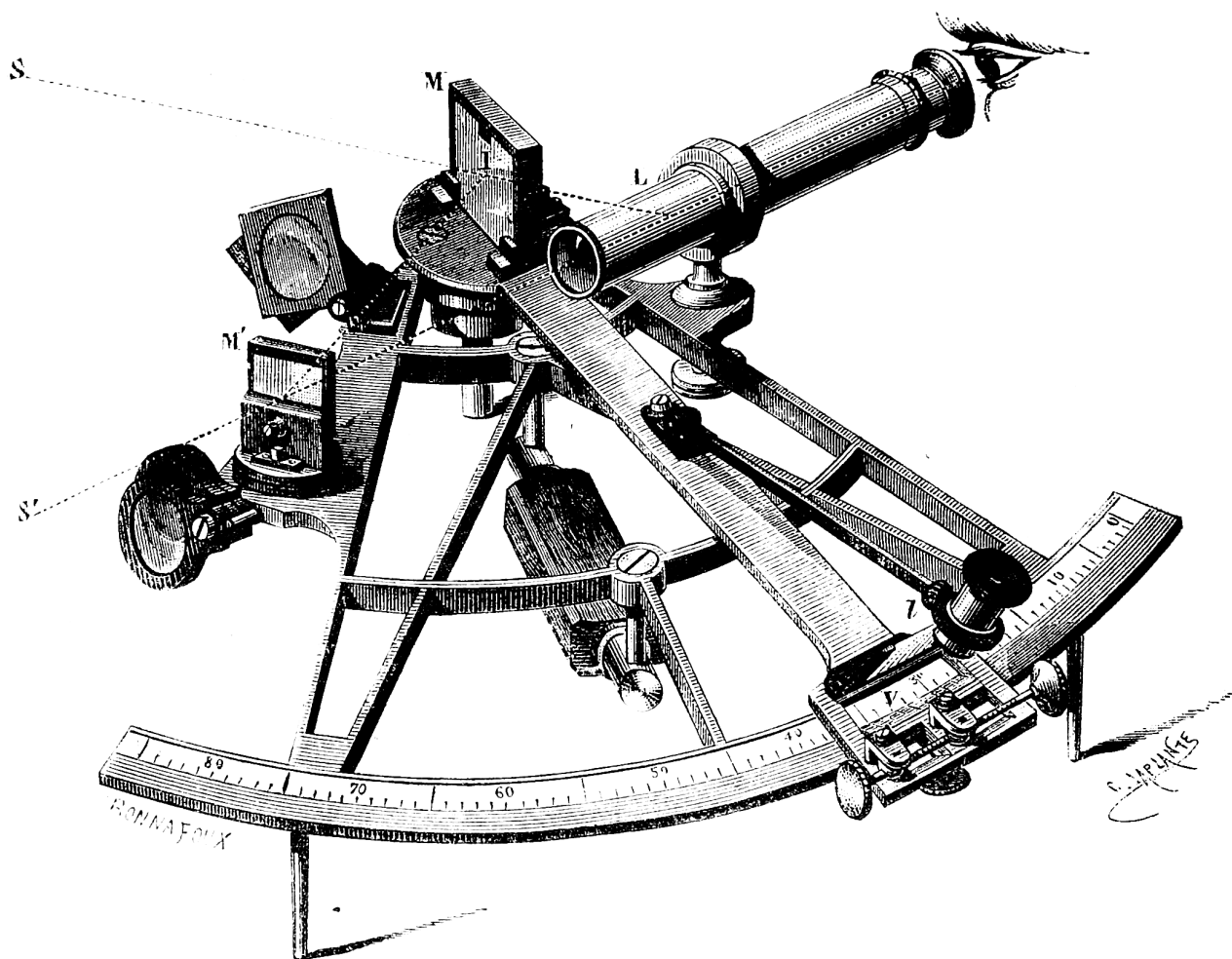




ALMANAQUE NÁUTICO PERSEIS 2001

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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: 16/3 PMG: 12 ^h 03 ^m 7			Edad: 6 ^d 3 PHE SD: 14/9 PMG: 17 ^h 13 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	08.7	-23	00.8	109	13.3	-8	49.3	60 N	7 09	8 06	9 02	11 51	9
1	194	08.4		00.6	123	47.3 ¹⁵⁰		38.6 ¹⁰⁷	58	7 02	7 54	8 45	47	12
2	209	08.1		00.4	138	21.2 ¹⁴⁹		27.8 ¹⁰⁸	56	6 56	44	31	44	14
3	224	07.9	-23	00.1	152	55.2 ¹⁵⁰		16.9 ¹⁰⁹	54	50	36	19	41	16
4	239	07.6	-22	59.9	167	29.2 ¹⁵⁰	-8	06.1 ¹⁰⁸	52	44	28	8 08	39	18
5	254	07.3	-22	59.7	182	03.2 ¹⁵⁰	-7	55.1 ¹¹⁰	50	6 39	7 20	7 59	11 36	20
6	269	07.0	-22	59.5	196	37.2 ¹⁵⁰	-7	44.2 ¹⁰⁹	45	6 28	7 05	7 38	11 31	23
7	284	06.7		59.3	211	11.2 ¹⁵⁰		33.2 ¹¹⁰	40	18	6 52	22	26	27
8	299	06.4		59.1	225	45.2 ¹⁵⁰		22.1 ¹¹¹	35	08	40	7 08	22	30
9	314	06.1		58.9	240	19.2 ¹⁵⁰	-7	11.1 ¹¹⁰	30	6 00	30	6 56	19	32
10	329	05.8		58.7	254	53.3 ¹⁵¹	-7	00.0 ¹¹¹	20	5 44	6 11	35	13	36
11	344	05.5	-22	58.5	269	27.3 ¹⁵⁰	-6	48.8 ¹¹²	10 N	5 28	5 54	6 17	11 08	39
12	359	05.2	-22	58.3	284	01.3 ¹⁵⁰	-6	37.6 ¹¹²	0	5 11	5 37	6 00	11 03	43
13	14	04.9		58.0	298	35.3 ¹⁵⁰		26.4 ¹¹²	10 S	4 53	20	5 43	10 58	46
14	29	04.6		57.8	313	09.3 ¹⁵⁰		15.1 ¹¹³	20	30	5 00	24	52	51
15	44	04.3		57.6	327	43.3 ¹⁵⁰	-6	03.9 ¹¹²	30	4 02	4 35	5 02	46	55
16	59	04.0		57.4	342	17.3 ¹⁵⁰	-5	52.5 ¹¹⁴	35	3 44	20	4 50	43	57
17	74	03.7	-22	57.2	356	51.4 ¹⁵¹	-5	41.2 ¹¹³	40	3 21	4 02	4 35	10 39	60
18	89	03.4	-22	57.0	11	25.4 ¹⁵⁰	-5	29.8 ¹¹⁴	45	2 51	3 40	4 17	10 34	63
19	104	03.1		56.8	25	59.3 ¹⁴⁹		18.4 ¹¹⁴	50	2 07	3 11	3 55	29	67
20	119	02.9		56.5	40	33.3 ¹⁵⁰	-5	06.9 ¹¹⁵	52	1 41	2 57	45	26	69
21	134	02.6		56.3	55	07.3 ¹⁵⁰	-4	55.4 ¹¹⁵	54	1 01	39	33	23	71
22	149	02.3		56.1	69	41.3 ¹⁵⁰		43.9 ¹¹⁵	56	** ** *	2 18	19	20	73
23	164	02.0		55.9	84	15.3 ¹⁵⁰		32.4 ¹¹⁵	58	** ** *	1 50	3 03	17	75
24	179	01.7	-22	55.7	98	49.2 ¹⁴⁹	-4	20.8 ¹¹⁶	60 S	** ** *	1 06	2 43	10 13	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 14 ^m 3		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.4 PMG: 7 ^h 29 ^m		Mag: -2.7 PMG: 21 ^h 14 ^m		Mag: -0.1 PMG: 20 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	42.6	130	59.8	-13	56.8	247	37.3	-11	58.9
1	115	45.1	145	59.6		55.7	262	38.4		59.4
2	130	47.6	160	59.5		54.7	277	39.4	-11	59.8
3	145	50.0	175	59.3		53.6	292	40.5	-12	00.3
4	160	52.5	190	59.2		52.5	307	41.6		00.8
5	175	55.0	205	59.0	-13	51.4	322	42.6	-12	01.3
6	190	57.4	220	58.9	-13	50.3	337	43.7	-12	01.8
7	205	59.9	235	58.7		49.2	352	44.7		02.3
8	221	02.4	250	58.6		48.1	7	45.8		02.8
9	236	04.8	265	58.4		47.0	22	46.8		03.3
10	251	07.3	280	58.3		45.9	37	47.9		03.8
11	266	09.7	295	58.1	-13	44.8	52	49.0	-12	04.3
12	281	12.2	310	58.0	-13	43.7	67	50.0	-12	04.8
13	296	14.7	325	57.9		42.6	82	51.1		05.3
14	311	17.1	340	57.7		41.5	97	52.1		05.8
15	326	19.6	355	57.6		40.4	112	53.2		06.3
16	341	22.1	10	57.4		39.3	127	54.2		06.7
17	356	24.5	25	57.3	-13	38.2	142	55.3	-12	07.2
18	11	27.0	40	57.2	-13	37.1	157	56.4	-12	07.7
19	26	29.5	55	57.0		36.0	172	57.4		08.2
20	41	31.9	70	56.9		34.9	187	58.5		08.7
21	56	34.4	85	56.7		33.8	202	59.5		09.2
22	71	36.8	100	56.6		32.7	218	00.6		09.7
23	86	39.3	115	56.5		31.6	233	01.6		10.2
24	101	41.8	130	56.3	-13	30.5	248	02.7	-12	10.7
Dif	—		-1 +11		+11 -5		+27 0		+26 0	

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: 7 ^d 3 PHE { SD: 15:1 PMG: 17 ^h 56 ^m					Civil		Náutico	Hora	Rº	Hora	Rº			
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	01.7	-22	55.7	98	49.2	-4	20.8	60 N	15 07	16 03	16 59	12 00	10	**	*	*	
1	194	01.4		55.4	113	23.2 ¹⁵⁰	-4	09.2 ¹¹⁶	58	23	14	17 07	11 59	12	**	*	*	
2	209	01.1		55.2	127	57.1 ¹⁴⁹	-3	57.6 ¹¹⁶	56	38	24	13	58	14	**	*	*	
3	224	00.8		55.0	142	31.0 ¹⁴⁹		45.9 ¹¹⁷	54	15 50	33	19	57	17	**	*	*	
4	239	00.5		54.8	157	04.9 ¹⁴⁹		34.2 ¹¹⁷	52	16 00	41	24	57	18	**	*	*	
5	254	00.2	-22	54.5	171	38.8 ¹⁴⁹	-3	22.5 ¹¹⁷	50	16 10	16 48	17 29	11 56	20	**	*	*	
6	268	59.9	-22	54.3	186	12.7 ¹⁴⁹	-3	10.8 ¹¹⁷	45	16 30	17 04	17 41	11 54	24	**	*	*	
7	283	59.6		54.1	200	46.5 ¹⁴⁸	-2	59.0 ¹¹⁸	40	16 46	17	17 51	53	27	**	*	*	
8	298	59.3		53.8	215	20.4 ¹⁴⁹		47.3 ¹¹⁷	35	17 00	28	18 00	52	29	**	*	*	
9	313	59.1		53.6	229	54.2 ¹⁴⁸		35.5 ¹¹⁸	30	12	38	08	51	32	**	*	*	
10	328	58.8		53.4	244	28.0 ¹⁴⁸		23.6 ¹¹⁹	20	33	17 57	24	49	36	**	*	*	
11	343	58.5	-22	53.2	259	01.8 ¹⁴⁸	-2	11.8 ¹¹⁸	10 N	17 51	18 14	18 40	11 47	40	**	*	*	
12	358	58.2	-22	52.9	273	35.5 ¹⁴⁷	-1	59.9 ¹¹⁹	0	18 08	18 30	18 56	11 46	44	**	*	*	
13	13	57.9		52.7	288	09.3 ¹⁴⁸		48.0 ¹¹⁹	10 S	25	18 48	19 15	44	48	**	*	*	
14	28	57.6		52.5	302	43.0 ¹⁴⁷		36.1 ¹¹⁹	20	18 43	19 08	19 37	43	51	**	*	*	
15	43	57.3		52.2	317	16.7 ¹⁴⁷		24.2 ¹¹⁹	30	19 05	32	20 05	41	56	**	*	*	
16	58	57.0		52.0	331	50.3 ¹⁴⁶		12.2 ¹²⁰	35	18	19 47	23	40	58	**	*	*	
17	73	56.7	-22	51.8	346	23.9 ¹⁴⁶	-1	00.3 ¹¹⁹	40	19 32	20 05	20 46	11 39	61	**	*	*	
18	88	56.4	-22	51.5	0	57.6 ¹⁴⁷	-0	48.3 ¹²⁰	45	19 50	20 27	21 15	11 37	65	**	*	*	
19	103	56.2		51.3	15	31.1 ¹⁴⁵		36.3 ¹²⁰	50	20 11	20 55	21 58	36	69	**	*	*	
20	118	55.9		51.0	30	04.7 ¹⁴⁶		24.3 ¹²⁰	52	22	21 10	22 24	35	71	**	*	*	
21	133	55.6		50.8	44	38.2 ¹⁴⁵		12.2 ¹²¹	54	34	27	23 02	34	73	**	*	*	
22	148	55.3		50.6	59	11.7 ¹⁴⁵	-0	00.2 ¹²⁰	56	20 47	21 48	** *	33	75	**	*	*	
23	163	55.0		50.3	73	45.1 ¹⁴⁴	+0	11.9 ¹²¹	58	21 03	22 15	** *	32	78	**	*	*	
24	178	54.7	-22	50.1	88	18.6 ¹⁴⁵	+0	23.9 ¹²⁰	60 S	21 23	22 56	** *	11 31	81	**	*	*	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 10 ^m 4		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 7 ^h 27 ^m		Mag: -2.7 PMG: 21 ^h 10 ^m		Mag: -0.1 PMG: 20 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	101	41.8	130	56.3	-13	30.5	248	02.7	-12	10.7	41	30.2	+19	47.7	48	57.0	+16	46.7
1	116	44.2	145	56.2		29.4	263	03.8		11.2	56	32.9		47.7	63	59.6		46.7
2	131	46.7	160	56.1		28.3	278	04.8		11.6	71	35.5		47.6	79	02.2		46.7
3	146	49.2	175	55.9		27.2	293	05.9		12.1	86	38.2		47.6	94	04.8		46.7
4	161	51.6	190	55.8		26.1	308	06.9		12.6	101	40.9		47.6	109	07.3		46.6
5	176	54.1	205	55.7	-13	25.0	323	08.0	-12	13.1	116	43.5	+19	47.5	124	09.9	+16	46.6
6	191	56.6	220	55.6	-13	23.9	338	09.0	-12	13.6	131	46.2	+19	47.5	139	12.5	+16	46.6
7	206	59.0	235	55.4		22.8	353	10.1		14.1	146	48.9		47.5	154	15.0		46.6
8	222	01.5	250	55.3		21.7	8	11.2		14.6	161	51.5		47.5	169	17.6		46.6
9	237	04.0	265	55.2		20.6	23	12.2		15.1	176	54.2		47.4	184	20.2		46.6
10	252	06.4	280	55.0		19.5	38	13.3		15.6	191	56.9		47.4	199	22.8		46.6
11	267	08.9	295	54.9	-13	18.4	53	14.3	-12	16.0	206	59.5	+19	47.4	214	25.3	+16	46.5
12	282	11.3	310	54.8	-13	17.3	68	15.4	-12	16.5	222	02.2	+19	47.3	229	27.9	+16	46.5
13	297	13.8	325	54.7		16.2	83	16.5		17.0	237	04.9		47.3	244	30.5		46.5
14	312	16.3	340	54.6		15.1	98	17.5		17.5	252	07.5		47.3	259	33.0		46.5
15	327	18.7	355	54.4		13.9	113	18.6		18.0	267	10.2		47.3	274	35.6		46.5
16	342	21.2	10	54.3		12.8	128	19.6		18.5	282	12.8		47.2	289	38.2		46.5
17	357	23.7	25	54.2	-13	11.7	143	20.7	-12	19.0	297	15.5	+19	47.2	304	40.7	+16	46.5
18	12	26.1	40	54.1	-13	10.6	158	21.7	-12	19.5	312	18.2	+19	47.2	319	43.3	+16	46.4
19	27	28.6	55	54.0		09.5	173	22.8		20.0	327	20.8		47.2	334	45.9		46.4
20	42	31.1	70	53.8		08.4	188	23.9		20.4	342	23.5		47.1	349	48.5		46.4
21	57	33.5	85	53.7		07.3	203	24.9		20.9	357	26.1		47.1	4	51.0		46.4
22	72	36.0	100	53.6		06.2	218	26.0		21.4	12	28.8		47.1	19	53.6		46.4
23	87	38.4	115	53.5		05.1	233	27.0		21.9	27	31.5		47.0	34	56.2		46.4
24	102	40.9	130	53.4	-13	03.9	248	28.1	-12	22.4	42	34.1	+19	47.0	49	58.7	+16	46.4
Dif	—		-1		+11		+11		-5		+27		0		+26		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 8 ^d 3	PHE	SD: 15 ^h 2		PMG: 18 ^h 40 ^m	R ^c : 47 ^m						
	hG ☉	Dec									Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	54.7	-22	50.1	88	18.6	+0 23.9	60 N	7 09	8 05	9 01	12 10	10	0 09	82
1	193	54.4		49.8	102	51.9 ¹⁴³	36.0 ¹²¹	58	7 02	7 54	8 45	11 13		09	79
2	208	54.1		49.6	117	25.3 ¹⁴⁴	+0 48.1 ¹²¹	56	6 55	44	31	12 16		09	76
3	223	53.9		49.4	131	58.6 ¹⁴³	+1 00.2 ¹²¹	54	49	35	18	14 17		09	74
4	238	53.6		49.1	146	31.9 ¹⁴³	12.4 ¹²²	52	44	27	8 08	15 19		08	72
5	253	53.3	-22	48.9	161	05.1 ¹⁴²	+1 24.5 ¹²¹	50	6 39	7 20	7 58	12 16	21	0 08	70
6	268	53.0	-22	48.6	175	38.3 ¹⁴²	+1 36.6 ¹²¹	45	6 28	7 05	7 38	12 18	25	0 08	66
7	283	52.7		48.4	190	11.5 ¹⁴²	+1 48.8 ¹²²	40	18	6 52	22	20 28		08	62
8	298	52.4		48.1	204	44.6 ¹⁴¹	+2 00.9 ¹²¹	35	09	40	7 08	21 32		08	59
9	313	52.1		47.9	219	17.6 ¹⁴⁰	13.1 ¹²²	30	6 00	30	6 56	23 34		07	57
10	328	51.8		47.6	233	50.7 ¹⁴¹	25.2 ¹²¹	20	5 45	6 12	36	25 39		07	52
11	343	51.6	-22	47.4	248	23.6 ¹³⁹	+2 37.4 ¹²²	10 N	5 29	5 55	6 18	12 27	43	0 07	48
12	358	51.3	-22	47.1	262	56.6 ¹⁴⁰	+2 49.5 ¹²¹	0	5 12	5 38	6 01	12 30	46	0 07	44
13	13	51.0		46.9	277	29.5 ¹³⁹	+3 01.7 ¹²²	10 S	4 54	21	5 44	32 49		06	41
14	28	50.7		46.6	292	02.3 ¹³⁸	13.9 ¹²²	20	32	5 01	25	34 54		06	37
15	43	50.4		46.4	306	35.1 ¹³⁸	26.1 ¹²²	30	4 04	4 37	5 04	37 58		05	33
16	58	50.1		46.1	321	07.8 ¹³⁷	38.2 ¹²¹	35	3 45	22	4 51	38 61		05	31
17	73	49.8	-22	45.9	335	40.5 ¹³⁷	+3 50.4 ¹²²	40	3 23	4 04	4 37	12 40	64	0 05	27
18	88	49.6	-22	45.6	350	13.1 ¹³⁶	+4 02.6 ¹²²	45	2 54	3 42	4 19	12 42	67	0 05	24
19	103	49.3		45.4	4	45.7 ¹³⁶	14.7 ¹²¹	50	2 10	3 14	3 57	45 71		04	21
20	118	49.0		45.1	19	18.2 ¹³⁵	26.9 ¹²²	52	1 45	2 59	47	46 73		04	19
21	133	48.7		44.9	33	50.7 ¹³⁵	39.1 ¹²²	54	1 07	42	35	47 76		04	16
22	148	48.4		44.6	48	23.1 ¹³⁴	+4 51.2 ¹²¹	56	** **	2 21	22	48 78		04	14
23	163	48.1		44.3	62	55.5 ¹³⁴	+5 03.4 ¹²²	58	** **	1 54	3 06	50 81		03	12
24	178	47.8	-22	44.1	77	27.8 ¹³³	+5 15.5 ¹²¹	60 S	** **	1 13	2 46	12 52	83	0 03	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 06 ^m 5		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 7 ^h 26 ^m		Mag: -2.7 PMG: 21 ^h 06 ^m		Mag: -0.1 PMG: 20 ^h 37 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	102	40.9	130	53.4	-13 03.9	248	28.1	-12 22.4	42	34.1	+19 47.0	49 58.7	+16 46.4	
1	117	43.4	145	53.3	02.8	263	29.1	22.9	57	36.8	47.0	65 01.3	46.3	
2	132	45.8	160	53.2	01.7	278	30.2	23.4	72	39.4	47.0	80 03.9	46.3	
3	147	48.3	175	53.1	-13 00.6	293	31.3	23.8	87	42.1	46.9	95 06.4	46.3	
4	162	50.8	190	52.9	-12 59.5	308	32.3	24.3	102	44.8	46.9	110 09.0	46.3	
5	177	53.2	205	52.8	-12 58.4	323	33.4	-12 24.8	117	47.4	+19 46.9	125 11.6	+16 46.3	
6	192	55.7	220	52.7	-12 57.3	338	34.4	-12 25.3	132	50.1	+19 46.9	140 14.1	+16 46.3	
7	207	58.2	235	52.6	56.1	353	35.5	25.8	147	52.7	46.8	155 16.7	46.3	
8	223	00.6	250	52.5	55.0	8	36.5	26.3	162	55.4	46.8	170 19.3	46.2	
9	238	03.1	265	52.4	53.9	23	37.6	26.8	177	58.1	46.8	185 21.8	46.2	
10	253	05.6	280	52.3	52.8	38	38.7	27.2	193	00.7	46.7	200 24.4	46.2	
11	268	08.0	295	52.2	-12 51.7	53	39.7	-12 27.7	208	03.4	+19 46.7	215 27.0	+16 46.2	
12	283	10.5	310	52.1	-12 50.6	68	40.8	-12 28.2	223	06.0	+19 46.7	230 29.5	+16 46.2	
13	298	12.9	325	52.0	49.4	83	41.8	28.7	238	08.7	46.7	245 32.1	46.2	
14	313	15.4	340	51.9	48.3	98	42.9	29.2	253	11.3	46.6	260 34.7	46.2	
15	328	17.9	355	51.8	47.2	113	43.9	29.7	268	14.0	46.6	275 37.2	46.2	
16	343	20.3	10	51.7	46.1	128	45.0	30.1	283	16.6	46.6	290 39.8	46.1	
17	358	22.8	25	51.6	-12 45.0	143	46.1	-12 30.6	298	19.3	+19 46.6	305 42.4	+16 46.1	
18	13	25.3	40	51.5	-12 43.8	158	47.1	-12 31.1	313	22.0	+19 46.5	320 44.9	+16 46.1	
19	28	27.7	55	51.4	42.7	173	48.2	31.6	328	24.6	46.5	335 47.5	46.1	
20	43	30.2	70	51.3	41.6	188	49.2	32.1	343	27.3	46.5	350 50.0	46.1	
21	58	32.7	85	51.2	40.5	203	50.3	32.6	358	29.9	46.5	5 52.6	46.1	
22	73	35.1	100	51.1	39.4	218	51.4	33.0	13	32.6	46.4	20 55.2	46.1	
23	88	37.6	115	51.0	38.2	233	52.4	33.5	28	35.2	46.4	35 57.7	46.1	
24	103	40.1	130	50.9	-12 37.1	248	53.5	-12 34.0	43	37.9	+19 46.4	51 00.3	+16 46.0	
Dif	—		-1	+11		+11	-5		+27		0	+26		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 0			Edad: 9 ^d 3 PHE { SD: 15:5 PMG: 19 ^h 27 ^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	178	47.8	-22 44.1	77	27.8	+5 15.5		60 N	15 10	16 06	17 02	12 20 12	1 31 85	
1	193	47.6	43.8	92	00.0 ¹³²	27.7 ¹²²		58	26	17	09	24 16	28 82	
2	208	47.3	43.6	106	32.2 ¹³²	39.8 ¹²¹		56	40	27	15	28 18	25 79	
3	223	47.0	43.3	121	04.3 ¹³¹	+5 51.9 ¹²¹		54	15 52	35	21	31 21	23 77	
4	238	46.7	43.0	135	36.3 ¹³⁰	+6 04.0 ¹²¹		52	16 03	43	26	34 23	20 75	
5	253	46.4	-22 42.8	150	08.3 ¹³⁰	+6 16.1 ¹²¹		50	16 12	16 50	17 31	12 37 25	1 18 73	
6	268	46.1	-22 42.5	164	40.2 ¹²⁹	+6 28.2 ¹²¹		45	16 32	17 05	17 42	12 43 29	1 14 68	
7	283	45.9	42.2	179	12.1 ¹²⁹	40.3 ¹²¹		40	16 48	18	17 52	48 32	10 65	
8	298	45.6	42.0	193	43.8 ¹²⁷	+6 52.3 ¹²⁰		35	17 02	30	18 01	53 35	07 62	
9	313	45.3	41.7	208	15.5 ¹²⁷	+7 04.3 ¹²⁰		30	14	40	10	12 57 37	1 04 60	
10	328	45.0	41.4	222	47.2 ¹²⁷	16.4 ¹²¹		20	34	17 58	25	13 04 41	0 59 55	
11	343	44.7	-22 41.2	237	18.8 ¹²⁶	+7 28.4 ¹²⁰		10 N	17 52	18 15	18 41	13 10 45	0 55 51	
12	358	44.5	-22 40.9	251	50.3 ¹²⁵	+7 40.4 ¹²⁰		0	18 09	18 31	18 57	13 16 49	0 51 48	
13	13	44.2	40.6	266	21.7 ¹²⁴	+7 52.3 ¹¹⁹		10 S	26	18 49	19 16	21 53	47 44	
14	28	43.9	40.4	280	53.0 ¹²³	+8 04.3 ¹²⁰		20	18 44	19 08	19 37	28 56	43 40	
15	43	43.6	40.1	295	24.3 ¹²³	16.2 ¹¹⁹		30	19 05	32	20 05	35 61	38 36	
16	58	43.3	39.8	309	55.5 ¹²²	28.1 ¹¹⁹		35	18	19 47	23	39 64	36 32	
17	73	43.0	-22 39.5	324	26.6 ¹²¹	+8 39.9 ¹¹⁸		40	19 32	20 05	20 46	13 44 67	0 32 30	
18	88	42.8	-22 39.3	338	57.7 ¹²¹	+8 51.8 ¹¹⁹		45	19 49	20 26	21 15	13 49 71	0 29 26	
19	103	42.5	39.0	353	28.6 ¹¹⁹	+9 03.6 ¹¹⁸		50	20 11	20 54	21 57	56 75	25 22	
20	118	42.2	38.7	7	59.5 ¹¹⁹	15.4 ¹¹⁸		52	21	21 09	22 22	13 59 77	23 20	
21	133	41.9	38.4	22	30.3 ¹¹⁸	27.2 ¹¹⁸		54	33	25	22 58	14 03 79	20 19	
22	148	41.6	38.2	37	01.1 ¹¹⁸	38.9 ¹¹⁷		56	20 46	21 46	** **	06 82	18 16	
23	163	41.4	37.9	51	31.7 ¹¹⁶	+9 50.6 ¹¹⁷		58	21 02	22 12	** **	11 84	15 14	
24	178	41.1	-22 37.6	66	02.2 ¹¹⁵	+10 02.3 ¹¹⁷		60 S	21 21	22 51	** **	14 15 88	0 13 10	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 17 ^h 02 ^m 5		Mag: -4.4 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 7 ^h 24 ^m			Mag: -2.7 PMG: 21 ^h 02 ^m		Mag: -0.1 PMG: 20 ^h 32 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	103	40.1	130	50.9	-12 37.1	248	53.5	-12 34.0	43	37.9	+19 46.4	51	00.3	+16 46.0
1	118	42.5	145	50.8	36.0	263	54.5	34.5	58	40.5	46.4	66	02.9	46.0
2	133	45.0	160	50.8	34.9	278	55.6	35.0	73	43.2	46.3	81	05.4	46.0
3	148	47.4	175	50.7	33.7	293	56.6	35.5	88	45.8	46.3	96	08.0	46.0
4	163	49.9	190	50.6	32.6	308	57.7	35.9	103	48.5	46.3	111	10.6	46.0
5	178	52.4	205	50.5	-12 31.5	323	58.8	-12 36.4	118	51.1	+19 46.3	126	13.1	+16 46.0
6	193	54.8	220	50.4	-12 30.4	338	59.8	-12 36.9	133	53.8	+19 46.2	141	15.7	+16 46.0
7	208	57.3	235	50.3	29.2	354	00.9	37.4	148	56.4	46.2	156	18.2	46.0
8	223	59.8	250	50.2	28.1	9	01.9	37.9	163	59.1	46.2	171	20.8	45.9
9	239	02.2	265	50.2	27.0	24	03.0	38.3	179	01.7	46.2	186	23.4	45.9
10	254	04.7	280	50.1	25.9	39	04.0	38.8	194	04.4	46.1	201	25.9	45.9
11	269	07.2	295	50.0	-12 24.7	54	05.1	-12 39.3	209	07.0	+19 46.1	216	28.5	+16 45.9
12	284	09.6	310	49.9	-12 23.6	69	06.2	-12 39.8	224	09.7	+19 46.1	231	31.1	+16 45.9
13	299	12.1	325	49.8	22.5	84	07.2	40.3	239	12.3	46.1	246	33.6	45.9
14	314	14.5	340	49.7	21.3	99	08.3	40.8	254	15.0	46.0	261	36.2	45.9
15	329	17.0	355	49.7	20.2	114	09.3	41.2	269	17.6	46.0	276	38.7	45.9
16	344	19.5	10	49.6	19.1	129	10.4	41.7	284	20.3	46.0	291	41.3	45.8
17	359	21.9	25	49.5	-12 17.9	144	11.4	-12 42.2	299	22.9	+19 46.0	306	43.9	+16 45.8
18	14	24.4	40	49.4	-12 16.8	159	12.5	-12 42.7	314	25.5	+19 45.9	321	46.4	+16 45.8
19	29	26.9	55	49.4	15.7	174	13.6	43.2	329	28.2	45.9	336	49.0	45.8
20	44	29.3	70	49.3	14.6	189	14.6	43.6	344	30.8	45.9	351	51.5	45.8
21	59	31.8	85	49.2	13.4	204	15.7	44.1	359	33.5	45.9	6	54.1	45.8
22	74	34.3	100	49.1	12.3	219	16.7	44.6	14	36.1	45.8	21	56.7	45.8
23	89	36.7	115	49.1	11.2	234	17.8	45.1	29	38.8	45.8	36	59.2	45.8
24	104	39.2	130	49.0	-12 10.0	249	18.9	-12 45.5	44	41.4	+19 45.8	52	01.8	+16 45.8
Dif	—		-1 +11			+11 -5			+26 0			+26 0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 5				Edad: 10 ^d 3 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 PMG: 20 ^h 17 ^m R ^o : 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	41.1	-22	37.6	66	02.2	+10	02.3	60 N	7 08	8 04	9 00	12 32	17	2 56	90		
1	193	40.8		37.3	80	32.7 ¹¹⁵		13.9 ¹¹⁶	58	7 01	7 53	8 43	40 20		50	86		
2	208	40.5		37.0	95	03.1 ¹¹⁴		25.5 ¹¹⁶	56	6 55	43	30	46 23		44	83		
3	223	40.2		36.8	109	33.4 ¹¹³		37.1 ¹¹⁶	54	49	35	18	52 25		40	80		
4	238	40.0		36.5	124	03.6 ¹¹²	+10	48.6 ¹¹⁵	52	44	27	8 07	12 57	28	35	78		
5	253	39.7	-22	36.2	138	33.7 ¹¹¹	+11	00.1 ¹¹⁵	50	6 39	7 20	7 58	13 02	29	2 31	76		
6	268	39.4	-22	35.9	153	03.8 ¹¹¹	+11	11.5 ¹¹⁴	45	6 28	7 05	7 38	13 12	33	2 22	72		
7	283	39.1		35.6	167	33.7 ¹⁰⁹		22.9 ¹¹⁴	40	18	6 52	22	20 37		15	68		
8	298	38.9		35.4	182	03.5 ¹⁰⁸		34.3 ¹¹⁴	35	09	41	7 09	28 39		09	65		
9	313	38.6		35.1	196	33.3 ¹⁰⁸		45.6 ¹¹³	30	6 01	31	6 57	34 42		2 04	62		
10	328	38.3		34.8	211	03.0 ¹⁰⁷	+11	56.9 ¹¹³	20	5 45	6 12	36	45 47		1 54	59		
11	343	38.0	-22	34.5	225	32.5 ¹⁰⁵	+12	08.1 ¹¹²	10 N	5 30	5 56	6 19	13 55	50	1 46	55		
12	358	37.7	-22	34.2	240	02.0 ¹⁰⁵	+12	19.3 ¹¹²	0	5 13	5 39	6 02	14 05	53	1 39	50		
13	13	37.5		33.9	254	31.4 ¹⁰⁴		30.4 ¹¹¹	10 S	4 55	22	5 45	14 57		31	47		
14	28	37.2		33.6	269	00.7 ¹⁰³		41.5 ¹¹¹	20	33	5 02	27	24 61		23	43		
15	43	36.9		33.3	283	29.8 ¹⁰¹	+12	52.5 ¹¹⁰	30	4 05	4 38	5 05	36 64		14	39		
16	58	36.6		33.0	297	58.9 ¹⁰¹	+13	03.5 ¹¹⁰	35	3 47	24	4 53	43 67		08	37		
17	73	36.4	-22	32.8	312	27.9 ¹⁰⁰	+13	14.4 ¹⁰⁹	40	3 25	4 06	4 39	14 51	69	1 02	34		
18	88	36.1	-22	32.5	326	56.8 ⁹⁹	+13	25.3 ¹⁰⁹	45	2 56	3 44	4 21	15 00	73	0 55	31		
19	103	35.8		32.2	341	25.6 ⁹⁸		36.1 ¹⁰⁸	50	2 14	16	4 00	11 77		47	27		
20	118	35.5		31.9	355	54.3 ⁹⁷		46.8 ¹⁰⁷	52	1 49	3 02	3 49	16 79		43	25		
21	133	35.3		31.6	10	22.8 ⁹⁵	+13	57.5 ¹⁰⁷	54	1 13	2 45	38	22 81		39	22		
22	148	35.0		31.3	24	51.3 ⁹⁵	+14	08.1 ¹⁰⁶	56	** **	2 25	24	28 84		34	20		
23	163	34.7		31.0	39	19.7 ⁹⁴		18.7 ¹⁰⁶	58	** **	1 59	3 09	35 88		29	17		
24	178	34.4	-22	30.7	53	48.0 ⁹³	+14	29.1 ¹⁰⁴	60 S	** **	1 19	2 50	15 43	92	0 23	15		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 58 ^m 6		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 7 ^h 22 ^m		Mag: -2.7 PMG: 20 ^h 58 ^m		Mag: -0.1 PMG: 20 ^h 28 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	104	39.2	130	49.0	-12	10.0	249	18.9	-12	45.5
1	119	41.7	145	48.9		08.9	264	19.9		46.0
2	134	44.1	160	48.9		07.8	279	21.0		46.5
3	149	46.6	175	48.8		06.6	294	22.0		47.0
4	164	49.0	190	48.7		05.5	309	23.1		47.5
5	179	51.5	205	48.7	-12	04.4	324	24.1	-12	47.9
6	194	54.0	220	48.6	-12	03.2	339	25.2	-12	48.4
7	209	56.4	235	48.5		02.1	354	26.3		48.9
8	224	58.9	250	48.5	-12	00.9	9	27.3		49.4
9	240	01.4	265	48.4	-11	59.8	24	28.4		49.9
10	255	03.8	280	48.3		58.7	39	29.4		50.3
11	270	06.3	295	48.3	-11	57.5	54	30.5	-12	50.8
12	285	08.8	310	48.2	-11	56.4	69	31.5	-12	51.3
13	300	11.2	325	48.2		55.3	84	32.6		51.8
14	315	13.7	340	48.1		54.1	99	33.7		52.2
15	330	16.2	355	48.0		53.0	114	34.7		52.7
16	345	18.6	10	48.0		51.8	129	35.8		53.2
17	0	21.1	25	47.9	-11	50.7	144	36.8	-12	53.7
18	15	23.5	40	47.9	-11	49.6	159	37.9	-12	54.1
19	30	26.0	55	47.8		48.4	174	39.0		54.6
20	45	28.5	70	47.8		47.3	189	40.0		55.1
21	60	30.9	85	47.7		46.1	204	41.1		55.6
22	75	33.4	100	47.7		45.0	219	42.1		56.0
23	90	35.9	115	47.6		43.9	234	43.2		56.5
24	105	38.3	130	47.6	-11	42.7	249	44.2	-12	57.0
Dif	—		-1 +11		+11		-5		+26 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: 11 ^d 3 PHE { SD: 16:0 PMG: 21 ^h 11 ^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	178	34.4	-22	30.7	53	48.0	+14 29.1	60 N	15 13	16 09	17 05	12 49 25	4 26 91	
1	193	34.2		30.4	68	16.1	91 39.6 ¹⁰⁵	58	29	20	11	13 00 28	16 88	
2	208	33.9		30.1	82	44.2	91 +14 49.9 ¹⁰³	56	43	29	18	09 31	07 85	
3	223	33.6		29.8	97	12.2	90 +15 00.2 ¹⁰³	54	15 55	38	23	17 34	4 00 82	
4	238	33.3		29.5	111	40.0	88 10.4 ¹⁰²	52	16 05	45	29	25 35	3 53 80	
5	253	33.1	-22	29.2	126	07.8	88 +15 20.5 ¹⁰¹	50	16 15	16 52	17 33	13 31 38	3 47 78	
6	268	32.8	-22	28.9	140	35.4	86 +15 30.6 ¹⁰¹	45	16 34	17 07	17 44	13 45 42	3 34 74	
7	283	32.5		28.6	155	03.0	86 40.6 ¹⁰⁰	40	16 50	20	17 54	13 57 44	23 71	
8	298	32.2		28.3	169	30.4	84 +15 50.5 ⁹⁹	35	17 03	31	18 03	14 07 47	14 68	
9	313	32.0		28.0	183	57.7	83 +16 00.3 ⁹⁸	30	15	41	11	16 49	3 06 66	
10	328	31.7		27.7	198	24.9	82 10.1 ⁹⁸	20	35	17 59	27	32 52	2 53 61	
11	343	31.4	-22	27.4	212	52.0	81 +16 19.7 ⁹⁶	10 N	17 53	18 16	18 42	14 45 55	2 41 58	
12	358	31.2	-22	27.1	227	19.0	80 +16 29.3 ⁹⁶	0	18 10	18 32	18 58	14 58 58	2 29 56	
13	13	30.9		26.8	241	45.9	79 38.8 ⁹⁵	10 S	26	18 49	19 16	15 11 60	18 53	
14	28	30.6		26.5	256	12.7	78 48.2 ⁹⁴	20	18 44	19 09	19 38	25 63	2 06 49	
15	43	30.3		26.1	270	39.3	76 +16 57.5 ⁹³	30	19 05	33	20 05	40 67	1 53 45	
16	58	30.1		25.8	285	05.9	76 +17 06.7 ⁹²	35	18	19 47	23	15 50 69	45 43	
17	73	29.8	-22	25.5	299	32.4	75 +17 15.8 ⁹¹	40	19 32	20 04	20 45	16 00 72	1 36 40	
18	88	29.5	-22	25.2	313	58.7	73 +17 24.9 ⁹¹	45	19 49	20 26	21 14	16 13 74	1 26 37	
19	103	29.3		24.9	328	24.9	72 33.8 ⁸⁹	50	20 10	20 53	21 55	28 78	14 32	
20	118	29.0		24.6	342	51.1	72 42.6 ⁸⁸	52	20	21 07	22 19	35 80	08 31	
21	133	28.7		24.3	357	17.1	70 +17 51.4 ⁸⁸	54	32	24	22 53	43 83	1 01 29	
22	148	28.4		24.0	11	43.0	69 +18 00.0 ⁸⁶	56	20 45	21 44	** ** *	16 52 85	0 54 27	
23	163	28.2		23.6	26	08.8	68 +18 08.6 ⁸⁶	58	21 00	22 09	** ** *	17 03 87	46 24	
24	178	27.9	-22	23.3	40	34.4	66 +18 17.0 ⁸⁴	60 S	21 19	22 46	** ** *	17 15 91	0 38 19	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 54 ^m 7		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 7 ^h 21 ^m		Mag: -2.7 PMG: 20 ^h 53 ^m		Mag: -0.1 PMG: 20 ^h 24 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	105	38.3	130	47.6	249	44.2	45	44.8	53	03.1				
1	120	40.8	145	47.5	264	45.3	60	47.4	68	05.7				
2	135	43.3	160	47.5	279	46.4	75	50.0	83	08.3				
3	150	45.7	175	47.4	294	47.4	90	52.7	98	10.8				
4	165	48.2	190	47.4	309	48.5	105	55.3	113	13.4				
5	180	50.7	205	47.3	324	49.5	120	57.9	128	15.9				
6	195	53.1	220	47.3	339	50.6	136	00.6	143	18.5				
7	210	55.6	235	47.2	354	51.6	151	03.2	158	21.0				
8	225	58.0	250	47.2	369	52.7	166	05.8	173	23.6				
9	241	00.5	265	47.2	384	53.8	181	08.5	188	26.1				
10	256	03.0	280	47.1	399	54.8	196	11.1	203	28.7				
11	271	05.4	295	47.1	414	55.9	211	13.7	218	31.2				
12	286	07.9	310	47.0	429	56.9	226	16.4	233	33.8				
13	301	10.4	325	47.0	444	58.0	241	19.0	248	36.3				
14	316	12.8	340	47.0	459	59.1	256	21.6	263	38.9				
15	331	15.3	355	46.9	474	00.1	271	24.3	278	41.5				
16	346	17.8	370	46.9	489	01.2	286	26.9	293	44.0				
17	1	20.2	25	46.9	504	02.2	301	29.5	308	46.6				
18	16	22.7	40	46.8	519	03.3	316	32.1	323	49.1				
19	31	25.1	55	46.8	534	04.3	331	34.8	338	51.7				
20	46	27.6	70	46.8	549	05.4	346	37.4	353	54.2				
21	61	30.1	85	46.7	564	06.5	1	40.0	8	56.8				
22	76	32.5	100	46.7	579	07.5	16	42.7	23	59.3				
23	91	35.0	115	46.7	594	08.6	31	45.3	39	01.9				
24	106	37.5	130	46.6	609	09.6	46	47.9	54	04.4				
Dif	—		0		+11		+26		+26					

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: 12 ^d 3 PHE { SD: 16/2 PMG: 22 ^h 10 ^m 4 ^h : 59/8 12 ^h : 60/1 20 ^h : 60/4 R°: 63 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	27.9	-22	23.3	40	34.4	+18	17.0	83	58	60 N	7 07	8 03	8 58	13 14	39	5 57	88			
1	193	27.6		23.0	55	00.0		25.3	83	58		7 00	7 52	42		28	42	44	84		
2	208	27.4		22.7	69	25.5		33.5	82	56		6 54	42	28		40	44	32	82		
3	223	27.1		22.4	83	50.9		41.6	81	54		49	34	17		13	51	46	22	80	
4	238	26.8		22.1	98	16.1		49.6	80	52		43	26	8 06		14	00	48	13	78	
5	253	26.6	-22	21.7	112	41.3	+18	57.5	79	50		6 39	7 20	7 57		14	09	48	5 05	77	
6	268	26.3	-22	21.4	127	06.3	+19	05.3	78	45		6 28	7 04	7 38		14	27	51	4 48	74	
7	283	26.0		21.1	141	31.2		12.9	76	40		18	6 52	22		41	54	34	71		
8	298	25.8		20.8	155	56.1		20.5	76	35		09	41	7 09		14	54	55	22	69	
9	313	25.5		20.5	170	20.8		27.9	74	30		6 01	31	6 57		15	05	56	4 12	68	
10	328	25.2		20.1	184	45.4		35.2	73	20		5 46	6 13	37		24	58	3 54	65		
11	343	25.0	-22	19.8	199	09.9	+19	42.3	71	10 N		5 30	5 57	6 19		15	40	61	3 39	62	
12	358	24.7	-22	19.5	213	34.3	+19	49.4	71	0		5 14	5 40	6 03		15	56	62	3 25	60	
13	13	24.4		19.2	227	58.7	+19	56.3	69	10 S		4 56	23	5 46		16	11	64	3 11	57	
14	28	24.2		18.8	242	22.9	+20	03.1	68	20		35	5 04	28		28	66	2 55	56		
15	43	23.9		18.5	256	47.0		09.7	66	30		4 07	4 40	5 07		47	68	38	52		
16	58	23.6		18.2	271	11.0		16.3	66	35		3 49	25	4 55		16	59	69	28	50	
17	73	23.4	-22	17.9	285	34.9	+20	22.7	64	40		3 27	4 08	4 40		17	12	70	2 16	49	
18	88	23.1	-22	17.5	299	58.7	+20	28.9	62	45		2 59	3 47	4 23		17	27	72	2 03	46	
19	103	22.8		17.2	314	22.4		35.0	61	50		2 17	19	4 02		46	75	1 46	43		
20	118	22.6		16.9	328	46.1		41.0	60	52		1 54	3 05	3 52		17	55	76	39	41	
21	133	22.3		16.5	343	09.6		46.9	59	54		1 19	2 49	41		18	06	76	30	39	
22	148	22.0		16.2	357	33.0		52.6	57	56		** ** *	29	28		17	78	21	36		
23	163	21.8		15.9	11	56.4	+20	58.2	56	58		** ** *	2 03	3 12		30	81	1 10	34		
24	178	21.5	-22	15.5	26	19.6	+21	03.6	54	60 S		** ** *	1 26	2 54		18	46	83	0 57	31	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 50 ^m 7			Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 7 ^h 19 ^m			Mag: -2.7 PMG: 20 ^h 49 ^m			Mag: 0.0 PMG: 20 ^h 20 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	106	37.5	130	46.6	-11	15.2	250	09.6	-13	08.3	46	47.9	+19	44.7	54	04.4	+16	45.3
1	121	39.9	145	46.6		14.0	265	10.7		08.8	61	50.5		44.7	69	07.0		45.2
2	136	42.4	160	46.6		12.9	280	11.7		09.3	76	53.2		44.7	84	09.5		45.2
3	151	44.9	175	46.6		11.7	295	12.8		09.8	91	55.8		44.6	99	12.1		45.2
4	166	47.3	190	46.5		10.6	310	13.9		10.2	106	58.4		44.6	114	14.6		45.2
5	181	49.8	205	46.5	-11	09.4	325	14.9	-13	10.7	122	01.0	+19	44.6	129	17.2	+16	45.2
6	196	52.3	220	46.5	-11	08.3	340	16.0	-13	11.2	137	03.7	+19	44.6	144	19.7	+16	45.2
7	211	54.7	235	46.5		07.1	355	17.0		11.6	152	06.3		44.6	159	22.3		45.2
8	226	57.2	250	46.5		06.0	10	18.1		12.1	167	08.9		44.5	174	24.8		45.2
9	241	59.6	265	46.4		04.8	25	19.2		12.6	182	11.5		44.5	189	27.4		45.2
10	257	02.1	280	46.4		03.7	40	20.2		13.1	197	14.2		44.5	204	29.9		45.2
11	272	04.6	295	46.4	-11	02.5	55	21.3	-13	13.5	212	16.8	+19	44.5	219	32.5	+16	45.2
12	287	07.0	310	46.4	-11	01.4	70	22.3	-13	14.0	227	19.4	+19	44.5	234	35.0	+16	45.1
13	302	09.5	325	46.4	-11	00.2	85	23.4		14.5	242	22.0		44.4	249	37.6		45.1
14	317	12.0	340	46.3	-10	59.0	100	24.4		14.9	257	24.7		44.4	264	40.1		45.1
15	332	14.4	355	46.3		57.9	115	25.5		15.4	272	27.3		44.4	279	42.7		45.1
16	347	16.9	10	46.3		56.7	130	26.6		15.9	287	29.9		44.4	294	45.2		45.1
17	2	19.4	25	46.3	-10	55.6	145	27.6	-13	16.3	302	32.5	+19	44.4	309	47.8	+16	45.1
18	17	21.8	40	46.3	-10	54.4	160	28.7	-13	16.8	317	35.1	+19	44.3	324	50.3	+16	45.1
19	32	24.3	55	46.3		53.3	175	29.7		17.3	332	37.8		44.3	339	52.8		45.1
20	47	26.8	70	46.3		52.1	190	30.8		17.7	347	40.4		44.3	354	55.4		45.1
21	62	29.2	85	46.3		50.9	205	31.8		18.2	2	43.0		44.3	9	57.9		45.1
22	77	31.7	100	46.3		49.8	220	32.9		18.7	17	45.6		44.3	25	00.5		45.1
23	92	34.1	115	46.2		48.6	235	34.0		19.1	32	48.2		44.2	40	03.0		45.0
24	107	36.6	130	46.2	-10	47.5	250	35.0	-13	19.6	47	50.9	+19	44.2	55	05.6	+16	45.0
Dif	—			0 +12			+11 -5			+26 0			0			+25 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: 13 ^d 3 PHE { 4 ^h : 60'6 12 ^h : 60'8 20 ^h : 61'0 R°: 65 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m
0	178	21.5	-22	15.5	26	19.6	+21	03.6	60 N	15 17	16 12	17 07	13 53	59
1	193	21.2		15.2	40	42.8		08.9	58	33	23	14	14 10	60
2	208	21.0		14.9	55	05.9		14.0	56	46	32	20	24	61
3	223	20.7		14.5	69	28.9		19.0	54	15 58	40	26	37	61
4	238	20.4		14.2	83	51.8		23.8	52	16 08	48	31	48	61
5	253	20.2	-22	13.8	98	14.6	+21	28.5	50	16 17	16 55	17 36	14 57	62
6	268	19.9	-22	13.5	112	37.4	+21	33.0	45	16 36	17 10	17 46	15 18	62
7	283	19.7		13.2	127	00.0		37.4	44	16 52	22	17 56	35	63
8	298	19.4		12.8	141	22.6		41.7	35	17 05	33	18 04	15 49	63
9	313	19.1		12.5	155	45.1		45.7	40	17	17 43	12	16 01	64
10	328	18.9		12.2	170	07.6		49.6	39	37	18 00	28	22	64
11	343	18.6	-22	11.8	184	30.0	+21	53.4	38	10 N	17 54	18 17	18 43	64
12	358	18.3	-22	11.5	198	52.3	+21	57.0	36	0	18 10	18 33	18 59	64
13	13	18.1		11.1	213	14.5	+22	00.4	34	10 S	27	18 50	19 17	65
14	28	17.8		10.8	227	36.7		03.7	33	20	18 45	19 09	19 38	64
15	43	17.6		10.4	241	58.8		06.8	31	30	19 06	33	20 05	65
16	58	17.3		10.1	256	20.8		09.8	30	35	18	19 47	23	65
17	73	17.0	-22	09.7	270	42.8	+22	12.6	28	40	19 32	20 04	20 44	65
18	88	16.8	-22	09.4	285	04.7	+22	15.2	26	45	19 49	20 25	21 13	65
19	103	16.5		09.0	299	26.6		17.7	25	50	20 09	20 52	21 53	65
20	118	16.3		08.7	313	48.4		20.0	23	52	19	21 06	22 16	65
21	133	16.0		08.3	328	10.1		22.1	21	54	31	22	22 48	65
22	148	15.7		08.0	342	31.9		24.0	19	56	44	21 41	** **	65
23	163	15.5		07.6	356	53.5		25.8	18	58	20 59	22 06	** **	65
24	178	15.2	-22	07.3	11	15.2	+22	27.5	17	60 S	21 17	22 41	** **	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 46 ^m 8		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 7 ^h 17 ^m		Mag: -2.7 PMG: 20 ^h 45 ^m		Mag: 0.0 PMG: 20 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	107	36.6	130	46.2	-10	47.5	250	35.0	47	50.9
1	122	39.1	145	46.2		46.3	265	36.1	+19	44.2
2	137	41.5	160	46.2		45.2	280	37.1		44.2
3	152	44.0	175	46.2		44.0	295	38.2		44.2
4	167	46.5	190	46.2		42.8	310	39.3		44.2
5	182	48.9	205	46.2	-10	41.7	325	40.3	+19	44.1
6	197	51.4	220	46.2	-10	40.5	340	41.4	+19	44.1
7	212	53.9	235	46.2		39.4	355	42.4		44.1
8	227	56.3	250	46.2		38.2	10	43.5		44.1
9	242	58.8	265	46.2		37.0	25	44.5		44.1
10	258	01.3	280	46.2		35.9	40	45.6		44.0
11	273	03.7	295	46.2	-10	34.7	55	46.7	+19	44.0
12	288	06.2	310	46.2	-10	33.5	70	47.7	+19	44.0
13	303	08.6	325	46.2		32.4	85	48.8		44.0
14	318	11.1	340	46.2		31.2	100	49.8		44.0
15	333	13.6	355	46.2		30.1	115	50.9		43.9
16	348	16.0	10	46.2		28.9	130	51.9		43.9
17	3	18.5	25	46.3	-10	27.7	145	53.0	+19	43.9
18	18	21.0	40	46.3	-10	26.6	160	54.1	+19	43.9
19	33	23.4	55	46.3		25.4	175	55.1		43.9
20	48	25.9	70	46.3		24.2	190	56.2		43.9
21	63	28.4	85	46.3		23.1	205	57.2		43.8
22	78	30.8	100	46.3		21.9	220	58.3		43.8
23	93	33.3	115	46.3		20.7	235	59.4		43.8
24	108	35.8	130	46.3	-10	19.6	251	00.4	+19	43.8
Dif	—		0		+12		+11		-5	
									+26	
									0	
									+25	
									0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 2				Edad: 14 ^d 3 PHE { SD: 16 ^h 6 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	15.2	-22	07.3	11	15.2	+22	27.5	60 N	7	06	8	01	8	56	14	52	
1	193	15.0		06.9	25	36.7		28.9	58	6	59	7	51	40		15	10	
2	208	14.7		06.6	39	58.3		30.2	56		53		41	27		25	77	
3	223	14.5		06.2	54	19.8		31.3	54		48		33	16		38	75	
4	238	14.2		05.9	68	41.3		32.2	52		43		26	8	05	49	75	
5	253	13.9	-22	05.5	83	02.7	+22	33.0	50	6	38	7	19	7	56	15	59	
6	268	13.7	-22	05.2	97	24.1	+22	33.6	45	6	27	7	04	7	37	16	20	
7	283	13.4		04.8	111	45.5		34.0	40		18		6	52	22	38	70	
8	298	13.2		04.5	126	06.8		34.2	35		09		41	7	09	16	52	
9	313	12.9		04.1	140	28.2		34.3	30	6	01		31	6	57	17	05	
10	328	12.7		03.7	154	49.5		34.2	20	5	46	6	13	37	26	67	6	05
11	343	12.4	-22	03.4	169	10.8	+22	33.9	10 N	5	31	5	57	6	20	17	45	
12	358	12.1	-22	03.0	183	32.1	+22	33.4	0	5	15	5	41	6	03	18	02	
13	13	11.9		02.7	197	53.4		32.8	10 S	4	57		24	5	47	20	63	
14	28	11.6		02.3	212	14.6		32.0	20		36		5	05	29	18	38	
15	43	11.4		01.9	226	35.9		31.0	30	4	09	4	42	5	09	19	00	
16	58	11.1		01.6	240	57.1		29.8	35	3	51		27	4	56		13	
17	73	10.9	-22	01.2	255	18.4	+22	28.5	40	3	30	4	10	4	42	19	27	
18	88	10.6	-22	00.8	269	39.7	+22	27.0	45	3	02	3	49	4	26	19	44	
19	103	10.4		00.5	284	00.9		25.3	50	2	21		22	4	05	20	06	
20	118	10.1	-22	00.1	298	22.2		23.4	52	1	58	3	08	3	55	16	52	
21	133	09.8	-21	59.7	312	43.4		21.4	54	1	26	2	52	44		27	51	
22	148	09.6		59.4	327	04.7		19.2	56	**	**		33	31		40	49	
23	163	09.3		59.0	341	26.0		16.8	58	**	**	2	08	3	16	20	56	
24	178	09.1	-21	58.6	355	47.3	+22	14.3	60 S	**	**	1	34	2	58	21	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 42 ^m 9		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 7 ^h 15 ^m		Mag: -2.7 PMG: 20 ^h 41 ^m		Mag: 0.0 PMG: 20 ^h 12 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	108	35.8	130	46.3	-10	19.6	251	00.4	-13	30.8
1	123	38.2	145	46.4		18.4	266	01.5		31.2
2	138	40.7	160	46.4		17.2	281	02.5		31.7
3	153	43.1	175	46.4		16.1	296	03.6		32.2
4	168	45.6	190	46.4		14.9	311	04.6		32.6
5	183	48.1	205	46.4	-10	13.7	326	05.7	-13	33.1
6	198	50.5	220	46.4	-10	12.6	341	06.8	-13	33.6
7	213	53.0	235	46.5		11.4	356	07.8		34.0
8	228	55.5	250	46.5		10.2	11	08.9		34.5
9	243	57.9	265	46.5		09.1	26	09.9		34.9
10	259	00.4	280	46.5		07.9	41	11.0		35.4
11	274	02.9	295	46.6	-10	06.7	56	12.1	-13	35.9
12	289	05.3	310	46.6	-10	05.5	71	13.1	-13	36.3
13	304	07.8	325	46.6		04.4	86	14.2		36.8
14	319	10.3	340	46.6		03.2	101	15.2		37.2
15	334	12.7	355	46.7		02.0	116	16.3		37.7
16	349	15.2	10	46.7	-10	00.9	131	17.3		38.2
17	4	17.6	25	46.7	-9	59.7	146	18.4	-13	38.6
18	19	20.1	40	46.8	-9	58.5	161	19.5	-13	39.1
19	34	22.6	55	46.8		57.4	176	20.5		39.6
20	49	25.0	70	46.8		56.2	191	21.6		40.0
21	64	27.5	85	46.9		55.0	206	22.6		40.5
22	79	30.0	100	46.9		53.8	221	23.7		40.9
23	94	32.4	115	46.9		52.7	236	24.8		41.4
24	109	34.9	130	47.0	-9	51.5	251	25.8	-13	41.8
Dif	—		0		+12		+11		-5	

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: 15 ^d 3 SD: 16:7 PMG: 0 ^h 18 ^m	PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'4 R°: 63 ^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	09.1	-21	58.6	355	47.3	+22	14.3	60 N	15 21	16 15	17 10	16 12 94	9 33 36		
1	193	08.8		58.3	10	08.7	24	11.5	58	36	26	17	28 90	17 39		
2	208	08.6		57.9	24	30.0	23	08.6	56	15 49	35	23	42 87	9 03 42		
3	223	08.3		57.5	38	51.4	24	05.6	54	16 01	43	28	16 53 85	8 51 44		
4	238	08.1		57.1	53	12.8	24	+22	52	11	50	33	17 04 83	41 45		
5	253	07.8	-21	56.8	67	34.3	25	+21	50	16 20	16 57	17 38	17 13 81	8 31 47		
6	268	07.6	-21	56.4	81	55.7	24	+21	45	16 39	17 12	17 48	17 32 78	8 11 50		
7	283	07.3		56.0	96	17.2	25	51.6	40	16 54	24	17 58	17 48 75	7 55 52		
8	298	07.1		55.6	110	38.7	25	47.6	35	17 07	35	18 06	18 02 72	41 54		
9	313	06.8		55.3	125	00.3	26	43.6	30	18	17 44	14	13 71	29 56		
10	328	06.6		54.9	139	21.9	26	39.3	20	38	18 02	29	33 67	7 08 59		
11	343	06.3	-21	54.5	153	43.6	27	+21	10 N	17 55	18 18	18 44	18 50 65	6 50 61		
12	358	06.1	-21	54.1	168	05.3	27	+21	0	18 11	18 34	18 59	19 06 62	6 33 63		
13	13	05.8		53.7	182	27.0	27	25.5	10 S	28	18 50	19 17	23 59	6 16 65		
14	28	05.6		53.4	196	48.8	28	20.6	20	18 45	19 09	19 38	40 56	5 58 67		
15	43	05.3		53.0	211	10.7	29	15.5	30	19 06	33	20 05	19 59 53	37 70		
16	58	05.1		52.6	225	32.6	29	10.3	35	18	19 47	22	20 11 51	24 72		
17	73	04.8	-21	52.2	239	54.5	29	+21	40	19 31	20 03	20 44	20 24 48	5 10 73		
18	88	04.6	-21	51.8	254	16.5	30	+20	45	19 48	20 24	21 11	20 40 45	4 53 75		
19	103	04.3		51.5	268	38.6	31	53.6	50	20 08	20 51	21 51	20 59 41	32 78		
20	118	04.1		51.1	283	00.8	32	47.7	52	18	21 04	22 13	21 08 39	22 80		
21	133	03.8		50.7	297	22.9	31	41.7	54	29	20	22 43	18 37	4 11 81		
22	148	03.6		50.3	311	45.2	33	35.5	56	42	21 39	** **	29 35	3 58 83		
23	163	03.3		49.9	326	07.5	33	29.2	58	20 56	22 02	** **	42 32	43 86		
24	178	03.1	-21	49.5	340	29.9	34	+20	60 S	21 14	22 35	** **	21 57 29	3 25 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 38 ^m 9		Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 7 ^h 14 ^m			Mag: -2.7 PMG: 20 ^h 37 ^m			Mag: 0.0 PMG: 20 ^h 08 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	109	34.9	130	47.0	-9	51.5	251	25.8	-13	41.8	49	56.2	+19	43.4	57	07.6
1	124	37.4	145	47.0		50.3	266	26.9		42.3	64	58.8		43.4	72	10.1
2	139	39.8	160	47.0		49.1	281	27.9		42.8	80	01.4		43.4	87	12.7
3	154	42.3	175	47.1		48.0	296	29.0		43.2	95	04.0		43.3	102	15.2
4	169	44.8	190	47.1		46.8	311	30.0		43.7	110	06.6		43.3	117	17.7
5	184	47.2	205	47.2	-9	45.6	326	31.1	-13	44.1	125	09.2	+19	43.3	132	20.3
6	199	49.7	220	47.2	-9	44.4	341	32.2	-13	44.6	140	11.8	+19	43.3	147	22.8
7	214	52.1	235	47.2		43.3	356	33.2		45.1	155	14.4		43.3	162	25.3
8	229	54.6	250	47.3		42.1	11	34.3		45.5	170	17.0		43.3	177	27.9
9	244	57.1	265	47.3		40.9	26	35.3		46.0	185	19.6		43.2	192	30.4
10	259	59.5	280	47.4		39.7	41	36.4		46.4	200	22.2		43.2	207	32.9
11	275	02.0	295	47.4	-9	38.6	56	37.5	-13	46.9	215	24.8	+19	43.2	222	35.5
12	290	04.5	310	47.5	-9	37.4	71	38.5	-13	47.4	230	27.4	+19	43.2	237	38.0
13	305	06.9	325	47.5		36.2	86	39.6		47.8	245	30.0		43.2	252	40.6
14	320	09.4	340	47.6		35.0	101	40.6		48.3	260	32.6		43.2	267	43.1
15	335	11.9	355	47.6		33.9	116	41.7		48.7	275	35.2		43.2	282	45.6
16	350	14.3	10	47.7		32.7	131	42.7		49.2	290	37.8		43.1	297	48.2
17	5	16.8	25	47.7	-9	31.5	146	43.8	-13	49.6	305	40.3	+19	43.1	312	50.7
18	20	19.2	40	47.8	-9	30.3	161	44.9	-13	50.1	320	42.9	+19	43.1	327	53.2
19	35	21.7	55	47.8		29.1	176	45.9		50.5	335	45.5		43.1	342	55.8
20	50	24.2	70	47.9		28.0	191	47.0		51.0	350	48.1		43.1	357	58.3
21	65	26.6	85	47.9		26.8	206	48.0		51.5	5	50.7		43.1	13	00.8
22	80	29.1	100	48.0		25.6	221	49.1		51.9	20	53.3		43.0	28	03.4
23	95	31.6	115	48.0		24.4	236	50.2		52.4	35	55.9		43.0	43	05.9
24	110	34.0	130	48.1	-9	23.3	251	51.2	-13	52.8	50	58.5	+19	43.0	58	08.4
Dif	—		0		+12		+11		-5		+26		0		+25	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 16 ^d 3 PHE { 4 ^h : 61 ^m 3 12 ^h : 61 ^m 2 20 ^h : 61 ^m 0						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 08 ^m 0			SD: 16:7 PMG: 1 ^h 21 ^m R°: 61 ^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	03.1	-21 49.5	340	29.9	+20 22.7	60 N	7 04	7 59	8 53	17 46	97	10 09	24			
1	193	02.8	49.1	354	52.4	16.1	58	6 58	49	38	17 58	94	9 56	27			
2	208	02.6	48.7	9	14.9	09.3	56	52	40	25	18 09	90	45	30			
3	223	02.4	48.4	23	37.5	+20 02.3	54	47	32	14	18 88		35	33			
4	238	02.1	48.0	38	00.2	+19 55.3	52	42	25	8 04	27 85		26	35			
5	253	01.9	-21 47.6	52	23.0	+19 48.0	50	6 37	7 18	7 55	18 34	83	9 18	37			
6	268	01.6	-21 47.2	66	45.8	+19 40.7	45	6 27	7 04	7 37	18 50	78	9 01	41			
7	283	01.4	46.8	81	08.7	33.2	40	18	6 51	21	19 03	75	8 47	45			
8	298	01.1	46.4	95	31.7	25.5	35	09	41	7 08	14 72		35	47			
9	313	00.9	46.0	109	54.8	17.7	30	6 02	31	6 57	24 69		25	49			
10	328	00.6	45.6	124	18.0	09.8	20	5 47	6 14	37	40 65		8 07	53			
11	343	00.4	-21 45.2	138	41.2	+19 01.8	10 N	5 32	5 58	6 20	19 55	61	7 51	57			
12	358	00.1	-21 44.8	153	04.5	+18 53.6	0	5 16	5 42	6 04	20 08	58	7 36	60			
13	12	59.9	44.4	167	28.0	45.2	10 S	4 59	25	5 48	22 54		21	63			
14	27	59.7	44.0	181	51.5	36.8	20	38	5 06	31	36 50		7 05	67			
15	42	59.4	43.6	196	15.1	28.2	30	4 11	4 43	5 10	20 52	46	6 47	70			
16	57	59.2	43.2	210	38.7	19.5	35	3 53	29	4 58	21 02	43	36	72			
17	72	58.9	-21 42.8	225	02.5	+18 10.7	40	3 32	4 12	4 44	21 12	41	6 23	76			
18	87	58.7	-21 42.4	239	26.4	+18 01.7	45	3 05	3 52	4 28	21 25	37	6 08	79			
19	102	58.4	42.0	253	50.3	+17 52.6	50	2 25	25	4 08	40 33		5 50	83			
20	117	58.2	41.6	268	14.4	43.4	52	2 03	3 12	3 58	47 31		42	85			
21	132	58.0	41.2	282	38.5	34.1	54	1 33	2 56	47	21 55	29	32	87			
22	147	57.7	40.8	297	02.7	24.7	56	0 33	37	34	22 04	26	21	90			
23	162	57.5	40.4	311	27.0	15.2	58	** **	2 14	20	14 23		5 09	93			
24	177	57.2	-21 40.0	325	51.5	+17 05.5	60 S	** **	1 41	3 02	22 26	18	4 54	97			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 35 ^m 0		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.2 PMG: 7 ^h 12 ^m		Mag: -2.7 PMG: 20 ^h 33 ^m		Mag: 0.0 PMG: 20 ^h 04 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	110	34.0	130	48.1	-9	23.3	251	51.2	-13	52.8
1	125	36.5	145	48.2		22.1	266	52.3		53.3
2	140	39.0	160	48.2		20.9	281	53.3		53.7
3	155	41.4	175	48.3		19.7	296	54.4		54.2
4	170	43.9	190	48.3		18.5	311	55.4		54.6
5	185	46.4	205	48.4	-9	17.4	326	56.5	-13	55.1
6	200	48.8	220	48.5	-9	16.2	341	57.6	-13	55.6
7	215	51.3	235	48.5		15.0	356	58.6		56.0
8	230	53.7	250	48.6		13.8	11	59.7		56.5
9	245	56.2	265	48.7		12.6	27	00.7		56.9
10	260	58.7	280	48.7		11.4	42	01.8		57.4
11	276	01.1	295	48.8	-9	10.3	57	02.9	-13	57.8
12	291	03.6	310	48.9	-9	09.1	72	03.9	-13	58.3
13	306	06.1	325	48.9		07.9	87	05.0		58.7
14	321	08.5	340	49.0		06.7	102	06.0		59.2
15	336	11.0	355	49.1		05.5	117	07.1	-13	59.6
16	351	13.5	10	49.1		04.3	132	08.1	-14	00.1
17	6	15.9	25	49.2	-9	03.2	147	09.2	-14	00.5
18	21	18.4	40	49.3	-9	02.0	162	10.3	-14	01.0
19	36	20.9	55	49.4	-9	00.8	177	11.3		01.5
20	51	23.3	70	49.4	-8		192	12.4		01.9
21	66	25.8	85	49.5		58.4	207	13.4		02.4
22	81	28.2	100	49.6		57.2	222	14.5		02.8
23	96	30.7	115	49.7		56.1	237	15.6		03.3
24	111	33.2	130	49.7	-8	54.9	252	16.6	-14	03.7
Dif	—		+1 +12		+11 -5		+26 0		+25 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 17 ^d 3 PHE { 4 ^h : 60:9 12 ^h : 60:7 20 ^h : 60:5										
	PMG: 12 ^h 08 ^m 4			SD: 16:6 PMG: 2 ^h 22 ^m R°: 57 ^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	57.2	-21 40.0	325	51.5	+17 05.5	55	60 N	15 25	16 19	17 14	19 23 96	10 33 16	
1	192	57.0		340	16.0	+16 55.7	98	58	40	29	20	32 91	23 20	
2	207	56.8	39.2	354	40.6	45.9	98	56	15 53	38	26	39 89	15 23	
3	222	56.5	38.8	9	05.3	35.9	100	54	16 04	46	31	46 86	08 25	
4	237	56.3	38.4	23	30.1	25.8	101	52	14	16 53	36	52 83	10 01 28	
5	252	56.0	-21 38.0	37	55.0	+16 15.6	102	50	16 22	17 00	17 40	19 57 81	9 55 30	
6	267	55.8	-21 37.6	52	20.0	+16 05.3	103	45	16 41	17 14	17 50	20 08 77	9 42 34	
7	282	55.6	37.1	66	45.1	+15 54.9	104	40	16 56	26	17 59	18 73	32 37	
8	297	55.3	36.7	81	10.3	44.4	105	35	17 09	36	18 08	26 69	22 41	
9	312	55.1	36.3	95	35.5	33.8	106	30	20	17 46	15	33 67	14 44	
10	327	54.8	35.9	110	00.9	23.2	106	20	39	18 03	30	45 62	9 00 48	
11	342	54.6	-21 35.5	124	26.4	+15 12.4	108	10 N	17 56	18 19	18 45	20 56 57	8 48 52	
12	357	54.4	-21 35.1	138	52.0	+15 01.5	109	0	18 12	18 34	19 00	21 06 53	8 36 56	
13	12	54.1	34.7	153	17.7	+14 50.6	109	10 S	28	18 51	17	16 49	24 60	
14	27	53.9	34.3	167	43.4	39.5	111	20	18 45	19 10	19 38	26 46	8 12 63	
15	42	53.7	33.8	182	09.3	28.4	111	30	19 05	32	20 05	38 41	7 57 68	
16	57	53.4	33.4	196	35.3	17.2	112	35	17	19 46	22	45 38	48 71	
17	72	53.2	-21 33.0	211	01.3	+14 05.9	113	40	19 31	20 03	20 43	21 53 35	7 39 74	
18	87	52.9	-21 32.6	225	27.5	+13 54.5	114	45	19 47	20 23	21 10	22 02 31	7 27 78	
19	102	52.7	32.2	239	53.8	43.1	114	50	20 07	20 49	21 48	13 27	13 83	
20	117	52.5	31.7	254	20.1	31.6	115	52	17	21 02	22 09	18 25	7 07 84	
21	132	52.2	31.3	268	46.6	20.0	116	54	27	17	22 38	24 22	6 59 88	
22	147	52.0	30.9	283	13.1	+13 08.3	117	56	40	36	23 27	30 20	51 90	
23	162	51.8	30.5	297	39.8	+12 56.6	117	58	20 54	21 58	** **	37 17	42 93	
24	177	51.5	-21 30.1	312	06.5	+12 44.8	118	60 S	21 11	22 29	** **	22 44 14	6 31 97	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 31 ^m 1		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.2 PMG: 7 ^h 10 ^m		Mag: -2.7 PMG: 20 ^h 28 ^m		Mag: 0.0 PMG: 20 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	111	33.2	130	49.7	-8 54.9	252	16.6	-14 03.7	52	00.7	+19 42.7	59 09.2	+16 44.5	
1	126	35.6	145	49.8	53.7	267	17.7	04.2	67	03.2	42.7	74 11.7	44.5	
2	141	38.1	160	49.9	52.5	282	18.7	04.6	82	05.8	42.7	89 14.2	44.5	
3	156	40.6	175	50.0	51.3	297	19.8	05.1	97	08.4	42.7	104 16.7	44.5	
4	171	43.0	190	50.1	50.1	312	20.8	05.5	112	11.0	42.6	119 19.3	44.5	
5	186	45.5	205	50.2	-8 48.9	327	21.9	-14 06.0	127	13.6	+19 42.6	134 21.8	+16 44.5	
6	201	48.0	220	50.2	-8 47.8	342	23.0	-14 06.4	142	16.2	+19 42.6	149 24.3	+16 44.5	
7	216	50.4	235	50.3	46.6	357	24.0	06.9	157	18.7	42.6	164 26.9	44.5	
8	231	52.9	250	50.4	45.4	12	25.1	07.3	172	21.3	42.6	179 29.4	44.5	
9	246	55.4	265	50.5	44.2	27	26.1	07.8	187	23.9	42.6	194 31.9	44.4	
10	261	57.8	280	50.6	43.0	42	27.2	08.2	202	26.5	42.6	209 34.4	44.4	
11	277	00.3	295	50.7	-8 41.8	57	28.3	-14 08.7	217	29.1	+19 42.6	224 37.0	+16 44.4	
12	292	02.7	310	50.8	-8 40.6	72	29.3	-14 09.1	232	31.6	+19 42.5	239 39.5	+16 44.4	
13	307	05.2	325	50.9	39.4	87	30.4	09.6	247	34.2	42.5	254 42.0	44.4	
14	322	07.7	340	51.0	38.3	102	31.4	10.0	262	36.8	42.5	269 44.5	44.4	
15	337	10.1	355	51.0	37.1	117	32.5	10.5	277	39.4	42.5	284 47.1	44.4	
16	352	12.6	10 51.1	35.9	35.9	132	33.6	10.9	292	42.0	42.5	299 49.6	44.4	
17	7	15.1	25 51.2	-8 34.7	147	34.6	-14 11.4	307	44.5	+19 42.5	314 52.1	+16 44.4		
18	22	17.5	40 51.3	-8 33.5	162	35.7	-14 11.8	322	47.1	+19 42.5	329 54.6	+16 44.4		
19	37	20.0	55 51.4	32.3	177	36.7	12.3	337	49.7	42.5	344 57.2	44.4		
20	52	22.5	70 51.5	31.1	192	37.8	12.7	352	52.3	42.5	359 59.7	44.4		
21	67	24.9	85 51.6	29.9	207	38.8	13.2	7 54.9	42.4	15 02.2	44.4			
22	82	27.4	100 51.7	28.7	222	39.9	13.6	22 57.4	42.4	30 04.7	44.4			
23	97	29.8	115 51.8	27.6	237	41.0	14.0	38 00.0	42.4	45 07.3	44.4			
24	112	32.3	130 51.9	-8 26.4	252	42.0	-14 14.5	53 02.6	+19 42.4	60 09.8	+16 44.4			
Dif	—		+1	+12	+11	-4		+26	0		+25	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: 18 ^d 3 PHE { SD: 16:4 PMG: 3 ^h 19 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	51.5	-21	30.1	312	06.5	+12	44.8	60 N	7 03	7 57	8 51	20 59	91	10 49	13	
1	192	51.3		29.6	326	33.3		32.9	58	6 57	47	36	21 03	89	43	16	
2	207	51.1		29.2	341	00.3		21.0	56	51	38	23	08 85		38	18	
3	222	50.8		28.8	355	27.3		+12 09.0	54	46	31	12	12 82		33	22	
4	237	50.6		28.4	9	54.4		+11 56.9	52	41	23	8 03	15 80		29	23	
5	252	50.4	-21	27.9	24	21.6		+11 44.8	50	6 36	7 17	7 54	21 18	78	10 25	25	
6	267	50.1	-21	27.5	38	48.9		+11 32.6	45	6 26	7 03	7 36	21 25	73	10 16	30	
7	282	49.9		27.1	53	16.3		20.4	40	17	6 51	21	31 69		09	33	
8	297	49.7		26.7	67	43.8		+11 08.1	35	09	40	7 08	35 67		10 03	36	
9	312	49.4		26.2	82	11.3		+10 55.7	30	6 02	31	6 57	40 63		9 58	39	
10	327	49.2		25.8	96	39.0		43.3	20	5 47	6 14	38	47 59		48	44	
11	342	49.0	-21	25.4	111	06.7		+10 30.9	10 N	5 32	5 58	6 21	21 53	55	9 40	48	
12	357	48.7	-21	24.9	125	34.6		+10 18.4	0	5 17	5 43	6 05	21 59	51	9 32	52	
13	12	48.5		24.5	140	02.5		+10 05.9	10 S	5 00	26	5 49	22 05	47	24	56	
14	27	48.3		24.1	154	30.5		+9 53.3	20	4 39	5 08	32	12 42		15	60	
15	42	48.0		23.6	168	58.6		40.7	30	4 13	4 45	12	19 37		9 05	65	
16	57	47.8		23.2	183	26.8		28.0	35	3 56	31	5 00	23 35		8 59	68	
17	72	47.6	-21	22.8	197	55.1		+9 15.3	40	3 35	4 15	4 47	22 28	31	8 53	71	
18	87	47.4	-21	22.3	212	23.4		+9 02.5	45	3 08	3 55	4 30	22 33	28	8 45	75	
19	102	47.1		21.9	226	51.9		+8 49.8	50	2 30	28	10	40 23		36	80	
20	117	46.9		21.5	241	20.4		36.9	52	2 08	15	4 01	43 21		31	82	
21	132	46.7		21.0	255	49.0		24.1	54	1 40	3 00	3 50	46 20		27	84	
22	147	46.4		20.6	270	17.6		+8 11.2	56	0 50	2 42	38	50 17		21	87	
23	162	46.2		20.1	284	46.4		+7 58.3	58	** **	2 19	24	54 14		15	91	
24	177	46.0	-21	19.7	299	15.2		+7 45.4	60 S	** **	1 48	3 07	22 58	12	8 08	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 27 ^m 1		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.2 PMG: 7 ^h 09 ^m		Mag: -2.7 PMG: 20 ^h 24 ^m		Mag: 0.0 PMG: 19 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	112	32.3	130	51.9	-8	26.4	252	42.0	-14	14.5	53	02.6	+19	42.4	60	09.8	+16	44.4
1	127	34.8	145	52.0		25.2	267	43.1		14.9	68	05.2		42.4	75	12.3		44.4
2	142	37.2	160	52.1		24.0	282	44.1		15.4	83	07.7		42.4	90	14.8		44.4
3	157	39.7	175	52.2		22.8	297	45.2		15.8	98	10.3		42.4	105	17.4		44.4
4	172	42.2	190	52.3		21.6	312	46.3		16.3	113	12.9		42.4	120	19.9		44.4
5	187	44.6	205	52.4	-8	20.4	327	47.3	-14	16.7	128	15.5	+19	42.4	135	22.4	+16	44.4
6	202	47.1	220	52.5	-8	19.2	342	48.4	-14	17.2	143	18.0	+19	42.3	150	24.9	+16	44.4
7	217	49.6	235	52.6		18.0	357	49.4		17.6	158	20.6		42.3	165	27.4		44.4
8	232	52.0	250	52.8		16.8	12	50.5		18.1	173	23.2		42.3	180	30.0		44.4
9	247	54.5	265	52.9		15.6	27	51.6		18.5	188	25.8		42.3	195	32.5		44.4
10	262	57.0	280	53.0		14.4	42	52.6		19.0	203	28.3		42.3	210	35.0		44.4
11	277	59.4	295	53.1	-8	13.3	57	53.7	-14	19.4	218	30.9	+19	42.3	225	37.5	+16	44.4
12	293	01.9	310	53.2	-8	12.1	72	54.7	-14	19.9	233	33.5	+19	42.3	240	40.1	+16	44.4
13	308	04.3	325	53.3		10.9	87	55.8		20.3	248	36.0		42.3	255	42.6		44.4
14	323	06.8	340	53.4		09.7	102	56.8		20.7	263	38.6		42.3	270	45.1		44.4
15	338	09.3	355	53.5		08.5	117	57.9		21.2	278	41.2		42.2	285	47.6		44.4
16	353	11.7	10	53.7		07.3	132	59.0		21.6	293	43.8		42.2	300	50.1		44.4
17	8	14.2	25	53.8	-8	06.1	148	00.0	-14	22.1	308	46.3	+19	42.2	315	52.7	+16	44.4
18	23	16.7	40	53.9	-8	04.9	163	01.1	-14	22.5	323	48.9	+19	42.2	330	55.2	+16	44.4
19	38	19.1	55	54.0		03.7	178	02.1		23.0	338	51.5		42.2	345	57.7		44.4
20	53	21.6	70	54.1		02.5	193	03.2		23.4	353	54.0		42.2	1	00.2		44.4
21	68	24.1	85	54.2		01.3	208	04.3		23.9	8	56.6		42.2	16	02.7		44.4
22	83	26.5	100	54.4	-8	00.1	223	05.3		24.3	23	59.2		42.2	31	05.3		44.4
23	98	29.0	115	54.5	-7	58.9	238	06.4		24.7	39	01.7		42.2	46	07.8		44.4
24	113	31.5	130	54.6	-7	57.7	253	07.4	-14	25.2	54	04.3	+19	42.2	61	10.3	+16	44.4
Dif	—		+1		+12		+11		-4		+26		0		+25		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3		Edad: 19 ^d 3 PHE { 4 ^h : 59:4 12 ^h : 59:1 20 ^h : 58:8						Civil			Náutico		Hora R°	
	PMG: 12 ^h 09 ^m 1		PMG: 4 ^h 12 ^m R°: 49 ^m												
	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	h m m
0	177	46.0	-21 19.7	299	15.2	+7 45.4	60 N	15 30	16 23	17 17	22 30 88	11 02 10			
1	192	45.8		313	44.2 ¹⁰⁰	32.4 ¹³⁰	58	44	33	23	32 84	10 59 14			
2	207	45.5		328	13.1 ⁹⁹	19.4 ¹³⁰	56	15 56	41	29	33 82	56 17			
3	222	45.3		342	42.2 ¹⁰¹	+7 06.4 ¹³⁰	54	16 07	49	34	34 79	54 19			
4	237	45.1		357	11.4 ¹⁰²	+6 53.3 ¹³¹	52	17	16 56	38	35 77	52 21			
5	252	44.8	-21 17.5	11	40.6 ¹⁰²	+6 40.3 ¹³⁰	50	16 25	17 02	17 43	22 36 75	10 50 23			
6	267	44.6	-21 17.1	26	09.9 ¹⁰³	+6 27.2 ¹³¹	45	16 43	17 16	17 53	22 38 71	10 46 27			
7	282	44.4		40	39.2 ¹⁰³	14.1 ¹³¹	40	16 58	28	18 01	40 67	42 31			
8	297	44.2		55	08.6 ¹⁰⁴	+6 01.0 ¹³¹	35	17 11	38	09	42 64	39 34			
9	312	43.9		69	38.2 ¹⁰⁶	+5 47.8 ¹³²	30	22	17 48	17	43 61	37 36			
10	327	43.7		84	07.7 ¹⁰⁵	34.7 ¹³¹	20	41	18 04	31	46 56	32 41			
11	342	43.5	-21 14.8	98	37.4 ¹⁰⁷	+5 21.5 ¹³²	10 N	17 57	18 20	18 46	22 48 52	10 28 45			
12	357	43.3	-21 14.4	113	07.1 ¹⁰⁷	+5 08.4 ¹³¹	0	18 13	18 35	19 01	22 50 48	10 24 49			
13	12	43.0		127	36.8 ¹⁰⁷	+4 55.2 ¹³²	10 S	29	18 51	18	52 44	20 53			
14	27	42.8		142	06.7 ¹⁰⁹	42.0 ¹³²	20	18 46	19 10	19 38	54 40	15 58			
15	42	42.6		156	36.6 ¹⁰⁹	28.8 ¹³²	30	19 05	32	20 04	56 35	10 63			
16	57	42.4		171	06.5 ¹⁰⁹	15.6 ¹³²	35	17	19 46	21	58 32	07 66			
17	72	42.1	-21 12.1	185	36.6 ¹¹¹	+4 02.4 ¹³²	40	19 30	20 02	20 41	22 59 30	10 04 68			
18	87	41.9	-21 11.7	200	06.7 ¹¹¹	+3 49.2 ¹³²	45	19 46	20 22	21 08	23 01 26	10 00 72			
19	102	41.7		214	36.8 ¹¹¹	36.0 ¹³²	50	20 06	20 47	21 45	03 22	9 56 76			
20	117	41.5		229	07.0 ¹¹²	22.7 ¹³³	52	15	21 00	22 05	04 20	53 79			
21	132	41.3		243	37.3 ¹¹³	+3 09.5 ¹³²	54	25	15	22 32	06 17	51 81			
22	147	41.0		258	07.6 ¹¹³	+2 56.3 ¹³²	56	37	32	23 15	07 15	48 84			
23	162	40.8		272	38.0 ¹¹⁴	43.1 ¹³²	58	20 51	21 54	** **	08 13	46 86			
24	177	40.6	-21 08.9	287	08.4 ¹¹⁴	+2 29.9 ¹³²	60 S	21 08	22 23	** **	23 10 10	9 42 90			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO	
	PMG: 16 ^h 23 ^m 2		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.2 PMG: 7 ^h 07 ^m		Mag: -2.7 PMG: 20 ^h 20 ^m			Mag: 0.0 PMG: 19 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	113	31.5	130	54.6	-7 57.7	253 07.4	-14 25.2	54 04.3	+19 42.2	61 10.3	+16 44.4
1	128	33.9	145	54.7	56.5	268 08.5	25.6	69 06.9	42.2	76 12.8	44.4
2	143	36.4	160	54.9	55.3	283 09.6	26.1	84 09.4	42.1	91 15.3	44.4
3	158	38.8	175	55.0	54.1	298 10.6	26.5	99 12.0	42.1	106 17.9	44.4
4	173	41.3	190	55.1	53.0	313 11.7	27.0	114 14.6	42.1	121 20.4	44.4
5	188	43.8	205	55.2	-7 51.8	328 12.7	-14 27.4	129 17.1	+19 42.1	136 22.9	+16 44.4
6	203	46.2	220	55.4	-7 50.6	343 13.8	-14 27.8	144 19.7	+19 42.1	151 25.4	+16 44.4
7	218	48.7	235	55.5	49.4	358 14.8	28.3	159 22.3	42.1	166 27.9	44.4
8	233	51.2	250	55.6	48.2	13 15.9	28.7	174 24.8	42.1	181 30.5	44.4
9	248	53.6	265	55.7	47.0	28 17.0	29.2	189 27.4	42.1	196 33.0	44.4
10	263	56.1	280	55.9	45.8	43 18.0	29.6	204 30.0	42.1	211 35.5	44.3
11	278	58.6	295	56.0	-7 44.6	58 19.1	-14 30.0	219 32.5	+19 42.1	226 38.0	+16 44.3
12	294	01.0	310	56.1	-7 43.4	73 20.1	-14 30.5	234 35.1	+19 42.1	241 40.5	+16 44.3
13	309	03.5	325	56.3	42.2	88 21.2	30.9	249 37.7	42.0	256 43.0	44.3
14	324	05.9	340	56.4	41.0	103 22.3	31.4	264 40.2	42.0	271 45.6	44.3
15	339	08.4	355	56.5	39.8	118 23.3	31.8	279 42.8	42.0	286 48.1	44.3
16	354	10.9	10 56.7	38.6	133 24.4	32.3	294 45.3	42.0	301 50.6	44.3	
17	9	13.3	25 56.8	-7 37.4	148 25.4	-14 32.7	309 47.9	+19 42.0	316 53.1	+16 44.3	
18	24	15.8	40 57.0	-7 36.2	163 26.5	-14 33.1	324 50.5	+19 42.0	331 55.6	+16 44.3	
19	39	18.3	55 57.1	35.0	178 27.6	33.6	339 53.0	42.0	346 58.1	44.3	
20	54	20.7	70 57.2	33.8	193 28.6	34.0	354 55.6	42.0	2 00.6	44.3	
21	69	23.2	85 57.4	32.6	208 29.7	34.5	9 58.2	42.0	17 03.2	44.3	
22	84	25.7	100 57.5	31.4	223 30.7	34.9	25 00.7	42.0	32 05.7	44.3	
23	99	28.1	115 57.7	30.2	238 31.8	35.3	40 03.3	42.0	47 08.2	44.3	
24	114	30.6	130 57.8	-7 29.0	253 32.9	-14 35.8	55 05.8	+19 42.0	62 10.7	+16 44.3	
Dif	—		+1	+12	+11	-4	+26	0	+25		

