	226	29.1 ¹¹⁶		27.6 ⁹⁸	56	20 48	21 51	** ** *	** ** *	25 75						
23	164	47.1		19.7	240	59.7 ¹¹⁶		37.2 ⁹⁶	58	21 05	22 20	** ** *	23 55 24	29 78						
24	179	46.8	-23	19.5	255	30.1 ¹¹⁴	-9	46.9 ⁹⁷	60 S	21 25	23 09	** ** *	23 49 22	13 34 80						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG		Mag: -4.7			Mag: +0.9			Mag: -2.7			Mag: +0.6								
	17 ^h 38 ^m 5		PMG: 13 ^h 41 ^m			PMG: 6 ^h 17 ^m			PMG: 0 ^h 55 ^m			PMG: 8 ^h 52 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'								
0	94	39.4	154	07.9	-19	22.0	265	38.3	-1	35.8	346	18.6	+22	28.4	226	42.3	-15	36.3		
1	109	41.9	169	10.9		21.5	280	39.7		36.3	1	21.4		28.5	241	44.5		36.3		
2	124	44.4	184	13.9		21.0	295	41.1		36.7	16	24.2		28.5	256	46.7		36.4		
3	139	46.8	199	17.0		20.5	310	42.5		37.1	31	27.0		28.6	271	48.9		36.5		
4	154	49.3	214	20.0		20.0	325	43.9		37.6	46	29.8		28.6	286	51.2		36.5		
5	169	51.7	229	23.1	-19	19.5	340	45.2	-1	38.0	61	32.6	+22	28.7	301	53.4	-15	36.6		
6	184	54.2	244	26.1	-19	19.0	355	46.6	-1	38.4	76	35.5	+22	28.7	316	55.6	-15	36.6		
7	199	56.7	259	29.2		18.5	10	48.0		38.9	91	38.3		28.8	331	57.8		36.7		
8	214	59.1	274	32.3		18.0	25	49.4		39.3	106	41.1		28.8	347	00.0		36.8		
9	230	01.6	289	35.3		17.5	40	50.8		39.7	121	43.9		28.9	2	02.3		36.8		
10	245	04.1	304	38.4		17.0	55	52.2		40.2	136	46.7		28.9	17	04.5		36.9		
11	260	06.5	319	41.5	-19	16.5	70	53.6	-1	40.6	151	49.5	+22	29.0	32	06.7	-15	36.9		
12	275	09.0	334	44.6	-19	16.0	85	54.9	-1	41.0	166	52.3	+22	29.0	47	08.9	-15	37.0		
13	290	11.5	349	47.7		15.5	100	56.3		41.4	181	55.1		29.0	62	11.2		37.0		
14	305	13.9	4	50.8		15.0	115	57.7		41.9	196	57.9		29.1	77	13.4		37.1		
15	320	16.4	19	53.9		14.5	130	59.1		42.3	212	00.8		29.1	92	15.6		37.2		
16	335	18.9	34	57.0		14.0	146	00.5		42.7	227	03.6		29.2	107	17.8		37.2		
17	350	21.3	50	00.1	-19	13.5	161	01.9	-1	43.2	242	06.4	+22	29.2	122	20.0	-15	37.3		
18	5	23.8	65	03.2	-19	13.0	176	03.3	-1	43.6	257	09.2	+22	29.3	137	22.3	-15	37.3		
19	20	26.2	80	06.3		12.5	191	04.7		44.0	272	12.0		29.3	152	24.5		37.4		
20	35	28.7	95	09.4		12.0	206	06.1		44.4	287	14.8		29.4	167	26.7		37.5		
21	50	31.2	110	12.5		11.5	221	07.4		44.9	302	17.6		29.4	182	28.9		37.5		
22	65	33.6	125	15.7		11.0	236	08.8		45.3	317	20.5		29.5	197	31.2		37.6		
23	80	36.1	140	18.8		10.5	251	10.2		45.7	332	23.3		29.5	212	33.4		37.6		
24	95	38.6	155	22.0	-19	10.0	266	11.6	-1	46.2	347	26.1	+22	29.6	227	35.6	-15	37.7		
Dif	—		+31			+5			+14			-4			+28			0		
															+22			-1		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 01 ^m 1			Edad: 24 ^d 0 PHE { 4 ^h : 57'4 12 ^h : 57'8 20 ^h : 58'1 PMG: 7 ^h 12 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	46.8	-23	19.5	255	30.1	-9	46.9	60 N	7 09	8 06	9 04	2 16	82	11 57	24	
1	194	46.5		19.4	270	00.5 ¹¹⁴	-9	56.5 ⁹⁶	58	7 02	7 54	8 46	10 79	12 04	26	26	
2	209	46.2		19.3	284	30.9 ¹¹⁴	-10	06.1 ⁹⁵	56	6 55	44	32	04 77	10 28			
3	224	45.9		19.2	299	01.1 ¹¹²		15.6 ⁹⁶	54	49	35	19	2 00	74	15	30	
4	239	45.5		19.1	313	31.3 ¹¹²		25.1 ⁹⁵	52	43	27	8 08	1 55	73	20	32	
5	254	45.2	-23	19.0	328	01.3 ¹¹⁰	-10	34.6 ⁹⁵	50	6 38	7 20	7 58	1 51	72	12 25	33	
6	269	44.9	-23	18.9	342	31.3 ¹¹⁰	-10	44.0 ⁹⁴	45	6 26	7 04	7 37	1 43	68	12 34	37	
7	284	44.6		18.8	357	01.3 ¹¹⁰	-10	53.4 ⁹⁴	40	16	6 50	21	36	65	42	40	
8	299	44.3		18.7	11	31.1 ¹⁰⁸	-11	02.7 ⁹³	35	6 07	38	7 07	30	62	49	42	
9	314	44.0		18.6	26	00.9 ¹⁰⁸		12.0 ⁹³	30	5 58	28	6 54	25	60	12 56	43	
10	329	43.7		18.5	40	30.6 ¹⁰⁷		21.2 ⁹²	20	42	6 09	33	16	57	13 06	47	
11	344	43.4	-23	18.4	55	00.1 ¹⁰⁵	-11	30.4 ⁹²	10 N	5 26	5 52	6 15	1 08	54	13 16	49	
12	359	43.1	-23	18.2	69	29.7 ¹⁰⁶	-11	39.6 ⁹²	0	5 09	5 35	5 57	1 01	50	13 24	53	
13	14	42.8		18.1	83	59.1 ¹⁰⁴		48.7 ⁹¹	10 S	4 50	5 17	40	0 53	48	33	55	
14	29	42.5		18.0	98	28.4 ¹⁰³	-11	57.7 ⁹⁰	20	4 27	4 56	5 21	45	45	43	58	
15	44	42.2		17.9	112	57.7 ¹⁰³	-12	06.7 ⁹⁰	30	3 58	32	4 59	37	41	13 53	62	
16	59	41.9		17.8	127	26.9 ¹⁰²		15.7 ⁸⁹	35	40	4 16	46	32	39	14 00	63	
17	74	41.6	-23	17.7	141	55.9 ¹⁰⁰	-12	24.6 ⁸⁹	40	3 17	3 58	4 31	0 26	37	14 07	65	
18	89	41.2	-23	17.6	156	24.9 ¹⁰⁰	-12	33.4 ⁸⁸	45	2 46	3 36	4 13	0 19	35	14 15	68	
19	104	40.9		17.4	170	53.8 ⁹⁹		42.2 ⁸⁸	50	2 01	3 06	3 51	12	31	25	72	
20	119	40.6		17.3	185	22.7 ⁹⁹		50.9 ⁸⁷	52	1 33	2 51	40	08	30	30	73	
21	134	40.3		17.2	199	51.4 ⁹⁷	-12	59.6 ⁸⁷	54	0 48	33	28	04	28	35	75	
22	149	40.0		17.1	214	20.0 ⁹⁶	-13	08.2 ⁸⁶	56	** ** *	2 11	3 13	0 00	26	40	77	
23	164	39.7		17.0	228	48.6 ⁹⁶		16.7 ⁸⁵	58	** ** *	1 42	2 57	** ** *	**	47	79	
24	179	39.4	-23	16.8	243	17.1 ⁹⁵	-13	25.2 ⁸⁵	60 S	** ** *	0 53	2 36	** ** *	**	14 54	82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 34 ^m 5		Mag: -4.6 PMG: 13 ^h 36 ^m		Mag: +0.9 PMG: 6 ^h 15 ^m		Mag: -2.7 PMG: 0 ^h 50 ^m		Mag: +0.6 PMG: 8 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	95	38.6	155	22.0	-19	10.0	347	26.1	+22	29.6
1	110	41.0	170	25.1		09.5	2	28.9		29.6
2	125	43.5	185	28.2		09.0	17	31.7		29.6
3	140	46.0	200	31.4		08.5	32	34.5		29.7
4	155	48.4	215	34.5		08.0	47	37.3		29.7
5	170	50.9	230	37.7	-19	07.5	62	40.1	+22	29.8
6	185	53.3	245	40.9	-19	07.0	77	43.0	+22	29.8
7	200	55.8	260	44.0		06.5	92	45.8		29.9
8	215	58.3	275	47.2		06.0	107	48.6		29.9
9	231	00.7	290	50.4		05.5	122	51.4		30.0
10	246	03.2	305	53.6		05.0	137	54.2		30.0
11	261	05.7	320	56.8	-19	04.5	152	57.0	+22	30.1
12	276	08.1	336	00.0	-19	04.0	167	59.9	+22	30.1
13	291	10.6	351	03.2		03.5	183	02.7		30.2
14	306	13.1	6	06.4		03.0	198	05.5		30.2
15	321	15.5	21	09.6		02.5	213	08.3		30.3
16	336	18.0	36	12.8		02.0	228	11.1		30.3
17	351	20.5	51	16.0	-19	01.5	243	13.9	+22	30.3
18	6	22.9	66	19.2	-19	01.0	258	16.7	+22	30.4
19	21	25.4	81	22.4		00.6	273	19.6		30.4
20	36	27.8	96	25.6	-19	00.1	288	22.4		30.5
21	51	30.3	111	28.9	-18	59.6	303	25.2		30.5
22	66	32.8	126	32.1		59.1	318	28.0		30.6
23	81	35.2	141	35.4		58.6	333	30.8		30.6
24	96	37.7	156	38.6	-18	58.1	348	33.6	+22	30.7
Dif	—		+32		+5		+14		-4	
							+28		0	
									+22	
									-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 01 ^m 6				Edad: 25 ^d 0 PHE { SD: 15 ^h 9 PMG: 8 ^h 04 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	39.4	-23	16.8	243	17.1	-13	25.2	60 N	15 00	15 57	16 54	3 38 82	12 21 32				
1	194	39.1		16.7	257	45.4	93	33.6	58	17	16 09	17 01	29 79	30 35				
2	209	38.8		16.6	272	13.7	93	42.0	56	32	19	08	21 77	38 37				
3	224	38.5		16.5	286	41.9	92	50.2	54	44	28	14	14 76	46 38				
4	239	38.2		16.3	301	10.0	91	-13 58.5	52	15 55	36	20	08 74	52 40				
5	254	37.9	-23	16.2	315	38.0	90	-14 06.6	50	16 05	16 43	17 25	3 03 72	12 58 41				
6	269	37.6	-23	16.1	330	05.9	89	-14 14.7	45	16 26	16 59	17 37	2 51 69	13 11 44				
7	284	37.3		15.9	344	33.8	89	22.7	40	42	17 13	47	41 67	22 46				
8	299	37.0		15.8	359	01.5	87	30.6	35	16 56	24	17 56	32 65	31 48				
9	314	36.6		15.7	13	29.1	86	38.5	30	17 09	35	18 05	25 63	39 50				
10	329	36.3		15.6	27	56.7	86	46.3	20	30	17 54	21	13 59	13 53 52				
11	344	36.0	-23	15.4	42	24.2	85	-14 54.0	10 N	17 48	18 11	18 37	2 02 57	14 05 55				
12	359	35.7	-23	15.3	56	51.5	83	-15 01.6	0	18 05	18 28	18 54	1 51 55	14 17 57				
13	14	35.4		15.2	71	18.8	83	09.2	10 S	23	18 46	19 13	41 52	28 59				
14	29	35.1		15.0	85	46.0	82	16.7	20	18 42	19 06	19 35	30 50	41 61				
15	44	34.8		14.9	100	13.0	80	24.1	30	19 04	31	20 04	18 47	14 55 63				
16	59	34.5		14.8	114	40.0	80	31.4	35	16	19 46	23	11 45	15 03 65				
17	74	34.2	-23	14.6	129	06.9	79	-15 38.6	40	19 31	20 04	20 46	1 03 43	15 12 67				
18	89	33.9	-23	14.5	143	33.7	78	-15 45.8	45	19 49	20 26	21 16	0 54 40	15 23 69				
19	104	33.6		14.3	158	00.4	77	52.8	50	20 12	20 56	22 01	43 37	37 71				
20	119	33.3		14.2	172	27.1	77	-15 59.8	52	22	21 11	22 28	38 35	43 73				
21	134	33.0		14.1	186	53.6	75	-16 06.7	54	34	28	23 11	32 34	50 74				
22	149	32.7		13.9	201	20.0	74	13.5	56	20 48	21 50	** **	26 32	15 57 76				
23	164	32.4		13.8	215	46.3	73	20.2	58	21 05	22 19	** **	19 30	16 06 78				
24	179	32.1	-23	13.6	230	12.6	73	-16 26.8	60 S	21 25	23 06	** **	0 11 27	16 16 80				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 30 ^m 6		Mag: -4.6 PMG: 13 ^h 30 ^m				Mag: +0.9 PMG: 6 ^h 12 ^m				Mag: -2.7 PMG: 0 ^h 46 ^m				Mag: +0.6 PMG: 8 ^h 45 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	37.7	156	38.6	-18	58.1	266	45.1	-1	56.4	348	33.6	+22	30.7	228	29.0	-15	39.1
1	111	40.2	171	41.9		57.6	281	46.5		56.8	3	36.5		30.7	243	31.2		39.2
2	126	42.6	186	45.1		57.1	296	47.9		57.2	18	39.3		30.8	258	33.5		39.2
3	141	45.1	201	48.4		56.6	311	49.3		57.6	33	42.1		30.8	273	35.7		39.3
4	156	47.6	216	51.6		56.1	326	50.7		58.1	48	44.9		30.9	288	37.9		39.3
5	171	50.0	231	54.9	-18	55.6	341	52.1	-1	58.5	63	47.7	+22	30.9	303	40.1	-15	39.4
6	186	52.5	246	58.2	-18	55.2	356	53.5	-1	58.9	78	50.5	+22	30.9	318	42.4	-15	39.4
7	201	55.0	262	01.4		54.7	11	54.9		59.3	93	53.4		31.0	333	44.6		39.5
8	216	57.4	277	04.7		54.2	26	56.3	-1	59.8	108	56.2		31.0	348	46.8		39.6
9	231	59.9	292	08.0		53.7	41	57.7	-2	00.2	123	59.0		31.1	3	49.0		39.6
10	247	02.3	307	11.3		53.2	56	59.1		00.6	139	01.8		31.1	18	51.3		39.7
11	262	04.8	322	14.6	-18	52.7	72	00.5	-2	01.0	154	04.6	+22	31.2	33	53.5	-15	39.7
12	277	07.3	337	17.9	-18	52.2	87	01.9	-2	01.4	169	07.4	+22	31.2	48	55.7	-15	39.8
13	292	09.7	352	21.2		51.8	102	03.3		01.9	184	10.3		31.3	63	57.9		39.8
14	307	12.2	7	24.5		51.3	117	04.7		02.3	199	13.1		31.3	79	00.2		39.9
15	322	14.7	22	27.8		50.8	132	06.1		02.7	214	15.9		31.4	94	02.4		40.0
16	337	17.1	37	31.1		50.3	147	07.5		03.1	229	18.7		31.4	109	04.6		40.0
17	352	19.6	52	34.4	-18	49.8	162	08.9	-2	03.5	244	21.5	+22	31.5	124	06.9	-15	40.1
18	7	22.1	67	37.7	-18	49.3	177	10.3	-2	04.0	259	24.3	+22	31.5	139	09.1	-15	40.1
19	22	24.5	82	41.1		48.9	192	11.7		04.4	274	27.2		31.6	154	11.3		40.2
20	37	27.0	97	44.4		48.4	207	13.1		04.8	289	30.0		31.6	169	13.5		40.2
21	52	29.4	112	47.7		47.9	222	14.5		05.2	304	32.8		31.6	184	15.8		40.3
22	67	31.9	127	51.1		47.4	237	16.0		05.6	319	35.6		31.7	199	18.0		40.4
23	82	34.4	142	54.4		46.9	252	17.4		06.1	334	38.4		31.7	214	20.2		40.4
24	97	36.8	157	57.8	-18	46.4	267	18.8	-2	06.5	349	41.3	+22	31.8	229	22.4	-15	40.5
Dif	—		+33		+5		+14		-4		+28		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 02 ^m 1			Edad: 26 ^d 0 PHE { SD: 16:1 PMG: 9 ^h 00 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	32.1	-23	13.6	230	12.6	-16	26.8	60 N	7 10	8 06	9 03	5 00	78	12 53	44		
1	194	31.8		13.5	244	38.7	71	33.3	58	7 02	7 55	8 46	4 48	76	13 05	46		
2	209	31.5		13.4	259	04.8	71	39.7	56	6 55	44	32	38	75	15	48		
3	224	31.2		13.2	273	30.8	70	46.0	54	49	35	19	30	73	24	49		
4	239	30.8		13.1	287	56.7	69	52.2	52	44	27	8 08	22	72	32	50		
5	254	30.5	-23	12.9	302	22.4	67	-16	58.4	62	6 39	7 20	7 58	4 15	70	13 39	51	
6	269	30.2	-23	12.8	316	48.1	67	-17	04.4	60	6 27	7 04	7 38	4 00	68	13 55	53	
7	284	29.9		12.6	331	13.7	66	10.3	59	40	17	6 51	21	3 48	66	14 08	54	
8	299	29.6		12.5	345	39.3	66	16.1	58	35	6 08	39	7 07	37	65	19	55	
9	314	29.3		12.3	0	04.7	64	21.8	57	30	5 59	29	6 55	28	64	29	56	
10	329	29.0		12.2	14	30.0	63	27.4	56	20	43	6 10	34	3 12	62	14 45	58	
11	344	28.7	-23	12.0	28	55.3	63	-17	32.9	55	5 27	5 53	6 16	2 59	60	15 00	59	
12	359	28.4	-23	11.9	43	20.4	61	-17	38.3	54	5 10	5 36	5 58	2 46	59	15 14	60	
13	14	28.1		11.7	57	45.5	61	43.6	53	10 S	4 51	5 18	41	33	57	27	61	
14	29	27.8		11.6	72	10.5	60	48.8	52	20	28	4 58	22	20	55	42	62	
15	44	27.5		11.4	86	35.4	59	53.8	50	30	4 00	33	5 00	2 05	53	15 58	64	
16	59	27.2		11.3	101	00.2	58	-17	58.8	50	3 41	18	4 47	1 56	52	16 08	65	
17	74	26.9	-23	11.1	115	25.0	58	-18	03.6	48	3 18	4 00	4 32	1 46	50	16 19	66	
18	89	26.6	-23	10.9	129	49.6	56	-18	08.3	47	2 48	3 37	4 15	1 34	48	16 32	67	
19	104	26.3		10.8	144	14.2	56	12.9	46	50	2 03	3 08	3 52	20	46	48	69	
20	119	26.0		10.6	158	38.7	55	17.4	45	52	1 36	2 53	42	13	45	16 56	69	
21	134	25.7		10.5	173	03.1	54	21.8	44	54	0 53	35	29	1 06	44	17 04	70	
22	149	25.4		10.3	187	27.4	53	26.0	42	56	** **	2 14	3 15	0 58	42	13	71	
23	164	25.1		10.1	201	51.7	53	30.1	41	58	** **	1 45	2 59	49	40	24	72	
24	179	24.8	-23	10.0	216	15.9	52	-18	34.1	40	** **	0 57	2 39	0 38	39	17 36	73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 26 ^m 7		Mag: -4.5 PMG: 13 ^h 25 ^m			Mag: +0.9 PMG: 6 ^h 10 ^m			Mag: -2.7 PMG: 0 ^h 41 ^m			Mag: +0.6 PMG: 8 ^h 41 ^m						
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	97	36.8	157	57.8	-18	46.4	267	18.8	-2	06.5	349	41.3	+22	31.8	229	22.4	-15	40.5
1	112	39.3	173	01.1		46.0	282	20.2		06.9	4	44.1		31.8	244	24.7		40.5
2	127	41.8	188	04.5		45.5	297	21.6		07.3	19	46.9		31.9	259	26.9		40.6
3	142	44.2	203	07.8		45.0	312	23.0		07.7	34	49.7		31.9	274	29.1		40.6
4	157	46.7	218	11.2		44.5	327	24.4		08.2	49	52.5		32.0	289	31.4		40.7
5	172	49.2	233	14.6	-18	44.0	342	25.8	-2	08.6	64	55.4	+22	32.0	304	33.6	-15	40.8
6	187	51.6	248	18.0	-18	43.6	357	27.2	-2	09.0	79	58.2	+22	32.1	319	35.8	-15	40.8
7	202	54.1	263	21.3		43.1	12	28.6		09.4	95	01.0		32.1	334	38.0		40.9
8	217	56.6	278	24.7		42.6	27	30.0		09.8	110	03.8		32.2	349	40.3		40.9
9	232	59.0	293	28.1		42.1	42	31.4		10.3	125	06.6		32.2	4	42.5		41.0
10	248	01.5	308	31.5		41.7	57	32.8		10.7	140	09.5		32.2	19	44.7		41.0
11	263	03.9	323	34.9	-18	41.2	72	34.3	-2	11.1	155	12.3	+22	32.3	34	47.0	-15	41.1
12	278	06.4	338	38.3	-18	40.7	87	35.7	-2	11.5	170	15.1	+22	32.3	49	49.2	-15	41.2
13	293	08.9	353	41.7		40.2	102	37.1		11.9	185	17.9		32.4	64	51.4		41.2
14	308	11.3	8	45.1		39.8	117	38.5		12.3	200	20.7		32.4	79	53.7		41.3
15	323	13.8	23	48.5		39.3	132	39.9		12.8	215	23.6		32.5	94	55.9		41.3
16	338	16.3	38	51.9		38.8	147	41.3		13.2	230	26.4		32.5	109	58.1		41.4
17	353	18.7	53	55.3	-18	38.3	162	42.7	-2	13.6	245	29.2	+22	32.6	125	00.3	-15	41.4
18	8	21.2	68	58.8	-18	37.9	177	44.1	-2	14.0	260	32.0	+22	32.6	140	02.6	-15	41.5
19	23	23.7	84	02.2		37.4	192	45.5		14.4	275	34.8		32.7	155	04.8		41.5
20	38	26.1	99	05.6		36.9	207	47.0		14.8	290	37.7		32.7	170	07.0		41.6
21	53	28.6	114	09.1		36.4	222	48.4		15.3	305	40.5		32.8	185	09.3		41.7
22	68	31.1	129	12.5		36.0	237	49.8		15.7	320	43.3		32.8	200	11.5		41.7
23	83	33.5	144	15.9		35.5	252	51.2		16.1	335	46.1		32.9	215	13.7		41.8
24	98	36.0	159	19.4	-18	35.0	267	52.6	-2	16.5	350	48.9	+22	32.9	230	16.0	-15	41.8
Dif	—		+34		+5		+14		-4		+28		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 02 ^m 6			Edad: 27 ^d 0 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'7 PMG: 9 ^h 59 ^m R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	179	24.8	-23	10.0	216	15.9	-18	34.1	60 N	15 02	15 59	16 56	6 18 68	13 37 61
1	194	24.5		09.8	230	39.9	50	38.0	58	19	16 11	17 03	6 04 68	13 51 61
2	209	24.2		09.7	245	04.0	51	41.7	56	34	21	10	5 53 66	14 03 61
3	224	23.9		09.5	259	27.9	49	45.3	54	46	30	16	43 66	13 61
4	239	23.6		09.3	273	51.8	49	48.8	52	15 57	38	21	34 66	22 62
5	254	23.3	-23	09.2	288	15.6	48	-18 52.2	50	16 07	16 45	17 27	5 25 66	14 30 62
6	269	23.0	-23	09.0	302	39.3	47	-18 55.4	45	16 27	17 01	17 38	5 08 65	14 48 62
7	284	22.7		08.8	317	03.0	47	-18 58.5	40	44	14	48	4 54 65	15 02 62
8	299	22.4		08.7	331	26.6	46	-19 01.5	35	16 58	26	17 57	42 64	14 62
9	314	22.1		08.5	345	50.1	45	04.4	30	17 10	36	18 06	32 64	25 62
10	329	21.8		08.3	0	13.6	45	07.1	27	31	17 55	22	4 14 63	43 62
11	344	21.5	-23	08.2	14	37.0	44	-19 09.6	10 N	17 49	18 12	18 38	3 59 62	15 59 62
12	359	21.2	-23	08.0	29	00.4	44	-19 12.1	0	18 06	18 29	18 55	3 45 61	16 14 62
13	14	20.9		07.8	43	23.7	43	14.4	10 S	24	18 47	19 14	30 61	28 63
14	29	20.6		07.6	57	46.9	42	16.6	20	18 42	19 07	19 36	3 15 60	16 44 63
15	44	20.3		07.5	72	10.0	41	18.6	30	19 04	31	20 05	2 58 59	17 02 63
16	59	20.0		07.3	86	33.2	42	20.5	35	17	19 47	23	48 58	13 62
17	74	19.7	-23	07.1	100	56.2	40	-19 22.2	40	19 32	20 04	20 46	2 36 58	17 25 62
18	89	19.4	-23	06.9	115	19.2	40	-19 23.8	45	19 49	20 27	21 16	2 22 58	17 39 62
19	104	19.1		06.8	129	42.2	40	25.3	50	20 12	20 56	22 00	2 06 56	17 57 61
20	119	18.7		06.6	144	05.1	39	26.7	52	22	21 11	22 27	1 58 56	18 05 62
21	134	18.4		06.4	158	27.9	38	27.8	54	34	28	23 08	50 55	14 62
22	149	18.1		06.2	172	50.7	38	28.9	56	20 48	21 50	** **	40 55	24 62
23	164	17.8		06.0	187	13.5	38	29.8	58	21 05	22 18	** **	29 54	36 61
24	179	17.5	-23	05.9	201	36.2	37	-19 30.6	60 S	21 24	23 03	** **	1 17 52	18 49 61
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 22 ^m 7		Mag: -4.5 PMG: 13 ^h 20 ^m		Mag: +0.9 PMG: 6 ^h 08 ^m		Mag: -2.7 PMG: 0 ^h 37 ^m		Mag: +0.6 PMG: 8 ^h 38 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	98	36.0	159	19.4	-18	35.0	267	52.6	-2	16.5				
1	113	38.4	174	22.8		34.6	282	54.0		16.9				
2	128	40.9	189	26.3		34.1	297	55.4		17.3				
3	143	43.4	204	29.8		33.6	312	56.9		17.8				
4	158	45.8	219	33.2		33.1	327	58.3		18.2				
5	173	48.3	234	36.7	-18	32.7	342	59.7	-2	18.6				
6	188	50.8	249	40.2	-18	32.2	358	01.1	-2	19.0				
7	203	53.2	264	43.7		31.7	13	02.5		19.4				
8	218	55.7	279	47.1		31.3	28	03.9		19.8				
9	233	58.2	294	50.6		30.8	43	05.4		20.2				
10	249	00.6	309	54.1		30.3	58	06.8		20.7				
11	264	03.1	324	57.6	-18	29.9	73	08.2	-2	21.1				
12	279	05.6	340	01.1	-18	29.4	88	09.6	-2	21.5				
13	294	08.0	355	04.6		28.9	103	11.0		21.9				
14	309	10.5	10	08.1		28.5	118	12.4		22.3				
15	324	12.9	25	11.6		28.0	133	13.9		22.7				
16	339	15.4	40	15.1		27.5	148	15.3		23.1				
17	354	17.9	55	18.7	-18	27.1	163	16.7	-2	23.5				
18	9	20.3	70	22.2	-18	26.6	178	18.1	-2	24.0				
19	24	22.8	85	25.7		26.2	193	19.5		24.4				
20	39	25.3	100	29.2		25.7	208	21.0		24.8				
21	54	27.7	115	32.8		25.2	223	22.4		25.2				
22	69	30.2	130	36.3		24.8	238	23.8		25.6				
23	84	32.7	145	39.8		24.3	253	25.2		26.0				
24	99	35.1	160	43.4	-18	23.8	268	26.6	-2	26.4				
Dif	—		+35		+5		+14		-4					
							+28		0					
									+22					
									-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 03 ^m 1			Edad: 28 ^d 0 PHE { 4 ^h : 60'9 12 ^h : 61'1 20 ^h : 61'2 Rº: 63 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	17.5	-23	05.9	201	36.2	-19	30.6	6	60 N	7 09	8 06	9 03	7 26	53	14 38	76	
1	194	17.2		05.7	215	58.9	37	31.2	5	58	7 02	7 54	8 46	7 12	54	14 52	75	
2	209	16.9		05.5	230	21.6	37	31.7	6	56	6 56	44	31	6 59	56	15 04	74	
3	224	16.6		05.3	244	44.2	36	32.0	3	54	50	36	19	49	56	14	73	
4	239	16.3		05.1	259	06.8	36	32.2	2	52	44	28	8 08	40	57	24	72	
5	254	16.1	-23	05.0	273	29.3	35	-19	32.2	0	50	6 39	7 20	7 59	6 31	58	15 32	71
6	269	15.8	-23	04.8	287	51.8	35	-19	32.1	1	45	6 27	7 05	7 38	6 13	59	15 50	70
7	284	15.5		04.6	302	14.3	35	31.9	2	40	17	6 51	22	5 59	59	16 04	69	
8	299	15.2		04.4	316	36.7	34	31.5	4	35	08	40	7 08	46	61	16	68	
9	314	14.9		04.2	330	59.2	35	30.9	6	30	6 00	29	6 56	36	60	27	67	
10	329	14.6		04.0	345	21.6	34	30.2	7	20	5 43	6 11	35	17	62	16 45	66	
11	344	14.3	-23	03.8	359	44.0	34	-19	29.4	8	10 N	5 27	5 54	6 17	5 01	62	17 01	64
12	359	14.0	-23	03.6	14	06.3	33	-19	28.4	10	0	5 11	5 37	5 59	4 46	63	17 16	63
13	14	13.7		03.4	28	28.7	34	27.3	11	10 S	4 52	5 19	42	31	64	31	61	
14	29	13.4		03.3	42	51.0	33	26.0	13	20	30	4 59	23	4 15	64	17 47	60	
15	44	13.1		03.1	57	13.3	33	24.6	14	30	4 01	34	5 02	3 57	65	18 05	58	
16	59	12.8		02.9	71	35.6	33	23.0	16	35	3 43	19	4 49	46	66	15	58	
17	74	12.5	-23	02.7	85	57.9	33	-19	21.3	17	40	3 20	4 01	4 34	3 34	66	18 27	56
18	89	12.2	-23	02.5	100	20.2	33	-19	19.4	19	45	2 50	3 39	4 16	3 20	66	18 41	55
19	104	11.9		02.3	114	42.5	33	17.4	20	50	2 06	3 10	3 54	3 02	67	18 58	54	
20	119	11.6		02.1	129	04.8	33	15.2	22	52	1 39	2 55	44	2 54	67	19 07	52	
21	134	11.3		01.9	143	27.0	32	12.9	23	54	0 58	38	31	45	68	16	51	
22	149	11.0		01.7	157	49.3	33	10.5	24	56	** **	2 16	18	35	68	26	49	
23	164	10.7		01.5	172	11.6	33	07.9	26	58	** **	1 48	3 01	23	68	37	48	
24	179	10.4	-23	01.3	186	33.9	33	-19	05.1	28	60 S	** **	1 03	2 41	2 09	69	19 50	47
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 18 ^m 8			Mag: -4.4 PMG: 13 ^h 14 ^m			Mag: +0.9 PMG: 6 ^h 06 ^m			Mag: -2.7 PMG: 0 ^h 32 ^m			Mag: +0.6 PMG: 8 ^h 34 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	99	35.1	160	43.4	-18	23.8	268	26.6	-2	26.4	351	56.7	+22	34.0	231	09.5	-15	43.2
1	114	37.6	175	46.9		23.4	283	28.1		26.8	6	59.5		34.1	246	11.7		43.2
2	129	40.1	190	50.5		22.9	298	29.5		27.2	22	02.3		34.1	261	14.0		43.3
3	144	42.5	205	54.0		22.5	313	30.9		27.7	37	05.1		34.1	276	16.2		43.3
4	159	45.0	220	57.6		22.0	328	32.3		28.1	52	07.9		34.2	291	18.5		43.4
5	174	47.4	236	01.2	-18	21.6	343	33.8	-2	28.5	67	10.8	+22	34.2	306	20.7	-15	43.4
6	189	49.9	251	04.7	-18	21.1	358	35.2	-2	28.9	82	13.6	+22	34.3	321	22.9	-15	43.5
7	204	52.4	266	08.3		20.6	13	36.6		29.3	97	16.4		34.3	336	25.2		43.6
8	219	54.8	281	11.9		20.2	28	38.0		29.7	112	19.2		34.4	351	27.4		43.6
9	234	57.3	296	15.5		19.7	43	39.5		30.1	127	22.1		34.4	6	29.6		43.7
10	249	59.8	311	19.1		19.3	58	40.9		30.5	142	24.9		34.5	21	31.9		43.7
11	265	02.2	326	22.6	-18	18.8	73	42.3	-2	30.9	157	27.7	+22	34.5	36	34.1	-15	43.8
12	280	04.7	341	26.2	-18	18.4	88	43.7	-2	31.3	172	30.5	+22	34.6	51	36.3	-15	43.8
13	295	07.2	356	29.8		17.9	103	45.2		31.8	187	33.4		34.6	66	38.6		43.9
14	310	09.6	11	33.4		17.5	118	46.6		32.2	202	36.2		34.7	81	40.8		43.9
15	325	12.1	26	37.0		17.0	133	48.0		32.6	217	39.0		34.7	96	43.0		44.0
16	340	14.6	41	40.6		16.5	148	49.4		33.0	232	41.8		34.7	111	45.3		44.0
17	355	17.0	56	44.3	-18	16.1	163	50.9	-2	33.4	247	44.7	+22	34.8	126	47.5	-15	44.1
18	10	19.5	71	47.9	-18	15.6	178	52.3	-2	33.8	262	47.5	+22	34.8	141	49.7	-15	44.2
19	25	21.9	86	51.5		15.2	193	53.7		34.2	277	50.3		34.9	156	52.0		44.2
20	40	24.4	101	55.1		14.7	208	55.2		34.6	292	53.1		34.9	171	54.2		44.3
21	55	26.9	116	58.7		14.3	223	56.6		35.0	307	55.9		35.0	186	56.4		44.3
22	70	29.3	132	02.4		13.8	238	58.0		35.4	322	58.8		35.0	201	58.7		44.4
23	85	31.8	147	06.0		13.4	253	59.5		35.8	338	01.6		35.1	217	00.9		44.4
24	100	34.3	162	09.6	-18	12.9	269	00.9	-2	36.2	353	04.4	+22	35.1	232	03.1	-15	44.5
Dif	—			+36	+5		+14	-4			+28		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 03 ^m 5			Edad: 29 ^d 0 PHE { 4 ^h : 61'3 12 ^h : 61'4 20 ^h : 61'4 R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	10.4	-23 01.3	186	33.9	-19 05.1	29	60 N	15 05	16 02	16 58	8 19 40	15 54 88		
1	194	10.1	01.1	200	56.1	-19 02.2	29	58	22	13	17 05	8 06 42	16 07 85		
2	209	09.8	00.9	215	18.4	-18 59.2	30	56	36	23	12	7 55 44	18 83		
3	224	09.5	00.7	229	40.7	56.0	33	54	48	32	18	45 46	27 81		
4	239	09.2	00.5	244	03.1	52.7	33	52	15 59	40	23	37 47	36 79		
5	254	08.9	-23 00.3	258	25.4	-18 49.2	35	50	16 09	16 47	17 28	7 29 48	16 43 78		
6	269	08.6	-23 00.1	272	47.7	-18 45.6	36	45	16 29	17 03	17 40	7 12 51	17 00 75		
7	284	08.3	-22 59.9	287	10.1	41.8	38	40	45	16	50	6 58 53	13 72		
8	299	08.0	59.7	301	32.5	37.9	39	35	16 59	27	17 59	47 54	24 71		
9	314	07.7	59.5	315	54.9	33.9	40	30	17 11	38	18 07	36 56	34 69		
10	329	07.4	59.2	330	17.3	29.7	42	20	32	17 56	23	19 58	17 51 66		
11	344	07.1	-22 59.0	344	39.7	-18 25.3	44	10 N	17 50	18 13	18 39	6 03 61	18 05 64		
12	359	06.8	-22 58.8	359	02.2	-18 20.9	44	0	18 07	18 30	18 56	5 49 62	18 19 61		
13	14	06.5	58.6	13	24.7	16.3	46	10 S	24	18 47	19 14	35 64	32 59		
14	29	06.2	58.4	27	47.2	11.5	48	20	18 43	19 08	19 37	19 66	18 47 56		
15	44	05.9	58.2	42	09.8	06.6	49	30	19 05	32	20 05	5 02 68	19 03 54		
16	59	05.7	58.0	56	32.4	-18 01.6	50	35	17	19 47	23	4 52 69	13 51		
17	74	05.4	-22 57.8	70	55.0	-17 56.4	52	40	19 32	20 05	20 46	4 40 71	19 23 50		
18	89	05.1	-22 57.6	85	17.7	-17 51.2	52	45	19 50	20 27	21 16	4 26 73	19 36 47		
19	104	04.8	57.3	99	40.4	45.7	55	50	20 12	20 55	21 59	09 76	52 44		
20	119	04.5	57.1	114	03.2	40.2	55	52	22	21 10	22 25	4 01 77	19 59 42		
21	134	04.2	56.9	128	25.9	34.5	57	54	34	27	23 04	3 53 77	20 07 41		
22	149	03.9	56.7	142	48.8	28.7	58	56	20 48	21 48	** **	43 79	15 40		
23	164	03.6	56.5	157	11.6	22.7	60	58	21 04	22 16	** **	31 81	25 38		
24	179	03.3	-22 56.2	171	34.6	-17 16.6	61	60 S	21 23	22 59	** **	3 18 83	20 37 34		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 14 ^m 9		Mag: -4.4 PMG: 13 ^h 08 ^m			Mag: +0.8 PMG: 6 ^h 03 ^m			Mag: -2.7 PMG: 0 ^h 28 ^m			Mag: +0.6 PMG: 8 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	100	34.3	162 09.6	-18 12.9	269 00.9	-2 36.2	353 04.4	+22 35.1	232 03.1	-15 44.5					
1	115	36.7	177 13.3	12.5	284 02.3	36.6	8 07.2	35.2	247 05.4	44.5					
2	130	39.2	192 16.9	12.0	299 03.7	37.1	23 10.1	35.2	262 07.6	44.6					
3	145	41.7	207 20.6	11.6	314 05.2	37.5	38 12.9	35.3	277 09.9	44.6					
4	160	44.1	222 24.2	11.2	329 06.6	37.9	53 15.7	35.3	292 12.1	44.7					
5	175	46.6	237 27.9	-18 10.7	344 08.0	-2 38.3	68 18.5	+22 35.3	307 14.3	-15 44.8					
6	190	49.0	252 31.5	-18 10.3	359 09.5	-2 38.7	83 21.4	+22 35.4	322 16.6	-15 44.8					
7	205	51.5	267 35.2	09.8	14 10.9	39.1	98 24.2	35.4	337 18.8	44.9					
8	220	54.0	282 38.9	09.4	29 12.3	39.5	113 27.0	35.5	352 21.0	44.9					
9	235	56.4	297 42.5	08.9	44 13.8	39.9	128 29.8	35.5	7 23.3	45.0					
10	250	58.9	312 46.2	08.5	59 15.2	40.3	143 32.7	35.6	22 25.5	45.0					
11	266	01.4	327 49.9	-18 08.0	74 16.6	-2 40.7	158 35.5	+22 35.6	37 27.7	-15 45.1					
12	281	03.8	342 53.6	-18 07.6	89 18.1	-2 41.1	173 38.3	+22 35.7	52 30.0	-15 45.1					
13	296	06.3	357 57.3	07.2	104 19.5	41.5	188 41.1	35.7	67 32.2	45.2					
14	311	08.8	13 00.9	06.7	119 20.9	41.9	203 44.0	35.8	82 34.5	45.2					
15	326	11.2	28 04.6	06.3	134 22.4	42.3	218 46.8	35.8	97 36.7	45.3					
16	341	13.7	43 08.3	05.8	149 23.8	42.7	233 49.6	35.9	112 38.9	45.3					
17	356	16.2	58 12.0	-18 05.4	164 25.3	-2 43.1	248 52.4	+22 35.9	127 41.2	-15 45.4					
18	11	18.6	73 15.7	-18 04.9	179 26.7	-2 43.5	263 55.3	+22 35.9	142 43.4	-15 45.5					
19	26	21.1	88 19.4	04.5	194 28.1	43.9	278 58.1	36.0	157 45.6	45.5					
20	41	23.5	103 23.2	04.1	209 29.6	44.3	294 00.9	36.0	172 47.9	45.6					
21	56	26.0	118 26.9	03.6	224 31.0	44.7	309 03.7	36.1	187 50.1	45.6					
22	71	28.5	133 30.6	03.2	239 32.4	45.1	324 06.6	36.1	202 52.4	45.7					
23	86	30.9	148 34.3	02.8	254 33.9	45.5	339 09.4	36.2	217 54.6	45.7					
24	101	33.4	163 38.0	-18 02.3	269 35.3	-2 45.9	354 12.2	+22 36.2	232 56.8	-15 45.8					
Dif	—		+37	+4	+14	-4	+28	0	+22	-1					

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	357	43.9	44.0	44.0	43.9	43.8	43.5	43.3	43.1	42.9	42.9	42.9	43.0
2 - β Cas	<i>Caph</i>	2.3	357	31.6	31.8	31.9	31.8	31.5	31.1	30.8	30.5	30.3	30.2	30.4	30.6
3 - γ Peg	<i>Algenib</i>	2.8	356	31.2	31.3	31.3	31.3	31.1	30.9	30.7	30.5	30.3	30.3	30.3	30.4
4 - α Phe	<i>Ankaa</i>	2.4	353	16.1	16.2	16.3	16.3	16.1	15.8	15.6	15.3	15.1	15.1	15.2	15.3
5 - α Cas	<i>Schedar</i>	2.2	349	40.9	41.1	41.2	41.2	40.9	40.6	40.2	39.9	39.7	39.6	39.7	39.8
6 - β Cet	<i>Diphda</i>	2.0	348	56.2	56.3	56.4	56.3	56.2	56.0	55.8	55.5	55.4	55.3	55.4	55.5
7 - γ Cas	<i>Navi</i>	1.6	345	37.1	37.3	37.5	37.4	37.2	36.8	36.4	36.1	35.8	35.7	35.8	35.9
8 - β And	<i>Mirach</i>	2.1	342	22.7	22.9	22.9	22.9	22.8	22.5	22.3	22.0	21.8	21.7	21.7	21.8
9 - α Eri	<i>Achernar</i>	0.5	335	27.0	27.2	27.4	27.5	27.4	27.1	26.8	26.5	26.2	26.1	26.1	26.3
10 - γ And	<i>Almak</i>	2.3	328	49.0	49.2	49.3	49.3	49.2	49.0	48.7	48.4	48.2	48.0	48.0	48.0
12 - α Ari	<i>Hamal</i>	2.0	328	1.0	1.1	1.2	1.2	1.1	1.0	0.7	0.5	0.3	0.1	0.1	0.1
11 - α UMi	<i>Polaris</i>	2.0	317	44.4	58.3	69.4	76.1	74.9	66.7	53.9	38.6	24.5	14.6	10.5	13.6
13 - θ Eri	<i>Acamar</i>	3.3	315	18.4	18.6	18.7	18.8	18.8	18.7	18.5	18.2	18.0	17.8	17.7	17.8
14 - α Cet	<i>Menkar</i>	2.5	314	15.2	15.3	15.4	15.5	15.4	15.3	15.1	14.9	14.7	14.5	14.4	14.4
15 - β Per	<i>Algol</i>	2.1	312	44.1	44.3	44.4	44.5	44.5	44.3	44.1	43.8	43.5	43.3	43.2	43.1
16 - α Per	<i>Mirfak</i>	1.8	308	40.4	40.6	40.8	40.9	40.9	40.7	40.5	40.1	39.8	39.6	39.4	39.4
17 - η Tau	<i>Alcyone</i>	2.9	302	55.6	55.7	55.8	55.9	55.9	55.8	55.6	55.3	55.1	54.9	54.8	54.7
18 - γ Eri	<i>Zaurak</i>	3.0	300	20.0	20.1	20.3	20.4	20.4	20.3	20.1	19.9	19.7	19.5	19.4	19.3
19 - α Tau	<i>Aldebaran</i>	0.9	290	49.4	49.5	49.6	49.8	49.8	49.7	49.5	49.3	49.1	48.9	48.7	48.6
20 - β Ori	<i>Rigel</i>	0.1	281	12.0	12.1	12.2	12.4	12.4	12.4	12.3	12.1	11.9	11.7	11.5	11.4
21 - α Aur	<i>Capella</i>	0.1	280	34.4	34.5	34.7	34.9	35.0	34.9	34.7	34.5	34.1	33.8	33.6	33.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	32.0	32.1	32.2	32.3	32.4	32.3	32.2	32.0	31.8	31.6	31.4	31.3
23 - β Tau	<i>Elnath</i>	1.7	278	12.6	12.7	12.8	13.0	13.0	13.0	12.9	12.6	12.4	12.1	11.9	11.8
24 - δ Ori	<i>Mintaka</i>	2.2	276	49.4	49.4	49.6	49.7	49.8	49.7	49.6	49.4	49.2	49.0	48.8	48.7
25 - ε Ori	<i>Alnilam</i>	1.7	275	46.3	46.4	46.5	46.7	46.7	46.7	46.6	46.4	46.2	46.0	45.8	45.7
26 - ζ Ori	<i>Alnitak</i>	1.9	274	38.2	38.3	38.4	38.5	38.6	38.6	38.5	38.3	38.1	37.9	37.7	37.6
27 - κ Ori	<i>Saiph</i>	2.1	272	53.8	53.9	54.0	54.2	54.3	54.2	54.1	54.0	53.8	53.5	53.4	53.2
28 - α Ori	<i>Betelgeuse</i>	0.4	271	1.3	1.3	1.4	1.6	1.7	1.6	1.5	1.4	1.1	0.9	0.7	0.6
29 - β Aur	<i>Menkalinan</i>	1.9	269	51.9	52.0	52.2	52.4	52.5	52.5	52.3	52.1	51.8	51.5	51.2	51.0
30 - β CMa	<i>Mirzam</i>	2.0	264	10.3	10.4	10.5	10.7	10.8	10.8	10.7	10.6	10.4	10.2	9.9	9.8
31 - α Car	<i>Canopus</i>	-0.7	263	55.7	55.9	56.1	56.4	56.6	56.7	56.6	56.5	56.2	55.9	55.6	55.4
32 - γ Gem	<i>Alhena</i>	1.9	260	22.4	22.5	22.6	22.7	22.8	22.8	22.7	22.6	22.3	22.1	21.9	21.7
33 - α CMa	<i>Sirius</i>	-1.5	258	33.6	33.7	33.8	33.9	34.0	34.1	34.0	33.9	33.7	33.5	33.2	33.1
34 - ε CMa	<i>Adhara</i>	1.5	255	12.3	12.4	12.5	12.7	12.8	12.9	12.8	12.7	12.5	12.3	12.1	11.9
35 - δ CMa	<i>Wezen</i>	1.9	252	45.6	45.6	45.8	45.9	46.0	46.1	46.1	45.9	45.8	45.5	45.3	45.1
36 - η CMa	<i>Aludra</i>	2.5	248	50.2	50.3	50.4	50.6	50.7	50.8	50.7	50.6	50.5	50.2	50.0	49.8
37 - α Gem	<i>Castor</i>	2.0	246	7.9	7.9	8.0	8.1	8.2	8.3	8.2	8.1	7.9	7.7	7.4	7.2
38 - α CMi	<i>Procyon</i>	0.4	244	59.7	59.7	59.7	59.9	60.0	60.0	60.0	59.9	59.7	59.5	59.3	59.1
39 - β Gem	<i>Pollux</i>	1.1	243	27.7	27.7	27.7	27.9	28.0	28.1	28.0	27.9	27.7	27.5	27.2	27.0
40 - ζ Pup	<i>Naos</i>	2.3	238	58.7	58.7	58.8	59.0	59.2	59.3	59.3	59.3	59.1	58.9	58.6	58.4
41 - γ Vel	<i>Regor</i>	1.8	237	30.3	30.3	30.4	30.6	30.8	31.0	31.0	31.0	30.8	30.5	30.2	30.0
42 - ε Car	<i>Avior</i>	1.9	234	17.4	17.5	17.7	17.9	18.2	18.5	18.6	18.5	18.3	18.0	17.6	17.3
43 - δ Velorum		2.0	228	43.3	43.2	43.4	43.6	43.9	44.1	44.2	44.1	44.0	43.7	43.4	43.0
44 - ζ Hydrae		3.1	225	58.2	58.1	58.2	58.3	58.4	58.5	58.5	58.4	58.3	58.1	57.9	57.7
45 - λ Vel	<i>Suhail</i>	2.2	222	52.2	52.1	52.2	52.4	52.5	52.7	52.8	52.8	52.6	52.4	52.1	51.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.8	38.7	38.9	39.3	39.8	40.2	40.4	40.5	40.3	39.9	39.4	38.9
47 - ι Car	<i>Aspidiske</i>	2.3	220	37.6	37.5	37.6	37.9	38.1	38.4	38.5	38.6	38.4	38.2	37.8	37.4
48 - α Lyn	<i>Elvashak</i>	3.1	219	31.7	31.6	31.6	31.8	31.9	32.0	32.0	32.0	31.9	31.7	31.4	31.1
49 - α Hyd	<i>Alphard</i>	2.0	217	56.0	56.0	56.0	56.1	56.2	56.3	56.3	56.3	56.2	56.0	55.8	55.6
50 - α Leo	<i>Regulus</i>	1.4	207	43.5	43.4	43.4	43.5	43.6	43.7	43.7	43.7	43.6	43.5	43.3	43.0