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: 20 ^d 3 PHE { SD: 16'0 PMG: 5 ^h 01 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	177	40.6	-21	08.9	287	08.4	+2 29.9	60 N	7 01	7 55	8 48	23 58	85	11 12 11
1	192	40.4		08.5	301	38.9 ¹¹⁵	16.7 ¹³²	58	6 55	45	33	56	82	13 13
2	207	40.1		08.0	316	09.4 ¹¹⁵	+2 03.5 ¹³²	56	49	37	21	55	79	13 15
3	222	39.9		07.6	330	40.0 ¹¹⁶	+1 50.3 ¹³²	54	44	29	11	53	77	13 17
4	237	39.7		07.1	345	10.7 ¹¹⁷	37.1 ¹³²	52	40	22	8 01	52	75	13 19
5	252	39.5	-21	06.6	359	41.4 ¹¹⁷	+1 23.9 ¹³²	50	6 35	7 16	7 53	23 51	73	11 13 21
6	267	39.3	-21	06.2	14	12.1 ¹¹⁷	+1 10.8 ¹³¹	45	6 26	7 02	7 35	23 49	68	11 13 25
7	282	39.0		05.7	28	42.9 ¹¹⁸	+0 57.6 ¹³²	40	17	6 50	20	47	65	13 29
8	297	38.8		05.3	43	13.7 ¹¹⁸	44.5 ¹³¹	35	09	40	7 08	46	61	13 32
9	312	38.6		04.8	57	44.6 ¹¹⁹	31.3 ¹³²	30	6 01	31	6 57	44	59	13 35
10	327	38.4		04.3	72	15.5 ¹¹⁹	18.2 ¹³¹	20	5 47	6 14	38	42	54	13 39
11	342	38.2	-21	03.9	86	46.5 ¹²⁰	+0 05.1 ¹³¹	10 N	5 33	5 59	6 21	23 40	50	11 13 43
12	357	38.0	-21	03.4	101	17.5 ¹²⁰	-0 08.0 ¹³¹	0	5 18	5 44	6 06	23 38	46	11 13 47
13	12	37.7		02.9	115	48.6 ¹²¹	21.0 ¹³⁰	10 S	5 01	27	5 50	36	43	13 51
14	27	37.5		02.5	130	19.6 ¹²⁰	34.1 ¹³¹	20	4 41	5 09	33	34	39	13 55
15	42	37.3		02.0	144	50.8 ¹²²	-0 47.1 ¹³⁰	30	4 15	4 47	14	31	35	13 60
16	57	37.1		01.5	159	21.9 ¹²¹	-1 00.1 ¹³⁰	35	3 58	33	5 02	30	32	13 62
17	72	36.9	-21	01.1	173	53.2 ¹²³	-1 13.1 ¹³⁰	40	3 38	4 17	4 49	23 29	29	11 12 66
18	87	36.7	-21	00.6	188	24.4 ¹²²	-1 26.0 ¹²⁹	45	3 11	3 57	4 33	23 27	26	11 12 70
19	102	36.4	-21	00.1	202	55.7 ¹²³	38.9 ¹²⁹	50	2 34	32	13	25	22	12 74
20	117	36.2	-20	59.7	217	27.0 ¹²³	-1 51.8 ¹²⁹	52	2 14	19	4 04	24	20	12 76
21	132	36.0		59.2	231	58.3 ¹²³	-2 04.7 ¹²⁹	54	1 47	3 04	3 54	23	18	12 78
22	147	35.8		58.7	246	29.7 ¹²⁴	17.6 ¹²⁹	56	1 04	2 47	42	22	16	12 81
23	162	35.6		58.2	261	01.1 ¹²⁴	30.4 ¹²⁸	58	** **	2 25	28	21	13	12 83
24	177	35.4	-20	57.8	275	32.6 ¹²⁵	-2 43.2 ¹²⁸	60 S	** **	1 56	3 12	23 20	10	11 12 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 16 ^h 19 ^m 3		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.2 PMG: 7 ^h 05 ^m		Mag: -2.7 PMG: 20 ^h 16 ^m		Mag: 0.0 PMG: 19 ^h 48 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	114	30.6	130	57.8	-7 29.0	253	32.9	-14 35.8	55 05.8	+19 42.0	62 10.7	+16 44.3
1	129	33.1	145	58.0	27.8	268	33.9	36.2	70 08.4	41.9	77 13.2	44.3
2	144	35.5	160	58.1	26.6	283	35.0	36.6	85 10.9	41.9	92 15.7	44.3
3	159	38.0	175	58.3	25.4	298	36.0	37.1	100 13.5	41.9	107 18.3	44.3
4	174	40.4	190	58.4	24.2	313	37.1	37.5	115 16.1	41.9	122 20.8	44.3
5	189	42.9	205	58.5	-7 23.0	328	38.2	-14 38.0	130 18.6	+19 41.9	137 23.3	+16 44.3
6	204	45.4	220	58.7	-7 21.8	343	39.2	-14 38.4	145 21.2	+19 41.9	152 25.8	+16 44.3
7	219	47.8	235	58.8	20.6	358	40.3	38.8	160 23.7	41.9	167 28.3	44.3
8	234	50.3	250	59.0	19.4	13	41.3	39.3	175 26.3	41.9	182 30.8	44.3
9	249	52.8	265	59.2	18.2	28	42.4	39.7	190 28.8	41.9	197 33.3	44.3
10	264	55.2	280	59.3	17.0	43	43.5	40.2	205 31.4	41.9	212 35.8	44.3
11	279	57.7	295	59.5	-7 15.8	58	44.5	-14 40.6	220 34.0	+19 41.9	227 38.4	+16 44.3
12	295	00.2	310	59.6	-7 14.6	73	45.6	-14 41.0	235 36.5	+19 41.9	242 40.9	+16 44.3
13	310	02.6	325	59.8	13.4	88	46.6	41.5	250 39.1	41.9	257 43.4	44.3
14	325	05.1	340	59.9	12.2	103	47.7	41.9	265 41.6	41.9	272 45.9	44.3
15	340	07.6	356	00.1	11.0	118	48.8	42.3	280 44.2	41.8	287 48.4	44.3
16	355	10.0	11	00.2	09.8	133	49.8	42.8	295 46.7	41.8	302 50.9	44.3
17	10	12.5	26	00.4	-7 08.6	148	50.9	-14 43.2	310 49.3	+19 41.8	317 53.4	+16 44.3
18	25	14.9	41	00.6	-7 07.4	163	51.9	-14 43.6	325 51.8	+19 41.8	332 55.9	+16 44.3
19	40	17.4	56	00.7	06.2	178	53.0	44.1	340 54.4	41.8	347 58.5	44.3
20	55	19.9	71	00.9	05.0	193	54.1	44.5	355 56.9	41.8	3 01.0	44.3
21	70	22.3	86	01.1	03.8	208	55.1	45.0	10 59.5	41.8	18 03.5	44.3
22	85	24.8	101	01.2	02.6	223	56.2	45.4	26 02.0	41.8	33 06.0	44.4
23	100	27.3	116	01.4	01.4	238	57.2	45.8	41 04.6	41.8	48 08.5	44.4
24	115	29.7	131	01.5	-7 00.2	253	58.3	-14 46.3	56 07.1	+19 41.8	63 11.0	+16 44.4
Dif	—		+2 +12		+11 -4		+26 0		+25 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 21 ^d 3 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 0					PMG: 12 ^h 09 ^m 8			PMG: 5 ^h 49 ^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	m	h m	m		
0	177	35.4	-20 57.8	275	32.6	-2 43.2	60 N	15 34	16 27	17 20	** ** *	**	11 23	11		
1	192	35.1	57.3	290	04.0 ¹²⁴	-2 56.0 ¹²⁸	58	15 48	36	26	** ** *	**	26	13		
2	207	34.9	56.8	304	35.5 ¹²⁵	-3 08.7 ¹²⁷	56	16 00	44	32	** ** *	**	28	16		
3	222	34.7	56.3	319	07.0 ¹²⁵	21.4 ¹²⁷	54	11	52	37	** ** *	**	30	19		
4	237	34.5	55.9	333	38.6 ¹²⁶	34.1 ¹²⁷	52	20	16 59	41	** ** *	**	32	21		
5	252	34.3	-20 55.4	348	10.2 ¹²⁶	-3 46.7 ¹²⁶	50	16 28	17 05	17 45	** ** *	**	11 34	22		
6	267	34.1	-20 54.9	2	41.8 ¹²⁶	-3 59.3 ¹²⁶	45	16 46	17 19	17 55	** ** *	**	11 38	27		
7	282	33.9	54.4	17	13.4 ¹²⁶	-4 11.9 ¹²⁶	40	17 00	30	18 03	** ** *	**	42	29		
8	297	33.7	54.0	31	45.0 ¹²⁶	24.4 ¹²⁵	35	13	40	11	** ** *	**	45	32		
9	312	33.4	53.5	46	16.7 ¹²⁷	36.9 ¹²⁵	30	23	17 49	18	** ** *	**	48	34		
10	327	33.2	53.0	60	48.4 ¹²⁷	-4 49.4 ¹²⁵	20	42	18 05	32	** ** *	**	52	39		
11	342	33.0	-20 52.5	75	20.1 ¹²⁷	-5 01.8 ¹²⁴	10 N	17 58	18 21	18 46	** ** *	**	11 56	43		
12	357	32.8	-20 52.0	89	51.8 ¹²⁷	-5 14.2 ¹²⁴	0	18 13	18 36	19 01	** ** *	**	12 00	47		
13	12	32.6	51.5	104	23.6 ¹²⁸	26.5 ¹²³	10 S	29	18 52	18	** ** *	**	04	50		
14	27	32.4	51.1	118	55.3 ¹²⁷	38.8 ¹²³	20	18 46	19 10	19 38	** ** *	**	08	54		
15	42	32.2	50.6	133	27.1 ¹²⁸	-5 51.1 ¹²³	30	19 05	31	20 04	** ** *	**	13	58		
16	57	32.0	50.1	147	58.9 ¹²⁸	-6 03.3 ¹²²	35	16	19 45	20	** ** *	**	15	61		
17	72	31.8	-20 49.6	162	30.7 ¹²⁸	-6 15.4 ¹²¹	40	19 29	20 01	20 40	23 58 30		12 18	64		
18	87	31.5	-20 49.1	177	02.5 ¹²⁸	-6 27.6 ¹²²	45	19 45	20 20	21 06	23 53 27		12 22	67		
19	102	31.3	48.6	191	34.3 ¹²⁸	39.7 ¹²¹	50	20 04	45	21 42	47 23		26	72		
20	117	31.1	48.1	206	06.2 ¹²⁹	-6 51.7 ¹²⁰	52	13	20 57	22 02	44 21		28	74		
21	132	30.9	47.7	220	38.0 ¹²⁸	-7 03.7 ¹²⁰	54	23	21 12	22 27	41 19		30	76		
22	147	30.7	47.2	235	09.9 ¹²⁹	15.6 ¹¹⁹	56	35	29	23 05	38 17		33	78		
23	162	30.5	46.7	249	41.8 ¹²⁹	27.5 ¹¹⁹	58	20 48	21 50	** ** *	34 14		35	81		
24	177	30.3	-20 46.2	264	13.6 ¹²⁸	-7 39.4 ¹¹⁹	60 S	21 04	22 17	** ** *	23 30 12		12 38	84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 15 ^m 3		Mag: -4.5 PMG: 15 ^h 16 ^m			Mag: +1.2 PMG: 7 ^h 04 ^m			Mag: -2.6 PMG: 20 ^h 12 ^m			Mag: 0.0 PMG: 19 ^h 44 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	°	°	'	°	°	°	'		
0	115	29.7	131 01.5	-7 00.2	253 58.3	-14 46.3	56 07.1	+19 41.8	63 11.0	+16 44.4						
1	130	32.2	146 01.7	-6 59.0	268 59.4	46.7	71 09.7	41.8	78 13.5	44.4						
2	145	34.7	161 01.9	57.8	284 00.4	47.1	86 12.2	41.8	93 16.0	44.4						
3	160	37.1	176 02.0	56.6	299 01.5	47.6	101 14.8	41.8	108 18.5	44.4						
4	175	39.6	191 02.2	55.4	314 02.5	48.0	116 17.3	41.8	123 21.0	44.4						
5	190	42.0	206 02.4	-6 54.2	329 03.6	-14 48.4	131 19.9	+19 41.8	138 23.6	+16 44.4						
6	205	44.5	221 02.6	-6 53.0	344 04.7	-14 48.9	146 22.4	+19 41.8	153 26.1	+16 44.4						
7	220	47.0	236 02.7	51.8	359 05.7	49.3	161 25.0	41.7	168 28.6	44.4						
8	235	49.4	251 02.9	50.6	14 06.8	49.7	176 27.5	41.7	183 31.1	44.4						
9	250	51.9	266 03.1	49.3	29 07.8	50.2	191 30.1	41.7	198 33.6	44.4						
10	265	54.4	281 03.3	48.1	44 08.9	50.6	206 32.6	41.7	213 36.1	44.4						
11	280	56.8	296 03.4	-6 46.9	59 10.0	-14 51.0	221 35.2	+19 41.7	228 38.6	+16 44.4						
12	295	59.3	311 03.6	-6 45.7	74 11.0	-14 51.5	236 37.7	+19 41.7	243 41.1	+16 44.4						
13	311	01.8	326 03.8	44.5	89 12.1	51.9	251 40.3	41.7	258 43.6	44.4						
14	326	04.2	341 04.0	43.3	104 13.1	52.3	266 42.8	41.7	273 46.1	44.4						
15	341	06.7	356 04.1	42.1	119 14.2	52.8	281 45.3	41.7	288 48.6	44.4						
16	356	09.2	11 04.3	40.9	134 15.3	53.2	296 47.9	41.7	303 51.1	44.4						
17	11	11.6	26 04.5	-6 39.7	149 16.3	-14 53.6	311 50.4	+19 41.7	318 53.6	+16 44.4						
18	26	14.1	41 04.7	-6 38.5	164 17.4	-14 54.1	326 53.0	+19 41.7	333 56.2	+16 44.4						
19	41	16.5	56 04.9	37.3	179 18.4	54.5	341 55.5	41.7	348 58.7	44.4						
20	56	19.0	71 05.1	36.1	194 19.5	54.9	356 58.1	41.7	4 01.2	44.4						
21	71	21.5	86 05.2	34.9	209 20.6	55.3	12 00.6	41.7	19 03.7	44.4						
22	86	23.9	101 05.4	33.7	224 21.6	55.8	27 03.1	41.7	34 06.2	44.4						
23	101	26.4	116 05.6	32.5	239 22.7	56.2	42 05.7	41.7	49 08.7	44.4						
24	116	28.9	131 05.8	-6 31.3	254 23.7	-14 56.6	57 08.2	+19 41.7	64 11.2	+16 44.4						
Dif	—		+2	+12	+11	-4	+25	0	+25	0						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3			Edad: 22 ^d 3	PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /5 20 ^h : 56 ^m /2	R ^o : 47 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 12 ^h 10 ^m 1																
	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	h m m	
0	177	30.3	-20 46.2	264	13.6	-7 39.4		60 N	6 59	7 52	8 44	1 23 82	11 34 12				
1	192	30.1	45.7	278	45.5	-7 51.2	118	58	53	43	31	18 80	39 16				
2	207	29.9	45.2	293	17.4	-8 02.9	117	56	48	35	19	14 77	44 18				
3	222	29.7	44.7	307	49.3	14.6	117	54	43	27	8 08	10 75	49 20				
4	237	29.5	44.2	322	21.2	26.2	116	52	38	20	7 59	07 72	53 22				
5	252	29.3	-20 43.7	336	53.1	-8 37.8	116	50	6 34	7 14	7 51	1 04 70	11 56 24				
6	267	29.1	-20 43.2	351	25.0	-8 49.4	116	45	6 25	7 01	7 34	0 57 67	12 05 27				
7	282	28.8	42.7	5	57.0	-9 00.8	114	40	16	6 50	19	52 63	11 31				
8	297	28.6	42.2	20	28.9	12.3	115	35	09	40	7 07	47 60	17 34				
9	312	28.4	41.7	35	00.8	23.6	113	30	6 01	31	6 56	43 58	22 36				
10	327	28.2	41.3	49	32.7	34.9	113	20	5 47	6 14	38	36 54	31 40				
11	342	28.0	-20 40.8	64	04.6	-9 46.2	113	10 N	5 33	5 59	6 22	0 30 50	12 39 43				
12	357	27.8	-20 40.3	78	36.5	-9 57.4	112	0	5 19	5 44	6 07	0 24 47	12 47 46				
13	12	27.6	39.8	93	08.4	-10 08.5	111	10 S	5 02	29	5 51	19 43	12 54 50				
14	27	27.4	39.3	107	40.4	19.6	111	20	4 42	5 11	35	13 39	13 02 53				
15	42	27.2	38.8	122	12.3	30.6	110	30	17	4 49	15	06 35	11 57				
16	57	27.0	38.3	136	44.2	41.6	110	35	4 00	35	5 04	0 02 33	16 60				
17	72	26.8	-20 37.8	151	16.1	-10 52.5	109	40	3 40	4 20	4 51	** ** *	13 22 63				
18	87	26.6	-20 37.3	165	48.0	-11 03.4	109	45	3 15	4 00	4 36	** ** *	13 29 66				
19	102	26.4	36.7	180	19.8	14.1	107	50	2 39	3 35	17	** ** *	38 69				
20	117	26.2	36.2	194	51.7	24.8	107	52	2 19	23	4 07	** ** *	42 71				
21	132	26.0	35.7	209	23.6	35.5	107	54	1 53	3 09	3 57	** ** *	46 73				
22	147	25.8	35.2	223	55.5	46.1	106	56	1 15	2 52	46	23 55 19	51 76				
23	162	25.6	34.7	238	27.3	-11 56.6	105	58	** ** *	31	32	48 18	13 56 79				
24	177	25.4	-20 34.2	252	59.2	-12 07.1	105	60 S	** ** *	2 03	3 16	23 42 14	14 02 82				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 11 ^m 4		Mag: -4.5 PMG: 15 ^h 15 ^m		Mag: +1.2 PMG: 7 ^h 02 ^m		Mag: -2.6 PMG: 20 ^h 08 ^m		Mag: 0.0 PMG: 19 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	116	28.9	131 05.8	-6 31.3	254 23.7	-14 56.6	57 08.2	+19 41.7	64 11.2	+16 44.4
1	131	31.3	146 06.0	30.1	269 24.8	57.1	72 10.8	41.7	79 13.7	44.4
2	146	33.8	161 06.2	28.9	284 25.9	57.5	87 13.3	41.7	94 16.2	44.4
3	161	36.3	176 06.4	27.7	299 26.9	57.9	102 15.9	41.7	109 18.7	44.4
4	176	38.7	191 06.6	26.5	314 28.0	58.4	117 18.4	41.6	124 21.2	44.4
5	191	41.2	206 06.8	-6 25.2	329 29.0	-14 58.8	132 20.9	+19 41.6	139 23.7	+16 44.4
6	206	43.7	221 06.9	-6 24.0	344 30.1	-14 59.2	147 23.5	+19 41.6	154 26.2	+16 44.4
7	221	46.1	236 07.1	22.8	359 31.2	-14 59.7	162 26.0	41.6	169 28.7	44.4
8	236	48.6	251 07.3	21.6	14 32.2	-15 00.1	177 28.6	41.6	184 31.2	44.4
9	251	51.0	266 07.5	20.4	29 33.3	00.5	192 31.1	41.6	199 33.7	44.4
10	266	53.5	281 07.7	19.2	44 34.3	00.9	207 33.6	41.6	214 36.2	44.4
11	281	56.0	296 07.9	-6 18.0	59 35.4	-15 01.4	222 36.2	+19 41.6	229 38.7	+16 44.4
12	296	58.4	311 08.1	-6 16.8	74 36.5	-15 01.8	237 38.7	+19 41.6	244 41.2	+16 44.4
13	312	00.9	326 08.3	15.6	89 37.5	02.2	252 41.2	41.6	259 43.7	44.4
14	327	03.4	341 08.5	14.4	104 38.6	02.7	267 43.8	41.6	274 46.2	44.4
15	342	05.8	356 08.7	13.2	119 39.6	03.1	282 46.3	41.6	289 48.7	44.4
16	357	08.3	11 08.9	12.0	134 40.7	03.5	297 48.8	41.6	304 51.2	44.4
17	12	10.8	26 09.1	-6 10.8	149 41.8	-15 03.9	312 51.4	+19 41.6	319 53.7	+16 44.4
18	27	13.2	41 09.3	-6 09.6	164 42.8	-15 04.4	327 53.9	+19 41.6	334 56.3	+16 44.4
19	42	15.7	56 09.5	08.3	179 43.9	04.8	342 56.4	41.6	349 58.8	44.4
20	57	18.1	71 09.8	07.1	194 44.9	05.2	357 59.0	41.6	5 01.3	44.4
21	72	20.6	86 10.0	05.9	209 46.0	05.6	13 01.5	41.6	20 03.8	44.4
22	87	23.1	101 10.2	04.7	224 47.1	06.1	28 04.0	41.6	35 06.3	44.4
23	102	25.5	116 10.4	03.5	239 48.1	06.5	43 06.6	41.6	50 08.8	44.5
24	117	28.0	131 10.6	-6 02.3	254 49.2	-15 06.9	58 09.1	+19 41.6	65 11.3	+16 44.5
Dif	—		+2	+12	+11	-4	+25	0	+25	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 23 ^d 3 PHE { 4 ^h : 56:0 12 ^h : 55:8 20 ^h : 55:6					Civil			Náutico		Hora R°	
	PMG: 12 ^h 10 ^m 5			SD: 15:3					R°: 47 ^m			Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m
0	177	25.4	-20 34.2	252	59.2	-12 07.1	60 N	15 39	16 31	17 24	2 45 81	11 46 16			
1	192	25.2	33.7	267	31.0 ¹²⁸	17.4 ¹⁰³	58	15 52	40	30	38 77	11 55 19			
2	207	25.0	33.2	282	02.8 ¹²⁸	27.8 ¹⁰⁴	56	16 04	48	35	31 74	12 02 22			
3	222	24.8	32.7	296	34.6 ¹²⁸	38.0 ¹⁰²	54	14	16 55	40	25 72	09 22			
4	237	24.6	32.2	311	06.4 ¹²⁸	48.2 ¹⁰²	52	23	17 02	44	19 71	15 26			
5	252	24.4	-20 31.7	325	38.2 ¹²⁸	-12 58.3 ¹⁰¹	50	16 31	17 08	17 48	2 14 69	12 20 28			
6	267	24.2	-20 31.2	340	10.0 ¹²⁸	-13 08.4 ¹⁰¹	45	16 48	17 21	17 57	2 04 64	12 32 31			
7	282	24.0	30.7	354	41.8 ¹²⁸	18.4 ¹⁰⁰	40	17 03	32	18 05	1 55 62	42 34			
8	297	23.8	30.1	9	13.5 ¹²⁷	28.3 ⁹⁹	35	15	42	13	47 60	51 36			
9	312	23.6	29.6	23	45.3 ¹²⁸	38.1 ⁹⁸	30	25	17 51	20	41 57	12 58 38			
10	327	23.4	29.1	38	17.0 ¹²⁷	47.9 ⁹⁸	20	43	18 07	34	30 53	13 11 42			
11	342	23.2	-20 28.6	52	48.7 ¹²⁷	-13 57.6 ⁹⁷	10 N	17 59	18 21	18 47	1 20 50	13 22 45			
12	357	23.0	-20 28.1	67	20.4 ¹²⁷	-14 07.2 ⁹⁶	0	18 14	18 36	19 02	1 11 47	13 33 47			
13	12	22.8	27.6	81	52.1 ¹²⁷	16.7 ⁹⁵	10 S	29	18 52	18	1 02 43	44 50			
14	27	22.6	27.1	96	23.8 ¹²⁷	26.2 ⁹⁵	20	18 46	19 09	19 38	0 52 41	13 55 53			
15	42	22.4	26.5	110	55.4 ¹²⁶	35.6 ⁹⁴	30	19 04	31	20 03	41 37	14 08 57			
16	57	22.2	26.0	125	27.0 ¹²⁶	44.9 ⁹³	35	15	19 44	19	35 34	16 59			
17	72	22.0	-20 25.5	139	58.6 ¹²⁶	-14 54.2 ⁹³	40	19 28	20 00	20 38	0 28 32	14 25 61			
18	87	21.8	-20 25.0	154	30.2 ¹²⁶	-15 03.3 ⁹¹	45	19 43	20 18	21 04	0 20 29	14 35 64			
19	102	21.6	24.5	169	01.8 ¹²⁶	12.4 ⁹¹	50	20 02	43	39	10 25	47 68			
20	117	21.5	23.9	183	33.4 ¹²⁶	21.4 ⁹⁰	52	11	20 55	21 57	05 24	53 69			
21	132	21.3	23.4	198	04.9 ¹²⁵	30.4 ⁹⁰	54	21	21 09	22 21	0 00 22	14 59 71			
22	147	21.1	22.9	212	36.4 ¹²⁵	39.2 ⁸⁸	56	32	25	22 56	** ** *	15 07 73			
23	162	20.9	22.4	227	07.9 ¹²⁵	48.0 ⁸⁸	58	20 45	21 45	** ** *	** ** *	15 75			
24	177	20.7	-20 21.9	241	39.4 ¹²⁵	-15 56.7 ⁸⁷	60 S	21 00	22 11	** ** *	23 56 18	15 24 79			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 16 ^h 07 ^m 5		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.2 PMG: 7 ^h 00 ^m		Mag: -2.6 PMG: 20 ^h 04 ^m		Mag: 0.0 PMG: 19 ^h 36 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	117	28.0	131 10.6	-6 02.3	254 49.2	-15 06.9	58 09.1	+19 41.6	65 11.3	+16 44.5	
1	132	30.5	146 10.8	-6 01.1	269 50.3	07.4	73 11.6	41.6	80 13.8	44.5	
2	147	32.9	161 11.0	-5 59.9	284 51.3	07.8	88 14.2	41.6	95 16.3	44.5	
3	162	35.4	176 11.2	58.7	299 52.4	08.2	103 16.7	41.6	110 18.8	44.5	
4	177	37.9	191 11.4	57.5	314 53.4	08.6	118 19.2	41.6	125 21.3	44.5	
5	192	40.3	206 11.7	-5 56.3	329 54.5	-15 09.1	133 21.8	+19 41.6	140 23.8	+16 44.5	
6	207	42.8	221 11.9	-5 55.1	344 55.6	-15 09.5	148 24.3	+19 41.6	155 26.3	+16 44.5	
7	222	45.3	236 12.1	53.8	359 56.6	09.9	163 26.8	41.6	170 28.8	44.5	
8	237	47.7	251 12.3	52.6	14 57.7	10.3	178 29.4	41.6	185 31.3	44.5	
9	252	50.2	266 12.5	51.4	29 58.7	10.8	193 31.9	41.6	200 33.8	44.5	
10	267	52.6	281 12.7	50.2	44 59.8	11.2	208 34.4	41.6	215 36.3	44.5	
11	282	55.1	296 13.0	-5 49.0	60 00.9	-15 11.6	223 36.9	+19 41.6	230 38.8	+16 44.5	
12	297	57.6	311 13.2	-5 47.8	75 01.9	-15 12.0	238 39.5	+19 41.6	245 41.3	+16 44.5	
13	313	00.0	326 13.4	46.6	90 03.0	12.5	253 42.0	41.6	260 43.7	44.5	
14	328	02.5	341 13.6	45.4	105 04.0	12.9	268 44.5	41.5	275 46.2	44.5	
15	343	05.0	356 13.9	44.2	120 05.1	13.3	283 47.1	41.5	290 48.7	44.5	
16	358	07.4	11 14.1	43.0	135 06.2	13.7	298 49.6	41.5	305 51.2	44.5	
17	13	09.9	26 14.3	-5 41.8	150 07.2	-15 14.1	313 52.1	+19 41.5	320 53.7	+16 44.5	
18	28	12.4	41 14.5	-5 40.5	165 08.3	-15 14.6	328 54.6	+19 41.5	335 56.2	+16 44.5	
19	43	14.8	56 14.8	39.3	180 09.4	15.0	343 57.2	41.5	350 58.7	44.5	
20	58	17.3	71 15.0	38.1	195 10.4	15.4	358 59.7	41.5	6 01.2	44.5	
21	73	19.8	86 15.2	36.9	210 11.5	15.8	14 02.2	41.5	21 03.7	44.5	
22	88	22.2	101 15.4	35.7	225 12.5	16.3	29 04.7	41.5	36 06.2	44.5	
23	103	24.7	116 15.7	34.5	240 13.6	16.7	44 07.3	41.5	51 08.7	44.5	
24	118	27.1	131 15.9	-5 33.3	255 14.7	-15 17.1	59 09.8	+19 41.5	66 11.2	+16 44.5	
Dif	—		+2	+12	+11	-4	+25	0	+25		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:3			Edad: 24 ^d 3	PHE { 4 ^h : 55:4 12 ^h : 55:2 20 ^h : 55:0	R ^o : 48 ^m		Náutico			Civil		Hora R°		Hora R°		
	PMG: 12 ^h 10 ^m 8																
	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	h m m	
0	177	20.7	-20 21.9	241	39.4	-15 56.7	86	60 N	6 56	7 49	8 41	4 06 77	12 02 22				
1	192	20.5	21.3	256	10.9 ¹²⁵	-16 05.3	86	58	51	40	28	3 55 74	14 24				
2	207	20.3	20.8	270	42.3 ¹²⁴	13.8	85	56	46	32	16	45 72	24 27				
3	222	20.1	20.3	285	13.7 ¹²⁴	22.3	85	54	41	25	8 06	37 69	33 29				
4	237	19.9	19.8	299	45.1 ¹²⁴	30.7	84	52	37	19	7 57	30 67	41 30				
5	252	19.7	-20 19.2	314	16.5 ¹²⁴	-16 38.9	82	50	6 33	7 13	7 49	3 23 66	12 48 32				
6	267	19.5	-20 18.7	328	47.9 ¹²⁴	-16 47.1	82	45	6 24	7 00	7 32	3 08 63	13 03 35				
7	282	19.3	18.2	343	19.2 ¹²³	-16 55.3	82	40	16	6 49	18	2 57 59	16 37				
8	297	19.1	17.7	357	50.5 ¹²³	-17 03.3	80	35	08	39	7 06	47 57	27 39				
9	312	19.0	17.1	12	21.8 ¹²³	11.2	79	30	6 01	30	6 56	38 56	36 41				
10	327	18.8	16.6	26	53.1 ¹²³	19.1	79	20	5 47	14	38	23 53	13 53 43				
11	342	18.6	-20 16.1	41	24.3 ¹²²	-17 26.9	78	10 N	5 34	6 00	6 22	2 10 50	14 07 46				
12	357	18.4	-20 15.5	55	55.6 ¹²³	-17 34.6	77	0	5 19	5 45	6 07	1 58 47	14 20 49				
13	12	18.2	15.0	70	26.8 ¹²²	42.2	76	10 S	5 03	30	5 52	45 46	34 50				
14	27	18.0	14.5	84	57.9 ¹²¹	49.7	75	20	4 44	5 12	36	33 42	14 48 53				
15	42	17.8	13.9	99	29.1 ¹²²	-17 57.1	74	30	19	4 51	17	18 39	15 05 55				
16	57	17.6	13.4	114	00.2 ¹²¹	-18 04.5	74	35	4 03	38	5 06	09 38	15 56				
17	72	17.4	-20 12.9	128	31.3 ¹²¹	-18 11.7	72	40	3 43	4 22	4 53	1 00 35	15 26 58				
18	87	17.3	-20 12.3	143	02.4 ¹²¹	-18 18.9	72	45	3 18	4 03	4 38	0 49 32	15 39 61				
19	102	17.1	11.8	157	33.5 ¹²¹	25.9	70	50	2 43	3 39	20	35 30	15 55 63				
20	117	16.9	11.3	172	04.6 ¹²¹	32.9	70	52	24	27	11	29 28	16 02 65				
21	132	16.7	10.7	186	35.6 ¹²⁰	39.8	69	54	2 00	3 13	4 01	22 26	10 67				
22	147	16.5	10.2	201	06.6 ¹²⁰	46.6	68	56	1 26	2 57	3 50	14 24	20 69				
23	162	16.3	09.7	215	37.6 ¹²⁰	53.3	67	58	** **	37	37	0 06 21	30 72				
24	177	16.1	-20 09.1	230	08.5 ¹¹⁹	-18 59.9	66	60 S	** **	2 11	3 21	** ** *	16 43 74				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 03 ^m 6		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.1 PMG: 6 ^h 59 ^m		Mag: -2.6 PMG: 20 ^h 00 ^m		Mag: 0.0 PMG: 19 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	118	27.1	131 15.9	-5 33.3	255 14.7	-15 17.1	59 09.8	+19 41.5	66 11.2	+16 44.5
1	133	29.6	146 16.1	32.1	270 15.7	17.5	74 12.3	41.5	81 13.7	44.6
2	148	32.1	161 16.4	30.9	285 16.8	18.0	89 14.8	41.5	96 16.2	44.6
3	163	34.5	176 16.6	29.7	300 17.9	18.4	104 17.4	41.5	111 18.7	44.6
4	178	37.0	191 16.8	28.4	315 18.9	18.8	119 19.9	41.5	126 21.2	44.6
5	193	39.5	206 17.1	-5 27.2	330 20.0	-15 19.2	134 22.4	+19 41.5	141 23.7	+16 44.6
6	208	41.9	221 17.3	-5 26.0	345 21.0	-15 19.6	149 24.9	+19 41.5	156 26.2	+16 44.6
7	223	44.4	236 17.6	24.8	0 22.1	20.1	164 27.4	41.5	171 28.7	44.6
8	238	46.9	251 17.8	23.6	15 23.2	20.5	179 30.0	41.5	186 31.2	44.6
9	253	49.3	266 18.0	22.4	30 24.2	20.9	194 32.5	41.5	201 33.7	44.6
10	268	51.8	281 18.3	21.2	45 25.3	21.3	209 35.0	41.5	216 36.2	44.6
11	283	54.2	296 18.5	-5 20.0	60 26.3	-15 21.7	224 37.5	+19 41.5	231 38.7	+16 44.6
12	298	56.7	311 18.8	-5 18.8	75 27.4	-15 22.2	239 40.0	+19 41.5	246 41.2	+16 44.6
13	313	59.2	326 19.0	17.6	90 28.5	22.6	254 42.6	41.5	261 43.6	44.6
14	329	01.6	341 19.3	16.3	105 29.5	23.0	269 45.1	41.5	276 46.1	44.6
15	344	04.1	356 19.5	15.1	120 30.6	23.4	284 47.6	41.5	291 48.6	44.6
16	359	06.6	11 19.8	13.9	135 31.7	23.8	299 50.1	41.5	306 51.1	44.6
17	14	09.0	26 20.0	-5 12.7	150 32.7	-15 24.3	314 52.6	+19 41.5	321 53.6	+16 44.6
18	29	11.5	41 20.3	-5 11.5	165 33.8	-15 24.7	329 55.1	+19 41.5	336 56.1	+16 44.6
19	44	14.0	56 20.5	10.3	180 34.8	25.1	344 57.7	41.5	351 58.6	44.6
20	59	16.4	71 20.8	09.1	195 35.9	25.5	0 00.2	41.5	7 01.1	44.6
21	74	18.9	86 21.0	07.9	210 37.0	25.9	15 02.7	41.5	22 03.6	44.7
22	89	21.4	101 21.3	06.7	225 38.0	26.3	30 05.2	41.5	37 06.1	44.7
23	104	23.8	116 21.5	05.4	240 39.1	26.8	45 07.7	41.5	52 08.6	44.7
24	119	26.3	131 21.8	-5 04.2	255 40.2	-15 27.2	60 10.2	+19 41.5	67 11.1	+16 44.7
Dif	—		+2	+12	+11	-4	+25	0	+25	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 11 ^m 1			Edad: 25 ^d 3 PHE { SD: 15/0 PMG: 8 ^h 57 ^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	177	16.1	-20 09.1	230	08.5	-18 59.9		60 N	15 44	16 35	17 28	5 23 70		12 24 30	
1	192	16.0	08.6	244	39.4 ¹¹⁹	-19 06.4 ⁶⁵		58	15 57	44	33	5 09 68		38 33	
2	207	15.8	08.0	259	10.4 ¹²⁰	12.9 ⁶⁵		56	16 08	51	38	4 57 66		12 51 34	
3	222	15.6	07.5	273	41.2 ¹¹⁸	19.2 ⁶³		54	18	16 58	43	46 64		13 02 36	
4	237	15.4	07.0	288	12.1 ¹¹⁹	25.4 ⁶²		52	27	17 05	47	37 63		11 38	
5	252	15.2	-20 06.4	302	43.0 ¹¹⁹	-19 31.6 ⁶²		50	16 34	17 11	17 51	4 29 61		13 20 38	
6	267	15.0	-20 05.9	317	13.8 ¹¹⁸	-19 37.6 ⁶⁰		45	16 51	17 23	17 59	4 11 59		13 38 41	
7	282	14.8	05.3	331	44.6 ¹¹⁸	43.6 ⁶⁰		40	17 05	34	18 07	3 56 58		13 53 42	
8	297	14.7	04.8	346	15.4 ¹¹⁸	49.4 ⁵⁸		35	17	44	15	44 56		14 06 43	
9	312	14.5	04.2	0	46.1 ¹¹⁷	-19 55.2 ⁵⁸		30	27	17 52	22	34 54		17 45	
10	327	14.3	03.7	15	16.9 ¹¹⁸	-20 00.8 ⁵⁶		20	17 45	18 08	35	16 52		36 46	
11	342	14.1	-20 03.2	29	47.6 ¹¹⁷	-20 06.4 ⁵⁶		10 N	18 00	18 22	18 48	3 00 50		14 53 48	
12	357	13.9	-20 02.6	44	18.3 ¹¹⁷	-20 11.9 ⁵⁵		0	18 15	18 37	19 02	2 45 49		15 09 48	
13	12	13.8	02.1	58	49.0 ¹¹⁷	17.2 ⁵³		10 S	29	18 52	18	31 46		24 50	
14	27	13.6	01.5	73	19.6 ¹¹⁶	22.5 ⁵³		20	18 45	19 09	19 37	2 15 45		15 41 52	
15	42	13.4	01.0	87	50.3 ¹¹⁷	27.7 ⁵²		30	19 04	30	20 02	1 57 43		16 00 53	
16	57	13.2	-20 00.4	102	20.9 ¹¹⁶	32.7 ⁵⁰		35	15	43	18	47 41		11 55	
17	72	13.0	-19 59.9	116	51.5 ¹¹⁶	-20 37.7 ⁵⁰		40	19 27	19 58	20 37	1 35 40		16 24 56	
18	87	12.9	-19 59.3	131	22.1 ¹¹⁶	-20 42.6 ⁴⁹		45	19 42	20 17	21 01	1 21 38		16 40 57	
19	102	12.7	58.8	145	52.6 ¹¹⁵	47.4 ⁴⁸		50	20 00	40	35	1 05 35		16 58 59	
20	117	12.5	58.2	160	23.2 ¹¹⁶	52.0 ⁴⁶		52	09	20 52	21 53	0 57 34		17 07 60	
21	132	12.3	57.7	174	53.7 ¹¹⁵	-20 56.6 ⁴⁶		54	18	21 05	22 16	48 32		17 61	
22	147	12.1	57.1	189	24.2 ¹¹⁵	-21 01.1 ⁴⁵		56	29	21	22 47	38 31		29 62	
23	162	12.0	56.6	203	54.7 ¹¹⁵	05.4 ⁴³		58	42	21 40	** **	27 28		42 63	
24	177	11.8	-19 56.0	218	25.2 ¹¹⁵	-21 09.7 ⁴³		60 S	20 56	22 05	** **	0 14 26		17 57 66	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 59 ^m 6		Mag: -4.6 PMG: 15 ^h 14 ^m			Mag: +1.1 PMG: 6 ^h 57 ^m			Mag: -2.6 PMG: 19 ^h 56 ^m			Mag: 0.0 PMG: 19 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	119	26.3	131 21.8	-5 04.2	255 40.2	-15 27.2	60 10.2	+19 41.5	67 11.1	+16 44.7					
1	134	28.7	146 22.0	03.0	270 41.2	27.6	75 12.8	41.5	82 13.6	44.7					
2	149	31.2	161 22.3	01.8	285 42.3	28.0	90 15.3	41.5	97 16.0	44.7					
3	164	33.7	176 22.5	-5 00.6	300 43.3	28.4	105 17.8	41.5	112 18.5	44.7					
4	179	36.1	191 22.8	-4 59.4	315 44.4	28.9	120 20.3	41.5	127 21.0	44.7					
5	194	38.6	206 23.1	-4 58.2	330 45.5	-15 29.3	135 22.8	+19 41.5	142 23.5	+16 44.7					
6	209	41.1	221 23.3	-4 57.0	345 46.5	-15 29.7	150 25.3	+19 41.5	157 26.0	+16 44.7					
7	224	43.5	236 23.6	55.8	0 47.6	30.1	165 27.8	41.5	172 28.5	44.7					
8	239	46.0	251 23.8	54.5	15 48.7	30.5	180 30.3	41.5	187 31.0	44.7					
9	254	48.5	266 24.1	53.3	30 49.7	30.9	195 32.9	41.5	202 33.5	44.7					
10	269	50.9	281 24.4	52.1	45 50.8	31.4	210 35.4	41.5	217 36.0	44.7					
11	284	53.4	296 24.6	-4 50.9	60 51.8	-15 31.8	225 37.9	+19 41.5	232 38.5	+16 44.7					
12	299	55.9	311 24.9	-4 49.7	75 52.9	-15 32.2	240 40.4	+19 41.6	247 40.9	+16 44.7					
13	314	58.3	326 25.2	48.5	90 54.0	32.6	255 42.9	41.6	262 43.4	44.7					
14	330	00.8	341 25.4	47.3	105 55.0	33.0	270 45.4	41.6	277 45.9	44.8					
15	345	03.2	356 25.7	46.1	120 56.1	33.4	285 47.9	41.6	292 48.4	44.8					
16	0	05.7	11 26.0	44.8	135 57.2	33.8	300 50.4	41.6	307 50.9	44.8					
17	15	08.2	26 26.3	-4 43.6	150 58.2	-15 34.3	315 52.9	+19 41.6	322 53.4	+16 44.8					
18	30	10.6	41 26.5	-4 42.4	165 59.3	-15 34.7	330 55.4	+19 41.6	337 55.9	+16 44.8					
19	45	13.1	56 26.8	41.2	181 00.4	35.1	345 57.9	41.6	352 58.4	44.8					
20	60	15.6	71 27.1	40.0	196 01.4	35.5	1 00.5	41.6	8 00.8	44.8					
21	75	18.0	86 27.3	38.8	211 02.5	35.9	16 03.0	41.6	23 03.3	44.8					
22	90	20.5	101 27.6	37.6	226 03.5	36.3	31 05.5	41.6	38 05.8	44.8					
23	105	23.0	116 27.9	36.4	241 04.6	36.7	46 08.0	41.6	53 08.3	44.8					
24	120	25.4	131 28.2	-4 35.2	256 05.7	-15 37.2	61 10.5	+19 41.6	68 10.8	+16 44.8					
Dif	—		+3	+12	+11	-4	+25	0	+25	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 11 ^m 4			Edad: 26 ^d 3 PHE { SD: 14 ^h 9 PMG: 9 ^h 46 ^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	11.8	-19	56.0	218	25.2	-21	09.7	60 N	6 54	7 46	8 37	6 33	60	12 54	42		
1	192	11.6		55.4	232	55.6 ¹¹⁴		13.9	42	58	48	38	24	17	58	13 11	43	
2	207	11.4		54.9	247	26.1 ¹¹⁵		17.9	40	56	44	30	13	6 03	57	25	44	
3	222	11.2		54.3	261	56.5 ¹¹⁴		21.9	40	54	39	23	8 04	5 50	57	38	44	
4	237	11.1		53.8	276	26.9 ¹¹⁴		25.7	38	52	35	17	7 55	40	56	49	44	
5	252	10.9	-19	53.2	290	57.3 ¹¹⁴	-21	29.5	38	50	6 31	7 11	7 47	5 30	56	13 58	46	
6	267	10.7	-19	52.7	305	27.7 ¹¹⁴	-21	33.1	36	45	6 22	6 58	7 31	5 10	54	14 19	46	
7	282	10.5		52.1	319	58.0 ¹¹³		36.7	36	40	15	48	17	4 54	53	35	47	
8	297	10.4		51.5	334	28.4 ¹¹⁴		40.1	34	35	07	38	7 05	40	53	14 49	48	
9	312	10.2		51.0	348	58.7 ¹¹³		43.5	34	30	6 01	30	6 55	28	52	15 02	47	
10	327	10.0		50.4	3	29.1 ¹¹⁴		46.7	32	20	5 47	14	38	4 08	51	22	49	
11	342	09.8	-19	49.9	17	59.4 ¹¹³	-21	49.8	31	10 N	5 34	6 00	6 22	3 50	50	15 41	48	
12	357	09.7	-19	49.3	32	29.7 ¹¹³	-21	52.8	30	0	5 20	5 46	6 08	3 34	49	15 57	50	
13	12	09.5		48.7	47	00.0 ¹¹³		55.8	30	10 S	5 04	31	5 53	17	49	16 14	50	
14	27	09.3		48.2	61	30.3 ¹¹³	-21	58.6	28	20	4 45	5 13	37	3 00	47	33	50	
15	42	09.2		47.6	76	00.6 ¹¹³	-22	01.3	27	30	21	4 52	19	2 40	46	16 53	51	
16	57	09.0		47.0	90	30.8 ¹¹²		03.9	26	35	4 05	40	5 08	28	46	17 06	51	
17	72	08.8	-19	46.5	105	01.1 ¹¹³	-22	06.4	25	40	3 46	4 25	4 56	2 15	44	17 20	51	
18	87	08.6	-19	45.9	119	31.3 ¹¹²	-22	08.7	23	45	3 22	4 06	4 41	1 59	43	17 37	51	
19	102	08.5		45.3	134	01.6 ¹¹³		11.0	23	50	2 48	3 43	23	40	41	17 57	52	
20	117	08.3		44.8	148	31.8 ¹¹²		13.2	22	52	30	31	14	31	41	18 07	52	
21	132	08.1		44.2	163	02.1 ¹¹³		15.3	21	54	2 07	18	4 05	20	40	18	53	
22	147	07.9		43.6	177	32.3 ¹¹²		17.2	19	56	1 36	3 02	3 54	1 09	39	31	52	
23	162	07.8		43.1	192	02.5 ¹¹²		19.1	19	58	** **	2 43	41	0 55	38	18 45	53	
24	177	07.6	-19	42.5	206	32.7 ¹¹²	-22	20.8	17	60 S	** **	2 19	3 27	0 40	35	19 03	53	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 55 ^m 7			Mag: -4.6 PMG: 15 ^h 14 ^m			Mag: +1.1 PMG: 6 ^h 55 ^m			Mag: -2.6 PMG: 19 ^h 52 ^m			Mag: 0.0 PMG: 19 ^h 24 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	120	25.4	131	28.2	-4	35.2	256	05.7	-15	37.2	61	10.5	+19	41.6	68	10.8	+16	44.8
1	135	27.9	146	28.5		33.9	271	06.7		37.6	76	13.0		41.6	83	13.3		44.8
2	150	30.4	161	28.7		32.7	286	07.8		38.0	91	15.5		41.6	98	15.8		44.8
3	165	32.8	176	29.0		31.5	301	08.9		38.4	106	18.0		41.6	113	18.2		44.8
4	180	35.3	191	29.3		30.3	316	09.9		38.8	121	20.5		41.6	128	20.7		44.8
5	195	37.7	206	29.6	-4	29.1	331	11.0	-15	39.2	136	23.0	+19	41.6	143	23.2	+16	44.9
6	210	40.2	221	29.9	-4	27.9	346	12.0	-15	39.6	151	25.5	+19	41.6	158	25.7	+16	44.9
7	225	42.7	236	30.1		26.7	1	13.1		40.0	166	28.0		41.6	173	28.2		44.9
8	240	45.1	251	30.4		25.5	16	14.2		40.5	181	30.5		41.6	188	30.7		44.9
9	255	47.6	266	30.7		24.2	31	15.2		40.9	196	33.0		41.6	203	33.2		44.9
10	270	50.1	281	31.0		23.0	46	16.3		41.3	211	35.5		41.6	218	35.6		44.9
11	285	52.5	296	31.3	-4	21.8	61	17.4	-15	41.7	226	38.0	+19	41.6	233	38.1	+16	44.9
12	300	55.0	311	31.6	-4	20.6	76	18.4	-15	42.1	241	40.5	+19	41.6	248	40.6	+16	44.9
13	315	57.5	326	31.9		19.4	91	19.5		42.5	256	43.0		41.6	263	43.1		44.9
14	330	59.9	341	32.2		18.2	106	20.6		42.9	271	45.5		41.6	278	45.6		44.9
15	346	02.4	356	32.5		17.0	121	21.6		43.3	286	48.0		41.6	293	48.1		44.9
16	1	04.8	11	32.8		15.8	136	22.7		43.7	301	50.5		41.6	308	50.5		44.9
17	16	07.3	26	33.0	-4	14.5	151	23.8	-15	44.2	316	53.0	+19	41.6	323	53.0	+16	44.9
18	31	09.8	41	33.3	-4	13.3	166	24.8	-15	44.6	331	55.5	+19	41.6	338	55.5	+16	45.0
19	46	12.2	56	33.6		12.1	181	25.9		45.0	346	58.0		41.6	353	58.0		45.0
20	61	14.7	71	33.9		10.9	196	26.9		45.4	2	00.5		41.6	9	00.5		45.0
21	76	17.2	86	34.2		09.7	211	28.0		45.8	17	03.0		41.6	24	03.0		45.0
22	91	19.6	101	34.5		08.5	226	29.1		46.2	32	05.5		41.7	39	05.4		45.0
23	106	22.1	116	34.8		07.3	241	30.1		46.6	47	08.0		41.7	54	07.9		45.0
24	121	24.6	131	35.1	-4	06.1	256	31.2	-15	47.0	62	10.5	+19	41.7	69	10.4	+16	45.0
Dif	—			+3 +12			+11 -4			+25 0			+25 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 6			Edad: 27 ^d 3 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1 SD: 14:8 PMG: 10 ^h 35 ^m Rº: 49 ^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	177	07.6	-19	42.5	206	32.7	-22	20.8	15 49	16 39	17 32	7 33 47	13 36 54	
1	192	07.4		41.9	221	03.0 ¹¹³		22.5	17 01	48	37	15 48	13 54 54	
2	207	07.3		41.4	235	33.2 ¹¹²		24.0	12	16 55	41	7 00 48	14 09 53	
3	222	07.1		40.8	250	03.4 ¹¹²		25.4	21	17 02	46	6 47 48	22 53	
4	237	06.9		40.2	264	33.6 ¹¹²		26.7	30	08	50	36 48	33 53	
5	252	06.8	-19	39.6	279	03.8 ¹¹²	-22	28.0	16 38	17 14	17 53	6 26 48	14 44 52	
6	267	06.6	-19	39.1	293	34.0 ¹¹²	-22	29.1	16 54	17 26	18 02	6 04 49	15 05 52	
7	282	06.4		38.5	308	04.2 ¹¹²		30.1	17 07	36	09	5 47 49	22 51	
8	297	06.3		37.9	322	34.4 ¹¹²		30.9	19	46	16	33 49	37 51	
9	312	06.1		37.3	337	04.7 ¹¹³		31.7	29	17 54	23	5 20 49	15 49 51	
10	327	05.9		36.8	351	34.9 ¹¹²		32.4	17 46	18 09	36	4 59 49	16 11 50	
11	342	05.8	-19	36.2	6	05.1 ¹¹²	-22	33.0	18 01	18 23	18 49	4 40 49	16 29 50	
12	357	05.6	-19	35.6	20	35.3 ¹¹²	-22	33.4	18 15	18 37	19 03	4 23 49	16 47 49	
13	12	05.4		35.0	35	05.5 ¹¹²		33.8	30	18 52	18	4 06 49	17 04 49	
14	27	05.3		34.5	49	35.8 ¹¹³		34.0	18 45	19 09	19 37	3 47 49	23 48	
15	42	05.1		33.9	64	06.0 ¹¹²		34.2	19 03	29	20 01	26 49	44 47	
16	57	04.9		33.3	78	36.3 ¹¹³		34.2	14	42	16	3 14 49	17 57 46	
17	72	04.8	-19	32.7	93	06.5 ¹¹²	-22	34.1	19 26	19 57	20 35	2 59 49	18 11 46	
18	87	04.6	-19	32.1	107	36.8 ¹¹³	-22	33.9	19 40	20 15	20 59	2 42 49	18 28 46	
19	102	04.4		31.6	122	07.0 ¹¹²		33.6	19 58	38	21 31	21 49	49 45	
20	117	04.3		31.0	136	37.3 ¹¹³		33.2	20 06	20 49	21 49	12 48	18 59 44	
21	132	04.1		30.4	151	07.6 ¹¹³		32.7	15	21 02	22 10	2 00 49	19 11 43	
22	147	04.0		29.8	165	37.9 ¹¹³		32.1	26	17	22 39	1 48 48	23 43	
23	162	03.8		29.2	180	08.2 ¹¹³		31.4	38	35	23 29	33 48	38 42	
24	177	03.6	-19	28.6	194	38.5 ¹¹³	-22	30.6	20 52	21 58	** **	1 15 49	19 56 41	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 51 ^m 8		Mag: -4.6 PMG: 15 ^h 13 ^m			Mag: +1.1 PMG: 6 ^h 53 ^m			Mag: -2.6 PMG: 19 ^h 48 ^m			Mag: 0.0 PMG: 19 ^h 20 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	121	24.6	131	35.1	-4	06.1	256	31.2	-15	47.0	62	10.5	+19	41.7
1	136	27.0	146	35.4		04.8	271	32.3		47.4	77	13.0		41.7
2	151	29.5	161	35.7		03.6	286	33.3		47.8	92	15.5		41.7
3	166	32.0	176	36.0		02.4	301	34.4		48.2	107	18.0		41.7
4	181	34.4	191	36.3	-4	01.2	316	35.5		48.7	122	20.5		41.7
5	196	36.9	206	36.7	-4	00.0	331	36.5	-15	49.1	137	23.0	+19	41.7
6	211	39.3	221	37.0	-3	58.8	346	37.6	-15	49.5	152	25.5	+19	41.7
7	226	41.8	236	37.3		57.6	1	38.7		49.9	167	28.0		41.7
8	241	44.3	251	37.6		56.4	16	39.7		50.3	182	30.5		41.7
9	256	46.7	266	37.9		55.1	31	40.8		50.7	197	33.0		41.7
10	271	49.2	281	38.2		53.9	46	41.8		51.1	212	35.5		41.7
11	286	51.7	296	38.5	-3	52.7	61	42.9	-15	51.5	227	37.9	+19	41.7
12	301	54.1	311	38.8	-3	51.5	76	44.0	-15	51.9	242	40.4	+19	41.7
13	316	56.6	326	39.1		50.3	91	45.0		52.3	257	42.9		41.7
14	331	59.1	341	39.5		49.1	106	46.1		52.7	272	45.4		41.7
15	347	01.5	356	39.8		47.9	121	47.2		53.1	287	47.9		41.7
16	2	04.0	11	40.1		46.7	136	48.2		53.5	302	50.4		41.7
17	17	06.5	26	40.4	-3	45.5	151	49.3	-15	53.9	317	52.9	+19	41.7
18	32	08.9	41	40.7	-3	44.2	166	50.4	-15	54.3	332	55.4	+19	41.8
19	47	11.4	56	41.0		43.0	181	51.4		54.8	347	57.9		41.8
20	62	13.8	71	41.4		41.8	196	52.5		55.2	3	00.4		41.8
21	77	16.3	86	41.7		40.6	211	53.6		55.6	18	02.9		41.8
22	92	18.8	101	42.0		39.4	226	54.6		56.0	33	05.3		41.8
23	107	21.2	116	42.3		38.2	241	55.7		56.4	48	07.8		41.8
24	122	23.7	131	42.7	-3	37.0	256	56.8	-15	56.8	63	10.3	+19	41.8
Dif	—		+3		+12		+11		-4		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 11 ^m 9			Edad: 28 ^d 3 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 11 ^h 24 ^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	03.6	-19	28.6	194	38.5	-22	30.6	60 N	6 51	7 43	8 33	8 20	35	14 30	65
1	192	03.5		28.1	209	08.9 ¹¹⁴		29.7	58	46	35	21	8 03	36	14 48	63
2	207	03.3		27.5	223	39.2 ¹¹³		28.6	56	41	27	10	7 48	38	15 02	62
3	222	03.1		26.9	238	09.6 ¹¹⁴		27.5	54	37	21	8 01	35	39	15	60
4	237	03.0		26.3	252	40.0 ¹¹⁴		26.2	52	33	15	7 53	24	40	26	59
5	252	02.8	-19	25.7	267	10.4 ¹¹⁴	-22	24.9	50	6 30	7 09	7 45	7 14	40	15 36	58
6	267	02.7	-19	25.1	281	40.8 ¹¹⁴	-22	23.4	45	6 21	6 57	7 29	6 53	42	15 57	56
7	282	02.5		24.5	296	11.2 ¹¹⁴		21.9	40	14	47	16	36	43	16 13	55
8	297	02.3		23.9	310	41.6 ¹¹⁴		20.2	35	07	37	7 05	22	44	28	53
9	312	02.2		23.3	325	12.1 ¹¹⁵		18.4	30	6 00	29	6 55	6 09	45	16 40	52
10	327	02.0		22.8	339	42.6 ¹¹⁵		16.5	20	5 47	14	38	5 48	46	17 01	50
11	342	01.9	-19	22.2	354	13.1 ¹¹⁵	-22	14.6	10 N	5 35	6 00	6 22	5 29	48	17 19	49
12	357	01.7	-19	21.6	8	43.6 ¹¹⁵	-22	12.5	0	5 21	5 46	6 08	5 12	49	17 36	48
13	12	01.6		21.0	23	14.1 ¹¹⁵		10.3	10 S	5 05	32	5 54	4 55	49	17 53	46
14	27	01.4		20.4	37	44.7 ¹¹⁶		08.0	20	4 47	5 15	39	36	51	18 11	45
15	42	01.2		19.8	52	15.3 ¹¹⁶		05.6	30	23	4 54	21	15	52	31	43
16	57	01.1		19.2	66	45.9 ¹¹⁶		03.1	35	4 07	42	5 10	4 03	52	43	42
17	72	00.9	-19	18.6	81	16.5 ¹¹⁶	-22	00.5	40	3 49	4 27	4 58	3 48	53	18 57	41
18	87	00.8	-19	18.0	95	47.2 ¹¹⁷	-21	57.8	45	3 25	4 09	4 44	3 31	54	19 14	39
19	102	00.6		17.4	110	17.8 ¹¹⁶		55.0	50	2 53	3 46	26	10	56	34	37
20	117	00.5		16.8	124	48.5 ¹¹⁷		52.1	52	35	35	18	3 00	56	43	36
21	132	00.3		16.2	139	19.3 ¹¹⁸		49.1	54	2 14	22	4 09	2 49	57	19 54	35
22	147	00.1		15.6	153	50.0 ¹¹⁷		46.0	56	1 45	3 07	3 58	36	58	20 06	33
23	162	00.0		15.0	168	20.8 ¹¹⁸		42.7	58	0 55	2 49	46	21	59	20	32
24	176	59.8	-19	14.4	182	51.6 ¹¹⁸	-21	39.4	60 S	** **	2 26	3 32	2 04	60	20 37	29
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 47 ^m 8			Mag: -4.6 PMG: 15 ^h 13 ^m			Mag: +1.1 PMG: 6 ^h 52 ^m			Mag: -2.6 PMG: 19 ^h 44 ^m			Mag: 0.0 PMG: 19 ^h 16 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	122	23.7			131	42.7	-3	37.0	256	56.8	-15	56.8	63	10.3	+19	41.8
1	137	26.2			146	43.0		35.8	271	57.8		57.2	78	12.8		41.8
2	152	28.6			161	43.3		34.5	286	58.9		57.6	93	15.3		41.8
3	167	31.1			176	43.6		33.3	302	00.0		58.0	108	17.8		41.8
4	182	33.6			191	44.0		32.1	317	01.0		58.4	123	20.3		41.8
5	197	36.0			206	44.3	-3	30.9	332	02.1	-15	58.8	138	22.8	+19	41.8
6	212	38.5			221	44.6	-3	29.7	347	03.2	-15	59.2	153	25.2	+19	41.8
7	227	41.0			236	45.0		28.5	2	04.2	-15	59.6	168	27.7		41.8
8	242	43.4			251	45.3		27.3	17	05.3	-16	00.0	183	30.2		41.8
9	257	45.9			266	45.6		26.1	32	06.3	-16	00.4	198	32.7		41.8
10	272	48.3			281	46.0		24.9	47	07.4		00.8	213	35.2		41.9
11	287	50.8			296	46.3	-3	23.6	62	08.5	-16	01.2	228	37.7	+19	41.9
12	302	53.3			311	46.6	-3	22.4	77	09.5	-16	01.6	243	40.1	+19	41.9
13	317	55.7			326	47.0		21.2	92	10.6		02.0	258	42.6		41.9
14	332	58.2			341	47.3		20.0	107	11.7		02.4	273	45.1		41.9
15	348	00.7			356	47.6		18.8	122	12.7		02.8	288	47.6		41.9
16	3	03.1			11	48.0		17.6	137	13.8		03.2	303	50.1		41.9
17	18	05.6			26	48.3	-3	16.4	152	14.9	-16	03.6	318	52.6	+19	41.9
18	33	08.1			41	48.7	-3	15.2	167	15.9	-16	04.0	333	55.0	+19	41.9
19	48	10.5			56	49.0		14.0	182	17.0		04.4	348	57.5		41.9
20	63	13.0			71	49.4		12.7	197	18.1		04.8	4	00.0		41.9
21	78	15.5			86	49.7		11.5	212	19.1		05.2	19	02.5		41.9
22	93	17.9			101	50.0		10.3	227	20.2		05.6	34	05.0		41.9
23	108	20.4			116	50.4		09.1	242	21.3		06.0	49	07.4		41.9
24	123	22.8			131	50.7	-3	07.9	257	22.3	-16	06.4	64	09.9	+19	42.0
Dif	—		+3		+12		+11		-4		+25		0		+25	

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: 29 ^d 3 PHE { SD: 14/7 PMG: 12 ^h 12 ^m R°: 47 ^m 4 ^h : 53/9 12 ^h : 53/9 20 ^h : 53/9															
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	176	59.8	-19	14.4	182	51.6	-21	39.4	60 N	15 54	16 43	17 36	8 55	24	15 35	73				
1	191	59.7		13.8	197	22.4 ¹¹⁸		36.0 ³⁴	58	16 06		52	40	39	27	15 51				
2	206	59.5		13.2	211	53.3 ¹¹⁹		32.5 ³⁵	56	16	16 59	45	26	29	16 04	67				
3	221	59.4		12.6	226	24.2 ¹¹⁹		28.9 ³⁶	54	25	17 05	49	14	31	15	65				
4	236	59.2		12.0	240	55.1 ¹¹⁹		25.2 ³⁷	52	33		11	53	8 04	32	25				
5	251	59.1	-19	11.4	255	26.0 ¹¹⁹	-21	21.4 ³⁸	50	16 41	17 17	17 56	7 54	34	16 34	62				
6	266	58.9	-19	10.8	269	57.0 ¹²⁰	-21	17.5 ³⁹	45	16 57	17 29	18 04	7 35	36	16 53	59				
7	281	58.8		10.2	284	28.0 ¹²⁰		13.5 ⁴⁰	40	17 10		39	12	19 39	17 08	57				
8	296	58.6		09.6	298	59.0 ¹²⁰		09.4 ⁴¹	35	21	48	18	7 06	40	21	55				
9	311	58.5		09.0	313	30.1 ¹²¹		05.2 ⁴²	30	30	17 56	25	6 54	42	32	54				
10	326	58.3		08.4	328	01.2 ¹²¹	-21	00.9 ⁴³	20	17 47	18 10	37	34	44	17 51	51				
11	341	58.2	-19	07.8	342	32.3 ¹²¹	-20	56.5 ⁴⁴	10 N	18 02	18 24	18 50	6 17	45	18 08	49				
12	356	58.0	-19	07.2	357	03.5 ¹²²	-20	52.0 ⁴⁵	0	18 16	18 38	19 03	6 01	47	18 24	46				
13	11	57.9		06.6	11	34.7 ¹²²		47.5 ⁴⁵	10 S	30	18 52	18	5 44	49	39	44				
14	26	57.7		06.0	26	05.9 ¹²²		42.8 ⁴⁷	20	18 45	19 09	19 37	27	51	18 56	42				
15	41	57.6		05.3	40	37.2 ¹²³		38.0 ⁴⁸	30	19 02	29	20 00	5 07	53	19 14	40				
16	56	57.4		04.7	55	08.4 ¹²²		33.2 ⁴⁸	35	13	41	15	4 55	54	25	38				
17	71	57.3	-19	04.1	69	39.8 ¹²⁴	-20	28.2 ⁵⁰	40	19 24	19 55	20 33	4 41	56	19 38	36				
18	86	57.1	-19	03.5	84	11.1 ¹²³	-20	23.2 ⁵⁰	45	19 38	20 13	20 56	4 25	58	19 53	33				
19	101	57.0		02.9	98	42.5 ¹²⁴		18.0 ⁵²	50	19 55	35	21 28	4 06	60	20 11	31				
20	116	56.8		02.3	113	14.0 ¹²⁵		12.8 ⁵²	52	20 03	46	21 44	3 56	62	19	30				
21	131	56.7		01.7	127	45.4 ¹²⁴		07.5 ⁵³	54	12	20 58	22 04	46	63	29	27				
22	146	56.5		01.1	142	16.9 ¹²⁵	-20	02.1 ⁵⁴	56	23	21 13	22 31	34	64	39	26				
23	161	56.4	-19	00.5	156	48.5 ¹²⁶	-19	56.6 ⁵⁵	58	34	30	23 12	20	67	20 52	23				
24	176	56.2	-18	59.8	171	20.0 ¹²⁵	-19	51.0 ⁵⁶	60 S	20 48	21 52	** **	3 04	69	21 06	20				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 43 ^m 9				Mag: -4.6 PMG: 15 ^h 12 ^m				Mag: +1.1 PMG: 6 ^h 50 ^m				Mag: -2.6 PMG: 19 ^h 40 ^m				Mag: +0.1 PMG: 19 ^h 12 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	123	22.8	131	50.7	-3	07.9	257	22.3	-16	06.4	64	09.9	+19	42.0	71	09.3	+16	45.4		
1	138	25.3	146	51.1		06.7	272	23.4		06.8	79	12.4		42.0	86	11.8		45.5		
2	153	27.8	161	51.4		05.5	287	24.5		07.2	94	14.9		42.0	101	14.2		45.5		
3	168	30.2	176	51.8		04.3	302	25.5		07.6	109	17.3		42.0	116	16.7		45.5		
4	183	32.7	191	52.2		03.1	317	26.6		08.0	124	19.8		42.0	131	19.2		45.5		
5	198	35.2	206	52.5	-3	01.8	332	27.7	-16	08.4	139	22.3	+19	42.0	146	21.7	+16	45.5		
6	213	37.6	221	52.9	-3	00.6	347	28.7	-16	08.8	154	24.8	+19	42.0	161	24.1	+16	45.5		
7	228	40.1	236	53.2	-2	59.4	2	29.8		09.2	169	27.3		42.0	176	26.6		45.5		
8	243	42.6	251	53.6		58.2	17	30.9		09.6	184	29.7		42.0	191	29.1		45.5		
9	258	45.0	266	53.9		57.0	32	31.9		10.0	199	32.2		42.0	206	31.5		45.5		
10	273	47.5	281	54.3		55.8	47	33.0		10.4	214	34.7		42.0	221	34.0		45.5		
11	288	49.9	296	54.6	-2	54.6	62	34.1	-16	10.8	229	37.2	+19	42.0	236	36.5	+16	45.6		
12	303	52.4	311	55.0	-2	53.4	77	35.1	-16	11.2	244	39.6	+19	42.1	251	38.9	+16	45.6		
13	318	54.9	326	55.4		52.2	92	36.2		11.6	259	42.1		42.1	266	41.4		45.6		
14	333	57.3	341	55.7		51.0	107	37.3		12.0	274	44.6		42.1	281	43.9		45.6		
15	348	59.8	356	56.1		49.7	122	38.3		12.4	289	47.0		42.1	296	46.4		45.6		
16	4	02.3	11	56.5		48.5	137	39.4		12.8	304	49.5		42.1	311	48.8		45.6		
17	19	04.7	26	56.8	-2	47.3	152	40.5	-16	13.2	319	52.0	+19	42.1	326	51.3	+16	45.6		
18	34	07.2	41	57.2	-2	46.1	167	41.5	-16	13.6	334	54.5	+19	42.1	341	53.8	+16	45.6		
19	49	09.7	56	57.6		44.9	182	42.6		14.0	349	56.9		42.1	356	56.2		45.6		
20	64	12.1	71	57.9		43.7	197	43.7		14.4	4	59.4		42.1	11	58.7		45.7		
21	79	14.6	86	58.3		42.5	212	44.8		14.8	20	01.9		42.1	27	01.2		45.7		
22	94	17.1	101	58.7		41.3	227	45.8		15.2	35	04.4		42.1	42	03.6		45.7		
23	109	19.5	116	59.0		40.1	242	46.9		15.6	50	06.8		42.2	57	06.1		45.7		
24	124	22.0	131	59.4	-2	38.9	257	48.0	-16	16.0	65	09.3	+19	42.2	72	08.6	+16	45.7		
Dif	—		+4		+12		+11		-4		+25		0		+25					