ESTRELLAS, 2013
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	9.9	9.9	9.8	9.7	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.3
2 - β Cas	<i>Caph</i>	2.3	+59	13.6	13.5	13.4	13.3	13.2	13.2	13.3	13.4	13.6	13.8	13.9	14.0
3 - γ Peg	<i>Algenib</i>	2.8	+15	15.5	15.4	15.4	15.4	15.4	15.5	15.6	15.7	15.8	15.8	15.8	15.8
4 - α Phe	<i>Ankaa</i>	2.4	-42	14.3	14.2	14.1	14.0	13.8	13.7	13.6	13.6	13.7	13.8	13.9	14.0
5 - α Cas	<i>Schedar</i>	2.2	+56	36.8	36.8	36.6	36.5	36.4	36.4	36.5	36.6	36.8	36.9	37.1	37.1
6 - β Cet	<i>Diphda</i>	2.0	-17	55.0	55.0	54.9	54.9	54.8	54.6	54.5	54.5	54.5	54.5	54.6	54.7
7 - γ Cas	<i>Navi</i>	1.6	+60	47.6	47.5	47.4	47.2	47.1	47.1	47.2	47.3	47.5	47.6	47.8	47.8
8 - β And	<i>Mirach</i>	2.1	+35	41.6	41.5	41.4	41.4	41.3	41.3	41.4	41.5	41.6	41.8	41.8	41.9
9 - α Eri	<i>Achernar</i>	0.5	-57	10.5	10.5	10.4	10.2	10.0	9.9	9.8	9.7	9.8	9.9	10.1	10.2
10 - γ And	<i>Almak</i>	2.3	+42	23.7	23.7	23.6	23.5	23.5	23.4	23.5	23.6	23.7	23.8	23.9	23.9
12 - α Ari	<i>Hamal</i>	2.0	+23	31.5	31.5	31.4	31.4	31.4	31.4	31.5	31.6	31.6	31.7	31.8	31.8
11 - α UMi	<i>Polaris</i>	2.0	+89	19.5	19.5	19.5	19.3	19.2	19.0	19.0	19.0	19.1	19.2	19.4	19.6
13 - θ Eri	<i>Acamar</i>	3.3	-40	15.4	15.4	15.4	15.3	15.1	15.0	14.8	14.8	14.8	14.9	15.0	15.1
14 - α Cet	<i>Menkar</i>	2.5	+4	8.4	8.3	8.3	8.3	8.4	8.4	8.5	8.6	8.7	8.7	8.6	8.6
15 - β Per	<i>Algol</i>	2.1	+41	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.4	0.4	0.5	0.6
16 - α Per	<i>Mirfak</i>	1.8	+49	54.6	54.6	54.5	54.4	54.4	54.3	54.3	54.3	54.4	54.5	54.6	54.7
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.7	8.7	8.7	8.6	8.6	8.6	8.6	8.7	8.7	8.8	8.8	8.8
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.5	28.5	28.5	28.5	28.4	28.3	28.2	28.1	28.1	28.1	28.2	28.3
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.1	32.1	32.1	32.1	32.1
20 - β Ori	<i>Rigel</i>	0.1	-8	11.4	11.5	11.5	11.5	11.4	11.3	11.2	11.2	11.1	11.1	11.2	11.3
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.6
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.4	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.8
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.4	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.2	56.3
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.9	39.9	40.0	40.1
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.4	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.4	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.9	56.9	56.9	56.8	56.7	56.7	56.6	56.6	56.6	56.6	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.0	58.1	58.1	58.1	58.1	58.0	57.9	57.8	57.7	57.7	57.8	57.9
31 - α Car	<i>Canopus</i>	-0.7	-52	42.4	42.6	42.6	42.6	42.5	42.4	42.2	42.1	42.0	42.0	42.1	42.3
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.0
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.3	44.4	44.4	44.4	44.4	44.3	44.2	44.1	44.1	44.1	44.1	44.3
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.6	59.8	59.8	59.8	59.8	59.7	59.5	59.4	59.4	59.4	59.4	59.6
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.1	25.2	25.3	25.3	25.2	25.1	25.0	24.9	24.8	24.8	24.9	25.0
36 - η CMa	<i>Aludra</i>	2.5	-29	19.9	20.1	20.1	20.2	20.1	20.0	19.9	19.8	19.7	19.7	19.8	19.9
37 - α Gem	<i>Castor</i>	2.0	+31	51.4	51.4	51.4	51.4	51.4	51.4	51.4	51.3	51.3	51.2	51.2	51.2
38 - α CMi	<i>Procyon</i>	0.4	+5	11.3	11.2	11.2	11.2	11.2	11.2	11.3	11.3	11.3	11.3	11.2	11.1
39 - β Gem	<i>Pollux</i>	1.1	+27	59.4	59.5	59.5	59.5	59.5	59.5	59.5	59.4	59.4	59.3	59.3	59.3
40 - ζ Pup	<i>Naos</i>	2.3	-40	2.6	2.7	2.8	2.9	2.9	2.8	2.7	2.5	2.4	2.4	2.5	2.6
41 - γ Vel	<i>Regor</i>	1.8	-47	22.7	22.8	23.0	23.0	23.0	22.9	22.8	22.6	22.5	22.5	22.5	22.7
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.2	33.4	33.5	33.6	33.6	33.5	33.4	33.2	33.1	33.1	33.1	33.2
43 - δ Velorum		2.0	-54	45.5	45.7	45.8	45.9	45.9	45.9	45.7	45.6	45.5	45.4	45.4	45.6
44 - ζ Hydrae		3.1	+5	53.5	53.5	53.4	53.4	53.5	53.5	53.5	53.5	53.5	53.5	53.4	53.3
45 - λ Vel	<i>Suhail</i>	2.2	-43	29.2	29.4	29.5	29.6	29.6	29.6	29.5	29.3	29.2	29.2	29.2	29.3
46 - β Car	<i>Miaplacidus</i>	1.7	-69	46.3	46.5	46.6	46.8	46.8	46.8	46.6	46.5	46.3	46.3	46.3	46.4
47 - ι Car	<i>Aspidiske</i>	2.3	-59	19.9	20.1	20.2	20.3	20.4	20.3	20.2	20.0	19.9	19.8	19.8	19.9
48 - α Lyn	<i>Elvashak</i>	3.1	+34	19.9	20.0	20.0	20.1	20.1	20.1	20.1	20.0	19.9	19.8	19.7	19.7
49 - α Hyd	<i>Alphard</i>	2.0	-8	43.1	43.2	43.3	43.3	43.3	43.2	43.2	43.1	43.1	43.1	43.2	43.3
50 - α Leo	<i>Regulus</i>	1.4	+11	53.9	53.9	53.9	53.9	54.0	54.0	54.0	54.0	54.0	53.9	53.8	53.7

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	9.4	9.2	9.1	9.2	9.4	9.6	9.7	9.8	9.8	9.6	9.4	9.0
52 - ν	Hydrae	3.1	197	25.5	25.3	25.3	25.3	25.4	25.5	25.6	25.6	25.6	25.5	25.3	25.0
53 - β	UMa Merak	2.4	194	20.2	19.9	19.9	20.0	20.2	20.4	20.5	20.6	20.6	20.5	20.2	19.8
54 - α	UMa Dubhe	1.8	193	51.6	51.3	51.3	51.4	51.6	51.9	52.1	52.2	52.2	52.0	51.7	51.3
55 - β	Leo Denebola	2.1	182	33.8	33.6	33.5	33.5	33.6	33.7	33.7	33.8	33.8	33.7	33.6	33.3
56 - γ	Crv Gienah	2.6	175	52.4	52.2	52.1	52.1	52.1	52.2	52.3	52.4	52.4	52.4	52.2	52.0
57 - α	Cru Acrux	1.4	173	9.4	9.0	8.8	8.7	8.9	9.1	9.3	9.6	9.7	9.7	9.4	9.0
58 - γ	Cru Gacrux	1.6	172	1.0	0.7	0.5	0.4	0.5	0.7	0.9	1.1	1.2	1.2	0.9	0.6
59 - γ	Cen Muhlifain	2.2	169	25.9	25.6	25.4	25.4	25.4	25.5	25.7	25.9	25.9	25.9	25.7	25.4
60 - β	Cru Mimosa	1.3	167	52.1	51.7	51.5	51.4	51.5	51.7	51.9	52.1	52.2	52.2	52.0	51.6
61 - ε	UMa Alioth	1.8	166	20.9	20.5	20.3	20.3	20.4	20.5	20.8	21.0	21.1	21.1	21.0	20.7
62 - α^2	CVn Cor Caroli	2.9	165	50.3	50.0	49.9	49.8	49.8	49.9	50.1	50.2	50.3	50.3	50.2	49.9
63 - ε	Vir Vindemiatrix	2.8	164	17.4	17.1	17.0	16.9	17.0	17.0	17.1	17.2	17.3	17.2	17.1	16.9
64 - ζ	UMa Mizar	2.3	158	53.2	52.9	52.6	52.6	52.6	52.8	53.0	53.2	53.4	53.4	53.3	53.1
65 - α	Vir Spica	1.0	158	31.5	31.3	31.1	31.0	31.0	31.1	31.2	31.3	31.3	31.3	31.2	31.0
66 - η	UMa Alkaid	1.9	152	59.2	58.8	58.6	58.5	58.5	58.7	58.8	59.0	59.2	59.2	59.2	59.0
67 - β	Cen Hadar	0.6	148	48.3	47.9	47.6	47.4	47.3	47.4	47.6	47.8	48.0	48.1	48.0	47.7
68 - θ	Cen Menkent	2.1	148	7.9	7.6	7.4	7.3	7.2	7.3	7.4	7.5	7.6	7.7	7.6	7.4
69 - α	Boo Arcturus	0.0	145	56.0	55.8	55.6	55.5	55.5	55.5	55.6	55.7	55.8	55.9	55.8	55.7
70 - α^1	Cen Rigil Kentaurus	0.0	139	52.3	51.9	51.5	51.3	51.2	51.3	51.4	51.7	52.0	52.1	52.0	51.8
71 - α^2	Lib Zubenelgenubi	2.8	137	5.8	5.6	5.4	5.2	5.1	5.1	5.2	5.3	5.4	5.5	5.4	5.3
72 - β	UMi Kochab	2.1	137	20.5	19.8	19.3	19.0	18.9	19.2	19.7	20.3	20.8	21.2	21.3	21.1
73 - β	Lib Zubeneschamali	2.6	130	34.2	34.0	33.8	33.6	33.5	33.5	33.6	33.7	33.8	33.9	33.9	33.7
74 - α	CrB Alphecca	2.2	126	11.4	11.2	11.0	10.8	10.7	10.7	10.8	10.9	11.0	11.1	11.2	11.1
75 - α	Ser Unukalhai	2.7	123	46.3	46.1	45.9	45.7	45.6	45.6	45.6	45.7	45.8	45.9	45.9	45.8
76 - α	Sco Antares	0.9	112	26.8	26.6	26.4	26.1	26.0	25.9	25.9	26.0	26.1	26.2	26.3	26.2
77 - α	TrA Atria	1.9	107	29.3	28.8	28.2	27.7	27.3	27.1	27.2	27.4	27.8	28.2	28.3	28.2
78 - ε	Scorpii	2.3	107	14.8	14.6	14.3	14.1	13.9	13.8	13.8	13.9	14.0	14.2	14.2	14.2
79 - η	Oph Sabik	2.4	102	13.1	12.9	12.7	12.5	12.3	12.2	12.2	12.2	12.3	12.5	12.5	12.5
80 - α	Her Rasalgethi	3.1	101	11.4	11.2	11.0	10.8	10.7	10.6	10.6	10.6	10.8	10.9	11.0	11.0
81 - λ	Sco Shaula	1.6	96	22.6	22.4	22.1	21.9	21.6	21.5	21.4	21.5	21.6	21.8	21.9	21.9
82 - α	Oph Rasalhague	2.1	96	7.0	6.8	6.6	6.4	6.2	6.1	6.1	6.1	6.3	6.4	6.5	6.5
83 - θ	Sco Sargas	1.9	95	26.2	26.0	25.7	25.4	25.1	25.0	24.9	25.0	25.2	25.3	25.4	25.4
84 - γ	Dra Eltanin	2.2	90	46.8	46.5	46.3	46.0	45.7	45.6	45.6	45.8	46.0	46.3	46.5	46.5
85 - ε	Sgr Kaus Australis	1.9	83	44.5	44.3	44.1	43.8	43.6	43.4	43.3	43.3	43.5	43.6	43.8	43.8
86 - α	Lyr Vega	0.0	80	39.6	39.4	39.2	38.9	38.7	38.5	38.5	38.5	38.7	38.9	39.1	39.1
87 - σ	Sgr Nunki	2.0	75	59.0	58.8	58.6	58.4	58.2	58.0	57.9	57.9	58.0	58.1	58.2	58.3
88 - α	Aql Altair	0.8	62	8.8	8.7	8.6	8.4	8.1	7.9	7.8	7.8	7.9	8.0	8.1	8.2
89 - γ	Cyg Sadr	2.2	54	19.8	19.7	19.6	19.3	19.0	18.8	18.7	18.6	18.7	18.9	19.1	19.2
90 - α	Pav Peacock	1.9	53	20.3	20.1	19.9	19.6	19.2	18.8	18.6	18.5	18.6	18.8	19.1	19.2
91 - α	Cyg Deneb	1.3	49	32.1	32.0	31.9	31.6	31.4	31.1	30.9	30.9	31.0	31.2	31.4	31.5
92 - α	Cep Alderamin	2.4	40	17.1	17.1	16.9	16.6	16.2	15.8	15.6	15.5	15.6	15.9	16.2	16.5
93 - ε	Peg Enif	0.7	33	47.7	47.6	47.6	47.4	47.2	46.9	46.8	46.7	46.6	46.7	46.8	46.9
94 - δ	Cap Deneb Algedi	2.9	33	3.7	3.7	3.6	3.4	3.2	2.9	2.7	2.6	2.6	2.7	2.8	2.9
95 - α	Gru Al Na'ir	1.7	27	44.5	44.5	44.4	44.2	43.9	43.6	43.3	43.1	43.1	43.2	43.4	43.5
96 - β	Gruis	2.1	19	8.6	8.6	8.5	8.4	8.1	7.8	7.5	7.3	7.3	7.3	7.5	7.7
97 - α	PsA Fomalhaut	1.2	15	24.5	24.6	24.5	24.4	24.2	23.9	23.7	23.5	23.4	23.5	23.6	23.7
98 - β	Peg Scheat	2.4	13	53.8	53.9	53.9	53.7	53.5	53.3	53.1	52.9	52.8	52.8	52.9	53.1
99 - α	Peg Markab	2.5	13	38.8	38.8	38.8	38.7	38.5	38.3	38.0	37.9	37.8	37.8	37.9	38.0