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: 0 ^d 5 PHE { 4 ^h : 53'9 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 12 ^h 59 ^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	176	56.2	-18	59.8	171	20.0	-19	51.0	60 N	6 48	7 40	8 29	9 19	17	16 48	75
1	191	56.1		59.2	185	51.6 ¹²⁶		45.3 ⁵⁷	58	43	32	17	9 06	20	17 00	72
2	206	56.0		58.6	200	23.3 ¹²⁷		39.6 ⁵⁷	56	39	25	8 07	8 55	22	11	70
3	221	55.8		58.0	214	55.0 ¹²⁷		33.7 ⁵⁹	54	35	18	7 58	45	25	20	68
4	236	55.7		57.4	229	26.7 ¹²⁷		27.8 ⁵⁹	52	31	12	50	36	27	28	66
5	251	55.5	-18	56.8	243	58.5 ¹²⁸	-19	21.8 ⁶⁰	50	6 28	7 07	7 43	8 28	28	17 36	64
6	266	55.4	-18	56.1	258	30.2 ¹²⁷	-19	15.7 ⁶¹	45	6 20	6 55	7 27	8 11	32	17 52	61
7	281	55.2		55.5	273	02.1 ¹²⁹		09.5 ⁶²	40	13	45	14	7 58	33	18 05	58
8	296	55.1		54.9	287	33.9 ¹²⁸	-19	03.2 ⁶³	35	06	36	7 03	46	36	16	56
9	311	55.0		54.3	302	05.9 ¹³⁰	-18	56.8 ⁶⁴	30	6 00	28	6 54	36	37	26	54
10	326	54.8		53.7	316	37.8 ¹²⁹		50.4 ⁶⁴	20	5 47	14	37	18	41	42	51
11	341	54.7	-18	53.0	331	09.8 ¹³⁰	-18	43.8 ⁶⁶	10 N	5 35	6 00	6 23	7 02	44	18 57	47
12	356	54.5	-18	52.4	345	41.8 ¹³⁰	-18	37.2 ⁶⁶	0	5 22	5 47	6 09	6 48	46	19 10	45
13	11	54.4		51.8	0	13.9 ¹³¹		30.5 ⁶⁷	10 S	5 06	33	5 55	33	48	23	43
14	26	54.2		51.2	14	46.0 ¹³¹		23.7 ⁶⁸	20	4 48	5 16	40	18	50	38	39
15	41	54.1		50.6	29	18.1 ¹³¹		16.9 ⁶⁸	30	25	4 56	22	6 00	54	19 54	36
16	56	54.0		49.9	43	50.3 ¹³²		09.9 ⁷⁰	35	4 10	44	12	5 49	56	20 03	34
17	71	53.8	-18	49.3	58	22.5 ¹³²	-18	02.9 ⁷⁰	40	3 52	4 30	5 01	5 37	58	20 14	32
18	86	53.7	-18	48.7	72	54.7 ¹³²	-17	55.8 ⁷¹	45	3 29	4 12	4 47	5 23	60	20 26	30
19	101	53.5		48.1	87	27.0 ¹³³		48.6 ⁷²	50	2 57	3 50	30	5 06	63	42	25
20	116	53.4		47.4	101	59.3 ¹³³		41.4 ⁷²	52	41	39	22	4 58	65	49	24
21	131	53.3		46.8	116	31.7 ¹³⁴		34.1 ⁷³	54	2 21	27	13	49	66	20 56	23
22	146	53.1		46.2	131	04.1 ¹³⁴		26.6 ⁷⁵	56	1 54	3 12	4 02	38	69	21 05	21
23	161	53.0		45.5	145	36.5 ¹³⁴		19.2 ⁷⁴	58	1 13	2 55	3 51	27	71	15	18
24	176	52.9	-18	44.9	160	09.0 ¹³⁵	-17	11.6 ⁷⁶	60 S	** **	2 33	3 37	4 13	74	21 26	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 15 ^h 40 ^m 0		Mag: -4.6 PMG: 15 ^h 12 ^m		Mag: +1.1 PMG: 6 ^h 48 ^m		Mag: -2.6 PMG: 19 ^h 36 ^m		Mag: +0.1 PMG: 19 ^h 08 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	124	22.0	131	59.4	-2 38.9	257	48.0	-16 16.0	65	09.3	+19 42.2	72	08.6	+16 45.7	
1	139	24.4	146	59.8	37.6	272	49.0	16.4	80	11.8	42.2	87	11.0	45.7	
2	154	26.9	162	00.2	36.4	287	50.1	16.8	95	14.2	42.2	102	13.5	45.7	
3	169	29.4	177	00.5	35.2	302	51.2	17.2	110	16.7	42.2	117	16.0	45.7	
4	184	31.8	192	00.9	34.0	317	52.2	17.6	125	19.2	42.2	132	18.4	45.8	
5	199	34.3	207	01.3	-2 32.8	332	53.3	-16 17.9	140	21.6	+19 42.2	147	20.9	+16 45.8	
6	214	36.8	222	01.7	-2 31.6	347	54.4	-16 18.3	155	24.1	+19 42.2	162	23.4	+16 45.8	
7	229	39.2	237	02.1	30.4	2	55.4	18.7	170	26.6	42.2	177	25.8	45.8	
8	244	41.7	252	02.4	29.2	17	56.5	19.1	185	29.0	42.2	192	28.3	45.8	
9	259	44.2	267	02.8	28.0	32	57.6	19.5	200	31.5	42.3	207	30.8	45.8	
10	274	46.6	282	03.2	26.8	47	58.6	19.9	215	34.0	42.3	222	33.2	45.8	
11	289	49.1	297	03.6	-2 25.6	62	59.7	-16 20.3	230	36.4	+19 42.3	237	35.7	+16 45.8	
12	304	51.6	312	04.0	-2 24.4	78	00.8	-16 20.7	245	38.9	+19 42.3	252	38.2	+16 45.8	
13	319	54.0	327	04.4	23.1	93	01.8	21.1	260	41.4	42.3	267	40.6	45.9	
14	334	56.5	342	04.7	21.9	108	02.9	21.5	275	43.8	42.3	282	43.1	45.9	
15	349	58.9	357	05.1	20.7	123	04.0	21.9	290	46.3	42.3	297	45.6	45.9	
16	5	01.4	12	05.5	19.5	138	05.0	22.3	305	48.8	42.3	312	48.0	45.9	
17	20	03.9	27	05.9	-2 18.3	153	06.1	-16 22.7	320	51.2	+19 42.3	327	50.5	+16 45.9	
18	35	06.3	42	06.3	-2 17.1	168	07.2	-16 23.1	335	53.7	+19 42.3	342	52.9	+16 45.9	
19	50	08.8	57	06.7	15.9	183	08.3	23.4	350	56.1	42.4	357	55.4	45.9	
20	65	11.3	72	07.1	14.7	198	09.3	23.8	5	58.6	42.4	12	57.9	45.9	
21	80	13.7	87	07.5	13.5	213	10.4	24.2	21	01.1	42.4	28	00.3	46.0	
22	95	16.2	102	07.9	12.3	228	11.5	24.6	36	03.5	42.4	43	02.8	46.0	
23	110	18.7	117	08.3	11.1	243	12.5	25.0	51	06.0	42.4	58	05.3	46.0	
24	125	21.1	132	08.7	-2 09.9	258	13.6	-16 25.4	66	08.5	+19 42.4	73	07.7	+16 46.0	
Dif	—		+4		+12	+11		-4	+25		0	+25		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 6			Edad: 1 ^d 5 SD: 14:7 PMG: 13 ^h 44 ^m	PHE { 4 ^h : 54:0 12 ^h : 54:1 20 ^h : 54:1 R°: 44 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	176	52.9	-18	44.9	160	09.0	-17 11.6	60 N	15 59	16 48	17 40	9 36 13	18 03 77			
1	191	52.7		44.3	174	41.5 ¹³⁵	-17 04.0	58	16 10	16 56	44	26 16	12 74			
2	206	52.6		43.7	189	14.1 ¹³⁶	-16 56.3	56	20	17 03	48	17 19	21 71			
3	221	52.4		43.0	203	46.7 ¹³⁶	48.5	54	29	09	52	10 20	28 69			
4	236	52.3		42.4	218	19.3 ¹³⁶	40.6	52	37	15	56	9 03 22	34 67			
5	251	52.2	-18	41.8	232	51.9 ¹³⁶	-16 32.7	50	16 44	17 20	17 59	8 56 24	18 40 65			
6	266	52.0	-18	41.1	247	24.6 ¹³⁷	-16 24.7	45	16 59	17 31	18 07	8 43 27	18 53 61			
7	281	51.9		40.5	261	57.4 ¹³⁸	16.6	40	17 12	41	14	31 31	19 03 58			
8	296	51.8		39.9	276	30.2 ¹³⁸	08.5	35	23	50	20	22 32	12 56			
9	311	51.6		39.2	291	03.0 ¹³⁸	-16 00.3	30	32	17 57	26	8 13 35	20 53			
10	326	51.5		38.6	305	35.8 ¹³⁸	-15 52.0	20	17 48	18 12	38	7 59 38	33 50			
11	341	51.4	-18	38.0	320	08.7 ¹³⁹	-15 43.6	10 N	18 03	18 25	18 50	7 46 41	19 44 47			
12	356	51.2	-18	37.3	334	41.6 ¹³⁹	-15 35.2	0	18 16	18 38	19 03	7 34 44	19 55 44			
13	11	51.1		36.7	349	14.6 ¹⁴⁰	26.7	10 S	30	18 52	18	21 48	20 06 40			
14	26	51.0		36.1	3	47.5 ¹³⁹	18.2	20	18 44	19 08	36	7 08 51	17 37			
15	41	50.8		35.4	18	20.6 ¹⁴¹	09.6	30	19 01	28	19 59	6 54 53	30 34			
16	56	50.7		34.8	32	53.6 ¹⁴⁰	-15 00.9	35	11	39	20 13	45 56	37 32			
17	71	50.6	-18	34.1	47	26.7 ¹⁴¹	-14 52.1	40	19 23	19 53	20 31	6 35 58	20 46 29			
18	86	50.4	-18	33.5	61	59.9 ¹⁴²	-14 43.3	45	19 36	20 10	20 53	6 23 61	20 56 26			
19	101	50.3		32.9	76	33.0 ¹⁴¹	34.5	50	19 53	32	21 24	09 65	21 07 23			
20	116	50.2		32.2	91	06.2 ¹⁴²	25.5	52	20 01	42	40	6 03 66	13 21			
21	131	50.1		31.6	105	39.4 ¹⁴²	16.5	54	09	20 54	21 59	5 55 69	19 19			
22	146	49.9		30.9	120	12.7 ¹⁴³	-14 07.5	56	19	21 08	22 23	47 70	26 16			
23	161	49.8		30.3	134	46.0 ¹⁴³	-13 58.3	58	30	25	22 59	38 73	33 15			
24	176	49.7	-18	29.7	149	19.3 ¹⁴³	-13 49.2	60 S	20 43	21 45	** **	5 27 76	21 42 11			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 36 ^m 0		Mag: -4.6 PMG: 15 ^h 11 ^m		Mag: +1.1 PMG: 6 ^h 47 ^m		Mag: -2.6 PMG: 19 ^h 32 ^m		Mag: +0.1 PMG: 19 ^h 04 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	125	21.1	132	08.7	-2	09.9	258	13.6	-16	25.4	66	08.5	+19	42.4	73	07.7	+16	46.0
1	140	23.6	147	09.1		08.7	273	14.7		25.8	81	10.9		42.4	88	10.2		46.0
2	155	26.1	162	09.5		07.4	288	15.7		26.2	96	13.4		42.4	103	12.6		46.0
3	170	28.5	177	09.9		06.2	303	16.8		26.6	111	15.8		42.4	118	15.1		46.0
4	185	31.0	192	10.3		05.0	318	17.9		27.0	126	18.3		42.5	133	17.6		46.0
5	200	33.4	207	10.7	-2	03.8	333	18.9	-16	27.4	141	20.8	+19	42.5	148	20.0	+16	46.1
6	215	35.9	222	11.1	-2	02.6	348	20.0	-16	27.7	156	23.2	+19	42.5	163	22.5	+16	46.1
7	230	38.4	237	11.5		01.4	3	21.1		28.1	171	25.7		42.5	178	25.0		46.1
8	245	40.8	252	11.9	-2	00.2	18	22.2		28.5	186	28.1		42.5	193	27.4		46.1
9	260	43.3	267	12.3	-1	59.0	33	23.2		28.9	201	30.6		42.5	208	29.9		46.1
10	275	45.8	282	12.7		57.8	48	24.3		29.3	216	33.0		42.5	223	32.3		46.1
11	290	48.2	297	13.1	-1	56.6	63	25.4	-16	29.7	231	35.5	+19	42.5	238	34.8	+16	46.1
12	305	50.7	312	13.5	-1	55.4	78	26.4	-16	30.1	246	38.0	+19	42.6	253	37.3	+16	46.2
13	320	53.2	327	13.9		54.2	93	27.5		30.5	261	40.4		42.6	268	39.7		46.2
14	335	55.6	342	14.4		53.0	108	28.6		30.9	276	42.9		42.6	283	42.2		46.2
15	350	58.1	357	14.8		51.8	123	29.6		31.2	291	45.3		42.6	298	44.6		46.2
16	6	00.5	12	15.2		50.6	138	30.7		31.6	306	47.8		42.6	313	47.1		46.2
17	21	03.0	27	15.6	-1	49.4	153	31.8	-16	32.0	321	50.2	+19	42.6	328	49.6	+16	46.2
18	36	05.5	42	16.0	-1	48.2	168	32.9	-16	32.4	336	52.7	+19	42.6	343	52.0	+16	46.2
19	51	07.9	57	16.4		47.0	183	33.9		32.8	351	55.1		42.6	358	54.5		46.2
20	66	10.4	72	16.9		45.7	198	35.0		33.2	6	57.6		42.7	13	56.9		46.3
21	81	12.9	87	17.3		44.5	213	36.1		33.6	22	00.0		42.7	28	59.4		46.3
22	96	15.3	102	17.7		43.3	228	37.1		34.0	37	02.5		42.7	44	01.9		46.3
23	111	17.8	117	18.1		42.1	243	38.2		34.3	52	04.9		42.7	59	04.3		46.3
24	126	20.3	132	18.5	-1	40.9	258	39.3	-16	34.7	67	07.4	+19	42.7	74	06.8	+16	46.3
Dif	—		+4		+12		+11		-4		+25		0		+25			

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: 2 ^d 5 PHE { SD: 14'7 PMG: 14 ^h 28 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	49.7	-18 29.7	149	19.3	-13 49.2	93	60 N	6 45	7 36	8 25		9 49	11	19 20 77
1	191	49.5	29.0	163	52.7 ¹⁴⁴	39.9	93	58	40	29	14		42	13	26 74
2	206	49.4	28.4	178	26.1 ¹⁴⁴	30.6	93	56	36	22	8 04		36	15	32 71
3	221	49.3	27.7	192	59.5 ¹⁴⁴	21.3	93	54	32	16	7 55		30	18	37 69
4	236	49.2	27.1	207	32.9 ¹⁴⁴	11.9	94	52	29	10	47		25	20	41 68
5	251	49.0	-18 26.4	222	06.4 ¹⁴⁵	-13 02.4	95	50	6 26	7 05	7 40		9 20	22	19 45 66
6	266	48.9	-18 25.8	236	39.9 ¹⁴⁵	-12 52.9	95	45	6 18	6 54	7 25		9 10	25	19 54 62
7	281	48.8	25.1	251	13.5 ¹⁴⁶	43.3	96	40	11	44	13		9 02	27	20 01 59
8	296	48.6	24.5	265	47.0 ¹⁴⁵	33.6	97	35	6 05	35	7 02		8 54	31	08 56
9	311	48.5	23.8	280	20.6 ¹⁴⁶	23.9	97	30	5 59	28	6 53		48	33	13 54
10	326	48.4	23.2	294	54.2 ¹⁴⁶	14.2	97	20	47	14	37		37	36	23 49
11	341	48.3	-18 22.5	309	27.9 ¹⁴⁷	-12 04.4	98	10 N	5 35	6 01	6 23		8 27	40	20 31 46
12	356	48.1	-18 21.9	324	01.6 ¹⁴⁷	-11 54.5	99	0	5 22	5 47	6 09		8 18	43	20 39 42
13	11	48.0	21.2	338	35.3 ¹⁴⁷	44.6	99	10 S	5 07	33	5 56		8 09	46	46 40
14	26	47.9	20.6	353	09.0 ¹⁴⁷	34.7	99	20	4 50	5 18	41		7 59	49	20 54 36
15	41	47.8	19.9	7	42.8 ¹⁴⁸	24.7	100	30	27	4 58	24		47	54	21 04 31
16	56	47.6	19.3	22	16.5 ¹⁴⁷	14.6	101	35	4 12	46	14		41	56	09 29
17	71	47.5	-18 18.6	36	50.3 ¹⁴⁸	-11 04.5	101	40	3 55	4 32	5 03		7 33	59	21 15 27
18	86	47.4	-18 18.0	51	24.2 ¹⁴⁹	-10 54.4	101	45	3 32	4 16	4 50		7 24	62	21 22 24
19	101	47.3	17.3	65	58.0 ¹⁴⁸	44.2	102	50	3 02	3 54	33		14	65	30 20
20	116	47.2	16.7	80	31.9 ¹⁴⁹	33.9	103	52	2 46	43	25		09	67	34 18
21	131	47.0	16.0	95	05.8 ¹⁴⁹	23.6	103	54	27	32	17		7 04	69	38 17
22	146	46.9	15.4	109	39.7 ¹⁴⁹	13.3	103	56	2 03	18	4 07		6 57	72	42 15
23	161	46.8	14.7	124	13.6 ¹⁴⁹	-10 02.9	104	58	1 27	3 01	3 56		51	74	48 12
24	176	46.7	-18 14.1	138	47.6 ¹⁵⁰	-9 52.5	104	60 S	** **	2 41	3 43		6 43	77	21 53 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 32 ^m 1		Mag: -4.6 PMG: 15 ^h 10 ^m		Mag: +1.0 PMG: 6 ^h 45 ^m		Mag: -2.6 PMG: 19 ^h 28 ^m		Mag: +0.1 PMG: 19 ^h 00 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	126	20.3	132	18.5	-1	40.9	258	39.3	-16	34.7	67	07.4	+19	42.7	74	06.8	+16	46.3
1	141	22.7	147	19.0		39.7	273	40.3		35.1	82	09.9		42.7	89	09.2		46.3
2	156	25.2	162	19.4		38.5	288	41.4		35.5	97	12.3		42.7	104	11.7		46.3
3	171	27.7	177	19.8		37.3	303	42.5		35.9	112	14.8		42.7	119	14.1		46.4
4	186	30.1	192	20.2		36.1	318	43.6		36.3	127	17.2		42.8	134	16.6		46.4
5	201	32.6	207	20.7	-1	34.9	333	44.6	-16	36.7	142	19.7	+19	42.8	149	19.1	+16	46.4
6	216	35.0	222	21.1	-1	33.7	348	45.7	-16	37.0	157	22.1	+19	42.8	164	21.5	+16	46.4
7	231	37.5	237	21.5		32.5	3	46.8		37.4	172	24.6		42.8	179	24.0		46.4
8	246	40.0	252	22.0		31.3	18	47.8		37.8	187	27.0		42.8	194	26.4		46.4
9	261	42.4	267	22.4		30.1	33	48.9		38.2	202	29.5		42.8	209	28.9		46.4
10	276	44.9	282	22.8		28.9	48	50.0		38.6	217	31.9		42.8	224	31.3		46.5
11	291	47.4	297	23.3	-1	27.7	63	51.1	-16	39.0	232	34.3	+19	42.9	239	33.8	+16	46.5
12	306	49.8	312	23.7	-1	26.5	78	52.1	-16	39.3	247	36.8	+19	42.9	254	36.2	+16	46.5
13	321	52.3	327	24.1		25.3	93	53.2		39.7	262	39.2		42.9	269	38.7		46.5
14	336	54.8	342	24.6		24.1	108	54.3		40.1	277	41.7		42.9	284	41.2		46.5
15	351	57.2	357	25.0		22.9	123	55.3		40.5	292	44.1		42.9	299	43.6		46.5
16	6	59.7	12	25.5		21.7	138	56.4		40.9	307	46.6		42.9	314	46.1		46.5
17	22	02.1	27	25.9	-1	20.5	153	57.5	-16	41.3	322	49.0	+19	42.9	329	48.5	+16	46.6
18	37	04.6	42	26.3	-1	19.3	168	58.6	-16	41.6	337	51.5	+19	43.0	344	51.0	+16	46.6
19	52	07.1	57	26.8		18.1	183	59.6		42.0	352	53.9		43.0	359	53.4		46.6
20	67	09.5	72	27.2		16.9	199	00.7		42.4	7	56.4		43.0	14	55.9		46.6
21	82	12.0	87	27.7		15.7	214	01.8		42.8	22	58.8		43.0	29	58.3		46.6
22	97	14.5	102	28.1		14.5	229	02.8		43.2	38	01.2		43.0	45	00.8		46.6
23	112	16.9	117	28.6		13.3	244	03.9		43.6	53	03.7		43.0	60	03.2		46.7
24	127	19.4	132	29.0	-1	12.1	259	05.0	-16	43.9	68	06.1	+19	43.0	75	05.7	+16	46.7
Dif	—		+4	+12		+11	-4		+24	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 0			Edad: 3 ^d 5 PHE { 4 ^h : 54/4 12 ^h : 54/6 20 ^h : 54/7 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	176	46.7	-18	14.1	138	47.6	-9 52.5	60 N	16 04	16 52	17 44	10 00 9	20 37 77						
1	191	46.6		13.4	153	21.6 ¹⁵⁰	42.0 ¹⁰⁵	58	15	17 00	48	9 55 12	40 75						
2	206	46.4		12.7	167	55.6 ¹⁵⁰	31.5 ¹⁰⁵	56	25	06	52	51 15	43 73						
3	221	46.3		12.1	182	29.6 ¹⁵⁰	20.9 ¹⁰⁶	54	33	12	56	48 16	46 70						
4	236	46.2		11.4	197	03.6 ¹⁵⁰	-9 10.3 ¹⁰⁶	52	41	18	17 59	45 18	49 68						
5	251	46.1	-18	10.8	211	37.7 ¹⁵¹	-8 59.7 ¹⁰⁶	50	16 47	17 23	18 02	9 42 19	20 51 66						
6	266	46.0	-18	10.1	226	11.7 ¹⁵⁰	-8 49.0 ¹⁰⁷	45	17 02	17 34	18 09	9 35 23	20 56 62						
7	281	45.8		09.4	240	45.8 ¹⁵¹	38.2 ¹⁰⁸	40	14	43	16	29 27	21 00 59						
8	296	45.7		08.8	255	19.9 ¹⁵¹	27.5 ¹⁰⁷	35	25	51	22	25 29	04 56						
9	311	45.6		08.1	269	54.0 ¹⁵¹	16.7 ¹⁰⁸	30	34	17 59	28	21 31	07 54						
10	326	45.5		07.5	284	28.1 ¹⁵¹	-8 05.8 ¹⁰⁹	20	17 50	18 13	39	13 36	12 50						
11	341	45.4	-18	06.8	299	02.3 ¹⁵²	-7 55.0 ¹⁰⁸	10 N	18 03	18 25	18 51	9 07 39	21 17 46						
12	356	45.3	-18	06.1	313	36.4 ¹⁵¹	-7 44.0 ¹¹⁰	0	18 17	18 38	19 04	9 01 42	21 21 43						
13	11	45.1		05.5	328	10.6 ¹⁵²	33.1 ¹⁰⁹	10 S	30	18 52	18	8 55 46	26 39						
14	26	45.0		04.8	342	44.7 ¹⁵¹	22.1 ¹¹⁰	20	18 44	19 07	35	48 50	30 36						
15	41	44.9		04.1	357	18.9 ¹⁵²	-7 11.1 ¹¹⁰	30	19 00	26	19 58	41 54	35 32						
16	56	44.8		03.5	11	53.1 ¹⁵²	-7 00.0 ¹¹¹	35	10	38	20 12	37 56	38 29						
17	71	44.7	-18	02.8	26	27.3 ¹⁵²	-6 48.9 ¹¹¹	40	19 21	19 51	20 29	8 32 59	21 42 26						
18	86	44.6	-18	02.1	41	01.5 ¹⁵²	-6 37.8 ¹¹¹	45	19 34	20 08	20 50	8 26 62	21 46 23						
19	101	44.5		01.5	55	35.7 ¹⁵²	26.7 ¹¹¹	50	50	29	21 20	19 66	50 20						
20	116	44.3		00.8	70	10.0 ¹⁵³	15.5 ¹¹²	52	19 58	39	35	16 68	52 18						
21	131	44.2	-18	00.1	84	44.2 ¹⁵²	-6 04.2 ¹¹³	54	20 06	20 51	21 53	13 69	55 15						
22	146	44.1	-17	59.5	99	18.4 ¹⁵²	-5 53.0 ¹¹²	56	16	21 04	22 16	09 72	21 57 14						
23	161	44.0		58.8	113	52.6 ¹⁵²	41.7 ¹¹³	58	26	20	22 48	05 74	22 00 11						
24	176	43.9	-17	58.1	128	26.9 ¹⁵³	-5 30.4 ¹¹³	60 S	20 39	21 39	** **	8 00 77	22 03 9						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 28 ^m 2			Mag: -4.7 PMG: 15 ^h 10 ^m			Mag: +1.0 PMG: 6 ^h 43 ^m			Mag: -2.6 PMG: 19 ^h 24 ^m			Mag: +0.1 PMG: 18 ^h 57 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	127	19.4	132	29.0	-1	12.1	259	05.0	-16	43.9	68	06.1	+19	43.0	75	05.7	+16	46.7	
1	142	21.9	147	29.5		10.9	274	06.1		44.3	83	08.6		43.1	90	08.1		46.7	
2	157	24.3	162	29.9		09.7	289	07.1		44.7	98	11.0		43.1	105	10.6		46.7	
3	172	26.8	177	30.4		08.5	304	08.2		45.1	113	13.5		43.1	120	13.1		46.7	
4	187	29.3	192	30.8		07.3	319	09.3		45.5	128	15.9		43.1	135	15.5		46.7	
5	202	31.7	207	31.3	-1	06.1	334	10.3	-16	45.8	143	18.3	+19	43.1	150	18.0	+16	46.7	
6	217	34.2	222	31.7	-1	04.9	349	11.4	-16	46.2	158	20.8	+19	43.1	165	20.4	+16	46.8	
7	232	36.6	237	32.2		03.7	4	12.5		46.6	173	23.2		43.1	180	22.9		46.8	
8	247	39.1	252	32.7		02.5	19	13.6		47.0	188	25.7		43.2	195	25.3		46.8	
9	262	41.6	267	33.1		01.3	34	14.6		47.4	203	28.1		43.2	210	27.8		46.8	
10	277	44.0	282	33.6	-1	00.1	49	15.7		47.7	218	30.5		43.2	225	30.2		46.8	
11	292	46.5	297	34.0	-0	58.9	64	16.8	-16	48.1	233	33.0	+19	43.2	240	32.7	+16	46.8	
12	307	49.0	312	34.5	-0	57.7	79	17.9	-16	48.5	248	35.4	+19	43.2	255	35.1	+16	46.9	
13	322	51.4	327	35.0		56.5	94	18.9		48.9	263	37.9		43.2	270	37.6		46.9	
14	337	53.9	342	35.4		55.3	109	20.0		49.3	278	40.3		43.3	285	40.0		46.9	
15	352	56.4	357	35.9		54.1	124	21.1		49.6	293	42.7		43.3	300	42.5		46.9	
16	7	58.8	12	36.4		52.9	139	22.1		50.0	308	45.2		43.3	315	44.9		46.9	
17	23	01.3	27	36.8	-0	51.7	154	23.2	-16	50.4	323	47.6	+19	43.3	330	47.4	+16	46.9	
18	38	03.8	42	37.3	-0	50.5	169	24.3	-16	50.8	338	50.0	+19	43.3	345	49.8	+16	46.9	
19	53	06.2	57	37.8		49.3	184	25.4		51.2	353	52.5		43.3	0	52.3		47.0	
20	68	08.7	72	38.2		48.1	199	26.4		51.5	8	54.9		43.4	15	54.7		47.0	
21	83	11.1	87	38.7		46.9	214	27.5		51.9	23	57.3		43.4	30	57.2		47.0	
22	98	13.6	102	39.2		45.7	229	28.6		52.3	38	59.8		43.4	45	59.6		47.0	
23	113	16.1	117	39.7		44.5	244	29.7		52.7	54	02.2		43.4	61	02.1		47.0	
24	128	18.5	132	40.1	-0	43.3	259	30.7	-16	53.0	69	04.7	+19	43.4	76	04.5	+16	47.0	
Dif	—			+5	+12		+11	-4		+24	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 2			Edad: 4 ^d 5 PHE { SD: 14'9 PMG: 15 ^h 54 ^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	43.9	-17	58.1	128	26.9	-5	30.4	60 N	6	41	7	32	8	21	10	09	9	21	54	79	
1	191	43.8		57.5	143	01.1 ¹⁵²		19.1 ¹¹³	58	37		25		10		07	12		55	76		
2	206	43.7		56.8	157	35.4 ¹⁵³	-5	07.7 ¹¹⁴	56	33		19	8	00		06	13		56	73		
3	221	43.6		56.1	172	09.6 ¹⁵²	-4	56.3 ¹¹⁴	54	30		13	7	52		04	16		56	72		
4	236	43.5		55.4	186	43.9 ¹⁵³		44.9 ¹¹⁴	52	27		07		44		03	17		57	69		
5	251	43.3	-17	54.8	201	18.1 ¹⁵²	-4	33.5 ¹¹⁴	50	6	23	7	03	7	38	10	01	20	21	57	68	
6	266	43.2	-17	54.1	215	52.3 ¹⁵²	-4	22.0 ¹¹⁵	45	6	16	6	52	7	23	9	58	23	21	58	64	
7	281	43.1		53.4	230	26.6 ¹⁵³	-4	10.5 ¹¹⁵	40		10		42		11		56	26	21	59	61	
8	296	43.0		52.7	245	00.8 ¹⁵²	-3	59.0 ¹¹⁵	35	6	04	34	7	01		54	29		22	00	57	
9	311	42.9		52.1	259	35.0 ¹⁵²		47.4 ¹¹⁶	30	5	58	27	6	52		52	31		01	55		
10	326	42.8		51.4	274	09.3 ¹⁵³		35.9 ¹¹⁵	20		47		13		36		49	35		02	50	
11	341	42.7	-17	50.7	288	43.5 ¹⁵²	-3	24.3 ¹¹⁶	10 N	5	35		6	01	6	23	9	46	39	22	03	47
12	356	42.6	-17	50.0	303	17.7 ¹⁵²	-3	12.7 ¹¹⁶	0	5	23		5	48	6	10	9	43	43	22	04	43
13	11	42.5		49.4	317	51.9 ¹⁵²	-3	01.1 ¹¹⁶	10 S	5	08		34	5	56		41	46		05	39	
14	26	42.4		48.7	332	26.1 ¹⁵²	-2	49.4 ¹¹⁷	20	4	51		19	42		38	50		06	35		
15	41	42.3		48.0	347	00.3 ¹⁵²		37.7 ¹¹⁷	30		29		5	00		35	54		07	31		
16	56	42.2		47.3	1	34.5 ¹⁵²		26.1 ¹¹⁶	35	4	15		4	49		16	33	57		07	29	
17	71	42.1	-17	46.6	16	08.6 ¹⁵¹	-2	14.4 ¹¹⁷	40	3	58		4	35	5	05	9	31	59	22	08	26
18	86	41.9	-17	46.0	30	42.8 ¹⁵²	-2	02.6 ¹¹⁸	45	3	36		4	19	4	52	9	28	63	22	09	23
19	101	41.8		45.3	45	16.9 ¹⁵¹	-1	50.9 ¹¹⁷	50	3	07		3	58	37		25	67		10	19	
20	116	41.7		44.6	59	51.1 ¹⁵²		39.1 ¹¹⁸	52	2	52		48		29		24	69		10	18	
21	131	41.6		43.9	74	25.2 ¹⁵¹		27.4 ¹¹⁷	54		34		36		21		22	71		10	16	
22	146	41.5		43.2	88	59.3 ¹⁵¹		15.6 ¹¹⁸	56		2	11		23		11	21	73		11	14	
23	161	41.4		42.6	103	33.4 ¹⁵¹	-1	03.8 ¹¹⁸	58	1	39		3	07	4	01	19	76		11	12	
24	176	41.3	-17	41.9	118	07.4 ¹⁵⁰	-0	52.0 ¹¹⁸	60 S	** *		2	48	3	48	9	17	78	22	12	9	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 15 ^h 24 ^m 2			Mag: -4.7 PMG: 15 ^h 09 ^m			Mag: +1.0 PMG: 6 ^h 41 ^m			Mag: -2.6 PMG: 19 ^h 21 ^m			Mag: +0.1 PMG: 18 ^h 53 ^m									
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	128	18.5	132	40.1	-0	43.3	259	30.7	-16	53.0	69	04.7	+19	43.4	76	04.5	+16	47.0				
1	143	21.0	147	40.6		42.1	274	31.8		53.4	84	07.1		43.4	91	07.0		47.1				
2	158	23.5	162	41.1		40.9	289	32.9		53.8	99	09.5		43.5	106	09.4		47.1				
3	173	25.9	177	41.6		39.7	304	34.0		54.2	114	12.0		43.5	121	11.8		47.1				
4	188	28.4	192	42.1		38.5	319	35.0		54.5	129	14.4		43.5	136	14.3		47.1				
5	203	30.9	207	42.5	-0	37.3	334	36.1	-16	54.9	144	16.8	+19	43.5	151	16.7	+16	47.1				
6	218	33.3	222	43.0	-0	36.1	349	37.2	-16	55.3	159	19.2	+19	43.5	166	19.2	+16	47.1				
7	233	35.8	237	43.5		34.9	4	38.2		55.7	174	21.7		43.5	181	21.6		47.2				
8	248	38.2	252	44.0		33.7	19	39.3		56.1	189	24.1		43.6	196	24.1		47.2				
9	263	40.7	267	44.5		32.5	34	40.4		56.4	204	26.5		43.6	211	26.5		47.2				
10	278	43.2	282	45.0		31.3	49	41.5		56.8	219	29.0		43.6	226	29.0		47.2				
11	293	45.6	297	45.5	-0	30.2	64	42.5	-16	57.2	234	31.4	+19	43.6	241	31.4	+16	47.2				
12	308	48.1	312	45.9	-0	29.0	79	43.6	-16	57.6	249	33.8	+19	43.6	256	33.9	+16	47.2				
13	323	50.6	327	46.4		27.8	94	44.7		57.9	264	36.3		43.6	271	36.3		47.3				
14	338	53.0	342	46.9		26.6	109	45.8		58.3	279	38.7		43.7	286	38.8		47.3				
15	353	55.5	357	47.4		25.4	124	46.8		58.7	294	41.1		43.7	301	41.2		47.3				
16	8	58.0	12	47.9		24.2	139	47.9		59.0	309	43.5		43.7	316	43.6		47.3				
17	24	00.4	27	48.4	-0	23.0	154	49.0	-16	59.4	324	46.0	+19	43.7	331	46.1	+16	47.3				
18	39	02.9	42	48.9	-0	21.8	169	50.1	-16	59.8	339	48.4	+19	43.7	346	48.5	+16	47.3				
19	54	05.4	57	49.4		20.6	184	51.1	-17	00.2	354	50.8		43.7	1	51.0		47.4				
20	69	07.8	72	49.9		19.4	199	52.2		00.5	9	53.3		43.8	16	53.4		47.4				
21	84	10.3	87	50.4		18.2	214	53.3		00.9	24	55.7		43.8	31	55.9		47.4				
22	99	12.7	102	50.9		17.0	229	54.4		01.3	39	58.1		43.8	46	58.3		47.4				
23	114	15.2	117	51.4		15.8	244	55.4		01.7	55	00.5		43.8	62	00.8		47.4				
24	129	17.7	132	51.9	-0	14.6	259	56.5	-17	02.0	70	03.0	+19	43.8	77	03.2	+16	47.4				
Dif	—		+5		+12		+11		-4		+24		0		+24							

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2				Edad: 5 ^d 5	PHE {	4 ^h : 55 ^m 3				Civil	Náutico	Hora	R°	Hora	R°		
	PMG: 12 ^h 13 ^m 3						12 ^h : 55 ^m 5											
	PMG: 16 ^h 36 ^m						20 ^h : 55 ^m 7											
	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	176	41.3	-17	41.9	118	07.4	-0	52.0	60 N	16 09	16 57	17 48	10 18 10	23 13 82				
1	191	41.2		41.2	132	41.5 ¹⁵¹		40.2 ¹¹⁸	58	20	17 04	52	19 12	11 79				
2	206	41.1		40.5	147	15.5 ¹⁵⁰		28.3 ¹¹⁹	56	29	10	56	19 15	09 76				
3	221	41.0		39.8	161	49.5 ¹⁵⁰		16.5 ¹¹⁸	54	37	16	17 59	20 16	08 73				
4	236	40.9		39.1	176	23.5 ¹⁵⁰		-0 04.6 ¹¹⁹	52	44	21	18 02	20 18	06 72				
5	251	40.8	-17	38.4	190	57.5 ¹⁵⁰		+0 07.2 ¹¹⁸	50	16 51	17 26	18 05	10 21 20	23 05 70				
6	266	40.7	-17	37.8	205	31.4 ¹⁴⁹		+0 19.1 ¹¹⁹	45	17 05	17 36	18 12	10 21 24	23 02 66				
7	281	40.6		37.1	220	05.3 ¹⁴⁹		31.0 ¹¹⁹	40	17	45	18	22 27	23 00 62				
8	296	40.5		36.4	234	39.2 ¹⁴⁹		42.9 ¹¹⁹	35	27	17 53	24	23 30	22 57 60				
9	311	40.4		35.7	249	13.1 ¹⁴⁹		+0 54.8 ¹¹⁹	30	36	18 01	29	23 33	56 56				
10	326	40.3		35.0	263	46.9 ¹⁴⁸		+1 06.7 ¹¹⁹	20	17 51	14	40	24 37	52 53				
11	341	40.2	-17	34.3	278	20.8 ¹⁴⁹		+1 18.6 ¹¹⁹	10 N	18 04	18 26	18 52	10 25 41	22 50 48				
12	356	40.1	-17	33.6	292	54.5 ¹⁴⁷		+1 30.5 ¹¹⁹	0	18 17	18 39	19 04	10 26 44	22 47 45				
13	11	40.0		32.9	307	28.3 ¹⁴⁸		42.4 ¹¹⁹	10 S	30	18 52	18	27 47	44 42				
14	26	39.9		32.2	322	02.0 ¹⁴⁷		+1 54.3 ¹¹⁹	20	43	19 07	34	28 51	41 38				
15	41	39.8		31.6	336	35.7 ¹⁴⁷		+2 06.2 ¹¹⁹	30	18 59	25	19 56	29 56	38 33				
16	56	39.7		30.9	351	09.4 ¹⁴⁷		18.2 ¹²⁰	35	19 09	36	20 10	30 58	36 31				
17	71	39.6	-17	30.2	5	43.0 ¹⁴⁶		+2 30.1 ¹¹⁹	40	19 19	19 49	20 26	10 30 62	22 34 28				
18	86	39.5	-17	29.5	20	16.6 ¹⁴⁶		+2 42.0 ¹¹⁹	45	19 32	20 05	20 47	10 31 65	22 32 25				
19	101	39.4		28.8	34	50.2 ¹⁴⁶		+2 53.9 ¹¹⁹	50	47	26	21 16	32 69	29 21				
20	116	39.3		28.1	49	23.7 ¹⁴⁵		+3 05.9 ¹²⁰	52	19 55	35	30	33 70	28 19				
21	131	39.2		27.4	63	57.2 ¹⁴⁵		17.8 ¹¹⁹	54	20 03	46	21 47	33 73	26 17				
22	146	39.1		26.7	78	30.6 ¹⁴⁴		29.7 ¹¹⁹	56	12	20 59	22 09	34 75	25 15				
23	161	39.1		26.0	93	04.0 ¹⁴⁴		41.6 ¹¹⁹	58	22	21 14	22 38	35 77	23 12				
24	176	39.0	-17	25.3	107	37.4 ¹⁴⁴		+3 53.5 ¹¹⁹	60 S	20 34	21 33	23 27	10 35 81	22 21 10				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 20 ^m 3		Mag: -4.7 PMG: 15 ^h 08 ^m				Mag: +1.0 PMG: 6 ^h 40 ^m				Mag: -2.6 PMG: 19 ^h 17 ^m				Mag: +0.1 PMG: 18 ^h 49 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	129	17.7	132	51.9	-0	14.6	259	56.5	-17	02.0	70	03.0	+19	43.8	77	03.2	+16	47.4
1	144	20.1	147	52.4		13.4	274	57.6		02.4	85	05.4		43.9	92	05.6		47.5
2	159	22.6	162	52.9		12.3	289	58.7		02.8	100	07.8		43.9	107	08.1		47.5
3	174	25.1	177	53.4		11.1	304	59.7		03.1	115	10.2		43.9	122	10.5		47.5
4	189	27.5	192	53.9		09.9	320	00.8		03.5	130	12.7		43.9	137	13.0		47.5
5	204	30.0	207	54.4	-0	08.7	335	01.9	-17	03.9	145	15.1	+19	43.9	152	15.4	+16	47.5
6	219	32.5	222	55.0	-0	07.5	350	03.0	-17	04.3	160	17.5	+19	43.9	167	17.9	+16	47.5
7	234	34.9	237	55.5		06.3	5	04.0		04.6	175	19.9		44.0	182	20.3		47.6
8	249	37.4	252	56.0		05.1	20	05.1		05.0	190	22.3		44.0	197	22.7		47.6
9	264	39.8	267	56.5		03.9	35	06.2		05.4	205	24.8		44.0	212	25.2		47.6
10	279	42.3	282	57.0		02.7	50	07.3		05.7	220	27.2		44.0	227	27.6		47.6
11	294	44.8	297	57.5	-0	01.5	65	08.3	-17	06.1	235	29.6	+19	44.0	242	30.1	+16	47.6
12	309	47.2	312	58.0	-0	00.3	80	09.4	-17	06.5	250	32.0	+19	44.1	257	32.5	+16	47.7
13	324	49.7	327	58.6	+0	00.8	95	10.5		06.9	265	34.4		44.1	272	34.9		47.7
14	339	52.2	342	59.1		02.0	110	11.6		07.2	280	36.9		44.1	287	37.4		47.7
15	354	54.6	357	59.6		03.2	125	12.7		07.6	295	39.3		44.1	302	39.8		47.7
16	9	57.1	13	00.1		04.4	140	13.7		08.0	310	41.7		44.1	317	42.3		47.7
17	24	59.6	28	00.6	+0	05.6	155	14.8	-17	08.3	325	44.1	+19	44.2	332	44.7	+16	47.7
18	40	02.0	43	01.2	+0	06.8	170	15.9	-17	08.7	340	46.5	+19	44.2	347	47.1	+16	47.8
19	55	04.5	58	01.7		08.0	185	17.0		09.1	355	49.0		44.2	2	49.6		47.8
20	70	07.0	73	02.2		09.2	200	18.0		09.4	10	51.4		44.2	17	52.0		47.8
21	85	09.4	88	02.7		10.3	215	19.1		09.8	25	53.8		44.2	32	54.5		47.8
22	100	11.9	103	03.3		11.5	230	20.2		10.2	40	56.2		44.3	47	56.9		47.8
23	115	14.3	118	03.8		12.7	245	21.3		10.5	55	58.6		44.3	62	59.3		47.9
24	130	16.8	133	04.3	+0	13.9	260	22.3	-17	10.9	71	01.0	+19	44.3	78	01.8	+16	47.9
Dif	—		+5		+12		+11		-4		+24		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: 6 ^d 5 SD: 15/2 PMG: 17 ^h 21 ^m	PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/5 R°: 47 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	39.0	-17	25.3	107	37.4	+3 53.5	60 N	6 38	7 28	8 16	10 28	10	**	**	**
1	191	38.9		24.6	122	10.7 ¹⁴³	+4 05.4 ¹¹⁹	58	34	22	8 06	31	13	**	**	**
2	206	38.8		23.9	136	44.0 ¹⁴³	17.3 ¹¹⁹	56	30	15	7 57	34	16	**	**	**
3	221	38.7		23.2	151	17.3 ¹⁴³	29.2 ¹¹⁹	54	27	10	49	36	18	**	**	**
4	236	38.6		22.5	165	50.5 ¹⁴²	41.1 ¹¹⁹	52	24	05	41	38	21	**	**	**
5	251	38.5	-17	21.8	180	23.6 ¹⁴¹	+4 53.0 ¹¹⁹	50	6 21	7 00	7 35	10 41	22	**	**	**
6	266	38.4	-17	21.1	194	56.7 ¹⁴¹	+5 04.8 ¹¹⁸	45	6 14	6 50	7 21	10 45	26	**	**	**
7	281	38.3		20.4	209	29.8 ¹⁴¹	16.7 ¹¹⁹	40	08	41	09	49	29	**	**	**
8	296	38.2		19.7	224	02.8 ¹⁴⁰	28.5 ¹¹⁸	35	6 03	33	7 00	53	32	23	57	61
9	311	38.1		19.0	238	35.7 ¹³⁹	40.4 ¹¹⁹	30	5 57	26	6 51	10 56	34		52	59
10	326	38.0		18.3	253	08.6 ¹³⁹	+5 52.2 ¹¹⁸	20	46	13	36	11 01	39		45	54
11	341	37.9	-17	17.6	267	41.5 ¹³⁹	+6 04.0 ¹¹⁸	10 N	5 35	6 01	6 23	11 06	42	23	38	51
12	356	37.9	-17	16.9	282	14.3 ¹³⁸	+6 15.8 ¹¹⁸	0	5 23	5 48	6 10	11 10	46	23	32	47
13	11	37.8		16.2	296	47.1 ¹³⁸	27.5 ¹¹⁷	10 S	5 09	35	5 57	14	50		26	44
14	26	37.7		15.5	311	19.8 ¹³⁷	39.3 ¹¹⁸	20	4 53	20	44	19	54		19	40
15	41	37.6		14.8	325	52.4 ¹³⁶	+6 51.0 ¹¹⁷	30	31	5 02	28	25	58		11	37
16	56	37.5		14.1	340	25.0 ¹³⁶	+7 02.8 ¹¹⁸	35	17	4 51	18	28	60		07	34
17	71	37.4	-17	13.4	354	57.5 ¹³⁵	+7 14.5 ¹¹⁷	40	4 01	4 38	5 08	11 32	63	23	02	31
18	86	37.3	-17	12.7	9	30.0 ¹³⁵	+7 26.2 ¹¹⁷	45	3 40	4 22	4 55	11 36	67	22	57	27
19	101	37.2		12.0	24	02.4 ¹³⁴	37.8 ¹¹⁶	50	3 12	4 02	40	41	71		50	23
20	116	37.1		11.3	38	34.7 ¹³³	+7 49.5 ¹¹⁷	52	2 57	3 52	33	43	73		47	21
21	131	37.1		10.6	53	07.0 ¹³³	+8 01.1 ¹¹⁶	54	40	41	25	46	75		43	20
22	146	37.0		09.8	67	39.2 ¹³²	12.7 ¹¹⁶	56	2 19	28	16	49	77		40	17
23	161	36.9		09.1	82	11.4 ¹³²	24.2 ¹¹⁵	58	1 50	3 13	4 06	52	80		35	15
24	176	36.8	-17	08.4	96	43.5 ¹³¹	+8 35.8 ¹¹⁶	60 S	1 01	2 55	3 54	11 56	83	22	31	12
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 16 ^m 4			Mag: -4.7 PMG: 15 ^h 07 ^m			Mag: +1.0 PMG: 6 ^h 38 ^m			Mag: -2.5 PMG: 19 ^h 13 ^m			Mag: +0.1 PMG: 18 ^h 45 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	130	16.8	133	04.3	+0	13.9	260	22.3	-17	10.9	71	01.0	+19	44.3	78	01.8
1	145	19.3	148	04.9		15.1	275	23.4		11.3	86	03.5		44.3	93	04.2
2	160	21.7	163	05.4		16.3	290	24.5		11.6	101	05.9		44.3	108	06.7
3	175	24.2	178	05.9		17.5	305	25.6		12.0	116	08.3		44.4	123	09.1
4	190	26.7	193	06.5		18.7	320	26.6		12.4	131	10.7		44.4	138	11.5
5	205	29.1	208	07.0	+0	19.8	335	27.7	-17	12.7	146	13.1	+19	44.4	153	14.0
6	220	31.6	223	07.5	+0	21.0	350	28.8	-17	13.1	161	15.5	+19	44.4	168	16.4
7	235	34.1	238	08.1		22.2	5	29.9		13.5	176	17.9		44.4	183	18.8
8	250	36.5	253	08.6		23.4	20	31.0		13.8	191	20.4		44.5	198	21.3
9	265	39.0	268	09.2		24.6	35	32.0		14.2	206	22.8		44.5	213	23.7
10	280	41.5	283	09.7		25.8	50	33.1		14.6	221	25.2		44.5	228	26.2
11	295	43.9	298	10.3	+0	26.9	65	34.2	-17	14.9	236	27.6	+19	44.5	243	28.6
12	310	46.4	313	10.8	+0	28.1	80	35.3	-17	15.3	251	30.0	+19	44.5	258	31.0
13	325	48.8	328	11.3		29.3	95	36.3		15.7	266	32.4		44.6	273	33.5
14	340	51.3	343	11.9		30.5	110	37.4		16.0	281	34.8		44.6	288	35.9
15	355	53.8	358	12.4		31.7	125	38.5		16.4	296	37.2		44.6	303	38.3
16	10	56.2	13	13.0		32.9	140	39.6		16.8	311	39.7		44.6	318	40.8
17	25	58.7	28	13.5	+0	34.0	155	40.7	-17	17.1	326	42.1	+19	44.6	333	43.2
18	41	01.2	43	14.1	+0	35.2	170	41.7	-17	17.5	341	44.5	+19	44.7	348	45.6
19	56	03.6	58	14.7		36.4	185	42.8		17.9	356	46.9		44.7	3	48.1
20	71	06.1	73	15.2		37.6	200	43.9		18.2	11	49.3		44.7	18	50.5
21	86	08.6	88	15.8		38.8	215	45.0		18.6	26	51.7		44.7	33	52.9
22	101	11.0	103	16.3		40.0	230	46.0		18.9	41	54.1		44.8	48	55.4
23	116	13.5	118	16.9		41.1	245	47.1		19.3	56	56.5		44.8	63	57.8
24	131	15.9	133	17.4	+0	42.3	260	48.2	-17	19.7	71	58.9	+19	44.8	79	00.2
Dif	—			+5	+12		+11	-4		+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 6			Edad: 7 ^d 5 PHE { 4 ^h : 56:7 12 ^h : 57:0 20 ^h : 57:3 R°: 50 ^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	176	36.8	-17	08.4	96	43.5	+8	35.8	60 N	16 14	17 02	17 52	10 38 15	0 35 84
1	191	36.7		07.7	111	15.5 ¹³⁰		47.3 ¹¹⁵	58	24	08	56	44 18	30 81
2	206	36.6		07.0	125	47.5 ¹³⁰	+8	58.8 ¹¹⁵	56	33	14	17 59	50 20	25 79
3	221	36.5		06.3	140	19.4 ¹²⁹	+9	10.3 ¹¹⁵	54	41	20	18 02	54 23	21 77
4	236	36.5		05.6	154	51.2 ¹²⁸		21.7 ¹¹⁴	52	48	25	05	10 59 24	18 74
5	251	36.4	-17	04.9	169	23.0 ¹²⁸	+9	33.1 ¹¹⁴	50	16 54	17 29	18 08	11 03 26	0 15 72
6	266	36.3	-17	04.2	183	54.7 ¹²⁷	+9	44.5 ¹¹⁴	45	17 08	17 39	18 14	11 11 30	0 08 67
7	281	36.2		03.5	198	26.3 ¹²⁶	+9	55.8 ¹¹³	40	19	48	20	18 34	0 02 64
8	296	36.1		02.7	212	57.8 ¹²⁵	+10	07.1 ¹¹³	35	29	17 55	26	25 36	** ** *
9	311	36.0		02.0	227	29.3 ¹²⁵		18.4 ¹¹³	30	37	18 02	31	30 39	** ** *
10	326	36.0		01.3	242	00.7 ¹²⁴		29.6 ¹¹²	20	17 52	15	41	40 42	** ** *
11	341	35.9	-17	00.6	256	32.0 ¹²³	+10	40.8 ¹¹²	10 N	18 05	18 27	18 52	11 48 46	** ** *
12	356	35.8	-16	59.9	271	03.3 ¹²³	+10	52.0 ¹¹²	0	18 17	18 39	19 04	11 56 50	** ** *
13	11	35.7		59.2	285	34.4 ¹²¹	+11	03.1 ¹¹¹	10 S	29	18 52	17	12 04 53	** ** *
14	26	35.6		58.4	300	05.5 ¹²¹		14.2 ¹¹¹	20	43	19 06	34	13 56	23 59 45
15	41	35.6		57.7	314	36.5 ¹²⁰		25.2 ¹¹⁰	30	18 58	24	19 55	23 60	48 40
16	56	35.5		57.0	329	07.5 ¹²⁰		36.2 ¹¹⁰	35	19 07	35	20 08	28 64	41 38
17	71	35.4	-16	56.3	343	38.3 ¹¹⁸	+11	47.2 ¹¹⁰	40	19 17	19 47	20 24	12 35 66	23 33 36
18	86	35.3	-16	55.6	358	09.1 ¹¹⁸	+11	58.1 ¹⁰⁹	45	19 30	20 03	20 44	12 43 69	23 24 33
19	101	35.2		54.9	12	39.8 ¹¹⁷	+12	08.9 ¹⁰⁸	50	44	22	21 11	52 74	13 29
20	116	35.2		54.1	27	10.4 ¹¹⁶		19.8 ¹⁰⁹	52	51	32	25	12 56 76	08 27
21	131	35.1		53.4	41	40.9 ¹¹⁵		30.5 ¹⁰⁷	54	19 59	42	21 41	13 01 78	23 03 25
22	146	35.0		52.7	56	11.3 ¹¹⁴		41.3 ¹⁰⁸	56	20 08	20 54	22 02	06 81	22 57 22
23	161	34.9		52.0	70	41.7 ¹¹⁴	+12	51.9 ¹⁰⁶	58	18	21 09	22 28	12 84	50 20
24	176	34.9	-16	51.3	85	11.9 ¹¹²	+13	02.5 ¹⁰⁶	60 S	20 29	21 26	23 08	13 19 87	22 43 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 12 ^m 4		Mag: -4.7 PMG: 15 ^h 06 ^m		Mag: +1.0 PMG: 6 ^h 36 ^m		Mag: -2.5 PMG: 19 ^h 09 ^m		Mag: +0.1 PMG: 18 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	131	15.9	133	17.4	+0	42.3	260	48.2	-17	19.7
1	146	18.4	148	18.0		43.5	275	49.3		20.0
2	161	20.9	163	18.6		44.7	290	50.4		20.4
3	176	23.3	178	19.1		45.9	305	51.4		20.8
4	191	25.8	193	19.7		47.0	320	52.5		21.1
5	206	28.3	208	20.3	+0	48.2	335	53.6	-17	21.5
6	221	30.7	223	20.8	+0	49.4	350	54.7	-17	21.8
7	236	33.2	238	21.4		50.6	5	55.8		22.2
8	251	35.7	253	22.0		51.8	20	56.8		22.6
9	266	38.1	268	22.5		52.9	35	57.9		22.9
10	281	40.6	283	23.1		54.1	50	59.0		23.3
11	296	43.1	298	23.7	+0	55.3	66	00.1	-17	23.7
12	311	45.5	313	24.3	+0	56.5	81	01.2	-17	24.0
13	326	48.0	328	24.8		57.6	96	02.2		24.4
14	341	50.4	343	25.4	+0	58.8	111	03.3		24.7
15	356	52.9	358	26.0	+1	00.0	126	04.4		25.1
16	11	55.4	13	26.6	+1	01.2	141	05.5		25.5
17	26	57.8	28	27.2	+1	02.3	156	06.6	-17	25.8
18	42	00.3	43	27.7	+1	03.5	171	07.6	-17	26.2
19	57	02.8	58	28.3		04.7	186	08.7		26.5
20	72	05.2	73	28.9		05.9	201	09.8		26.9
21	87	07.7	88	29.5		07.0	216	10.9		27.3
22	102	10.2	103	30.1		08.2	231	12.0		27.6
23	117	12.6	118	30.7		09.4	246	13.0		28.0
24	132	15.1	133	31.3	+1	10.6	261	14.1	-17	28.3
Dif	—		+6		+12		+11		-4	
							+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 13 ^m 7			Edad: 8 ^d 5 PHE { SD: 15:6 PMG: 18 ^h 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	34.9	-16	51.3	85	11.9	+13	02.5	60 N	6 34	7 24	8 11	10 53	19	1 59	88
1	191	34.8		50.5	99	42.1		13.1	58	30	18	8 02	11 02	23	51	84
2	206	34.7		49.8	114	12.2		23.6	56	27	12	7 53	10 25		44	81
3	221	34.6		49.1	128	42.2		34.1	54	24	07	45	17 28		38	78
4	236	34.6		48.4	143	12.1		44.5	52	21	7 02	38	23 30		32	76
5	251	34.5	-16	47.6	157	41.9	+13	54.8	50	6 19	6 57	7 32	11 29	32	1 27	74
6	266	34.4	-16	46.9	172	11.6	+14	05.1	45	6 12	6 48	7 19	11 41	36	1 15	71
7	281	34.3		46.2	186	41.2		15.3	40	07	39	7 08	11 52	39	1 06	67
8	296	34.3		45.5	201	10.7		25.5	35	6 01	32	6 58	12 01	41	0 58	65
9	311	34.2		44.7	215	40.2		35.6	30	5 56	25	50	09 43		51	62
10	326	34.1		44.0	230	09.5		45.6	20	46	12	35	22 48		39	58
11	341	34.0	-16	43.3	244	38.8	+14	55.6	10 N	5 35	6 00	6 22	12 34	51	0 29	55
12	356	34.0	-16	42.6	259	07.9	+15	05.5	0	5 24	5 49	6 10	12 46	53	0 19	52
13	11	33.9		41.8	273	37.0		15.3	10 S	5 10	36	5 58	12 57	57	0 10	48
14	26	33.8		41.1	288	05.9		25.1	20	4 54	21	45	13 09	60	** ** *	**
15	41	33.7		40.4	302	34.8		34.8	30	33	5 04	29	23 64		** ** *	**
16	56	33.7		39.6	317	03.6		44.4	35	20	4 53	21	32 65		** ** *	**
17	71	33.6	-16	38.9	331	32.2	+15	53.9	40	4 04	4 40	5 10	13 41	68	** ** *	**
18	86	33.5	-16	38.2	346	00.8	+16	03.4	45	3 44	4 25	4 58	13 52	71	23 57	39
19	101	33.5		37.5	0	29.3		12.8	50	17	4 06	44	14 06	75	42	36
20	116	33.4		36.7	14	57.6		22.1	52	3 03	3 56	37	12 77		35	34
21	131	33.3		36.0	29	25.9		31.4	54	2 47	46	29	19 79		28	32
22	146	33.3		35.3	43	54.0		40.5	56	26	34	20	27 82		19	30
23	161	33.2		34.5	58	22.1		49.6	58	2 00	19	4 11	36 84		23 10	27
24	176	33.1	-16	33.8	72	50.1	+16	58.6	60 S	1 20	3 02	3 59	14 46	88	22 59	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 08 ^m 5		Mag: -4.7 PMG: 15 ^h 05 ^m		Mag: +1.0 PMG: 6 ^h 35 ^m		Mag: -2.5 PMG: 19 ^h 05 ^m		Mag: +0.1 PMG: 18 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	132	15.1	133	31.3	+1	10.6	261	14.1	-17	28.3	72	56.6	+19	45.3	79	58.6	+16	48.8
1	147	17.6	148	31.8		11.7	276	15.2		28.7	87	59.0		45.4	95	01.0		48.8
2	162	20.0	163	32.4		12.9	291	16.3		29.0	103	01.4		45.4	110	03.5		48.9
3	177	22.5	178	33.0		14.1	306	17.4		29.4	118	03.8		45.4	125	05.9		48.9
4	192	24.9	193	33.6		15.3	321	18.4		29.8	133	06.2		45.4	140	08.3		48.9
5	207	27.4	208	34.2	+1	16.4	336	19.5	-17	30.1	148	08.6	+19	45.5	155	10.7	+16	48.9
6	222	29.9	223	34.8	+1	17.6	351	20.6	-17	30.5	163	11.0	+19	45.5	170	13.2	+16	48.9
7	237	32.3	238	35.4		18.8	6	21.7		30.8	178	13.4		45.5	185	15.6		49.0
8	252	34.8	253	36.0		20.0	21	22.8		31.2	193	15.8		45.5	200	18.0		49.0
9	267	37.3	268	36.6		21.1	36	23.8		31.5	208	18.2		45.5	215	20.4		49.0
10	282	39.7	283	37.2		22.3	51	24.9		31.9	223	20.6		45.6	230	22.9		49.0
11	297	42.2	298	37.8	+1	23.5	66	26.0	-17	32.3	238	23.0	+19	45.6	245	25.3	+16	49.1
12	312	44.7	313	38.4	+1	24.6	81	27.1	-17	32.6	253	25.3	+19	45.6	260	27.7	+16	49.1
13	327	47.1	328	39.0		25.8	96	28.2		33.0	268	27.7		45.6	275	30.2		49.1
14	342	49.6	343	39.6		27.0	111	29.3		33.3	283	30.1		45.7	290	32.6		49.1
15	357	52.0	358	40.3		28.1	126	30.3		33.7	298	32.5		45.7	305	35.0		49.1
16	12	54.5	13	40.9		29.3	141	31.4		34.0	313	34.9		45.7	320	37.4		49.2
17	27	57.0	28	41.5	+1	30.5	156	32.5	-17	34.4	328	37.3	+19	45.7	335	39.9	+16	49.2
18	42	59.4	43	42.1	+1	31.7	171	33.6	-17	34.7	343	39.7	+19	45.8	350	42.3	+16	49.2
19	58	01.9	58	42.7		32.8	186	34.7		35.1	358	42.1		45.8	5	44.7		49.2
20	73	04.4	73	43.3		34.0	201	35.7		35.5	13	44.5		45.8	20	47.1		49.2
21	88	06.8	88	43.9		35.2	216	36.8		35.8	28	46.9		45.8	35	49.6		49.3
22	103	09.3	103	44.6		36.3	231	37.9		36.2	43	49.3		45.9	50	52.0		49.3
23	118	11.8	118	45.2		37.5	246	39.0		36.5	58	51.7		45.9	65	54.4		49.3
24	133	14.2	133	45.8	+1	38.7	261	40.1	-17	36.9	73	54.0	+19	45.9	80	56.8	+16	49.3
Dif	—		+6		+12		+11		-4		+24		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 8			Edad: 9 ^d 5 PHE { 4 ^h : 58' ⁵ 12 ^h : 58' ⁸ 20 ^h : 59' ¹ R°: 58 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	33.1	-16	33.8	72	50.1	+16 58.6	60 N	16 20	17 06	17 57	11 12 30	3 27 87		
1	191	33.1		33.1	87	17.9	88 +17 07.5	58	29	13	18 00	25 33	15 84		
2	206	33.0		32.3	101	45.7	88 16.3	56	38	18	03	35 36	3 05 81		
3	221	32.9		31.6	116	13.3	86 25.1	54	45	23	06	45 38	2 56 79		
4	236	32.8		30.8	130	40.9	86 33.7	52	52	28	09	11 53 40	48 77		
5	251	32.8	-16	30.1	145	08.3	84 +17 42.3	50	16 58	17 32	18 11	12 01 41	2 41 75		
6	266	32.7	-16	29.4	159	35.6	83 +17 50.7	45	17 11	17 42	18 17	12 17 45	2 26 71		
7	281	32.7		28.6	174	02.9	83 +17 59.1	40	22	50	22	31 47	13 69		
8	296	32.6		27.9	188	30.0	81 +18 07.4	35	31	17 57	27	42 49	2 03 66		
9	311	32.5		27.2	202	57.0	80 15.6	30	39	18 04	32	12 52 51	1 53 65		
10	326	32.5		26.4	217	23.9	79 23.6	20	17 53	16	42	13 10 53	37 61		
11	341	32.4	-16	25.7	231	50.8	79 +18 31.6	10 N	18 06	18 27	18 53	13 25 56	1 24 58		
12	356	32.3	-16	24.9	246	17.5	77 +18 39.5	0	18 17	18 39	19 04	13 39 58	1 11 55		
13	11	32.3		24.2	260	44.1	76 47.3	10 S	29	18 51	17	13 54 60	0 58 53		
14	26	32.2		23.5	275	10.6	75 +18 55.0	20	42	19 05	33	14 09 62	44 50		
15	41	32.1		22.7	289	37.0	74 +19 02.5	30	18 57	22	19 53	27 65	28 47		
16	56	32.1		22.0	304	03.3	73 10.0	35	19 06	33	20 06	37 67	19 45		
17	71	32.0	-16	21.2	318	29.5	72 +19 17.4	40	19 15	19 45	20 21	14 49 69	0 09 42		
18	86	32.0	-16	20.5	332	55.5	70 +19 24.6	45	19 27	20 00	20 41	15 03 72	*** ** *		
19	101	31.9		19.8	347	21.5	70 31.7	50	41	19	21 07	21 74	*** ** *		
20	116	31.8		19.0	1	47.4	69 38.8	52	48	28	20	29 76	*** ** *		
21	131	31.8		18.3	16	13.2	68 45.7	54	19 55	38	36	38 78	*** ** *		
22	146	31.7		17.5	30	38.9	67 52.4	56	20 04	20 50	21 55	15 49 79	23 49 42		
23	161	31.6		16.8	45	04.4	65 +19 59.1	58	13	21 03	22 19	16 00 82	37 39		
24	176	31.6	-16	16.0	59	29.9	65 +20 05.7	60 S	20 24	21 20	22 53	16 14 86	23 22 37		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 04 ^m 6		Mag: -4.7 PMG: 15 ^h 04 ^m		Mag: +0.9 PMG: 6 ^h 33 ^m		Mag: -2.5 PMG: 19 ^h 01 ^m		Mag: +0.1 PMG: 18 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	133	14.2	133	45.8	+1	38.7	73	54.0	+19	45.9
1	148	16.7	148	46.4		39.8	88	56.4		45.9
2	163	19.2	163	47.0		41.0	103	58.8		46.0
3	178	21.6	178	47.7		42.2	119	01.2		46.0
4	193	24.1	193	48.3		43.3	134	03.6		46.0
5	208	26.5	208	48.9	+1	44.5	149	06.0	+19	46.0
6	223	29.0	223	49.5	+1	45.7	164	08.4	+19	46.1
7	238	31.5	238	50.2		46.8	179	10.8		46.1
8	253	33.9	253	50.8		48.0	194	13.2		46.1
9	268	36.4	268	51.4		49.1	209	15.5		46.1
10	283	38.9	283	52.1		50.3	224	17.9		46.2
11	298	41.3	298	52.7	+1	51.5	239	20.3	+19	46.2
12	313	43.8	313	53.3	+1	52.6	254	22.7	+19	46.2
13	328	46.3	328	54.0		53.8	269	25.1		46.2
14	343	48.7	343	54.6		55.0	284	27.5		46.3
15	358	51.2	358	55.3		56.1	299	29.8		46.3
16	13	53.7	13	55.9		57.3	314	32.2		46.3
17	28	56.1	28	56.5	+1	58.4	329	34.6	+19	46.3
18	43	58.6	43	57.2	+1	59.6	344	37.0	+19	46.4
19	59	01.0	58	57.8	+2	00.8	359	39.4		46.4
20	74	03.5	73	58.5		01.9	14	41.8		46.4
21	89	06.0	88	59.1		03.1	29	44.1		46.5
22	104	08.4	103	59.8		04.2	44	46.5		46.5
23	119	10.9	119	00.4		05.4	59	48.9		46.5
24	134	13.4	134	01.1	+2	06.6	74	51.3	+19	46.5
Dif	—		+6		+12		+11		-4	
									+24	
									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 9			Edad: 10 ^d 5 PHE { SD: 16:1 PMG: 20 ^h 51 ^m 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 60/0 R°: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	31.6	-16	16.0	59	29.9	+20	05.7	60 N	6	30	7	20	8	07	11	42
1	191	31.5		15.3	73	55.3	64	12.1	64	58	27	14	7	57	11	58	48
2	206	31.5		14.5	88	20.5	62	18.4	63	56	24	08	49	12	11	50	26
3	221	31.4		13.8	102	45.7	62	24.6	62	54	21	7	03	42	23	51	15
4	236	31.4		13.0	117	10.8	61	30.7	61	52	18	6	59	35	33	52	4
5	251	31.3	-16	12.3	131	35.7	59	+20	36.6	50	6	16	6	55	7	29	12
6	266	31.2	-16	11.5	146	00.6	59	+20	42.4	45	6	10	6	45	7	16	13
7	281	31.2		10.8	160	25.4	58		48.1	40	05	37	7	06	18	56	22
8	296	31.1		10.0	174	50.1	57		53.7	35	6	00	30	6	56	31	57
9	311	31.1		09.3	189	14.6	55	+20	59.1	30	5	55	24	48	13	43	58
10	326	31.0		08.5	203	39.1	55	+21	04.4	20	45	12	34	14	03	60	38
11	341	31.0	-16	07.8	218	03.5	54	+21	09.5	10 N	5	35	6	00	6	22	14
12	356	30.9	-16	07.0	232	27.8	53	+21	14.5	0	5	24	5	49	6	10	14
13	11	30.8		06.3	246	52.0	52		19.4	10 S	5	11	37	5	59	14	54
14	26	30.8		05.5	261	16.2	52		24.2	20	4	55	23	46	15	11	64
15	41	30.7		04.8	275	40.2	50		28.8	30	35	5	06	31	32	65	15
16	56	30.7		04.0	290	04.1	49		33.2	35	22	4	55	23	44	66	1
17	71	30.6	-16	03.3	304	28.0	49	+21	37.5	40	4	07	4	43	5	13	15
18	86	30.6	-16	02.5	318	51.7	47	+21	41.7	45	3	47	4	28	5	01	16
19	101	30.5		01.8	333	15.4	47		45.8	50	21	10	4	47	16	35	69
20	116	30.5		01.0	347	39.0	46		49.6	52	3	08	4	01	45	69	18
21	131	30.4	-16	00.3	2	02.5	45		53.4	54	2	53	3	51	16	56	70
22	146	30.4	-15	59.5	16	26.0	45	+21	57.0	56	34	39	25	17	08	71	**
23	161	30.3		58.8	30	49.3	43	+22	00.4	58	2	10	25	16	22	72	**
24	176	30.3	-15	58.0	45	12.6	43	+22	03.7	60 S	1	35	3	09	4	05	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 00 ^m 6		Mag: -4.7 PMG: 15 ^h 03 ^m		Mag: +0.9 PMG: 6 ^h 31 ^m		Mag: -2.5 PMG: 18 ^h 58 ^m		Mag: +0.1 PMG: 18 ^h 29 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	134	13.4	134	01.1	+2	06.6	262	06.1	-17	45.3	74	51.3	+19	46.5	81	55.0	+16	49.9
1	149	15.8	149	01.7		07.7	277	07.2		45.6	89	53.7		46.6	96	57.4		49.9
2	164	18.3	164	02.4		08.9	292	08.2		46.0	104	56.1		46.6	111	59.8		49.9
3	179	20.8	179	03.0		10.0	307	09.3		46.3	119	58.4		46.6	127	02.2		49.9
4	194	23.2	194	03.7		11.2	322	10.4		46.7	135	00.8		46.6	142	04.6		50.0
5	209	25.7	209	04.4	+2	12.4	337	11.5	-17	47.0	150	03.2	+19	46.7	157	07.1	+16	50.0
6	224	28.2	224	05.0	+2	13.5	352	12.6	-17	47.4	165	05.6	+19	46.7	172	09.5	+16	50.0
7	239	30.6	239	05.7		14.7	7	13.7		47.7	180	07.9		46.7	187	11.9		50.0
8	254	33.1	254	06.3		15.8	22	14.8		48.1	195	10.3		46.7	202	14.3		50.1
9	269	35.5	269	07.0		17.0	37	15.8		48.4	210	12.7		46.8	217	16.7		50.1
10	284	38.0	284	07.7		18.1	52	16.9		48.8	225	15.1		46.8	232	19.1		50.1
11	299	40.5	299	08.3	+2	19.3	67	18.0	-17	49.1	240	17.5	+19	46.8	247	21.6	+16	50.1
12	314	42.9	314	09.0	+2	20.4	82	19.1	-17	49.5	255	19.8	+19	46.9	262	24.0	+16	50.2
13	329	45.4	329	09.7		21.6	97	20.2		49.8	270	22.2		46.9	277	26.4		50.2
14	344	47.9	344	10.3		22.7	112	21.3		50.2	285	24.6		46.9	292	28.8		50.2
15	359	50.3	359	11.0		23.9	127	22.4		50.5	300	27.0		46.9	307	31.2		50.2
16	14	52.8	14	11.7		25.1	142	23.4		50.9	315	29.3		47.0	322	33.6		50.2
17	29	55.3	29	12.4	+2	26.2	157	24.5	-17	51.2	330	31.7	+19	47.0	337	36.1	+16	50.3
18	44	57.7	44	13.0	+2	27.4	172	25.6	-17	51.5	345	34.1	+19	47.0	352	38.5	+16	50.3
19	60	00.2	59	13.7		28.5	187	26.7		51.9	0	36.5		47.0	7	40.9		50.3
20	75	02.7	74	14.4		29.7	202	27.8		52.2	15	38.8		47.1	22	43.3		50.3
21	90	05.1	89	15.1		30.8	217	28.9		52.6	30	41.2		47.1	37	45.7		50.4
22	105	07.6	104	15.8		32.0	232	30.0		52.9	45	43.6		47.1	52	48.1		50.4
23	120	10.0	119	16.4		33.1	247	31.0		53.3	60	46.0		47.2	67	50.6		50.4
24	135	12.5	134	17.1	+2	34.3	262	32.1	-17	53.6	75	48.3	+19	47.2	82	53.0	+16	50.4
Dif	—		+7 +12		+11 -3		+24 0				+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: 11 ^d 5 PHE { 4 ^h : 60:3 12 ^h : 60:5 20 ^h : 60:7 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
0	176	30.3	-15	58.0	45	12.6	+22	03.7	60 N	16 25	17 11	18 01	12 28	69	6 14 64
1	191	30.2		57.2	59	35.8		06.8	58	34	17	04	12 46	68	5 56 64
2	206	30.2		56.5	73	58.9		09.8	56	42	22	07	13 01	68	42 64
3	221	30.1		55.7	88	22.0		12.6	54	49	27	09	14 67		29 64
4	236	30.1		55.0	102	45.0		15.3	52	16 55	32	12	25 67		18 64
5	251	30.0	-15	54.2	117	07.9	+22	17.8	50	17 01	17 36	18 14	13 36	66	5 08 64
6	266	30.0	-15	53.4	131	30.7	+22	20.2	45	17 14	17 45	18 19	13 57	66	4 47 64
7	281	29.9		52.7	145	53.5		22.4	40	24	52	24	14 14	66	30 63
8	296	29.9		51.9	160	16.2		24.4	35	33	17 59	29	28 66		15 64
9	311	29.8		51.2	174	38.8		26.3	30	41	18 05	34	14 41	65	4 03 64
10	326	29.8		50.4	189	01.4		28.0	20	17 54	17	43	15 03	64	3 42 63
11	341	29.7	-15	49.6	203	24.0	+22	29.6	10 N	18 06	18 28	18 53	15 21	64	3 23 63
12	356	29.7	-15	48.9	217	46.4	+22	30.9	0	18 17	18 39	19 04	15 39	63	3 06 63
13	11	29.6		48.1	232	08.9		32.2	10 S	29	18 51	16	15 56	64	2 49 62
14	26	29.6		47.3	246	31.2		33.2	20	41	19 04	32	16 15	63	30 63
15	41	29.5		46.6	260	53.5		34.1	30	18 56	21	19 51	37 62		2 09 62
16	56	29.5		45.8	275	15.8		34.9	35	19 04	31	20 04	16 50	61	1 57 61
17	71	29.5	-15	45.1	289	38.0	+22	35.4	40	19 13	19 43	20 19	17 04	61	1 42 62
18	86	29.4	-15	44.3	304	00.2	+22	35.8	45	19 25	19 57	20 38	17 22	60	1 26 60
19	101	29.4		43.5	318	22.3		36.1	50	38	20 15	21 03	44 58		1 05 59
20	116	29.3		42.8	332	44.4		36.1	52	45	24	15	17 54	58	0 55 59
21	131	29.3		42.0	347	06.5		36.0	54	19 52	34	30	18 06	57	44 58
22	146	29.2		41.2	1	28.5		35.8	56	20 00	45	21 48	19 57		31 58
23	161	29.2		40.5	15	50.5		35.3	58	08	20 58	22 10	34 56		0 16 58
24	176	29.2	-15	39.7	30	12.4	+22	34.7	60 S	20 19	21 13	22 41	18 53	54	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 56 ^m 7		Mag: -4.7 PMG: 15 ^h 02 ^m		Mag: +0.9 PMG: 6 ^h 29 ^m		Mag: -2.5 PMG: 18 ^h 54 ^m		Mag: +0.1 PMG: 18 ^h 26 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	135	12.5	134	17.1	+2	34.3	262	32.1	-17	53.6	75	48.3	+19	47.2	82	53.0	+16	50.4
1	150	15.0	149	17.8		35.4	277	33.2		54.0	90	50.7		47.2	97	55.4		50.5
2	165	17.4	164	18.5		36.6	292	34.3		54.3	105	53.1		47.2	112	57.8		50.5
3	180	19.9	179	19.2		37.7	307	35.4		54.6	120	55.4		47.3	128	00.2		50.5
4	195	22.4	194	19.9		38.9	322	36.5		55.0	135	57.8		47.3	143	02.6		50.5
5	210	24.8	209	20.6	+2	40.0	337	37.6	-17	55.3	151	00.2	+19	47.3	158	05.0	+16	50.6
6	225	27.3	224	21.3	+2	41.2	352	38.6	-17	55.7	166	02.6	+19	47.4	173	07.5	+16	50.6
7	240	29.8	239	22.0		42.3	7	39.7		56.0	181	04.9		47.4	188	09.9		50.6
8	255	32.2	254	22.6		43.5	22	40.8		56.4	196	07.3		47.4	203	12.3		50.6
9	270	34.7	269	23.3		44.6	37	41.9		56.7	211	09.7		47.4	218	14.7		50.7
10	285	37.1	284	24.0		45.7	52	43.0		57.0	226	12.0		47.5	233	17.1		50.7
11	300	39.6	299	24.7	+2	46.9	67	44.1	-17	57.4	241	14.4	+19	47.5	248	19.5	+16	50.7
12	315	42.1	314	25.4	+2	48.0	82	45.2	-17	57.7	256	16.8	+19	47.5	263	21.9	+16	50.7
13	330	44.5	329	26.1		49.2	97	46.3		58.1	271	19.1		47.6	278	24.3		50.8
14	345	47.0	344	26.8		50.3	112	47.3		58.4	286	21.5		47.6	293	26.8		50.8
15	0	49.5	359	27.6		51.5	127	48.4		58.8	301	23.9		47.6	308	29.2		50.8
16	15	51.9	14	28.3		52.6	142	49.5		59.1	316	26.2		47.7	323	31.6		50.8
17	30	54.4	29	29.0	+2	53.8	157	50.6	-17	59.4	331	28.6	+19	47.7	338	34.0	+16	50.9
18	45	56.9	44	29.7	+2	54.9	172	51.7	-17	59.8	346	31.0	+19	47.7	353	36.4	+16	50.9
19	60	59.3	59	30.4		56.0	187	52.8	-18	00.1	1	33.3		47.7	8	38.8		50.9
20	76	01.8	74	31.1		57.2	202	53.9		00.5	16	35.7		47.8	23	41.2		50.9
21	91	04.3	89	31.8		58.3	217	55.0		00.8	31	38.1		47.8	38	43.6		51.0
22	106	06.7	104	32.5	+2	59.5	232	56.0		01.1	46	40.4		47.8	53	46.0		51.0
23	121	09.2	119	33.2	+3	00.6	247	57.1		01.5	61	42.8		47.9	68	48.5		51.0
24	136	11.6	134	34.0	+3	01.8	262	58.2	-18	01.8	76	45.2	+19	47.9	83	50.9	+16	51.0
Dif	—		+7		+11		+11		-3		+24		0		+24			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 12 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 61'1 20 ^h : 61'2													
	PMG: 12 ^h 14 ^m 1			SD: 16'6 PMG: 22 ^h 58 ^m 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	176	29.2	-15	39.7	30	12.4	+22	34.7	60 N	6	26	7	16	8	02	13	37
1	191	29.1		38.9	44	34.3	29	33.9	58	23	10		7	53	13	54	
2	206	29.1		38.1	58	56.2	29	33.0	56	20	05		45		14	09	
3	221	29.0		37.4	73	18.1	29	31.9	54	18	7	00	38		21	81	
4	236	29.0		36.6	87	40.0	29	30.6	52	16	6	56	32		32	79	
5	251	28.9	-15	35.8	102	01.8	28	+22 29.1	50	6	13	6	52	7	26	14	42
6	266	28.9	-15	35.1	116	23.6	28	+22 27.5	45	6	08	6	43	7	14	15	03
7	281	28.9		34.3	130	45.4	28	25.6	40	6	03		35	7	04		20
8	296	28.8		33.5	145	07.2	28	23.7	35	5	58		28	6	55		34
9	311	28.8		32.7	159	29.0	28	21.5	30		54		22		47		15
10	326	28.7		32.0	173	50.7	27	19.2	20	45	11		34		34		16
11	341	28.7	-15	31.2	188	12.5	28	+22 16.7	10 N	5	35	6	00	6	22	16	25
12	356	28.7	-15	30.4	202	34.2	27	+22 14.0	0	5	24	5	49	6	11	16	42
13	11	28.6		29.7	216	56.0	28	11.2	10 S	5	12		37	5	59		17
14	26	28.6		28.9	231	17.7	27	08.2	20	4	57		24		47		18
15	41	28.6		28.1	245	39.5	28	05.0	32	37	5	07	33		39	56	
16	56	28.5		27.3	260	01.3	28	+22 01.7	35	25	4	57	25		17	51	
17	71	28.5	-15	26.6	274	23.0	27	+21 58.1	40	4	10	4	46	5	15	18	05
18	86	28.5	-15	25.8	288	44.8	28	+21 54.5	45	3	51	4	31	5	04	18	22
19	101	28.4		25.0	303	06.6	28	50.6	50	26	14		4	51		42	48
20	116	28.4		24.2	317	28.4	28	46.6	52	3	14	4	05		44	18	52
21	131	28.3		23.4	331	50.2	28	42.4	54	2	59	3	55		37	19	03
22	146	28.3		22.7	346	12.1	29	38.0	56		41		44		29		16
23	161	28.3		21.9	0	33.9	28	33.5	58	2	19	31		21		30	39
24	176	28.2	-15	21.1	14	55.8	29	+21 28.8	60 S	1	48	3	16	4	10	19	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 52 ^m 8		Mag: -4.7 PMG: 15 ^h 01 ^m		Mag: +0.9 PMG: 6 ^h 28 ^m		Mag: -2.5 PMG: 18 ^h 50 ^m		Mag: +0.1 PMG: 18 ^h 22 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	136	11.6	134	34.0	+3	01.8	262	58.2	-18	01.8	76	45.2	+19	47.9	83	50.9
1	151	14.1	149	34.7		02.9	277	59.3		02.2	91	47.5		47.9	98	53.3
2	166	16.6	164	35.4		04.0	293	00.4		02.5	106	49.9		47.9	113	55.7
3	181	19.0	179	36.1		05.2	308	01.5		02.8	121	52.3		48.0	128	58.1
4	196	21.5	194	36.9		06.3	323	02.6		03.2	136	54.6		48.0	144	00.5
5	211	24.0	209	37.6	+3	07.4	338	03.7	-18	03.5	151	57.0	+19	48.0	159	02.9
6	226	26.4	224	38.3	+3	08.6	353	04.8	-18	03.9	166	59.3	+19	48.1	174	05.3
7	241	28.9	239	39.0		09.7	8	05.8		04.2	182	01.7		48.1	189	07.7
8	256	31.4	254	39.8		10.9	23	06.9		04.5	197	04.1		48.1	204	10.1
9	271	33.8	269	40.5		12.0	38	08.0		04.9	212	06.4		48.2	219	12.5
10	286	36.3	284	41.2		13.1	53	09.1		05.2	227	08.8		48.2	234	15.0
11	301	38.8	299	42.0	+3	14.3	68	10.2	-18	05.5	242	11.1	+19	48.2	249	17.4
12	316	41.2	314	42.7	+3	15.4	83	11.3	-18	05.9	257	13.5	+19	48.3	264	19.8
13	331	43.7	329	43.4		16.5	98	12.4		06.2	272	15.9		48.3	279	22.2
14	346	46.1	344	44.2		17.7	113	13.5		06.6	287	18.2		48.3	294	24.6
15	1	48.6	359	44.9		18.8	128	14.6		06.9	302	20.6		48.3	309	27.0
16	16	51.1	14	45.6		19.9	143	15.7		07.2	317	22.9		48.4	324	29.4
17	31	53.5	29	46.4	+3	21.1	158	16.7	-18	07.6	332	25.3	+19	48.4	339	31.8
18	46	56.0	44	47.1	+3	22.2	173	17.8	-18	07.9	347	27.7	+19	48.4	354	34.2
19	61	58.5	59	47.9		23.3	188	18.9		08.2	2	30.0		48.5	9	36.6
20	77	00.9	74	48.6		24.5	203	20.0		08.6	17	32.4		48.5	24	39.0
21	92	03.4	89	49.4		25.6	218	21.1		08.9	32	34.7		48.5	39	41.4
22	107	05.9	104	50.1		26.7	233	22.2		09.2	47	37.1		48.6	54	43.8
23	122	08.3	119	50.9		27.9	248	23.3		09.6	62	39.4		48.6	69	46.2
24	137	10.8	134	51.6	+3	29.0	263	24.4	-18	09.9	77	41.8	+19	48.6	84	48.6
Dif	—		+7		+11		+11		-3		+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 1			Edad: 13 ^d 5 PHE { SD: 16:7 PMG: **h **m 4 ^h : 61:3 12 ^h : 61:4 20 ^h : 61:4 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	h m m			
0	176	28.2	-15	21.1	14	55.8	+21	28.8	60 N	16 30	17 16	18 06	15 04 98	8 03 29			
1	191	28.2		20.3	29	17.7		23.9	58	39	21	08	19 94	7 48 33			
2	206	28.2		19.5	43	39.7	30	18.9	56	46	26	11	31 91	35 36			
3	221	28.1		18.8	58	01.6	29	13.7	54	53	31	13	42 88	24 38			
4	236	28.1		18.0	72	23.6	30	08.4	52	16 59	35	15	15 51 86	14 40			
5	251	28.1	-15	17.2	86	45.7	31	+21 02.9	50	17 05	17 39	18 17	16 00 84	7 05 42			
6	266	28.0	-15	16.4	101	07.8	31	+20 57.2	45	17 16	17 47	18 22	16 18 80	6 46 46			
7	281	28.0		15.6	115	29.9	31	51.4	40	26	17 55	27	33 76	30 50			
8	296	28.0		14.9	129	52.0	31	45.4	35	35	18 01	31	45 74	17 52			
9	311	28.0		14.1	144	14.2	32	39.2	30	42	07	35	16 56 71	6 06 53			
10	326	27.9		13.3	158	36.4	32	32.9	20	17 55	18	44	17 15 67	5 46 57			
11	341	27.9	-15	12.5	172	58.7	33	+20 26.4	10 N	18 07	18 28	18 54	17 31 64	5 29 60			
12	356	27.9	-15	11.7	187	21.0	33	+20 19.8	0	18 18	18 39	19 04	17 46 61	5 13 62			
13	11	27.8		10.9	201	43.4	34	13.0	10 S	29	18 50	16	18 01 57	4 56 65			
14	26	27.8		10.2	216	05.8	34	+20 06.1	20	40	19 03	31	17 54	39 68			
15	41	27.8		09.4	230	28.3	35	+19 59.0	30	18 54	19	50	35 51	19 71			
16	56	27.7		08.6	244	50.8	35	51.8	35	19 02	29	20 02	46 48	4 07 73			
17	71	27.7	-15	07.8	259	13.4	36	+19 44.4	40	19 11	19 40	20 16	18 58 45	3 53 76			
18	86	27.7	-15	07.0	273	36.1	37	+19 36.9	45	19 22	19 54	20 34	19 13 41	3 37 78			
19	101	27.7		06.2	287	58.8	37	29.2	50	35	20 11	20 58	30 38	17 82			
20	116	27.6		05.4	302	21.5	37	21.4	52	41	20	21 10	38 36	3 08 83			
21	131	27.6		04.6	316	44.4	39	13.4	54	48	29	24	47 34	2 57 85			
22	146	27.6		03.9	331	07.2	38	+19 05.3	56	19 55	40	21 41	19 58 30	45 88			
23	161	27.6		03.1	345	30.2	40	+18 57.0	58	20 04	20 52	22 01	20 09 28	31 90			
24	176	27.5	-15	02.3	359	53.2	40	+18 48.6	60 S	20 13	21 06	22 29	20 23 23	2 14 95			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 48 ^m 8		Mag: -4.7 PMG: 15 ^h 00 ^m			Mag: +0.9 PMG: 6 ^h 26 ^m			Mag: -2.5 PMG: 18 ^h 46 ^m			Mag: +0.1 PMG: 18 ^h 18 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	137	10.8	134	51.6	+3	29.0	263	24.4	-18	09.9	77	41.8	+19	48.6	84	48.6	
1	152	13.3	149	52.4		30.1	278	25.5		10.2	92	44.1		48.7	99	51.1	
2	167	15.7	164	53.1		31.3	293	26.6		10.6	107	46.5		48.7	114	53.5	
3	182	18.2	179	53.9		32.4	308	27.7		10.9	122	48.9		48.7	129	55.9	
4	197	20.6	194	54.7		33.5	323	28.7		11.2	137	51.2		48.8	144	58.3	
5	212	23.1	209	55.4	+3	34.6	338	29.8	-18	11.6	152	53.6	+19	48.8	160	00.7	
6	227	25.6	224	56.2	+3	35.8	353	30.9	-18	11.9	167	55.9	+19	48.8	175	03.1	
7	242	28.0	239	56.9		36.9	8	32.0		12.2	182	58.3		48.8	190	05.5	
8	257	30.5	254	57.7		38.0	23	33.1		12.6	198	00.6		48.9	205	07.9	
9	272	33.0	269	58.5		39.2	38	34.2		12.9	213	03.0		48.9	220	10.3	
10	287	35.4	284	59.2		40.3	53	35.3		13.2	228	05.3		48.9	235	12.7	
11	302	37.9	300	00.0	+3	41.4	68	36.4	-18	13.6	243	07.7	+19	49.0	250	15.1	
12	317	40.4	315	00.8	+3	42.5	83	37.5	-18	13.9	258	10.0	+19	49.0	265	17.5	
13	332	42.8	330	01.5		43.7	98	38.6		14.2	273	12.4		49.0	280	19.9	
14	347	45.3	345	02.3		44.8	113	39.7		14.6	288	14.7		49.1	295	22.3	
15	2	47.8	0	03.1		45.9	128	40.8		14.9	303	17.1		49.1	310	24.7	
16	17	50.2	15	03.9		47.0	143	41.8		15.2	318	19.4		49.1	325	27.1	
17	32	52.7	30	04.6	+3	48.1	158	42.9	-18	15.6	333	21.8	+19	49.2	340	29.5	
18	47	55.1	45	05.4	+3	49.3	173	44.0	-18	15.9	348	24.1	+19	49.2	355	31.9	
19	62	57.6	60	06.2		50.4	188	45.1		16.2	3	26.5		49.2	10	34.3	
20	78	00.1	75	07.0		51.5	203	46.2		16.6	18	28.8		49.3	25	36.7	
21	93	02.5	90	07.8		52.6	218	47.3		16.9	33	31.2		49.3	40	39.1	
22	108	05.0	105	08.6		53.8	233	48.4		17.2	48	33.5		49.3	55	41.5	
23	123	07.5	120	09.3		54.9	248	49.5		17.6	63	35.9		49.4	70	43.9	
24	138	09.9	135	10.1	+3	56.0	263	50.6	-18	17.9	78	38.2	+19	49.4	85	46.3	
Dif	—		+8		+11	+11		-3		+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: 14 ^d 5 PHE { SD: 16/7 PMG: 0 ^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	176	27.5	-15 02.3	359	53.2	+18 48.6	85	60 N	6 22	7 11	7 57	16 42	100	8 32	20
1	191	27.5	01.5	14	16.3	41	40.1	58	19	06	48	16 53	95	21	24
2	206	27.5	-15 00.7	28	39.5	42	31.5	56	17	7 01	41	17 02	92	11	27
3	221	27.5	-14 59.9	43	02.7	42	22.7	54	15	6 56	34	10 89		8 02	30
4	236	27.4	59.1	57	26.0	43	13.7	52	12	52	28	17 87		7 54	32
5	251	27.4	-14 58.3	71	49.3	43	+18 04.7	50	6 10	6 49	7 23	17 24	84	7 47	34
6	266	27.4	-14 57.5	86	12.8	45	+17 55.5	45	6 06	6 40	7 11	17 38	80	7 32	38
7	281	27.4	56.7	100	36.3	45	46.1	40	6 01	33	7 01	49 76		20	41
8	296	27.3	55.9	114	59.9	46	36.7	35	5 57	27	6 53	17 59	73	7 09	45
9	311	27.3	55.1	129	23.5	46	27.1	30	53	21	46	18 07	70	6 59	48
10	326	27.3	54.3	143	47.3	48	17.4	20	44	10	33	22 65		43	52
11	341	27.3	-14 53.6	158	11.1	48	+17 07.6	10 N	5 35	6 00	6 21	18 35	61	6 29	55
12	356	27.3	-14 52.8	172	35.0	49	+16 57.7	0	5 24	5 49	6 11	18 47	57	6 15	59
13	11	27.2	52.0	186	59.0	50	47.6	10 S	5 13	38	6 00	18 58	54	6 01	63
14	26	27.2	51.2	201	23.0	50	37.4	20	4 58	25	5 48	19 11	49	5 47	66
15	41	27.2	50.4	215	47.1	51	27.1	30	39	09	35	26 44		30	71
16	56	27.2	49.6	230	11.4	53	16.7	35	27	5 00	27	34 42		20	74
17	71	27.1	-14 48.8	244	35.7	53	+16 06.2	40	4 13	4 48	5 18	19 43	39	5 09	76
18	86	27.1	-14 48.0	259	00.0	53	+15 55.6	45	3 55	4 35	5 07	19 54	35	4 55	81
19	101	27.1	47.2	273	24.5	55	44.9	50	31	18	4 54	20 08	30	39	85
20	116	27.1	46.4	287	49.0	55	34.1	52	19	09	48	14 28		31	87
21	131	27.1	45.6	302	13.7	57	23.1	54	3 05	4 00	41	21 26		22	90
22	146	27.1	44.8	316	38.4	57	12.1	56	2 48	3 49	34	28 23		13	92
23	161	27.0	44.0	331	03.2	58	+15 00.9	58	28	37	25	37 20		4 01	97
24	176	27.0	-14 43.2	345	28.1	59	+14 49.7	60 S	2 00	3 23	4 16	20 46	17	3 49	100
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 44 ^m 9		Mag: -4.8 PMG: 14 ^h 59 ^m			Mag: +0.9 PMG: 6 ^h 24 ^m			Mag: -2.5 PMG: 18 ^h 43 ^m			Mag: +0.1 PMG: 18 ^h 14 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	138	09.9	135	10.1	+3 56.0	263	50.6	-18 17.9	78	38.2	+19 49.4	85	46.3	+16 52.3	
1	153	12.4	150	10.9	57.1	278	51.7	18.2	93	40.6	49.4	100	48.7	52.3	
2	168	14.9	165	11.7	58.2	293	52.8	18.5	108	42.9	49.5	115	51.1	52.4	
3	183	17.3	180	12.5	+3 59.4	308	53.9	18.9	123	45.3	49.5	130	53.5	52.4	
4	198	19.8	195	13.3	+4 00.5	323	55.0	19.2	138	47.6	49.5	145	55.9	52.4	
5	213	22.2	210	14.1	+4 01.6	338	56.1	-18 19.5	153	49.9	+19 49.6	160	58.3	+16 52.4	
6	228	24.7	225	14.9	+4 02.7	353	57.2	-18 19.9	168	52.3	+19 49.6	176	00.7	+16 52.5	
7	243	27.2	240	15.7	03.8	8	58.2	20.2	183	54.6	49.6	191	03.1	52.5	
8	258	29.6	255	16.5	04.9	23	59.3	20.5	198	57.0	49.7	206	05.5	52.5	
9	273	32.1	270	17.3	06.1	39	00.4	20.9	213	59.3	49.7	221	07.9	52.5	
10	288	34.6	285	18.1	07.2	54	01.5	21.2	229	01.7	49.7	236	10.3	52.6	
11	303	37.0	300	18.9	+4 08.3	69	02.6	-18 21.5	244	04.0	+19 49.8	251	12.7	+16 52.6	
12	318	39.5	315	19.7	+4 09.4	84	03.7	-18 21.8	259	06.4	+19 49.8	266	15.1	+16 52.6	
13	333	42.0	330	20.5	10.5	99	04.8	22.2	274	08.7	49.8	281	17.5	52.7	
14	348	44.4	345	21.3	11.6	114	05.9	22.5	289	11.0	49.9	296	19.9	52.7	
15	3	46.9	0 22.1	12.7	12.7	129	07.0	22.8	304	13.4	49.9	311	22.3	52.7	
16	18	49.4	15 23.0	13.8	13.8	144	08.1	23.1	319	15.7	49.9	326	24.7	52.7	
17	33	51.8	30 23.8	+4 15.0	15.0	159	09.2	-18 23.5	334	18.1	+19 50.0	341	27.1	+16 52.8	
18	48	54.3	45 24.6	+4 16.1	16.1	174	10.3	-18 23.8	349	20.4	+19 50.0	356	29.5	+16 52.8	
19	63	56.7	60 25.4	17.2	17.2	189	11.4	24.1	4	22.7	50.0	11	31.9	52.8	
20	78	59.2	75 26.2	18.3	18.3	204	12.5	24.5	19	25.1	50.1	26	34.3	52.9	
21	94	01.7	90 27.0	19.4	19.4	219	13.6	24.8	34	27.4	50.1	41	36.7	52.9	
22	109	04.1	105 27.9	20.5	20.5	234	14.7	25.1	49	29.8	50.1	56	39.1	52.9	
23	124	06.6	120 28.7	21.6	21.6	249	15.8	25.4	64	32.1	50.2	71	41.5	52.9	
24	139	09.1	135 29.5	+4 22.7	22.7	264	16.9	-18 25.8	79	34.4	+19 50.2	86	43.9	+16 53.0	
Dif	—		+8	+11		+11	-3		+23		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: 15 ^d 5 PHE { SD: 16'7 PMG: 1 ^h 00 ^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	176	27.0	-14	43.2	345	28.1	+14	49.7	60 N	16 35	17 21	18 10	18 22 97	8 52 15
1	191	27.0		42.4	359	53.0	59	38.4	58	44	26	12	28 94	45 18
2	206	27.0		41.6	14	18.1	61	27.0	56	51	30	15	34 91	38 21
3	221	27.0		40.8	28	43.2	61	15.4	54	16 57	35	17	39 88	32 22
4	236	27.0		40.0	43	08.4	62	+14 03.8	52	17 03	38	18	44 85	26 26
5	251	26.9	-14	39.2	57	33.7	63	+13 52.1	50	17 08	17 42	18 20	18 48 83	8 21 28
6	266	26.9	-14	38.4	71	59.1	64	+13 40.4	45	17 19	17 50	18 25	18 58 77	8 10 33
7	281	26.9		37.6	86	24.6	65	28.5	40	29	17 57	29	19 05 74	8 01 37
8	296	26.9		36.8	100	50.2	66	16.5	35	37	18 03	33	12 70	7 54 39
9	311	26.9		36.0	115	15.8	66	+13 04.5	30	44	09	37	17 68	47 42
10	326	26.9		35.2	129	41.6	68	+12 52.4	20	17 56	19	45	27 63	35 47
11	341	26.8	-14	34.4	144	07.4	68	+12 40.2	10 N	18 07	18 29	18 54	19 36 58	7 24 52
12	356	26.8	-14	33.5	158	33.3	69	+12 28.0	0	18 18	18 39	19 04	19 44 54	7 14 56
13	11	26.8		32.7	172	59.3	70	15.6	10 S	28	18 50	15	19 52 50	7 04 60
14	26	26.8		31.9	187	25.4	71	+12 03.2	20	39	19 02	29	20 00 46	6 53 64
15	41	26.8		31.1	201	51.5	71	+11 50.8	30	18 53	18	48	10 40	41 69
16	56	26.8		30.3	216	17.8	73	38.2	35	19 00	27	19 59	16 37	34 71
17	71	26.8	-14	29.5	230	44.1	73	+11 25.6	40	19 09	19 38	20 13	20 22 34	6 25 76
18	86	26.8	-14	28.7	245	10.5	74	+11 13.0	45	19 19	19 51	20 31	20 29 31	6 16 79
19	101	26.8		27.9	259	37.0	75	+11 00.2	50	31	20 08	20 54	38 26	6 04 84
20	116	26.7		27.1	274	03.6	76	+10 47.4	52	37	16	21 05	42 24	5 58 87
21	131	26.7		26.3	288	30.2	76	34.6	54	44	24	18	47 21	52 89
22	146	26.7		25.5	302	57.0	78	21.7	56	51	35	34	51 19	45 92
23	161	26.7		24.7	317	23.8	78	+10 08.7	58	19 59	20 46	21 53	20 57 16	38 95
24	176	26.7	-14	23.8	331	50.7	79	+9 55.7	60 S	20 08	21 00	22 18	21 03 13	5 29 99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 41 ^m 0		Mag: -4.8 PMG: 14 ^h 57 ^m		Mag: +0.9 PMG: 6 ^h 22 ^m		Mag: -2.5 PMG: 18 ^h 39 ^m		Mag: +0.1 PMG: 18 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	09.1	135	29.5	+4	22.7	264	16.9	-18	25.8
1	154	11.5	150	30.3		23.8	279	18.0		26.1
2	169	14.0	165	31.2		24.9	294	19.0		26.4
3	184	16.5	180	32.0		26.0	309	20.1		26.7
4	199	18.9	195	32.8		27.1	324	21.2		27.1
5	214	21.4	210	33.7	+4	28.3	339	22.3	-18	27.4
6	229	23.9	225	34.5	+4	29.4	354	23.4	-18	27.7
7	244	26.3	240	35.3		30.5	9	24.5		28.0
8	259	28.8	255	36.2		31.6	24	25.6		28.4
9	274	31.2	270	37.0		32.7	39	26.7		28.7
10	289	33.7	285	37.8		33.8	54	27.8		29.0
11	304	36.2	300	38.7	+4	34.9	69	28.9	-18	29.3
12	319	38.6	315	39.5	+4	36.0	84	30.0	-18	29.6
13	334	41.1	330	40.4		37.1	99	31.1		30.0
14	349	43.6	345	41.2		38.2	114	32.2		30.3
15	4	46.0	0	42.1		39.3	129	33.3		30.6
16	19	48.5	15	42.9		40.4	144	34.4		30.9
17	34	51.0	30	43.8	+4	41.5	159	35.5	-18	31.3
18	49	53.4	45	44.6	+4	42.6	174	36.6	-18	31.6
19	64	55.9	60	45.5		43.7	189	37.7		31.9
20	79	58.3	75	46.3		44.8	204	38.8		32.2
21	95	00.8	90	47.2		45.9	219	39.9		32.5
22	110	03.3	105	48.1		47.0	234	41.0		32.9
23	125	05.7	120	48.9		48.1	249	42.1		33.2
24	140	08.2	135	49.8	+4	49.2	264	43.2	-18	33.5
Dif	—		+8		+11		+11		-3	

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: 16 ^d 5 PHE { SD: 16'5 PMG: 1 ^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	176	26.7	-14	23.8	331	50.7	+9 55.7	60 N	6 17	7 06	7 51	19 59	93	9 07	12
1	191	26.7		23.0	346	17.7	80 42.7	58	15	7 01	43	20 02	90	9 03	15
2	206	26.7		22.2	0	44.8	81 29.6	56	13	6 57	36	05 86		8 59	17
3	221	26.7		21.4	15	11.9	81 16.4	54	11	53	30	07 84		55	20
4	236	26.7		20.6	29	39.2	83 +9 03.2	52	09	49	24	09 82		52	23
5	251	26.7	-14	19.8	44	06.5	83 +8 50.0	50	6 07	6 46	7 19	20 11	80	8 49	25
6	266	26.7	-14	19.0	58	33.9	84 +8 36.7	45	6 03	6 38	7 08	20 15	75	8 43	29
7	281	26.6		18.2	73	01.3	84 23.4	40	5 59	31	6 59	19 71		38	32
8	296	26.6		17.3	87	28.9	86 +8 10.0	35	55	25	51	22 68		33	36
9	311	26.6		16.5	101	56.5	86 +7 56.6	30	51	19	44	25 65		29	39
10	326	26.6		15.7	116	24.2	87 43.2	20	43	6 09	32	30 59		22	44
11	341	26.6	-14	14.9	130	52.0	88 +7 29.8	10 N	5 34	5 59	6 21	20 34	55	8 16	48
12	356	26.6	-14	14.1	145	19.8	88 +7 16.3	0	5 25	5 49	6 11	20 38	51	8 10	52
13	11	26.6		13.3	159	47.7	89 +7 02.8	10 S	5 13	39	6 00	42 46		8 04	56
14	26	26.6		12.5	174	15.7	90 +6 49.2	20	4 59	26	5 49	46 42		7 57	61
15	41	26.6		11.6	188	43.8	91 35.6	30	41	11	36	50 38		50	66
16	56	26.6		10.8	203	11.9	91 22.0	35	30	5 02	29	53 35		45	70
17	71	26.6	-14	10.0	217	40.1	92 +6 08.4	40	4 16	4 51	5 20	20 56	31	7 41	72
18	86	26.6	-14	09.2	232	08.4	93 +5 54.8	45	3 58	4 38	5 10	21 00	27	7 35	76
19	101	26.6		08.4	246	36.7	93 41.1	50	35	21	4 58	04 23		28	81
20	116	26.6		07.6	261	05.1	94 27.5	52	24	14	52	06 21		25	83
21	131	26.6		06.7	275	33.6	95 13.8	54	3 11	4 05	46	08 19		21	86
22	146	26.6		05.9	290	02.2	96 +5 00.1	56	2 55	3 55	38	10 17		17	89
23	161	26.6		05.1	304	30.8	96 +4 46.4	58	36	43	30	13 14		13	92
24	176	26.6	-14	04.3	318	59.5	97 +4 32.6	60 S	2 11	3 29	4 21	21 16	11	7 08	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 37 ^m 1		Mag: -4.8 PMG: 14 ^h 56 ^m		Mag: +0.8 PMG: 6 ^h 21 ^m		Mag: -2.5 PMG: 18 ^h 35 ^m		Mag: +0.1 PMG: 18 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	140	08.2	135	49.8	+4	49.2	264	43.2	-18	33.5
1	155	10.7	150	50.7		50.3	279	44.3		33.8
2	170	13.1	165	51.5		51.3	294	45.4		34.1
3	185	15.6	180	52.4		52.4	309	46.5		34.5
4	200	18.1	195	53.3		53.5	324	47.6		34.8
5	215	20.5	210	54.1	+4	54.6	339	48.7	-18	35.1
6	230	23.0	225	55.0	+4	55.7	354	49.8	-18	35.4
7	245	25.5	240	55.9		56.8	9	50.9		35.7
8	260	27.9	255	56.8		57.9	24	52.0		36.1
9	275	30.4	270	57.6	+4	59.0	39	53.1		36.4
10	290	32.8	285	58.5	+5	00.1	54	54.2		36.7
11	305	35.3	300	59.4	+5	01.2	69	55.3	-18	37.0
12	320	37.8	316	00.3	+5	02.3	84	56.4	-18	37.3
13	335	40.2	331	01.2		03.3	99	57.5		37.7
14	350	42.7	346	02.0		04.4	114	58.6		38.0
15	5	45.2	1	02.9		05.5	129	59.7		38.3
16	20	47.6	16	03.8		06.6	145	00.8		38.6
17	35	50.1	31	04.7	+5	07.7	160	01.9	-18	38.9
18	50	52.6	46	05.6	+5	08.8	175	03.0	-18	39.2
19	65	55.0	61	06.5		09.9	190	04.1		39.6
20	80	57.5	76	07.4		11.0	205	05.2		39.9
21	96	00.0	91	08.3		12.0	220	06.3		40.2
22	111	02.4	106	09.2		13.1	235	07.4		40.5
23	126	04.9	121	10.1		14.2	250	08.5		40.8
24	141	07.3	136	11.0	+5	15.3	265	09.6	-18	41.1
Dif	—		+9		+11		+11		-3	
									+23	
									0	
									+24	

ALMANAQUE NÁUTICO PERSEUS

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: 18 ^d 5 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'2 SD: 16'1 PMG: 3 ^h 40 ^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	176	26.6	-13	44.5	306	45.0	-0	56.0	60 N	6	13	7	02	7	46	23	01	
1	191	26.6		43.6	321	15.0 ¹¹⁰	-1	09.5 ¹³⁵	58	11	6	57	39	22	58	83	31	
2	206	26.7		42.8	335	45.1 ¹¹¹		23.0 ¹³⁵	56	09	53	32	55	80	33	16		
3	221	26.7		42.0	350	15.2 ¹¹¹		36.5 ¹³⁵	54	07	49	26	52	78	34	19		
4	236	26.7		41.1	4	45.3 ¹¹¹	-1	49.9 ¹³⁴	52	06	45	21	50	75	35	21		
5	251	26.7	-13	40.3	19	15.5 ¹¹²	-2	03.3 ¹³⁴	50	6	04	6	42	7	16	22	47	
6	266	26.7	-13	39.5	33	45.7 ¹¹²	-2	16.7 ¹³⁴	45	6	01	6	35	7	05	22	42	
7	281	26.7		38.6	48	16.0 ¹¹³		30.0 ¹³³	40	5	57	29	6	57	38	66	41	
8	296	26.7		37.8	62	46.2 ¹¹²		43.4 ¹³⁴	35	53	23	49	35	63	43	33		
9	311	26.7		37.0	77	16.6 ¹¹⁴	-2	56.6 ¹³²	30	50	18	42	32	60	45	35		
10	326	26.7		36.1	91	46.9 ¹¹³	-3	09.9 ¹³³	20	42	6	08	31	26	56	47	41	
11	341	26.7	-13	35.3	106	17.3 ¹¹⁴	-3	23.1 ¹³²	10 N	5	34	5	59	6	21	22	22	
12	356	26.7	-13	34.5	120	47.7 ¹¹⁴	-3	36.3 ¹³²	0	5	25	5	50	6	11	22	18	
13	11	26.8		33.6	135	18.2 ¹¹⁵	-3	49.4 ¹³¹	10 S	14	39	6	01	13	45	54	53	
14	26	26.8		32.8	149	48.7 ¹¹⁵	-4	02.5 ¹³¹	20	5	00	27	5	50	09	40	57	
15	41	26.8		32.0	164	19.2 ¹¹⁵		15.5 ¹³⁰	30	4	43	13	38	04	36	9	59	
16	56	26.8		31.1	178	49.8 ¹¹⁶		28.6 ¹³¹	35	32	5	04	31	22	01	33	10	
17	71	26.8	-13	30.3	193	20.3 ¹¹⁵	-4	41.5 ¹²⁹	40	4	19	4	54	5	23	21	58	
18	86	26.8	-13	29.5	207	50.9 ¹¹⁶	-4	54.5 ¹³⁰	45	4	02	4	41	5	13	21	54	
19	101	26.8		28.6	222	21.6 ¹¹⁷	-5	07.3 ¹²⁸	50	3	40	25	5	01	50	23	07	
20	116	26.8		27.8	236	52.2 ¹¹⁶		20.2 ¹²⁹	52	29	18	4	56	47	22	09	77	
21	131	26.8		26.9	251	22.9 ¹¹⁷		33.0 ¹²⁸	54	17	09	50	45	19	10	79		
22	146	26.9		26.1	265	53.6 ¹¹⁷		45.7 ¹²⁷	56	3	02	4	00	43	17	11	82	
23	161	26.9		25.3	280	24.3 ¹¹⁷	-5	58.4 ¹²⁷	58	2	44	3	49	35	40	14	13	
24	176	26.9	-13	24.4	294	55.1 ¹¹⁸	-6	11.1 ¹²⁷	60 S	2	21	3	36	4	27	21	37	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 14 ^h 29 ^m 2			Mag: -4.8 PMG: 14 ^h 53 ^m			Mag: +0.8 PMG: 6 ^h 17 ^m			Mag: -2.5 PMG: 18 ^h 28 ^m			Mag: +0.1 PMG: 17 ^h 59 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	142	06.5	136	33.2	+5	41.1	265	36.0	-18	48.7	82	21.9	+19	52.9	89	35.9	+16	55.1
1	157	08.9	151	34.1		42.2	280	37.1		49.0	97	24.2		52.9	104	38.3		55.2
2	172	11.4	166	35.1		43.2	295	38.2		49.3	112	26.5		52.9	119	40.7		55.2
3	187	13.9	181	36.0		44.3	310	39.3		49.6	127	28.8		53.0	134	43.1		55.2
4	202	16.3	196	36.9		45.4	325	40.4		49.9	142	31.2		53.0	149	45.4		55.3
5	217	18.8	211	37.9	+5	46.4	340	41.5	-18	50.2	157	33.5	+19	53.1	164	47.8	+16	55.3
6	232	21.3	226	38.9	+5	47.5	355	42.6	-18	50.5	172	35.8	+19	53.1	179	50.2	+16	55.3
7	247	23.7	241	39.8		48.6	10	43.8		50.9	187	38.1		53.1	194	52.6		55.4
8	262	26.2	256	40.8		49.6	25	44.9		51.2	202	40.4		53.2	209	55.0		55.4
9	277	28.7	271	41.7		50.7	40	46.0		51.5	217	42.7		53.2	224	57.3		55.4
10	292	31.1	286	42.7		51.7	55	47.1		51.8	232	45.0		53.3	239	59.7		55.5
11	307	33.6	301	43.6	+5	52.8	70	48.2	-18	52.1	247	47.3	+19	53.3	255	02.1	+16	55.5
12	322	36.0	316	44.6	+5	53.9	85	49.3	-18	52.4	262	49.6	+19	53.3	270	04.5	+16	55.5
13	337	38.5	331	45.6		54.9	100	50.4		52.7	277	51.9		53.4	285	06.9		55.5
14	352	41.0	346	46.5		56.0	115	51.5		53.0	292	54.3		53.4	300	09.2		55.6
15	7	43.4	1	47.5		57.0	130	52.6		53.3	307	56.6		53.5	315	11.6		55.6
16	22	45.9	16	48.5		58.1	145	53.7		53.6	322	58.9		53.5	330	14.0		55.6
17	37	48.4	31	49.5	+5	59.2	160	54.8	-18	53.9	338	01.2	+19	53.5	345	16.4	+16	55.7
18	52	50.8	46	50.4	+6	00.2	175	55.9	-18	54.2	353	03.5	+19	53.6	0	18.8	+16	55.7
19	67	53.3	61	51.4		01.3	190	57.0		54.6	8	05.8		53.6	15	21.1		55.7
20	82	55.8	76	52.4		02.3	205	58.1		54.9	23	08.1		53.7	30	23.5		55.8
21	97	58.2	91	53.4		03.4	220	59.2		55.2	38	10.4		53.7	45	25.9		55.8
22	113	00.7	106	54.4		04.4	236	00.3		55.5	53	12.7		53.7	60	28.3		55.8
23	128	03.2	121	55.3		05.5	251	01.4		55.8	68	15.0		53.8	75	30.6		55.9
24	143	05.6	136	56.3	+6	06.6	266	02.5	-18	56.1	83	17.3	+19	53.8	90	33.0	+16	55.9
Dif	—			+10 +11			+11 -3			+23 0			+24 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 19 ^d 5 PHE { 4 ^h : 57 ^m 9 12 ^h : 57 ^m 6 20 ^h : 57 ^m 3 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	176	26.9	-13	24.4	294	55.1	-6	11.1	60 N	16 46	17 30	18 19	** ** *	** ** *	9 40	13			
1	191	26.9		23.6	309	25.8 ¹¹⁷		23.7 ¹²⁶	58	53	35	21	** ** *	** ** *	45	15			
2	206	26.9		22.7	323	56.6 ¹¹⁸		36.2 ¹²⁵	56	16 59	39	22	** ** *	** ** *	49	18			
3	221	26.9		21.9	338	27.4 ¹¹⁸	-6	48.7 ¹²⁵	54	17 05	42	24	** ** *	** ** *	53	20			
4	236	26.9		21.1	352	58.3 ¹¹⁹	-7	01.2 ¹²⁵	52	10	45	25	** ** *	** ** *	56	22			
5	251	27.0	-13	20.2	7	29.1 ¹¹⁸	-7	13.6 ¹²⁴	50	17 15	17 49	18 27	** ** *	** ** *	9 59	24			
6	266	27.0	-13	19.4	22	00.0 ¹¹⁹	-7	25.9 ¹²³	45	17 25	17 55	18 30	23 52 67		10 06	28			
7	281	27.0		18.5	36	30.9 ¹¹⁹		38.2 ¹²³	40	33	18 01	33	44 64		11 32				
8	296	27.0		17.7	51	01.8 ¹¹⁹	-7	50.4 ¹²²	35	41	07	36	38 61		16 34				
9	311	27.0		16.9	65	32.7 ¹¹⁹	-8	02.6 ¹²²	30	47	12	40	32 59		20 37				
10	326	27.0		16.0	80	03.6 ¹¹⁹		14.7 ¹²¹	20	17 58	21	47	22 55		28 41				
11	341	27.1	-13	15.2	94	34.5 ¹¹⁹	-8	26.8 ¹²¹	10 N	18 08	18 30	18 55	23 14 51		10 34	45			
12	356	27.1	-13	14.3	109	05.5 ¹²⁰	-8	38.8 ¹²⁰	0	18 18	18 39	19 03	23 06 47		10 41	47			
13	11	27.1		13.5	123	36.5 ¹²⁰	-8	50.7 ¹¹⁹	10 S	27	18 49	14	22 58 44		47 51				
14	26	27.1		12.6	138	07.4 ¹¹⁹	-9	02.6 ¹¹⁹	20	37	19 00	27	49 41		10 53	55			
15	41	27.1		11.8	152	38.4 ¹²⁰		14.4 ¹¹⁸	30	49	14	44	40 37		11 01	59			
16	56	27.2		10.9	167	09.4 ¹²⁰		26.1 ¹¹⁷	35	18 56	23	19 55	34 35		05 62				
17	71	27.2	-13	10.1	181	40.4 ¹²⁰	-9	37.8 ¹¹⁷	40	19 04	19 33	20 07	22 28 32		11 10	65			
18	86	27.2	-13	09.3	196	11.4 ¹²⁰	-9	49.4 ¹¹⁶	45	19 13	19 45	20 24	22 21 29		11 16	68			
19	101	27.2		08.4	210	42.4 ¹²⁰	-10	01.0 ¹¹⁶	50	24	20 00	44	13 25		23 72				
20	116	27.2		07.6	225	13.5 ¹²¹		12.5 ¹¹⁵	52	30	07	20 55	09 23		26 74				
21	131	27.3		06.7	239	44.5 ¹²⁰		23.9 ¹¹⁴	54	35	15	21 07	04 21		29 77				
22	146	27.3		05.9	254	15.6 ¹²¹		35.3 ¹¹⁴	56	42	24	21	22 00 18		33 80				
23	161	27.3		05.0	268	46.6 ¹²⁰		46.6 ¹¹³	58	49	35	38	21 54 17		38 82				
24	176	27.3	-13	04.2	283	17.6 ¹²⁰	-10	57.8 ¹¹²	60 S	19 57	20 47	21 59	21 48 14		11 43	85			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 25 ^m 3			Mag: -4.8 PMG: 14 ^h 51 ^m			Mag: +0.8 PMG: 6 ^h 15 ^m			Mag: -2.4 PMG: 18 ^h 24 ^m			Mag: +0.1 PMG: 17 ^h 55 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	143	05.6	136	56.3	+6	06.6	266	02.5	-18	56.1	83	17.3	+19	53.8	90	33.0	+16	55.9	
1	158	08.1	151	57.3		07.6	281	03.7		56.4	98	19.6		53.9	105	35.4		55.9	
2	173	10.5	166	58.3		08.7	296	04.8		56.7	113	21.9		53.9	120	37.8		56.0	
3	188	13.0	181	59.3		09.7	311	05.9		57.0	128	24.2		53.9	135	40.2		56.0	
4	203	15.5	197	00.3		10.8	326	07.0		57.3	143	26.5		54.0	150	42.5		56.0	
5	218	17.9	212	01.3	+6	11.8	341	08.1	-18	57.6	158	28.8	+19	54.0	165	44.9	+16	56.1	
6	233	20.4	227	02.3	+6	12.9	356	09.2	-18	57.9	173	31.2	+19	54.1	180	47.3	+16	56.1	
7	248	22.9	242	03.3		13.9	11	10.3		58.2	188	33.5		54.1	195	49.7		56.1	
8	263	25.3	257	04.3		15.0	26	11.4		58.5	203	35.8		54.1	210	52.0		56.2	
9	278	27.8	272	05.3		16.0	41	12.5		58.8	218	38.1		54.2	225	54.4		56.2	
10	293	30.3	287	06.3		17.1	56	13.6		59.1	233	40.4		54.2	240	56.8		56.2	
11	308	32.7	302	07.3	+6	18.1	71	14.7	-18	59.5	248	42.7	+19	54.3	255	59.2	+16	56.3	
12	323	35.2	317	08.3	+6	19.1	86	15.8	-18	59.8	263	45.0	+19	54.3	271	01.5	+16	56.3	
13	338	37.6	332	09.3		20.2	101	16.9	-19	00.1	278	47.3		54.3	286	03.9		56.3	
14	353	40.1	347	10.3		21.2	116	18.1		00.4	293	49.6		54.4	301	06.3		56.4	
15	8	42.6	2	11.3		22.3	131	19.2		00.7	308	51.9		54.4	316	08.7		56.4	
16	23	45.0	17	12.3		23.3	146	20.3		01.0	323	54.2		54.5	331	11.0		56.4	
17	38	47.5	32	13.3	+6	24.4	161	21.4	-19	01.3	338	56.5	+19	54.5	346	13.4	+16	56.5	
18	53	50.0	47	14.4	+6	25.4	176	22.5	-19	01.6	353	58.8	+19	54.6	1	15.8	+16	56.5	
19	68	52.4	62	15.4		26.5	191	23.6		01.9	9	01.1		54.6	16	18.2		56.5	
20	83	54.9	77	16.4		27.5	206	24.7		02.2	24	03.4		54.6	31	20.5		56.6	
21	98	57.4	92	17.4		28.5	221	25.8		02.5	39	05.7		54.7	46	22.9		56.6	
22	113	59.8	107	18.5		29.6	236	26.9		02.8	54	08.0		54.7	61	25.3		56.6	
23	129	02.3	122	19.5		30.6	251	28.0		03.1	69	10.3		54.8	76	27.7		56.7	
24	144	04.8	137	20.5	+6	31.6	266	29.1	-19	03.4	84	12.6	+19	54.8	91	30.0	+16	56.7	
Dif	—			+10	+10		+11	-3		+23	0			+24			0		

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 20 ^d 5 PHE { 4 ^h : 57 ^o 0 12 ^h : 56 ^o 7 20 ^h : 56 ^o 4 PMG: 5 ^h 17 ^m 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	h	m			
0	176	27.3	-13	04.2	283	17.6	-10	57.8	60 N	6 08	6 57	7 41	0 28	84	9 53	14			
1	191	27.3		03.3	297	48.7 ¹²¹	-11	09.0 ¹¹²	58	06	52	34	21	81	10 00	18			
2	206	27.4		02.5	312	19.8 ¹²¹		20.0 ¹¹⁰	56	05	49	28	15	78	07	20			
3	221	27.4		01.6	326	50.8 ¹²⁰		31.1 ¹¹¹	54	04	45	22	10	75	13	23			
4	236	27.4	-13	00.8	341	21.9 ¹²¹		42.0 ¹⁰⁹	52	02	42	17	05	73	18	25			
5	251	27.4	-12	59.9	355	52.9 ¹²⁰	-11	52.9 ¹⁰⁹	50	6 01	6 39	7 12	0 01	71	10 23	27			
6	266	27.5	-12	59.1	10	24.0 ¹²¹	-12	03.7 ¹⁰⁸	45	5 58	6 32	7 02	** ** *		10 34	30			
7	281	27.5		58.2	24	55.1 ¹²¹		14.4 ¹⁰⁷	40	55	26	6 54	** ** *		43	33			
8	296	27.5		57.4	39	26.1 ¹²⁰		25.1 ¹⁰⁷	35	51	21	47	** ** *		50	36			
9	311	27.5		56.5	53	57.2 ¹²¹		35.6 ¹⁰⁵	30	48	16	41	** ** *		10 57	38			
10	326	27.5		55.7	68	28.2 ¹²⁰		46.1 ¹⁰⁵	20	41	6 07	30	** ** *		11 09	41			
11	341	27.6	-12	54.8	82	59.3 ¹²¹	-12	56.6 ¹⁰⁵	10 N	5 34	5 59	6 20	** ** *		11 19	45			
12	356	27.6	-12	54.0	97	30.4 ¹²¹	-13	06.9 ¹⁰³	0	5 25	5 50	6 11	23 53	49	11 28	48			
13	11	27.6		53.1	112	01.4 ¹²⁰		17.2 ¹⁰³	10 S	15	40	6 01	42	46	38	51			
14	26	27.7		52.3	126	32.5 ¹²¹		27.4 ¹⁰²	20	5 02	28	5 51	30	43	11 48	55			
15	41	27.7		51.4	141	03.5 ¹²⁰		37.5 ¹⁰¹	30	4 45	15	40	17	39	12 00	58			
16	56	27.7		50.5	155	34.5 ¹²⁰		47.6 ¹⁰¹	35	34	5 06	33	09	37	07	60			
17	71	27.7	-12	49.7	170	05.6 ¹²¹	-13	57.5 ⁹⁹	40	4 21	4 56	5 25	23 00	35	12 15	63			
18	86	27.8	-12	48.8	184	36.6 ¹²⁰	-14	07.4 ⁹⁹	45	4 05	4 44	5 16	22 50	32	12 24	66			
19	101	27.8		48.0	199	07.6 ¹²⁰		17.2 ⁹⁸	50	3 45	29	05	38	28	35	70			
20	116	27.8		47.1	213	38.7 ¹²¹		26.9 ⁹⁷	52	34	22	5 00	32	27	40	72			
21	131	27.8		46.3	228	09.7 ¹²⁰		36.6 ⁹⁷	54	22	14	4 54	25	25	46	74			
22	146	27.9		45.4	242	40.7 ¹²⁰		46.1 ⁹⁵	56	3 08	4 05	48	18	23	12 53	76			
23	161	27.9		44.6	257	11.7 ¹²⁰	-14	55.6 ⁹⁵	58	2 52	3 55	40	11	20	13 00	78			
24	176	27.9	-12	43.7	271	42.7 ¹²⁰	-15	05.0 ⁹⁴	60 S	2 31	3 42	4 32	22 02	17	13 08	82			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 21 ^m 3			Mag: -4.8 PMG: 14 ^h 50 ^m			Mag: +0.8 PMG: 6 ^h 14 ^m			Mag: -2.4 PMG: 18 ^h 20 ^m			Mag: +0.1 PMG: 17 ^h 51 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	144	04.8		137	20.5	+6	31.6	266	29.1	-19	03.4	84	12.6	+19	54.8	91	30.0		
1	159	07.2		152	21.5		32.7	281	30.3		03.7	99	14.9		54.8	106	32.4		
2	174	09.7		167	22.6		33.7	296	31.4		04.0	114	17.1		54.9	121	34.8		
3	189	12.1		182	23.6		34.8	311	32.5		04.3	129	19.4		54.9	136	37.2		
4	204	14.6		197	24.6		35.8	326	33.6		04.6	144	21.7		55.0	151	39.5		
5	219	17.1		212	25.7	+6	36.8	341	34.7	-19	04.9	159	24.0	+19	55.0	166	41.9		
6	234	19.5		227	26.7	+6	37.9	356	35.8	-19	05.2	174	26.3	+19	55.1	181	44.3		
7	249	22.0		242	27.8		38.9	11	36.9		05.5	189	28.6		55.1	196	46.6		
8	264	24.5		257	28.8		39.9	26	38.0		05.8	204	30.9		55.1	211	49.0		
9	279	26.9		272	29.9		41.0	41	39.1		06.1	219	33.2		55.2	226	51.4		
10	294	29.4		287	30.9		42.0	56	40.2		06.4	234	35.5		55.2	241	53.8		
11	309	31.9		302	31.9	+6	43.0	71	41.4	-19	06.7	249	37.8	+19	55.3	256	56.1		
12	324	34.3		317	33.0	+6	44.1	86	42.5	-19	07.0	264	40.1	+19	55.3	271	58.5		
13	339	36.8		332	34.1		45.1	101	43.6		07.3	279	42.4		55.4	287	00.9		
14	354	39.3		347	35.1		46.1	116	44.7		07.6	294	44.7		55.4	302	03.2		
15	9	41.7		2	36.2		47.1	131	45.8		07.9	309	47.0		55.4	317	05.6		
16	24	44.2		17	37.2		48.2	146	46.9		08.2	324	49.3		55.5	332	08.0		
17	39	46.6		32	38.3	+6	49.2	161	48.0	-19	08.5	339	51.6	+19	55.5	347	10.4		
18	54	49.1		47	39.3	+6	50.2	176	49.1	-19	08.8	354	53.9	+19	55.6	2	12.7		
19	69	51.6		62	40.4		51.2	191	50.3		09.1	9	56.1		55.6	17	15.1		
20	84	54.0		77	41.5		52.3	206	51.4		09.4	24	58.4		55.7	32	17.5		
21	99	56.5		92	42.5		53.3	221	52.5		09.7	40	00.7		55.7	47	19.8		
22	114	59.0		107	43.6		54.3	236	53.6		10.0	55	03.0		55.7	62	22.2		
23	130	01.4		122	44.7		55.3	251	54.7		10.3	70	05.3		55.8	77	24.6		
24	145	03.9		137	45.8	+6	56.4	266	55.8	-19	10.6	85	07.6	+19	55.8	92	26.9		
Dif	—			+11			+10	+11			-3			+23			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: 21 ^d 5 PHE { SD: 15:3 PMG: 6 ^h 05 ^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	27.9	-12	43.7	271	42.7	-15	05.0	60 N	16 51	17 35	18 24	1 52 79	10 07 20	
1	191	28.0		42.8	286	13.6 ¹¹⁹		14.3 ⁹³	58	16 58	39	25	42 76	18 23	
2	206	28.0		42.0	300	44.6 ¹²⁰		23.5 ⁹²	56	17 04	43	26	33 74	27 26	
3	221	28.0		41.1	315	15.6 ¹²⁰		32.7 ⁹²	54	09	46	27	25 72	36 27	
4	236	28.0		40.3	329	46.5 ¹¹⁹		41.7 ⁹⁰	52	14	49	29	18 70	43 29	
5	251	28.1	-12	39.4	344	17.5 ¹²⁰	-15	50.7 ⁹⁰	50	17 18	17 52	18 30	1 12 68	10 50 30	
6	266	28.1	-12	38.6	358	48.4 ¹¹⁹	-15	59.6 ⁸⁹	45	17 28	17 58	18 32	0 59 64	11 04 34	
7	281	28.1		37.7	13	19.3 ¹¹⁹	-16	08.4 ⁸⁸	40	36	18 04	35	48 62	16 36	
8	296	28.2		36.8	27	50.2 ¹¹⁹		17.1 ⁸⁷	35	43	09	38	39 59	26 39	
9	311	28.2		36.0	42	21.1 ¹¹⁹		25.7 ⁸⁶	30	49	13	41	31 57	35 40	
10	326	28.2		35.1	56	52.0 ¹¹⁹		34.2 ⁸⁵	20	17 59	22	48	17 54	11 50 44	
11	341	28.3	-12	34.2	71	22.9 ¹¹⁹	-16	42.7 ⁸⁵	10 N	18 09	18 30	18 55	0 05 51	12 04 46	
12	356	28.3	-12	33.4	85	53.8 ¹¹⁹	-16	51.0 ⁸³	0	18 18	18 39	19 03	** ** *	12 16 49	
13	11	28.3		32.5	100	24.6 ¹¹⁸	-16	59.3 ⁸³	10 S	27	48	13	** ** *	29 51	
14	26	28.4		31.7	114	55.5 ¹¹⁹	-17	07.5 ⁸²	20	36	18 59	26	** ** *	43 53	
15	41	28.4		30.8	129	26.3 ¹¹⁸		15.6 ⁸¹	30	47	19 12	42	23 56 42	12 58 57	
16	56	28.4		29.9	143	57.1 ¹¹⁸		23.6 ⁸⁰	35	18 54	20	19 52	46 40	13 07 59	
17	71	28.5	-12	29.1	158	28.0 ¹¹⁹	-17	31.5 ⁷⁹	40	19 01	19 30	20 04	23 35 38	13 18 60	
18	86	28.5	-12	28.2	172	58.8 ¹¹⁸	-17	39.3 ⁷⁸	45	19 10	19 41	20 20	23 22 36	13 30 63	
19	101	28.5		27.3	187	29.5 ¹¹⁷		47.0 ⁷⁷	50	21	19 56	40	23 06 33	45 66	
20	116	28.6		26.5	202	00.3 ¹¹⁸	-17	54.6 ⁷⁶	52	26	20 03	20 50	22 59 32	13 52 68	
21	131	28.6		25.6	216	31.1 ¹¹⁸	-18	02.1 ⁷⁵	54	31	10	21 01	50 31	14 00 69	
22	146	28.6		24.8	231	01.8 ¹¹⁷		09.6 ⁷⁵	56	37	19	14	41 28	09 71	
23	161	28.7		23.9	245	32.5 ¹¹⁷		16.9 ⁷³	58	44	29	30	31 26	18 74	
24	176	28.7	-12	23.0	260	03.3 ¹¹⁸	-18	24.2 ⁷³	60 S	19 51	20 40	21 49	22 19 23	14 30 77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 17 ^m 4		Mag: -4.8 PMG: 14 ^h 48 ^m		Mag: +0.8 PMG: 6 ^h 12 ^m		Mag: -2.4 PMG: 18 ^h 17 ^m		Mag: +0.2 PMG: 17 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	145	03.9	137	45.8	+6	56.4	266	55.8	-19	10.6	85	07.6	+19	55.8	92	26.9	+16	57.5
1	160	06.4	152	46.8		57.4	281	56.9		10.9	100	09.9		55.9	107	29.3		57.6
2	175	08.8	167	47.9		58.4	296	58.0		11.2	115	12.2		55.9	122	31.7		57.6
3	190	11.3	182	49.0	+6	59.4	311	59.2		11.5	130	14.5		56.0	137	34.0		57.6
4	205	13.7	197	50.1	+7	00.4	327	00.3		11.8	145	16.7		56.0	152	36.4		57.7
5	220	16.2	212	51.2	+7	01.5	342	01.4	-19	12.1	160	19.0	+19	56.0	167	38.8	+16	57.7
6	235	18.7	227	52.2	+7	02.5	357	02.5	-19	12.4	175	21.3	+19	56.1	182	41.1	+16	57.7
7	250	21.1	242	53.3		03.5	12	03.6		12.7	190	23.6		56.1	197	43.5		57.8
8	265	23.6	257	54.4		04.5	27	04.7		13.0	205	25.9		56.2	212	45.9		57.8
9	280	26.1	272	55.5		05.5	42	05.8		13.2	220	28.2		56.2	227	48.3		57.8
10	295	28.5	287	56.6		06.5	57	07.0		13.5	235	30.5		56.3	242	50.6		57.9
11	310	31.0	302	57.7	+7	07.6	72	08.1	-19	13.8	250	32.8	+19	56.3	257	53.0	+16	57.9
12	325	33.5	317	58.8	+7	08.6	87	09.2	-19	14.1	265	35.0	+19	56.3	272	55.4	+16	57.9
13	340	35.9	332	59.9		09.6	102	10.3		14.4	280	37.3		56.4	287	57.7		58.0
14	355	38.4	348	01.0		10.6	117	11.4		14.7	295	39.6		56.4	303	00.1		58.0
15	10	40.9	3	02.1		11.6	132	12.5		15.0	310	41.9		56.5	318	02.4		58.0
16	25	43.3	18	03.2		12.6	147	13.6		15.3	325	44.2		56.5	333	04.8		58.1
17	40	45.8	33	04.3	+7	13.6	162	14.8	-19	15.6	340	46.5	+19	56.6	348	07.2	+16	58.1
18	55	48.2	48	05.4	+7	14.6	177	15.9	-19	15.9	355	48.7	+19	56.6	3	09.5	+16	58.1
19	70	50.7	63	06.5		15.6	192	17.0		16.2	10	51.0		56.7	18	11.9		58.2
20	85	53.2	78	07.6		16.7	207	18.1		16.5	25	53.3		56.7	33	14.3		58.2
21	100	55.6	93	08.8		17.7	222	19.2		16.8	40	55.6		56.7	48	16.6		58.3
22	115	58.1	108	09.9		18.7	237	20.3		17.1	55	57.9		56.8	63	19.0		58.3
23	131	00.6	123	11.0		19.7	252	21.5		17.4	71	00.2		56.8	78	21.4		58.3
24	146	03.0	138	12.1	+7	20.7	267	22.6	-19	17.7	86	02.4	+19	56.9	93	23.7	+16	58.4
Dif	—		+11		+10		+11		-3		+23		0		+24		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 1			Edad: 22 ^d 5 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 0 PMG: 6 ^h 53 ^m R°: 49 ^m				Náutico	Civil		Hora	R°	Hora	R°			
	hG ☉	Dec		hG ☾	Dif	Dec									Dif		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	176	28.7	-12	23.0	260	03.3	-18	24.2	71	6 03	6 52	7 35	3 11	74	10 27	27	
1	191	28.8		22.2	274	34.0 ¹¹⁷		31.3	71	02	48	29	2 58	71	41	30	
2	206	28.8		21.3	289	04.7 ¹¹⁷		38.4	70	01	44	23	47	68	10 53	32	
3	221	28.8		20.4	303	35.3 ¹¹⁶		45.4	70	6 00	41	18	37	66	11 03	34	
4	236	28.9		19.6	318	06.0 ¹¹⁷		52.2	68	5 59	38	13	28	65	12	35	
5	251	28.9	-12	18.7	332	36.7 ¹¹⁷	-18	59.0	68	5 58	6 35	7 09	2 20	64	11 20	37	
6	266	28.9	-12	17.8	347	07.3 ¹¹⁶	-19	05.7	67	5 55	6 29	6 59	2 03	61	11 38	39	
7	281	29.0		17.0	1	37.9 ¹¹⁶		12.2	65	52	24	52	1 50	58	11 52	41	
8	296	29.0		16.1	16	08.5 ¹¹⁶		18.7	65	49	19	45	38	57	12 05	42	
9	311	29.1		15.2	30	39.1 ¹¹⁶		25.1	64	47	15	39	28	55	15	44	
10	326	29.1		14.3	45	09.7 ¹¹⁶		31.4	63	40	6 06	29	1 11	52	34	45	
11	341	29.1	-12	13.5	59	40.3 ¹¹⁶	-19	37.6	62	5 33	5 58	6 19	0 56	50	12 50	47	
12	356	29.2	-12	12.6	74	10.8 ¹¹⁵	-19	43.6	60	5 25	5 50	6 11	0 42	48	13 05	49	
13	11	29.2		11.7	88	41.4 ¹¹⁶		49.6	60	15	40	6 02	28	46	20	51	
14	26	29.3		10.9	103	11.9 ¹¹⁵	-19	55.5	59	20	5 03	30	5 52	0 13	44	36	53
15	41	29.3		10.0	117	42.4 ¹¹⁵	-20	01.3	58	30	4 47	16	41	** ** *	13 55	54	
16	56	29.3		09.1	132	13.0 ¹¹⁶		07.0	57	35	37	5 08	35	** ** *	14 06	55	
17	71	29.4	-12	08.3	146	43.4 ¹¹⁴	-20	12.6	56	40	4 24	4 59	5 27	** ** *	14 18	57	
18	86	29.4	-12	07.4	161	13.9 ¹¹⁵	-20	18.1	55	45	4 09	4 47	5 19	23 58	42	14 33	59
19	101	29.5		06.5	175	44.4 ¹¹⁵		23.4	53	50	3 49	33	08	39	40	14 51	61
20	116	29.5		05.6	190	14.9 ¹¹⁵		28.7	53	52	39	26	5 03	31	38	15 00	62
21	131	29.5		04.8	204	45.3 ¹¹⁴		33.9	52	54	28	19	4 58	21	37	09	63
22	146	29.6		03.9	219	15.7 ¹¹⁴		39.0	51	56	3 15	10	52	23 09	37	20	65
23	161	29.6		03.0	233	46.2 ¹¹⁵		44.0	50	58	2 59	4 00	45	22 57	34	32	67
24	176	29.7	-12	02.1	248	16.6 ¹¹⁴	-20	48.8	48	60 S	2 40	3 49	4 38	22 42	32	15 47	69
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 14 ^h 13 ^m 5		Mag: -4.8 PMG: 14 ^h 46 ^m		Mag: +0.7 PMG: 6 ^h 10 ^m		Mag: -2.4 PMG: 18 ^h 13 ^m		Mag: +0.2 PMG: 17 ^h 44 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	146	03.0	138	12.1	+7	20.7	267	22.6	+19	56.9							
1	161	05.5	153	13.2		21.7	282	23.7		56.9							
2	176	08.0	168	14.4		22.7	297	24.8		57.0							
3	191	10.4	183	15.5		23.7	312	25.9		57.0							
4	206	12.9	198	16.6		24.7	327	27.0		57.1							
5	221	15.4	213	17.8	+7	25.7	342	28.2	-19	19.1							
6	236	17.8	228	18.9	+7	26.7	357	29.3	-19	19.4							
7	251	20.3	243	20.0		27.7	12	30.4		19.7							
8	266	22.7	258	21.2		28.7	27	31.5		20.0							
9	281	25.2	273	22.3		29.7	42	32.6		20.3							
10	296	27.7	288	23.4		30.7	57	33.8		20.6							
11	311	30.1	303	24.6	+7	31.7	72	34.9	-19	20.9							
12	326	32.6	318	25.7	+7	32.7	87	36.0	-19	21.2							
13	341	35.1	333	26.9		33.7	102	37.1		21.4							
14	356	37.5	348	28.0		34.7	117	38.2		21.7							
15	11	40.0	3	29.2		35.7	132	39.3		22.0							
16	26	42.5	18	30.3		36.6	147	40.5		22.3							
17	41	44.9	33	31.5	+7	37.6	162	41.6	-19	22.6							
18	56	47.4	48	32.6	+7	38.6	177	42.7	-19	22.9							
19	71	49.9	63	33.8		39.6	192	43.8		23.2							
20	86	52.3	78	35.0		40.6	207	44.9		23.5							
21	101	54.8	93	36.1		41.6	222	46.1		23.8							
22	116	57.2	108	37.3		42.6	237	47.2		24.0							
23	131	59.7	123	38.5		43.6	252	48.3		24.3							
24	147	02.2	138	39.6	+7	44.6	267	49.4	-19	24.6							
Dif	—		+11		+10		+11		-3								
							+23		0								
									+24								
									0								

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2			Edad: 23 ^d 5	PHE { 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:5	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	PMG: 12 ^h 14 ^m 0					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	176	29.7	-12 02.1	248	16.6	-20 48.8	48	60 N	16 56	17 40	18 29	4 25	64	10 54	38		
1	191	29.7	01.3	262	47.0 ¹¹⁴	53.6	48	58	17 03	44	29	4 09	62	11 11	39		
2	206	29.8	-12 00.4	277	17.4 ¹¹⁴	-20 58.3	47	56	08	47	30	3 55	61	25	40		
3	221	29.8	-11 59.5	291	47.8 ¹¹⁴	-21 02.8	45	54	13	50	31	43	60	37	4		
4	236	29.9	58.6	306	18.1 ¹¹³	07.3	45	52	18	53	32	33	58	47	43		
5	251	29.9	-11 57.8	320	48.5 ¹¹⁴	-21 11.6	43	50	17 22	17 55	18 33	3 24	57	11 57	43		
6	266	29.9	-11 56.9	335	18.8 ¹¹³	-21 15.9	43	45	17 31	18 01	18 35	3 04	56	12 17	44		
7	281	30.0	56.0	349	49.2 ¹¹⁴	20.0	41	40	38	06	37	2 48	55	33	46		
8	296	30.0	55.1	4	19.5 ¹¹³	24.1	41	35	45	10	40	35	54	47	46		
9	311	30.1	54.3	18	49.8 ¹¹³	28.0	39	30	17 50	15	43	23	53	12 59	47		
10	326	30.1	53.4	33	20.2 ¹¹⁴	31.8	38	20	18 00	23	49	2 03	52	13 19	48		
11	341	30.2	-11 52.5	47	50.5 ¹¹³	-21 35.6	38	10 N	18 09	18 30	18 55	1 46	51	13 37	49		
12	356	30.2	-11 51.6	62	20.8 ¹¹³	-21 39.2	36	0	18 17	18 38	19 03	1 30	49	13 54	49		
13	11	30.3	50.8	76	51.1 ¹¹³	42.7	35	10 S	26	47	12	1 14	48	14 11	50		
14	26	30.3	49.9	91	21.3 ¹¹²	46.1	34	20	35	18 58	24	0 57	47	29	50		
15	41	30.4	49.0	105	51.6 ¹¹³	49.4	33	30	46	19 10	40	38	45	14 49	52		
16	56	30.4	48.1	120	21.9 ¹¹³	52.6	32	35	52	18	19 49	26	45	15 01	52		
17	71	30.5	-11 47.2	134	52.2 ¹¹³	-21 55.7	31	40	18 59	19 27	20 01	0 13	43	15 15	53		
18	86	30.5	-11 46.4	149	22.4 ¹¹²	-21 58.7	30	45	19 07	19 38	20 16	***	***	***	52		
19	101	30.6	45.5	163	52.7 ¹¹³	-22 01.6	29	50	17	52	35	***	***	***	15		
20	116	30.6	44.6	178	23.0 ¹¹³	04.3	27	52	21	19 58	45	***	***	***	16		
21	131	30.7	43.7	192	53.2 ¹¹²	07.0	27	54	27	20 06	20 55	23 58	46	12	56		
22	146	30.7	42.8	207	23.5 ¹¹³	09.6	26	56	32	14	21 08	46	45	25	56		
23	161	30.8	42.0	221	53.7 ¹¹²	12.0	24	58	39	23	22	31	45	39	57		
24	176	30.8	-11 41.1	236	23.9 ¹¹²	-22 14.4	24	60 S	19 46	20 34	21 40	23 14	44	16 56	58		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 14 ^h 09 ^m 5		Mag: -4.8 PMG: 14 ^h 44 ^m		Mag: +0.7 PMG: 6 ^h 08 ^m		Mag: -2.4 PMG: 18 ^h 09 ^m		Mag: +0.2 PMG: 17 ^h 40 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	147	02.2	138	39.6	+7 44.6	267	49.4	-19 24.6	86	57.1	+19 58.0	94	20.4	+16 59.2		
1	162	04.6	153	40.8	45.5	282	50.5	24.9	101	59.4	58.0	109	22.8	59.3		
2	177	07.1	168	42.0	46.5	297	51.7	25.2	117	01.6	58.1	124	25.1	59.3		
3	192	09.6	183	43.1	47.5	312	52.8	25.5	132	03.9	58.1	139	27.5	59.3		
4	207	12.0	198	44.3	48.5	327	53.9	25.8	147	06.2	58.2	154	29.9	59.4		
5	222	14.5	213	45.5	+7 49.5	342	55.0	-19 26.1	162	08.4	+19 58.2	169	32.2	+16 59.4		
6	237	17.0	228	46.7	+7 50.5	357	56.1	-19 26.3	177	10.7	+19 58.2	184	34.6	+16 59.5		
7	252	19.4	243	47.9	51.4	12	57.3	26.6	192	13.0	58.3	199	36.9	59.5		
8	267	21.9	258	49.1	52.4	27	58.4	26.9	207	15.3	58.3	214	39.3	59.5		
9	282	24.3	273	50.2	53.4	42	59.5	27.2	222	17.5	58.4	229	41.7	59.6		
10	297	26.8	288	51.4	54.4	58	00.6	27.5	237	19.8	58.4	244	44.0	59.6		
11	312	29.3	303	52.6	+7 55.4	73	01.8	-19 27.8	252	22.1	+19 58.5	259	46.4	+16 59.6		
12	327	31.7	318	53.8	+7 56.3	88	02.9	-19 28.1	267	24.3	+19 58.5	274	48.7	+16 59.7		
13	342	34.2	333	55.0	57.3	103	04.0	28.3	282	26.6	58.6	289	51.1	59.7		
14	357	36.7	348	56.2	58.3	118	05.1	28.6	297	28.9	58.6	304	53.4	59.7		
15	12	39.1	3	57.4	+7 59.3	133	06.2	28.9	312	31.1	58.7	319	55.8	59.8		
16	27	41.6	18	58.6	+8 00.2	148	07.4	29.2	327	33.4	58.7	334	58.2	59.8		
17	42	44.1	33	59.8	+8 01.2	163	08.5	-19 29.5	342	35.7	+19 58.8	350	00.5	+16 59.9		
18	57	46.5	49	01.0	+8 02.2	178	09.6	-19 29.8	357	37.9	+19 58.8	5	02.9	+16 59.9		
19	72	49.0	64	02.2	03.2	193	10.7	30.1	12	40.2	58.9	20	05.2	+16 59.9		
20	87	51.5	79	03.4	04.1	208	11.9	30.3	27	42.5	58.9	35	07.6	+17 00.0		
21	102	53.9	94	04.7	05.1	223	13.0	30.6	42	44.7	59.0	50	09.9	00.0		
22	117	56.4	109	05.9	06.1	238	14.1	30.9	57	47.0	59.0	65	12.3	+17 00.0		
23	132	58.8	124	07.1	07.0	253	15.2	31.2	72	49.3	59.0	80	14.6	+17 00.1		
24	148	01.3	139	08.3	+8 08.0	268	16.4	-19 31.5	87	51.5	+19 59.1	95	17.0	+17 00.1		
Dif	—		+12 +10		+11 -3		+23 0		+24 0		+24 0		+24 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 9				Edad: 24 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 PMG: 8 ^h 31 ^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	176	30.8	-11	41.1	236	23.9	-22	14.4	22	14.4	22	60 N	5 58	6 46	7 30	5 29	51	11 32	51	
1	191	30.9		40.2	250	54.2 ¹¹³		16.6	22	16.6	22	58	57	43	24	5 11	51	11 50	51	
2	206	30.9		39.3	265	24.4 ¹¹²		18.7	21	18.7	21	56	57	40	18	4 56	51	12 05	51	
3	221	31.0		38.4	279	54.7 ¹¹³		20.8	21	20.8	21	54	56	37	13	4 43	50	12 18	51	
4	236	31.0		37.5	294	24.9 ¹¹²		22.7	19	22.7	19	52	55	34	09	3 51	51	12 30	50	
5	251	31.1	-11	36.7	308	55.1 ¹¹²	-22	24.5	18	24.5	18	50	5 54	6 32	7 05	4 21	51	12 40	50	
6	266	31.1	-11	35.8	323	25.4 ¹¹³	-22	26.2	17	26.2	17	45	5 52	6 26	6 56	4 00	51	13 01	50	
7	281	31.2		34.9	337	55.6 ¹¹²		27.8	16	27.8	16	40	50	21	49	3 43	50	13 19	49	
8	296	31.2		34.0	352	25.8 ¹¹²		29.3	15	29.3	15	35	47	17	43	2 59	50	13 33	50	
9	311	31.3		33.1	6	56.1 ¹¹³		30.7	14	30.7	14	30	45	13	37	3 16	50	13 46	49	
10	326	31.3		32.2	21	26.3 ¹¹²		31.9	12	31.9	12	20	39	6 05	27	2 55	50	14 07	50	
11	341	31.4	-11	31.4	35	56.6 ¹¹³	-22	33.1	12	33.1	12	10 N	5 33	5 57	6 19	2 37	49	14 26	49	
12	356	31.4	-11	30.5	50	26.8 ¹¹²	-22	34.1	10	34.1	10	0	5 25	5 49	6 11	2 19	50	14 43	49	
13	11	31.5		29.6	64	57.1 ¹¹³		35.1	10	35.1	10	10 S	16	41	6 02	2 02	49	15 01	48	
14	26	31.5		28.7	79	27.3 ¹¹²		35.9	8	35.9	8	20	5 04	31	5 53	1 44	49	15 19	49	
15	41	31.6		27.8	93	57.6 ¹¹³		36.7	8	36.7	8	30	4 49	18	43	1 23	48	15 41	48	
16	56	31.7		26.9	108	27.9 ¹¹³		37.3	6	37.3	6	35	39	10	37	1 11	48	15 53	48	
17	71	31.7	-11	26.0	122	58.1 ¹¹²	-22	37.8	5	37.8	5	40	4 27	5 01	5 30	0 56	48	16 08	47	
18	86	31.8	-11	25.2	137	28.4 ¹¹³	-22	38.2	4	38.2	4	45	4 12	4 50	5 22	0 40	47	16 25	47	
19	101	31.8		24.3	151	58.7 ¹¹³		38.5	3	38.5	3	50	3 53	37	12	19	47	16 46	47	
20	116	31.9		23.4	166	29.0 ¹¹³		38.7	2	38.7	2	52	44	30	07	0 09	47	16 56	47	
21	131	31.9		22.5	180	59.3 ¹¹³		38.8	1	38.8	1	54	33	23	5 02	** ** *	**	17 08	46	
22	146	32.0		21.6	195	29.6 ¹¹³		38.8	0	38.8	0	56	21	15	4 57	** ** *	**	21	45	
23	161	32.0		20.7	210	00.0 ¹¹⁴		38.7	1	38.7	1	58	3 06	4 06	50	** ** *	**	36	45	
24	176	32.1	-11	19.8	224	30.3 ¹¹³	-22	38.4	3	38.4	3	60 S	2 48	3 55	4 43	23 58	57	17 54	44	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 05 ^m 6				Mag: -4.8 PMG: 14 ^h 42 ^m				Mag: +0.7 PMG: 6 ^h 06 ^m				Mag: -2.4 PMG: 18 ^h 06 ^m				Mag: +0.2 PMG: 17 ^h 36 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	148	01.3	139	08.3	+8	08.0	268	16.4	-19	31.5	87	51.5	+19	59.1	95	17.0	+17	00.1		
1	163	03.8	154	09.5		09.0	283	17.5		31.8	102	53.8		59.1	110	19.4		00.2		
2	178	06.2	169	10.8		09.9	298	18.6		32.0	117	56.1		59.2	125	21.7		00.2		
3	193	08.7	184	12.0		10.9	313	19.7		32.3	132	58.3		59.2	140	24.1		00.2		
4	208	11.2	199	13.2		11.9	328	20.9		32.6	148	00.6		59.3	155	26.4		00.3		
5	223	13.6	214	14.4	+8	12.8	343	22.0	-19	32.9	163	02.9	+19	59.3	170	28.8	+17	00.3		
6	238	16.1	229	15.7	+8	13.8	358	23.1	-19	33.2	178	05.1	+19	59.4	185	31.1	+17	00.3		
7	253	18.6	244	16.9		14.7	13	24.2		33.4	193	07.4		59.4	200	33.5		00.4		
8	268	21.0	259	18.2		15.7	28	25.4		33.7	208	09.6		59.5	215	35.8		00.4		
9	283	23.5	274	19.4		16.7	43	26.5		34.0	223	11.9		59.5	230	38.2		00.5		
10	298	26.0	289	20.6		17.6	58	27.6		34.3	238	14.2		59.6	245	40.5		00.5		
11	313	28.4	304	21.9	+8	18.6	73	28.7	-19	34.6	253	16.4	+19	59.6	260	42.9	+17	00.5		
12	328	30.9	319	23.1	+8	19.5	88	29.9	-19	34.9	268	18.7	+19	59.7	275	45.3	+17	00.6		
13	343	33.3	334	24.4		20.5	103	31.0		35.1	283	21.0		59.7	290	47.6		00.6		
14	358	35.8	349	25.6		21.5	118	32.1		35.4	298	23.2		59.8	305	50.0		00.7		
15	13	38.3	4	26.9		22.4	133	33.2		35.7	313	25.5		59.8	320	52.3		00.7		
16	28	40.7	19	28.1		23.4	148	34.4		36.0	328	27.7		59.9	335	54.7		00.7		
17	43	43.2	34	29.4	+8	24.3	163	35.5	-19	36.3	343	30.0	+19	59.9	350	57.0	+17	00.8		
18	58	45.7	49	30.6	+8	25.3	178	36.6	-19	36.5	358	32.3	+20	00.0	5	59.4	+17	00.8		
19	73	48.1	64	31.9		26.2	193	37.8		36.8	13	34.5	+20	00.0	21	01.7		00.8		
20	88	50.6	79	33.2		27.2	208	38.9		37.1	28	36.8	+20	00.1	36	04.1		00.9		
21	103	53.1	94	34.4		28.1	223	40.0		37.4	43	39.0		00.1	51	06.4		00.9		
22	118	55.5	109	35.7		29.1	238	41.1		37.6	58	41.3		00.2	66	08.8		01.0		
23	133	58.0	124	37.0		30.0	253	42.3		37.9	73	43.6		00.2	81	11.1		01.0		
24	149	00.5	139	38.2	+8	31.0	268	43.4	-19	38.2	88	45.8	+20	00.2	96	13.5	+17	01.0		
Dif	—				+12 +10				+11 -3				+23 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: 25 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 PMG: 9 ^h 20 ^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	h m	h m
0	176	32.1	-11	19.8	224	30.3	-22 38.4	60 N	17 02	17 45	18 33	6 20 38	12 23 62		
1	191	32.2		18.9	239	00.6 ¹¹³	38.1	58	07	48	34	6 02 39	41 60		
2	206	32.2		18.0	253	31.0 ¹¹⁴	37.7	56	13	51	34	5 47 40	12 56 59		
3	221	32.3		17.2	268	01.4 ¹¹⁴	37.1	54	17	54	35	33 42	13 09 58		
4	236	32.3		16.3	282	31.7 ¹¹³	36.5	52	21	56	35	22 42	20 57		
5	251	32.4	-11	15.4	297	02.1 ¹¹⁴	-22 35.7	50	17 25	17 58	18 36	5 12 43	13 30 57		
6	266	32.5	-11	14.5	311	32.5 ¹¹⁴	-22 34.8	45	17 34	18 03	18 38	4 51 44	13 51 55		
7	281	32.5		13.6	326	03.0 ¹¹⁵	33.8	40	40	08	40	33 45	14 08 54		
8	296	32.6		12.7	340	33.4 ¹¹⁴	32.8	35	46	12	42	19 45	23 52		
9	311	32.6		11.8	355	03.8 ¹¹⁴	31.6	30	17 52	16	44	4 06 46	35 52		
10	326	32.7		10.9	9	34.3 ¹¹⁵	30.3	20	18 01	23	49	3 45 47	14 57 50		
11	341	32.8	-11	10.0	24	04.8 ¹¹⁵	-22 28.9	10 N	18 09	18 31	18 55	3 26 48	15 15 49		
12	356	32.8	-11	09.1	38	35.3 ¹¹⁵	-22 27.4	0	18 17	18 38	19 03	3 09 48	15 32 48		
13	11	32.9		08.2	53	05.8 ¹¹⁵	25.8	10 S	25	47	12	2 51 49	15 49 47		
14	26	32.9		07.3	67	36.3 ¹¹⁵	24.1	20	34	18 56	23	33 50	16 08 46		
15	41	33.0		06.4	82	06.9 ¹¹⁶	22.2	30	44	19 08	37	2 11 51	29 44		
16	56	33.1		05.6	96	37.4 ¹¹⁵	20.3	35	49	16	47	1 59 51	41 44		
17	71	33.1	-11	04.7	111	08.0 ¹¹⁶	-22 18.3	40	18 56	19 24	19 58	1 44 52	16 55 43		
18	86	33.2	-11	03.8	125	38.6 ¹¹⁶	-22 16.2	45	19 04	19 35	20 12	1 27 52	17 12 41		
19	101	33.3		02.9	140	09.2 ¹¹⁶	13.9	50	13	48	30	1 06 53	33 39		
20	116	33.3		02.0	154	39.9 ¹¹⁷	11.6	52	17	19 54	39	0 56 53	43 38		
21	131	33.4		01.1	169	10.6 ¹¹⁷	09.2	54	22	20 01	20 50	44 54	17 54 37		
22	146	33.4	-11	00.2	183	41.2 ¹¹⁶	06.6	56	27	08	21 01	31 55	18 06 36		
23	161	33.5	-10	59.3	198	12.0 ¹¹⁸	04.0	58	33	17	15	0 16 56	21 34		
24	176	33.6	-10	58.4	212	42.7 ¹¹⁷	-22 01.2	60 S	19 40	20 27	21 32	** ** *	18 38 32		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 01 ^m 7		Mag: -4.8 PMG: 14 ^h 40 ^m		Mag: +0.7 PMG: 6 ^h 05 ^m		Mag: -2.4 PMG: 18 ^h 02 ^m		Mag: +0.2 PMG: 17 ^h 32 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	149	00.5	139	38.2	268	43.4	88	45.8	96	13.5					
1	164	02.9	154	39.5	283	44.5	103	48.1	111	15.8					
2	179	05.4	169	40.8	298	45.6	118	50.3	126	18.2					
3	194	07.8	184	42.1	313	46.8	133	52.6	141	20.5					
4	209	10.3	199	43.4	328	47.9	148	54.8	156	22.9					
5	224	12.8	214	44.6	343	49.0	163	57.1	171	25.2					
6	239	15.2	229	45.9	358	50.2	178	59.3	186	27.6					
7	254	17.7	244	47.2	373	51.3	194	01.6	201	29.9					
8	269	20.2	259	48.5	388	52.4	209	03.9	216	32.3					
9	284	22.6	274	49.8	403	53.6	224	06.1	231	34.6					
10	299	25.1	289	51.1	418	54.7	239	08.4	246	37.0					
11	314	27.6	304	52.4	433	55.8	254	10.6	261	39.3					
12	329	30.0	319	53.7	448	56.9	269	12.9	276	41.7					
13	344	32.5	334	55.0	463	58.1	284	15.1	291	44.0					
14	359	34.9	349	56.3	478	59.2	299	17.4	306	46.4					
15	14	37.4	4	57.6	134	00.3	314	19.6	321	48.7					
16	29	39.9	19	58.9	149	01.5	329	21.9	336	51.1					
17	44	42.3	35	00.2	164	02.6	344	24.1	351	53.4					
18	59	44.8	50	01.5	179	03.7	359	26.4	6	55.8					
19	74	47.3	65	02.8	194	04.9	14	28.6	21	58.1					
20	89	49.7	80	04.2	209	06.0	29	30.9	37	00.5					
21	104	52.2	95	05.5	224	07.1	44	33.1	52	02.8					
22	119	54.7	110	06.8	239	08.3	59	35.4	67	05.1					
23	134	57.1	125	08.1	254	09.4	74	37.6	82	07.5					
24	149	59.6	140	09.5	269	10.5	89	39.9	97	09.8					
Dif	—		+13		+11		+23		0		+23				

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: 26 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 10 ^h 09 ^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	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h

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: 27 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 PMG: 10 ^h 56 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	35.2	-10	36.8	201	08.2	-20	25.5	60 N	17 07	17 50	18 38	7 24	19	14 35	76	
1	191	35.3		35.9	215	39.6 ¹²⁴		20.4	58	12		53	38	7 10	22	14 49	72
2	206	35.3		35.0	230	11.1 ¹²⁵		15.1	56	17		55	38	6 58	25	15 00	70
3	221	35.4		34.1	244	42.6 ¹²⁵		09.7	54	21	17 57	39		48	26	11	66
4	236	35.5		33.2	259	14.1 ¹²⁵	-20	04.3	52	25	18 00	39		39	28	20	65
5	251	35.6	-10	32.3	273	45.7 ¹²⁶	-19	58.7	50	17 29	18 02	18 39		6 30	30	15 28	63
6	266	35.6	-10	31.4	288	17.2 ¹²⁵	-19	53.1	45	17 36	18 06	18 40		6 13	32	15 45	60
7	281	35.7		30.5	302	48.9 ¹²⁷		47.3	58	43	10	42		5 58	35	15 58	58
8	296	35.8		29.5	317	20.5 ¹²⁶		41.5	58	48	14	44		46	37	16 10	56
9	311	35.8		28.6	331	52.2 ¹²⁷		35.6	59	30	17 53	18	45	35	39	20	54
10	326	35.9		27.7	346	24.0 ¹²⁸		29.6	60	20	18 02	24	50	16	42	38	51
11	341	36.0	-10	26.8	0	55.7 ¹²⁷	-19	23.5	61	10 N	18 10	18 31	18 56	5 00	44	16 53	48
12	356	36.1	-10	25.9	15	27.5 ¹²⁸	-19	17.4	61	0	18 17	18 38	19 02	4 45	46	17 07	46
13	11	36.1		25.0	29	59.3 ¹²⁸		11.1	63	10 S	24	46	11	30	48	22	43
14	26	36.2		24.1	44	31.2 ¹²⁹	-19	04.8	63	20	32	18 55	21	4 13	51	37	40
15	41	36.3		23.2	59	03.1 ¹²⁹	-18	58.4	64	30	42	19 06	35	3 55	53	17 54	37
16	56	36.4		22.3	73	35.0 ¹²⁹		51.8	66	35	47	13	44	44	55	18 04	35
17	71	36.4	-10	21.4	88	07.0 ¹³⁰	-18	45.2	66	40	18 53	19 21	19 55	3 31	57	18 15	33
18	86	36.5	-10	20.5	102	39.0 ¹³⁰	-18	38.6	66	45	19 00	19 31	20 08	3 16	60	18 28	31
19	101	36.6		19.6	117	11.0 ¹³⁰		31.8	68	50	09	43	26	2 58	63	44	28
20	116	36.7		18.7	131	43.1 ¹³¹		25.0	68	52	13	49	34	49	64	18 52	26
21	131	36.8		17.7	146	15.2 ¹³¹		18.0	70	54	18	19 56	44	40	65	19 00	24
22	146	36.8		16.8	160	47.4 ¹³²		11.0	70	56	23	20 03	20 55	29	67	10	22
23	161	36.9		15.9	175	19.5 ¹³¹	-18	03.9	71	58	28	11	21 08	16	70	21	19
24	176	37.0	-10	15.0	189	51.8 ¹³³	-17	56.8	71	60 S	19 34	20 21	21 23	2 01	74	19 33	16

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG 13 ^h 53 ^m 8		Mag: -4.8 PMG: 14 ^h 36 ^m		Mag: +0.6 PMG: 6 ^h 01 ^m		Mag: -2.4 PMG: 17 ^h 55 ^m			Mag: +0.2 PMG: 17 ^h 25 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	150	58.7	140	42.0	269	37.8	90	33.8	98	06.1	113	08.4
1	166	01.2	155	43.4	284	38.9	105	36.0	113	08.4	128	10.8
2	181	03.7	170	44.8	299	40.0	120	38.3	128	10.8	143	13.1
3	196	06.1	185	46.2	314	41.2	135	40.5	143	13.1	158	15.5
4	211	08.6	200	47.6	329	42.3	150	42.7	158	15.5	173	17.8
5	226	11.0	215	49.0	344	43.4	165	45.0	173	17.8	188	20.2
6	241	13.5	230	50.4	359	44.6	180	47.2	188	20.2	203	22.5
7	256	16.0	245	51.8	14	45.7	195	49.5	203	22.5	218	24.8
8	271	18.4	260	53.2	29	46.9	210	51.7	218	24.8	233	27.2
9	286	20.9	275	54.6	44	48.0	225	53.9	233	27.2	248	29.5
10	301	23.4	290	56.0	59	49.1	240	56.2	248	29.5	263	31.9
11	316	25.8	305	57.4	74	50.3	255	58.4	263	31.9	278	34.2
12	331	28.3	320	58.8	89	51.4	271	00.7	278	34.2	293	36.5
13	346	30.8	336	00.2	104	52.6	286	02.9	293	36.5	308	38.9
14	1	33.2	351	01.6	119	53.7	301	05.1	308	38.9	323	41.2
15	16	35.7	6	03.0	134	54.8	316	07.4	323	41.2	338	43.6
16	31	38.2	21	04.5	149	56.0	331	09.6	338	43.6	353	45.9
17	46	40.6	36	05.9	164	57.1	346	11.8	353	45.9	1	14.1
18	61	43.1	51	07.3	179	58.3	1	14.1	8	48.2	16	16.3
19	76	45.5	66	08.7	194	59.4	16	16.3	23	50.6	31	18.6
20	91	48.0	81	10.2	210	00.5	31	18.6	38	52.9	46	20.8
21	106	50.5	96	11.6	225	01.7	46	20.8	53	55.2	61	23.0
22	121	52.9	111	13.0	240	02.8	61	23.0	68	57.6	76	25.3
23	136	55.4	126	14.5	255	04.0	76	25.3	83	59.9	91	27.5
24	151	57.9	141	15.9	270	05.1	91	27.5	99	02.3		
Dif	—		+14		+11		+22			+1		
			+9		-3					+23		