ESTRELLAS, 2013
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	29.3	29.5	29.7	29.8	29.9	29.9	29.8	29.7	29.6	29.5	29.4	29.5
52 - ν	Hydrae	3.1	-16	15.8	16.0	16.0	16.1	16.1	16.1	16.0	16.0	15.9	15.9	15.9	16.0
53 - β	UMa Merak	2.4	+56	18.4	18.4	18.5	18.7	18.7	18.8	18.7	18.6	18.5	18.3	18.2	18.1
54 - α	UMa Dubhe	1.8	+61	40.4	40.5	40.6	40.8	40.8	40.9	40.8	40.7	40.5	40.4	40.2	40.1
55 - β	Leo Denebola	2.1	+14	29.7	29.7	29.7	29.7	29.7	29.8	29.8	29.8	29.8	29.7	29.6	29.5
56 - γ	Crv Gienah	2.6	-17	36.9	37.0	37.1	37.2	37.2	37.2	37.1	37.1	37.0	37.0	37.0	37.1
57 - α	Cru Acrux	1.4	-63	10.1	10.2	10.4	10.6	10.7	10.8	10.8	10.7	10.6	10.4	10.3	10.3
58 - γ	Cru Gacrux	1.6	-57	11.0	11.1	11.3	11.5	11.6	11.6	11.6	11.6	11.4	11.3	11.2	11.2
59 - γ	Cen Muhlifain	2.2	-49	1.7	1.9	2.0	2.2	2.3	2.3	2.3	2.2	2.1	2.0	1.9	2.0
60 - β	Cru Mimosas	1.3	-59	45.4	45.5	45.7	45.9	46.0	46.1	46.1	46.0	45.9	45.7	45.6	45.6
61 - ϵ	UMa Alioth	1.8	+55	53.0	53.0	53.1	53.2	53.3	53.4	53.4	53.4	53.3	53.1	52.9	52.8
62 - α^2	CVn Cor Caroli	2.9	+38	14.6	14.5	14.6	14.7	14.8	14.9	14.9	14.9	14.8	14.7	14.5	14.4
63 - ϵ	Vir Vindemiatrix	2.8	+10	53.2	53.1	53.1	53.1	53.2	53.2	53.3	53.3	53.3	53.2	53.1	53.0
64 - ζ	UMa Mizar	2.3	+54	51.1	51.1	51.2	51.3	51.4	51.5	51.6	51.5	51.4	51.3	51.1	50.9
65 - α	Vir Spica	1.0	-11	13.8	13.9	13.9	14.0	14.0	14.0	13.9	13.9	13.9	13.9	13.9	14.0
66 - η	UMa Alkaid	1.9	+49	14.6	14.5	14.6	14.7	14.9	15.0	15.0	15.0	14.9	14.8	14.6	14.4
67 - β	Cen Hadar	0.6	-60	25.9	26.0	26.1	26.2	26.4	26.5	26.5	26.5	26.4	26.3	26.2	26.1
68 - θ	Cen Menkent	2.1	-36	25.9	26.0	26.1	26.2	26.3	26.3	26.3	26.3	26.2	26.2	26.1	26.1
69 - α	Boo Arcturus	0.0	+19	6.7	6.6	6.6	6.7	6.8	6.8	6.9	6.9	6.9	6.8	6.7	6.6
70 - α^1	Cen Rigil Kentaurus	0.0	-60	53.1	53.1	53.2	53.4	53.5	53.6	53.7	53.7	53.6	53.5	53.3	53.3
71 - α^2	Lib Zubenelgenubi	2.8	-16	5.7	5.8	5.8	5.9	5.9	5.9	5.9	5.8	5.8	5.8	5.8	5.8
72 - β	UMi Kochab	2.1	+74	5.8	5.8	5.8	6.0	6.1	6.3	6.3	6.3	6.3	6.1	5.9	5.7
73 - β	Lib Zubeneshamali	2.6	-9	25.8	25.9	25.9	26.0	25.9	25.9	25.9	25.9	25.8	25.8	25.9	25.9
74 - α	CrB Alphecca	2.2	+26	40.1	40.0	40.0	40.1	40.2	40.3	40.4	40.5	40.4	40.4	40.3	40.1
75 - α	Ser Unukalhai	2.7	+6	23.1	23.0	23.0	23.0	23.0	23.1	23.2	23.2	23.2	23.2	23.1	23.0
76 - α	Sco Antares	0.9	-26	27.5	27.5	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
77 - α	TrA Atria	1.9	-69	2.7	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.2	3.2	3.0	2.9
78 - ϵ	Scorpii	2.3	-34	18.8	18.8	18.8	18.9	18.9	19.0	19.0	19.0	19.0	19.0	18.9	18.9
79 - η	Oph Sabik	2.4	-15	44.3	44.4	44.4	44.4	44.4	44.4	44.3	44.3	44.3	44.3	44.3	44.3
80 - α	Her Rasalgethi	3.1	+14	22.5	22.5	22.4	22.5	22.5	22.6	22.7	22.8	22.8	22.8	22.7	22.6
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	33.0	33.0	33.1	33.2	33.3	33.3	33.4	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2
84 - γ	Dra Eltanin	2.2	+51	29.2	29.1	29.0	29.1	29.2	29.4	29.5	29.6	29.7	29.7	29.6	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.6	22.6	22.5	22.5
86 - α	Lyr Vega	0.0	+38	47.8	47.7	47.6	47.6	47.7	47.9	48.0	48.2	48.2	48.2	48.2	48.1
87 - σ	Sgr Nunki	2.0	-26	16.7	16.7	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
88 - α	Aql Altair	0.8	+8	54.3	54.2	54.2	54.2	54.3	54.4	54.5	54.6	54.6	54.6	54.6	54.6
89 - γ	Cyg Sadr	2.2	+40	18.1	17.9	17.8	17.8	17.9	18.0	18.2	18.3	18.5	18.5	18.5	18.4
90 - α	Pav Peacock	1.9	-56	41.5	41.4	41.3	41.2	41.1	41.1	41.2	41.3	41.4	41.4	41.5	41.4
91 - α	Cyg Deneb	1.3	+45	19.8	19.7	19.6	19.5	19.6	19.7	19.9	20.0	20.2	20.2	20.2	20.2
92 - α	Cep Alderamin	2.4	+62	38.7	38.5	38.4	38.3	38.4	38.5	38.6	38.8	39.0	39.1	39.1	39.1
93 - ϵ	Peg Enif	0.7	+9	56.2	56.2	56.1	56.1	56.2	56.3	56.4	56.5	56.6	56.6	56.6	56.6
94 - δ	Cap Deneb Algedi	2.9	-16	4.0	4.0	4.0	3.9	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7
95 - α	Gru Al Na'ir	1.7	-46	53.9	53.8	53.7	53.5	53.4	53.4	53.4	53.4	53.5	53.6	53.7	53.7
96 - β	Gruis	2.1	-46	49.1	49.0	48.8	48.7	48.6	48.5	48.5	48.5	48.6	48.7	48.8	48.8
97 - α	PsA Fomalhaut	1.2	-29	33.2	33.2	33.1	33.0	32.9	32.8	32.7	32.7	32.8	32.8	32.9	32.9
98 - β	Peg Scheat	2.4	+28	9.4	9.3	9.2	9.2	9.2	9.3	9.4	9.6	9.7	9.8	9.8	9.8
99 - α	Peg Markab	2.5	+15	16.7	16.6	16.6	16.5	16.6	16.7	16.8	16.9	17.0	17.0	17.1	17.0