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: 28 ^d 5 PHE { 4 ^h : 54/0 12 ^h : 54/1 20 ^h : 54/1 PMG: 11 ^h 42 ^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	176	37.0	-10	15.0	189	51.8	-17	56.8	60 N	5 48	6 36	7 19	7 43	15	15 51	77
1	191	37.1		14.1	204	24.0 ¹³²		49.5 ⁷³	58	48	33	13	32	17	16 01	74
2	206	37.1		13.2	218	56.3 ¹³³		42.2 ⁷³	56	48	31	09	23	19	10 7	
3	221	37.2		12.3	233	28.6 ¹³³		34.8 ⁷⁴	54	48	29	05	14	22	18	69
4	236	37.3		11.4	248	01.0 ¹³⁴		27.3 ⁷⁵	52	47	27	7 01	07	23	25	67
5	251	37.4	-10	10.5	262	33.3 ¹³³	-17	19.7 ⁷⁶	50	5 47	6 25	6 57	7 00	25	16 31	66
6	266	37.5	-10	09.5	277	05.8 ¹³⁵	-17	12.1 ⁷⁶	45	5 46	6 20	6 50	6 45	29	16 45	62
7	281	37.5		08.6	291	38.2 ¹³⁴	-17	04.4 ⁷⁷	40	45	16	44	33	31	16 56	59
8	296	37.6		07.7	306	10.7 ¹³⁵	-16	56.6 ⁷⁸	35	43	13	38	23	33	17 06	56
9	311	37.7		06.8	320	43.2 ¹³⁵		48.7 ⁷⁹	30	41	09	33	6 14	35	14	54
10	326	37.8		05.9	335	15.8 ¹³⁶		40.8 ⁷⁹	20	37	6 03	25	5 58	39	29	50
11	341	37.9	-10	05.0	349	48.4 ¹³⁶	-16	32.8 ⁸⁰	10 N	5 31	5 56	6 17	5 44	42	17 41	47
12	356	37.9	-10	04.1	4	21.0 ¹³⁶	-16	24.7 ⁸¹	0	5 25	5 49	6 10	5 31	45	17 53	44
13	11	38.0		03.2	18	53.7 ¹³⁷		16.5 ⁸²	10 S	17	41	6 03	18	48	18 05	41
14	26	38.1		02.2	33	26.4 ¹³⁷	-16	08.3 ⁸²	20	5 06	32	5 55	5 04	51	17	38
15	41	38.2		01.3	47	59.1 ¹³⁷	-16	00.0 ⁸³	30	4 52	21	46	4 48	54	31	34
16	56	38.3	-10	00.4	62	31.8 ¹³⁷	-15	51.6 ⁸⁴	35	43	14	40	39	56	39	32
17	71	38.3	-9	59.5	77	04.6 ¹³⁸	-15	43.1 ⁸⁵	40	4 33	5 06	5 34	4 28	59	18 48	30
18	86	38.4	-9	58.6	91	37.5 ¹³⁹	-15	34.6 ⁸⁵	45	4 19	4 57	5 27	4 16	61	18 59	27
19	101	38.5		57.7	106	10.3 ¹³⁸		26.0 ⁸⁶	50	4 02	44	19	4 01	64	19 12	23
20	116	38.6		56.8	120	43.2 ¹³⁹		17.4 ⁸⁶	52	3 54	39	15	3 53	67	18	21
21	131	38.7		55.8	135	16.1 ¹³⁹	-15	08.7 ⁸⁷	54	44	32	10	45	69	24	20
22	146	38.8		54.9	149	49.1 ¹⁴⁰	-14	59.9 ⁸⁸	56	33	25	05	36	71	32	17
23	161	38.8		54.0	164	22.1 ¹⁴⁰		51.0 ⁸⁹	58	20	17	5 00	26	73	40	15
24	176	38.9	-9	53.1	178	55.1 ¹⁴⁰	-14	42.1 ⁸⁹	60 S	3 05	4 07	4 54	3 15	76	19 49	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 49 ^m 9		Mag: -4.8 PMG: 14 ^h 34 ^m		Mag: +0.6 PMG: 5 ^h 59 ^m		Mag: -2.4 PMG: 17 ^h 52 ^m		Mag: +0.2 PMG: 17 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	151	57.9	141	15.9	+9	36.8	270	05.1	-19	57.7	91	27.5	+20	03.9	99	02.3	+17	03.9
1	167	00.3	156	17.4		37.6	285	06.2		58.0	106	29.7		04.0	114	04.6		04.0
2	182	02.8	171	18.8		38.5	300	07.4		58.3	121	32.0		04.0	129	06.9		04.0
3	197	05.3	186	20.3		39.4	315	08.5		58.5	136	34.2		04.1	144	09.3		04.0
4	212	07.7	201	21.7		40.3	330	09.7		58.8	151	36.4		04.1	159	11.6		04.1
5	227	10.2	216	23.2	+9	41.1	345	10.8	-19	59.1	166	38.7	+20	04.2	174	14.0	+17	04.1
6	242	12.7	231	24.6	+9	42.0	0	12.0	-19	59.3	181	40.9	+20	04.2	189	16.3	+17	04.2
7	257	15.1	246	26.1		42.9	15	13.1		59.6	196	43.1		04.3	204	18.6		04.2
8	272	17.6	261	27.6		43.8	30	14.2	-19	59.8	211	45.4		04.3	219	21.0		04.3
9	287	20.0	276	29.0		44.6	45	15.4	-20	00.1	226	47.6		04.4	234	23.3		04.3
10	302	22.5	291	30.5		45.5	60	16.5		00.4	241	49.8		04.4	249	25.6		04.3
11	317	25.0	306	32.0	+9	46.4	75	17.7	-20	00.6	256	52.1	+20	04.5	264	28.0	+17	04.4
12	332	27.4	321	33.4	+9	47.2	90	18.8	-20	00.9	271	54.3	+20	04.5	279	30.3	+17	04.4
13	347	29.9	336	34.9		48.1	105	20.0		01.2	286	56.5		04.6	294	32.6		04.5
14	2	32.4	351	36.4		49.0	120	21.1		01.4	301	58.7		04.6	309	35.0		04.5
15	17	34.8	6	37.9		49.8	135	22.2		01.7	317	01.0		04.7	324	37.3		04.5
16	32	37.3	21	39.3		50.7	150	23.4		01.9	332	03.2		04.7	339	39.6		04.6
17	47	39.8	36	40.8	+9	51.6	165	24.5	-20	02.2	347	05.4	+20	04.8	354	42.0	+17	04.6
18	62	42.2	51	42.3	+9	52.4	180	25.7	-20	02.5	2	07.7	+20	04.9	9	44.3	+17	04.7
19	77	44.7	66	43.8		53.3	195	26.8		02.7	17	09.9		04.9	24	46.6		04.7
20	92	47.1	81	45.3		54.1	210	28.0		03.0	32	12.1		05.0	39	49.0		04.8
21	107	49.6	96	46.8		55.0	225	29.1		03.2	47	14.3		05.0	54	51.3		04.8
22	122	52.1	111	48.3		55.9	240	30.3		03.5	62	16.6		05.1	69	53.7		04.8
23	137	54.5	126	49.8		56.7	255	31.4		03.8	77	18.8		05.1	84	56.0		04.9
24	152	57.0	141	51.3	+9	57.6	270	32.6	-20	04.0	92	21.0	+20	05.2	99	58.3	+17	04.9
Dif	—		+15		+9		+11		-3		+22		+1		+23			

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: 29 ^d 5 PHE { 4 ^h : 54:2 12 ^h : 54:3 20 ^h : 54:4 R°: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	176	38.9	-9 53.1	178	55.1	-14 42.1	90	60 N	17 12	17 55	18 43	7 58 11	17 08 77				
1	191	39.0	52.2	193	28.2 ¹⁴¹	33.1	90	58	17	57	43	49 14	15 75				
2	206	39.1	51.3	208	01.3 ¹⁴¹	24.1	90	56	21	17 59	42	42 17	21 72				
3	221	39.2	50.3	222	34.4 ¹⁴¹	15.0	91	54	25	18 01	42	36 18	27 70				
4	236	39.3	49.4	237	07.5 ¹⁴¹	-14 05.8	92	52	29	03	42	30 21	32 68				
5	251	39.4	-9 48.5	251	40.7 ¹⁴²	-13 56.6	92	50	17 32	18 05	18 42	7 25 22	17 37 66				
6	266	39.4	-9 47.6	266	13.9 ¹⁴²	-13 47.3	93	45	17 39	18 09	18 43	7 14 25	17 47 62				
7	281	39.5	46.7	280	47.1 ¹⁴²	37.9	94	40	45	12	44	7 04 29	17 55 59				
8	296	39.6	45.7	295	20.4 ¹⁴³	28.5	94	35	50	16	45	6 56 31	18 02 57				
9	311	39.7	44.8	309	53.7 ¹⁴³	19.0	95	30	17 55	19	47	49 34	08 54				
10	326	39.8	43.9	324	27.0 ¹⁴³	-13 09.5	95	20	18 03	25	51	37 37	19 50				
11	341	39.9	-9 43.0	339	00.4 ¹⁴⁴	-12 59.9	96	10 N	18 10	18 31	18 56	6 26 41	18 28 47				
12	356	40.0	-9 42.1	353	33.7 ¹⁴³	-12 50.2	97	0	18 17	18 38	19 02	6 16 44	18 37 43				
13	11	40.0	41.1	8	07.1 ¹⁴⁴	40.5	97	10 S	24	45	10	6 06 46	46 40				
14	26	40.1	40.2	22	40.6 ¹⁴⁵	30.8	97	20	31	18 53	20	5 55 50	18 55 36				
15	41	40.2	39.3	37	14.0 ¹⁴⁴	20.9	99	30	40	19 04	33	42 54	19 05 33				
16	56	40.3	38.4	51	47.5 ¹⁴⁵	11.1	98	35	45	11	42	35 56	11 30				
17	71	40.4	-9 37.5	66	21.0 ¹⁴⁵	-12 01.1	100	40	18 50	19 18	19 52	5 27 59	19 18 27				
18	86	40.5	-9 36.5	80	54.6 ¹⁴⁶	-11 51.2	99	45	18 57	19 28	20 05	5 17 62	19 26 24				
19	101	40.6	35.6	95	28.1 ¹⁴⁵	41.1	101	50	19 05	39	21	05 66	35 21				
20	116	40.7	34.7	110	01.7 ¹⁴⁶	31.0	101	52	09	45	29	5 00 67	39 20				
21	131	40.8	33.8	124	35.3 ¹⁴⁶	20.9	101	54	13	51	38	4 54 69	44 17				
22	146	40.8	32.9	139	09.0 ¹⁴⁷	10.7	102	56	18	19 58	20 49	47 72	49 16				
23	161	40.9	31.9	153	42.6 ¹⁴⁶	-11 00.4	103	58	23	20 05	21 01	39 75	19 55 13				
24	176	41.0	-9 31.0	168	16.3 ¹⁴⁷	-10 50.2	102	60 S	19 28	20 14	21 15	4 31 77	20 02 10				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 13 ^h 45 ^m 9		Mag: -4.8 PMG: 14 ^h 31 ^m			Mag: +0.6 PMG: 5 ^h 57 ^m			Mag: -2.4 PMG: 17 ^h 48 ^m			Mag: +0.2 PMG: 17 ^h 17 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	152	57.0	141 51.3	+9 57.6	270 32.6	-20 04.0	92	21.0	+20 05.2	99 58.3	+17 04.9						
1	167	59.5	156 52.8	58.4	285 33.7	04.3	107	23.2	05.2	115 00.7	05.0						
2	183	01.9	171 54.3	+9 59.3	300 34.9	04.5	122	25.5	05.3	130 03.0	05.0						
3	198	04.4	186 55.8	+10 00.1	315 36.0	04.8	137	27.7	05.3	145 05.3	05.1						
4	213	06.9	201 57.3	01.0	330 37.1	05.1	152	29.9	05.4	160 07.7	05.1						
5	228	09.3	216 58.9	+10 01.8	345 38.3	-20 05.3	167	32.2	+20 05.4	175 10.0	+17 05.1						
6	243	11.8	232 00.4	+10 02.7	0 39.4	-20 05.6	182	34.4	+20 05.5	190 12.3	+17 05.2						
7	258	14.3	247 01.9	03.5	15 40.6	05.8	197	36.6	05.6	205 14.6	05.2						
8	273	16.7	262 03.4	04.4	30 41.7	06.1	212	38.8	05.6	220 17.0	05.3						
9	288	19.2	277 04.9	05.2	45 42.9	06.4	227	41.0	05.7	235 19.3	05.3						
10	303	21.6	292 06.5	06.1	60 44.0	06.6	242	43.3	05.7	250 21.6	05.4						
11	318	24.1	307 08.0	+10 06.9	75 45.2	-20 06.9	257	45.5	+20 05.8	265 24.0	+17 05.4						
12	333	26.6	322 09.5	+10 07.7	90 46.3	-20 07.1	272	47.7	+20 05.8	280 26.3	+17 05.4						
13	348	29.0	337 11.1	08.6	105 47.5	07.4	287	49.9	05.9	295 28.6	05.5						
14	3	31.5	352 12.6	09.4	120 48.6	07.6	302	52.2	05.9	310 31.0	05.5						
15	18	34.0	7 14.2	10.3	135 49.8	07.9	317	54.4	06.0	325 33.3	05.6						
16	33	36.4	22 15.7	11.1	150 50.9	08.2	332	56.6	06.0	340 35.6	05.6						
17	48	38.9	37 17.3	+10 11.9	165 52.1	-20 08.4	347	58.8	+20 06.1	355 38.0	+17 05.7						
18	63	41.4	52 18.8	+10 12.8	180 53.2	-20 08.7	3	01.0	+20 06.2	10 40.3	+17 05.7						
19	78	43.8	67 20.4	13.6	195 54.4	08.9	18	03.3	06.2	25 42.6	05.7						
20	93	46.3	82 21.9	14.4	210 55.5	09.2	33	05.5	06.3	40 45.0	05.8						
21	108	48.8	97 23.5	15.3	225 56.7	09.4	48	07.7	06.3	55 47.3	05.8						
22	123	51.2	112 25.0	16.1	240 57.8	09.7	63	09.9	06.4	70 49.6	05.9						
23	138	53.7	127 26.6	16.9	255 59.0	09.9	78	12.2	06.4	85 51.9	05.9						
24	153	56.1	142 28.2	+10 17.8	271 00.1	-20 10.2	93	14.4	+20 06.5	100 54.3	+17 06.0						
Dif	—		+15	+8	+11	-3	+22		+1	+23							

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: 0 ^d 7 PHE { SD: 14'8 PMG: 13 ^h 10 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m				
0	176	41.0	-9	168	16.3	-10	50.2	60 N	5	42	6	31	7	13	8	09	9	18	25	78		
1	191	41.1		182	50.0 ¹⁴⁷		39.8 ¹⁰⁴	58	43	28		08	8	03	12		30	75				
2	206	41.2		197	23.7 ¹⁴⁷		29.4 ¹⁰⁴	56	43	26		04	7	59	14		33	73				
3	221	41.3		211	57.5 ¹⁴⁸		19.0 ¹⁰⁴	54	43	24		7	00		54	17	37	70				
4	236	41.4		226	31.2 ¹⁴⁷	-10	08.5 ¹⁰⁵	52	43	22		6	57		51	18	40	68				
5	251	41.5	-9	241	05.0 ¹⁴⁸	-9	58.0 ¹⁰⁵	50	5	43	6	21	6	53	7	47	20	18	43	66		
6	266	41.6	-9	255	38.8 ¹⁴⁸	-9	47.4 ¹⁰⁶	45	5	43	6	17	6	47	7	39	24	18	49	63		
7	281	41.7		270	12.7 ¹⁴⁹		36.8 ¹⁰⁶	40	42		13	41		33	27		54	60				
8	296	41.8		284	46.5 ¹⁴⁸		26.1 ¹⁰⁷	35	41		10	36		27	30		18	59	56			
9	311	41.9		299	20.4 ¹⁴⁹		15.4 ¹⁰⁷	30	39		07	31		23	31		19	02	54			
10	326	41.9		313	54.2 ¹⁴⁸	-9	04.7 ¹⁰⁷	20	36	6	01	23		14	36		09	50				
11	341	42.0	-9	328	28.1 ¹⁴⁹	-8	53.9 ¹⁰⁸	10 N	5	31	5	55	6	17	7	07	39	19	15	46		
12	356	42.1	-9	343	02.0 ¹⁴⁹	-8	43.1 ¹⁰⁸	0	5	25	5	49	6	10	7	00	42	19	20	43		
13	11	42.2		357	36.0 ¹⁵⁰		32.2 ¹⁰⁹	10 S		17	42	6	03		6	52	47	26	39			
14	26	42.3		12	09.9 ¹⁴⁹		21.3 ¹⁰⁹	20	5	07	33	5	56		45	50		31	36			
15	41	42.4		26	43.9 ¹⁵⁰	-8	10.3 ¹¹⁰	30	4	54	23	47		36	54		38	31				
16	56	42.5		41	17.8 ¹⁴⁹	-7	59.3 ¹¹⁰	35		45	16	42		31	57		41	29				
17	71	42.6	-9	55	51.8 ¹⁵⁰	-7	48.3 ¹¹⁰	40	4	35	5	09	5	37	6	26	59	19	45	27		
18	86	42.7	-9	70	25.8 ¹⁵⁰	-7	37.3 ¹¹⁰	45	4	23	5	00	5	30	6	19	62	19	50	23		
19	101	42.8		84	59.8 ¹⁵⁰		26.2 ¹¹¹	50	4	06	4	48	22		11	66		56	19			
20	116	42.9		99	33.9 ¹⁵¹		15.0 ¹¹²	52	3	58	43	18		07	68		19	59	17			
21	131	43.0		114	07.9 ¹⁵⁰	-7	03.9 ¹¹¹	54		49	37	14		6	03	70	20	01	16			
22	146	43.1		128	41.9 ¹⁵⁰	-6	52.6 ¹¹³	56		39	30	10		5	59	72		05	13			
23	161	43.2		143	16.0 ¹⁵¹		41.4 ¹¹²	58		27	22	5	05		54	75		08	12			
24	176	43.3	-9	157	50.0 ¹⁵⁰	-6	30.1 ¹¹³	60 S	3	12	4	13	4	59	5	48	78	20	12	9		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 13 ^h 42 ^m 0			Mag: -4.8 PMG: 14 ^h 29 ^m			Mag: +0.6 PMG: 5 ^h 56 ^m			Mag: -2.4 PMG: 17 ^h 44 ^m			Mag: +0.2 PMG: 17 ^h 14 ^m									
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	'	
0	153	56.1		142	28.2	+10	17.8	271	00.1	-20	10.2	93	14.4	+20	06.5	100	54.3	+17	06.0			
1	168	58.6		157	29.7		18.6	286	01.3		10.5	108	16.6		06.5	115	56.6		06.0			
2	184	01.1		172	31.3		19.4	301	02.4		10.7	123	18.8		06.6	130	58.9		06.0			
3	199	03.5		187	32.9		20.2	316	03.6		11.0	138	21.0		06.7	146	01.3		06.1			
4	214	06.0		202	34.5		21.1	331	04.7		11.2	153	23.2		06.7	161	03.6		06.1			
5	229	08.5		217	36.0	+10	21.9	346	05.9	-20	11.5	168	25.5	+20	06.8	176	05.9	+17	06.2			
6	244	10.9		232	37.6	+10	22.7	1	07.0	-20	11.7	183	27.7	+20	06.8	191	08.2	+17	06.2			
7	259	13.4		247	39.2		23.5	16	08.2		12.0	198	29.9		06.9	206	10.6		06.3			
8	274	15.9		262	40.8		24.3	31	09.4		12.2	213	32.1		06.9	221	12.9		06.3			
9	289	18.3		277	42.4		25.2	46	10.5		12.5	228	34.3		07.0	236	15.2		06.3			
10	304	20.8		292	44.0		26.0	61	11.7		12.7	243	36.5		07.0	251	17.6		06.4			
11	319	23.2		307	45.6	+10	26.8	76	12.8	-20	13.0	258	38.8	+20	07.1	266	19.9	+17	06.4			
12	334	25.7		322	47.2	+10	27.6	91	14.0	-20	13.2	273	41.0	+20	07.1	281	22.2	+17	06.5			
13	349	28.2		337	48.8		28.4	106	15.1		13.5	288	43.2		07.2	296	24.5		06.5			
14	4	30.6		352	50.4		29.2	121	16.3		13.8	303	45.4		07.3	311	26.9		06.6			
15	19	33.1		7	52.0		30.1	136	17.4		14.0	318	47.6		07.3	326	29.2		06.6			
16	34	35.6		22	53.6		30.9	151	18.6		14.3	333	49.8		07.4	341	31.5		06.6			
17	49	38.0		37	55.2	+10	31.7	166	19.7	-20	14.5	348	52.0	+20	07.4	356	33.8	+17	06.7			
18	64	40.5		52	56.8	+10	32.5	181	20.9	-20	14.8	3	54.3	+20	07.5	11	36.2	+17	06.7			
19	79	43.0		67	58.4		33.3	196	22.1		15.0	18	56.5		07.5	26	38.5		06.8			
20	94	45.4		83	00.1		34.1	211	23.2		15.3	33	58.7		07.6	41	40.8		06.8			
21	109	47.9		98	01.7		34.9	226	24.4		15.5	49	00.9		07.7	56	43.1		06.9			
22	124	50.4		113	03.3		35.7	241	25.5		15.8	64	03.1		07.7	71	45.5		06.9			
23	139	52.8		128	04.9		36.5	256	26.7		16.0	79	05.3		07.8	86	47.8		07.0			
24	154	55.3		143	06.6	+10	37.3	271	27.8	-20	16.3	94	07.5	+20	07.8	101	50.1	+17	07.0			
Dif	—			+16			+8	+12			-3	+22			+1	+23			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 0			Edad: 1 ^d 7 SD: 14:9 PMG: 13 ^h 53 ^m	PHE { 4 ^h : 54:8 12 ^h : 54:9 20 ^h : 55:0 R°: 42 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	176	43.3	-9	08.8	157	50.0	-6 30.1	60 N	17 17	18 00	18 48	8 18	9	19 43	79	
1	191	43.4		07.9	172	24.1 ¹⁵¹	18.8 ¹¹³	58	22	02	47	15	12	45	76	
2	206	43.5		06.9	186	58.2 ¹⁵¹	-6 07.5 ¹¹³	56	26	03	46	13	14	46	74	
3	221	43.6		06.0	201	32.3 ¹⁵¹	-5 56.1 ¹¹⁴	54	29	05	46	11	15	47	72	
4	236	43.7		05.1	216	06.4 ¹⁵¹	44.8 ¹¹³	52	32	07	46	09	17	48	70	
5	251	43.8	-9	04.1	230	40.5 ¹⁵¹	-5 33.3 ¹¹⁵	50	17 35	18 08	18 46	8 07	19	19 49	68	
6	266	43.9	-9	03.2	245	14.6 ¹⁵¹	-5 21.9 ¹¹⁴	45	17 42	18 12	18 46	8 03	23	19 52	63	
7	281	44.0		02.3	259	48.7 ¹⁵¹	-5 10.4 ¹¹⁵	40	47	15	46	8 00	26	54	60	
8	296	44.1		01.3	274	22.8 ¹⁵¹	-4 58.9 ¹¹⁵	35	52	18	47	7 57	29	55	57	
9	311	44.2	-9	00.4	288	56.9 ¹⁵¹	47.4 ¹¹⁵	30	17 56	20	48	54	32	56	55	
10	326	44.3	-8	59.5	303	31.0 ¹⁵¹	35.8 ¹¹⁶	20	18 04	26	51	50	35	19 59	50	
11	341	44.4	-8	58.6	318	05.1 ¹⁵¹	-4 24.2 ¹¹⁶	10 N	18 10	18 31	18 56	7 46	39	20 01	46	
12	356	44.5	-8	57.6	332	39.2 ¹⁵¹	-4 12.6 ¹¹⁶	0	18 16	18 37	19 02	7 42	43	20 03	43	
13	11	44.6		56.7	347	13.4 ¹⁵²	-4 01.0 ¹¹⁶	10 S	23	44	09	39	46	05	39	
14	26	44.7		55.8	1	47.5 ¹⁵¹	-3 49.4 ¹¹⁶	20	30	18 52	18	35	50	07	35	
15	41	44.8		54.8	16	21.6 ¹⁵¹	37.7 ¹¹⁷	30	38	19 02	31	30	55	09	31	
16	56	44.9		53.9	30	55.7 ¹⁵¹	26.0 ¹¹⁷	35	42	08	39	28	57	10	29	
17	71	45.0	-8	53.0	45	29.8 ¹⁵¹	-3 14.3 ¹¹⁷	40	18 47	19 15	19 49	7 25	60	20 12	26	
18	86	45.1	-8	52.0	60	03.9 ¹⁵¹	-3 02.5 ¹¹⁸	45	18 54	19 24	20 01	7 21	63	20 13	23	
19	101	45.2		51.1	74	38.0 ¹⁵¹	-2 50.8 ¹¹⁷	50	19 01	35	16	17	67	15	20	
20	116	45.3		50.2	89	12.1 ¹⁵¹	39.0 ¹¹⁸	52	05	40	24	15	69	16	18	
21	131	45.4		49.2	103	46.2 ¹⁵¹	27.2 ¹¹⁸	54	08	46	32	13	71	17	16	
22	146	45.5		48.3	118	20.3 ¹⁵¹	15.4 ¹¹⁸	56	13	19 52	42	11	73	18	14	
23	161	45.6		47.4	132	54.4 ¹⁵¹	-2 03.6 ¹¹⁸	58	17	20 00	20 54	09	75	20	11	
24	176	45.7	-8	46.4	147	28.5 ¹⁵¹	-1 51.8 ¹¹⁸	60 S	19 23	20 08	21 07	7 06	78	20 21	9	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 38 ^m 1			Mag: -4.8 PMG: 14 ^h 26 ^m			Mag: +0.6 PMG: 5 ^h 54 ^m			Mag: -2.4 PMG: 17 ^h 41 ^m			Mag: +0.2 PMG: 17 ^h 10 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'	
0	154	55.3	143	06.6	+10	37.3	271	27.8	-20	16.3	94	07.5	+20	07.8	101	50.1
1	169	57.7	158	08.2		38.1	286	29.0		16.5	109	09.7		07.9	116	52.4
2	185	00.2	173	09.9		38.9	301	30.1		16.8	124	12.0		07.9	131	54.8
3	200	02.7	188	11.5		39.7	316	31.3		17.0	139	14.2		08.0	146	57.1
4	215	05.1	203	13.1		40.5	331	32.5		17.3	154	16.4		08.0	161	59.4
5	230	07.6	218	14.8	+10	41.3	346	33.6	-20	17.5	169	18.6	+20	08.1	177	01.7
6	245	10.1	233	16.4	+10	42.1	1	34.8	-20	17.8	184	20.8	+20	08.2	192	04.1
7	260	12.5	248	18.1		42.9	16	35.9		18.0	199	23.0		08.2	207	06.4
8	275	15.0	263	19.7		43.7	31	37.1		18.3	214	25.2		08.3	222	08.7
9	290	17.5	278	21.4		44.5	46	38.2		18.5	229	27.4		08.3	237	11.0
10	305	19.9	293	23.1		45.3	61	39.4		18.8	244	29.6		08.4	252	13.4
11	320	22.4	308	24.7	+10	46.0	76	40.6	-20	19.0	259	31.8	+20	08.4	267	15.7
12	335	24.8	323	26.4	+10	46.8	91	41.7	-20	19.3	274	34.1	+20	08.5	282	18.0
13	350	27.3	338	28.1		47.6	106	42.9		19.5	289	36.3		08.6	297	20.3
14	5	29.8	353	29.7		48.4	121	44.0		19.8	304	38.5		08.6	312	22.7
15	20	32.2	8	31.4		49.2	136	45.2		20.0	319	40.7		08.7	327	25.0
16	35	34.7	23	33.1		50.0	151	46.4		20.2	334	42.9		08.7	342	27.3
17	50	37.2	38	34.8	+10	50.7	166	47.5	-20	20.5	349	45.1	+20	08.8	357	29.6
18	65	39.6	53	36.4	+10	51.5	181	48.7	-20	20.7	4	47.3	+20	08.8	12	31.9
19	80	42.1	68	38.1		52.3	196	49.8		21.0	19	49.5		08.9	27	34.3
20	95	44.6	83	39.8		53.1	211	51.0		21.2	34	51.7		09.0	42	36.6
21	110	47.0	98	41.5		53.9	226	52.2		21.5	49	53.9		09.0	57	38.9
22	125	49.5	113	43.2		54.6	241	53.3		21.7	64	56.1		09.1	72	41.2
23	140	52.0	128	44.9		55.4	256	54.5		22.0	79	58.3		09.1	87	43.5
24	155	54.4	143	46.6	+10	56.2	271	55.7	-20	22.2	95	00.5	+20	09.2	102	45.9
Dif	—		+17		+8		+12		-2		+22		+1		+23	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 9			Edad: 2 ^d 7 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'4 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	176	45.7	-8	46.4	147	28.5	-1 51.8	60 N	5 37	6 25	7 07	8 27	9	21 02	80	
1	191	45.8		45.5	162	02.5 ¹⁵⁰	39.9 ¹¹⁹	58	38	23	7 03	27	11	01	77	
2	206	45.9		44.6	176	36.6 ¹⁵¹	28.1 ¹¹⁸	56	38	21	6 59	27	13	21	00	
3	221	46.0		43.6	191	10.6 ¹⁵⁰	16.2 ¹¹⁹	54	39	20	55	26	16	20	59	
4	236	46.1		42.7	205	44.6 ¹⁵⁰	-1 04.3 ¹¹⁹	52	39	18	52	26	18	58	70	
5	251	46.2	-8	41.8	220	18.7 ¹⁵¹	-0 52.4 ¹¹⁹	50	5 40	6 17	6 49	8 26	20	20	57	
6	266	46.3	-8	40.8	234	52.7 ¹⁵⁰	-0 40.5 ¹¹⁹	45	5 40	6 14	6 43	8 26	23	20	55	
7	281	46.4		39.9	249	26.7 ¹⁵⁰	28.6 ¹¹⁹	40	39	11	38	26	26	54	61	
8	296	46.5		38.9	264	00.6 ¹⁴⁹	16.7 ¹¹⁹	35	38	08	33	26	29	52	59	
9	311	46.6		38.0	278	34.6 ¹⁵⁰	-0 04.7 ¹²⁰	30	37	05	29	26	31	51	56	
10	326	46.7		37.1	293	08.5 ¹⁴⁹	+0 07.2 ¹¹⁹	20	34	6 00	22	25	36	49	52	
11	341	46.8	-8	36.1	307	42.5 ¹⁵⁰	+0 19.2 ¹²⁰	10 N	5 30	5 54	6 16	8 25	40	20	47	
12	356	46.9	-8	35.2	322	16.4 ¹⁴⁹	+0 31.1 ¹¹⁹	0	5 24	5 49	6 10	8 25	43	20	46	
13	11	47.0		34.3	336	50.3 ¹⁴⁹	43.1 ¹²⁰	10 S	17	42	6 03	25	47	44	41	
14	26	47.1		33.3	351	24.1 ¹⁴⁸	+0 55.1 ¹²⁰	20	5 08	34	5 57	25	51	42	37	
15	41	47.2		32.4	5	58.0 ¹⁴⁹	+1 07.0 ¹¹⁹	30	4 56	24	49	25	55	40	33	
16	56	47.3		31.4	20	31.8 ¹⁴⁸	19.0 ¹²⁰	35	48	18	44	25	57	39	30	
17	71	47.4	-8	30.5	35	05.6 ¹⁴⁸	+1 31.0 ¹²⁰	40	4 38	5 11	5 39	8 25	60	20	38	
18	86	47.6	-8	29.6	49	39.4 ¹⁴⁸	+1 43.0 ¹²⁰	45	4 26	5 02	5 33	8 24	65	20	36	
19	101	47.7		28.6	64	13.2 ¹⁴⁸	+1 54.9 ¹¹⁹	50	10	4 52	26	24	68	35	20	
20	116	47.8		27.7	78	46.9 ¹⁴⁷	+2 06.9 ¹²⁰	52	4 03	47	22	24	70	34	18	
21	131	47.9		26.8	93	20.6 ¹⁴⁷	18.9 ¹²⁰	54	3 54	41	18	24	72	33	16	
22	146	48.0		25.8	107	54.3 ¹⁴⁷	30.9 ¹²⁰	56	44	35	14	24	75	32	14	
23	161	48.1		24.9	122	28.0 ¹⁴⁷	42.8 ¹¹⁹	58	33	27	10	24	77	31	12	
24	176	48.2	-8	23.9	137	01.6 ¹⁴⁶	+2 54.8 ¹²⁰	60 S	3 20	4 19	5 04	8 24	80	20	30	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 34 ^m 1			Mag: -4.8 PMG: 14 ^h 23 ^m			Mag: +0.6 PMG: 5 ^h 52 ^m			Mag: -2.4 PMG: 17 ^h 37 ^m			Mag: +0.2 PMG: 17 ^h 06 ^m			
	hG ♀		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	155	54.4	143	46.6	+10	56.2	271	55.7	-20	22.2	95	00.5	+20	09.2	102	45.9
1	170	56.9	158	48.3		57.0	286	56.8		22.5	110	02.7		09.2	117	48.2
2	185	59.3	173	50.0		57.7	301	58.0		22.7	125	04.9		09.3	132	50.5
3	201	01.8	188	51.7		58.5	316	59.1		23.0	140	07.1		09.4	147	52.8
4	216	04.3	203	53.4	+10	59.3	332	00.3		23.2	155	09.3		09.4	162	55.1
5	231	06.7	218	55.2	+11	00.0	347	01.5	-20	23.4	170	11.5	+20	09.5	177	57.5
6	246	09.2	233	56.9	+11	00.8	2	02.6	-20	23.7	185	13.7	+20	09.5	192	59.8
7	261	11.7	248	58.6		01.6	17	03.8		23.9	200	15.9		09.6	208	02.1
8	276	14.1	264	00.3		02.3	32	05.0		24.2	215	18.2		09.6	223	04.4
9	291	16.6	279	02.0		03.1	47	06.1		24.4	230	20.4		09.7	238	06.7
10	306	19.1	294	03.8		03.8	62	07.3		24.7	245	22.6		09.8	253	09.1
11	321	21.5	309	05.5	+11	04.6	77	08.5	-20	24.9	260	24.8	+20	09.8	268	11.4
12	336	24.0	324	07.2	+11	05.4	92	09.6	-20	25.2	275	27.0	+20	09.9	283	13.7
13	351	26.4	339	09.0		06.1	107	10.8		25.4	290	29.2		09.9	298	16.0
14	6	28.9	354	10.7		06.9	122	11.9		25.6	305	31.4		10.0	313	18.3
15	21	31.4	9	12.5		07.6	137	13.1		25.9	320	33.6		10.0	328	20.7
16	36	33.8	24	14.2		08.4	152	14.3		26.1	335	35.8		10.1	343	23.0
17	51	36.3	39	16.0	+11	09.1	167	15.4	-20	26.4	350	38.0	+20	10.2	358	25.3
18	66	38.8	54	17.7	+11	09.9	182	16.6	-20	26.6	5	40.2	+20	10.2	13	27.6
19	81	41.2	69	19.5		10.6	197	17.8		26.9	20	42.4		10.3	28	29.9
20	96	43.7	84	21.2		11.4	212	18.9		27.1	35	44.6		10.3	43	32.2
21	111	46.2	99	23.0		12.1	227	20.1		27.3	50	46.7		10.4	58	34.6
22	126	48.6	114	24.8		12.9	242	21.3		27.6	65	48.9		10.5	73	36.9
23	141	51.1	129	26.5		13.6	257	22.4		27.8	80	51.1		10.5	88	39.2
24	156	53.6	144	28.3	+11	14.3	272	23.6	-20	28.1	95	53.3	+20	10.6	103	41.5
Dif	—			+17 +8			+12 -2			+22 +1			+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 3 ^d 7 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0														
	PMG: 12 ^h 12 ^m 7			SD: 15 ^h 1 PMG: 15 ^h 19 ^m R°: 46 ^m					Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	176	48.2	-8	23.9	137	01.6	+2 54.8	60 N	17 22	18 04	18 53	8 36	10	22 22 83				
1	191	48.3		23.0	151	35.2 ¹⁴⁶	+3 06.8 ¹²⁰	58	26	06	51	38 13		18 80				
2	206	48.4		22.1	166	08.8 ¹⁴⁶	18.7 ¹¹⁹	56	30	07	51	40 15		15 77				
3	221	48.5		21.1	180	42.3 ¹⁴⁵	30.7 ¹²⁰	54	33	09	50	42 18		11 75				
4	236	48.6		20.2	195	15.9 ¹⁴⁶	42.6 ¹¹⁹	52	36	10	49	44 19		08 73				
5	251	48.7	-8	19.2	209	49.3 ¹⁴⁴	+3 54.5 ¹¹⁹	50	17 39	18 11	18 49	8 46 21		22 06 70				
6	266	48.9	-8	18.3	224	22.8 ¹⁴⁵	+4 06.5 ¹²⁰	45	17 45	18 14	18 48	8 49 25		22 00 66				
7	281	49.0		17.4	238	56.2 ¹⁴⁴	18.4 ¹¹⁹	40	50	17	48	52 29		21 55 63				
8	296	49.1		16.4	253	29.6 ¹⁴⁴	30.3 ¹¹⁹	35	54	19	49	55 31		51 60				
9	311	49.2		15.5	268	02.9 ¹⁴³	42.2 ¹¹⁹	30	17 58	22	50	8 57 34		47 58				
10	326	49.3		14.5	282	36.2 ¹⁴³	+4 54.1 ¹¹⁹	20	18 04	27	52	9 01 38		41 53				
11	341	49.4	-8	13.6	297	09.5 ¹⁴³	+5 06.0 ¹¹⁹	10 N	18 10	18 31	18 56	9 05 41		21 35 50				
12	356	49.5	-8	12.6	311	42.7 ¹⁴²	+5 17.8 ¹¹⁸	0	18 16	18 37	19 01	9 08 45		21 30 46				
13	11	49.6		11.7	326	15.9 ¹⁴²	29.7 ¹¹⁹	10 S	22	43	08	12 48		25 42				
14	26	49.7		10.8	340	49.1 ¹⁴²	41.5 ¹¹⁸	20	28	18 50	17	16 52		19 39				
15	41	49.9		09.8	355	22.2 ¹⁴¹	+5 53.3 ¹¹⁸	30	35	19 00	28	20 57		13 34				
16	56	50.0		08.9	9	55.3 ¹⁴¹	+6 05.1 ¹¹⁸	35	40	05	36	22 60		09 32				
17	71	50.1	-8	07.9	24	28.3 ¹⁴⁰	+6 16.9 ¹¹⁸	40	18 45	19 12	19 45	9 25 62		21 05 29				
18	86	50.2	-8	07.0	39	01.3 ¹⁴⁰	+6 28.7 ¹¹⁸	45	18 50	19 20	19 57	9 29 65		21 00 26				
19	101	50.3		06.0	53	34.2 ¹³⁹	40.4 ¹¹⁷	50	18 57	31	20 12	32 70		20 55 22				
20	116	50.4		05.1	68	07.1 ¹³⁹	+6 52.1 ¹¹⁷	52	19 00	35	19	34 72		52 20				
21	131	50.5		04.2	82	40.0 ¹³⁹	+7 03.8 ¹¹⁷	54	04	41	27	36 74		49 18				
22	146	50.6		03.2	97	12.8 ¹³⁸	15.5 ¹¹⁷	56	08	47	36	39 76		46 16				
23	161	50.8		02.3	111	45.5 ¹³⁷	27.2 ¹¹⁷	58	12	19 54	20 47	41 79		43 13				
24	176	50.9	-8	01.3	126	18.2 ¹³⁷	+7 38.8 ¹¹⁶	60 S	19 17	20 01	21 00	9 44 82		20 39 10				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 30 ^m 2		Mag: -4.8 PMG: 14 ^h 20 ^m		Mag: +0.5 PMG: 5 ^h 50 ^m		Mag: -2.3 PMG: 17 ^h 34 ^m		Mag: +0.2 PMG: 17 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	156	53.6	144	28.3	+11	14.3	272	23.6	-20	28.1	95	53.3	+20	10.6	103	41.5	+17	09.2
1	171	56.0	159	30.1		15.1	287	24.8		28.3	110	55.5		10.6	118	43.8		09.2
2	186	58.5	174	31.9		15.8	302	25.9		28.5	125	57.7		10.7	133	46.1		09.2
3	202	00.9	189	33.6		16.6	317	27.1		28.8	140	59.9		10.7	148	48.5		09.3
4	217	03.4	204	35.4		17.3	332	28.3		29.0	156	02.1		10.8	163	50.8		09.3
5	232	05.9	219	37.2	+11	18.0	347	29.4	-20	29.3	171	04.3	+20	10.9	178	53.1	+17	09.4
6	247	08.3	234	39.0	+11	18.8	2	30.6	-20	29.5	186	06.5	+20	10.9	193	55.4	+17	09.4
7	262	10.8	249	40.8		19.5	17	31.8		29.7	201	08.7		11.0	208	57.7		09.5
8	277	13.3	264	42.6		20.2	32	33.0		30.0	216	10.9		11.0	224	00.0		09.5
9	292	15.7	279	44.4		21.0	47	34.1		30.2	231	13.1		11.1	239	02.4		09.6
10	307	18.2	294	46.2		21.7	62	35.3		30.5	246	15.3		11.2	254	04.7		09.6
11	322	20.7	309	48.0	+11	22.4	77	36.5	-20	30.7	261	17.5	+20	11.2	269	07.0	+17	09.7
12	337	23.1	324	49.8	+11	23.1	92	37.6	-20	30.9	276	19.7	+20	11.3	284	09.3	+17	09.7
13	352	25.6	339	51.6		23.9	107	38.8		31.2	291	21.9		11.3	299	11.6		09.8
14	7	28.0	354	53.4		24.6	122	40.0		31.4	306	24.1		11.4	314	13.9		09.8
15	22	30.5	9	55.2		25.3	137	41.1		31.7	321	26.3		11.5	329	16.2		09.8
16	37	33.0	24	57.1		26.0	152	42.3		31.9	336	28.5		11.5	344	18.6		09.9
17	52	35.4	39	58.9	+11	26.8	167	43.5	-20	32.1	351	30.6	+20	11.6	359	20.9	+17	09.9
18	67	37.9	55	00.7	+11	27.5	182	44.7	-20	32.4	6	32.8	+20	11.6	14	23.2	+17	10.0
19	82	40.4	70	02.5		28.2	197	45.8		32.6	21	35.0		11.7	29	25.5		10.0
20	97	42.8	85	04.4		28.9	212	47.0		32.8	36	37.2		11.7	44	27.8		10.1
21	112	45.3	100	06.2		29.6	227	48.2		33.1	51	39.4		11.8	59	30.1		10.1
22	127	47.8	115	08.0		30.3	242	49.3		33.3	66	41.6		11.9	74	32.4		10.2
23	142	50.2	130	09.9		31.0	257	50.5		33.6	81	43.8		11.9	89	34.8		10.2
24	157	52.7	145	11.7	+11	31.7	272	51.7	-20	33.8	96	46.0	+20	12.0	104	37.1	+17	10.3
Dif	—		+18		+7		+12		-2		+22		+1		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'1 PMG: 12 ^h 12 ^m 5			Edad: 4 ^d 7 PHE { SD: 15'3 PMG: 16 ^h 05 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m									
0	176	50.9	-8	01.3	126	18.2	+7 38.8	60 N	5 31	6 19	7 01	8 46	12	23 45	85									
1	191	51.0	-8	00.4	140	50.9 ¹³⁷	+7 50.4 ¹¹⁶	58	33	18	6 57	51 15		38 82										
2	206	51.1	-7	59.4	155	23.5 ¹³⁶	+8 02.0 ¹¹⁶	56	34	17	54	8 55	18	32 78										
3	221	51.2		58.5	169	56.1 ¹³⁶	13.5 ¹¹⁵	54	35	15	51	9 00	20	26 76										
4	236	51.3		57.5	184	28.6 ¹³⁵	25.0 ¹¹⁵	52	35	14	48	03 22		21 74										
5	251	51.5	-7	56.6	199	01.0 ¹³⁴	+8 36.5 ¹¹⁵	50	5 36	6 13	6 45	9 07	24	23 16	72									
6	266	51.6	-7	55.7	213	33.4 ¹³⁴	+8 48.0 ¹¹⁵	45	5 36	6 10	6 40	9 14	28	23 06	68									
7	281	51.7		54.7	228	05.7 ¹³³	+8 59.4 ¹¹⁴	40	36	08	35	21 31		22 58	65									
8	296	51.8		53.8	242	38.0 ¹³³	+9 10.8 ¹¹⁴	35	36	05	31	26 34		51 62										
9	311	51.9		52.8	257	10.3 ¹³³	22.2 ¹¹⁴	30	35	6 03	27	31 36		45 59										
10	326	52.0		51.9	271	42.4 ¹³¹	33.6 ¹¹⁴	20	33	5 58	21	39 40		34 55										
11	341	52.2	-7	50.9	286	14.6 ¹³²	+9 44.9 ¹¹³	10 N	5 29	5 54	6 15	9 46	44	22 25	52									
12	356	52.3	-7	50.0	300	46.6 ¹³⁰	+9 56.1 ¹¹²	0	5 24	5 48	6 09	9 53	48	22 16	49									
13	11	52.4		49.0	315	18.6 ¹³⁰	+10 07.4 ¹¹³	10 S	18	42	6 04	10 00	51	22 07	46									
14	26	52.5		48.1	329	50.5 ¹²⁹	18.6 ¹¹²	20	5 09	35	5 57	08 54		21 58	42									
15	41	52.6		47.1	344	22.4 ¹²⁹	29.7 ¹¹¹	30	4 57	26	50	17 58		47 38										
16	56	52.7		46.2	358	54.2 ¹²⁸	40.8 ¹¹¹	35	50	20	46	22 61		41 36										
17	71	52.9	-7	45.2	13	26.0 ¹²⁸	+10 51.9 ¹¹¹	40	4 40	5 14	5 41	10 27	64	21 34	33									
18	86	53.0	-7	44.3	27	57.7 ¹²⁷	+11 02.9 ¹¹⁰	45	4 29	5 05	5 36	10 34	68	21 26	30									
19	101	53.1		43.3	42	29.3 ¹²⁶	13.9 ¹¹⁰	50	14	4 55	29	42 72		17 26										
20	116	53.2		42.4	57	00.8 ¹²⁵	24.9 ¹¹⁰	52	4 07	51	26	46 73		12 24										
21	131	53.3		41.4	71	32.3 ¹²⁵	35.8 ¹⁰⁹	54	3 59	45	22	50 76		07 22										
22	146	53.5		40.5	86	03.8 ¹²⁵	46.6 ¹⁰⁸	56	50	39	19	10 55	78	21 02	20									
23	161	53.6		39.5	100	35.1 ¹²³	+11 57.5 ¹⁰⁹	58	39	33	14	11 00	81	20 56	17									
24	176	53.7	-7	38.6	115	06.4 ¹²³	+12 08.2 ¹⁰⁷	60 S	3 27	4 25	5 10	11 06	84	20 49	14									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 13 ^h 26 ^m 3			Mag: -4.8 PMG: 14 ^h 17 ^m			Mag: +0.5 PMG: 5 ^h 48 ^m			Mag: -2.3 PMG: 17 ^h 30 ^m			Mag: +0.2 PMG: 16 ^h 59 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'									
0	157	52.7	145	11.7	+11	31.7	272	51.7	-20	33.8	96	46.0	+20	12.0	104	37.1	+17	10.3						
1	172	55.2	160	13.6		32.5	287	52.9		34.0	111	48.2		12.0	119	39.4		10.3						
2	187	57.6	175	15.4		33.2	302	54.0		34.3	126	50.4		12.1	134	41.7		10.4						
3	203	00.1	190	17.3		33.9	317	55.2		34.5	141	52.6		12.2	149	44.0		10.4						
4	218	02.5	205	19.1		34.6	332	56.4		34.7	156	54.7		12.2	164	46.3		10.5						
5	233	05.0	220	21.0	+11	35.3	347	57.6	-20	35.0	171	56.9	+20	12.3	179	48.6	+17	10.5						
6	248	07.5	235	22.9	+11	36.0	2	58.7	-20	35.2	186	59.1	+20	12.3	194	50.9	+17	10.5						
7	263	09.9	250	24.7		36.7	17	59.9		35.5	202	01.3		12.4	209	53.2		10.6						
8	278	12.4	265	26.6		37.4	33	01.1		35.7	217	03.5		12.5	224	55.6		10.6						
9	293	14.9	280	28.5		38.1	48	02.3		35.9	232	05.7		12.5	239	57.9		10.7						
10	308	17.3	295	30.3		38.8	63	03.4		36.2	247	07.9		12.6	255	00.2		10.7						
11	323	19.8	310	32.2	+11	39.5	78	04.6	-20	36.4	262	10.1	+20	12.6	270	02.5	+17	10.8						
12	338	22.3	325	34.1	+11	40.2	93	05.8	-20	36.6	277	12.2	+20	12.7	285	04.8	+17	10.8						
13	353	24.7	340	36.0		40.9	108	07.0		36.9	292	14.4		12.8	300	07.1		10.9						
14	8	27.2	355	37.9		41.5	123	08.1		37.1	307	16.6		12.8	315	09.4		10.9						
15	23	29.7	10	39.8		42.2	138	09.3		37.3	322	18.8		12.9	330	11.7		11.0						
16	38	32.1	25	41.7		42.9	153	10.5		37.6	337	21.0		12.9	345	14.0		11.0						
17	53	34.6	40	43.6	+11	43.6	168	11.7	-20	37.8	352	23.2	+20	13.0	0	16.4	+17	11.1						
18	68	37.0	55	45.5	+11	44.3	183	12.9	-20	38.0	7	25.4	+20	13.1	15	18.7	+17	11.1						
19	83	39.5	70	47.4		45.0	198	14.0		38.3	22	27.5		13.1	30	21.0		11.2						
20	98	42.0	85	49.3		45.7	213	15.2		38.5	37	29.7		13.2	45	23.3		11.2						
21	113	44.4	100	51.2		46.3	228	16.4		38.7	52	31.9		13.2	60	25.6		11.3						
22	128	46.9	115	53.1		47.0	243	17.6		39.0	67	34.1		13.3	75	27.9		11.3						
23	143	49.4	130	55.0		47.7	258	18.7		39.2	82	36.3		13.4	90	30.2		11.3						
24	158	51.8	145	56.9	+11	48.4	273	19.9	-20	39.4	97	38.5	+20	13.4	105	32.5	+17	11.4						
Dif	—			+19			+7			+12			-2			+22			+1			+23		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 5 ^d 7 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 0 20 ^h : 57 ^m 2 R°: 51 ^m										
	PMG: 12 ^h 12 ^m 3			SD: 15 ^h 4 PMG: 16 ^h 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
0	176	53.7	-7 38.6	115	06.4	+12 08.2		60 N	17 27	18 09	18 57	8 58 17	** ** *	** ** *
1	191	53.8		129	37.6 ¹²²	18.9 ¹⁰⁷		58	31	11	56	9 06 20	** ** *	** ** *
2	206	53.9	36.7	144	08.8 ¹²²	29.6 ¹⁰⁷		56	34	12	55	13 23	** ** *	** ** *
3	221	54.1	35.7	158	39.8 ¹²⁰	40.2 ¹⁰⁶		54	37	13	54	20 25	** ** *	** ** *
4	236	54.2	34.8	173	10.8 ¹²⁰	+12 50.8 ¹⁰⁶		52	40	14	53	25 27	** ** *	** ** *
5	251	54.3	-7 33.8	187	41.8 ¹²⁰	+13 01.3 ¹⁰⁵		50	17 42	18 15	18 52	9 31 29	** ** *	** ** *
6	266	54.4	-7 32.9	202	12.6 ¹¹⁸	+13 11.8 ¹⁰⁵		45	17 47	18 17	18 51	9 42 33	** ** *	** ** *
7	281	54.5	31.9	216	43.4 ¹¹⁸	22.2 ¹⁰⁴		40	52	19	50	9 52 35	** ** *	** ** *
8	296	54.7	31.0	231	14.1 ¹¹⁷	32.5 ¹⁰³		35	56	21	50	10 00 38	23 53 64	
9	311	54.8	30.0	245	44.8 ¹¹⁷	42.8 ¹⁰³		30	17 59	23	51	07 40	44 62	
10	326	54.9	29.1	260	15.3 ¹¹⁵	+13 53.0 ¹⁰²		20	18 05	27	53	19 45	29 59	
11	341	55.0	-7 28.1	274	45.8 ¹¹⁵	+14 03.2 ¹⁰²		10 N	18 10	18 32	18 56	10 30 48	23 17 55	
12	356	55.1	-7 27.2	289	16.2 ¹¹⁴	+14 13.3 ¹⁰¹		0	18 16	18 36	19 01	10 41 50	23 05 52	
13	11	55.3	26.2	303	46.5 ¹¹³	23.4 ¹⁰¹		10 S	21	42	07	10 51 54	22 53 49	
14	26	55.4	25.3	318	16.8 ¹¹³	33.3 ⁹⁹		20	27	49	15	11 02 58	40 46	
15	41	55.5	24.3	332	47.0 ¹¹²	43.3 ¹⁰⁰		30	33	18 57	26	15 61	25 43	
16	56	55.6	23.4	347	17.1 ¹¹¹	+14 53.1 ⁹⁸		35	37	19 03	33	23 63	17 41	
17	71	55.8	-7 22.4	1	47.1 ¹¹⁰	+15 02.9 ⁹⁸		40	18 42	19 09	19 42	11 31 66	22 07 39	
18	86	55.9	-7 21.5	16	17.0 ¹⁰⁹	+15 12.6 ⁹⁷		45	18 47	19 17	19 53	11 42 69	21 56 36	
19	101	56.0	20.5	30	46.8 ¹⁰⁸	22.3 ⁹⁷		50	53	26	20 07	54 73	43 32	
20	116	56.1	19.6	45	16.6 ¹⁰⁸	31.9 ⁹⁶		52	56	31	14	11 59 75	36 30	
21	131	56.3	18.6	59	46.3 ¹⁰⁷	41.4 ⁹⁵		54	18 59	36	21	12 06 77	29 28	
22	146	56.4	17.7	74	15.9 ¹⁰⁶	+15 50.8 ⁹⁴		56	19 02	41	30	13 79	22 25	
23	161	56.5	16.7	88	45.4 ¹⁰⁵	+16 00.2 ⁹⁴		58	06	48	40	21 82	13 23	
24	176	56.6	-7 15.8	103	14.8 ¹⁰⁴	+16 09.5 ⁹³		60 S	19 11	19 55	20 52	12 30 86	21 03 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 22 ^m 3		Mag: -4.8 PMG: 14 ^h 14 ^m		Mag: +0.5 PMG: 5 ^h 46 ^m		Mag: -2.3 PMG: 17 ^h 27 ^m		Mag: +0.2 PMG: 16 ^h 55 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	158	51.8	145	56.9	+11 48.4	273	19.9	-20 39.4	97	38.5	+20 13.4	105	32.5	+17 11.4
1	173	54.3	160	58.9	49.0	288	21.1	39.7	112	40.6	13.5	120	34.8	11.4
2	188	56.8	176	00.8	49.7	303	22.3	39.9	127	42.8	13.5	135	37.1	11.5
3	203	59.2	191	02.7	50.4	318	23.5	40.1	142	45.0	13.6	150	39.4	11.5
4	219	01.7	206	04.6	51.1	333	24.6	40.4	157	47.2	13.7	165	41.7	11.6
5	234	04.1	221	06.6	+11 51.7	348	25.8	-20 40.6	172	49.4	+20 13.7	180	44.1	+17 11.6
6	249	06.6	236	08.5	+11 52.4	3	27.0	-20 40.8	187	51.5	+20 13.8	195	46.4	+17 11.7
7	264	09.1	251	10.5	53.1	18	28.2	41.0	202	53.7	13.9	210	48.7	11.7
8	279	11.5	266	12.4	53.7	33	29.4	41.3	217	55.9	13.9	225	51.0	11.8
9	294	14.0	281	14.4	54.4	48	30.5	41.5	232	58.1	14.0	240	53.3	11.8
10	309	16.5	296	16.3	55.1	63	31.7	41.7	248	00.3	14.0	255	55.6	11.9
11	324	18.9	311	18.3	+11 55.7	78	32.9	-20 42.0	263	02.4	+20 14.1	270	57.9	+17 11.9
12	339	21.4	326	20.2	+11 56.4	93	34.1	-20 42.2	278	04.6	+20 14.2	286	00.2	+17 12.0
13	354	23.9	341	22.2	57.0	108	35.3	42.4	293	06.8	14.2	301	02.5	12.0
14	9	26.3	356	24.2	57.7	123	36.5	42.7	308	09.0	14.3	316	04.8	12.1
15	24	28.8	11	26.1	58.3	138	37.6	42.9	323	11.2	14.3	331	07.1	12.1
16	39	31.3	26	28.1	59.0	153	38.8	43.1	338	13.3	14.4	346	09.4	12.2
17	54	33.7	41	30.1	+11 59.6	168	40.0	-20 43.3	353	15.5	+20 14.5	1	11.7	+17 12.2
18	69	36.2	56	32.1	+12 00.3	183	41.2	-20 43.6	8	17.7	+20 14.5	16	14.0	+17 12.3
19	84	38.6	71	34.0	00.9	198	42.4	43.8	23	19.9	14.6	31	16.3	12.3
20	99	41.1	86	36.0	01.6	213	43.6	44.0	38	22.0	14.6	46	18.6	12.4
21	114	43.6	101	38.0	02.2	228	44.7	44.3	53	24.2	14.7	61	21.0	12.4
22	129	46.0	116	40.0	02.9	243	45.9	44.5	68	26.4	14.8	76	23.3	12.4
23	144	48.5	131	42.0	03.5	258	47.1	44.7	83	28.6	14.8	91	25.6	12.5
24	159	51.0	146	44.0	+12 04.2	273	48.3	-20 44.9	98	30.8	+20 14.9	106	27.9	+17 12.5
Dif	—		+20 +7		+12 -2		+22 +1		+23 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 1			Edad: 6 ^d 7 PHE { 4 ^h : 57 ^h 4 12 ^h : 57 ^h 7 20 ^h : 57 ^h 9 R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	56.6	-7	15.8	103	14.8	+16	09.5	5	26	6	14	6	56	9	15
1	191	56.8		14.8	117	44.2		18.7	27	13			52	26	28	1
2	206	56.9		13.9	132	13.5		27.8	29	12			49	36	30	0
3	221	57.0		12.9	146	42.6		36.9	30	11			46	45	32	4
4	236	57.1		11.9	161	11.7		45.9	31	10			44	9	52	35
5	251	57.3	-7	11.0	175	40.7	+16	54.8	5	32	6	09	6	41	10	00
6	266	57.4	-7	10.0	190	09.6	+17	03.6	5	33	6	07	6	36	10	15
7	281	57.5		09.1	204	38.5		12.3	34	05			32	27	42	0
8	296	57.6		08.1	219	07.2		21.0	34	03			28	38	44	**
9	311	57.8		07.2	233	35.9		29.6	33	01			25	10	47	**
10	326	57.9		06.2	248	04.5		38.0	31	5	57		19	11	04	**
11	341	58.0	-7	05.3	262	32.9	+17	46.4	5	28	5	53	6	14	11	18
12	356	58.2	-7	04.3	277	01.3	+17	54.7	5	24	5	48	6	09	11	31
13	11	58.3		03.3	291	29.6	+18	03.0	18		42		6	04	11	45
14	26	58.4		02.4	305	57.9		11.1	5	10	36		5	58	12	00
15	41	58.5		01.4	320	26.0		19.1	4	59	27		52	16	63	23
16	56	58.7	-7	00.5	334	54.0		27.0	52	22			48	26	64	22
17	71	58.8	-6	59.5	349	22.0	+18	34.9	4	43	5	16	5	44	12	37
18	86	58.9	-6	58.6	3	49.8	+18	42.6	4	32	5	08	5	38	12	51
19	101	59.1		57.6	18	17.6		50.3	18		4	59	32	13	07	72
20	116	59.2		56.7	32	45.3	+18	57.8	12		55		30	14	74	22
21	131	59.3		55.7	47	12.9	+19	05.3	4	04	50		26	23	76	21
22	146	59.4		54.7	61	40.4		12.6	3	55	44		23	32	79	47
23	161	59.6		53.8	76	07.8		19.8	45		38		19	43	81	36
24	176	59.7	-6	52.8	90	35.1	+19	27.0	3	34	4	31	5	15	13	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 18 ^m 4		Mag: -4.8 PMG: 14 ^h 11 ^m		Mag: +0.5 PMG: 5 ^h 44 ^m		Mag: -2.3 PMG: 17 ^h 23 ^m		Mag: +0.2 PMG: 16 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	51.0	146	44.0	+12	04.2	273	48.3	+20	14.9
1	174	53.4	161	46.0		04.8	288	49.5		15.0
2	189	55.9	176	48.0		05.4	303	50.7		15.0
3	204	58.4	191	50.0		06.1	318	51.8		15.1
4	220	00.8	206	52.0		06.7	333	53.0		15.1
5	235	03.3	221	54.0	+12	07.3	348	54.2	+20	15.2
6	250	05.8	236	56.1	+12	08.0	3	55.4	+20	15.3
7	265	08.2	251	58.1		08.6	18	56.6		15.3
8	280	10.7	267	00.1		09.2	33	57.8		15.4
9	295	13.1	282	02.1		09.9	48	59.0		15.4
10	310	15.6	297	04.2		10.5	64	00.2		15.5
11	325	18.1	312	06.2	+12	11.1	79	01.3	+20	15.6
12	340	20.5	327	08.2	+12	11.7	94	02.5	+20	15.6
13	355	23.0	342	10.3		12.3	109	03.7		15.7
14	10	25.5	357	12.3		13.0	124	04.9		15.8
15	25	27.9	12	14.4		13.6	139	06.1		15.8
16	40	30.4	27	16.4		14.2	154	07.3		15.9
17	55	32.9	42	18.5	+12	14.8	169	08.5	+20	15.9
18	70	35.3	57	20.5	+12	15.4	184	09.7	+20	16.0
19	85	37.8	72	22.6		16.0	199	10.9		16.1
20	100	40.2	87	24.7		16.7	214	12.0		16.1
21	115	42.7	102	26.7		17.3	229	13.2		16.2
22	130	45.2	117	28.8		17.9	244	14.4		16.3
23	145	47.6	132	30.9		18.5	259	15.6		16.3
24	160	50.1	147	33.0	+12	19.1	274	16.8	+20	16.4
Dif	—		+20		+6		+12		+1	
									+23	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1			Edad: 7 ^d 7 PHE { 4 ^h : 58/2 12 ^h : 58/4 20 ^h : 58/7	SD: 15 ^h 8														
	PMG: 12 ^h 11 ^m 9				PMG: 18 ^h 39 ^m				Rº: 59 ^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					
0	176	59.7	-6	90	35.1	+19	27.0	60 N	17 32	18 14	19 02	9 39 37		2 36 81					
1	191	59.8		105	02.3	82	34.0	58	36	15	19 00	9 54 40		22 77					
2	207	00.0		119	29.5	82	40.9	56	38	16	18 59	10 06 42		2 09 76					
3	222	00.1		133	56.5	80	47.8	54	41	16	57	17 44		1 59 74					
4	237	00.2		148	23.5	80	+19	54.5	43	17	56	27 45		49 73					
5	252	00.4	-6	162	50.4	79	+20	01.1	17 45	18 18	18 55	10 36 46		1 41 71					
6	267	00.5	-6	177	17.2	78	+20	07.5	17 50	18 19	18 53	10 54 49		1 23 68					
7	282	00.6		191	43.9	77	13.9	40	54	21	53	11 09 51		1 09 66					
8	297	00.8		206	10.5	76	20.2	35	17 57	23	52	22 52		0 57 64					
9	312	00.9		220	37.0	75	26.3	30	18 00	24	52	34 53		46 63					
10	327	01.0		235	03.5	75	32.3	20	06	28	54	11 53 55		28 60					
11	342	01.2	-6	249	29.8	73	+20	38.3	18 11	18 32	18 56	12 10 56		0 12 58					
12	357	01.3	-6	263	56.1	73	+20	44.0	18 15	18 36	19 00	12 26 58		** ** *					
13	12	01.4		278	22.3	72	49.7	10 S	20	41	06	42 59		** ** *					
14	27	01.6		292	48.4	71	+20	55.3	20	25	47	12 59 61		** ** *					
15	42	01.7		307	14.4	70	+21	00.7	30	31	18 55	24 13 19 63		23 58 56					
16	57	01.8		321	40.3	69	06.0	35	35	19 00	30	30 64		46 55					
17	72	02.0	-6	336	06.2	69	+21	11.2	18 38	19 06	19 39	13 44 65		23 32 54					
18	87	02.1	-6	350	31.9	67	+21	16.2	18 43	19 13	19 49	14 00 66		23 15 54					
19	102	02.2		4	57.6	67	21.1	50	49	22	20 02	19 69		22 55 52					
20	117	02.4		19	23.2	66	25.9	52	51	26	08	28 70		46 51					
21	132	02.5		33	48.7	65	30.6	54	54	31	16	39 71		35 50					
22	147	02.6		48	14.1	64	35.1	56	18 57	36	24	14 51 72		23 49					
23	162	02.8		30.7	62	39.5	39.5	58	19 01	42	33	15 04 74		22 09 47					
24	177	02.9	-6	77	04.8	63	+21	43.8	19 05	19 49	20 44	15 21 76		21 52 45					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 14 ^m 5		Mag: -4.8 PMG: 14 ^h 08 ^m			Mag: +0.5 PMG: 5 ^h 42 ^m			Mag: -2.3 PMG: 17 ^h 20 ^m			Mag: +0.2 PMG: 16 ^h 48 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	'	°	'	°	°	'	'	°	'	'					
0	160	50.1	147	33.0	+12	19.1	274	16.8	-20	50.4	99	22.9	+20	16.4	107	23.1	+17	13.7	
1	175	52.6	162	35.0		19.7	289	18.0		50.6	114	25.1		16.4	122	25.4		13.8	
2	190	55.0	177	37.1		20.3	304	19.2		50.8	129	27.2		16.5	137	27.7		13.8	
3	205	57.5	192	39.2		20.9	319	20.4		51.0	144	29.4		16.6	152	30.0		13.9	
4	221	00.0	207	41.3		21.5	334	21.6		51.3	159	31.6		16.6	167	32.3		13.9	
5	236	02.4	222	43.4	+12	22.1	349	22.8	-20	51.5	174	33.7	+20	16.7	182	34.6	+17	14.0	
6	251	04.9	237	45.5	+12	22.7	4	24.0	-20	51.7	189	35.9	+20	16.8	197	36.9	+17	14.0	
7	266	07.4	252	47.6		23.3	19	25.2		51.9	204	38.1		16.8	212	39.2		14.1	
8	281	09.8	267	49.7		23.8	34	26.3		52.1	219	40.2		16.9	227	41.5		14.1	
9	296	12.3	282	51.8		24.4	49	27.5		52.4	234	42.4		16.9	242	43.8		14.2	
10	311	14.7	297	53.9		25.0	64	28.7		52.6	249	44.6		17.0	257	46.1		14.2	
11	326	17.2	312	56.1	+12	25.6	79	29.9	-20	52.8	264	46.7	+20	17.1	272	48.4	+17	14.3	
12	341	19.7	327	58.2	+12	26.2	94	31.1	-20	53.0	279	48.9	+20	17.1	287	50.7	+17	14.3	
13	356	22.1	343	00.3		26.8	109	32.3		53.3	294	51.1		17.2	302	53.0		14.4	
14	11	24.6	358	02.4		27.4	124	33.5		53.5	309	53.2		17.3	317	55.3		14.4	
15	26	27.1	13	04.6		27.9	139	34.7		53.7	324	55.4		17.3	332	57.6		14.5	
16	41	29.5	28	06.7		28.5	154	35.9		53.9	339	57.5		17.4	347	59.9		14.5	
17	56	32.0	43	08.8	+12	29.1	169	37.1	-20	54.1	354	59.7	+20	17.5	3	02.2	+17	14.6	
18	71	34.5	58	11.0	+12	29.7	184	38.3	-20	54.4	10	01.9	+20	17.5	18	04.5	+17	14.6	
19	86	36.9	73	13.1		30.2	199	39.5		54.6	25	04.0		17.6	33	06.8		14.7	
20	101	39.4	88	15.3		30.8	214	40.7		54.8	40	06.2		17.6	48	09.1		14.7	
21	116	41.9	103	17.4		31.4	229	41.9		55.0	55	08.4		17.7	63	11.4		14.8	
22	131	44.3	118	19.6		31.9	244	43.1		55.2	70	10.5		17.8	78	13.7		14.8	
23	146	46.8	133	21.7		32.5	259	44.3		55.5	85	12.7		17.8	93	16.0		14.9	
24	161	49.2	148	23.9	+12	33.1	274	45.5	-20	55.7	100	14.9	+20	17.9	108	18.3	+17	14.9	
Dif	—		+21			+6	+12			-2			+22		+1	+23			0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 8 ^d 7	PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 2 20 ^h : 59 ^m 4										
	PMG: 12 ^h 11 ^m 7					SD: 16 ^h 0		PMG: 19 ^h 38 ^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	177	02.9	-6 29.8	77	04.8	+21 43.8	60 N	5 20	6 08	6 50	10 16	56	3 57	68	
1	192	03.0	28.8	91	30.0	47.9 41	58	22	07	47	34	56	39	68	
2	207	03.2	27.9	105	55.1	51.9 40	56	24	07	44	10 48	58	25	67	
3	222	03.3	26.9	120	20.2	55.8 39	54	25	06	41	11 01	58	13	66	
4	237	03.4	25.9	134	45.1	59	52	27	05	39	12	58	3 02	65	
5	252	03.6	-6 25.0	149	10.0	59	50	5 28	6 05	6 37	11 22	58	2 52	65	
6	267	03.7	-6 24.0	163	34.9	59	45	5 29	6 03	6 33	11 43	59	2 31	64	
7	282	03.9	23.0	177	59.6	57	40	31	02	29	12 00	59	15	63	
8	297	04.0	22.1	192	24.3	57	35	31	6 00	26	14	60	2 01	62	
9	312	04.1	21.1	206	48.9	56	30	31	5 59	23	27	59	1 49	62	
10	327	04.3	20.2	221	13.5	56	20	30	55	18	12 48	60	28	61	
11	342	04.4	-6 19.2	235	38.0	55	10 N	5 27	5 52	6 13	13 06	61	1 10	60	
12	357	04.5	-6 18.2	250	02.4	54	0	5 23	5 48	6 08	13 24	60	0 53	59	
13	12	04.7	17.3	264	26.7	53	10 S	18	43	6 04	13 41	61	36	59	
14	27	04.8	16.3	278	51.0	53	20	11	37	5 59	14 00	61	0 18	58	
15	42	05.0	15.3	293	15.3	53	30	5 00	29	53	22	61	*** ** *		
16	57	05.1	14.4	307	39.4	51	35	4 54	24	50	34	61	*** ** *		
17	72	05.2	-6 13.4	322	03.5	51	40	4 46	5 18	5 46	14 49	61	*** ** *		
18	87	05.4	-6 12.5	336	27.6	51	45	4 35	5 11	5 41	15 06	61	*** ** *		
19	102	05.5	11.5	350	51.6	50	50	22	5 02	36	28	61	23 47	65	
20	117	05.7	10.5	5	15.5	49	52	16	4 58	33	38	61	37	65	
21	132	05.8	09.6	19	39.4	49	54	09	54	30	15 50	61	25	65	
22	147	05.9	08.6	34	03.3	49	56	4 01	49	27	16 03	61	23 12	65	
23	162	06.1	07.6	48	27.0	47	58	3 51	43	24	18	61	22 56	66	
24	177	06.2	-6 06.7	62	50.8	48	60 S	3 40	4 36	5 20	16 37	60	22 37	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 10 ^m 6		Mag: -4.8 PMG: 14 ^h 04 ^m		Mag: +0.4 PMG: 5 ^h 41 ^m		Mag: -2.3 PMG: 17 ^h 17 ^m		Mag: +0.2 PMG: 16 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	161	49.2	148	23.9	+12 33.1	274	45.5	-20 55.7	100	14.9	+20 17.9	108	18.3	+17 14.9
1	176	51.7	163	26.1	33.6	289	46.7	55.9	115	17.0	18.0	123	20.6	15.0
2	191	54.2	178	28.2	34.2	304	47.9	56.1	130	19.2	18.0	138	22.9	15.0
3	206	56.6	193	30.4	34.8	319	49.1	56.3	145	21.3	18.1	153	25.2	15.1
4	221	59.1	208	32.6	35.3	334	50.3	56.5	160	23.5	18.2	168	27.5	15.1
5	237	01.6	223	34.8	+12 35.9	349	51.5	-20 56.8	175	25.7	+20 18.2	183	29.8	+17 15.2
6	252	04.0	238	36.9	+12 36.4	4	52.7	-20 57.0	190	27.8	+20 18.3	198	32.1	+17 15.2
7	267	06.5	253	39.1	37.0	19	53.9	57.2	205	30.0	18.3	213	34.4	15.3
8	282	09.0	268	41.3	37.5	34	55.1	57.4	220	32.1	18.4	228	36.7	15.3
9	297	11.4	283	43.5	38.1	49	56.3	57.6	235	34.3	18.5	243	38.9	15.4
10	312	13.9	298	45.7	38.6	64	57.5	57.9	250	36.5	18.5	258	41.2	15.4
11	327	16.4	313	47.9	+12 39.2	79	58.7	-20 58.1	265	38.6	+20 18.6	273	43.5	+17 15.5
12	342	18.8	328	50.1	+12 39.7	94	59.9	-20 58.3	280	40.8	+20 18.7	288	45.8	+17 15.5
13	357	21.3	343	52.3	40.3	110	01.1	58.5	295	42.9	18.7	303	48.1	15.6
14	12	23.7	358	54.5	40.8	125	02.3	58.7	310	45.1	18.8	318	50.4	15.6
15	27	26.2	13	56.7	41.3	140	03.5	58.9	325	47.3	18.9	333	52.7	15.7
16	42	28.7	28	59.0	41.9	155	04.7	59.2	340	49.4	18.9	348	55.0	15.7
17	57	31.1	44	01.2	+12 42.4	170	05.9	-20 59.4	355	51.6	+20 19.0	3	57.3	+17 15.8
18	72	33.6	59	03.4	+12 42.9	185	07.1	-20 59.6	10	53.7	+20 19.0	18	59.6	+17 15.8
19	87	36.1	74	05.6	43.5	200	08.3	-20 59.8	25	55.9	19.1	34	01.9	15.9
20	102	38.5	89	07.9	44.0	215	09.5	-21 00.0	40	58.0	19.2	49	04.2	15.9
21	117	41.0	104	10.1	44.5	230	10.7	-21 00.2	56	00.2	19.2	64	06.5	16.0
22	132	43.5	119	12.4	45.1	245	11.9	00.4	71	02.3	19.3	79	08.8	16.0
23	147	45.9	134	14.6	45.6	260	13.1	00.7	86	04.5	19.4	94	11.1	16.1
24	162	48.4	149	16.8	+12 46.1	275	14.3	-21 00.9	101	06.7	+20 19.4	109	13.4	+17 16.1
Dif	—		+22		+5	+12		-2	+22		+1	+23		+

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 10 ^d 7	PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 5 20 ^h : 60 ^h 6										
	PMG: 12 ^h 11 ^m 2					SD: 16 ^h 4		PMG: 21 ^h 41 ^m			R ^o : 60 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	09.6	-5	43.5	48	10.3	+22	15.1	60 N	5 14	6 02	6 44	12 29	92	5 56 35
1	192	09.8		42.5	62	33.3	40	11.9	58	17	02	41	45	89	40 38
2	207	09.9		41.5	76	56.4	41	08.6	56	19	02	39	12 59	86	26 40
3	222	10.1		40.5	91	19.5	41	05.1	54	21	01	37	13 11	83	13 43
4	237	10.2		39.6	105	42.6	41	+22	52	22	01	35	22	81	5 03 44
5	252	10.4	-5	38.6	120	05.6	40	+21	50	5 23	6 01	6 33	13 31	80	4 53 46
6	267	10.5	-5	37.6	134	28.7	41	+21	45	5 26	6 00	6 29	13 51	76	4 33 49
7	282	10.7		36.7	148	51.8	41	49.4	40	28	5 59	26	14 07	73	16 51
8	297	10.8		35.7	163	14.9	41	45.0	35	28	58	23	20	71	4 02 53
9	312	11.0		34.7	177	38.0	41	40.6	30	29	57	20	32	69	3 50 55
10	327	11.1		33.8	192	01.1	41	35.9	20	28	54	16	14 52	66	29 57
11	342	11.2	-5	32.8	206	24.2	41	+21	10 N	5 26	5 51	6 12	15 10	63	3 11 59
12	357	11.4	-5	31.8	220	47.4	42	+21	0	5 23	5 47	6 08	15 26	61	2 54 61
13	12	11.5		30.9	235	10.5	41	21.1	10 S	18	43	04	15 42	58	37 63
14	27	11.7		29.9	249	33.7	42	15.8	20	11	37	6 00	16 00	55	2 18 66
15	42	11.8		28.9	263	56.9	42	10.4	30	5 02	30	5 54	20	52	1 57 68
16	57	12.0		27.9	278	20.1	42	+21	35	4 56	26	51	31	50	44 70
17	72	12.1	-5	27.0	292	43.4	43	+20	40	4 48	5 20	5 48	16 45	47	1 30 71
18	87	12.3	-5	26.0	307	06.6	42	+20	45	4 38	5 14	5 44	17 00	45	1 13 73
19	102	12.4		25.0	321	29.9	43	47.1	50	26	06	39	20	41	0 52 75
20	117	12.6		24.1	335	53.2	43	40.9	52	20	5 02	37	29	39	42 77
21	132	12.7		23.1	350	16.6	44	34.6	54	13	4 58	34	39	37	30 79
22	147	12.9		22.1	4	39.9	43	28.1	56	4 06	53	32	17 51	34	17 81
23	162	13.0		21.1	19	03.4	45	21.4	58	3 57	48	29	18 04	32	0 02 83
24	177	13.2	-5	20.2	33	26.8	44	+20	60 S	3 47	4 42	5 25	18 19	28	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 02 ^m 7		Mag: -4.8 PMG: 13 ^h 57 ^m		Mag: +0.4 PMG: 5 ^h 37 ^m		Mag: -2.3 PMG: 17 ^h 10 ^m		Mag: +0.2 PMG: 16 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	163	47.5	150	11.9	+12	58.1	275	43.3	-21	06.0	101	58.3	+20	21.0	110	08.3	+17	17.3
1	178	50.0	165	14.2		58.6	290	44.5		06.2	117	00.5		21.1	125	10.6		17.4
2	193	52.5	180	16.5		59.1	305	45.7		06.4	132	02.6		21.1	140	12.9		17.4
3	208	54.9	195	18.9	+12	59.6	320	46.9		06.6	147	04.7		21.2	155	15.2		17.5
4	223	57.4	210	21.2	+13	00.0	335	48.1		06.8	162	06.9		21.3	170	17.5		17.5
5	238	59.8	225	23.6	+13	00.5	350	49.3	-21	07.0	177	09.0	+20	21.3	185	19.8	+17	17.6
6	254	02.3	240	25.9	+13	01.0	5	50.5	-21	07.2	192	11.2	+20	21.4	200	22.1	+17	17.6
7	269	04.8	255	28.3		01.5	20	51.8		07.5	207	13.3		21.4	215	24.3		17.7
8	284	07.2	270	30.7		01.9	35	53.0		07.7	222	15.5		21.5	230	26.6		17.7
9	299	09.7	285	33.0		02.4	50	54.2		07.9	237	17.6		21.6	245	28.9		17.8
10	314	12.2	300	35.4		02.8	65	55.4		08.1	252	19.8		21.6	260	31.2		17.8
11	329	14.6	315	37.8	+13	03.3	80	56.6	-21	08.3	267	21.9	+20	21.7	275	33.5	+17	17.9
12	344	17.1	330	40.2	+13	03.8	95	57.8	-21	08.5	282	24.1	+20	21.8	290	35.8	+17	17.9
13	359	19.6	345	42.5		04.2	110	59.0		08.7	297	26.2		21.8	305	38.1		18.0
14	14	22.0	0	44.9		04.7	126	00.3		08.9	312	28.4		21.9	320	40.4		18.1
15	29	24.5	15	47.3		05.1	141	01.5		09.1	327	30.5		22.0	335	42.6		18.1
16	44	27.0	30	49.7		05.6	156	02.7		09.3	342	32.6		22.0	350	44.9		18.2
17	59	29.4	45	52.1	+13	06.0	171	03.9	-21	09.5	357	34.8	+20	22.1	5	47.2	+17	18.2
18	74	31.9	60	54.5	+13	06.5	186	05.1	-21	09.8	12	36.9	+20	22.2	20	49.5	+17	18.3
19	89	34.3	75	56.9		06.9	201	06.3		10.0	27	39.1		22.2	35	51.8		18.3
20	104	36.8	90	59.3		07.4	216	07.5		10.2	42	41.2		22.3	50	54.1		18.4
21	119	39.3	106	01.7		07.8	231	08.8		10.4	57	43.4		22.4	65	56.4		18.4
22	134	41.7	121	04.1		08.2	246	10.0		10.6	72	45.5		22.4	80	58.6		18.5
23	149	44.2	136	06.6		08.7	261	11.2		10.8	87	47.6		22.5	96	00.9		18.5
24	164	46.7	151	09.0	+13	09.1	276	12.4	-21	11.0	102	49.8	+20	22.6	111	03.2	+17	18.6
Dif	—		+24		+5		+12		-2		+21		+1		+23		+	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 11 ^d 7 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'9 R°: 57 ^m												
	PMG: 12 ^h 11 ^m 0			PMG: 22 ^h 41 ^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	177	13.2	-5 20.2	33	26.8	+20 14.6	69	60 N	17 42	18 24	19 12	14 01 99		6 31 23		
1	192	13.3		47	50.3	45 07.7	69	58	45	24	10	14 94		18 27		
2	207	13.5		62	13.8	45 +20 00.6	71	56	47	24	07	25 91		6 06 30		
3	222	13.6		76	37.3	45 +19 53.4	72	54	49	24	05	34 89		5 56 33		
4	237	13.8		91	00.9	46 46.0	74	52	50	24	03	43 86		47 35		
5	252	13.9	-5 15.3	105	24.6	47 +19 38.5	75	50	17 52	18 24	19 02	14 51 83		5 39 37		
6	267	14.1	-5 14.3	119	48.2	46 +19 30.8	77	45	17 55	18 25	18 59	15 07 79		5 22 41		
7	282	14.2		134	11.9	47 23.0	78	40	17 58	25	57	20 76		5 07 45		
8	297	14.4		148	35.7	48 15.0	80	35	18 01	26	55	31 73		4 55 47		
9	312	14.5		162	59.5	48 +19 06.9	81	30	03	27	55	41 70		45 49		
10	327	14.7		177	23.3	48 +18 58.7	82	20	07	29	55	15 58 66		26 53		
11	342	14.8	-5 09.5	191	47.2	49 +18 50.4	83	10 N	18 11	18 32	18 56	16 13 62		4 10 57		
12	357	15.0	-5 08.5	206	11.2	50 +18 41.9	85	0	18 14	18 35	18 59	16 27 58		3 55 60		
13	12	15.1		220	35.2	50 33.2	87	10 S	18	39	19 04	40 55		40 63		
14	27	15.3		234	59.2	50 24.5	87	20	22	44	10	16 55 51		24 66		
15	42	15.4		249	23.3	51 15.5	90	30	26	51	19	17 12 46		3 05 70		
16	57	15.6		263	47.5	52 +18 06.5	90	35	29	18 55	25	21 44		2 54 72		
17	72	15.7	-5 03.6	278	11.7	52 +17 57.4	91	40	18 32	19 00	19 32	17 32 41		2 41 75		
18	87	15.9	-5 02.7	292	35.9	52 +17 48.1	93	45	18 36	19 06	19 41	17 45 38		2 26 78		
19	102	16.0		307	00.2	53 38.6	95	50	40	13	53	18 01 33		2 07 83		
20	117	16.2	-5 00.7	321	24.6	54 29.1	95	52	42	17	58	08 31		1 59 84		
21	132	16.4	-4 59.7	335	49.0	54 19.4	97	54	45	21	20 05	16 29		49 86		
22	147	16.5		350	13.5	55 +17 09.7	97	56	47	25	12	25 26		38 89		
23	162	16.7		4	38.1	56 +16 59.7	100	58	50	30	20	36 22		25 92		
24	177	16.8	-4 56.8	19	02.7	56 +16 49.7	100	60 S	18 53	19 36	20 30	18 47 19		1 10 96		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 12 ^h 58 ^m 8		Mag: -4.8 PMG: 13 ^h 53 ^m		Mag: +0.4 PMG: 5 ^h 35 ^m		Mag: -2.3 PMG: 17 ^h 06 ^m			Mag: +0.2 PMG: 16 ^h 33 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	°	'	°	°	'	°	'	°	'					
0	164	46.7	151 09.0	+13 09.1	276 12.4	-21 11.0	102 49.8	+20 22.6	111 03.2	+17 18.6								
1	179	49.1	166 11.4	09.5	291 13.6	11.2	117 51.9	22.6	126 05.5	18.6								
2	194	51.6	181 13.8	10.0	306 14.9	11.4	132 54.1	22.7	141 07.8	18.7								
3	209	54.1	196 16.3	10.4	321 16.1	11.6	147 56.2	22.8	156 10.1	18.7								
4	224	56.5	211 18.7	10.8	336 17.3	11.8	162 58.4	22.8	171 12.4	18.8								
5	239	59.0	226 21.1	+13 11.3	351 18.5	-21 12.0	178 00.5	+20 22.9	186 14.6	+17 18.8								
6	255	01.4	241 23.6	+13 11.7	6 19.7	-21 12.2	193 02.6	+20 23.0	201 16.9	+17 18.9								
7	270	03.9	256 26.0	12.1	21 20.9	12.4	208 04.8	23.0	216 19.2	18.9								
8	285	06.4	271 28.5	12.5	36 22.2	12.6	223 06.9	23.1	231 21.5	19.0								
9	300	08.8	286 31.0	12.9	51 23.4	12.8	238 09.1	23.2	246 23.8	19.0								
10	315	11.3	301 33.4	13.4	66 24.6	13.1	253 11.2	23.2	261 26.1	19.1								
11	330	13.8	316 35.9	+13 13.8	81 25.8	-21 13.3	268 13.3	+20 23.3	276 28.3	+17 19.1								
12	345	16.2	331 38.3	+13 14.2	96 27.1	-21 13.5	283 15.5	+20 23.4	291 30.6	+17 19.2								
13	0	18.7	346 40.8	14.6	111 28.3	13.7	298 17.6	23.4	306 32.9	19.3								
14	15	21.2	1 43.3	15.0	126 29.5	13.9	313 19.7	23.5	321 35.2	19.3								
15	30	23.6	16 45.8	15.4	141 30.7	14.1	328 21.9	23.6	336 37.5	19.4								
16	45	26.1	31 48.3	15.8	156 31.9	14.3	343 24.0	23.6	351 39.8	19.4								
17	60	28.6	46 50.7	+13 16.2	171 33.2	-21 14.5	358 26.2	+20 23.7	6 42.0	+17 19.5								
18	75	31.0	61 53.2	+13 16.6	186 34.4	-21 14.7	13 28.3	+20 23.8	21 44.3	+17 19.5								
19	90	33.5	76 55.7	17.0	201 35.6	14.9	28 30.4	23.8	36 46.6	19.6								
20	105	35.9	91 58.2	17.4	216 36.8	15.1	43 32.6	23.9	51 48.9	19.6								
21	120	38.4	107 00.7	17.8	231 38.1	15.3	58 34.7	24.0	66 51.2	19.7								
22	135	40.9	122 03.2	18.2	246 39.3	15.5	73 36.8	24.0	81 53.4	19.7								
23	150	43.3	137 05.7	18.6	261 40.5	15.7	88 39.0	24.1	96 55.7	19.8								
24	165	45.8	152 08.2	+13 19.0	276 41.7	-21 15.9	103 41.1	+20 24.2	111 58.0	+17 19.8								
Dif	—		+25		+4		+12		-2		+21		+1		+23		+	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 8			Edad: 12 ^d 7 PHE { SD: 16'6 PMG: 23 ^h 38 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	16.8	-4	56.8	19	02.7	+16 49.7	60 N	5 08	5 56	6 38	15 40	99	6 54	17
1	192	17.0		55.8	33	27.3	56 39.6 ¹⁰¹	58	11	57	36	48	96	45	20
2	207	17.1		54.9	47	52.0	57 29.3 ¹⁰³	56	14	57	34	15 56	92	36	23
3	222	17.3		53.9	62	16.8	58 18.9 ¹⁰⁴	54	16	57	32	16 03	89	29	26
4	237	17.4		52.9	76	41.7	59 +16 08.4 ¹⁰⁵	52	18	57	30	09	86	22	28
5	252	17.6	-4	51.9	91	06.6	59 +15 57.8 ¹⁰⁶	50	5 19	5 57	6 29	16 14	85	6 16	30
6	267	17.7	-4	51.0	105	31.5	59 +15 47.1 ¹⁰⁷	45	5 22	5 56	6 26	16 26	79	6 03	34
7	282	17.9		50.0	119	56.6	61 36.3 ¹⁰⁸	40	24	56	23	36	75	5 52	38
8	297	18.0		49.0	134	21.7	61 25.4 ¹⁰⁹	35	26	55	20	44	72	42	42
9	312	18.2		48.0	148	46.8	61 14.4 ¹¹⁰	30	27	54	18	16 51	69	34	44
10	327	18.4		47.1	163	12.0	62 +15 03.2 ¹¹²	20	27	52	14	17 04	64	19	49
11	342	18.5	-4	46.1	177	37.3	63 +14 52.0 ¹¹²	10 N	5 25	5 50	6 11	17 15	59	5 07	53
12	357	18.7	-4	45.1	192	02.7	64 +14 40.7 ¹¹³	0	5 23	5 47	6 07	17 25	56	4 55	57
13	12	18.8		44.1	206	28.1	64 29.2 ¹¹⁵	10 S	18	43	04	35	52	43	60
14	27	19.0		43.2	220	53.6	65 17.7 ¹¹⁵	20	12	38	6 00	46	47	30	65
15	42	19.1		42.2	235	19.1	65 +14 06.1 ¹¹⁶	30	5 03	32	5 56	17 58	43	15	69
16	57	19.3		41.2	249	44.7	66 +13 54.3 ¹¹⁸	35	4 58	28	53	18 05	40	4 06	72
17	72	19.4	-4	40.2	264	10.4	67 +13 42.5 ¹¹⁸	40	4 50	5 23	5 50	18 13	37	3 56	76
18	87	19.6	-4	39.3	278	36.1	67 +13 30.6 ¹¹⁹	45	4 41	5 17	5 47	18 23	32	3 44	80
19	102	19.8		38.3	293	01.9	68 18.6 ¹²⁰	50	30	09	42	34	28	30	84
20	117	19.9		37.3	307	27.8	69 +13 06.6 ¹²⁰	52	24	06	40	39	26	23	87
21	132	20.1		36.3	321	53.8	70 +12 54.4 ¹²²	54	18	5 02	38	45	23	15	90
22	147	20.2		35.4	336	19.8	70 42.2 ¹²²	56	11	4 58	36	51	21	3 07	92
23	162	20.4		34.4	350	45.8	70 29.9 ¹²³	58	4 03	53	33	18 58	18	2 57	96
24	177	20.5	-4	33.4	5	12.0	72 +12 17.5 ¹²⁴	60 S	3 53	4 47	5 30	19 06	14	2 46	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 54 ^m 8		Mag: -4.7 PMG: 13 ^h 49 ^m		Mag: +0.4 PMG: 5 ^h 33 ^m		Mag: -2.3 PMG: 17 ^h 03 ^m		Mag: +0.2 PMG: 16 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	45.8	152	08.2	276	41.7	103	41.1	111	58.0
1	180	48.3	167	10.8	291	43.0	118	43.3	127	00.3
2	195	50.7	182	13.3	306	44.2	133	45.4	142	02.6
3	210	53.2	197	15.8	321	45.4	148	47.5	157	04.8
4	225	55.7	212	18.3	336	46.6	163	49.7	172	07.1
5	240	58.1	227	20.9	351	47.9	178	51.8	187	09.4
6	256	00.6	242	23.4	6	49.1	193	53.9	202	11.7
7	271	03.1	257	25.9	21	50.3	208	56.1	217	14.0
8	286	05.5	272	28.5	36	51.5	223	58.2	232	16.2
9	301	08.0	287	31.0	51	52.8	239	00.3	247	18.5
10	316	10.4	302	33.6	66	54.0	254	02.5	262	20.8
11	331	12.9	317	36.1	81	55.2	269	04.6	277	23.1
12	346	15.4	332	38.7	96	56.4	284	06.7	292	25.4
13	1	17.8	347	41.3	111	57.7	299	08.9	307	27.6
14	16	20.3	2	43.8	126	58.9	314	11.0	322	29.9
15	31	22.8	17	46.4	142	00.1	329	13.1	337	32.2
16	46	25.2	32	49.0	157	01.4	344	15.3	352	34.5
17	61	27.7	47	51.5	172	02.6	359	17.4	7	36.8
18	76	30.2	62	54.1	187	03.8	14	19.5	22	39.0
19	91	32.6	77	56.7	202	05.1	29	21.6	37	41.3
20	106	35.1	92	59.3	217	06.3	44	23.8	52	43.6
21	121	37.5	108	01.9	232	07.5	59	25.9	67	45.9
22	136	40.0	123	04.5	247	08.7	74	28.0	82	48.2
23	151	42.5	138	07.1	262	10.0	89	30.2	97	50.4
24	166	44.9	153	09.7	277	11.2	104	32.3	112	52.7
Dif	—		+26	+4	+12	-2	+21	+1	+23	+1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 13 ^d 7 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'6											
	PMG: 12 ^h 10 ^m 5		SD: 16:6		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	177	20.5	-4 33.4	5	12.0	+12 17.5	60 N	17 47	18 29	19 17	17 19 96		7 11 13	
1	192	20.7		19	38.2	+12 05.0 ¹²⁵	58	49	28	14	24 93		7 05 16	
2	207	20.9		34	04.5	+11 52.4 ¹²⁶	56	51	28	11	28 90		6 59 19	
3	222	21.0		48	30.8	39.8 ¹²⁶	54	53	28	09	32 87		55 22	
4	237	21.2		62	57.2	27.1 ¹²⁷	52	54	28	07	35 85		50 24	
5	252	21.3	-4 28.5	77	23.7	+11 14.3 ¹²⁸	50	17 55	18 27	19 05	17 39 82		6 46 26	
6	267	21.5	-4 27.5	91	50.2	+11 01.5 ¹²⁸	45	17 58	18 27	19 01	17 45 78		6 37 31	
7	282	21.7		106	16.8	+10 48.6 ¹²⁹	40	18 00	27	18 59	51 74		30 35	
8	297	21.8		120	43.4	35.6 ¹³⁰	35	03	28	57	17 56 70		24 37	
9	312	22.0		135	10.2	22.6 ¹³⁰	30	04	28	56	18 00 68		18 41	
10	327	22.1		149	37.0	+10 09.5 ¹³¹	20	08	30	55	08 62		08 46	
11	342	22.3	-4 22.7	164	03.8	+9 56.4 ¹³¹	10 N	18 11	18 32	18 56	18 14 58		6 00 50	
12	357	22.4	-4 21.7	178	30.7	+9 43.1 ¹³³	0	18 14	18 34	18 59	18 21 53		5 52 54	
13	12	22.6		192	57.7	29.9 ¹³²	10 S	17	38	19 02	27 48		43 59	
14	27	22.8		207	24.7	16.6 ¹³³	20	20	42	08	33 44		35 63	
15	42	22.9		221	51.8	+9 03.2 ¹³⁴	30	24	48	16	41 39		24 69	
16	57	23.1		236	19.0	+8 49.8 ¹³⁴	35	26	52	22	45 36		18 72	
17	72	23.2	-4 16.8	250	46.2	+8 36.3 ¹³⁵	40	18 29	18 56	19 29	18 50 32		5 12 74	
18	87	23.4	-4 15.8	265	13.5	+8 22.8 ¹³⁵	45	18 32	19 02	19 37	18 55 29		5 04 79	
19	102	23.6		279	40.9	+8 09.2 ¹³⁶	50	36	09	48	19 02 24		4 54 84	
20	117	23.7		294	08.3	+7 55.6 ¹³⁶	52	38	12	53	05 22		50 86	
21	132	23.9		308	35.7	42.0 ¹³⁶	54	40	16	19 59	08 20		45 88	
22	147	24.0		323	03.3	28.3 ¹³⁷	56	42	20	20 06	12 17		39 92	
23	162	24.2		337	30.9	14.6 ¹³⁷	58	44	24	14	16 14		33 95	
24	177	24.4	-4 09.9	351	58.5	+7 00.8 ¹³⁸	60 S	18 47	19 29	20 22	19 20 12		4 26 99	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG 12 ^h 50 ^m 9		Mag: -4.7 PMG: 13 ^h 45 ^m		Mag: +0.3 PMG: 5 ^h 31 ^m		Mag: -2.3 PMG: 16 ^h 59 ^m			Mag: +0.2 PMG: 16 ^h 26 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	166	44.9	153	09.7	+13 27.7	277	11.2	-21 20.7	104	32.3	+20 25.8	112	52.7	+17 21.1
1	181	47.4	168	12.3	28.0	292	12.4	20.9	119	34.4	25.9	127	55.0	21.2
2	196	49.9	183	14.9	28.4	307	13.7	21.1	134	36.5	25.9	142	57.3	21.2
3	211	52.3	198	17.5	28.7	322	14.9	21.3	149	38.7	26.0	157	59.5	21.3
4	226	54.8	213	20.2	29.0	337	16.1	21.5	164	40.8	26.1	173	01.8	21.3
5	241	57.3	228	22.8	+13 29.4	352	17.4	-21 21.7	179	42.9	+20 26.1	188	04.1	+17 21.4
6	256	59.7	243	25.4	+13 29.7	7	18.6	-21 21.9	194	45.1	+20 26.2	203	06.4	+17 21.4
7	272	02.2	258	28.0	30.0	22	19.8	22.1	209	47.2	26.3	218	08.6	21.5
8	287	04.7	273	30.7	30.3	37	21.1	22.3	224	49.3	26.3	233	10.9	21.5
9	302	07.1	288	33.3	30.6	52	22.3	22.5	239	51.4	26.4	248	13.2	21.6
10	317	09.6	303	35.9	31.0	67	23.5	22.7	254	53.6	26.5	263	15.5	21.6
11	332	12.0	318	38.6	+13 31.3	82	24.8	-21 22.9	269	55.7	+20 26.5	278	17.8	+17 21.7
12	347	14.5	333	41.2	+13 31.6	97	26.0	-21 23.1	284	57.8	+20 26.6	293	20.0	+17 21.7
13	2	17.0	348	43.9	31.9	112	27.3	23.3	299	59.9	26.7	308	22.3	21.8
14	17	19.4	3	46.6	32.2	127	28.5	23.5	315	02.1	26.7	323	24.6	21.9
15	32	21.9	18	49.2	32.5	142	29.7	23.7	330	04.2	26.8	338	26.9	21.9
16	47	24.4	33	51.9	32.8	157	31.0	23.9	345	06.3	26.9	353	29.1	22.0
17	62	26.8	48	54.5	+13 33.1	172	32.2	-21 24.1	0	08.4	+20 26.9	8	31.4	+17 22.0
18	77	29.3	63	57.2	+13 33.4	187	33.4	-21 24.3	15	10.6	+20 27.0	23	33.7	+17 22.1
19	92	31.8	78	59.9	33.7	202	34.7	24.5	30	12.7	27.1	38	36.0	22.1
20	107	34.2	94	02.6	34.0	217	35.9	24.6	45	14.8	27.1	53	38.2	22.2
21	122	36.7	109	05.3	34.3	232	37.2	24.8	60	16.9	27.2	68	40.5	22.2
22	137	39.2	124	08.0	34.6	247	38.4	25.0	75	19.1	27.3	83	42.8	22.3
23	152	41.6	139	10.6	34.9	262	39.6	25.2	90	21.2	27.4	98	45.0	22.3
24	167	44.1	154	13.3	+13 35.2	277	40.9	-21 25.4	105	23.3	+20 27.4	113	47.3	+17 22.4
Dif	—		+27		+3	+12		-2	+21		+1	+23		+

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 14 ^d 7 PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'1													
	PMG: 12 ^h 10 ^m 2			SD: 16'5 PMG: 0 ^h 33 ^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	177	24.4	-4	09.9	351	58.5	+7	00.8	60 N	5	02	5	51	6	32	18	55
1	192	24.5		09.0	6	26.2	87	+6	47.1 ¹³⁷	58	05	51	30		57	90	
2	207	24.7		08.0	20	54.0	88		33.2 ¹³⁹	56	08	52	28		58	88	
3	222	24.9		07.0	35	21.8	88		19.4 ¹³⁸	54	11	52	27		18	59	
4	237	25.0		06.0	49	49.6	88	+6	05.5 ¹³⁹	52	13	52	26		19	00	
5	252	25.2	-4	05.0	64	17.6	90	+5	51.6 ¹³⁹	50	5	52	6	25	19	01	
6	267	25.3	-4	04.1	78	45.5	89	+5	37.7 ¹³⁹	45	5	53	6	22	19	03	
7	282	25.5		03.1	93	13.6	91		23.7 ¹⁴⁰	40	21	53	20		05	71	
8	297	25.7		02.1	107	41.7	91	+5	09.7 ¹⁴⁰	35	23	52	18		06	68	
9	312	25.8		01.1	122	09.8	91	+4	55.7 ¹⁴⁰	30	24	52	16		08	65	
10	327	26.0	-4	00.1	136	38.0	92		41.7 ¹⁴⁰	20	25	51	13		10	60	
11	342	26.1	-3	59.2	151	06.2	92	+4	27.7 ¹⁴⁰	10 N	5	49	6	10	19	12	
12	357	26.3	-3	58.2	165	34.5	93	+4	13.6 ¹⁴¹	0	5	46	6	07	19	14	
13	12	26.5		57.2	180	02.9	94	+3	59.6 ¹⁴⁰	10 S	18	43	04		15	47	
14	27	26.6		56.2	194	31.3	94		45.5 ¹⁴¹	20	13	39	6	01	17	43	
15	42	26.8		55.2	208	59.7	94		31.4 ¹⁴¹	30	5	33	5	57	20	37	
16	57	27.0		54.3	223	28.2	95		17.3 ¹⁴¹	35	4	29	55		21	34	
17	72	27.1	-3	53.3	237	56.7	95	+3	03.2 ¹⁴¹	40	4	25	5	52	19	22	
18	87	27.3	-3	52.3	252	25.3	96	+2	49.1 ¹⁴¹	45	4	20	5	49	19	24	
19	102	27.5		51.3	266	53.9	96		35.0 ¹⁴¹	50	34	13	46		26	23	
20	117	27.6		50.3	281	22.6	97		20.9 ¹⁴¹	52	28	10	44		27	21	
21	132	27.8		49.4	295	51.3	97	+2	06.8 ¹⁴¹	54	23	06	42		28	19	
22	147	27.9		48.4	310	20.1	98	+1	52.7 ¹⁴¹	56	16	5	40		29	17	
23	162	28.1		47.4	324	48.9	98		38.6 ¹⁴¹	58	4	58	38		30	14	
24	177	28.3	-3	46.4	339	17.7	98	+1	24.5 ¹⁴¹	60 S	3	59	4	35	19	32	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 47 ^m 0		Mag: -4.7 PMG: 13 ^h 41 ^m			Mag: +0.3 PMG: 5 ^h 29 ^m			Mag: -2.3 PMG: 16 ^h 56 ^m			Mag: +0.2 PMG: 16 ^h 22 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°			
0	167	44.1	154	13.3	+13	35.2	277	40.9	-21	25.4	105	23.3	+20	27.4			
1	182	46.5	169	16.0		35.5	292	42.1		25.6	120	25.4		27.5			
2	197	49.0	184	18.7		35.8	307	43.3		25.8	135	27.6		27.6			
3	212	51.5	199	21.5		36.0	322	44.6		26.0	150	29.7		27.6			
4	227	53.9	214	24.2		36.3	337	45.8		26.2	165	31.8		27.7			
5	242	56.4	229	26.9	+13	36.6	352	47.1	-21	26.4	180	33.9	+20	27.8			
6	257	58.9	244	29.6	+13	36.9	7	48.3	-21	26.6	195	36.0	+20	27.8			
7	273	01.3	259	32.3		37.2	22	49.6		26.8	210	38.2		27.9			
8	288	03.8	274	35.0		37.4	37	50.8		27.0	225	40.3		28.0			
9	303	06.3	289	37.8		37.7	52	52.0		27.2	240	42.4		28.0			
10	318	08.7	304	40.5		38.0	67	53.3		27.4	255	44.5		28.1			
11	333	11.2	319	43.2	+13	38.2	82	54.5	-21	27.6	270	46.6	+20	28.2			
12	348	13.6	334	46.0	+13	38.5	97	55.8	-21	27.7	285	48.8	+20	28.2			
13	3	16.1	349	48.7		38.7	112	57.0		27.9	300	50.9		28.3			
14	18	18.6	4	51.5		39.0	127	58.3		28.1	315	53.0		28.4			
15	33	21.0	19	54.2		39.3	142	59.5		28.3	330	55.1		28.5			
16	48	23.5	34	57.0		39.5	158	00.7		28.5	345	57.2		28.5			
17	63	26.0	49	59.8	+13	39.8	173	02.0	-21	28.7	0	59.4	+20	28.6			
18	78	28.4	65	02.5	+13	40.0	188	03.2	-21	28.9	16	01.5	+20	28.7			
19	93	30.9	80	05.3		40.3	203	04.5		29.1	31	03.6		28.7			
20	108	33.4	95	08.1		40.5	218	05.7		29.3	46	05.7		28.8			
21	123	35.8	110	10.8		40.7	233	07.0		29.5	61	07.8		28.9			
22	138	38.3	125	13.6		41.0	248	08.2		29.7	76	10.0		28.9			
23	153	40.8	140	16.4		41.2	263	09.5		29.9	91	12.1		29.0			
24	168	43.2	155	19.2	+13	41.5	278	10.7	-21	30.0	106	14.2	+20	29.1			
Dif	—		+27		+3		+12		-2		+21		+1		+23		+

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 10 ^m 0		Edad: 15 ^d 7 PHE { SD: 16 ^h 3 PMG: 1 ^h 26 ^m R°: 51 ^m 4 ^h : 59 ^m 8 12 ^h : 59 ^m 6 20 ^h : 59 ^m 3												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	28.3	-3	46.4	339	17.7	+1 24.5	60 N	17 52	18 34	19 23	20 29	91	7 35	10
1	192	28.4		45.4	353	46.6 ⁹⁹	+1 10.4 ¹⁴¹	58	54	33	19	27	88	35	14
2	207	28.6		44.5	8	15.5 ⁹⁹	+0 56.3 ¹⁴¹	56	55	32	16	26	84	35	17
3	222	28.8		43.5	22	44.5 ¹⁰⁰	42.2 ¹⁴¹	54	56	32	13	24	82	35	19
4	237	28.9		42.5	37	13.5 ¹⁰⁰	28.2 ¹⁴⁰	52	57	31	10	23	80	36	21
5	252	29.1	-3	41.5	51	42.6 ¹⁰¹	+0 14.1 ¹⁴¹	50	17 58	18 31	19 08	20 21	78	7 36	23
6	267	29.3	-3	40.5	66	11.6 ¹⁰⁰	+0 00.1 ¹⁴⁰	45	18 01	18 30	19 04	20 19	73	7 36	27
7	282	29.4		39.5	80	40.8 ¹⁰²	-0 14.0 ¹⁴¹	40	03	30	19 01	16	70	36	31
8	297	29.6		38.6	95	09.9 ¹⁰¹	28.0 ¹⁴⁰	35	04	29	18 59	14	66	37	34
9	312	29.8		37.6	109	39.1 ¹⁰²	42.0 ¹⁴⁰	30	06	30	57	13	63	37	37
10	327	29.9		36.6	124	08.3 ¹⁰²	-0 55.9 ¹³⁹	20	08	30	56	10	58	37	42
11	342	30.1	-3	35.6	138	37.6 ¹⁰³	-1 09.9 ¹⁴⁰	10 N	18 11	18 32	18 56	20 07	54	7 38	46
12	357	30.3	-3	34.6	153	06.9 ¹⁰³	-1 23.8 ¹³⁹	0	18 13	18 34	18 58	20 05	50	7 38	50
13	12	30.4		33.7	167	36.2 ¹⁰³	37.7 ¹³⁹	10 S	16	37	19 01	02	46	38	55
14	27	30.6		32.7	182	05.6 ¹⁰⁴	-1 51.6 ¹³⁹	20	19	41	06	20 00	41	38	60
15	42	30.8		31.7	196	35.0 ¹⁰⁴	-2 05.4 ¹³⁸	30	22	46	14	19 57	37	39	64
16	57	30.9		30.7	211	04.4 ¹⁰⁴	19.3 ¹³⁹	35	24	49	19	55	35	39	67
17	72	31.1	-3	29.7	225	33.8 ¹⁰⁴	-2 33.1 ¹³⁸	40	18 26	18 53	19 25	19 54	31	7 39	71
18	87	31.3	-3	28.7	240	03.3 ¹⁰⁵	-2 46.8 ¹³⁷	45	18 29	18 58	19 33	19 52	27	7 39	75
19	102	31.4		27.8	254	32.8 ¹⁰⁵	-3 00.6 ¹³⁸	50	32	19 04	43	49	23	39	80
20	117	31.6		26.8	269	02.3 ¹⁰⁵	14.3 ¹³⁷	52	33	07	48	48	21	40	81
21	132	31.8		25.8	283	31.9 ¹⁰⁶	27.9 ¹³⁶	54	35	11	19 54	47	19	40	83
22	147	31.9		24.8	298	01.5 ¹⁰⁶	41.6 ¹³⁷	56	37	14	20 00	46	16	40	86
23	162	32.1		23.8	312	31.1 ¹⁰⁶	-3 55.2 ¹³⁶	58	39	18	07	44	14	40	89
24	177	32.3	-3	22.8	327	00.7 ¹⁰⁶	-4 08.7 ¹³⁵	60 S	18 41	19 23	20 15	19 42	11	7 40	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 43 ^m 0		Mag: -4.7 PMG: 13 ^h 36 ^m		Mag: +0.3 PMG: 5 ^h 27 ^m		Mag: -2.3 PMG: 16 ^h 53 ^m		Mag: +0.2 PMG: 16 ^h 19 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	168	43.2	155	19.2	+13	41.5	278	10.7	-21	30.0	106	14.2	+20	29.1	114	41.8	+17	23.7
1	183	45.7	170	22.0		41.7	293	12.0		30.2	121	16.3		29.1	129	44.1		23.8
2	198	48.1	185	24.8		41.9	308	13.2		30.4	136	18.4		29.2	144	46.4		23.8
3	213	50.6	200	27.6		42.1	323	14.5		30.6	151	20.5		29.3	159	48.7		23.9
4	228	53.1	215	30.4		42.4	338	15.7		30.8	166	22.6		29.4	174	50.9		23.9
5	243	55.5	230	33.2	+13	42.6	353	17.0	-21	31.0	181	24.8	+20	29.4	189	53.2	+17	24.0
6	258	58.0	245	36.0	+13	42.8	8	18.2	-21	31.2	196	26.9	+20	29.5	204	55.5	+17	24.0
7	274	00.5	260	38.8		43.0	23	19.5		31.4	211	29.0		29.6	219	57.7		24.1
8	289	02.9	275	41.6		43.3	38	20.7		31.6	226	31.1		29.6	235	00.0		24.1
9	304	05.4	290	44.5		43.5	53	22.0		31.8	241	33.2		29.7	250	02.3		24.2
10	319	07.9	305	47.3		43.7	68	23.2		31.9	256	35.3		29.8	265	04.5		24.3
11	334	10.3	320	50.1	+13	43.9	83	24.5	-21	32.1	271	37.5	+20	29.8	280	06.8	+17	24.3
12	349	12.8	335	52.9	+13	44.1	98	25.7	-21	32.3	286	39.6	+20	29.9	295	09.1	+17	24.4
13	4	15.2	350	55.8		44.3	113	27.0		32.5	301	41.7		30.0	310	11.3		24.4
14	19	17.7	5	58.6		44.5	128	28.2		32.7	316	43.8		30.0	325	13.6		24.5
15	34	20.2	21	01.5		44.7	143	29.5		32.9	331	45.9		30.1	340	15.9		24.5
16	49	22.6	36	04.3		44.9	158	30.7		33.1	346	48.0		30.2	355	18.2		24.6
17	64	25.1	51	07.2	+13	45.1	173	32.0	-21	33.3	1	50.1	+20	30.3	10	20.4	+17	24.6
18	79	27.6	66	10.0	+13	45.3	188	33.2	-21	33.4	16	52.2	+20	30.3	25	22.7	+17	24.7
19	94	30.0	81	12.9		45.5	203	34.5		33.6	31	54.4		30.4	40	25.0		24.7
20	109	32.5	96	15.8		45.7	218	35.7		33.8	46	56.5		30.5	55	27.2		24.8
21	124	35.0	111	18.6		45.9	233	37.0		34.0	61	58.6		30.5	70	29.5		24.9
22	139	37.4	126	21.5		46.1	248	38.2		34.2	77	00.7		30.6	85	31.8		24.9
23	154	39.9	141	24.4		46.2	263	39.5		34.4	92	02.8		30.7	100	34.0		25.0
24	169	42.4	156	27.3	+13	46.4	278	40.7	-21	34.6	107	04.9	+20	30.7	115	36.3	+17	25.0
Dif	—		+28		+2		+13		-2		+21		+1		+23		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 7 PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 7 20 ^h : 58 ^m 4												
	PMG: 12 ^h 09 ^m 7			SD: 16 ^h 1 PMG: 2 ^h 17 ^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	177	32.3	-3 22.8	327	00.7	-4 08.7		60 N	4 56	5 45	6 26	22 00	89	7 45	12	
1	192	32.4		341	30.4 ¹⁰⁷	22.2 ¹³⁵		58	5 00	46	24	21 55	85	49	14	
2	207	32.6		356	00.1 ¹⁰⁷	35.7 ¹³⁵		56	03	46	23	50 83		52	17	
3	222	32.8		10	29.8 ¹⁰⁷	-4 49.1 ¹³⁴		54	06	47	22	46 80		54	20	
4	237	32.9		24	59.5 ¹⁰⁷	-5 02.5 ¹³⁴		52	08	48	21	43 77		57	21	
5	252	33.1	-3 17.9	39	29.2 ¹⁰⁷	-5 15.9 ¹³⁴		50	5 11	5 48	6 20	21 39	75	7 59	23	
6	267	33.3	-3 16.9	53	59.0 ¹⁰⁸	-5 29.2 ¹³³		45	5 15	5 49	6 18	21 32	70	8 03	28	
7	282	33.4		68	28.8 ¹⁰⁸	42.4 ¹³²		40	18	49	16	26 67		07	32	
8	297	33.6		82	58.6 ¹⁰⁸	-5 55.6 ¹³²		35	20	50	15	20 65		11	34	
9	312	33.8		97	28.4 ¹⁰⁸	-6 08.8 ¹³²		30	22	50	14	16 61		14	37	
10	327	33.9		111	58.2 ¹⁰⁸	21.9 ¹³¹		20	23	49	11	08 57		19	42	
11	342	34.1	-3 12.0	126	28.1 ¹⁰⁹	-6 34.9 ¹³⁰		10 N	5 23	5 48	6 09	21 01	53	8 24	46	
12	357	34.3	-3 11.0	140	58.0 ¹⁰⁹	-6 47.9 ¹³⁰		0	5 22	5 46	6 06	20 55	49	8 28	50	
13	12	34.4		155	27.8 ¹⁰⁸	-7 00.9 ¹³⁰		10 S	19	43	04	48 46		33	53	
14	27	34.6		169	57.7 ¹⁰⁹	13.8 ¹²⁹		20	14	39	6 01	41 43		38	57	
15	42	34.8		184	27.6 ¹⁰⁹	26.6 ¹²⁸		30	06	34	5 58	34 38		43	62	
16	57	35.0		198	57.6 ¹¹⁰	39.4 ¹²⁸		35	5 01	31	56	30 35		46	65	
17	72	35.1	-3 06.1	213	27.5 ¹⁰⁹	-7 52.1 ¹²⁷		40	4 55	5 27	5 54	20 25	32	8 50	68	
18	87	35.3	-3 05.1	227	57.5 ¹¹⁰	-8 04.8 ¹²⁷		45	4 47	5 22	5 52	20 19	29	8 54	72	
19	102	35.5		242	27.4 ¹⁰⁹	17.4 ¹²⁶		50	37	16	49	12 25		8 59	76	
20	117	35.6		256	57.4 ¹¹⁰	29.9 ¹²⁵		52	32	13	47	09 23		9 01	79	
21	132	35.8		271	27.4 ¹¹⁰	42.4 ¹²⁵		54	27	10	46	06 20		03	81	
22	147	36.0		285	57.4 ¹¹⁰	-8 54.8 ¹²⁴		56	21	07	44	20 02	18	06	84	
23	162	36.1	-3 00.2	300	27.4 ¹¹⁰	-9 07.2 ¹²⁴		58	14	5 02	42	19 58	15	09	87	
24	177	36.3	-2 59.2	314	57.4 ¹¹⁰	-9 19.4 ¹²²		60 S	4 05	4 58	5 40	19 53	13	9 13	89	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 12 ^h 39 ^m 1		Mag: -4.7 PMG: 13 ^h 32 ^m			Mag: +0.3 PMG: 5 ^h 25 ^m			Mag: -2.3 PMG: 16 ^h 49 ^m			Mag: +0.2 PMG: 16 ^h 15 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	169	42.4	156 27.3	+13 46.4	278 40.7	-21 34.6	107 04.9	+20 30.7	115 36.3	+17 25.0					
1	184	44.8	171 30.1	46.6	293 42.0	34.8	122 07.0	30.8	130 38.6	25.1					
2	199	47.3	186 33.0	46.8	308 43.3	34.9	137 09.1	30.9	145 40.8	25.1					
3	214	49.7	201 35.9	46.9	323 44.5	35.1	152 11.2	31.0	160 43.1	25.2					
4	229	52.2	216 38.8	47.1	338 45.8	35.3	167 13.3	31.0	175 45.4	25.2					
5	244	54.7	231 41.7	+13 47.3	353 47.0	-21 35.5	182 15.5	+20 31.1	190 47.6	+17 25.3					
6	259	57.1	246 44.6	+13 47.5	8 48.3	-21 35.7	197 17.6	+20 31.2	205 49.9	+17 25.4					
7	274	59.6	261 47.5	47.6	23 49.5	35.9	212 19.7	31.2	220 52.1	25.4					
8	290	02.1	276 50.4	47.8	38 50.8	36.1	227 21.8	31.3	235 54.4	25.5					
9	305	04.5	291 53.3	47.9	53 52.1	36.2	242 23.9	31.4	250 56.7	25.5					
10	320	07.0	306 56.3	48.1	68 53.3	36.4	257 26.0	31.4	265 58.9	25.6					
11	335	09.5	321 59.2	+13 48.3	83 54.6	-21 36.6	272 28.1	+20 31.5	281 01.2	+17 25.6					
12	350	11.9	337 02.1	+13 48.4	98 55.8	-21 36.8	287 30.2	+20 31.6	296 03.5	+17 25.7					
13	5 14.4	352 05.0	48.6	113 57.1	37.0	302 32.3	31.7	311 05.7	25.7						
14	20 16.8	7 08.0	48.7	128 58.4	37.2	317 34.4	31.7	326 08.0	25.8						
15	35 19.3	22 10.9	48.8	143 59.6	37.3	332 36.5	31.8	341 10.3	25.9						
16	50 21.8	37 13.8	49.0	159 00.9	37.5	347 38.6	31.9	356 12.5	25.9						
17	65 24.2	52 16.8	+13 49.1	174 02.1	-21 37.7	2 40.7	+20 31.9	11 14.8	+17 26.0						
18	80 26.7	67 19.7	+13 49.3	189 03.4	-21 37.9	17 42.9	+20 32.0	26 17.1	+17 26.0						
19	95 29.2	82 22.7	49.4	204 04.7	38.1	32 45.0	32.1	41 19.3	26.1						
20	110 31.6	97 25.6	49.5	219 05.9	38.3	47 47.1	32.2	56 21.6	26.1						
21	125 34.1	112 28.6	49.7	234 07.2	38.5	62 49.2	32.2	71 23.9	26.2						
22	140 36.6	127 31.6	49.8	249 08.4	38.6	77 51.3	32.3	86 26.1	26.2						
23	155 39.0	142 34.5	49.9	264 09.7	38.8	92 53.4	32.4	101 28.4	26.3						
24	170 41.5	157 37.5	+13 50.1	279 11.0	-21 39.0	107 55.5	+20 32.4	116 30.6	+17 26.4						
Dif	—		+29	+2	+13		-2	+21		+1	+23		+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 17 ^d 7 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 5										
	PMG: 12 ^h 09 ^m 4			SD: 15 ^h 9 PMG: 3 ^h 06 ^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
0	177	36.3	-2 59.2	314	57.4	-9 19.4		60 N	17 57	18 39	19 28	23 29 85	7 57 14	
1	192	36.5	58.3	329	27.4 ¹¹⁰	31.7 ¹²³		58	58	38	24	20 81	8 03 17	
2	207	36.7	57.3	343	57.4 ¹¹⁰	43.8 ¹²¹		56	17 59	36	20	13 78	09 19	
3	222	36.8	56.3	358	27.5 ¹¹¹	-9 55.9 ¹²¹		54	18 00	35	17	06 76	14 22	
4	237	37.0	55.3	12	57.5 ¹¹⁰	-10 07.9 ¹²⁰		52	01	35	14	23 00 73	18 24	
5	252	37.2	-2 54.3	27	27.6 ¹¹¹	-10 19.9 ¹²⁰		50	18 02	18 34	19 12	22 54 72	8 22 26	
6	267	37.3	-2 53.3	41	57.6 ¹¹⁰	-10 31.7 ¹¹⁸		45	18 03	18 33	19 07	22 42 68	8 31 30	
7	282	37.5	52.3	56	27.7 ¹¹¹	43.6 ¹¹⁹		40	05	32	03	33 65	39 33	
8	297	37.7	51.4	70	57.7 ¹¹⁰	-10 55.3 ¹¹⁷		35	06	31	19 01	25 62	45 37	
9	312	37.9	50.4	85	27.8 ¹¹¹	-11 06.9 ¹¹⁶		30	07	31	18 59	17 60	8 51 39	
10	327	38.0	49.4	99	57.8 ¹¹⁰	18.5 ¹¹⁶		20	09	31	57	22 05 56	9 01 43	
11	342	38.2	-2 48.4	114	27.9 ¹¹¹	-11 30.0 ¹¹⁵		10 N	18 11	18 32	18 56	21 54 53	9 10 46	
12	357	38.4	-2 47.4	128	58.0 ¹¹¹	-11 41.5 ¹¹⁵		0	18 13	18 33	18 57	21 44 50	9 18 50	
13	12	38.5	46.4	143	28.1 ¹¹¹	-11 52.8 ¹¹³		10 S	15	36	19 00	34 47	26 53	
14	27	38.7	45.5	157	58.1 ¹¹⁰	-12 04.1 ¹¹³		20	17	39	05	24 43	35 57	
15	42	38.9	44.5	172	28.2 ¹¹¹	15.3 ¹¹²		30	19	43	11	12 39	45 61	
16	57	39.1	43.5	186	58.3 ¹¹¹	26.4 ¹¹¹		35	21	46	16	21 05 37	51 64	
17	72	39.2	-2 42.5	201	28.4 ¹¹¹	-12 37.5 ¹¹¹		40	18 23	18 50	19 22	20 57 34	9 58 66	
18	87	39.4	-2 41.5	215	58.4 ¹¹⁰	-12 48.5 ¹¹⁰		45	18 25	18 54	19 29	20 48 31	10 06 69	
19	102	39.6	40.5	230	28.5 ¹¹¹	-12 59.3 ¹⁰⁸		50	27	19 00	39	37 27	15 74	
20	117	39.7	39.5	244	58.6 ¹¹¹	-13 10.1 ¹⁰⁸		52	29	02	43	32 26	20 75	
21	132	39.9	38.6	259	28.7 ¹¹¹	20.9 ¹⁰⁸		54	30	05	48	26 24	24 78	
22	147	40.1	37.6	273	58.7 ¹¹⁰	31.5 ¹⁰⁶		56	31	09	19 54	20 22	30 80	
23	162	40.3	36.6	288	28.8 ¹¹¹	42.0 ¹⁰⁵		58	33	13	20 01	13 19	36 83	
24	177	40.4	-2 35.6	302	58.9 ¹¹¹	-13 52.5 ¹⁰⁵		60 S	18 35	19 17	20 08	20 06 15	10 42 87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 35 ^m 2		Mag: -4.6 PMG: 13 ^h 27 ^m			Mag: +0.3 PMG: 5 ^h 23 ^m			Mag: -2.3 PMG: 16 ^h 46 ^m			Mag: +0.2 PMG: 16 ^h 12 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	170	41.5	157	37.5	+13 50.1	279	11.0	-21 39.0	107	55.5	+20 32.4	116	30.6	+17 26.4
1	185	44.0	172	40.5	50.2	294	12.2	39.2	122	57.6	32.5	131	32.9	26.4
2	200	46.4	187	43.5	50.3	309	13.5	39.4	137	59.7	32.6	146	35.2	26.5
3	215	48.9	202	46.4	50.4	324	14.8	39.5	153	01.8	32.6	161	37.4	26.5
4	230	51.3	217	49.4	50.5	339	16.0	39.7	168	03.9	32.7	176	39.7	26.6
5	245	53.8	232	52.4	+13 50.6	354	17.3	-21 39.9	183	06.0	+20 32.8	191	42.0	+17 26.6
6	260	56.3	247	55.4	+13 50.7	9	18.6	-21 40.1	198	08.1	+20 32.9	206	44.2	+17 26.7
7	275	58.7	262	58.4	50.9	24	19.8	40.3	213	10.2	32.9	221	46.5	26.8
8	291	01.2	278	01.4	51.0	39	21.1	40.5	228	12.3	33.0	236	48.7	26.8
9	306	03.7	293	04.4	51.1	54	22.4	40.6	243	14.4	33.1	251	51.0	26.9
10	321	06.1	308	07.4	51.2	69	23.6	40.8	258	16.5	33.1	266	53.3	26.9
11	336	08.6	323	10.4	+13 51.3	84	24.9	-21 41.0	273	18.6	+20 33.2	281	55.5	+17 27.0
12	351	11.1	338	13.5	+13 51.4	99	26.2	-21 41.2	288	20.7	+20 33.3	296	57.8	+17 27.0
13	6	13.5	353	16.5	51.4	114	27.4	41.4	303	22.8	33.4	312	00.0	27.1
14	21	16.0	8	19.5	51.5	129	28.7	41.5	318	24.9	33.4	327	02.3	27.1
15	36	18.4	23	22.5	51.6	144	30.0	41.7	333	27.0	33.5	342	04.6	27.2
16	51	20.9	38	25.6	51.7	159	31.2	41.9	348	29.1	33.6	357	06.8	27.3
17	66	23.4	53	28.6	+13 51.8	174	32.5	-21 42.1	3	31.2	+20 33.6	12	09.1	+17 27.3
18	81	25.8	68	31.6	+13 51.9	189	33.8	-21 42.3	18	33.3	+20 33.7	27	11.3	+17 27.4
19	96	28.3	83	34.7	51.9	204	35.0	42.4	33	35.4	33.8	42	13.6	27.4
20	111	30.8	98	37.7	52.0	219	36.3	42.6	48	37.5	33.9	57	15.9	27.5
21	126	33.2	113	40.8	52.1	234	37.6	42.8	63	39.6	33.9	72	18.1	27.5
22	141	35.7	128	43.8	52.2	249	38.9	43.0	78	41.7	34.0	87	20.4	27.6
23	156	38.2	143	46.9	52.2	264	40.1	43.2	93	43.8	34.1	102	22.6	27.7
24	171	40.6	158	49.9	+13 52.3	279	41.4	-21 43.3	108	45.9	+20 34.1	117	24.9	+17 27.7
Dif	—		+30	+1		+13	-2		+21	+1		+23	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 18 ^d 7 PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6											
	PMG: 12 ^h 09 ^m 2			SD: 15 ^h 6 PMG: 3 ^h 56 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	40.4	-2	302	58.9	-13	52.5	60 N	4 50	5 39	6 20	** ** *		8 11	17
1	192	40.6		317	28.9 ¹¹⁰	-14	02.9 ¹⁰⁴	58	54	40	19	** ** *		20	21
2	207	40.8		331	59.0 ¹¹¹		13.2 ¹⁰³	56	4 58	41	18	** ** *		28	24
3	222	41.0		346	29.0 ¹¹⁰		23.4 ¹⁰²	54	5 01	42	17	** ** *		36	26
4	237	41.1		0	59.1 ¹¹¹		33.5 ¹⁰¹	52	04	43	17	** ** *		42	28
5	252	41.3	-2	15	29.1 ¹¹⁰	-14	43.5 ¹⁰⁰	50	5 06	5 44	6 16	** ** *		8 48	30
6	267	41.5	-2	29	59.2 ¹¹¹	-14	53.5 ¹⁰⁰	45	5 11	5 45	6 14	23 50 65		9 01	34
7	282	41.7		44	29.2 ¹¹⁰	-15	03.3 ⁹⁸	40	15	46	13	38 61		12	36
8	297	41.8		58	59.3 ¹¹¹		13.1 ⁹⁸	35	18	47	12	27 59		22	38
9	312	42.0		73	29.3 ¹¹⁰		22.8 ⁹⁷	30	20	47	11	17 58		30	40
10	327	42.2		87	59.3 ¹¹⁰		32.3 ⁹⁵	20	22	47	09	23 01 55		44	44
11	342	42.3	-2	102	29.3 ¹¹⁰	-15	41.8 ⁹⁵	10 N	5 22	5 47	6 08	22 47 52		9 56	47
12	357	42.5	-2	116	59.4 ¹¹¹	-15	51.2 ⁹⁴	0	5 21	5 45	6 06	22 34 50		10 08	50
13	12	42.7		131	29.4 ¹¹⁰	-16	00.5 ⁹³	10 S	19	43	04	21 47		19	53
14	27	42.9		145	59.4 ¹¹⁰		09.7 ⁹²	20	14	40	02	22 07 45		32	55
15	42	43.0		160	29.4 ¹¹⁰		18.9 ⁹²	30	08	36	6 00	21 51 42		46	59
16	57	43.2		174	59.4 ¹¹⁰		27.9 ⁹⁰	35	5 03	33	5 58	42 40		10 55	61
17	72	43.4	-2	189	29.4 ¹¹⁰	-16	36.8 ⁸⁹	40	4 57	5 29	5 56	21 31 38		11 04	63
18	87	43.6	-2	203	59.3 ¹⁰⁹	-16	45.6 ⁸⁸	45	4 50	5 25	5 55	21 19 35		11 15	67
19	102	43.7		218	29.3 ¹¹⁰	-16	54.4 ⁸⁸	50	41	20	52	21 04 32		29	70
20	117	43.9		232	59.3 ¹¹⁰	-17	03.0 ⁸⁶	52	36	17	51	20 58 30		35	72
21	132	44.1		247	29.2 ¹⁰⁹		11.5 ⁸⁵	54	31	14	50	50 29		42	74
22	147	44.3		261	59.2 ¹¹⁰		20.0 ⁸⁵	56	25	11	48	42 26		50	76
23	162	44.4		276	29.1 ¹⁰⁹		28.3 ⁸³	58	19	07	47	32 24		11 59	79
24	177	44.6	-2	290	59.1 ¹¹⁰	-17	36.6 ⁸³	60 S	4 11	5 03	5 45	20 21 21		12 09	82
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 31 ^m 2			Mag: -4.6 PMG: 13 ^h 22 ^m			Mag: +0.2 PMG: 5 ^h 21 ^m			Mag: -2.2 PMG: 16 ^h 43 ^m			Mag: +0.2 PMG: 16 ^h 08 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	171	40.6		158	49.9	+13	52.3	279	41.4	-21	43.3	108	45.9	+20	34.1
1	186	43.1		173	53.0		52.4	294	42.7		43.5	123	48.0		34.2
2	201	45.6		188	56.1		52.4	309	43.9		43.7	138	50.1		34.3
3	216	48.0		203	59.1		52.5	324	45.2		43.9	153	52.2		34.3
4	231	50.5		219	02.2		52.5	339	46.5		44.1	168	54.3		34.4
5	246	52.9		234	05.3	+13	52.6	354	47.8	-21	44.2	183	56.4	+20	34.5
6	261	55.4		249	08.4	+13	52.6	9	49.0	-21	44.4	198	58.5	+20	34.6
7	276	57.9		264	11.5		52.7	24	50.3		44.6	214	00.6		34.6
8	292	00.3		279	14.6		52.7	39	51.6		44.8	229	02.7		34.7
9	307	02.8		294	17.7		52.8	54	52.9		44.9	244	04.8		34.8
10	322	05.3		309	20.8		52.8	69	54.1		45.1	259	06.9		34.8
11	337	07.7		324	23.9	+13	52.9	84	55.4	-21	45.3	274	09.0	+20	34.9
12	352	10.2		339	27.0	+13	52.9	99	56.7	-21	45.5	289	11.1	+20	35.0
13	7	12.7		354	30.1		52.9	114	58.0		45.7	304	13.2		35.1
14	22	15.1		9	33.2		53.0	129	59.3		45.8	319	15.3		35.1
15	37	17.6		24	36.3		53.0	145	00.5		46.0	334	17.4		35.2
16	52	20.1		39	39.4		53.0	160	01.8		46.2	349	19.5		35.3
17	67	22.5		54	42.5	+13	53.0	175	03.1	-21	46.4	4	21.5	+20	35.4
18	82	25.0		69	45.7	+13	53.1	190	04.4	-21	46.5	19	23.6	+20	35.4
19	97	27.4		84	48.8		53.1	205	05.6		46.7	34	25.7		35.5
20	112	29.9		99	51.9		53.1	220	06.9		46.9	49	27.8		35.6
21	127	32.4		114	55.1		53.1	235	08.2		47.1	64	29.9		35.6
22	142	34.8		129	58.2		53.1	250	09.5		47.2	79	32.0		35.7
23	157	37.3		145	01.4		53.1	265	10.8		47.4	94	34.1		35.8
24	172	39.8		160	04.5	+13	53.1	280	12.0	-21	47.6	109	36.2	+20	35.9
Dif	—			+31	0			+13	-2			+21	+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 19 ^d 7 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 0 20 ^h : 55 ^m 8											
	PMG: 12 ^h 08 ^m 9			SD: 15 ^h 4 PMG: 4 ^h 46 ^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	m	h m m	m
0	177	44.6	-2 11.9	290	59.1	-17 36.6	81	60 N	18 02	18 44	19 33	0 54 78		8 28 24	
1	192	44.8		305	29.0 ¹⁰⁹	44.7	81	58	03	42	28	41 76		41 27	
2	207	45.0		319	58.9 ¹⁰⁹	-17 52.8	81	56	03	41	24	31 73		8 52 30	
3	222	45.1		334	28.8 ¹⁰⁹	-18 00.7	79	54	04	39	21	22 70		9 02 31	
4	237	45.3		348	58.7 ¹⁰⁹	08.6	79	52	04	38	18	13 69		10 34	
5	252	45.5	-2 07.0	3	28.6 ¹⁰⁹	-18 16.3	77	50	18 05	18 37	19 15	0 06 67		9 18 35	
6	267	45.7	-2 06.0	17	58.5 ¹⁰⁹	-18 23.9	76	45	18 06	18 35	19 09	** ** *		9 35 38	
7	282	45.9		32	28.4 ¹⁰⁹	31.5	76	40	07	34	05	** ** *		9 48 40	
8	297	46.0		46	58.3 ¹⁰⁹	38.9	74	35	08	33	02	** ** *		10 00 42	
9	312	46.2		61	28.2 ¹⁰⁹	46.3	74	30	08	32	19 00	** ** *		10 44	
10	327	46.4		75	58.1 ¹⁰⁹	-18 53.5	72	20	10	32	18 57	23 56 53		28 46	
11	342	46.6	-2 01.1	90	27.9 ¹⁰⁸	-19 00.6	71	10 N	18 11	18 32	18 56	23 39 52		10 43 48	
12	357	46.7	-2 00.1	104	57.8 ¹⁰⁹	-19 07.6	70	0	18 12	18 33	18 57	23 24 50		10 58 50	
13	12	46.9	-1 59.1	119	27.6 ¹⁰⁸	14.6	70	10 S	14	35	18 59	23 08 49		11 12 52	
14	27	47.1		133	57.5 ¹⁰⁹	21.4	68	20	15	37	19 03	22 52 46		27 55	
15	42	47.3		148	27.3 ¹⁰⁸	28.1	67	30	17	41	09	33 44		45 57	
16	57	47.4		162	57.1 ¹⁰⁸	34.7	66	35	18	43	13	22 43		11 56 58	
17	72	47.6	-1 55.1	177	26.9 ¹⁰⁸	-19 41.2	65	40	18 20	18 47	19 18	22 09 42		12 07 60	
18	87	47.8	-1 54.2	191	56.8 ¹⁰⁹	-19 47.6	64	45	18 21	18 50	19 25	21 54 41		12 22 61	
19	102	48.0		206	26.6 ¹⁰⁸	-19 53.9	63	50	23	55	34	36 38		39 64	
20	117	48.1		220	56.4 ¹⁰⁸	-20 00.1	62	52	24	18 58	38	28 37		47 66	
21	132	48.3		235	26.2 ¹⁰⁸	06.1	60	54	25	19 00	43	19 35		12 56 67	
22	147	48.5		249	56.0 ¹⁰⁸	12.1	60	56	26	03	48	21 08 34		13 06 70	
23	162	48.7		264	25.8 ¹⁰⁸	18.0	59	58	27	07	19 54	20 56 31		18 72	
24	177	48.9	-1 48.2	278	55.6 ¹⁰⁸	-20 23.7	57	60 S	18 29	19 11	20 02	20 42 29		13 31 75	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 27 ^m 3			Mag: -4.6 PMG: 13 ^h 17 ^m			Mag: +0.2 PMG: 5 ^h 19 ^m			Mag: -2.2 PMG: 16 ^h 39 ^m			Mag: +0.2 PMG: 16 ^h 04 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	172	39.8	160 04.5	+13 53.1		280 12.0	-21 47.6	109 36.2	+20 35.9		118 19.1	+17 29.1			
1	187	42.2	175 07.7	53.1		295 13.3	47.8	124 38.3	35.9		133 21.3	29.1			
2	202	44.7	190 10.8	53.1		310 14.6	47.9	139 40.4	36.0		148 23.6	29.2			
3	217	47.2	205 14.0	53.1		325 15.9	48.1	154 42.5	36.1		163 25.9	29.2			
4	232	49.6	220 17.1	53.1		340 17.2	48.3	169 44.6	36.1		178 28.1	29.3			
5	247	52.1	235 20.3	+13 53.1		355 18.5	-21 48.5	184 46.7	+20 36.2		193 30.4	+17 29.4			
6	262	54.5	250 23.5	+13 53.1		10 19.7	-21 48.6	199 48.7	+20 36.3		208 32.6	+17 29.4			
7	277	57.0	265 26.7	53.1		25 21.0	48.8	214 50.8	36.4		223 34.9	29.5			
8	292	59.5	280 29.8	53.1		40 22.3	49.0	229 52.9	36.4		238 37.1	29.5			
9	308	01.9	295 33.0	53.1		55 23.6	49.2	244 55.0	36.5		253 39.4	29.6			
10	323	04.4	310 36.2	53.1		70 24.9	49.3	259 57.1	36.6		268 41.6	29.7			
11	338	06.9	325 39.4	+13 53.0		85 26.2	-21 49.5	274 59.2	+20 36.6		283 43.9	+17 29.7			
12	353	09.3	340 42.6	+13 53.0		100 27.4	-21 49.7	290 01.3	+20 36.7		298 46.2	+17 29.8			
13	8 11.8	355 45.8	53.0	115 28.7		49.9	305 03.4	36.8	313 48.4		29.8				
14	23 14.3	10 49.0	53.0	130 30.0		50.0	320 05.5	36.9	328 50.7		29.9				
15	38 16.7	25 52.2	52.9	145 31.3		50.2	335 07.6	36.9	343 52.9		29.9				
16	53 19.2	40 55.4	52.9	160 32.6		50.4	350 09.6	37.0	358 55.2		30.0				
17	68 21.7	55 58.6	+13 52.9	175 33.9	-21 50.6		5 11.7	+20 37.1	13 57.4	+17 30.1					
18	83 24.1	71 01.8	+13 52.8	190 35.2	-21 50.7		20 13.8	+20 37.2	28 59.7	+17 30.1					
19	98 26.6	86 05.0	52.8	205 36.5	50.9		35 15.9	37.2	44 01.9	30.2					
20	113 29.0	101 08.2	52.7	220 37.7	51.1		50 18.0	37.3	59 04.2	30.2					
21	128 31.5	116 11.5	52.7	235 39.0	51.2		65 20.1	37.4	74 06.4	30.3					
22	143 34.0	131 14.7	52.6	250 40.3	51.4		80 22.2	37.4	89 08.7	30.3					
23	158 36.4	146 17.9	52.6	265 41.6	51.6		95 24.3	37.5	104 10.9	30.4					
24	173 38.9	161 21.2	+13 52.5	280 42.9	-21 51.8		110 26.3	+20 37.6	119 13.2	+17 30.5					
Dif	—	+32	0	+13	-2		+21	+1	+23	+1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 7 PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /3 20 ^h : 55 ^s /1												
	PMG: 12 ^h 08 ^m 6			SD: 15 ^s 2 PMG: 5 ^h 36 ^m R ^o : 50 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	177	48.9	-1 48.2	278	55.6	-20 23.7			60 N	4 43	5 32	6 14	2 12	70	8 52	34
1	192	49.0		47.2	293 25.3	107 29.4		57	58	48	34	13	1 57	67	9 08	37
2	207	49.2		46.3	307 55.1	108 34.9		55	56	52	36	13	44	65	22	38
3	222	49.4		45.3	322 24.9	108 40.4		55	54	56	37	12	32	64	33	40
4	237	49.6		44.3	336 54.7	108 45.7		53	52	4 59	38	12	22	63	44	40
5	252	49.7	-1 43.3	351 24.4	107 -20 50.9	52			50	5 02	5 39	6 12	1 13	62	9 53	41
6	267	49.9	-1 42.3	5 54.2	108 -20 56.0	51			45	5 07	5 42	6 11	0 55	59	10 13	43
7	282	50.1		41.3	20 24.0	108 -21 01.0		50	40	12	43	10	39	58	28	45
8	297	50.3		40.3	34 53.7	107 05.9		49	35	15	44	09	26	56	42	45
9	312	50.5		39.3	49 23.5	108 10.7		48	30	17	45	09	0 15	55	10 54	46
10	327	50.6		38.4	63 53.2	107 15.3		46	20	20	46	08	** ** *	**	11 14	48
11	342	50.8	-1 37.4	78 23.0	108 -21 19.9	46			10 N	5 21	5 46	6 06	** ** *	**	11 31	49
12	357	51.0	-1 36.4	92 52.7	107 -21 24.3	44			0	5 21	5 45	6 05	** ** *	**	11 48	50
13	12	51.2		35.4	107 22.5	108 28.7		44	10 S	19	43	04	23 57	49	12 04	51
14	27	51.4		34.4	121 52.2	107 32.9		42	20	15	41	03	38	49	22	52
15	42	51.5		33.4	136 22.0	108 37.0		41	30	09	37	01	17	48	42	53
16	57	51.7		32.4	150 51.7	107 41.0		40	35	05	34	6 00	23 05	48	12 54	54
17	72	51.9	-1 31.4	165 21.5	108 -21 44.9	39			40	5 00	5 31	5 59	22 51	47	13 07	55
18	87	52.1	-1 30.5	179 51.2	107 -21 48.7	38			45	4 53	5 28	5 57	22 35	46	13 23	57
19	102	52.2		29.5	194 21.0	108 52.4		37	50	44	23	55	14	45	43	58
20	117	52.4		28.5	208 50.7	107 56.0		36	52	40	21	55	22 05	44	13 53	58
21	132	52.6		27.5	223 20.5	108 -21 59.4		34	54	36	18	54	21 54	43	14 03	60
22	147	52.8		26.5	237 50.3	108 -22 02.8		34	56	30	15	53	42	42	16	60
23	162	53.0		25.5	252 20.0	107 06.0		32	58	24	12	51	27	42	30	61
24	177	53.1	-1 24.5	266 49.8	108 -22 09.1	31			60 S	4 17	5 08	5 50	21 11	40	14 46	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 23 ^m 4		Mag: -4.5 PMG: 13 ^h 12 ^m		Mag: +0.2 PMG: 5 ^h 17 ^m		Mag: -2.2 PMG: 16 ^h 36 ^m		Mag: +0.2 PMG: 16 ^h 01 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	173	38.9	161	21.2	+13 52.5	280	42.9	-21 51.8	119	13.2	+17 30.5				
1	188	41.4	176	24.4	52.5	295	44.2	51.9	125	28.4	37.7				
2	203	43.8	191	27.6	52.4	310	45.5	52.1	140	30.5	37.7				
3	218	46.3	206	30.9	52.3	325	46.8	52.3	155	32.6	37.8				
4	233	48.8	221	34.1	52.3	340	48.1	52.4	170	34.7	37.9				
5	248	51.2	236	37.4	+13 52.2	355	49.4	-21 52.6	185	36.8	+20 37.9				
6	263	53.7	251	40.6	+13 52.1	10	50.7	-21 52.8	200	38.9	+20 38.0				
7	278	56.2	266	43.9	52.1	25	51.9	53.0	215	40.9	38.1				
8	293	58.6	281	47.2	52.0	40	53.2	53.1	230	43.0	38.2				
9	309	01.1	296	50.4	51.9	55	54.5	53.3	245	45.1	38.2				
10	324	03.5	311	53.7	51.8	70	55.8	53.5	260	47.2	38.3				
11	339	06.0	326	57.0	+13 51.8	85	57.1	-21 53.6	275	49.3	+20 38.4				
12	354	08.5	342	00.3	+13 51.7	100	58.4	-21 53.8	290	51.4	+20 38.5				
13	9	10.9	357	03.5	51.6	115	59.7	54.0	305	53.4	38.5				
14	24	13.4	12	06.8	51.5	131	01.0	54.1	320	55.5	38.6				
15	39	15.9	27	10.1	51.4	146	02.3	54.3	335	57.6	38.7				
16	54	18.3	42	13.4	51.3	161	03.6	54.5	350	59.7	38.7				
17	69	20.8	57	16.7	+13 51.2	176	04.9	-21 54.7	6	01.8	+20 38.8				
18	84	23.3	72	20.0	+13 51.1	191	06.2	-21 54.8	21	03.9	+20 38.9				
19	99	25.7	87	23.3	51.0	206	07.5	55.0	36	05.9	39.0				
20	114	28.2	102	26.6	50.9	221	08.8	55.2	51	08.0	39.0				
21	129	30.7	117	29.9	50.8	236	10.1	55.3	66	10.1	39.1				
22	144	33.1	132	33.2	50.7	251	11.4	55.5	81	12.2	39.2				
23	159	35.6	147	36.5	50.6	266	12.7	55.7	96	14.3	39.3				
24	174	38.0	162	39.8	+13 50.4	281	14.0	-21 55.8	111	16.3	+20 39.3				
Dif	—		+33		-1	+13		-2	+21		+1	+23		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 21 ^d 7 PHE	SD: 15 ^h 0				R°: 49 ^m							
	PMG: 12 ^h 08 ^m 3				PMG: 6 ^h 26 ^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	177	53.1	-1 24.5	266	49.8	-22 09.1	30	60 N	18 07	18 49	19 38	3 22	56	9 26	47	
1	192	53.3	23.5	281	19.6 ¹⁰⁸	12.1	30	58	07	47	33	3 04	56	9 45	47	
2	207	53.5	22.5	295	49.3 ¹⁰⁷	15.0	29	56	08	45	29	2 49	55	10 00	47	
3	222	53.7	21.6	310	19.1 ¹⁰⁸	17.8	28	54	08	43	25	36	55	13	48	
4	237	53.9	20.6	324	48.9 ¹⁰⁸	20.5	27	52	08	42	21	25	54	24	48	
5	252	54.0	-1 19.6	339	18.7 ¹⁰⁸	-22 23.1	26	50	18 08	18 40	19 18	2 15	54	10 34	49	
6	267	54.2	-1 18.6	353	48.5 ¹⁰⁸	-22 25.5	24	45	18 09	18 38	19 12	1 54	53	10 56	48	
7	282	54.4	17.6	8	18.3 ¹⁰⁸	27.9	24	40	09	36	07	37	52	11 13	49	
8	297	54.6	16.6	22	48.1 ¹⁰⁸	30.1	22	35	09	34	04	22	53	27	49	
9	312	54.8	15.6	37	17.9 ¹⁰⁸	32.2	21	30	10	33	19 01	1 10	52	11 40	49	
10	327	54.9	14.6	51	47.7 ¹⁰⁸	34.2	20	20	10	32	18 58	0 49	51	12 02	49	
11	342	55.1	-1 13.7	66	17.6 ¹⁰⁹	-22 36.1	19	10 N	18 11	18 32	18 56	0 31	50	12 20	50	
12	357	55.3	-1 12.7	80	47.4 ¹⁰⁸	-22 37.9	18	0	18 12	18 32	18 56	0 14	49	12 38	49	
13	12	55.5	11.7	95	17.2 ¹⁰⁸	39.6	17	10 S	12	33	18 58	** ** *	**	12 55	50	
14	27	55.7	10.7	109	47.1 ¹⁰⁹	41.1	15	20	13	35	19 01	** ** *	**	13 14	50	
15	42	55.8	09.7	124	17.0 ¹⁰⁹	42.6	15	30	15	39	06	** ** *	**	35	50	
16	57	56.0	08.7	138	46.9 ¹⁰⁹	43.9	13	35	15	41	10	23 53	50	13 48	50	
17	72	56.2	-1 07.7	153	16.8 ¹⁰⁹	-22 45.2	13	40	18 16	18 43	19 15	23 38	51	14 02	50	
18	87	56.4	-1 06.7	167	46.7 ¹⁰⁹	-22 46.3	11	45	18 17	18 47	19 21	23 21	51	14 20	50	
19	102	56.6	05.7	182	16.6 ¹⁰⁹	47.3	10	50	19	51	29	22 59	52	41	50	
20	117	56.8	04.8	196	46.5 ¹⁰⁹	48.2	9	52	19	53	33	49	52	14 51	50	
21	132	56.9	03.8	211	16.4 ¹⁰⁹	49.0	8	54	20	55	38	37	52	15 03	49	
22	147	57.1	02.8	225	46.4 ¹¹⁰	49.7	7	56	21	18 58	43	24	52	16	50	
23	162	57.3	01.8	240	16.4 ¹¹⁰	50.2	5	58	22	19 01	48	22 09	52	31	50	
24	177	57.5	-1 00.8	254	46.4 ¹¹⁰	-22 50.7	5	60 S	18 23	19 04	19 55	21 51	52	15 49	50	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 19 ^m 4		Mag: -4.5 PMG: 13 ^h 06 ^m			Mag: +0.2 PMG: 5 ^h 15 ^m			Mag: -2.2 PMG: 16 ^h 33 ^m			Mag: +0.2 PMG: 15 ^h 57 ^m				
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	
0	174	38.0	162	39.8	+13 50.4	281	14.0	-21 55.8	111	16.3	+20 39.3	120	07.2	+17 31.9		
1	189	40.5	177	43.2	50.3	296	15.3	56.0	126	18.4	39.4	135	09.5	31.9		
2	204	43.0	192	46.5	50.2	311	16.6	56.2	141	20.5	39.5	150	11.7	32.0		
3	219	45.4	207	49.8	50.1	326	17.9	56.3	156	22.6	39.6	165	14.0	32.0		
4	234	47.9	222	53.1	49.9	341	19.2	56.5	171	24.7	39.6	180	16.2	32.1		
5	249	50.4	237	56.5	+13 49.8	356	20.5	-21 56.7	186	26.7	+20 39.7	195	18.5	+17 32.1		
6	264	52.8	252	59.8	+13 49.7	11	21.8	-21 56.8	201	28.8	+20 39.8	210	20.7	+17 32.2		
7	279	55.3	268	03.2	49.5	26	23.1	57.0	216	30.9	39.8	225	23.0	32.3		
8	294	57.8	283	06.5	49.4	41	24.4	57.2	231	33.0	39.9	240	25.2	32.3		
9	310	00.2	298	09.9	49.3	56	25.7	57.3	246	35.1	40.0	255	27.4	32.4		
10	325	02.7	313	13.2	49.1	71	27.0	57.5	261	37.1	40.1	270	29.7	32.4		
11	340	05.1	328	16.6	+13 49.0	86	28.3	-21 57.7	276	39.2	+20 40.1	285	31.9	+17 32.5		
12	355	07.6	343	19.9	+13 48.8	101	29.6	-21 57.8	291	41.3	+20 40.2	300	34.2	+17 32.6		
13	10	10.1	358	23.3	48.7	116	30.9	58.0	306	43.4	40.3	315	36.4	32.6		
14	25	12.5	13	26.6	48.5	131	32.2	58.2	321	45.4	40.4	330	38.7	32.7		
15	40	15.0	28	30.0	48.4	146	33.5	58.3	336	47.5	40.4	345	40.9	32.7		
16	55	17.5	43	33.4	48.2	161	34.8	58.5	351	49.6	40.5	0	43.2	32.8		
17	70	19.9	58	36.8	+13 48.1	176	36.1	-21 58.7	6	51.7	+20 40.6	15	45.4	+17 32.8		
18	85	22.4	73	40.1	+13 47.9	191	37.5	-21 58.8	21	53.8	+20 40.7	30	47.7	+17 32.9		
19	100	24.9	88	43.5	47.7	206	38.8	59.0	36	55.8	40.7	45	49.9	33.0		
20	115	27.3	103	46.9	47.6	221	40.1	59.2	51	57.9	40.8	60	52.2	33.0		
21	130	29.8	118	50.3	47.4	236	41.4	59.3	67	00.0	40.9	75	54.4	33.1		
22	145	32.3	133	53.7	47.2	251	42.7	59.5	82	02.1	40.9	90	56.7	33.1		
23	160	34.7	148	57.1	47.0	266	44.0	59.7	97	04.1	41.0	105	58.9	33.2		
24	175	37.2	164	00.5	+13 46.9	281	45.3	-21 59.8	112	06.2	+20 41.1	121	01.1	+17 33.3		
Dif	—		+34	-1		+13	-2		+21	+1		+22	+1			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 22 ^d 7	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3									
	PMG: 12 ^h 08 ^m 0					SD: 14'9		PMG: 7 ^h 15 ^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	h m	m
0	177	57.5	-1 00.8	254	46.4	-22 50.7	3	60 N	4 37	5 26	6 08	4 18	42	10 13 59
1	192	57.7	-0 59.8	269	16.4 ¹¹⁰	51.0	3	58	42	29	08	4 00	43	32 57
2	207	57.8	58.8	283	46.4 ¹¹⁰	51.3	1	56	47	31	08	3 44	44	10 47 57
3	222	58.0	57.8	298	16.4 ¹¹⁰	51.4	0	54	51	32	07	31	44	11 01 56
4	237	58.2	56.8	312	46.4 ¹¹⁰	51.4	0	52	54	34	07	19	45	12 56
5	252	58.4	-0 55.9	327	16.5 ¹¹¹	-22 51.3	1	50	4 57	5 35	6 07	3 09	45	11 23 54
6	267	58.6	-0 54.9	341	46.6 ¹¹¹	-22 51.1	2	45	5 04	5 38	6 07	2 47	46	11 44 54
7	282	58.8	53.9	356	16.7 ¹¹¹	50.8	3	40	08	40	07	29	47	12 02 53
8	297	58.9	52.9	10	46.8 ¹¹¹	50.4	4	35	12	41	07	15	47	16 53
9	312	59.1	51.9	25	16.9 ¹¹¹	49.9	5	30	15	43	06	2 02	48	29 52
10	327	59.3	50.9	39	47.1 ¹¹²	49.2	7	20	18	44	06	1 40	48	12 51 50
11	342	59.5	-0 49.9	54	17.3 ¹¹²	-22 48.5	7	10 N	5 20	5 44	6 05	1 21	49	13 10 49
12	357	59.7	-0 48.9	68	47.5 ¹¹²	-22 47.6	9	0	5 20	5 44	6 05	1 03	50	13 27 49
13	12	59.8	48.0	83	17.7 ¹¹²	46.7	9	10 S	19	43	04	0 46	49	13 45 48
14	28	00.0	47.0	97	47.9 ¹¹²	45.6	11	20	16	41	03	27	50	14 04 47
15	43	00.2	46.0	112	18.2 ¹¹³	44.4	12	30	10	38	02	0 05	51	25 46
16	58	00.4	45.0	126	48.5 ¹¹³	43.1	13	35	07	36	01	** ** *	**	38 45
17	73	00.6	-0 44.0	141	18.8 ¹¹³	-22 41.8	13	40	5 02	5 34	6 01	** ** *	**	14 52 45
18	88	00.8	-0 43.0	155	49.1 ¹¹³	-22 40.3	15	45	4 56	5 30	6 00	** ** *	**	15 10 43
19	103	00.9	42.0	170	19.5 ¹¹⁴	38.7	16	50	48	26	5 59	23 51	57	31 42
20	118	01.1	41.0	184	49.8 ¹¹³	36.9	18	52	44	24	58	41	58	41 41
21	133	01.3	40.0	199	20.2 ¹¹⁴	35.1	18	54	40	22	57	29	60	15 52 41
22	148	01.5	39.1	213	50.7 ¹¹⁵	33.2	19	56	35	19	57	16	61	16 06 38
23	163	01.7	38.1	228	21.1 ¹¹⁴	31.2	20	58	29	17	56	23 01	63	21 37
24	178	01.9	-0 37.1	242	51.6 ¹¹⁵	-22 29.1	21	60 S	4 23	5 13	5 55	22 43	65	16 39 35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 15 ^m 5		Mag: -4.4 PMG: 13 ^h 01 ^m		Mag: +0.1 PMG: 5 ^h 13 ^m		Mag: -2.2 PMG: 16 ^h 29 ^m		Mag: +0.2 PMG: 15 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	175	37.2	164 00.5	+13 46.9	281 45.3	-21 59.8	112 06.2	+20 41.1	121 01.1	+17 33.3
1	190	39.6	179 03.9	46.7	296 46.6	-22 00.0	127 08.3	41.2	136 03.4	33.3
2	205	42.1	194 07.3	46.5	311 47.9	-22 00.2	142 10.4	41.2	151 05.6	33.4
3	220	44.6	209 10.7	46.3	326 49.2	00.3	157 12.4	41.3	166 07.9	33.4
4	235	47.0	224 14.1	46.1	341 50.6	00.5	172 14.5	41.4	181 10.1	33.5
5	250	49.5	239 17.5	+13 45.9	356 51.9	-22 00.7	187 16.6	+20 41.5	196 12.4	+17 33.6
6	265	52.0	254 20.9	+13 45.7	11 53.2	-22 00.8	202 18.6	+20 41.5	211 14.6	+17 33.6
7	280	54.4	269 24.3	45.5	26 54.5	01.0	217 20.7	41.6	226 16.9	33.7
8	295	56.9	284 27.7	45.3	41 55.8	01.1	232 22.8	41.7	241 19.1	33.7
9	310	59.4	299 31.2	45.1	56 57.1	01.3	247 24.9	41.8	256 21.4	33.8
10	326	01.8	314 34.6	44.9	71 58.4	01.5	262 26.9	41.8	271 23.6	33.9
11	341	04.3	329 38.0	+13 44.7	86 59.7	-22 01.6	277 29.0	+20 41.9	286 25.8	+17 33.9
12	356	06.8	344 41.5	+13 44.5	102 01.1	-22 01.8	292 31.1	+20 42.0	301 28.1	+17 34.0
13	11	09.2	359 44.9	44.3	117 02.4	02.0	307 33.2	42.0	316 30.3	34.0
14	26	11.7	14 48.3	44.1	132 03.7	02.1	322 35.2	42.1	331 32.6	34.1
15	41	14.1	29 51.8	43.8	147 05.0	02.3	337 37.3	42.2	346 34.8	34.1
16	56	16.6	44 55.2	43.6	162 06.3	02.4	352 39.4	42.3	1 37.1	34.2
17	71	19.1	59 58.7	+13 43.4	177 07.6	-22 02.6	7 41.4	+20 42.3	16 39.3	+17 34.3
18	86	21.5	75 02.1	+13 43.2	192 09.0	-22 02.8	22 43.5	+20 42.4	31 41.5	+17 34.3
19	101	24.0	90 05.6	42.9	207 10.3	02.9	37 45.6	42.5	46 43.8	34.4
20	116	26.5	105 09.1	42.7	222 11.6	03.1	52 47.7	42.6	61 46.0	34.4
21	131	28.9	120 12.5	42.5	237 12.9	03.3	67 49.7	42.6	76 48.3	34.5
22	146	31.4	135 16.0	42.2	252 14.2	03.4	82 51.8	42.7	91 50.5	34.6
23	161	33.9	150 19.5	42.0	267 15.5	03.6	97 53.9	42.8	106 52.8	34.6
24	176	36.3	165 22.9	+13 41.8	282 16.9	-22 03.7	112 55.9	+20 42.9	121 55.0	+17 34.7
Dif	—		+34	-2	+13	-2	+21	+1	+22	+

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: 23 ^d 7 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 SD: 14 ^h 8 PMG: 8 ^h 04 ^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	01.9	-0 37.1	242	51.6	-22 29.1	23	60 N	18 12	18 54	19 44	5 00 30		11 12 69	
1	193	02.0	36.1	257	22.1 ¹¹⁵	26.8	23	58	12	51	38	4 43 32		29 67	
2	208	02.2	35.1	271	52.6 ¹¹⁵	24.5	23	56	12	49	33	28 34		44 64	
3	223	02.4	34.1	286	23.2 ¹¹⁶	22.0	25	54	12	47	29	15 36		11 57 62	
4	238	02.6	33.1	300	53.7 ¹¹⁵	19.5	25	52	11	45	25	4 04 37		12 08 61	
5	253	02.8	-0 32.1	315	24.3 ¹¹⁶	-22 16.8	27	50	18 11	18 44	19 22	3 54 38		12 17 60	
6	268	02.9	-0 31.1	329	55.0 ¹¹⁷	-22 14.1	27	45	18 11	18 40	19 15	3 33 40		12 38 57	
7	283	03.1	30.2	344	25.6 ¹¹⁶	11.2	29	40	11	38	10	16 42		12 55 55	
8	298	03.3	29.2	358	56.3 ¹¹⁷	08.3	29	35	11	36	06	3 02 43		13 09 54	
9	313	03.5	28.2	13	27.1 ¹¹⁸	05.2	31	30	11	35	19 02	2 50 43		21 53	
10	328	03.7	27.2	27	57.8 ¹¹⁷	-22 02.0	32	20	11	33	18 58	28 46		41 51	
11	343	03.9	-0 26.2	42	28.6 ¹¹⁸	-21 58.8	32	10 N	18 11	18 32	18 56	2 10 47		13 59 49	
12	358	04.1	-0 25.2	56	59.4 ¹¹⁸	-21 55.4	34	0	18 11	18 32	18 56	1 53 48		14 16 48	
13	13	04.2	24.2	71	30.2 ¹¹⁸	52.0	34	10 S	11	32	57	35 50		33 46	
14	28	04.4	23.2	86	01.1 ¹¹⁹	48.4	36	20	12	34	18 59	1 17 51		14 51 43	
15	43	04.6	22.3	100	32.0 ¹¹⁹	44.7	37	30	12	36	19 04	0 56 52		15 11 42	
16	58	04.8	21.3	115	02.9 ¹¹⁹	41.0	37	35	13	38	07	43 53		23 40	
17	73	05.0	-0 20.3	129	33.9 ¹²⁰	-21 37.1	39	40	18 13	18 40	19 12	0 29 54		15 37 38	
18	88	05.2	-0 19.3	144	04.9 ¹²⁰	-21 33.1	40	45	18 14	18 43	19 17	0 12 56		15 53 37	
19	103	05.3	18.3	158	35.9 ¹²⁰	29.1	40	50	14	47	25	** ** *		16 13 34	
20	118	05.5	17.3	173	07.0 ¹²¹	24.9	42	52	15	48	28	** ** *		22 33	
21	133	05.7	16.3	187	38.1 ¹²¹	20.7	42	54	15	50	32	** ** *		33 31	
22	148	05.9	15.3	202	09.2 ¹²¹	16.3	44	56	15	53	37	** ** *		44 30	
23	163	06.1	14.3	216	40.3 ¹²¹	11.9	44	58	16	55	42	** ** *		16 58 28	
24	178	06.3	-0 13.4	231	11.5 ¹²²	-21 07.3	46	60 S	18 17	18 58	19 48	23 48 72		17 14 25	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 11 ^m 6		Mag: -4.4 PMG: 12 ^h 55 ^m		Mag: +0.1 PMG: 5 ^h 10 ^m		Mag: -2.2 PMG: 16 ^h 26 ^m		Mag: +0.2 PMG: 15 ^h 50 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	176	36.3	165	22.9	282	16.9	112	55.9	121	55.0					
1	191	38.8	180	26.4	297	18.2	127	58.0	136	57.2					
2	206	41.2	195	29.9	312	19.5	143	00.1	151	59.5					
3	221	43.7	210	33.4	327	20.8	158	02.1	167	01.7					
4	236	46.2	225	36.8	342	22.2	173	04.2	182	04.0					
5	251	48.6	240	40.3	357	23.5	188	06.3	197	06.2					
6	266	51.1	255	43.8	12	24.8	203	08.3	212	08.5					
7	281	53.6	270	47.3	27	26.1	218	10.4	227	10.7					
8	296	56.0	285	50.8	42	27.4	233	12.5	242	12.9					
9	311	58.5	300	54.3	57	28.8	248	14.5	257	15.2					
10	327	01.0	315	57.8	72	30.1	263	16.6	272	17.4					
11	342	03.4	331	01.3	87	31.4	278	18.7	287	19.7					
12	357	05.9	346	04.8	102	32.7	293	20.7	302	21.9					
13	12	08.4	1	08.3	117	34.1	308	22.8	317	24.1					
14	27	10.8	16	11.8	132	35.4	323	24.9	332	26.4					
15	42	13.3	31	15.3	147	36.7	338	26.9	347	28.6					
16	57	15.7	46	18.9	162	38.0	353	29.0	2	30.9					
17	72	18.2	61	22.4	177	39.4	8	31.1	17	33.1					
18	87	20.7	76	25.9	192	40.7	23	33.1	32	35.3					
19	102	23.1	91	29.4	207	42.0	38	35.2	47	37.6					
20	117	25.6	106	33.0	222	43.4	53	37.3	62	39.8					
21	132	28.1	121	36.5	237	44.7	68	39.3	77	42.1					
22	147	30.5	136	40.0	252	46.0	83	41.4	92	44.3					
23	162	33.0	151	43.6	267	47.3	98	43.5	107	46.5					
24	177	35.5	166	47.1	282	48.7	113	45.5	122	48.8					
Dif	—		+35	-3	+13	-2	+21	+1	+22	+1					