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul
			h m	h m	h m	h m	h m	h m	h m
1 - α Andromedae	<i>Alpheratz</i>	2.1	17 23	15 21	13 31	11 29	9 31	7 29	5 31
2 - β Cassiopeae	<i>Caph</i>	2.3	17 24	15 22	13 32	11 30	9 32	7 30	5 32
6 - β Ceti	<i>Diphda</i>	2.0	17 58	15 56	14 06	12 04	10 06	8 04	6 06
9 - α Eridani	<i>Achernar</i>	0.5	18 52	16 50	15 00	12 58	11 00	8 58	7 00
12 - α Arietis	<i>Hamal</i>	2.0	19 22	17 20	15 30	13 28	11 30	9 28	7 30
13 - θ Eridani	<i>Acamar</i>	3.3	20 12	18 10	16 20	14 18	12 20	10 18	8 21
16 - α Persei	<i>Mirfak</i>	1.8	20 39	18 37	16 47	14 45	12 47	10 45	8 47
19 - α Tauri	<i>Aldebaran</i>	0.9	21 50	19 48	17 58	15 56	13 58	11 56	9 58
20 - β Orionis	<i>Rigel</i>	0.1	22 28	20 26	18 36	16 34	14 36	12 35	10 37
21 - α Aurigae	<i>Capella</i>	0.1	22 31	20 29	18 39	16 37	14 39	12 37	10 39
22 - γ Orionis	<i>Bellatrix</i>	1.6	22 39	20 37	18 47	16 45	14 47	12 45	10 47
28 - α Orionis	<i>Betelgeuse</i>	0.4	23 09	21 07	19 17	17 15	15 17	13 15	11 17
31 - α Carinae	<i>Canopus</i>	-0.7	23 37	21 35	19 45	17 43	15 45	13 43	11 45
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 03	21 57	20 07	18 05	16 07	14 05	12 07
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	0 16	22 10	20 20	18 18	16 20	14 18	12 20
38 - α Canis Minoris	<i>Procyon</i>	0.4	0 57	22 51	21 01	18 59	17 01	14 59	13 01
39 - β Geminorum	<i>Pollux</i>	1.1	1 03	22 57	21 07	19 05	17 07	15 05	13 07
42 - ϵ Carinae	<i>Avior</i>	1.9	1 39	23 34	21 43	19 42	17 44	15 42	13 44
45 - λ Velorum	<i>Suhail</i>	2.2	2 25	0 23	22 29	20 27	18 29	16 27	14 29
46 - β Carinae	<i>Miaplacidus</i>	1.7	2 30	0 28	22 34	20 32	18 34	16 32	14 34
49 - α Hydrae	<i>Alphard</i>	2.0	2 45	0 43	22 49	20 47	18 49	16 47	14 49
50 - α Leonis	<i>Regulus</i>	1.4	3 25	1 23	23 29	21 28	19 30	17 28	15 30
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 21	2 19	0 29	22 23	20 25	18 23	16 25
55 - β Leonis	<i>Denebola</i>	2.1	5 06	3 04	1 14	23 08	21 10	19 08	17 10
57 - α Crucis	<i>Acrux</i>	1.4	5 43	3 41	1 51	23 45	21 47	19 46	17 48
58 - γ Crucis	<i>Gacrux</i>	1.6	5 48	3 46	1 56	23 50	21 52	19 50	17 52
60 - β Crucis	<i>Mimosa</i>	1.3	6 04	4 02	2 12	0 10	22 09	20 07	18 09
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 10	4 08	2 18	0 17	22 15	20 13	18 15
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	6 40	4 38	2 48	0 46	22 44	20 43	18 45
65 - α Virginis	<i>Spica</i>	1.0	6 42	4 40	2 50	0 48	22 46	20 44	18 46
68 - θ Centauri	<i>Menkent</i>	2.1	7 23	5 21	3 31	1 29	23 27	21 25	19 27
69 - α Bootis	<i>Arcturus</i>	0.0	7 32	5 30	3 40	1 38	23 36	21 34	19 36
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	7 56	5 54	4 04	2 02	0 04	21 58	20 00
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 06	6 04	4 14	2 12	0 14	22 09	20 11
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 51	6 49	4 59	2 57	0 59	22 53	20 55
76 - α Scorpii	<i>Antares</i>	0.9	9 45	7 43	5 53	3 52	1 54	23 48	21 50
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 05	8 03	6 13	4 11	2 13	0 12	22 10
81 - λ Scorpii	<i>Shaula</i>	1.6	10 49	8 48	6 58	4 56	2 58	0 56	22 54
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 51	8 49	6 59	4 57	2 59	0 57	22 55
84 - γ Draconis	<i>Eltanin</i>	2.2	11 12	9 10	7 20	5 18	3 20	1 18	23 16
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	11 40	9 38	7 48	5 46	3 48	1 46	23 44
86 - α Lyrae	<i>Vega</i>	0.0	11 52	9 50	8 00	5 58	4 00	1 59	0 01
87 - σ Sagittarii	<i>Nunki</i>	2.0	12 11	10 09	8 19	6 17	4 19	2 17	0 19
88 - α Aquilae	<i>Altair</i>	0.8	13 06	11 04	9 14	7 12	5 14	3 12	1 14
90 - α Pavonis	<i>Peacock</i>	1.9	13 41	11 39	9 49	7 47	5 49	3 48	1 50
91 - α Cygni	<i>Deneb</i>	1.3	13 56	11 54	10 04	8 02	6 05	4 03	2 05
93 - ϵ Pegasi	<i>Enif</i>	0.7	14 59	12 57	11 07	9 05	7 07	5 05	3 08
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 23	13 21	11 31	9 29	7 31	5 30	3 32
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 12	14 11	12 20	10 19	8 21	6 19	4 21
99 - α Pegasi	<i>Markab</i>	2.5	16 19	14 18	12 28	10 26	8 28	6 26	4 28