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: 24 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: 8 ^h 52 ^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	m	
0	178	06.3	-0	231	11.5	-21	07.3	60 N	4	30	5	20	6	02	5	30	21
1	193	06.4		245	42.7 ¹²²	-21	02.7	58	36	23	02			15	24	36	
2	208	06.6		260	14.0 ¹²³	-20	57.9	56	41	25	02			5	02	26	
3	223	06.8		274	45.3 ¹²³		53.1	54	46	27	03			4	51	28	
4	238	07.0		289	16.6 ¹²³		48.2	52	49	29	03			4	1	30	
5	253	07.2	-0	303	48.0 ¹²⁴	-20	43.1	50	4	53	5	31	6	03	4	32	31
6	268	07.4	-0	318	19.3 ¹²³	-20	38.0	45	5	00	5	34	6	03	4	13	34
7	283	07.5		332	50.8 ¹²⁵		32.8	40	05	37	04			3	58	36	
8	298	07.7		347	22.2 ¹²⁴		27.5	35	09	39	04			4	5	38	
9	313	07.9		1	53.7 ¹²⁵		22.1	30	12	40	04			3	3	40	
10	328	08.1		16	25.2 ¹²⁵		16.7	20	17	42	04			3	14	42	
11	343	08.3	-0	30	56.8 ¹²⁶	-20	11.1	10 N	5	19	5	43	6	04	2	57	44
12	358	08.5	-0	45	28.4 ¹²⁶	-20	05.4	0	5	20	5	44	6	04	2	41	46
13	13	08.7	-0	60	00.0 ¹²⁶	-19	59.7	10 S	19	43	04			2	5	49	
14	28	08.8	+0	74	31.7 ¹²⁷		53.8	20	16	42	04			2	08	51	
15	43	09.0		89	03.4 ¹²⁷		47.9	30	12	39	03			1	48	53	
16	58	09.2		103	35.1 ¹²⁷		41.9	35	08	38	03			3	6	55	
17	73	09.4	+0	118	06.9 ¹²⁸	-19	35.8	40	5	04	5	36	6	03	1	23	57
18	88	09.6	+0	132	38.7 ¹²⁸	-19	29.6	45	4	59	5	33	6	02	1	08	58
19	103	09.8		147	10.5 ¹²⁸		23.3	50	51	29	02			0	48	62	
20	118	10.0		161	42.4 ¹²⁹		16.9	52	48	28	01			3	9	63	
21	133	10.1		176	14.3 ¹²⁹		10.4	54	44	26	01			2	9	64	
22	148	10.3		190	46.2 ¹²⁹	-19	03.9	56	39	24	01			1	7	67	
23	163	10.5		205	18.2 ¹³⁰	-18	57.3	58	34	21	00			0	04	69	
24	178	10.7	+0	219	50.2 ¹³⁰	-18	50.6	60 S	4	28	5	18	6	00	**	**	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 07 ^m 6		Mag: -4.4 PMG: 12 ^h 50 ^m			Mag: +0.1 PMG: 5 ^h 08 ^m			Mag: -2.2 PMG: 16 ^h 23 ^m			Mag: +0.2 PMG: 15 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	177	35.5	166	47.1	+13	282	48.7	-22	113	45.5	+20	122	48.8	+17	
1	192	37.9	181	50.7		297	50.0		128	47.6		137	51.0		
2	207	40.4	196	54.2		312	51.3		143	49.6		152	53.3		
3	222	42.9	211	57.7		327	52.7		158	51.7		167	55.5		
4	237	45.3	227	01.3		342	54.0		173	53.8		182	57.7		
5	252	47.8	242	04.9	+13	357	55.3	-22	188	55.8	+20	198	00.0	+17	
6	267	50.2	257	08.4	+13	12	56.7	-22	203	57.9	+20	213	02.2	+17	
7	282	52.7	272	12.0		27	58.0		219	00.0		228	04.5		
8	297	55.2	287	15.5		42	59.3		234	02.0		243	06.7		
9	312	57.6	302	19.1		58	00.7		249	04.1		258	08.9		
10	328	00.1	317	22.7		73	02.0		264	06.1		273	11.2		
11	343	02.6	332	26.2	+13	88	03.3	-22	279	08.2	+20	288	13.4	+17	
12	358	05.0	347	29.8	+13	103	04.7	-22	294	10.3	+20	303	15.6	+17	
13	13	07.5	2	33.4		118	06.0		309	12.3		318	17.9		
14	28	10.0	17	37.0		133	07.4		324	14.4		333	20.1		
15	43	12.4	32	40.5		148	08.7		339	16.4		348	22.4		
16	58	14.9	47	44.1		163	10.0		354	18.5		3	24.6		
17	73	17.4	62	47.7	+13	178	11.4	-22	9	20.6	+20	18	26.8	+17	
18	88	19.8	77	51.3	+13	193	12.7	-22	24	22.6	+20	33	29.1	+17	
19	103	22.3	92	54.9		208	14.0		39	24.7		48	31.3		
20	118	24.7	107	58.5		223	15.4		54	26.7		63	33.5		
21	133	27.2	123	02.1		238	16.7		69	28.8		78	35.8		
22	148	29.7	138	05.7		253	18.1		84	30.9		93	38.0		
23	163	32.1	153	09.3		268	19.4		99	32.9		108	40.2		
24	178	34.6	168	12.9	+13	283	20.7	-22	114	35.0	+20	123	42.5	+17	
Dif	—		+36	-3		+13	-2		+21		+1		+22		+

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 12 ^h 07 ^m 1			Edad: 25 ^d 7 PHE { 4 ^h : 54 ¹ / _{12^h: 54¹/_{20^h: 54²} SD: 14:7 PMG: 9^h 39^m R°: 44^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	10.7	+0	219	50.2	-18	50.6	60 N	18 17	18 59	19 49	5 51 15		13 35 77					
1	193	10.9		234	22.3 ¹³¹		43.8 ⁶⁸	58	16	56	43	39 18		47 74					
2	208	11.1		248	54.3 ¹³⁰		36.9 ⁶⁹	56	16	53	38	28 21		13 57 71					
3	223	11.3		263	26.5 ¹³²		29.9 ⁷⁰	54	15	51	33	19 23		14 06 69					
4	238	11.4		277	58.6 ¹³¹		22.9 ⁷⁰	52	15	49	29	11 24		14 67					
5	253	11.6	+0	292	30.8 ¹³²	-18	15.7 ⁷²	50	18 15	18 47	19 25	5 03 27		14 21 65					
6	268	11.8	+0	307	03.0 ¹³²	-18	08.5 ⁷²	45	18 14	18 43	19 18	4 47 30		14 36 61					
7	283	12.0		321	35.3 ¹³³	-18	01.2 ⁷³	40	13	40	12	34 33		48 59					
8	298	12.2		336	07.6 ¹³³	-17	53.9 ⁷³	35	12	38	07	23 35		14 58 57					
9	313	12.4		350	39.9 ¹³³		46.4 ⁷⁵	30	12	36	19 04	4 13 37		15 08 54					
10	328	12.6		5	12.2 ¹³³		38.9 ⁷⁵	20	11	33	18 59	3 56 40		23 51					
11	343	12.7	+0	19	44.6 ¹³⁴	-17	31.3 ⁷⁶	10 N	18 11	18 32	18 56	3 41 43		15 37 47					
12	358	12.9	+0	34	17.0 ¹³⁴	-17	23.6 ⁷⁷	0	18 10	18 31	18 55	3 27 46		15 49 45					
13	13	13.1		48	49.5 ¹³⁵		15.8 ⁷⁸	10 S	10	31	55	3 14 47		16 02 42					
14	28	13.3		63	22.0 ¹³⁵		08.0 ⁷⁸	20	10	32	18 57	2 59 50		16 38					
15	43	13.5		77	54.5 ¹³⁵	-17	00.1 ⁷⁹	30	10	34	19 01	41 55		31 35					
16	58	13.7		92	27.1 ¹³⁶	-16	52.1 ⁸⁰	35	10	35	04	31 56		40 33					
17	73	13.9	+0	106	59.7 ¹³⁶	-16	44.0 ⁸¹	40	18 10	18 37	19 08	2 20 58		16 50 30					
18	88	14.0	+0	121	32.3 ¹³⁶	-16	35.9 ⁸¹	45	18 10	18 39	19 13	2 06 61		17 01 28					
19	103	14.2		136	04.9 ¹³⁶		27.7 ⁸²	50	10	42	20	1 50 64		16 24					
20	118	14.4		150	37.6 ¹³⁷		19.4 ⁸³	52	10	44	23	42 66		22 23					
21	133	14.6		165	10.3 ¹³⁷		11.0 ⁸⁴	54	10	45	27	33 68		30 20					
22	148	14.8		179	43.1 ¹³⁸	-16	02.6 ⁸⁴	56	10	47	31	24 70		38 18					
23	163	15.0		194	15.9 ¹³⁸	-15	54.1 ⁸⁵	58	10	49	36	13 72		47 16					
24	178	15.2	+0	208	48.7 ¹³⁸	-15	45.5 ⁸⁶	60 S	18 10	18 52	19 42	1 00 75		17 57 14					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 12 ^h 03 ^m 7		Mag: -4.3 PMG: 12 ^h 44 ^m			Mag: +0.1 PMG: 5 ^h 06 ^m			Mag: -2.2 PMG: 16 ^h 19 ^m			Mag: +0.2 PMG: 15 ^h 43 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°					
0	178	34.6	168	12.9	+13	27.0	283	20.7	-22	11.3	114	35.0	+20	46.4	123	42.5	+17	37.6	
1	193	37.1	183	16.5		26.7	298	22.1		11.5	129	37.0		46.5	138	44.7		37.6	
2	208	39.5	198	20.1		26.3	313	23.4		11.6	144	39.1		46.6	153	47.0		37.7	
3	223	42.0	213	23.7		25.9	328	24.8		11.8	159	41.1		46.7	168	49.2		37.7	
4	238	44.5	228	27.3		25.5	343	26.1		11.9	174	43.2		46.7	183	51.4		37.8	
5	253	46.9	243	31.0	+13	25.1	358	27.5	-22	12.1	189	45.3	+20	46.8	198	53.7	+17	37.9	
6	268	49.4	258	34.6	+13	24.8	13	28.8	-22	12.2	204	47.3	+20	46.9	213	55.9	+17	37.9	
7	283	51.8	273	38.2		24.4	28	30.1		12.4	219	49.4		47.0	228	58.1		38.0	
8	298	54.3	288	41.8		24.0	43	31.5		12.6	234	51.4		47.0	244	00.4		38.0	
9	313	56.8	303	45.4		23.6	58	32.8		12.7	249	53.5		47.1	259	02.6		38.1	
10	328	59.2	318	49.1		23.2	73	34.2		12.9	264	55.5		47.2	274	04.8		38.2	
11	344	01.7	333	52.7	+13	22.8	88	35.5	-22	13.0	279	57.6	+20	47.3	289	07.1	+17	38.2	
12	359	04.2	348	56.3	+13	22.4	103	36.9	-22	13.2	294	59.7	+20	47.3	304	09.3	+17	38.3	
13	14	06.6	4	00.0		22.0	118	38.2		13.3	310	01.7		47.4	319	11.5		38.3	
14	29	09.1	19	03.6		21.6	133	39.6		13.5	325	03.8		47.5	334	13.8		38.4	
15	44	11.6	34	07.3		21.2	148	40.9		13.6	340	05.8		47.6	349	16.0		38.5	
16	59	14.0	49	10.9		20.8	163	42.3		13.8	355	07.9		47.6	4	18.2		38.5	
17	74	16.5	64	14.5	+13	20.4	178	43.6	-22	13.9	10	09.9	+20	47.7	19	20.5	+17	38.6	
18	89	19.0	79	18.2	+13	19.9	193	45.0	-22	14.1	25	12.0	+20	47.8	34	22.7	+17	38.7	
19	104	21.4	94	21.8		19.5	208	46.3		14.2	40	14.0		47.9	49	24.9		38.7	
20	119	23.9	109	25.5		19.1	223	47.7		14.4	55	16.1		47.9	64	27.2		38.8	
21	134	26.3	124	29.2		18.7	238	49.0		14.5	70	18.1		48.0	79	29.4		38.8	
22	149	28.8	139	32.8		18.3	253	50.4		14.7	85	20.2		48.1	94	31.6		38.9	
23	164	31.3	154	36.5		17.8	268	51.7		14.8	100	22.2		48.2	109	33.9		39.0	
24	179	33.7	169	40.1	+13	17.4	283	53.1	-22	15.0	115	24.3	+20	48.2	124	36.1	+17	39.0	
Dif	—		+36			-4	+13			-2	+21			+1	+22			+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 06 ^m 8			Edad: 26 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 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	178	15.2	+0 34.1	208	48.7	-15 45.5	60 N	4 24	5 14	5 56	6 06	12	14 52	78	
1	193	15.3		223	21.5 ¹³⁸	36.9 ⁸⁶	58	30	17	56	5 57	14	15 01	75	
2	208	15.5		237	54.4 ¹³⁹	28.1 ⁸⁸	56	35	20	57	49	17	08	73	
3	223	15.7		252	27.3 ¹³⁹	19.4 ⁸⁷	54	40	22	58	42	19	15	70	
4	238	15.9		267	00.2 ¹³⁹	10.5 ⁸⁹	52	44	24	58	35	21	21	68	
5	253	16.1	+0 39.0	281	33.2 ¹⁴⁰	-15 01.6 ⁸⁹	50	4 48	5 26	5 59	5 30	22	15 26	66	
6	268	16.3	+0 40.0	296	06.2 ¹⁴⁰	-14 52.6 ⁹⁰	45	4 56	5 30	6 00	5 17	26	15 37	63	
7	283	16.5		310	39.2 ¹⁴⁰	43.5 ⁹¹	40	5 02	33	00	5 07	29	47	59	
8	298	16.7		325	12.3 ¹⁴¹	34.4 ⁹¹	35	06	36	01	4 58	31	15 55	56	
9	313	16.8		339	45.3 ¹⁴⁰	25.2 ⁹²	30	10	38	02	50	34	16 02	54	
10	328	17.0		354	18.4 ¹⁴¹	16.0 ⁹²	20	15	40	02	36	38	14	50	
11	343	17.2	+0 44.9	8	51.6 ¹⁴²	-14 06.6 ⁹⁴	10 N	5 18	5 42	6 03	4 24	41	16 24	47	
12	358	17.4	+0 45.9	23	24.7 ¹⁴¹	-13 57.3 ⁹³	0	5 19	5 43	6 04	4 13	44	16 34	44	
13	13	17.6		37	57.9 ¹⁴²	47.8 ⁹⁵	10 S	19	43	04	4 01	48	44	40	
14	28	17.8		52	31.1 ¹⁴²	38.3 ⁹⁵	20	17	42	04	3 49	51	16 54	37	
15	43	18.0		67	04.4 ¹⁴³	28.7 ⁹⁶	30	13	41	05	36	54	17 06	33	
16	58	18.1		81	37.6 ¹⁴²	19.1 ⁹⁶	35	10	39	05	27	57	13	30	
17	73	18.3	+0 50.8	96	10.9 ¹⁴³	-13 09.4 ⁹⁷	40	5 06	5 38	6 05	3 18	59	17 20	29	
18	88	18.5	+0 51.8	110	44.2 ¹⁴³	-12 59.7 ⁹⁷	45	5 01	5 36	6 05	3 07	63	17 29	25	
19	103	18.7		125	17.6 ¹⁴⁴	49.9 ⁹⁸	50	4 55	33	05	2 54	66	40	21	
20	118	18.9		139	50.9 ¹⁴³	40.0 ⁹⁹	52	51	31	05	48	68	45	20	
21	133	19.1		154	24.3 ¹⁴⁴	30.1 ⁹⁹	54	48	30	05	41	70	50	18	
22	148	19.3		168	57.7 ¹⁴⁴	20.1 ¹⁰⁰	56	44	28	05	34	72	17 56	16	
23	163	19.5		183	31.2 ¹⁴⁵	-12 10.1 ¹⁰⁰	58	39	26	05	25	75	18 03	13	
24	178	19.6	+0 57.7	198	04.6 ¹⁴⁴	-12 00.0 ¹⁰¹	60 S	4 34	5 23	6 05	2 15	78	18 11	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 59 ^m 8		Mag: -4.3 PMG: 12 ^h 38 ^m			Mag: +0.1 PMG: 5 ^h 04 ^m			Mag: -2.2 PMG: 16 ^h 16 ^m			Mag: +0.2 PMG: 15 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	179	33.7	169	40.1	+13 17.4	283	53.1	-22 15.0	115	24.3	+20 48.2	124	36.1	+17 39.0	
1	194	36.2	184	43.8	17.0	298	54.4	15.1	130	26.4	48.3	139	38.3	39.1	
2	209	38.7	199	47.5	16.5	313	55.8	15.3	145	28.4	48.4	154	40.6	39.1	
3	224	41.1	214	51.1	16.1	328	57.1	15.5	160	30.5	48.5	169	42.8	39.2	
4	239	43.6	229	54.8	15.7	343	58.5	15.6	175	32.5	48.6	184	45.0	39.3	
5	254	46.1	244	58.5	+13 15.2	358	59.8	-22 15.8	190	34.6	+20 48.6	199	47.3	+17 39.3	
6	269	48.5	260	02.1	+13 14.8	14	01.2	-22 15.9	205	36.6	+20 48.7	214	49.5	+17 39.4	
7	284	51.0	275	05.8	14.3	29	02.6	16.1	220	38.7	48.8	229	51.7	39.4	
8	299	53.4	290	09.5	13.9	44	03.9	16.2	235	40.7	48.9	244	54.0	39.5	
9	314	55.9	305	13.2	13.4	59	05.3	16.4	250	42.8	48.9	259	56.2	39.6	
10	329	58.4	320	16.9	13.0	74	06.6	16.5	265	44.8	49.0	274	58.4	39.6	
11	345	00.8	335	20.6	+13 12.5	89	08.0	-22 16.7	280	46.9	+20 49.1	290	00.7	+17 39.7	
12	0	03.3	350	24.2	+13 12.0	104	09.3	-22 16.8	295	48.9	+20 49.2	305	02.9	+17 39.8	
13	15	05.8	5	27.9	11.6	119	10.7	17.0	310	51.0	49.2	320	05.1	39.8	
14	30	08.2	20	31.6	11.1	134	12.1	17.1	325	53.0	49.3	335	07.3	39.9	
15	45	10.7	35	35.3	10.6	149	13.4	17.3	340	55.1	49.4	350	09.6	39.9	
16	60	13.2	50	39.0	10.2	164	14.8	17.4	355	57.1	49.5	5	11.8	40.0	
17	75	15.6	65	42.7	+13 09.7	179	16.1	-22 17.6	10	59.2	+20 49.5	20	14.0	+17 40.1	
18	90	18.1	80	46.4	+13 09.2	194	17.5	-22 17.7	26	01.2	+20 49.6	35	16.3	+17 40.1	
19	105	20.6	95	50.1	08.7	209	18.9	17.9	41	03.3	49.7	50	18.5	40.2	
20	120	23.0	110	53.8	08.3	224	20.2	18.0	56	05.3	49.8	65	20.7	40.2	
21	135	25.5	125	57.5	07.8	239	21.6	18.2	71	07.4	49.8	80	23.0	40.3	
22	150	27.9	141	01.2	07.3	254	23.0	18.3	86	09.4	49.9	95	25.2	40.4	
23	165	30.4	156	04.9	06.8	269	24.3	18.4	101	11.4	50.0	110	27.4	40.4	
24	180	32.9	171	08.7	+13 06.3	284	25.7	-22 18.6	116	13.5	+20 50.1	125	29.6	+17 40.5	
Dif	—		+37	-5		+14	-1		+20	+1		+22	+1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 0 PMG: 12 ^h 06 ^m 5			Edad: 27 ^d 7 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7 R°: 43 ^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	178	19.6	+0	57.7	198	04.6	-12	00.0	60 N	18	22	19	04	19	55	6	18	9
1	193	19.8		58.7	212	38.1 ¹⁴⁵	-11	49.8 ¹⁰²	58	21	19	00		48		11	13	
2	208	20.0	+0	59.7	227	11.6 ¹⁴⁵		39.6 ¹⁰²	56	20	18	57		42		06	15	
3	223	20.2	+1	00.7	241	45.1 ¹⁴⁵		29.3 ¹⁰³	54	19		55		37		6	01	
4	238	20.4		01.7	256	18.7 ¹⁴⁶		19.0 ¹⁰³	52	18		52		32		5	56	
5	253	20.6	+1	02.7	270	52.2 ¹⁴⁵	-11	08.7 ¹⁰³	50	18	18	18	50	19	28	5	52	
6	268	20.8	+1	03.6	285	25.8 ¹⁴⁶	-10	58.3 ¹⁰⁴	45	18	16	18	46	19	20	5	43	
7	283	21.0		04.6	299	59.4 ¹⁴⁶		47.8 ¹⁰⁵	40	15		42		14		36	27	
8	298	21.1		05.6	314	33.0 ¹⁴⁶		37.3 ¹⁰⁵	35	14		39		09		29	30	
9	313	21.3		06.6	329	06.7 ¹⁴⁷		26.7 ¹⁰⁶	30	13		37		05		24	32	
10	328	21.5		07.6	343	40.3 ¹⁴⁶		16.1 ¹⁰⁶	20	12		34		19	00	14	36	
11	343	21.7	+1	08.6	358	14.0 ¹⁴⁷	-10	05.4 ¹⁰⁷	10 N	18	11	18	32	18	56	5	05	
12	358	21.9	+1	09.6	12	47.7 ¹⁴⁷	-9	54.7 ¹⁰⁷	0	18	10	18	30	18	54	4	57	
13	13	22.1		10.5	27	21.4 ¹⁴⁷		43.9 ¹⁰⁸	10 S	09		30		54		49	46	
14	28	22.3		11.5	41	55.1 ¹⁴⁷		33.1 ¹⁰⁸	20	08		30		56		40	50	
15	43	22.5		12.5	56	28.8 ¹⁴⁷		22.3 ¹⁰⁸	30	07		31		18	59	30	54	
16	58	22.6		13.5	71	02.6 ¹⁴⁸		11.4 ¹⁰⁹	35	07		32		19	02	24	57	
17	73	22.8	+1	14.5	85	36.3 ¹⁴⁷	-9	00.4 ¹¹⁰	40	18	07	18	34	19	05	4	17	
18	88	23.0	+1	15.5	100	10.1 ¹⁴⁸	-8	49.5 ¹⁰⁹	45	18	06	18	35	19	10	4	10	
19	103	23.2		16.5	114	43.9 ¹⁴⁸		38.4 ¹¹¹	50	06		38		16		4	00	
20	118	23.4		17.4	129	17.7 ¹⁴⁸		27.4 ¹¹⁰	52	05		39		18		3	56	
21	133	23.6		18.4	143	51.5 ¹⁴⁸		16.2 ¹¹²	54	05		40		22		51	71	
22	148	23.8		19.4	158	25.3 ¹⁴⁸	-8	05.1 ¹¹¹	56	05		42		26		46	73	
23	163	24.0		20.4	172	59.1 ¹⁴⁸	-7	53.9 ¹¹²	58	05		44		30		40	75	
24	178	24.1	+1	21.4	187	32.9 ¹⁴⁸	-7	42.7 ¹¹²	60 S	18	04	18	46	19	35	3	33	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 55 ^m 8			Mag: -4.2 PMG: 12 ^h 32 ^m			Mag: 0.0 PMG: 5 ^h 02 ^m			Mag: -2.2 PMG: 16 ^h 13 ^m			Mag: +0.2 PMG: 15 ^h 36 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	180	32.9	171	08.7	+13	06.3	284	25.7	-22	18.6	116	13.5	+20	50.1	125	29.6		
1	195	35.3	186	12.4		05.8	299	27.0		18.7	131	15.5		50.1	140	31.9		
2	210	37.8	201	16.1		05.3	314	28.4		18.9	146	17.6		50.2	155	34.1		
3	225	40.3	216	19.8		04.8	329	29.8		19.0	161	19.6		50.3	170	36.3		
4	240	42.7	231	23.5		04.3	344	31.1		19.2	176	21.7		50.4	185	38.6		
5	255	45.2	246	27.2	+13	03.8	359	32.5	-22	19.3	191	23.7	+20	50.4	200	40.8		
6	270	47.7	261	31.0	+13	03.3	14	33.9	-22	19.5	206	25.8	+20	50.5	215	43.0		
7	285	50.1	276	34.7		02.8	29	35.2		19.6	221	27.8		50.6	230	45.3		
8	300	52.6	291	38.4		02.3	44	36.6		19.8	236	29.9		50.7	245	47.5		
9	315	55.1	306	42.1		01.8	59	38.0		19.9	251	31.9		50.7	260	49.7		
10	330	57.5	321	45.9		01.3	74	39.3		20.1	266	34.0		50.8	275	51.9		
11	346	00.0	336	49.6	+13	00.7	89	40.7	-22	20.2	281	36.0	+20	50.9	290	54.2		
12	1	02.4	351	53.3	+13	00.2	104	42.1	-22	20.4	296	38.0	+20	51.0	305	56.4		
13	16	04.9	6	57.1	+12	59.7	119	43.5		20.5	311	40.1		51.1	320	58.6		
14	31	07.4	22	00.8		59.2	134	44.8		20.7	326	42.1		51.1	336	00.9		
15	46	09.8	37	04.6		58.6	149	46.2		20.8	341	44.2		51.2	351	03.1		
16	61	12.3	52	08.3		58.1	164	47.6		21.0	356	46.2		51.3	6	05.3		
17	76	14.8	67	12.0	+12	57.6	179	48.9	-22	21.1	11	48.3	+20	51.4	21	07.5		
18	91	17.2	82	15.8	+12	57.0	194	50.3	-22	21.2	26	50.3	+20	51.4	36	09.8		
19	106	19.7	97	19.5		56.5	209	51.7		21.4	41	52.3		51.5	51	12.0		
20	121	22.2	112	23.3		56.0	224	53.1		21.5	56	54.4		51.6	66	14.2		
21	136	24.6	127	27.0		55.4	239	54.4		21.7	71	56.4		51.7	81	16.4		
22	151	27.1	142	30.8		54.9	254	55.8		21.8	86	58.5		51.7	96	18.7		
23	166	29.5	157	34.5		54.3	269	57.2		22.0	102	00.5		51.8	111	20.9		
24	181	32.0	172	38.3	+12	53.8	284	58.6	-22	22.1	117	02.6	+20	51.9	126	23.1		
Dif	—			+37 -5			+14 -1			+20 +1			+22 +1					

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: 28 ^d 7 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1 R°: 44 ^m											
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	178	24.1	+1 21.4	187	32.9	-7 42.7	60 N	4 17	5 08	5 50	6 27	9	17 29	80	
1	193	24.3	22.4	202	06.8 ¹⁴⁹	31.4 ¹¹³	58	24	11	51	24	11	32	76	
2	208	24.5	23.4	216	40.6 ¹⁴⁸	20.1 ¹¹³	56	30	14	52	21	13	34	74	
3	223	24.7	24.3	231	14.5 ¹⁴⁹	-7 08.7 ¹¹⁴	54	35	17	53	18	15	36	72	
4	238	24.9	25.3	245	48.4 ¹⁴⁹	-6 57.3 ¹¹⁴	52	40	20	53	15	18	38	70	
5	253	25.1	+1 26.3	260	22.2 ¹⁴⁸	-6 45.9 ¹¹⁴	50	4 44	5 22	5 54	6 13	19	17 39	68	
6	268	25.3	+1 27.3	274	56.1 ¹⁴⁹	-6 34.5 ¹¹⁴	45	4 52	5 26	5 56	6 07	24	17 43	64	
7	283	25.5	28.3	289	30.0 ¹⁴⁹	23.0 ¹¹⁵	40	4 58	30	57	6 03	26	46	60	
8	298	25.6	29.3	304	03.9 ¹⁴⁹	-6 11.4 ¹¹⁶	35	5 03	33	58	5 59	29	48	58	
9	313	25.8	30.2	318	37.8 ¹⁴⁹	-5 59.9 ¹¹⁵	30	07	35	5 59	56	31	51	55	
10	328	26.0	31.2	333	11.7 ¹⁴⁹	48.3 ¹¹⁶	20	13	39	6 01	50	36	54	51	
11	343	26.2	+1 32.2	347	45.5 ¹⁴⁸	-5 36.7 ¹¹⁶	10 N	5 17	5 41	6 02	5 45	39	17 58	46	
12	358	26.4	+1 33.2	2	19.4 ¹⁴⁹	-5 25.0 ¹¹⁷	0	5 18	5 42	6 03	5 40	43	18 01	43	
13	13	26.6	34.2	16	53.3 ¹⁴⁹	13.4 ¹¹⁶	10 S	19	43	04	35	47	04	39	
14	28	26.8	35.2	31	27.2 ¹⁴⁹	-5 01.6 ¹¹⁸	20	17	43	05	30	51	07	36	
15	43	27.0	36.1	46	01.1 ¹⁴⁹	-4 49.9 ¹¹⁷	30	14	42	06	24	55	11	31	
16	58	27.2	37.1	60	35.0 ¹⁴⁹	38.1 ¹¹⁸	35	12	41	06	21	57	13	29	
17	73	27.3	+1 38.1	75	08.9 ¹⁴⁹	-4 26.3 ¹¹⁸	40	5 08	5 40	6 07	5 17	60	18 15	26	
18	88	27.5	+1 39.1	89	42.8 ¹⁴⁹	-4 14.5 ¹¹⁸	45	5 04	5 38	6 07	5 12	64	18 18	23	
19	103	27.7	40.1	104	16.7 ¹⁴⁹	-4 02.7 ¹¹⁸	50	4 58	36	08	07	68	21	19	
20	118	27.9	41.1	118	50.6 ¹⁴⁹	-3 50.8 ¹¹⁹	52	55	35	08	04	70	23	17	
21	133	28.1	42.0	133	24.5 ¹⁴⁹	38.9 ¹¹⁹	54	52	33	09	5 02	71	24	16	
22	148	28.3	43.0	147	58.4 ¹⁴⁹	27.0 ¹¹⁹	56	48	32	09	4 59	73	26	13	
23	163	28.5	44.0	162	32.2 ¹⁴⁸	15.1 ¹¹⁹	58	44	30	09	55	77	28	11	
24	178	28.7	+1 45.0	177	06.1 ¹⁴⁹	-3 03.1 ¹²⁰	60 S	4 39	5 28	6 10	4 51	80	18 30	8	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 51 ^m 9			Mag: -4.1 PMG: 12 ^h 26 ^m			Mag: 0.0 PMG: 5 ^h 00 ^m			Mag: -2.2 PMG: 16 ^h 10 ^m			Mag: +0.2 PMG: 15 ^h 32 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	181	32.0	172 38.3	+12 53.8	284 58.6	-22 22.1	117 02.6	+20 51.9	126 23.1	+17 42.0	141 25.3	42.0	156 27.6	42.1	
1	196	34.5	187 42.0	53.2	299 59.9	22.3	132 04.6	52.0	141 25.3	42.0	156 27.6	42.1	171 29.8	42.2	
2	211	36.9	202 45.8	52.7	315 01.3	22.4	147 06.6	52.0	177 10.7	52.2	201 34.3	42.3	216 36.5	42.3	
3	226	39.4	217 49.6	52.1	330 02.7	22.6	162 08.7	52.1	222 16.8	52.4	246 40.9	42.5	261 43.2	42.5	
4	241	41.9	232 53.3	51.6	345 04.1	22.7	177 10.7	52.2	237 18.9	52.5	291 47.6	42.7	306 49.8	42.7	
5	256	44.3	247 57.1	+12 51.0	0 05.5	-22 22.8	192 12.8	+20 52.3	252 20.9	52.6	276 45.4	42.6	336 54.3	42.8	
6	271	46.8	263 00.8	+12 50.4	15 06.8	-22 23.0	207 14.8	+20 52.3	267 23.0	52.6	38 07.6	43.2	42 09.8	43.3	
7	286	49.3	278 04.6	49.9	30 08.2	23.1	222 16.8	52.4	282 25.0	+20 52.7	22 01.0	43.0	27 39.3	+20 53.3	
8	301	51.7	293 08.4	49.3	45 09.6	23.3	237 18.9	52.5	297 27.0	+20 52.8	37 03.2	43.1	42 41.3	53.3	
9	316	54.2	308 12.1	48.7	60 11.0	23.4	252 20.9	52.6	312 29.1	52.9	97 12.1	43.3	102 49.5	53.6	
10	331	56.7	323 15.9	48.1	75 12.4	23.6	267 23.0	52.6	327 31.1	53.0	127 16.5	43.5	137 23.8	53.5	
11	346	59.1	338 19.7	+12 47.6	90 13.7	-22 23.7	282 25.0	+20 52.7	342 33.2	53.0	152 26.2	43.2	167 28.7	53.6	
12	2	01.6	353 23.5	+12 47.0	105 15.1	-22 23.9	297 27.0	+20 52.8	357 35.2	53.1	178 28.5	44.0	182 31.1	+12 39.9	
13	17	04.0	8 27.2	46.4	120 16.5	24.0	312 29.1	52.9	12 37.2	+20 53.2	18 15	26	19 01.0	+20 53.7	
14	32	06.5	23 31.0	45.8	135 17.9	24.1	327 31.1	53.0	13 37.2	+20 53.2	21 19	23	24 01.0	+20 53.2	
15	47	09.0	38 34.8	45.2	150 19.3	24.3	342 33.2	53.0	14 37.2	+20 53.2	23 17	23	25 01.0	+20 53.1	
16	62	11.4	53 38.6	44.6	165 20.7	24.4	357 35.2	53.1	15 01.0	+20 53.1	24 16	16	26 01.0	+20 52.9	
17	77	13.9	68 42.3	+12 44.1	180 22.0	-22 24.6	12 37.2	+20 53.2	16 01.0	+20 53.2	26 13	29	27 01.0	+20 52.8	
18	92	16.4	83 46.1	+12 43.5	195 23.4	-22 24.7	27 39.3	+20 53.3	17 01.0	+20 53.3	28 11	28	28 01.0	+20 53.3	
19	107	18.8	98 49.9	42.9	210 24.8	24.9	42 41.3	53.3	18 01.0	+20 53.3	29 17	23	29 01.0	+20 53.6	
20	122	21.3	113 53.7	42.3	225 26.2	25.0	57 43.4	53.4	19 01.0	+20 53.4	30 19	23	30 01.0	+20 53.7	
21	137	23.8	128 57.5	41.7	240 27.6	25.1	72 45.4	53.5	20 01.0	+20 53.5	31 29	23	31 01.0	+20 53.7	
22	152	26.2	144 01.3	41.1	255 29.0	25.3	87 47.4	53.6	21 01.0	+20 53.6	32 41	23	32 01.0	+20 53.7	
23	167	28.7	159 05.0	40.5	270 30.4	25.4	102 49.5	53.6	22 01.0	+20 53.6	33 51	23	33 01.0	+20 53.7	
24	182	31.1	174 08.8	+12 39.9	285 31.7	-22 25.6	117 51.5	+20 53.7	23 01.0	+20 53.7	34 51	23	34 01.0	+20 53.7	
Dif	—		+38	-6	+14		-1	+20		+1	+22		+1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 29 ^d 7 PHE { 4 ^h : 55'3 12 ^h : 55'4 20 ^h : 55'6											
	PMG: 12 ^h 05 ^m 9		SD: 15'0 PMG: 12 ^h 34 ^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	m
0	178	28.7	+1 45.0		177	06.1	-3 03.1	60 N	18 27	19 09	20 00	6 36 8	18 49 81	
1	193	28.8		46.0	191	39.9 ¹⁴⁸	-2 51.1 ¹²⁰	58	25	05	19 53	35 11	48 79	
2	208	29.0		47.0	206	13.8 ¹⁴⁹	39.1 ¹²⁰	56	24	19 01	47	34 14	48 76	
3	223	29.2		47.9	220	47.6 ¹⁴⁸	27.1 ¹²⁰	54	23	18 58	41	33 16	48 73	
4	238	29.4		48.9	235	21.5 ¹⁴⁹	15.1 ¹²⁰	52	22	56	36	33 17	48 71	
5	253	29.6	+1 49.9		249	55.3 ¹⁴⁸	-2 03.0 ¹²¹	50	18 21	18 53	19 32	6 32 19	18 47 70	
6	268	29.8	+1 50.9		264	29.1 ¹⁴⁸	-1 50.9 ¹²¹	45	18 19	18 48	19 23	6 31 23	18 47 65	
7	283	30.0		51.9	279	02.9 ¹⁴⁸	38.9 ¹²⁰	40	17	44	16	29 27	46 62	
8	298	30.2		52.9	293	36.7 ¹⁴⁸	26.8 ¹²¹	35	16	41	11	28 30	46 59	
9	313	30.4		53.8	308	10.4 ¹⁴⁷	14.6 ¹²²	30	14	38	06	27 32	46 56	
10	328	30.5		54.8	322	44.2 ¹⁴⁸	-1 02.5 ¹²¹	20	12	34	19 00	26 36	45 52	
11	343	30.7	+1 55.8		337	17.9 ¹⁴⁷	-0 50.4 ¹²¹	10 N	18 11	18 32	18 56	6 24 40	18 44 48	
12	358	30.9	+1 56.8		351	51.7 ¹⁴⁸	-0 38.2 ¹²²	0	18 09	18 30	18 54	6 23 44	18 44 44	
13	13	31.1		57.8	6	25.4 ¹⁴⁷	26.0 ¹²²	10 S	08	29	53	22 47	43 41	
14	28	31.3		58.8	20	59.1 ¹⁴⁷	13.9 ¹²¹	20	06	28	54	21 51	43 36	
15	43	31.5	+1 59.7		35	32.8 ¹⁴⁷	-0 01.7 ¹²²	30	05	29	57	19 56	42 32	
16	58	31.7	+2 00.7		50	06.4 ¹⁴⁶	+0 10.5 ¹²²	35	04	29	18 59	18 58	42 29	
17	73	31.9	+2 01.7		64	40.1 ¹⁴⁷	+0 22.7 ¹²²	40	18 03	18 30	19 02	6 17 61	18 41 27	
18	88	32.0	+2 02.7		79	13.7 ¹⁴⁶	+0 34.9 ¹²²	45	18 02	18 32	19 06	6 16 65	18 41 23	
19	103	32.2		03.7	93	47.3 ¹⁴⁶	47.1 ¹²²	50	01	33	11	15 68	40 20	
20	118	32.4		04.6	108	20.8 ¹⁴⁵	+0 59.3 ¹²²	52	01	34	14	14 71	40 18	
21	133	32.6		05.6	122	54.4 ¹⁴⁶	+1 11.6 ¹²³	54	00	35	17	13 73	40 15	
22	148	32.8		06.6	137	27.9 ¹⁴⁵	23.8 ¹²²	56	18 00	37	20	12 75	39 14	
23	163	33.0		07.6	152	01.4 ¹⁴⁵	36.0 ¹²²	58	17 59	38	24	12 77	39 11	
24	178	33.2	+2 08.6		166	34.9 ¹⁴⁵	+1 48.3 ¹²³	60 S	17 58	18 40	19 29	6 11 80	18 38 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 48 ^m 0		Mag: -4.1 PMG: 12 ^h 20 ^m		Mag: 0.0 PMG: 4 ^h 57 ^m		Mag: -2.2 PMG: 16 ^h 06 ^m		Mag: +0.2 PMG: 15 ^h 29 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	182	31.1	174 08.8	+12 39.9	285 31.7	-22 25.6	117 51.5	+20 53.7	127 16.5	+17 43.5
1	197	33.6	189 12.6		300 33.1	25.7	132 53.5	53.8	142 18.7	43.5
2	212	36.1	204 16.4		315 34.5	25.9	147 55.6	53.9	157 21.0	43.6
3	227	38.5	219 20.2		330 35.9	26.0	162 57.6	53.9	172 23.2	43.6
4	242	41.0	234 24.0		345 37.3	26.1	177 59.6	54.0	187 25.4	43.7
5	257	43.5	249 27.8	+12 36.8	0 38.7	-22 26.3	193 01.7	+20 54.1	202 27.6	+17 43.8
6	272	45.9	264 31.6	+12 36.2	15 40.1	-22 26.4	208 03.7	+20 54.2	217 29.9	+17 43.8
7	287	48.4	279 35.4		30 41.5	26.6	223 05.8	54.3	232 32.1	43.9
8	302	50.9	294 39.2		45 42.9	26.7	238 07.8	54.3	247 34.3	44.0
9	317	53.3	309 43.0		60 44.3	26.9	253 09.8	54.4	262 36.5	44.0
10	332	55.8	324 46.8		75 45.7	27.0	268 11.9	54.5	277 38.7	44.1
11	347	58.3	339 50.6	+12 33.0	90 47.0	-22 27.1	283 13.9	+20 54.6	292 41.0	+17 44.1
12	3	00.7	354 54.4	+12 32.4	105 48.4	-22 27.3	298 15.9	+20 54.6	307 43.2	+17 44.2
13	18	03.2	9 58.2		120 49.8	27.4	313 18.0	54.7	322 45.4	44.3
14	33	05.6	25 02.0		135 51.2	27.6	328 20.0	54.8	337 47.6	44.3
15	48	08.1	40 05.8		150 52.6	27.7	343 22.0	54.9	352 49.9	44.4
16	63	10.6	55 09.6		165 54.0	27.8	358 24.1	54.9	7 52.1	44.5
17	78	13.0	70 13.4	+12 29.2	180 55.4	-22 28.0	13 26.1	+20 55.0	22 54.3	+17 44.5
18	93	15.5	85 17.2	+12 28.5	195 56.8	-22 28.1	28 28.1	+20 55.1	37 56.5	+17 44.6
19	108	18.0	100 21.0		210 58.2	28.3	43 30.2	55.2	52 58.7	44.6
20	123	20.4	115 24.8		225 59.6	28.4	58 32.2	55.3	68 01.0	44.7
21	138	22.9	130 28.7		241 01.0	28.5	73 34.2	55.3	83 03.2	44.8
22	153	25.4	145 32.5		256 02.4	28.7	88 36.3	55.4	98 05.4	44.8
23	168	27.8	160 36.3		271 03.8	28.8	103 38.3	55.5	113 07.6	44.9
24	183	30.3	175 40.1	+12 24.6	286 05.2	-22 29.0	118 40.3	+20 55.6	128 09.8	+17 45.0
Dif	—		+38	-6	+14	-1	+20	+1	+22	+1

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: 0 ^d 9 PHE { 4 ^h : 55/7 12 ^h : 55/9 20 ^h : 56/0 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	33.2	+2 08.6	166	34.9	+1 48.3	60 N	4 10	5 02	5 44	6 44	10	20 10	83	
1	193	33.4	09.6	181	08.4 ¹⁴⁵	+2 00.5 ¹²²	58	18	06	45	46	12	07	80	
2	208	33.6	10.5	195	41.8 ¹⁴⁴	12.7 ¹²²	56	24	09	46	48	14	04	77	
3	223	33.7	11.5	210	15.2 ¹⁴⁴	24.9 ¹²²	54	30	12	48	49	17	20 01	75	
4	238	33.9	12.5	224	48.6 ¹⁴⁴	37.2 ¹²³	52	35	15	49	50	19	19 59	73	
5	253	34.1	+2 13.5	239	22.0 ¹⁴⁴	+2 49.4 ¹²²	50	4 39	5 17	5 50	6 51	21	19 57	71	
6	268	34.3	+2 14.5	253	55.3 ¹⁴³	+3 01.6 ¹²²	45	4 48	5 23	5 52	6 54	24	19 52	67	
7	283	34.5	15.4	268	28.6 ¹⁴³	13.8 ¹²²	40	4 55	27	54	56	27	48	63	
8	298	34.7	16.4	283	01.8 ¹⁴²	26.0 ¹²²	35	5 00	30	55	58	30	45	60	
9	313	34.9	17.4	297	35.1 ¹⁴³	38.2 ¹²²	30	05	33	57	6 59	33	42	58	
10	328	35.1	18.4	312	08.3 ¹⁴²	+3 50.4 ¹²²	20	11	37	5 59	7 02	37	37	53	
11	343	35.3	+2 19.4	326	41.4 ¹⁴¹	+4 02.6 ¹²²	10 N	5 15	5 40	6 01	7 04	42	19 32	50	
12	358	35.4	+2 20.3	341	14.6 ¹⁴²	+4 14.8 ¹²²	0	5 18	5 42	6 02	7 07	45	19 28	46	
13	13	35.6	21.3	355	47.7 ¹⁴¹	27.0 ¹²²	10 S	19	43	04	09	49	24	42	
14	28	35.8	22.3	10	20.7 ¹⁴⁰	39.1 ¹²¹	20	18	43	05	12	52	19	39	
15	43	36.0	23.3	24	53.7 ¹⁴⁰	+4 51.3 ¹²²	30	15	43	07	15	57	14	34	
16	58	36.2	24.3	39	26.7 ¹⁴⁰	+5 03.4 ¹²¹	35	13	43	08	16	60	11	32	
17	73	36.4	+2 25.2	53	59.7 ¹⁴⁰	+5 15.5 ¹²¹	40	5 10	5 42	6 09	7 18	63	19 08	29	
18	88	36.6	+2 26.2	68	32.6 ¹³⁹	+5 27.6 ¹²¹	45	5 07	5 41	6 10	7 21	66	19 04	26	
19	103	36.8	27.2	83	05.5 ¹³⁹	39.7 ¹²¹	50	5 01	39	11	23	71	19 00	21	
20	118	37.0	28.2	97	38.3 ¹³⁸	+5 51.8 ¹²¹	52	4 59	38	12	25	72	18 58	19	
21	133	37.1	29.2	112	11.1 ¹³⁸	+6 03.9 ¹²¹	54	56	37	12	26	74	55	18	
22	148	37.3	30.1	126	43.8 ¹³⁷	15.9 ¹²⁰	56	52	36	13	27	77	53	15	
23	163	37.5	31.1	141	16.6 ¹³⁸	27.9 ¹²⁰	58	49	35	14	29	80	50	13	
24	178	37.7	+2 32.1	155	49.2 ¹³⁶	+6 39.9 ¹²⁰	60 S	4 44	5 33	6 15	7 31	82	18 47	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 44 ^m 1		Mag: -4.2 PMG: 12 ^h 14 ^m			Mag: 0.0 PMG: 4 ^h 55 ^m			Mag: -2.2 PMG: 16 ^h 03 ^m			Mag: +0.2 PMG: 15 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	183	30.3	175	40.1	+12 24.6	286	05.2	-22 29.0	118	40.3	+20 55.6	128	09.8	+17 45.0	
1	198	32.7	190	43.9	24.0	301	06.6	29.1	133	42.3	55.6	143	12.1	45.0	
2	213	35.2	205	47.7	23.3	316	08.0	29.2	148	44.4	55.7	158	14.3	45.1	
3	228	37.7	220	51.5	22.6	331	09.4	29.4	163	46.4	55.8	173	16.5	45.1	
4	243	40.1	235	55.4	22.0	346	10.8	29.5	178	48.4	55.9	188	18.7	45.2	
5	258	42.6	250	59.2	+12 21.3	1	12.2	-22 29.7	193	50.5	+20 55.9	203	20.9	+17 45.3	
6	273	45.1	266	03.0	+12 20.6	16	13.6	-22 29.8	208	52.5	+20 56.0	218	23.2	+17 45.3	
7	288	47.5	281	06.8	19.9	31	15.0	29.9	223	54.5	56.1	233	25.4	45.4	
8	303	50.0	296	10.6	19.3	46	16.4	30.1	238	56.6	56.2	248	27.6	45.5	
9	318	52.5	311	14.5	18.6	61	17.8	30.2	253	58.6	56.3	263	29.8	45.5	
10	333	54.9	326	18.3	17.9	76	19.3	30.3	269	00.6	56.3	278	32.0	45.6	
11	348	57.4	341	22.1	+12 17.2	91	20.7	-22 30.5	284	02.6	+20 56.4	293	34.3	+17 45.7	
12	3	59.9	356	25.9	+12 16.5	106	22.1	-22 30.6	299	04.7	+20 56.5	308	36.5	+17 45.7	
13	19	02.3	11	29.8	15.8	121	23.5	30.8	314	06.7	56.6	323	38.7	45.8	
14	34	04.8	26	33.6	15.1	136	24.9	30.9	329	08.7	56.6	338	40.9	45.8	
15	49	07.2	41	37.4	14.5	151	26.3	31.0	344	10.8	56.7	353	43.1	45.9	
16	64	09.7	56	41.2	13.8	166	27.7	31.2	359	12.8	56.8	8	45.4	46.0	
17	79	12.2	71	45.1	+12 13.1	181	29.1	-22 31.3	14	14.8	+20 56.9	23	47.6	+17 46.0	
18	94	14.6	86	48.9	+12 12.4	196	30.5	-22 31.5	29	16.8	+20 56.9	38	49.8	+17 46.1	
19	109	17.1	101	52.7	11.7	211	31.9	31.6	44	18.9	57.0	53	52.0	46.2	
20	124	19.6	116	56.5	11.0	226	33.3	31.7	59	20.9	57.1	68	54.2	46.2	
21	139	22.0	132	00.4	10.3	241	34.8	31.9	74	22.9	57.2	83	56.4	46.3	
22	154	24.5	147	04.2	09.5	256	36.2	32.0	89	25.0	57.3	98	58.7	46.3	
23	169	27.0	162	08.0	08.8	271	37.6	32.1	104	27.0	57.3	114	00.9	46.4	
24	184	29.4	177	11.9	+12 08.1	286	39.0	-22 32.3	119	29.0	+20 57.4	129	03.1	+17 46.5	
Dif	—		+38 -7			+14 -1			+20 +1		+22 +1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0			Edad: 1 ^d 9 PHE { 4 ^h : 56'2 12 ^h : 56'3 20 ^h : 56'5 R°: 47 ^m														
	PMG: 12 ^h 05 ^m 3				SD: 15'3				PMG: 14 ^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	h m m				
0	178	37.7	+2 32.1	155	49.2	+6 39.9		60 N	18 32	19 14	20 06	6 54 11	21 33 86					
1	193	37.9		170	21.8 ¹³⁶	+6 51.9 ¹²⁰		58	30	10	19 58	6 58 14	27 82					
2	208	38.1	34.1	184	54.4 ¹³⁶	+7 03.8 ¹¹⁹		56	28	06	51	7 02 17	21 80					
3	223	38.3	35.0	199	26.9 ¹³⁵	15.8 ¹²⁰		54	27	19 02	45	06 18	16 77					
4	238	38.5	36.0	213	59.4 ¹³⁵	27.7 ¹¹⁹		52	25	18 59	40	09 21	12 74					
5	253	38.6	+2 37.0	228	31.9 ¹³⁵	+7 39.5 ¹¹⁸		50	18 24	18 57	19 35	7 12 22	21 08 72					
6	268	38.8	+2 38.0	243	04.3 ¹³⁴	+7 51.4 ¹¹⁹		45	18 21	18 51	19 26	7 18 27	20 59 68					
7	283	39.0	39.0	257	36.6 ¹³³	+8 03.2 ¹¹⁸		40	19	46	18	23 30	51 65					
8	298	39.2	39.9	272	08.9 ¹³³	15.0 ¹¹⁸		35	17	43	12	28 33	45 62					
9	313	39.4	40.9	286	41.2 ¹³³	26.8 ¹¹⁸		30	16	40	08	32 36	40 59					
10	328	39.6	41.9	301	13.3 ¹³¹	38.5 ¹¹⁷		20	13	35	19 01	39 40	30 55					
11	343	39.8	+2 42.9	315	45.5 ¹³²	+8 50.2 ¹¹⁷		10 N	18 11	18 32	18 56	7 46 43	20 22 51					
12	358	40.0	+2 43.9	330	17.6 ¹³¹	+9 01.9 ¹¹⁷		0	18 09	18 29	18 53	7 52 47	20 14 48					
13	13	40.2	44.8	344	49.6 ¹³⁰	13.5 ¹¹⁶		10 S	07	28	52	7 58 50	20 06 45					
14	28	40.3	45.8	359	21.6 ¹³⁰	25.1 ¹¹⁶		20	05	27	52	8 04 54	19 58 41					
15	43	40.5	46.8	13	53.5 ¹²⁹	36.7 ¹¹⁶		30	03	26	54	12 58	48 37					
16	58	40.7	47.8	28	25.4 ¹²⁹	48.2 ¹¹⁵		35	01	27	56	16 61	43 34					
17	73	40.9	+2 48.7	42	57.2 ¹²⁸	+9 59.7 ¹¹⁵		40	18 00	18 27	18 58	8 21 64	19 37 31					
18	88	41.1	+2 49.7	57	29.0 ¹²⁸	+10 11.2 ¹¹⁵		45	17 59	18 28	19 02	8 27 67	19 30 28					
19	103	41.3	50.7	72	00.7 ¹²⁷	22.6 ¹¹⁴		50	57	29	07	34 71	21 25					
20	118	41.5	51.7	86	32.4 ¹²⁷	34.0 ¹¹⁴		52	56	30	09	37 74	17 23					
21	133	41.7	52.7	101	04.0 ¹²⁶	45.3 ¹¹³		54	55	30	12	40 76	13 20					
22	148	41.9	53.6	115	35.5 ¹²⁵	+10 56.6 ¹¹³		56	54	31	15	44 79	08 18					
23	163	42.0	54.6	130	07.0 ¹²⁵	+11 07.8 ¹¹²		58	53	32	18	49 81	19 03 15					
24	178	42.2	+2 55.6	144	38.4 ¹²⁴	+11 19.0 ¹¹²		60 S	17 52	18 34	19 22	8 53 85	18 57 12					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 40 ^m 1		Mag: -4.2 PMG: 12 ^h 08 ^m			Mag: -0.1 PMG: 4 ^h 53 ^m			Mag: -2.2 PMG: 16 ^h 00 ^m			Mag: +0.2 PMG: 15 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	184	29.4	177	11.9	+12 08.1	286	39.0	-22 32.3	119	29.0	+20 57.4	129	03.1	+17 46.5				
1	199	31.9	192	15.7	07.4	301	40.4	32.4	134	31.0	57.5	144	05.3	46.5				
2	214	34.3	207	19.5	06.7	316	41.8	32.6	149	33.1	57.6	159	07.5	46.6				
3	229	36.8	222	23.4	06.0	331	43.2	32.7	164	35.1	57.6	174	09.7	46.7				
4	244	39.3	237	27.2	05.3	346	44.7	32.8	179	37.1	57.7	189	12.0	46.7				
5	259	41.7	252	31.0	+12 04.5	1	46.1	-22 33.0	194	39.1	+20 57.8	204	14.2	+17 46.8				
6	274	44.2	267	34.9	+12 03.8	16	47.5	-22 33.1	209	41.2	+20 57.9	219	16.4	+17 46.8				
7	289	46.7	282	38.7	03.1	31	48.9	33.2	224	43.2	57.9	234	18.6	46.9				
8	304	49.1	297	42.5	02.4	46	50.3	33.4	239	45.2	58.0	249	20.8	47.0				
9	319	51.6	312	46.4	01.6	61	51.7	33.5	254	47.2	58.1	264	23.0	47.0				
10	334	54.1	327	50.2	00.9	76	53.2	33.6	269	49.3	58.2	279	25.3	47.1				
11	349	56.5	342	54.0	+12 00.2	91	54.6	-22 33.8	284	51.3	+20 58.3	294	27.5	+17 47.2				
12	4	59.0	357	57.9	+11 59.4	106	56.0	-22 33.9	299	53.3	+20 58.3	309	29.7	+17 47.2				
13	20	01.5	13	01.7	58.7	121	57.4	34.0	314	55.3	58.4	324	31.9	47.3				
14	35	03.9	28	05.6	58.0	136	58.8	34.2	329	57.4	58.5	339	34.1	47.4				
15	50	06.4	43	09.4	57.2	152	00.3	34.3	344	59.4	58.6	354	36.3	47.4				
16	65	08.8	58	13.2	56.5	167	01.7	34.5	0	01.4	58.6	9	38.6	47.5				
17	80	11.3	73	17.1	+11 55.7	182	03.1	-22 34.6	15	03.4	+20 58.7	24	40.8	+17 47.5				
18	95	13.8	88	20.9	+11 55.0	197	04.5	-22 34.7	30	05.4	+20 58.8	39	43.0	+17 47.6				
19	110	16.2	103	24.7	54.2	212	06.0	34.9	45	07.5	58.9	54	45.2	47.7				
20	125	18.7	118	28.6	53.5	227	07.4	35.0	60	09.5	58.9	69	47.4	47.7				
21	140	21.2	133	32.4	52.7	242	08.8	35.1	75	11.5	59.0	84	49.6	47.8				
22	155	23.6	148	36.3	52.0	257	10.2	35.3	90	13.5	59.1	99	51.8	47.9				
23	170	26.1	163	40.1	51.2	272	11.7	35.4	105	15.6	59.2	114	54.1	47.9				
24	185	28.6	178	43.9	+11 50.5	287	13.1	-22 35.5	120	17.6	+20 59.3	129	56.3	+17 48.0				
Dif	—		+38			-7			+20			+1			+22		+1	

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: 2 ^d 9 PHE { 4 ^h : 56'7 12 ^h : 56'8 20 ^h : 57'0 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	42.2	+2	55.6	144	38.4	+11	19.0	60 N	4	03	4	55	5	37	7	05
1	193	42.4		56.6	159	09.7 ¹²³		30.2 ¹¹²	58	11	5	00	39	12	18	22	59
2	208	42.6		57.5	173	41.0 ¹²³		41.3 ¹¹¹	56	18	04	41	19	20	41	79	
3	223	42.8		58.5	188	12.3 ¹²³	+11	52.3 ¹¹⁰	54	24	07	43	24	23	33	77	
4	238	43.0	+2	59.5	202	43.4 ¹²¹	+12	03.3 ¹¹⁰	52	30	10	44	30	25	26	75	
5	253	43.2	+3	00.5	217	14.5 ¹²¹	+12	14.3 ¹¹⁰	50	4	34	5	13	5	45	7	34
6	268	43.4	+3	01.4	231	45.6 ¹²¹	+12	25.2 ¹⁰⁹	45	4	44	5	19	5	48	7	45
7	283	43.6		02.4	246	16.5 ¹¹⁹		36.1 ¹⁰⁹	40	51	23	51	7	53	35	21	56
8	298	43.7		03.4	260	47.5 ¹²⁰		46.9 ¹⁰⁸	35	4	57	27	53	8	01	37	47
9	313	43.9		04.4	275	18.3 ¹¹⁸	+12	57.6 ¹⁰⁷	30	5	02	30	54	8	39	39	61
10	328	44.1		05.4	289	49.1 ¹¹⁸	+13	08.3 ¹⁰⁷	20	09	35	5	57	19	43	25	58
11	343	44.3	+3	06.3	304	19.8 ¹¹⁷	+13	18.9 ¹⁰⁶	10 N	5	14	5	39	6	00	8	29
12	358	44.5	+3	07.3	318	50.4 ¹¹⁶	+13	29.5 ¹⁰⁶	0	5	17	5	41	6	02	8	39
13	13	44.7		08.3	333	21.0 ¹¹⁶		40.0 ¹⁰⁵	10 S	18	43	04	48	53	20	51	
14	28	44.9		09.3	347	51.5 ¹¹⁵	+13	50.4 ¹⁰⁴	20	18	44	06	8	58	57	39	
15	43	45.1		10.2	2	21.9 ¹¹⁴	+14	00.8 ¹⁰⁴	30	17	44	08	9	10	61	25	
16	58	45.2		11.2	16	52.3 ¹¹⁴		11.2 ¹⁰⁴	35	15	44	10	17	63	17	40	
17	73	45.4	+3	12.2	31	22.6 ¹¹³	+14	21.4 ¹⁰²	40	5	12	5	44	6	11	9	
18	88	45.6	+3	13.2	45	52.8 ¹¹²	+14	31.6 ¹⁰²	45	5	09	5	43	6	13	9	
19	103	45.8		14.1	60	23.0 ¹¹²		41.7 ¹⁰¹	50	05	42	14	45	74	46	29	
20	118	46.0		15.1	74	53.1 ¹¹¹	+14	51.8 ¹⁰¹	52	02	42	15	51	75	40	28	
21	133	46.2		16.1	89	23.1 ¹¹⁰	+15	01.8 ¹⁰⁰	54	5	00	41	16	9	56	78	
22	148	46.4		17.1	103	53.0 ¹⁰⁹		11.7 ⁹⁹	56	4	57	40	17	10	03	80	
23	163	46.6		18.0	118	22.9 ¹⁰⁹		21.6 ⁹⁹	58	53	39	18	10	83	18	21	
24	178	46.8	+3	19.0	132	52.7 ¹⁰⁸	+15	31.4 ⁹⁸	60 S	4	49	5	38	6	19	10	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 36 ^m 2			Mag: -4.2 PMG: 12 ^h 02 ^m			Mag: -0.1 PMG: 4 ^h 51 ^m			Mag: -2.2 PMG: 15 ^h 57 ^m			Mag: +0.2 PMG: 15 ^h 18 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	185	28.6		178	43.9	+11	50.5	287	13.1	-22	35.5	120	17.6	+20	59.3	129	56.3
1	200	31.0		193	47.8		49.7	302	14.5		35.7	135	19.6		59.3	144	58.5
2	215	33.5		208	51.6		49.0	317	15.9		35.8	150	21.6		59.4	160	00.7
3	230	36.0		223	55.4		48.2	332	17.4		35.9	165	23.6		59.5	175	02.9
4	245	38.4		238	59.3		47.4	347	18.8		36.1	180	25.7		59.6	190	05.1
5	260	40.9		254	03.1	+11	46.7	2	20.2	-22	36.2	195	27.7	+20	59.6	205	07.3
6	275	43.3		269	07.0	+11	45.9	17	21.7	-22	36.3	210	29.7	+20	59.7	220	09.6
7	290	45.8		284	10.8		45.1	32	23.1		36.5	225	31.7		59.8	235	11.8
8	305	48.3		299	14.6		44.4	47	24.5		36.6	240	33.7	+20	59.9	250	14.0
9	320	50.7		314	18.5		43.6	62	26.0		36.7	255	35.8	+21	00.0	265	16.2
10	335	53.2		329	22.3		42.8	77	27.4		36.9	270	37.8	+21	00.0	280	18.4
11	350	55.7		344	26.2	+11	42.0	92	28.8	-22	37.0	285	39.8	+21	00.1	295	20.6
12	5	58.1		359	30.0	+11	41.2	107	30.3	-22	37.1	300	41.8	+21	00.2	310	22.8
13	21	00.6		14	33.8		40.5	122	31.7		37.3	315	43.8		00.3	325	25.1
14	36	03.1		29	37.7		39.7	137	33.1		37.4	330	45.9		00.3	340	27.3
15	51	05.5		44	41.5		38.9	152	34.6		37.5	345	47.9		00.4	355	29.5
16	66	08.0		59	45.4		38.1	167	36.0		37.7	0	49.9		00.5	10	31.7
17	81	10.4		74	49.2	+11	37.3	182	37.4	-22	37.8	15	51.9	+21	00.6	25	33.9
18	96	12.9		89	53.0	+11	36.5	197	38.9	-22	37.9	30	53.9	+21	00.6	40	36.1
19	111	15.4		104	56.9		35.7	212	40.3		38.1	45	55.9		00.7	55	38.3
20	126	17.8		120	00.7		34.9	227	41.7		38.2	60	58.0		00.8	70	40.5
21	141	20.3		135	04.5		34.2	242	43.2		38.3	76	00.0		00.9	85	42.8
22	156	22.8		150	08.4		33.4	257	44.6		38.5	91	02.0		01.0	100	45.0
23	171	25.2		165	12.2		32.6	272	46.1		38.6	106	04.0		01.0	115	47.2
24	186	27.7		180	16.1	+11	31.8	287	47.5	-22	38.7	121	06.0	+21	01.1	130	49.4
Dif	—			+38			-8	+14			-1	+20			+1	+22	

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: 3 ^d 9 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/5 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	
0	178	46.8	+3 19.0	132	52.7	+15 31.4	97	60 N	18 37	19 19	20 12	7 20 20	*** ** *	*** ** *	
1	193	46.9		147	22.4 ¹⁰⁷		41.1	58	34	14	20 03	30 24	*** ** *	*** ** *	
2	208	47.1		161	52.1 ¹⁰⁷	+15 50.7	96	56	32	10	19 56	39 27	*** ** *	*** ** *	
3	223	47.3		176	21.7 ¹⁰⁶	+16 00.2	95	54	30	06	50	47 30	23 50 75		
4	238	47.5		190	51.2 ¹⁰⁵		09.7	52	29	03	44	7 55 31	41 73		
5	253	47.7	+3 23.9	205	20.6 ¹⁰⁴	+16 19.1	94	50	18 27	19 00	19 39	8 01 34	23 33 71		
6	268	47.9	+3 24.9	219	49.9 ¹⁰³	+16 28.4	93	45	18 24	18 53	19 29	8 16 37	23 16 68		
7	283	48.1		234	19.2 ¹⁰³		37.7	40	21	48	21	28 39	23 02 66		
8	298	48.3		248	48.4 ¹⁰²		46.8	35	19	44	14	38 42	22 51 63		
9	313	48.4		263	17.5 ¹⁰¹	+16 55.9	91	30	17	41	09	8 47 44	40 62		
10	328	48.6		277	46.6 ¹⁰¹	+17 04.9	90	20	13	36	19 01	9 02 47	23 59		
11	343	48.8	+3 29.7	292	15.6 ¹⁰⁰	+17 13.8	89	10 N	18 11	18 32	18 56	9 16 50	22 08 56		
12	358	49.0	+3 30.7	306	44.5 ⁹⁹	+17 22.6	88	0	18 08	18 29	18 53	9 28 53	21 53 55		
13	13	49.2		321	13.3 ⁹⁸		31.4	10 S	05	27	51	41 56	39 52		
14	28	49.4		326	42.0 ⁹⁷		40.0	20	03	25	50	9 55 58	24 50		
15	43	49.6		350	10.7 ⁹⁷		48.6	30	18 00	24	52	10 11 62	21 07 46		
16	58	49.8		4	39.3 ⁹⁶	+17 57.1	85	35	17 59	24	53	20 64	20 57 45		
17	73	50.0	+3 35.6	19	07.8 ⁹⁵	+18 05.4	83	40	17 57	18 24	18 55	10 31 66	20 45 43		
18	88	50.1	+3 36.5	33	36.2 ⁹⁴	+18 13.7	83	45	17 55	18 24	18 58	10 43 69	20 32 40		
19	103	50.3		37.5	48 04.6 ⁹⁴		21.9	50	53	25	19 02	10 59 72	15 37		
20	118	50.5		62	32.9 ⁹³		30.0	52	52	25	04	11 06 74	20 08 35		
21	133	50.7		77	01.1 ⁹²		38.0	54	50	26	07	14 76	19 59 34		
22	148	50.9		91	29.2 ⁹¹		45.9	56	49	26	09	23 79	50 31		
23	163	51.1		41.4	105 57.3 ⁹¹	+18 53.7	78	58	48	27	12	33 82	39 28		
24	178	51.3	+3 42.4	120	25.2 ⁸⁹	+19 01.4	77	60 S	17 46	18 28	19 16	11 45 85	19 26 25		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 32 ^m 3		Mag: -4.2 PMG: 11 ^h 56 ^m			Mag: -0.1 PMG: 4 ^h 48 ^m			Mag: -2.2 PMG: 15 ^h 53 ^m			Mag: +0.2 PMG: 15 ^h 14 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	186	27.7	180	16.1	+11 31.8		287 47.5	-22 38.7	121 06.0	+21 01.1		130 49.4	+17 49.5		
1	201	30.2	195	19.9		31.0	302 48.9	38.9	136 08.1		01.2	145 51.6	49.6		
2	216	32.6	210	23.7		30.2	317 50.4	39.0	151 10.1		01.3	160 53.8	49.6		
3	231	35.1	225	27.6		29.3	332 51.8	39.1	166 12.1		01.3	175 56.0	49.7		
4	246	37.6	240	31.4		28.5	347 53.3	39.3	181 14.1		01.4	190 58.2	49.8		
5	261	40.0	255	35.2	+11 27.7		2 54.7	-22 39.4	196 16.1	+21 01.5		206 00.4	+17 49.8		
6	276	42.5	270	39.1	+11 26.9		17 56.2	-22 39.5	211 18.1	+21 01.6		221 02.7	+17 49.9		
7	291	44.9	285	42.9		26.1	32 57.6	39.6	226 20.1		01.7	236 04.9	50.0		
8	306	47.4	300	46.7		25.3	47 59.0	39.8	241 22.2		01.7	251 07.1	50.0		
9	321	49.9	315	50.6		24.5	63 00.5	39.9	256 24.2		01.8	266 09.3	50.1		
10	336	52.3	330	54.4		23.7	78 01.9	40.0	271 26.2		01.9	281 11.5	50.2		
11	351	54.8	345	58.2	+11 22.9		93 03.4	-22 40.2	286 28.2	+21 02.0		296 13.7	+17 50.2		
12	6	57.3	1	02.1	+11 22.0		108 04.8	-22 40.3	301 30.2	+21 02.0		311 15.9	+17 50.3		
13	21	59.7	16	05.9		21.2	123 06.3	40.4	316 32.2		02.1	326 18.1	50.4		
14	37	02.2	31	09.7		20.4	138 07.7	40.6	331 34.2		02.2	341 20.3	50.4		
15	52	04.7	46	13.6		19.6	153 09.2	40.7	346 36.3		02.3	356 22.6	50.5		
16	67	07.1	61	17.4		18.7	168 10.6	40.8	1 38.3		02.4	11 24.8	50.5		
17	82	09.6	76	21.2	+11 17.9		183 12.1	-22 41.0	16 40.3	+21 02.4		26 27.0	+17 50.6		
18	97	12.1	91	25.1	+11 17.1		198 13.5	-22 41.1	31 42.3	+21 02.5		41 29.2	+17 50.7		
19	112	14.5	106	28.9		16.3	213 15.0	41.2	46 44.3		02.6	56 31.4	50.7		
20	127	17.0	121	32.7		15.4	228 16.4	41.3	61 46.3		02.7	71 33.6	50.8		
21	142	19.4	136	36.6		14.6	243 17.9	41.5	76 48.3		02.7	86 35.8	50.9		
22	157	21.9	151	40.4		13.8	258 19.3	41.6	91 50.3		02.8	101 38.0	50.9		
23	172	24.4	166	44.2		12.9	273 20.8	41.7	106 52.4		02.9	116 40.2	51.0		
24	187	26.8	181	48.0	+11 12.1		288 22.2	-22 41.9	121 54.4	+21 03.0		131 42.4	+17 51.1		
Dif	—		+38			-8	+14		-1	+20		+1	+22		+

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 1			Edad: 5 ^d 9 PHE { SD: 15'8 PMG: 17 ^h 31 ^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	55.8	+4	05.7	107	14.2	+21 33.1	60 N	18 41	19 24	20 18	8 12 48	1 48 72		
1	193	56.0		06.6	121	40.4	72 37.9	58	39	19	09	29 50	31 70		
2	208	56.1		07.6	136	06.5	71 42.6	56	36	14	20 01	43 51	17 69		
3	223	56.3		08.6	150	32.5	70 47.2	54	34	10	19 54	8 56 52	1 05 67		
4	238	56.5		09.5	164	58.5	70 51.6	52	32	06	48	9 07 52	0 54 67		
5	253	56.7	+4	10.5	179	24.4	69 +21 56.0	50	18 30	19 03	19 42	9 17 53	0 44 66		
6	268	56.9	+4	11.5	193	50.2	68 +22 00.1	45	18 26	18 56	19 31	9 37 55	0 24 65		
7	283	57.1		12.4	208	16.0	68 04.2	40	23	51	23	9 54 55	0 08 63		
8	298	57.3		13.4	222	41.7	67 08.1	35	20	46	16	10 08 56	** ** *		
9	313	57.5		14.4	237	07.3	66 11.9	30	18	42	10	21 56	** ** *		
10	328	57.6		15.3	251	32.9	66 15.5	20	14	36	19 02	10 42 57	** ** *		
11	343	57.8	+4	16.3	265	58.5	66 +22 19.0	10 N	18 11	18 32	18 56	11 00 58	** ** *		
12	358	58.0	+4	17.3	280	23.9	64 +22 22.4	0	18 07	18 28	18 52	11 17 59	23 45 59		
13	13	58.2		18.2	294	49.4	65 25.6	10 S	04	25	50	35 59	27 59		
14	28	58.4		19.2	309	14.7	63 28.7	20	18 01	23	49	11 53 60	23 08 60		
15	43	58.6		20.2	323	40.0	63 31.7	30	17 58	22	49	12 15 60	22 46 60		
16	58	58.8		21.1	338	05.3	63 34.5	35	56	21	50	27 61	34 59		
17	73	58.9	+4	22.1	352	30.5	62 +22 37.2	40	17 54	18 21	18 52	12 42 61	22 19 59		
18	88	59.1	+4	23.1	6	55.7	62 +22 39.7	45	17 51	18 20	18 54	12 59 62	22 01 59		
19	103	59.3		24.0	21	20.8	61 42.1	50	48	20	18 58	13 21 62	21 39 59		
20	118	59.5		25.0	35	45.9	61 44.4	52	47	21	19 00	31 62	29 59		
21	133	59.7		26.0	50	10.9	60 46.5	54	46	21	02	42 63	17 59		
22	148	59.9		26.9	64	35.9	60 48.4	56	44	21	04	13 56 63	21 04 58		
23	164	00.1		27.9	79	00.8	59 50.2	58	42	21	07	14 11 64	20 48 58		
24	179	00.3	+4	28.9	93	25.7	59 +22 51.9	60 S	17 40	18 22	19 10	14 29 65	20 30 57		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 24 ^m 4		Mag: -4.2 PMG: 11 ^h 44 ^m		Mag: -0.2 PMG: 4 ^h 44 ^m		Mag: -2.1 PMG: 15 ^h 47 ^m		Mag: +0.2 PMG: 15 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	26.0	183	19.6	+10	51.6	288	57.3	-22	44.9	122	42.6	+21	04.8	132	35.4	+17	52.6
1	203	28.4	198	23.4		50.7	303	58.8		45.1	137	44.6		04.9	147	37.6		52.7
2	218	30.9	213	27.2		49.8	319	00.3		45.2	152	46.6		05.0	162	39.8		52.7
3	233	33.4	228	31.0		48.9	334	01.7		45.3	167	48.6		05.1	177	42.0		52.8
4	248	35.8	243	34.8		48.1	349	03.2		45.4	182	50.6		05.2	192	44.2		52.9
5	263	38.3	258	38.6	+10	47.2	4	04.7	-22	45.6	197	52.6	+21	05.2	207	46.4	+17	52.9
6	278	40.8	273	42.4	+10	46.3	19	06.1	-22	45.7	212	54.6	+21	05.3	222	48.6	+17	53.0
7	293	43.2	288	46.2		45.4	34	07.6		45.8	227	56.6		05.4	237	50.9		53.1
8	308	45.7	303	50.0		44.6	49	09.1		46.0	242	58.6		05.5	252	53.1		53.1
9	323	48.2	318	53.8		43.7	64	10.6		46.1	258	00.6		05.5	267	55.3		53.2
10	338	50.6	333	57.6		42.8	79	12.0		46.2	273	02.7		05.6	282	57.5		53.3
11	353	53.1	349	01.4	+10	41.9	94	13.5	-22	46.3	288	04.7	+21	05.7	297	59.7	+17	53.3
12	8	55.5	4	05.2	+10	41.0	109	15.0	-22	46.5	303	06.7	+21	05.8	313	01.9	+17	53.4
13	23	58.0	19	09.0		40.1	124	16.5		46.6	318	08.7		05.9	328	04.1		53.4
14	39	00.5	34	12.8		39.2	139	17.9		46.7	333	10.7		05.9	343	06.3		53.5
15	54	02.9	49	16.6		38.4	154	19.4		46.8	348	12.7		06.0	358	08.5		53.6
16	69	05.4	64	20.4		37.5	169	20.9		47.0	3	14.7		06.1	13	10.7		53.6
17	84	07.9	79	24.2	+10	36.6	184	22.4	-22	47.1	18	16.7	+21	06.2	28	12.9	+17	53.7
18	99	10.3	94	28.0	+10	35.7	199	23.8	-22	47.2	33	18.7	+21	06.2	43	15.1	+17	53.8
19	114	12.8	109	31.7		34.8	214	25.3		47.3	48	20.7		06.3	58	17.3		53.8
20	129	15.3	124	35.5		33.9	229	26.8		47.5	63	22.7		06.4	73	19.5		53.9
21	144	17.7	139	39.3		33.0	244	28.3		47.6	78	24.7		06.5	88	21.7		54.0
22	159	20.2	154	43.1		32.1	259	29.8		47.7	93	26.7		06.6	103	23.9		54.0
23	174	22.7	169	46.9		31.2	274	31.3		47.8	108	28.7		06.6	118	26.1		54.1
24	189	25.1	184	50.6	+10	30.3	289	32.7	-22	48.0	123	30.7	+21	06.7	133	28.3	+17	54.2
Dif	—		+38		-9		+15		-1		+20		+1		+22		+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: 6 ^d 9 SD: 16:0 PMG: 18 ^h 30 ^m	PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'1 Rº: 59 ^m																		
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº						
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m								
0	179	00.3	+4	28.9	93	25.7	+22	51.9	15	60 N	3	49	4	43	5	25	9	00	68	3	00	55	
1	194	00.4		29.8	107	50.5	58	53.4	14	58	3	58	4	48	28		19	67		2	41	57	
2	209	00.6		30.8	122	15.3	58	54.8	12	56	4	06		53	31		34	66		26	57		
3	224	00.8		31.8	136	40.1	58	56.0	11	54	13	4	57	33			48	65		12	58		
4	239	01.0		32.7	151	04.8	57	57.1	11	52	19	5	01	35			9	59	65	2	01	57	
5	254	01.2	+4	33.7	165	29.5	57	+22	58.1	10	50	4	25	5	04	5	37	10	10	64	1	50	58
6	269	01.4	+4	34.7	179	54.2	57	+22	58.8	7	45	4	36	5	11	5	41	10	32	63	1	29	58
7	284	01.6		35.6	194	18.8	56	+22	59.5	7	40		45		17	44	10	49	63	1	11	59	
8	299	01.7		36.6	208	43.4	56	+23	00.0	5	35		52		22	47	11	04	62	0	56	59	
9	314	01.9		37.5	223	08.0	56	+23	00.3	3	30	4	57	25	49		17	62		44	58		
10	329	02.1		38.5	237	32.5	55	00.5	2	20	5	06		32	54		39	61		22	59		
11	344	02.3	+4	39.5	251	57.0	55	+23	00.5	0	10 N	5	12	5	36	5	57	11	58	60	0	03	59
12	359	02.5	+4	40.4	266	21.5	55	+23	00.4	1	0	5	16	5	40	6	01	12	16	59	**	**	**
13	14	02.7		41.4	280	45.9	54	+23	00.1	3	10 S		18		43	04	34	58		**	**	**	
14	29	02.9		42.4	295	10.4	55	+22	59.7	4	20	19		45	07		12	53	58	**	**	**	
15	44	03.0		43.3	309	34.8	54	59.2	5	30	19		47		11		13	15	57	23	46	64	
16	59	03.2		44.3	323	59.2	54	58.4	8	35	18		47		13		28	56		33	65		
17	74	03.4	+4	45.3	338	23.6	54	+22	57.6	8	40	5	17	5	48	6	15	13	43	55	23	18	66
18	89	03.6	+4	46.2	352	47.9	53	+22	56.5	11	45	5	14	5	48	6	18	14	01	54	23	00	68
19	104	03.8		47.2	7	12.2	53	55.4	11	50		11		48	21		23	53		22	38	70	
20	119	04.0		48.1	21	36.6	54	54.0	15	52	09		48	22			33	52		28	70		
21	134	04.2		49.1	36	00.9	53	52.5	15	54	07		48	24			45	51		16	72		
22	149	04.3		50.1	50	25.2	53	50.9	16	56	05		48	25			14	59	50	22	02	74	
23	164	04.5		51.0	64	49.5	53	49.1	18	58	5	02	48	27			15	15	48	21	46	75	
24	179	04.7	+4	52.0	79	13.7	52	+22	47.2	19	60 S	4	59	5	48	6	29	15	34	46	21	27	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 11 ^h 20 ^m 5		Mag: -4.2 PMG: 11 ^h 38 ^m		Mag: -0.2 PMG: 4 ^h 41 ^m		Mag: -2.1 PMG: 15 ^h 44 ^m		Mag: +0.2 PMG: 15 ^h 04 ^m													
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec												
h	°	'	°	°	'	°	°	'	°	°	'											
0	189	25.1	184	50.6	+10	30.3	289	32.7	-22	123	30.7	+21	06.7	133	28.3	+17	54.2					
1	204	27.6	199	54.4		29.4	304	34.2		48.1	138	32.7		06.8	148	30.5		54.2				
2	219	30.0	214	58.2		28.5	319	35.7		48.2	153	34.7		06.9	163	32.7		54.3				
3	234	32.5	230	02.0		27.6	334	37.2		48.3	168	36.7		06.9	178	34.9		54.4				
4	249	35.0	245	05.7		26.7	349	38.7		48.5	183	38.7		07.0	193	37.1		54.4				
5	264	37.4	260	09.5	+10	25.8	4	40.2	-22	48.6	198	40.7	+21	07.1	208	39.3	+17	54.5				
6	279	39.9	275	13.3	+10	24.9	19	41.6	-22	48.7	213	42.7	+21	07.2	223	41.5	+17	54.5				
7	294	42.4	290	17.0		24.0	34	43.1		48.8	228	44.7		07.3	238	43.7		54.6				
8	309	44.8	305	20.8		23.1	49	44.6		49.0	243	46.7		07.3	253	46.0		54.7				
9	324	47.3	320	24.6		22.2	64	46.1		49.1	258	48.7		07.4	268	48.2		54.7				
10	339	49.8	335	28.3		21.3	79	47.6		49.2	273	50.7		07.5	283	50.4		54.8				
11	354	52.2	350	32.1	+10	20.4	94	49.1	-22	49.3	288	52.7	+21	07.6	298	52.6	+17	54.9				
12	9	54.7	5	35.8	+10	19.5	109	50.6	-22	49.5	303	54.7	+21	07.6	313	54.8	+17	54.9				
13	24	57.1	20	39.6		18.6	124	52.1		49.6	318	56.7		07.7	328	57.0		55.0				
14	39	59.6	35	43.4		17.7	139	53.6		49.7	333	58.7		07.8	343	59.2		55.1				
15	55	02.1	50	47.1		16.7	154	55.0		49.8	349	00.7		07.9	359	01.4		55.1				
16	70	04.5	65	50.9		15.8	169	56.5		50.0	4	02.7		08.0	14	03.6		55.2				
17	85	07.0	80	54.6	+10	14.9	184	58.0	-22	50.1	19	04.7	+21	08.0	29	05.8	+17	55.3				
18	100	09.5	95	58.4	+10	14.0	199	59.5	-22	50.2	34	06.7	+21	08.1	44	08.0	+17	55.3				
19	115	11.9	111	02.1		13.1	215	01.0		50.3	49	08.7		08.2	59	10.2		55.4				
20	130	14.4	126	05.9		12.2	230	02.5		50.4	64	10.7		08.3	74	12.4		55.5				
21	145	16.9	141	09.6		11.2	245	04.0		50.6	79	12.7		08.4	89	14.6		55.5				
22	160	19.3	156	13.3		10.3	260	05.5		50.7	94	14.7		08.4	104	16.8		55.6				
23	175	21.8	171	17.1		9.4	275	07.0		50.8	109	16.7		08.5	119	19.0		55.7				
24	190	24.3	186	20.8	+10	08.5	290	08.5	-22	50.9	124	18.7	+21	08.6	134	21.2	+17	55.7				
Dif	—		+38	-9		+15	-1			+20	+1			+1		+22			+			