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN
			h m	h m	h m	h m	h m	
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 29	1 28	23 26	21 24	19 26	Se restará para obtener la hora del paso en otro día del mismo mes.
2 - β Cassiopeae	<i>Caph</i>	2.3	3 30	1 28	23 27	21 25	19 27	
6 - β Ceti	<i>Diphda</i>	2.0	4 05	2 03	0 05	21 59	20 01	
9 - α Eridani	<i>Achernar</i>	0.5	4 58	2 56	0 59	22 53	20 55	
12 - α Arietis	<i>Hamal</i>	2.0	5 28	3 26	1 28	23 22	21 24	
13 - θ Eridani	<i>Acamar</i>	3.3	6 19	4 17	2 19	0 17	22 15	Día
16 - α Persei	<i>Mirfak</i>	1.8	6 45	4 43	2 45	0 43	22 42	
19 - α Tauri	<i>Aldebaran</i>	0.9	7 56	5 54	3 57	1 55	23 53	h m
20 - β Orionis	<i>Rigel</i>	0.1	8 35	6 33	4 35	2 33	0 35	1 0 00
21 - α Aurigae	<i>Capella</i>	0.1	8 37	6 35	4 37	2 36	0 38	2 0 04
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 45	6 43	4 46	2 44	0 46	3 0 08
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 15	7 13	5 16	3 14	1 16	4 0 12
31 - α Carinae	<i>Canopus</i>	-0.7	9 44	7 42	5 44	3 42	1 44	5 0 16
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 05	8 03	6 05	4 03	2 05	6 0 20
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 18	8 17	6 19	4 17	2 19	7 0 24
38 - α Canis Minoris	<i>Procyon</i>	0.4	10 59	8 57	6 59	4 57	3 00	8 0 28
39 - β Geminorum	<i>Pollux</i>	1.1	11 05	9 03	7 05	5 04	3 06	9 0 31
42 - ϵ Carinae	<i>Avior</i>	1.9	11 42	9 40	7 42	5 40	3 42	10 0 35
45 - λ Velorum	<i>Suhail</i>	2.2	12 27	10 25	8 28	6 26	4 28	11 0 39
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 32	10 30	8 32	6 31	4 33	12 0 43
49 - α Hydrae	<i>Alphard</i>	2.0	12 47	10 45	8 47	6 45	4 47	13 0 47
50 - α Leonis	<i>Regulus</i>	1.4	13 28	11 26	9 28	7 26	5 28	14 0 51
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 23	12 21	10 23	8 21	6 23	15 0 55
55 - β Leonis	<i>Denebola</i>	2.1	15 08	13 06	11 08	9 06	7 09	16 0 59
57 - α Crucis	<i>Acrux</i>	1.4	15 46	13 44	11 46	9 44	7 46	17 1 03
58 - γ Crucis	<i>Gacrux</i>	1.6	15 50	13 48	11 50	9 49	7 51	18 1 07
60 - β Crucis	<i>Mimosa</i>	1.3	16 07	14 05	12 07	10 05	8 07	19 1 11
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 13	14 11	12 13	10 11	8 13	20 1 15
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 43	14 41	12 43	10 41	8 43	21 1 19
65 - α Virginis	<i>Spica</i>	1.0	16 44	14 42	12 44	10 42	8 44	22 1 23
68 - θ Centauri	<i>Menkent</i>	2.1	17 26	15 24	13 26	11 24	9 26	23 1 27
69 - α Bootis	<i>Arcturus</i>	0.0	17 34	15 32	13 34	11 33	9 35	24 1 30
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 59	15 57	13 59	11 57	9 59	25 1 34
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 09	16 07	14 09	12 07	10 09	26 1 38
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 53	16 51	14 53	12 51	10 53	27 1 42
76 - α Scorpii	<i>Antares</i>	0.9	19 48	17 46	15 48	13 46	11 48	28 1 46
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 08	18 06	16 08	14 06	12 08	29 1 50
81 - λ Scorpii	<i>Shaula</i>	1.6	20 52	18 50	16 52	14 50	12 52	30 1 54
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 53	18 51	16 53	14 51	12 53	31 1 58
84 - γ Draconis	<i>Eltanin</i>	2.2	21 14	19 12	17 15	15 13	13 15	
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 42	19 41	17 43	15 41	13 43	
86 - α Lyrae	<i>Vega</i>	0.0	21 55	19 53	17 55	15 53	13 55	
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 13	20 12	18 14	16 12	14 14	
88 - α Aquilae	<i>Altair</i>	0.8	23 09	21 07	19 09	17 07	15 09	
90 - α Pavonis	<i>Peacock</i>	1.9	23 44	21 42	19 44	17 42	15 44	
91 - α Cygni	<i>Deneb</i>	1.3	0 03	21 57	19 59	17 57	15 59	
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 06	23 00	21 02	19 00	17 02	
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 30	23 24	21 26	19 24	17 26	
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 19	0 17	22 15	20 13	18 15	
99 - α Pegasi	<i>Markab</i>	2.5	2 26	0 24	22 22	20 20	18 22	

Si el resultado es negativo sumar 23^h 56^m.

2ª CORRECCIÓN

Se aplicará para tener la hora civil del paso por otro meridiano.

Long.	Corr.
180 W	0
138 W	-2
46 W	-1
46 E	0
136 E	+1
180 E	+2

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2013

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-30.1	26 00	-39.1	52 00	-40.1	78 00	-33.0	104 00	-19.3	130 00	-1.6	156 00	+16.4
0 30	-30.4	26 30	-39.2	52 30	-40.0	78 30	-32.8	104 30	-19.0	130 30	-1.3	156 30	+16.7
1 00	-30.6	27 00	-39.3	53 00	-40.0	79 00	-32.6	105 00	-18.6	131 00	-0.9	157 00	+17.0
1 30	-30.8	27 30	-39.4	53 30	-39.9	79 30	-32.4	105 30	-18.3	131 30	-0.5	157 30	+17.3
2 00	-31.1	28 00	-39.4	54 00	-39.8	80 00	-32.2	106 00	-18.0	132 00	-0.2	158 00	+17.7
2 30	-31.3	28 30	-39.5	54 30	-39.8	80 30	-32.0	106 30	-17.7	132 30	+0.2	158 30	+18.0
3 00	-31.5	29 00	-39.6	55 00	-39.7	81 00	-31.7	107 00	-17.4	133 00	+0.5	159 00	+18.3
3 30	-31.7	29 30	-39.7	55 30	-39.6	81 30	-31.5	107 30	-17.0	133 30	+0.9	159 30	+18.6
4 00	-32.0	30 00	-39.8	56 00	-39.5	82 00	-31.3	108 00	-16.7	134 00	+1.2	160 00	+18.9
4 30	-32.2	30 30	-39.8	56 30	-39.4	82 30	-31.1	108 30	-16.4	134 30	+1.6	160 30	+19.3
5 00	-32.4	31 00	-39.9	57 00	-39.4	83 00	-30.8	109 00	-16.1	135 00	+1.9	161 00	+19.6
5 30	-32.6	31 30	-40.0	57 30	-39.3	83 30	-30.6	109 30	-15.7	135 30	+2.3	161 30	+19.9
6 00	-32.8	32 00	-40.0	58 00	-39.2	84 00	-30.4	110 00	-15.4	136 00	+2.7	162 00	+20.2
6 30	-33.0	32 30	-40.1	58 30	-39.1	84 30	-30.1	110 30	-15.1	136 30	+3.0	162 30	+20.5
7 00	-33.2	33 00	-40.2	59 00	-39.0	85 00	-29.9	111 00	-14.8	137 00	+3.4	163 00	+20.8
7 30	-33.4	33 30	-40.2	59 30	-38.9	85 30	-29.6	111 30	-14.4	137 30	+3.7	163 30	+21.1
8 00	-33.6	34 00	-40.3	60 00	-38.8	86 00	-29.4	112 00	-14.1	138 00	+4.1	164 00	+21.4
8 30	-33.8	34 30	-40.3	60 30	-38.7	86 30	-29.2	112 30	-13.8	138 30	+4.4	164 30	+21.7
9 00	-34.0	35 00	-40.4	61 00	-38.5	87 00	-28.9	113 00	-13.4	139 00	+4.8	165 00	+22.0
9 30	-34.2	35 30	-40.4	61 30	-38.4	87 30	-28.7	113 30	-13.1	139 30	+5.1	165 30	+22.3
10 00	-34.4	36 00	-40.5	62 00	-38.3	88 00	-28.4	114 00	-12.8	140 00	+5.5	166 00	+22.6
10 30	-34.6	36 30	-40.5	62 30	-38.2	88 30	-28.1	114 30	-12.4	140 30	+5.8	166 30	+22.9
11 00	-34.8	37 00	-40.5	63 00	-38.1	89 00	-27.9	115 00	-12.1	141 00	+6.2	167 00	+23.2
11 30	-35.0	37 30	-40.6	63 30	-37.9	89 30	-27.6	115 30	-11.7	141 30	+6.5	167 30	+23.5
12 00	-35.1	38 00	-40.6	64 00	-37.8	90 00	-27.4	116 00	-11.4	142 00	+6.9	168 00	+23.8
12 30	-35.3	38 30	-40.6	64 30	-37.7	90 30	-27.1	116 30	-11.1	142 30	+7.2	168 30	+24.1
13 00	-35.5	39 00	-40.6	65 00	-37.5	91 00	-26.8	117 00	-10.7	143 00	+7.6	169 00	+24.3
13 30	-35.7	39 30	-40.6	65 30	-37.4	91 30	-26.6	117 30	-10.4	143 30	+7.9	169 30	+24.6
14 00	-35.8	40 00	-40.7	66 00	-37.3	92 00	-26.3	118 00	-10.0	144 00	+8.3	170 00	+24.9
14 30	-36.0	40 30	-40.7	66 30	-37.1	92 30	-26.0	118 30	-9.7	144 30	+8.6	170 30	+25.2
15 00	-36.2	41 00	-40.7	67 00	-37.0	93 00	-25.8	119 00	-9.3	145 00	+9.0	171 00	+25.5
15 30	-36.3	41 30	-40.7	67 30	-36.8	93 30	-25.5	119 30	-9.0	145 30	+9.3	171 30	+25.7
16 00	-36.5	42 00	-40.7	68 00	-36.7	94 00	-25.2	120 00	-8.6	146 00	+9.7	172 00	+26.0
16 30	-36.6	42 30	-40.7	68 30	-36.5	94 30	-24.9	120 30	-8.3	146 30	+10.0	172 30	+26.3
17 00	-36.8	43 00	-40.7	69 00	-36.3	95 00	-24.6	121 00	-7.9	147 00	+10.4	173 00	+26.6
17 30	-37.0	43 30	-40.7	69 30	-36.2	95 30	-24.4	121 30	-7.6	147 30	+10.7	173 30	+26.8
18 00	-37.1	44 00	-40.7	70 00	-36.0	96 00	-24.1	122 00	-7.3	148 00	+11.0	174 00	+27.1
18 30	-37.2	44 30	-40.7	70 30	-35.9	96 30	-23.8	122 30	-6.9	148 30	+11.4	174 30	+27.4
19 00	-37.4	45 00	-40.6	71 00	-35.7	97 00	-23.5	123 00	-6.6	149 00	+11.7	175 00	+27.6
19 30	-37.5	45 30	-40.6	71 30	-35.5	97 30	-23.2	123 30	-6.2	149 30	+12.1	175 30	+27.9
20 00	-37.7	46 00	-40.6	72 00	-35.3	98 00	-22.9	124 00	-5.9	150 00	+12.4	176 00	+28.1
20 30	-37.8	46 30	-40.6	72 30	-35.2	98 30	-22.6	124 30	-5.5	150 30	+12.7	176 30	+28.4
21 00	-37.9	47 00	-40.6	73 00	-35.0	99 00	-22.3	125 00	-5.1	151 00	+13.1	177 00	+28.6
21 30	-38.1	47 30	-40.5	73 30	-34.8	99 30	-22.0	125 30	-4.8	151 30	+13.4	177 30	+28.9
22 00	-38.2	48 00	-40.5	74 00	-34.6	100 00	-21.7	126 00	-4.4	152 00	+13.7	178 00	+29.1
22 30	-38.3	48 30	-40.5	74 30	-34.4	100 30	-21.4	126 30	-4.1	152 30	+14.1	178 30	+29.4
23 00	-38.4	49 00	-40.4	75 00	-34.2	101 00	-21.1	127 00	-3.7	153 00	+14.4	179 00	+29.6
23 30	-38.5	49 30	-40.4	75 30	-34.0	101 30	-20.8	127 30	-3.4	153 30	+14.7	179 30	+29.9
24 00	-38.6	50 00	-40.3	76 00	-33.8	102 00	-20.5	128 00	-3.0	154 00	+15.1	180 00	+30.1
24 30	-38.8	50 30	-40.3	76 30	-33.6	102 30	-20.2	128 30	-2.7	154 30	+15.4	180 30	+30.4
25 00	-38.9	51 00	-40.2	77 00	-33.4	103 00	-19.9	129 00	-2.3	155 00	+15.7	181 00	+30.6
25 30	-39.0	51 30	-40.2	77 30	-33.2	103 30	-19.6	129 30	-2.0	155 30	+16.1	181 30	+30.8
26 00	-39.1	52 00	-40.1	78 00	-33.0	104 00	-19.3	130 00	-1.6	156 00	+16.4	182 00	+31.1

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2013

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+31.1	208 00	+39.4	234 00	+39.8	260 00	+32.2	286 00	+18.0	312 00	+0.2	338 00	-17.7
182 30	+31.3	208 30	+39.5	234 30	+39.8	260 30	+32.0	286 30	+17.7	312 30	-0.2	338 30	-18.0
183 00	+31.5	209 00	+39.6	235 00	+39.7	261 00	+31.7	287 00	+17.4	313 00	-0.5	339 00	-18.3
183 30	+31.7	209 30	+39.7	235 30	+39.6	261 30	+31.5	287 30	+17.0	313 30	-0.9	339 30	-18.6
184 00	+32.0	210 00	+39.8	236 00	+39.5	262 00	+31.3	288 00	+16.7	314 00	-1.2	340 00	-18.9
184 30	+32.2	210 30	+39.8	236 30	+39.4	262 30	+31.1	288 30	+16.4	314 30	-1.6	340 30	-19.3
185 00	+32.4	211 00	+39.9	237 00	+39.4	263 00	+30.8	289 00	+16.1	315 00	-1.9	341 00	-19.6
185 30	+32.6	211 30	+40.0	237 30	+39.3	263 30	+30.6	289 30	+15.7	315 30	-2.3	341 30	-19.9
186 00	+32.8	212 00	+40.0	238 00	+39.2	264 00	+30.4	290 00	+15.4	316 00	-2.7	342 00	-20.2
186 30	+33.0	212 30	+40.1	238 30	+39.1	264 30	+30.1	290 30	+15.1	316 30	-3.0	342 30	-20.5
187 00	+33.2	213 00	+40.2	239 00	+39.0	265 00	+29.9	291 00	+14.8	317 00	-3.4	343 00	-20.8
187 30	+33.4	213 30	+40.2	239 30	+38.9	265 30	+29.6	291 30	+14.4	317 30	-3.7	343 30	-21.1
188 00	+33.6	214 00	+40.3	240 00	+38.8	266 00	+29.4	292 00	+14.1	318 00	-4.1	344 00	-21.4
188 30	+33.8	214 30	+40.3	240 30	+38.7	266 30	+29.2	292 30	+13.8	318 30	-4.4	344 30	-21.7
189 00	+34.0	215 00	+40.4	241 00	+38.5	267 00	+28.9	293 00	+13.4	319 00	-4.8	345 00	-22.0
189 30	+34.2	215 30	+40.4	241 30	+38.4	267 30	+28.7	293 30	+13.1	319 30	-5.1	345 30	-22.3
190 00	+34.4	216 00	+40.5	242 00	+38.3	268 00	+28.4	294 00	+12.8	320 00	-5.5	346 00	-22.6
190 30	+34.6	216 30	+40.5	242 30	+38.2	268 30	+28.1	294 30	+12.4	320 30	-5.8	346 30	-22.9
191 00	+34.8	217 00	+40.5	243 00	+38.1	269 00	+27.9	295 00	+12.1	321 00	-6.2	347 00	-23.2
191 30	+35.0	217 30	+40.6	243 30	+37.9	269 30	+27.6	295 30	+11.7	321 30	-6.5	347 30	-23.5
192 00	+35.1	218 00	+40.6	244 00	+37.8	270 00	+27.4	296 00	+11.4	322 00	-6.9	348 00	-23.8
192 30	+35.3	218 30	+40.6	244 30	+37.7	270 30	+27.1	296 30	+11.1	322 30	-7.2	348 30	-24.1
193 00	+35.5	219 00	+40.6	245 00	+37.5	271 00	+26.8	297 00	+10.7	323 00	-7.6	349 00	-24.3
193 30	+35.7	219 30	+40.6	245 30	+37.4	271 30	+26.6	297 30	+10.4	323 30	-7.9	349 30	-24.6
194 00	+35.8	220 00	+40.7	246 00	+37.3	272 00	+26.3	298 00	+10.0	324 00	-8.3	350 00	-24.9
194 30	+36.0	220 30	+40.7	246 30	+37.1	272 30	+26.0	298 30	+9.7	324 30	-8.6	350 30	-25.2
195 00	+36.2	221 00	+40.7	247 00	+37.0	273 00	+25.8	299 00	+9.3	325 00	-9.0	351 00	-25.5
195 30	+36.3	221 30	+40.7	247 30	+36.8	273 30	+25.5	299 30	+9.0	325 30	-9.3	351 30	-25.7
196 00	+36.5	222 00	+40.7	248 00	+36.7	274 00	+25.2	300 00	+8.6	326 00	-9.7	352 00	-26.0
196 30	+36.6	222 30	+40.7	248 30	+36.5	274 30	+24.9	300 30	+8.3	326 30	-10.0	352 30	-26.3
197 00	+36.8	223 00	+40.7	249 00	+36.3	275 00	+24.6	301 00	+7.9	327 00	-10.4	353 00	-26.6
197 30	+37.0	223 30	+40.7	249 30	+36.2	275 30	+24.4	301 30	+7.6	327 30	-10.7	353 30	-26.8
198 00	+37.1	224 00	+40.7	250 00	+36.0	276 00	+24.1	302 00	+7.3	328 00	-11.0	354 00	-27.1
198 30	+37.2	224 30	+40.7	250 30	+35.9	276 30	+23.8	302 30	+6.9	328 30	-11.4	354 30	-27.4
199 00	+37.4	225 00	+40.6	251 00	+35.7	277 00	+23.5	303 00	+6.6	329 00	-11.7	355 00	-27.6
199 30	+37.5	225 30	+40.6	251 30	+35.5	277 30	+23.2	303 30	+6.2	329 30	-12.1	355 30	-27.9
200 00	+37.7	226 00	+40.6	252 00	+35.3	278 00	+22.9	304 00	+5.9	330 00	-12.4	356 00	-28.1
200 30	+37.8	226 30	+40.6	252 30	+35.2	278 30	+22.6	304 30	+5.5	330 30	-12.7	356 30	-28.4
201 00	+37.9	227 00	+40.6	253 00	+35.0	279 00	+22.3	305 00	+5.1	331 00	-13.1	357 00	-28.6
201 30	+38.1	227 30	+40.5	253 30	+34.8	279 30	+22.0	305 30	+4.8	331 30	-13.4	357 30	-28.9
202 00	+38.2	228 00	+40.5	254 00	+34.6	280 00	+21.7	306 00	+4.4	332 00	-13.7	358 00	-29.1
202 30	+38.3	228 30	+40.5	254 30	+34.4	280 30	+21.4	306 30	+4.1	332 30	-14.1	358 30	-29.4
203 00	+38.4	229 00	+40.4	255 00	+34.2	281 00	+21.1	307 00	+3.7	333 00	-14.4	359 00	-29.6
203 30	+38.5	229 30	+40.4	255 30	+34.0	281 30	+20.8	307 30	+3.4	333 30	-14.7	359 30	-29.9
204 00	+38.6	230 00	+40.3	256 00	+33.8	282 00	+20.5	308 00	+3.0	334 00	-15.1	360 00	-30.1
204 30	+38.8	230 30	+40.3	256 30	+33.6	282 30	+20.2	308 30	+2.7	334 30	-15.4		
205 00	+38.9	231 00	+40.2	257 00	+33.4	283 00	+19.9	309 00	+2.3	335 00	-15.7		
205 30	+39.0	231 30	+40.2	257 30	+33.2	283 30	+19.6	309 30	+2.0	335 30	-16.1		
206 00	+39.1	232 00	+40.1	258 00	+33.0	284 00	+19.3	310 00	+1.6	336 00	-16.4		
206 30	+39.2	232 30	+40.0	258 30	+32.8	284 30	+19.0	310 30	+1.3	336 30	-16.7		
207 00	+39.3	233 00	+40.0	259 00	+32.6	285 00	+18.6	311 00	+0.9	337 00	-17.0		
207 30	+39.4	233 30	+39.9	259 30	+32.4	285 30	+18.3	311 30	+0.5	337 30	-17.3		
208 00	+39.4	234 00	+39.8	260 00	+32.2	286 00	+18.0	312 00	+0.2	338 00	-17.7		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2013

TABLA II

(SIEMPRE POSITIVA)

hL Υ	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
120	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
300	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
360	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL Υ	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
0	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.3	+0.5
40	+0.2	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.1	+0.1	+0.2	+0.4
60	+0.1	+0.3	+0.3	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.3	-0.5
220	-0.2	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.3	+0.1	-0.1	-0.2	-0.4
240	-0.1	-0.3	-0.3	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	+0.1
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.5	+0.6	20
30	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	+0.1	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	60
70	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.8	70
80	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.7	-0.7	-0.8	-1.0	80
90	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	90
100	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	100
110	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	110
120	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	120
130	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	130
140	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.2	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	240
250	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.7	250
260	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	+1.0	260
270	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	270
280	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	280
290	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	290
300	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	300
310	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	310
320	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.0	+1.2	+1.3	+1.6	320
330	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	360

Cuando el signo es +, la Polar está al E del meridiano.
 Cuando el signo es -, la Polar está al W del meridiano.

Long	Retardo diario																	
	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	65 ^m	70 ^m	75 ^m	80 ^m	85 ^m	90 ^m
o	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3
15	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
20	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5
25	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6
30	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8
35	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
40	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10
45	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11
50	1	1	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	13
55	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14
60	1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	13	14	15
65	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	14	15	16
70	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
75	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19
80	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
85	1	2	4	5	6	7	8	9	11	12	13	14	15	17	18	19	20	21
90	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20	21	23
95	1	3	4	5	7	8	9	11	12	13	15	16	17	18	20	21	22	24
100	1	3	4	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
105	1	3	4	6	7	9	10	12	13	15	16	18	19	20	22	23	25	26
110	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28
115	2	3	5	6	8	10	11	13	14	16	18	19	21	22	24	26	27	29
120	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
125	2	3	5	7	9	10	12	14	16	17	19	21	23	24	26	28	30	31
130	2	4	5	7	9	11	13	14	16	18	20	22	23	25	27	29	31	33
135	2	4	6	8	9	11	13	15	17	19	21	23	24	26	28	30	32	34
140	2	4	6	8	10	12	14	16	18	19	21	23	25	27	29	31	33	35
145	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
150	2	4	6	8	10	13	15	17	19	21	23	25	27	29	31	33	35	38
155	2	4	6	9	11	13	15	17	19	22	24	26	28	30	32	34	37	39
160	2	4	7	9	11	13	16	18	20	22	24	27	29	31	33	36	38	40
165	2	5	7	9	11	14	16	18	21	23	25	28	30	32	34	37	39	41
170	2	5	7	9	12	14	17	19	21	24	26	28	31	33	35	38	40	43
175	2	5	7	10	12	15	17	19	22	24	27	29	32	34	36	39	41	44
180	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2013**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2013)	
Elevación del observador m	Corrección /	Elevación del observador m	Corrección /	Altura apte. ⊙ /	Corrección /	Altura apte. ⊙ /	Corrección /	Altura apte. ⊙ /	Corrección /	Altura apte. ⊙ /	Corrección /				
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	Ene 1	+0/3		
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	Ene 22	+0/2		
1.9	-2.4	13.6	-6.5	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Feb 26	+0/1		
2.0	-2.5	14.0	-6.6	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 22	0/0		
2.2	-2.6	14.4	-6.7	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 13	-0/1		
2.3	-2.7	14.8	-6.8	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7	May 7	-0/2		
2.5	-2.8	15.3	-7.0	7 00	+8.8	10 00	+10.8	16 13	+12.8	37 25	+14.9	Jun 12	-0/3		
2.7	-2.9	15.7	-7.1	7 06	+8.9	10 12	+10.9	16 43	+12.9	39 49	+15.0	Jul 27	-0/2		
2.9	-3.0	16.2	-7.2	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	Sep 1	-0/1		
3.1	-3.1	16.6	-7.3	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	Sep 25	0/0		
3.3	-3.2	17.1	-7.4	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	Oct 17	+0/1		
3.5	-3.3	17.6	-7.5	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	Nov 10	+0/2		
3.7	-3.4	18.0	-7.6	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	Dic 15	+0/3		
3.9	-3.5	18.5	-7.7	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6	Dic 31			
4.2	-3.6	19.0	-7.8	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7				
4.4	-3.7	19.5	-7.9	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8				
4.7	-3.8	20.0	-8.0	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9				
4.9	-3.9	20.5	-8.1	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0				
5.2	-4.0	21.0	-8.2	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00					
5.4	-4.1	21.5	-8.3	8 45		13 23		25 59							
5.7	-4.2	22.1	-8.4	TABLA C = PLANETAS Y ESTRELLAS											
6.0	-4.3	22.6	-8.5	Refracción				Paralaje (2013)							
6.2	-4.4	23.1	-8.6	Altura apte.	Corrección /	Altura apte.	Corrección /	Fechas	Venus para cualquier altura	Marte					
6.5	-4.5	23.7	-8.7							Altura aparente					
6.8	-4.6	24.2	-8.8	○ /	/	○ /	/			< 30°	> 30° < 60°	> 60°			
7.1	-4.7	24.8	-8.9	6 30	-7.8	14 00	-3.8	Ene 1							
7.4	-4.8	25.4	-9.0	6 40	-7.6	15 00	-3.6								
7.7	-4.9	25.9	-9.1	6 50	-7.5	16 00	-3.3		+0/1	+0/1	0/0	0/0			
8.0	-5.0	26.5	-9.2	7 00	-7.3	17 00	-3.1	Oct 3							
8.4	-5.1	27.1	-9.3	7 15	-7.1	18 00	-3.0								
8.7	-5.2	27.7	-9.4	7 30	-6.9	19 00	-2.8		+0/2	+0/1	0/0	0/0			
9.0	-5.3	28.3	-9.5	7 45	-6.7	20 00	-2.6	Oct 11							
9.4	-5.4	28.9	-9.6	8 00	-6.5	21 00	-2.5								
9.7	-5.5	29.5	-9.7	8 15	-6.3	22 00	-2.4		+0/2	+0/1	+0/1	0/0			
10.1	-5.6	30.1	-9.8	8 30	-6.2	24 00	-2.2	Nov 19							
10.4	-5.7	30.7	-9.9	8 45	-6.0	26 00	-2.0		+0/3	+0/1	+0/1	0/0			
10.8	-5.8	31.3	-10.0	9 00	-5.9	28 00	-1.8								
11.2	-5.9	32.0	-10.1	9 20	-5.7	32 00	-1.6	Dic 11							
11.6	-6.0	32.6	-10.2	9 40	-5.5	36 00	-1.3		+0/4	+0/1	+0/1	0/0			
11.9	-6.1	33.3	-10.3	10 00	-5.3	40 00	-1.2								
12.3	-6.2	33.9	-10.4	10 30	-5.1	45 00	-1.0	Dic 27							
12.7	-6.3	34.6		11 00	-4.8	50 00	-0.8		+0/5	+0/1	+0/1	0/0			
				11 30	-4.6	60 00	-0.6								
				12 00	-4.5	70 00	-0.4	Dic 31							
				12 30	-4.3	80 00	-0.2								
				13 00	-4.1	90 00	0.0								

La altura aparente es la observada corregida por depresión del horizonte.
En estas tablas, para los valores explícitos tomar el valor superior.