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: 7 ^d 9 PHE { SD: 16'1 PMG: 19 ^h 29 ^m 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/5 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	h m m
0	179	04.7	+4 52.0	79	13.7	+22 47.2	60 N	18 46	19 30	20 24	10 08 85		3 55 39	
1	194	04.9		93	38.0	53 45.1	58	43	24	14	26 81		38 41	
2	209	05.1		108	02.3	53 42.8	56	40	19	20 06	40 80		23 43	
3	224	05.3		122	26.6	53 40.4	54	38	14	19 58	10 53 77		3 10 45	
4	239	05.5		136	50.8	52 37.9	52	36	10	52	11 04 76		2 58 47	
5	254	05.6	+4 56.8	151	15.1	53 +22 35.2	50	18 33	19 06	19 46	11 14 74		2 48 48	
6	269	05.8	+4 57.8	165	39.3	52 +22 32.3	45	18 29	18 59	19 34	11 35 72		2 27 50	
7	284	06.0		180	03.6	53 29.3	40	25	53	25	11 52 69		2 10 51	
8	299	06.2	+4 59.7	194	27.9	53 26.1	35	22	48	18	12 06 68		1 55 53	
9	314	06.4	+5 00.6	208	52.1	52 22.8	30	19	43	12	19 66		42 55	
10	329	06.6		223	16.4	53 19.4	20	15	37	19 03	40 63		21 56	
11	344	06.7	+5 02.6	237	40.7	53 +22 15.7	10 N	18 11	18 32	18 56	12 58 61		1 02 58	
12	359	06.9	+5 03.5	252	05.0	53 +22 12.0	0	18 07	18 28	18 52	13 15 59		0 44 60	
13	14	07.1		04.5	266	29.3	10 S	03	24	49	32 57		26 61	
14	29	07.3		05.4	280	53.6	20	18 00	22	47	13 51 54		0 08 62	
15	44	07.5		06.4	295	17.9	30	17 55	19	47	14 12 52		*** ** *	
16	59	07.7		07.4	309	42.3	35	53	18	48	24 50		*** ** *	
17	74	07.9	+5 08.3	324	06.6	53 +21 50.9	40	17 50	18 18	18 49	14 38 49		*** ** *	
18	89	08.0	+5 09.3	338	31.0	54 +21 46.2	45	17 48	18 17	18 51	14 55 46		*** ** *	
19	104	08.2		10.2	352	55.4	50	44	16	54	15 16 42		23 48 78	
20	119	08.4		11.2	7	19.8	52	42	16	55	25 42		38 80	
21	134	08.6		12.2	21	44.3	54	41	16	57	36 40		28 81	
22	149	08.8		13.1	36	08.7	56	39	16	18 59	15 49 37		16 83	
23	164	09.0		14.1	50	33.2	58	37	16	19 01	16 03 35		23 01 87	
24	179	09.1	+5 15.0	64	57.7	55 +21 15.1	60 S	17 34	18 16	19 04	16 20 31		22 45 90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 16 ^m 5		Mag: -4.2 PMG: 11 ^h 32 ^m			Mag: -0.2 PMG: 4 ^h 39 ^m			Mag: -2.1 PMG: 15 ^h 41 ^m			Mag: +0.2 PMG: 15 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	190	24.3	186	20.8	+10 08.5	290	08.5	-22 50.9	124	18.7	+21 08.6	134	21.2	+17 55.7
1	205	26.7	201	24.6	07.6	305	10.0	51.1	139	20.7	08.7	149	23.4	55.8
2	220	29.2	216	28.3	06.7	320	11.5	51.2	154	22.7	08.7	164	25.6	55.9
3	235	31.6	231	32.0	05.7	335	13.0	51.3	169	24.7	08.8	179	27.8	55.9
4	250	34.1	246	35.8	04.8	350	14.5	51.4	184	26.7	08.9	194	30.0	56.0
5	265	36.6	261	39.5	+10 03.9	5	16.0	-22 51.6	199	28.7	+21 09.0	209	32.2	+17 56.0
6	280	39.0	276	43.2	+10 03.0	20	17.5	-22 51.7	214	30.7	+21 09.1	224	34.4	+17 56.1
7	295	41.5	291	46.9	02.0	35	19.0	51.8	229	32.7	09.1	239	36.6	56.2
8	310	44.0	306	50.7	01.1	50	20.5	51.9	244	34.7	09.2	254	38.8	56.2
9	325	46.4	321	54.4	+10 00.2	65	22.0	52.0	259	36.7	09.3	269	41.0	56.3
10	340	48.9	336	58.1	+9 59.3	80	23.5	52.2	274	38.7	09.4	284	43.2	56.4
11	355	51.4	352	01.8	+9 58.3	95	25.0	-22 52.3	289	40.7	+21 09.4	299	45.4	+17 56.4
12	10	53.8	7	05.6	+9 57.4	110	26.5	-22 52.4	304	42.7	+21 09.5	314	47.6	+17 56.5
13	25	56.3	22	09.3	56.5	125	28.0	52.5	319	44.7	09.6	329	49.8	56.6
14	40	58.8	37	13.0	55.5	140	29.5	52.7	334	46.7	09.7	344	52.0	56.6
15	56	01.2	52	16.7	54.6	155	31.0	52.8	349	48.6	09.8	359	54.2	56.7
16	71	03.7	67	20.4	53.7	170	32.5	52.9	4	50.6	09.8	14	56.4	56.8
17	86	06.1	82	24.1	+9 52.7	185	34.1	-22 53.0	19	52.6	+21 09.9	29	58.6	+17 56.8
18	101	08.6	97	27.8	+9 51.8	200	35.6	-22 53.1	34	54.6	+21 10.0	45	00.8	+17 56.9
19	116	11.1	112	31.5	50.9	215	37.1	53.3	49	56.6	10.1	60	03.0	57.0
20	131	13.5	127	35.2	50.0	230	38.6	53.4	64	58.6	10.1	75	05.2	57.0
21	146	16.0	142	38.9	49.0	245	40.1	53.5	80	00.6	10.2	90	07.4	57.1
22	161	18.5	157	42.6	48.1	260	41.6	53.6	95	02.6	10.3	105	09.6	57.2
23	176	20.9	172	46.3	47.1	275	43.1	53.8	110	04.6	10.4	120	11.8	57.2
24	191	23.4	187	50.0	+9 46.2	290	44.6	-22 53.9	125	06.6	+21 10.5	135	14.0	+17 57.3
Dif	—		+37 -9			+15 -1			+20 +1		+22 +1		+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 2			Edad: 8 ^d 9 PHE { SD: 16'2 PMG: 20 ^h 28 ^m 4 ^h : 59'7 12 ^h : 59'8 20 ^h : 59'9 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	179	09.1	+5	15.0	64	57.7	+21	15.1	57	60 N	3	42	4	36	5	19	11 33 94
1	194	09.3		16.0	79	22.3	56	09.4	58	58	3	52	42	23	11	47	90 19 29
2	209	09.5		16.9	93	46.8	55	+21	03.6	56	4	00	47	25	12	00	86 4 06 32
3	224	09.7		17.9	108	11.4	56	+20	57.6	60	54	08	52	28	10	85	3 55 34
4	239	09.9		18.9	122	36.0	56		51.5	61	52	14	4	56	30	20	82 45 36
5	254	10.1	+5	19.8	137	00.7	57	+20	45.2	63	50	4	20	5	00	5	32 12 28 80
6	269	10.3	+5	20.8	151	25.4	57	+20	38.8	64	45	4	32	5	07	5	37 12 47 75
7	284	10.4		21.7	165	50.1	57		32.2	66	40		41	14	41	13	01 73 3 01 45
8	299	10.6		22.7	180	14.8	57		25.6	66	35		49	19	44	14	70 2 48 48
9	314	10.8		23.6	194	39.6	58		18.7	69	30		4	55	23	47	25 67 37 49
10	329	11.0		24.6	209	04.4	58		11.8	69	20		5	04	30	52	43 64 17 53
11	344	11.2	+5	25.6	223	29.3	59	+20	04.7	71	10 N	5	10	5	35	5	56 13 59 61
12	359	11.4	+5	26.5	237	54.2	59	+19	57.4	73	0		5	15	5	39	6 00 14 14 58
13	14	11.5		27.5	252	19.1	59		50.0	74	10 S		18	43	04		29 54 27 61
14	29	11.7		28.4	266	44.1	60		42.5	75	20		20	45	08	14	45 51 1 10 63
15	44	11.9		29.4	281	09.1	60		34.9	76	30		20	48	12	15	04 47 0 50 67
16	59	12.1		30.3	295	34.2	61		27.1	78	35		20	49	14		14 45 38 69
17	74	12.3	+5	31.3	309	59.2	60	+19	19.2	79	40		5	19	5	50	6 17 15 27 41
18	89	12.5	+5	32.2	324	24.4	62	+19	11.2	80	45		5	17	5	51	6 20 15 41 39
19	104	12.6		33.2	338	49.6	62	+19	03.0	82	50		14	51	24	15	58 35 ** ** *
20	119	12.8		34.2	353	14.8	62	+18	54.7	83	52		13	52	25	16	07 32 ** ** *
21	134	13.0		35.1	7	40.1	63		46.3	84	54		11	52	27	16	30 ** ** *
22	149	13.2		36.1	22	05.4	63		37.7	86	56		09	52	29	26	28 ** ** *
23	164	13.4		37.0	36	30.8	64		29.0	87	58		07	52	31	38	24 ** ** *
24	179	13.6	+5	38.0	50	56.2	64	+18	20.2	88	60 S	5	04	5	52	6	34 16 51 21 ** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 12 ^m 6		Mag: -4.1 PMG: 11 ^h 26 ^m		Mag: -0.2 PMG: 4 ^h 37 ^m		Mag: -2.1 PMG: 15 ^h 37 ^m		Mag: +0.2 PMG: 14 ^h 57 ^m									
	hG ♊		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	191	23.4	187	50.0	+9	46.2	290	44.6	-22	53.9	125	06.6	+21	10.5	135	14.0	+17	57.3
1	206	25.9	202	53.7		45.3	305	46.1		54.0	140	08.6		10.5	150	16.2		57.4
2	221	28.3	217	57.4		44.3	320	47.7		54.1	155	10.6		10.6	165	18.4		57.4
3	236	30.8	233	01.1		43.4	335	49.2		54.2	170	12.6		10.7	180	20.6		57.5
4	251	33.3	248	04.8		42.5	350	50.7		54.4	185	14.6		10.8	195	22.8		57.6
5	266	35.7	263	08.4	+9	41.5	5	52.2	-22	54.5	200	16.6	+21	10.9	210	25.0	+17	57.6
6	281	38.2	278	12.1	+9	40.6	20	53.7	-22	54.6	215	18.6	+21	10.9	225	27.2	+17	57.7
7	296	40.6	293	15.8		39.6	35	55.2		54.7	230	20.5		11.0	240	29.3		57.7
8	311	43.1	308	19.5		38.7	50	56.8		54.8	245	22.5		11.1	255	31.5		57.8
9	326	45.6	323	23.1		37.8	65	58.3		55.0	260	24.5		11.2	270	33.7		57.9
10	341	48.0	338	26.8		36.8	80	59.8		55.1	275	26.5		11.2	285	35.9		57.9
11	356	50.5	353	30.5	+9	35.9	96	01.3	-22	55.2	290	28.5	+21	11.3	300	38.1	+17	58.0
12	11	53.0	8	34.1	+9	34.9	111	02.8	-22	55.3	305	30.5	+21	11.4	315	40.3	+17	58.1
13	26	55.4	23	37.8		34.0	126	04.4		55.4	320	32.5		11.5	330	42.5		58.1
14	41	57.9	38	41.5		33.1	141	05.9		55.6	335	34.5		11.6	345	44.7		58.2
15	57	00.4	53	45.1		32.1	156	07.4		55.7	350	36.5		11.6	0	46.9		58.3
16	72	02.8	68	48.8		31.2	171	08.9		55.8	5	38.5		11.7	15	49.1		58.3
17	87	05.3	83	52.4	+9	30.2	186	10.4	-22	55.9	20	40.5	+21	11.8	30	51.3	+17	58.4
18	102	07.7	98	56.1	+9	29.3	201	12.0	-22	56.0	35	42.4	+21	11.9	45	53.5	+17	58.5
19	117	10.2	113	59.8		28.3	216	13.5		56.2	50	44.4		11.9	60	55.7		58.5
20	132	12.7	129	03.4		27.4	231	15.0		56.3	65	46.4		12.0	75	57.9		58.6
21	147	15.1	144	07.0		26.4	246	16.5		56.4	80	48.4		12.1	91	00.1		58.7
22	162	17.6	159	10.7		25.5	261	18.1		56.5	95	50.4		12.2	106	02.3		58.7
23	177	20.1	174	14.3		24.6	276	19.6		56.6	110	52.4		12.3	121	04.5		58.8
24	192	22.5	189	18.0	+9	23.6	291	21.1	-22	56.8	125	54.4	+21	12.3	136	06.7	+17	58.9
Dif	—		+37	-9		+15	-1				+20		+1		+22		+1	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 9 ^d 9 PHE {	4 ^h : 60'0 12 ^h : 60'0 20 ^h : 60'1										
	PMG: 12 ^h 02 ^m 9			SD: 16'3		PMG: 21 ^h 25 ^m			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	m	h m m	m
0	179	13.6	+5 38.0		50 56.2	+18 20.2	60 N	18 51	19 35	20 30	13 07 96		4 59 18	
1	194	13.7			65 21.6		58	48	28	19	17 93		48 21	
2	209	13.9			79 47.1	+18 02.3	56	44	23	10	26 90		38 24	
3	224	14.1			94 12.7	+17 53.1	54	42	18	20 03	35 86		29 27	
4	239	14.3			108 38.3		52	39	14	19 56	42 84		21 30	
5	254	14.5	+5 42.7		123 04.0	+17 34.4	50	18 37	19 10	19 50	13 48 82		4 14 32	
6	269	14.6	+5 43.7		137 29.7	+17 24.9	45	18 31	19 01	19 37	14 02 78		3 59 36	
7	284	14.8			151 55.4		40	27	18 55	27	14 73		46 40	
8	299	15.0			166 21.2	+17 05.5	35	24	49	19	24 70		36 42	
9	314	15.2			180 47.1	+16 55.6	30	20	45	13	32 68		26 45	
10	329	15.4			195 13.0		20	15	37	19 03	14 47 63		3 10 49	
11	344	15.6	+5 48.5		209 39.0	+16 35.6	10 N	18 10	18 32	18 56	15 00 58		2 55 53	
12	359	15.7	+5 49.4		224 05.0	+16 25.4	0	18 06	18 27	18 51	15 12 55		2 42 56	
13	14	15.9			238 31.0		10 S	18 02	23	48	23 52		28 60	
14	29	16.1			252 57.2	+16 04.6	20	17 58	20	45	36 47		2 13 64	
15	44	16.3			267 23.3	+15 54.1	30	53	17	45	51 42		1 57 67	
16	59	16.5			281 49.6		35	50	16	45	15 59 40		47 70	
17	74	16.7	+5 54.2		296 15.8	+15 32.8	40	17 47	18 14	18 46	16 08 37		1 35 74	
18	89	16.8	+5 55.1		310 42.2	+15 22.0	45	17 44	18 13	18 47	16 20 33		1 22 77	
19	104	17.0			325 08.6	+15 11.0	50	40	12	49	33 28		1 06 81	
20	119	17.2			339 35.0	+15 00.0	52	38	12	51	39 27		0 58 83	
21	134	17.4			354 01.5	+14 48.9	54	36	11	52	46 24		49 86	
22	149	17.6			8 28.1		56	34	11	54	16 54 21		39 89	
23	164	17.7	+5 59.9		22 54.7		58	31	10	56	17 02 18		28 93	
24	179	17.9	+6 00.8		37 21.3	+14 14.9	60 S	17 28	18 10	18 58	17 12 15		0 15 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 08 ^m 7		Mag: -4.1 PMG: 11 ^h 20 ^m		Mag: -0.3 PMG: 4 ^h 34 ^m		Mag: -2.1 PMG: 15 ^h 34 ^m		Mag: +0.2 PMG: 14 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	22.5	189 18.0	+9 23.6	291 21.1	-22 56.8	125 54.4	+21 12.3	136 06.7	+17 58.9
1	207	25.0	204 21.6	22.7	306 22.7	56.9	140 56.4	12.4	151 08.9	58.9
2	222	27.5	219 25.2	21.7	321 24.2	57.0	155 58.4	12.5	166 11.1	59.0
3	237	29.9	234 28.9	20.8	336 25.7	57.1	171 00.3	12.6	181 13.3	59.1
4	252	32.4	249 32.5	19.8	351 27.2	57.2	186 02.3	12.6	196 15.5	59.1
5	267	34.9	264 36.1	+9 18.9	6 28.8	-22 57.4	201 04.3	+21 12.7	211 17.7	+17 59.2
6	282	37.3	279 39.8	+9 17.9	21 30.3	-22 57.5	216 06.3	+21 12.8	226 19.9	+17 59.3
7	297	39.8	294 43.4	17.0	36 31.8	57.6	231 08.3	12.9	241 22.1	59.3
8	312	42.2	309 47.0	16.0	51 33.4	57.7	246 10.3	13.0	256 24.3	59.4
9	327	44.7	324 50.6	15.1	66 34.9	57.8	261 12.3	13.0	271 26.4	59.5
10	342	47.2	339 54.2	14.1	81 36.4	57.9	276 14.3	13.1	286 28.6	59.5
11	357	49.6	354 57.8	+9 13.2	96 38.0	-22 58.1	291 16.2	+21 13.2	301 30.8	+17 59.6
12	12	52.1	10 01.4	+9 12.2	111 39.5	-22 58.2	306 18.2	+21 13.3	316 33.0	+17 59.7
13	27	54.6	25 05.0	11.3	126 41.1	58.3	321 20.2	13.4	331 35.2	59.7
14	42	57.0	40 08.7	10.3	141 42.6	58.4	336 22.2	13.4	346 37.4	59.8
15	57	59.5	55 12.3	09.4	156 44.1	58.5	351 24.2	13.5	1 39.6	59.9
16	73	02.0	70 15.9	08.4	171 45.7	58.7	6 26.2	13.6	16 41.8	+17 59.9
17	88	04.4	85 19.4	+9 07.5	186 47.2	-22 58.8	21 28.2	+21 13.7	31 44.0	+18 00.0
18	103	06.9	100 23.0	+9 06.5	201 48.7	-22 58.9	36 30.2	+21 13.7	46 46.2	+18 00.1
19	118	09.4	115 26.6	05.6	216 50.3	59.0	51 32.1	13.8	61 48.4	00.1
20	133	11.8	130 30.2	04.6	231 51.8	59.1	66 34.1	13.9	76 50.6	00.2
21	148	14.3	145 33.8	03.7	246 53.4	59.3	81 36.1	14.0	91 52.8	00.2
22	163	16.7	160 37.4	02.7	261 54.9	59.4	96 38.1	14.1	106 55.0	00.3
23	178	19.2	175 41.0	01.8	276 56.5	59.5	111 40.1	14.1	121 57.2	00.4
24	193	21.7	190 44.5	+9 00.8	291 58.0	-22 59.6	126 42.1	+21 14.2	136 59.4	+18 00.4
Dif	—		+36	-9	+15	-1	+20	+1	+22	+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 7			Edad: 10 ^d 9 PHE { SD: 16 ^h 4 PMG: 22 ^h 19 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	17.9	+6 00.8	37	21.3	+14 14.9	60 N	3 35	4 30	5 13	14 43	97	5 17	13
1	194	18.1	01.8	51	48.0	+14 03.4 ¹¹⁵	58	45	36	17	50	93	09	17
2	209	18.3	02.7	66	14.8	+13 51.9 ¹¹⁵	56	3 54	42	20	14 56	89	5 02	20
3	224	18.5	03.7	80	41.6	40.2 ¹¹⁷	54	4 02	47	23	15 01	87	4 56	22
4	239	18.6	04.6	95	08.5	28.4 ¹¹⁸	52	09	51	26	06	84	51	24
5	254	18.8	+6 05.6	109	35.4	+13 16.6 ¹¹⁸	50	4 15	4 55	5 28	15 10	82	4 46	26
6	269	19.0	+6 06.5	124	02.4	+13 04.6 ¹²⁰	45	4 28	5 04	5 33	15 20	77	4 35	31
7	284	19.2	07.5	138	29.4	+12 52.6 ¹²⁰	40	38	10	38	27	73	26	34
8	299	19.4	08.4	152	56.5	40.5 ¹²¹	35	46	16	41	34	70	18	38
9	314	19.5	09.4	167	23.7	28.4 ¹²¹	30	4 52	21	45	40	66	4 11	41
10	329	19.7	10.3	181	50.9	16.1 ¹²³	20	5 02	28	50	50	61	3 59	45
11	344	19.9	+6 11.2	196	18.1	+12 03.8 ¹²³	10 N	5 09	5 34	5 55	15 58	57	3 48	50
12	359	20.1	+6 12.2	210	45.4	+11 51.4 ¹²⁴	0	5 14	5 39	5 59	16 07	52	3 38	54
13	14	20.3	13.1	225	12.7	38.9 ¹²⁵	10 S	18	43	6 04	15	48	28	58
14	29	20.5	14.1	239	40.1	26.4 ¹²⁵	20	20	46	08	23	45	17	62
15	44	20.6	15.0	254	07.6	13.8 ¹²⁶	30	21	49	13	33	39	3 04	68
16	59	20.8	16.0	268	35.1	85 ¹²⁷	35	21	50	16	39	36	2 57	70
17	74	21.0	+6 16.9	283	02.7	+10 48.3 ¹²⁸	40	5 20	5 52	6 19	16 45	33	2 49	73
18	89	21.2	+6 17.9	297	30.3	+10 35.5 ¹²⁸	45	5 19	5 53	6 23	16 53	29	2 39	77
19	104	21.3	18.8	311	57.9	22.6 ¹²⁹	50	17	54	27	17 01	25	27	82
20	119	21.5	19.8	326	25.6	+10 09.7 ¹²⁹	52	16	55	29	06	22	21	85
21	134	21.7	20.7	340	53.4	+9 56.7 ¹³⁰	54	15	55	31	10	20	15	87
22	149	21.9	21.7	355	21.2	88 ¹³¹	56	13	56	33	15	18	08	90
23	164	22.1	22.6	9	49.0	30.5 ¹³¹	58	11	57	36	20	15	2 01	93
24	179	22.2	+6 23.6	24	16.9	+9 17.3 ¹³²	60 S	5 09	5 57	6 39	17 27	11	1 52	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 04 ^m 7		Mag: -4.1 PMG: 11 ^h 14 ^m		Mag: -0.3 PMG: 4 ^h 32 ^m		Mag: -2.1 PMG: 15 ^h 31 ^m		Mag: +0.2 PMG: 14 ^h 50 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	193	21.7	190	44.5	+9 00.8	291	58.0	-22 59.6	126	42.1	+21 14.2	136	59.4	+18 00.4
1	208	24.1	205	48.1	+8 59.9	306	59.5	59.7	141	44.0	14.3	152	01.5	00.5
2	223	26.6	220	51.7	58.9	322	01.1	-22 59.8	156	46.0	14.4	167	03.7	00.6
3	238	29.1	235	55.3	58.0	337	02.6	-23 00.0	171	48.0	14.4	182	05.9	00.6
4	253	31.5	250	58.8	57.0	352	04.2	-23 00.1	186	50.0	14.5	197	08.1	00.7
5	268	34.0	266	02.4	+8 56.1	7	05.7	-23 00.2	201	52.0	+21 14.6	212	10.3	+18 00.8
6	283	36.5	281	06.0	+8 55.1	22	07.3	-23 00.3	216	54.0	+21 14.7	227	12.5	+18 00.8
7	298	38.9	296	09.5	54.2	37	08.8	00.4	231	55.9	14.8	242	14.7	00.9
8	313	41.4	311	13.1	53.2	52	10.4	00.5	246	57.9	14.8	257	16.9	01.0
9	328	43.8	326	16.6	52.3	67	11.9	00.7	261	59.9	14.9	272	19.1	01.0
10	343	46.3	341	20.2	51.3	82	13.5	00.8	277	01.9	15.0	287	21.3	01.1
11	358	48.8	356	23.7	+8 50.4	97	15.0	-23 00.9	292	03.9	+21 15.1	302	23.5	+18 01.2
12	13	51.2	11	27.3	+8 49.4	112	16.6	-23 01.0	307	05.9	+21 15.2	317	25.7	+18 01.2
13	28	53.7	26	30.8	48.5	127	18.1	01.1	322	07.8	15.2	332	27.9	01.3
14	43	56.2	41	34.3	47.5	142	19.7	01.2	337	09.8	15.3	347	30.0	01.4
15	58	58.6	56	37.9	46.6	157	21.2	01.4	352	11.8	15.4	2	32.2	01.4
16	74	01.1	71	41.4	45.6	172	22.8	01.5	7	13.8	15.5	17	34.4	01.5
17	89	03.6	86	44.9	+8 44.7	187	24.4	-23 01.6	22	15.8	+21 15.5	32	36.6	+18 01.6
18	104	06.0	101	48.5	+8 43.7	202	25.9	-23 01.7	37	17.8	+21 15.6	47	38.8	+18 01.6
19	119	08.5	116	52.0	42.8	217	27.5	01.8	52	19.7	15.7	62	41.0	01.7
20	134	11.0	131	55.5	41.8	232	29.0	01.9	67	21.7	15.8	77	43.2	01.8
21	149	13.4	146	59.0	40.9	247	30.6	02.1	82	23.7	15.9	92	45.4	01.8
22	164	15.9	162	02.5	39.9	262	32.1	02.2	97	25.7	15.9	107	47.6	01.9
23	179	18.3	177	06.1	39.0	277	33.7	02.3	112	27.7	16.0	122	49.8	02.0
24	194	20.8	192	09.6	+8 38.0	292	35.3	-23 02.4	127	29.6	+21 16.1	137	52.0	+18 02.0
Dif	—		+35	-10		+16	-1		+20		+1	+22		+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 4			Edad: 11 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 60'0 20 ^h : 59'9 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	22.2	+6 23.6	24	16.9	+9 17.3	60 N	18 56	19 40	20 36	16 20 94	5 30 11				
1	194	22.4	24.5	38	44.9	+9 04.1 ¹³²	58	52	33	25	23 91	26 14				
2	209	22.6	25.4	53	12.9	+8 50.8 ¹³³	56	48	27	15	25 89	22 17				
3	224	22.8	26.4	67	40.9	+8 37.5 ¹³³	54	45	22	07	28 85	18 20				
4	239	23.0	27.3	82	09.0	+8 24.1 ¹³⁴	52	42	17	20 00	30 83	15 22				
5	254	23.1	+6 28.3	96	37.1	+8 10.7 ¹³⁴	50	18 40	19 13	19 53	16 32 81	5 12 24				
6	269	23.3	+6 29.2	111	05.3	+7 57.2 ¹³⁵	45	18 34	19 04	19 40	16 37 76	5 06 28				
7	284	23.5	30.2	125	33.5	+7 43.7 ¹³⁵	40	29	18 57	30	40 72	5 00 32				
8	299	23.7	31.1	140	01.8	+7 30.1 ¹³⁶	35	25	51	21	44 68	4 56 35				
9	314	23.9	32.0	154	30.1	+7 16.5 ¹³⁶	30	22	46	14	46 66	52 38				
10	329	24.0	33.0	168	58.4	+7 02.8 ¹³⁷	20	16	38	19 04	51 60	44 44				
11	344	24.2	+6 33.9	183	26.8	+6 49.1 ¹³⁷	10 N	18 10	18 32	18 56	16 55 56	4 38 48				
12	359	24.4	+6 34.9	197	55.2	+6 35.4 ¹³⁷	0	18 06	18 26	18 51	16 59 52	4 32 52				
13	14	24.6	35.8	212	23.7	+6 21.7 ¹³⁷	10 S	18 01	22	47	17 03 47	26 56				
14	29	24.7	36.8	226	52.2	+6 07.9 ¹³⁸	20	17 56	18	44	08 42	19 61				
15	44	24.9	37.7	241	20.8	+5 54.1 ¹³⁸	30	51	15	42	12 38	12 66				
16	59	25.1	38.6	255	49.4	+5 40.2 ¹³⁹	35	48	13	42	15 35	07 69				
17	74	25.3	+6 39.6	270	18.0	+5 26.3 ¹³⁹	40	17 44	18 11	18 43	17 18 32	4 02 73				
18	89	25.5	+6 40.5	284	46.7	+5 12.4 ¹³⁹	45	17 40	18 10	18 43	17 22 27	3 56 77				
19	104	25.6	41.5	299	15.4	+4 58.5 ¹³⁹	50	36	08	45	26 23	49 82				
20	119	25.8	42.4	313	44.1	+4 44.5 ¹⁴⁰	52	33	07	46	28 21	46 84				
21	134	26.0	43.4	328	12.9	+4 30.6 ¹³⁹	54	31	06	47	30 19	42 87				
22	149	26.2	44.3	342	41.7	+4 16.6 ¹⁴⁰	56	28	06	49	33 16	38 89				
23	164	26.3	45.2	357	10.5	+4 02.5 ¹⁴¹	58	26	05	50	35 14	34 92				
24	179	26.5	+6 46.2	11	39.4	+3 48.5 ¹⁴⁰	60 S	17 22	18 04	18 52	17 38 11	3 29 95				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 00 ^m 8		Mag: -4.2 PMG: 11 ^h 09 ^m			Mag: -0.3 PMG: 4 ^h 29 ^m			Mag: -2.1 PMG: 15 ^h 28 ^m			Mag: +0.2 PMG: 14 ^h 46 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	194	20.8	192 09.6	+8 38.0	292 35.3	-23 02.4	127 29.6	+21 16.1	137 52.0	+18 02.0						
1	209	23.3	207 13.1	37.1	307 36.8	02.5	142 31.6	16.2	152 54.2	02.1						
2	224	25.7	222 16.6	36.1	322 38.4	02.6	157 33.6	16.2	167 56.3	02.2						
3	239	28.2	237 20.1	35.2	337 39.9	02.8	172 35.6	16.3	182 58.5	02.2						
4	254	30.7	252 23.6	34.2	352 41.5	02.9	187 37.6	16.4	198 00.7	02.3						
5	269	33.1	267 27.1	+8 33.3	7 43.1	-23 03.0	202 39.5	+21 16.5	213 02.9	+18 02.4						
6	284	35.6	282 30.6	+8 32.3	22 44.6	-23 03.1	217 41.5	+21 16.6	228 05.1	+18 02.4						
7	299	38.1	297 34.1	31.4	37 46.2	03.2	232 43.5	16.6	243 07.3	02.5						
8	314	40.5	312 37.5	30.4	52 47.8	03.3	247 45.5	16.7	258 09.5	02.6						
9	329	43.0	327 41.0	29.5	67 49.3	03.5	262 47.5	16.8	273 11.7	02.6						
10	344	45.4	342 44.5	28.5	82 50.9	03.6	277 49.4	16.9	288 13.9	02.7						
11	359	47.9	357 48.0	+8 27.6	97 52.5	-23 03.7	292 51.4	+21 16.9	303 16.1	+18 02.8						
12	14	50.4	12 51.4	+8 26.6	112 54.0	-23 03.8	307 53.4	+21 17.0	318 18.2	+18 02.8						
13	29	52.8	27 54.9	25.7	127 55.6	03.9	322 55.4	17.1	333 20.4	02.9						
14	44	55.3	42 58.4	24.7	142 57.2	04.0	337 57.3	17.2	348 22.6	03.0						
15	59	57.8	58 01.8	23.8	157 58.7	04.1	352 59.3	17.3	3 24.8	03.0						
16	75	00.2	73 05.3	22.8	173 00.3	04.3	8 01.3	17.3	18 27.0	03.1						
17	90	02.7	88 08.8	+8 21.9	188 01.9	-23 04.4	23 03.3	+21 17.4	33 29.2	+18 03.2						
18	105	05.2	103 12.2	+8 20.9	203 03.5	-23 04.5	38 05.3	+21 17.5	48 31.4	+18 03.2						
19	120	07.6	118 15.7	20.0	218 05.0	04.6	53 07.2	17.6	63 33.6	03.3						
20	135	10.1	133 19.1	19.0	233 06.6	04.7	68 09.2	17.7	78 35.8	03.4						
21	150	12.6	148 22.6	18.1	248 08.2	04.8	83 11.2	17.7	93 37.9	03.4						
22	165	15.0	163 26.0	17.2	263 09.8	05.0	98 13.2	17.8	108 40.1	03.5						
23	180	17.5	178 29.4	16.2	278 11.3	05.1	113 15.1	17.9	123 42.3	03.6						
24	195	19.9	193 32.9	+8 15.3	293 12.9	-23 05.2	128 17.1	+21 18.0	138 44.5	+18 03.6						
Dif	—		+35 -9		+16 -1		+20 +1		+22 +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 1			Edad: 12 ^d 9 PHE { SD: 16'3 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
0	179	26.5	+6 46.2	11	39.4	+3 48.5		60 N	3 27	4 23	5 07	17 54	93	5 41	10
1	194	26.7		26	08.3	34.4 ¹⁴¹		58	38	30	11	54	89	40	13
2	209	26.9		40	37.3	20.4 ¹⁰⁰		56	48	36	15	54	86	39	16
3	224	27.1		55	06.2	06.3 ¹⁴¹	+3	54	3 57	42	18	53	84	38	18
4	239	27.2		69	35.2	52.2 ¹⁰⁰	+2	52	4 04	46	21	53	82	37	20
5	254	27.4	+6 50.9	84	04.3	38.1 ¹⁰¹	+2	50	4 10	4 51	5 24	17 53	79	5 36	22
6	269	27.6	+6 51.8	98	33.3	24.0 ¹⁰⁰	+2	45	4 24	5 00	5 30	17 53	74	5 34	27
7	284	27.8		113	02.4	09.9 ¹⁰¹	+2	40	34	07	35	52	71	32	31
8	299	27.9		127	31.5	55.8 ¹⁰¹	+1	35	43	13	39	52	67	31	34
9	314	28.1		142	00.7	41.6 ¹⁰²		30	4 50	18	42	52	64	30	37
10	329	28.3		156	29.9	27.5 ¹⁰²		20	5 00	26	49	51	59	28	42
11	344	28.5	+6 56.5	170	59.1	13.4 ¹⁰²	+1	10 N	5 08	5 33	5 54	17 51	55	5 26	46
12	359	28.6	+6 57.4	185	28.3	59.2 ¹⁰²	+0	0	5 14	5 38	5 59	17 51	50	5 24	51
13	14	28.8		199	57.6	45.1 ¹⁰³		10 S	18	43	6 04	50	47	22	55
14	29	29.0	+6 59.3	214	26.8	31.0 ¹⁰²		20	21	47	09	50	42	20	60
15	44	29.2	+7 00.3	228	56.1	16.9 ¹⁰³		30	22	50	14	50	37	18	65
16	59	29.3		243	25.5	02.8 ¹⁰⁴	+0	35	23	52	17	50	34	16	68
17	74	29.5	+7 02.1	257	54.8	11.3 ¹⁰³	-0	40	5 22	5 54	6 21	17 50	30	5 15	71
18	89	29.7	+7 03.1	272	24.2	25.4 ¹⁰⁴	-0	45	5 22	5 56	6 25	17 49	27	5 13	75
19	104	29.9		286	53.5	39.5 ¹⁰³		50	20	57	30	49	23	11	80
20	119	30.1		301	22.9	53.6 ¹⁰⁴	-0	52	19	58	32	49	21	10	82
21	134	30.2		315	52.4	07.6 ¹⁰⁵	-1	54	18	5 59	35	49	18	09	84
22	149	30.4		330	21.8	21.6 ¹⁰⁴		56	17	6 00	37	49	16	07	88
23	164	30.6		344	51.3	35.7 ¹⁰⁵		58	15	01	40	49	13	06	90
24	179	30.8	+7 08.7	359	20.7	49.7 ¹⁰⁴	-1	60 S	5 14	6 02	6 44	17 49	10	5 04	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 10 ^h 56 ^m 9		Mag: -4.2 PMG: 11 ^h 03 ^m		Mag: -0.4 PMG: 4 ^h 27 ^m		Mag: -2.1 PMG: 15 ^h 25 ^m		Mag: +0.2 PMG: 14 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	195	19.9	193	32.9	+8 15.3	293	12.9	-23 05.2	128	17.1	+21 18.0	138	44.5	+18 03.6	
1	210	22.4	208	36.3	14.3	308	14.5	05.3	143	19.1	18.0	153	46.7	03.7	
2	225	24.9	223	39.7	13.4	323	16.1	05.4	158	21.1	18.1	168	48.9	03.8	
3	240	27.3	238	43.2	12.4	338	17.6	05.5	173	23.0	18.2	183	51.1	03.8	
4	255	29.8	253	46.6	11.5	353	19.2	05.6	188	25.0	18.3	198	53.3	03.9	
5	270	32.3	268	50.0	+8 10.5	8	20.8	-23 05.8	203	27.0	+21 18.4	213	55.4	+18 04.0	
6	285	34.7	283	53.4	+8 09.6	23	22.4	-23 05.9	218	29.0	+21 18.4	228	57.6	+18 04.0	
7	300	37.2	298	56.8	08.7	38	24.0	06.0	233	30.9	18.5	243	59.8	04.1	
8	315	39.7	314	00.3	07.7	53	25.5	06.1	248	32.9	18.6	259	02.0	04.2	
9	330	42.1	329	03.7	06.8	68	27.1	06.2	263	34.9	18.7	274	04.2	04.2	
10	345	44.6	344	07.1	05.8	83	28.7	06.3	278	36.9	18.7	289	06.4	04.3	
11	0 47.0	359 10.5	+8 04.9	98 30.3	-23 06.4	98	30.3	-23 06.4	293	38.8	+21 18.8	304	08.6	+18 04.4	
12	15 49.5	14 13.9	+8 04.0	113 31.9	-23 06.6	113	31.9	-23 06.6	308	40.8	+21 18.9	319	10.8	+18 04.4	
13	30 52.0	29 17.2	03.0	128 33.5	06.7	128	33.5	06.7	323	42.8	19.0	334	12.9	04.5	
14	45 54.4	44 20.6	02.1	143 35.1	06.8	143	35.1	06.8	338	44.8	19.1	349	15.1	04.6	
15	60 56.9	59 24.0	01.1	158 36.6	06.9	158	36.6	06.9	353	46.7	19.1	4 17.3	04.6		
16	75 59.4	74 27.4	+8 00.2	173 38.2	07.0	173	38.2	07.0	8 48.7	19.2		19 19.5	04.7		
17	91 01.8	89 30.8	+7 59.3	188 39.8	-23 07.1	188	39.8	-23 07.1	23 50.7	+21 19.3		34 21.7	+18 04.8		
18	106 04.3	104 34.2	+7 58.3	203 41.4	-23 07.2	203	41.4	-23 07.2	38 52.7	+21 19.4		49 23.9	+18 04.8		
19	121 06.8	119 37.5	57.4	218 43.0	07.4	218	43.0	07.4	53 54.6	19.4		64 26.1	04.9		
20	136 09.2	134 40.9	56.5	233 44.6	07.5	233	44.6	07.5	68 56.6	19.5		79 28.3	05.0		
21	151 11.7	149 44.3	55.5	248 46.2	07.6	248	46.2	07.6	83 58.6	19.6		94 30.4	05.0		
22	166 14.2	164 47.6	54.6	263 47.8	07.7	263	47.8	07.7	99 00.5	19.7		109 32.6	05.1		
23	181 16.6	179 51.0	53.7	278 49.4	07.8	278	49.4	07.8	114 02.5	19.8		124 34.8	05.2		
24	196 19.1	194 54.4	+7 52.7	293 51.0	-23 07.9	293	51.0	-23 07.9	129 04.5	+21 19.8		139 37.0	+18 05.2		
Dif	—		+34	-9		+16	-1		+20	+1		+22		+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 8		Edad: 13 ^d 9 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/9 PMG: 0 ^h 03 ^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	
0	179	30.8	+7	08.7	359	20.7	-1 49.7	60 N	19 01	19 45	20 43	19 27	91	5 51	11	
1	194	30.9		09.6	13	50.2 ¹⁰⁵	-2 03.6 ¹³⁹	58	18 56	38	31	23	88	53	13	
2	209	31.1		10.6	28	19.7 ¹⁰⁵	17.6 ¹⁴⁰	56	53	32	20	20	85	55	16	
3	224	31.3		11.5	42	49.3 ¹⁰⁶	31.5 ¹³⁹	54	49	26	12	17	83	56	19	
4	239	31.5		12.4	57	18.8 ¹⁰⁵	45.4 ¹³⁹	52	46	21	20 04	15	80	57	21	
5	254	31.6	+7	13.4	71	48.4 ¹⁰⁶	-2 59.3 ¹³⁹	50	18 43	19 16	19 57	19 12	78	5 58	23	
6	269	31.8	+7	14.3	86	17.9 ¹⁰⁵	-3 13.2 ¹³⁹	45	18 37	19 07	19 43	19 07	73	6 01	27	
7	284	32.0		15.2	100	47.5 ¹⁰⁶	27.0 ¹³⁸	40	31	18 59	32	19 03	69	03	31	
8	299	32.1		16.2	115	17.1 ¹⁰⁶	40.8 ¹³⁸	35	27	53	23	18 59	66	05	34	
9	314	32.3		17.1	129	46.7 ¹⁰⁶	-3 54.6 ¹³⁸	30	23	47	16	56	63	07	37	
10	329	32.5		18.0	144	16.3 ¹⁰⁶	-4 08.3 ¹³⁷	20	16	38	19 05	50	59	10	42	
11	344	32.7	+7	19.0	158	45.9 ¹⁰⁶	-4 22.0 ¹³⁷	10 N	18 10	18 32	18 56	18 46	54	6 12	46	
12	359	32.8	+7	19.9	173	15.5 ¹⁰⁶	-4 35.7 ¹³⁷	0	18 05	18 26	18 50	18 41	50	6 15	50	
13	14	33.0		20.8	187	45.2 ¹⁰⁷	-4 49.3 ¹³⁶	10 S	18 00	21	46	37	46	17	54	
14	29	33.2		21.8	202	14.8 ¹⁰⁶	-5 02.9 ¹³⁶	20	17 54	17	42	32	42	20	58	
15	44	33.4		22.7	216	44.5 ¹⁰⁷	16.5 ¹³⁶	30	48	12	40	27	37	23	63	
16	59	33.5		23.6	231	14.1 ¹⁰⁶	30.0 ¹³⁵	35	45	10	40	24	34	24	67	
17	74	33.7	+7	24.6	245	43.8 ¹⁰⁷	-5 43.4 ¹³⁴	40	17 41	18 08	18 40	18 20	32	6 26	70	
18	89	33.9	+7	25.5	260	13.4 ¹⁰⁶	-5 56.9 ¹³⁵	45	17 37	18 06	18 40	18 16	28	6 28	74	
19	104	34.1		26.4	274	43.1 ¹⁰⁷	-6 10.3 ¹³⁴	50	31	04	41	12	23	31	78	
20	119	34.2		27.3	289	12.8 ¹⁰⁷	23.6 ¹³³	52	29	03	42	10	21	32	81	
21	134	34.4		28.3	303	42.5 ¹⁰⁷	36.9 ¹³³	54	26	02	43	07	20	33	84	
22	149	34.6		29.2	318	12.1 ¹⁰⁶	-6 50.1 ¹³²	56	23	01	44	05	17	35	86	
23	164	34.7		30.1	332	41.8 ¹⁰⁷	-7 03.3 ¹³²	58	20	18 00	45	18 02	14	36	89	
24	179	34.9	+7	31.1	347	11.5 ¹⁰⁷	-7 16.5 ¹³²	60 S	17 17	17 58	18 46	17 59	11	6 38	92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 52 ^m 9		Mag: -4.3 PMG: 10 ^h 58 ^m			Mag: -0.4 PMG: 4 ^h 24 ^m			Mag: -2.1 PMG: 15 ^h 22 ^m			Mag: +0.2 PMG: 14 ^h 39 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	196	19.1	194	54.4	+7	52.7	293	51.0	-23	07.9	129	04.5	+21	19.8	139	37.0
1	211	21.5	209	57.7		51.8	308	52.6		08.0	144	06.5		19.9	154	39.2
2	226	24.0	225	01.1		50.9	323	54.1		08.2	159	08.4		20.0	169	41.4
3	241	26.5	240	04.4		49.9	338	55.7		08.3	174	10.4		20.1	184	43.6
4	256	28.9	255	07.7		49.0	353	57.3		08.4	189	12.4		20.2	199	45.7
5	271	31.4	270	11.1	+7	48.1	8	58.9	-23	08.5	204	14.4	+21	20.2	214	47.9
6	286	33.9	285	14.4	+7	47.1	24	00.5	-23	08.6	219	16.3	+21	20.3	229	50.1
7	301	36.3	300	17.8		46.2	39	02.1		08.7	234	18.3		20.4	244	52.3
8	316	38.8	315	21.1		45.3	54	03.7		08.8	249	20.3		20.5	259	54.5
9	331	41.3	330	24.4		44.4	69	05.3		08.9	264	22.2		20.5	274	56.7
10	346	43.7	345	27.7		43.4	84	06.9		09.1	279	24.2		20.6	289	58.9
11	1	46.2	0	31.0	+7	42.5	99	08.5	-23	09.2	294	26.2	+21	20.7	305	01.0
12	16	48.7	15	34.4	+7	41.6	114	10.1	-23	09.3	309	28.1	+21	20.8	320	03.2
13	31	51.1	30	37.7		40.7	129	11.7		09.4	324	30.1		20.9	335	05.4
14	46	53.6	45	41.0		39.7	144	13.3		09.5	339	32.1		20.9	350	07.6
15	61	56.0	60	44.3		38.8	159	15.0		09.6	354	34.1		21.0	5	09.8
16	76	58.5	75	47.6		37.9	174	16.6		09.7	9	36.0		21.1	20	12.0
17	92	01.0	90	50.9	+7	37.0	189	18.2	-23	09.8	24	38.0	+21	21.2	35	14.1
18	107	03.4	105	54.2	+7	36.1	204	19.8	-23	10.0	39	40.0	+21	21.2	50	16.3
19	122	05.9	120	57.5		35.1	219	21.4		10.1	54	41.9		21.3	65	18.5
20	137	08.4	136	00.8		34.2	234	23.0		10.2	69	43.9		21.4	80	20.7
21	152	10.8	151	04.0		33.3	249	24.6		10.3	84	45.9		21.5	95	22.9
22	167	13.3	166	07.3		32.4	264	26.2		10.4	99	47.8		21.6	110	25.1
23	182	15.8	181	10.6		31.5	279	27.8		10.5	114	49.8		21.6	125	27.3
24	197	18.2	196	13.9	+7	30.5	294	29.4	-23	10.6	129	51.8	+21	21.7	140	29.4
Dif	—		+33		-9		+16		-1		+20		+1		+22	

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: 14 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'2 SD: 16'0 PMG: 0 ^h 53 ^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	179	34.9	+7	31.1	347	11.5	-7	16.5	60 N	3 20	4 17	5 01	20 58	89	6 02	12			
1	194	35.1		32.0	1	41.2 ¹⁰⁷		29.5 ¹³⁰	58	32	24	06	51	86	06	16			
2	209	35.3		32.9	16	10.9 ¹⁰⁷		42.6 ¹³¹	56	42	31	10	45	82	11	18			
3	224	35.4		33.9	30	40.6 ¹⁰⁷		-7 55.6 ¹³⁰	54	51	37	13	40	79	15	20			
4	239	35.6		34.8	45	10.3 ¹⁰⁷		-8 08.5 ¹²⁹	52	3 59	42	17	35	77	18	23			
5	254	35.8	+7	35.7	59	40.0 ¹⁰⁷		-8 21.3 ¹²⁸	50	4 06	4 46	5 20	20 30	75	6 21	25			
6	269	36.0	+7	36.6	74	09.6 ¹⁰⁶		-8 34.2 ¹²⁹	45	4 20	4 56	5 26	20 20	71	6 28	29			
7	284	36.1		37.6	88	39.3 ¹⁰⁷		46.9 ¹²⁷	40	31	5 04	31	12	68	34	33			
8	299	36.3		38.5	103	09.0 ¹⁰⁷		-8 59.6 ¹²⁷	35	40	10	36	20 05	65	39	36			
9	314	36.5		39.4	117	38.7 ¹⁰⁷		-9 12.2 ¹²⁶	30	47	16	40	19 59	62	44	38			
10	329	36.6		40.4	132	08.4 ¹⁰⁷		24.8 ¹²⁶	20	4 59	25	47	49	57	52	42			
11	344	36.8	+7	41.3	146	38.0 ¹⁰⁶		-9 37.3 ¹²⁵	10 N	5 07	5 32	5 53	19 40	54	6 58	47			
12	359	37.0	+7	42.2	161	07.7 ¹⁰⁷		-9 49.7 ¹²⁴	0	5 13	5 37	5 58	19 31	51	7 05	50			
13	14	37.1		43.1	175	37.4 ¹⁰⁷		-10 02.1 ¹²⁴	10 S	18	42	6 04	23	47	11	55			
14	29	37.3		44.1	190	07.0 ¹⁰⁶		14.4 ¹²³	20	21	47	09	14	43	18	58			
15	44	37.5		45.0	204	36.7 ¹⁰⁷		26.6 ¹²²	30	24	51	15	19 04	39	26	63			
16	59	37.7		45.9	219	06.3 ¹⁰⁶		38.8 ¹²²	35	24	54	19	18 58	37	31	65			
17	74	37.8	+7	46.9	233	35.9 ¹⁰⁶		-10 50.9 ¹²¹	40	5 24	5 56	6 23	18 52	33	7 36	69			
18	89	38.0	+7	47.8	248	05.6 ¹⁰⁷		-11 02.9 ¹²⁰	45	5 24	5 58	6 28	18 44	31	7 42	72			
19	104	38.2		48.7	262	35.2 ¹⁰⁶		14.9 ¹²⁰	50	23	6 00	33	35	26	49	77			
20	119	38.3		49.6	277	04.8 ¹⁰⁶		26.8 ¹¹⁹	52	22	02	36	31	24	53	79			
21	134	38.5		50.6	291	34.4 ¹⁰⁶		38.6 ¹¹⁸	54	22	03	38	27	22	7 57	81			
22	149	38.7		51.5	306	04.0 ¹⁰⁶		-11 50.3 ¹¹⁷	56	21	04	41	22	19	8 01	83			
23	164	38.9		52.4	320	33.6 ¹⁰⁶		-12 02.0 ¹¹⁷	58	20	05	45	16	17	05	87			
24	179	39.0	+7	53.3	335	03.2 ¹⁰⁶		-12 13.5 ¹¹⁵	60 S	5 18	6 06	6 48	18 10	13	8 10	91			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 10 ^h 49 ^m 0			Mag: -4.3 PMG: 10 ^h 53 ^m			Mag: -0.4 PMG: 4 ^h 22 ^m			Mag: -2.1 PMG: 15 ^h 19 ^m			Mag: +0.2 PMG: 14 ^h 36 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	197	18.2		196	13.9	+7	30.5	294	29.4	-23	10.6	129	51.8	+21	21.7	140	29.4	+18	06.8
1	212	20.7		211	17.1		29.6	309	31.0		10.7	144	53.7		21.8	155	31.6		06.9
2	227	23.1		226	20.4		28.7	324	32.7		10.9	159	55.7		21.9	170	33.8		07.0
3	242	25.6		241	23.7		27.8	339	34.3		11.0	174	57.7		21.9	185	36.0		07.0
4	257	28.1		256	26.9		26.9	354	35.9		11.1	189	59.6		22.0	200	38.2		07.1
5	272	30.5		271	30.2	+7	26.0	9	37.5	-23	11.2	205	01.6	+21	22.1	215	40.4	+18	07.2
6	287	33.0		286	33.4	+7	25.1	24	39.1	-23	11.3	220	03.6	+21	22.2	230	42.5	+18	07.2
7	302	35.5		301	36.7		24.1	39	40.7		11.4	235	05.5		22.3	245	44.7		07.3
8	317	37.9		316	39.9		23.2	54	42.3		11.5	250	07.5		22.3	260	46.9		07.4
9	332	40.4		331	43.2		22.3	69	44.0		11.6	265	09.5		22.4	275	49.1		07.4
10	347	42.9		346	46.4		21.4	84	45.6		11.8	280	11.4		22.5	290	51.3		07.5
11	2	45.3		1	49.6	+7	20.5	99	47.2	-23	11.9	295	13.4	+21	22.6	305	53.4	+18	07.6
12	17	47.8		16	52.9	+7	19.6	114	48.8	-23	12.0	310	15.4	+21	22.6	320	55.6	+18	07.6
13	32	50.3		31	56.1		18.7	129	50.4		12.1	325	17.3		22.7	335	57.8		07.7
14	47	52.7		46	59.3		17.8	144	52.1		12.2	340	19.3		22.8	351	00.0		07.8
15	62	55.2		62	02.5		16.9	159	53.7		12.3	355	21.3		22.9	6	02.2		07.8
16	77	57.6		77	05.7		16.0	174	55.3		12.4	10	23.2		23.0	21	04.4		07.9
17	93	00.1		92	09.0	+7	15.1	189	56.9	-23	12.5	25	25.2	+21	23.0	36	06.5	+18	08.0
18	108	02.6		107	12.2	+7	14.2	204	58.6	-23	12.6	40	27.2	+21	23.1	51	08.7	+18	08.0
19	123	05.0		122	15.4		13.3	220	00.2		12.8	55	29.1		23.2	66	10.9		08.1
20	138	07.5		137	18.6		12.4	235	01.8		12.9	70	31.1		23.3	81	13.1		08.2
21	153	10.0		152	21.8		11.5	250	03.4		13.0	85	33.1		23.3	96	15.3		08.2
22	168	12.4		167	25.0		10.6	265	05.1		13.1	100	35.0		23.4	111	17.5		08.3
23	183	14.9		182	28.1		09.7	280	06.7		13.2	115	37.0		23.5	126	19.6		08.4
24	198	17.4		197	31.3	+7	08.8	295	08.3	-23	13.3	130	39.0	+21	23.6	141	21.8	+18	08.4
Dif	—			+32 -9			+16 -1			+20 +1			+22 +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 3			Edad: 15 ^d 9 PHE { 4 ^h : 57°9 12 ^h : 57°6 20 ^h : 57°4 SD: 15°8 PMG: 1 ^h 43 ^m R°: 51 ^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
0	179	39.0	+7 53.3	335	03.2	-12 13.5	60 N	19 06	19 51	20 49	22 27 85	6 14	15	
1	194	39.2	54.3	349	32.8 ¹⁰⁶	25.0 ¹¹⁵	58	19 01	43	37	17 81	22	18	
2	209	39.4	55.2	4	02.4 ¹⁰⁶	36.5 ¹¹⁵	56	18 57	36	26	22 07 79	29	21	
3	224	39.5	56.1	18	31.9 ¹⁰⁵	47.8 ¹¹³	54	53	30	16	21 59 76	35	22	
4	239	39.7	57.0	33	01.5 ¹⁰⁶	-12 59.1 ¹¹³	52	49	25	08	52 73	41	26	
5	254	39.9	+7 58.0	47	31.0 ¹⁰⁵	-13 10.2 ¹¹¹	50	18 46	19 20	20 01	21 45 72	6 46	28	
6	269	40.0	+7 58.9	62	00.5 ¹⁰⁵	-13 21.3 ¹¹¹	45	18 39	19 09	19 46	21 31 68	6 57	32	
7	284	40.2	+7 59.8	76	30.1 ¹⁰⁶	32.3 ¹¹⁰	40	33	19 01	34	20 65	7 07	35	
8	299	40.4	+8 00.7	90	59.6 ¹⁰⁵	43.3 ¹¹⁰	35	28	18 54	25	10 62	15	38	
9	314	40.5	01.6	105	29.1 ¹⁰⁵	-13 54.1 ¹⁰⁸	30	24	48	17	21 01 61	22	40	
10	329	40.7	02.6	119	58.6 ¹⁰⁵	-14 04.8 ¹⁰⁷	20	17	39	19 05	20 46 57	34	44	
11	344	40.9	+8 03.5	134	28.0 ¹⁰⁴	-14 15.5 ¹⁰⁷	10 N	18 10	18 32	18 56	20 34 53	7 45	48	
12	359	41.0	+8 04.4	148	57.5 ¹⁰⁵	-14 26.1 ¹⁰⁶	0	18 05	18 25	18 50	20 22 51	7 55	51	
13	14	41.2	05.3	163	26.9 ¹⁰⁴	36.6 ¹⁰⁵	10 S	17 59	20	45	20 10 48	8 06	54	
14	29	41.4	06.3	177	56.4 ¹⁰⁵	47.0 ¹⁰⁴	20	53	15	41	19 57 45	16	58	
15	44	41.6	07.2	192	25.8 ¹⁰⁴	-14 57.3 ¹⁰³	30	46	10	38	43 42	29	61	
16	59	41.7	08.1	206	55.2 ¹⁰⁴	-15 07.5 ¹⁰²	35	42	08	37	35 39	36	64	
17	74	41.9	+8 09.0	221	24.6 ¹⁰⁴	-15 17.6 ¹⁰¹	40	17 38	18 05	18 37	19 25 37	8 45	66	
18	89	42.1	+8 09.9	235	54.0 ¹⁰⁴	-15 27.6 ¹⁰⁰	45	17 33	18 03	18 36	19 15 34	8 54	70	
19	104	42.2	10.9	250	23.4 ¹⁰⁴	37.6 ¹⁰⁰	50	27	18 00	37	19 01 31	9 06	74	
20	119	42.4	11.8	264	52.8 ¹⁰⁴	47.4 ⁹⁸	52	24	17 58	37	18 55 29	12	75	
21	134	42.6	12.7	279	22.1 ¹⁰³	-15 57.2 ⁹⁸	54	22	57	38	49 26	18	78	
22	149	42.7	13.6	293	51.5 ¹⁰⁴	-16 06.8 ⁹⁶	56	18	56	39	41 24	24	81	
23	164	42.9	14.5	308	20.8 ¹⁰³	16.4 ⁹⁶	58	15	54	40	33 21	32	84	
24	179	43.1	+8 15.5	322	50.1 ¹⁰³	-16 25.8 ⁹⁴	60 S	17 11	17 53	18 41	18 23 18	9 41	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 45 ^m 1		Mag: -4.4 PMG: 10 ^h 48 ^m		Mag: -0.4 PMG: 4 ^h 19 ^m		Mag: -2.1 PMG: 15 ^h 15 ^m		Mag: +0.2 PMG: 14 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	198	17.4	197 31.3	+7 08.8	295 08.3	-23 13.3	130 39.0	+21 23.6	141 21.8	+18 08.4
1	213	19.8	212 34.5	07.9	310 09.9	13.4	145 40.9	23.7	156 24.0	08.5
2	228	22.3	227 37.7	07.0	325 11.6	13.5	160 42.9	23.7	171 26.2	08.6
3	243	24.7	242 40.9	06.1	340 13.2	13.7	175 44.8	23.8	186 28.4	08.6
4	258	27.2	257 44.0	05.2	355 14.8	13.8	190 46.8	23.9	201 30.5	08.7
5	273	29.7	272 47.2	+7 04.3	10 16.5	-23 13.9	205 48.8	+21 24.0	216 32.7	+18 08.8
6	288	32.1	287 50.4	+7 03.4	25 18.1	-23 14.0	220 50.7	+21 24.0	231 34.9	+18 08.8
7	303	34.6	302 53.5	02.6	40 19.7	14.1	235 52.7	24.1	246 37.1	08.9
8	318	37.1	317 56.7	01.7	55 21.4	14.2	250 54.7	24.2	261 39.3	09.0
9	333	39.5	332 59.8	+7 00.8	70 23.0	14.3	265 56.6	24.3	276 41.4	09.0
10	348	42.0	348 03.0	+6 59.9	85 24.7	14.4	280 58.6	24.4	291 43.6	09.1
11	3	44.5	3 06.1	+6 59.0	100 26.3	-23 14.5	296 00.6	+21 24.4	306 45.8	+18 09.2
12	18	46.9	18 09.3	+6 58.1	115 27.9	-23 14.7	311 02.5	+21 24.5	321 48.0	+18 09.2
13	33	49.4	33 12.4	57.2	130 29.6	14.8	326 04.5	24.6	336 50.2	09.3
14	48	51.9	48 15.5	56.4	145 31.2	14.9	341 06.4	24.7	351 52.3	09.4
15	63	54.3	63 18.7	55.5	160 32.8	15.0	356 08.4	24.7	6 54.5	09.4
16	78	56.8	78 21.8	54.6	175 34.5	15.1	11 10.4	24.8	21 56.7	09.5
17	93	59.2	93 24.9	+6 53.7	190 36.1	-23 15.2	26 12.3	+21 24.9	36 58.9	+18 09.6
18	109	01.7	108 28.0	+6 52.8	205 37.8	-23 15.3	41 14.3	+21 25.0	52 01.1	+18 09.6
19	124	04.2	123 31.1	52.0	220 39.4	15.4	56 16.2	25.1	67 03.2	09.7
20	139	06.6	138 34.3	51.1	235 41.1	15.5	71 18.2	25.1	82 05.4	09.8
21	154	09.1	153 37.4	50.2	250 42.7	15.6	86 20.2	25.2	97 07.6	09.8
22	169	11.6	168 40.5	49.3	265 44.4	15.8	101 22.1	25.3	112 09.8	09.9
23	184	14.0	183 43.6	48.5	280 46.0	15.9	116 24.1	25.4	127 12.0	10.0
24	199	16.5	198 46.7	+6 47.6	295 47.6	-23 16.0	131 26.0	+21 25.4	142 14.1	+18 10.0
Dif	—		+31	-9	+16	-1	+20	+1	+22	+

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: 16 ^d 9 PHE { 4 ^h : 57.1 12 ^h : 56.8 20 ^h : 56.6 SD: 15 ^h 6 PMG: 2 ^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	h	m	
0	179	43.1	+8	15.5	322	50.1	-16	25.8	60 N	3	12	4	10	4	55	23	52
1	194	43.2			337	19.5 ¹⁰⁴		35.2 ⁹⁴	58	25	18	5	00	38	73	40	25
2	209	43.4			351	48.8 ¹⁰³		44.4 ⁹²	56	36	25	05	26	71	50	27	
3	224	43.6			6	18.0 ¹⁰²	-16	53.6 ⁹²	54	45	31	09	15	69	6	59	
4	239	43.7			20	47.3 ¹⁰³	-17	02.7 ⁹¹	52	3	53	37	12	23	05	68	
5	254	43.9	+8	20.1	35	16.6 ¹⁰³	-17	11.6 ⁸⁹	50	4	01	4	42	22	57	66	
6	269	44.1	+8	21.0	49	45.8 ¹⁰²	-17	20.5 ⁸⁹	45	4	16	4	52	22	39	63	
7	284	44.2			64	15.1 ¹⁰³		29.2 ⁸⁷	40	27	5	01	28	25	61	42	
8	299	44.4			78	44.3 ¹⁰²		37.9 ⁸⁷	35	37	08	33	12	60	7	53	
9	314	44.5			93	13.5 ¹⁰²		46.4 ⁸⁵	30	45	13	38	22	02	58	8	02
10	329	44.7			107	42.7 ¹⁰²	-17	54.9 ⁸⁵	20	4	57	23	45	21	43	56	
11	344	44.9	+8	25.6	122	11.9 ¹⁰²	-18	03.2 ⁸³	10 N	5	06	5	30	5	52	21	27
12	359	45.0	+8	26.5	136	41.1 ¹⁰²	-18	11.5 ⁸³	0	5	13	5	37	5	58	21	13
13	14	45.2			151	10.3 ¹⁰²		19.6 ⁸¹	10 S	18	42	6	04	20	58	49	
14	29	45.4			165	39.5 ¹⁰²		27.6 ⁸⁰	20	22	48	10	42	47	14	56	
15	44	45.5			180	08.6 ¹⁰¹		35.5 ⁷⁹	30	25	53	17	25	44	30	60	
16	59	45.7			194	37.8 ¹⁰²		43.3 ⁷⁸	35	26	55	21	14	43	40	61	
17	74	45.9	+8	31.1	209	06.9 ¹⁰¹	-18	51.0 ⁷⁷	40	5	26	5	58	6	25	20	02
18	89	46.0	+8	32.0	223	36.0 ¹⁰¹	-18	58.6 ⁷⁶	45	5	26	6	00	6	30	19	49
19	104	46.2			238	05.1 ¹⁰¹	-19	06.1 ⁷⁵	50	26	03	36	32	36	20	69	
20	119	46.4			252	34.2 ¹⁰¹		13.5 ⁷⁴	52	26	05	39	24	34	27	71	
21	134	46.5			267	03.3 ¹⁰¹		20.8 ⁷³	54	25	06	42	15	33	36	72	
22	149	46.7			281	32.4 ¹⁰¹		27.9 ⁷¹	56	25	08	45	19	05	31	45	
23	164	46.9			296	01.5 ¹⁰¹		35.0 ⁷¹	58	24	09	49	18	54	28	10	
24	179	47.0	+8	37.4	310	30.6 ¹⁰¹	-19	41.9 ⁶⁹	60 S	5	23	6	11	6	53	18	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 41 ^m 1		Mag: -4.4 PMG: 10 ^h 43 ^m		Mag: -0.5 PMG: 4 ^h 16 ^m		Mag: -2.1 PMG: 15 ^h 12 ^m		Mag: +0.2 PMG: 14 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	199	16.5	198	46.7	+6	47.6	295	47.6	-23	16.0
1	214	19.0	213	49.7		46.7	310	49.3		16.1
2	229	21.4	228	52.8		45.9	325	50.9		16.2
3	244	23.9	243	55.9		45.0	340	52.6		16.3
4	259	26.4	258	59.0		44.1	355	54.2		16.4
5	274	28.8	274	02.1	+6	43.3	10	55.9	-23	16.5
6	289	31.3	289	05.1	+6	42.4	25	57.6	-23	16.6
7	304	33.7	304	08.2		41.5	40	59.2		16.8
8	319	36.2	319	11.3		40.7	56	00.9		16.9
9	334	38.7	334	14.3		39.8	71	02.5		17.0
10	349	41.1	349	17.4		39.0	86	04.2		17.1
11	4	43.6	4	20.5	+6	38.1	101	05.8	-23	17.2
12	19	46.1	19	23.5	+6	37.2	116	07.5	-23	17.3
13	34	48.5	34	26.5		36.4	131	09.1		17.4
14	49	51.0	49	29.6		35.5	146	10.8		17.5
15	64	53.5	64	32.6		34.7	161	12.5		17.6
16	79	55.9	79	35.7		33.8	176	14.1		17.7
17	94	58.4	94	38.7	+6	33.0	191	15.8	-23	17.9
18	110	00.8	109	41.7	+6	32.1	206	17.4	-23	18.0
19	125	03.3	124	44.7		31.3	221	19.1		18.1
20	140	05.8	139	47.8		30.4	236	20.8		18.2
21	155	08.2	154	50.8		29.6	251	22.4		18.3
22	170	10.7	169	53.8		28.7	266	24.1		18.4
23	185	13.2	184	56.8		27.9	281	25.8		18.5
24	200	15.6	199	59.8	+6	27.0	296	27.4	-23	18.6
Dif	—		+30	-9			+17	-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: 17 ^d 9 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'8 PMG: 3 ^h 25 ^m R°: 51 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	179	47.0	+8	37.4	310	30.6	-19	41.9	60 N	19 11	19 56	20 56	** ** *	6 50 30				
1	194	47.2		38.4	324	59.7 ¹⁰¹		48.7 ⁶⁸	58	05	48	42	** ** *	7 05 32				
2	209	47.3		39.3	339	28.7 ¹⁰⁰	-19	55.5	68	56	19 01	40	31	** ** *	17 35			
3	224	47.5		40.2	353	57.8 ¹⁰¹	-20	02.1	66	54	18 56	34	21	** ** *	28 37			
4	239	47.7		41.1	8	26.8 ¹⁰⁰		08.6 ⁶⁵	52	53	28	12	** ** *	38 38				
5	254	47.8	+8	42.0	22	55.9 ¹⁰¹	-20	14.9	63	50	18 49	19 23	20 05	** ** *	7 47 39			
6	269	48.0	+8	42.9	37	24.9 ¹⁰⁰	-20	21.2	63	45	18 42	19 12	19 49	23 42 57	8 06 41			
7	284	48.2		43.8	51	53.9 ¹⁰⁰		27.4 ⁶²	60	40	35	19 03	37	26 56	21 43			
8	299	48.3		44.7	66	23.0 ¹⁰¹		33.4 ⁶⁰	60	35	30	18 56	27	12 55	34 45			
9	314	48.5		45.7	80	52.0 ¹⁰⁰		39.3 ⁵⁹	59	30	25	50	19	23 00 54	8 45 46			
10	329	48.6		46.6	95	21.0 ¹⁰⁰		45.1 ⁵⁸	58	20	17	40	19 06	22 39 53	9 05 48			
11	344	48.8	+8	47.5	109	50.0 ¹⁰⁰	-20	50.8	57	10 N	18 10	18 32	18 57	22 21 52	9 22 49			
12	359	49.0	+8	48.4	124	19.0 ¹⁰⁰	-20	56.4	55	0	18 04	18 25	18 49	22 04 51	9 37 52			
13	14	49.1		49.3	138	48.1 ¹⁰¹	-21	01.9	55	10 S	17 58	19	44	21 47 50	9 53 53			
14	29	49.3		50.2	153	17.1 ¹⁰⁰		07.2 ⁵³	53	20	51	13	39	29 49	10 10 55			
15	44	49.4		51.1	167	46.1 ¹⁰⁰		12.5 ⁵³	53	30	44	08	36	21 09 48	30 56			
16	59	49.6		52.0	182	15.1 ¹⁰⁰		17.6 ⁵¹	50	35	40	05	35	20 57 47	41 58			
17	74	49.8	+8	52.9	196	44.1 ¹⁰⁰	-21	22.6	50	40	17 35	18 02	18 34	20 44 45	10 54 59			
18	89	49.9	+8	53.8	211	13.1 ¹⁰⁰	-21	27.5	49	45	17 30	17 59	18 33	20 27 45	11 10 60			
19	104	50.1		54.8	225	42.1 ¹⁰⁰		32.3 ⁴⁸	48	50	23	56	33	20 08 42	29 63			
20	119	50.3		55.7	240	11.1 ¹⁰⁰		36.9 ⁴⁶	46	52	20	54	33	19 58 42	38 64			
21	134	50.4		56.6	254	40.1 ¹⁰⁰		41.5 ⁴⁶	44	54	17	53	33	48 40	11 48 65			
22	149	50.6		57.5	269	09.1 ¹⁰⁰		45.9 ⁴⁴	44	56	13	51	34	36 39	12 00 66			
23	164	50.7		58.4	283	38.2 ¹⁰¹		50.2 ⁴³	43	58	09	49	34	22 38	13 69			
24	179	50.9	+8	59.3	298	07.2 ¹⁰⁰	-21	54.4	42	60 S	17 05	17 47	18 35	19 06 35	12 29 71			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 37 ^m 2		Mag: -4.4 PMG: 10 ^h 38 ^m			Mag: -0.5 PMG: 4 ^h 14 ^m			Mag: -2.1 PMG: 15 ^h 09 ^m			Mag: +0.2 PMG: 14 ^h 25 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	200	15.6	199	59.8	+6	27.0	296	27.4	-23	18.6	132	13.0	+21	27.3	143	06.4	+18	11.7
1	215	18.1	215	02.8		26.2	311	29.1		18.7	147	15.0		27.4	158	08.6		11.7
2	230	20.6	230	05.8		25.4	326	30.8		18.8	162	17.0		27.5	173	10.8		11.8
3	245	23.0	245	08.8		24.5	341	32.4		18.9	177	18.9		27.5	188	12.9		11.9
4	260	25.5	260	11.8		23.7	356	34.1		19.1	192	20.9		27.6	203	15.1		11.9
5	275	28.0	275	14.7	+6	22.9	11	35.8	-23	19.2	207	22.8	+21	27.7	218	17.3	+18	12.0
6	290	30.4	290	17.7	+6	22.0	26	37.4	-23	19.3	222	24.8	+21	27.8	233	19.5	+18	12.1
7	305	32.9	305	20.7		21.2	41	39.1		19.4	237	26.7		27.8	248	21.6		12.1
8	320	35.3	320	23.7		20.4	56	40.8		19.5	252	28.7		27.9	263	23.8		12.2
9	335	37.8	335	26.6		19.5	71	42.5		19.6	267	30.6		28.0	278	26.0		12.3
10	350	40.3	350	29.6		18.7	86	44.1		19.7	282	32.6		28.1	293	28.2		12.3
11	5	42.7	5	32.6	+6	17.9	101	45.8	-23	19.8	297	34.5	+21	28.2	308	30.4	+18	12.4
12	20	45.2	20	35.5	+6	17.0	116	47.5	-23	19.9	312	36.5	+21	28.2	323	32.5	+18	12.5
13	35	47.7	35	38.5		16.2	131	49.2		20.0	327	38.5		28.3	338	34.7		12.5
14	50	50.1	50	41.4		15.4	146	50.8		20.2	342	40.4		28.4	353	36.9		12.6
15	65	52.6	65	44.4		14.6	161	52.5		20.3	357	42.4		28.5	8	39.1		12.7
16	80	55.1	80	47.3		13.7	176	54.2		20.4	12	44.3		28.5	23	41.2		12.7
17	95	57.5	95	50.2	+6	12.9	191	55.9	-23	20.5	27	46.3	+21	28.6	38	43.4	+18	12.8
18	111	00.0	110	53.2	+6	12.1	206	57.6	-23	20.6	42	48.2	+21	28.7	53	45.6	+18	12.9
19	126	02.5	125	56.1		11.3	221	59.3		20.7	57	50.2		28.8	68	47.8		12.9
20	141	04.9	140	59.0		10.5	237	00.9		20.8	72	52.1		28.9	83	49.9		13.0
21	156	07.4	156	01.9		09.7	252	02.6		20.9	87	54.1		28.9	98	52.1		13.1
22	171	09.8	171	04.9		08.8	267	04.3		21.0	102	56.0		29.0	113	54.3		13.1
23	186	12.3	186	07.8		08.0	282	06.0		21.1	117	58.0		29.1	128	56.5		13.2
24	201	14.8	201	10.7	+6	07.2	297	07.7	-23	21.2	132	59.9	+21	29.2	143	58.6	+18	13.3
Dif	—		+30			-8	+17			-1	+20		+1	+22			+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 00 ^m 5			Edad: 18 ^d 9 PHE { SD: 15 ^m 2 PMG: 4 ^h 16 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	50.9	+ 8 59.3	298	07.2	-21 54.4	60 N	3	04	4	04	4	49	1 09 64 7 20 41
1	194	51.1	+9 00.2	312	36.2 ¹⁰⁰	-21 58.5 ⁴¹	58	18	12	4	55	0	51 62 37 43	
2	209	51.2	01.1	327	05.2 ¹⁰⁰	-22 02.4 ³⁹	56	30	20	5	00	37	61 7 52 44	
3	224	51.4	02.0	341	34.3 ¹⁰¹	06.3 ³⁹	54	40	26	04	24	60	8 05 45	
4	239	51.5	02.9	356	03.3 ¹⁰⁰	10.0 ³⁷	52	48	32	08	13	59	16 46	
5	254	51.7	+9 03.8	10	32.4 ¹⁰¹	-22 13.6 ³⁶	50	3	56	4	37	5	11 0 03 59 8 26 47	
6	269	51.9	+9 04.7	25	01.4 ¹⁰⁰	-22 17.1 ³⁵	45	4	12	4	49	5	19 ** ** * 8 47 48	
7	284	52.0	05.6	39	30.5 ¹⁰¹	20.5 ³⁴	40	24	4	57	25	** ** *	9 04 48	
8	299	52.2	06.5	53	59.5 ¹⁰⁰	23.7 ³²	35	34	5	05	31	** ** *	19 48	
9	314	52.3	07.5	68	28.6 ¹⁰¹	26.9 ³²	30	42	11	35	23	54 50 31 49		
10	329	52.5	08.4	82	57.7 ¹⁰¹	29.9 ³⁰	20	4	55	21	44	32	50 9 53 50	
11	344	52.6	+9 09.3	97	26.8 ¹⁰¹	-22 32.8 ²⁹	10 N	5	05	5	29	5	51 23 13 50 10 11 51	
12	359	52.8	+9 10.2	111	55.9 ¹⁰¹	-22 35.6 ²⁸	0	5	12	5	36	5	57 22 55 51 10 29 51	
13	14	53.0	11.1	126	25.0 ¹⁰¹	38.3 ²⁷	10 S	18	42	6	04	37	51 10 46 51	
14	29	53.1	12.0	140	54.1 ¹⁰¹	40.8 ²⁵	20	22	48	10	22	18 51 11 05 52		
15	44	53.3	12.9	155	23.3 ¹⁰²	43.2 ²⁴	30	26	54	18	21	57 50 26 53		
16	59	53.4	13.8	169	52.4 ¹⁰¹	45.6 ²⁴	35	27	5	57	22	44 50 39 53		
17	74	53.6	+9 14.7	184	21.6 ¹⁰²	-22 47.8 ²²	40	5	28	6	00	6	27 21 29 50 11 53 53	
18	89	53.7	+9 15.6	198	50.8 ¹⁰²	-22 49.9 ²¹	45	5	29	6	03	6	33 21 12 50 12 10 54	
19	104	53.9	16.5	213	20.0 ¹⁰²	51.8 ¹⁹	50	29	06	39	20	50 50 32 54		
20	119	54.1	17.4	227	49.2 ¹⁰²	53.7 ¹⁹	52	29	08	42	40	50 42 54		
21	134	54.2	18.3	242	18.4 ¹⁰²	55.4 ¹⁷	54	29	10	46	28	50 12 53 55		
22	149	54.4	19.2	256	47.6 ¹⁰²	57.0 ¹⁶	56	28	11	49	15	49 13 06 56		
23	164	54.5	20.1	271	16.9 ¹⁰³	58.5 ¹⁵	58	28	13	53	20	00 49 22 55		
24	179	54.7	+9 21.0	285	46.2 ¹⁰³	-22 59.9 ¹⁴	60 S	5	27	6	15	6	58 19 41 49 13 40 56	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 33 ^m 3		Mag: -4.5 PMG: 10 ^h 33 ^m		Mag: -0.5 PMG: 4 ^h 11 ^m		Mag: -2.1 PMG: 15 ^h 06 ^m		Mag: +0.2 PMG: 14 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	201	14.8	201	10.7	297	07.7	132	59.9	143	58.6
1	216	17.2	216	13.6	312	09.4	148	01.9	159	00.8
2	231	19.7	231	16.5	327	11.0	163	03.8	174	03.0
3	246	22.2	246	19.4	342	12.7	178	05.8	189	05.2
4	261	24.6	261	22.3	357	14.4	193	07.8	204	07.3
5	276	27.1	276	25.2	12	16.1	208	09.7	219	09.5
6	291	29.6	291	28.1	27	17.8	223	11.7	234	11.7
7	306	32.0	306	30.9	42	19.5	238	13.6	249	13.9
8	321	34.5	321	33.8	57	21.2	253	15.6	264	16.0
9	336	37.0	336	36.7	72	22.9	268	17.5	279	18.2
10	351	39.4	351	39.6	87	24.6	283	19.5	294	20.4
11	6	41.9	6	42.4	102	26.3	298	21.4	309	22.5
12	21	44.3	21	45.3	117	28.0	313	23.4	324	24.7
13	36	46.8	36	48.1	132	29.7	328	25.3	339	26.9
14	51	49.3	51	51.0	147	31.4	343	27.3	354	29.1
15	66	51.7	66	53.8	162	33.1	358	29.2	9	31.2
16	81	54.2	81	56.7	177	34.8	13	31.2	24	33.4
17	96	56.7	96	59.5	192	36.5	28	33.1	39	35.6
18	111	59.1	112	02.4	207	38.2	43	35.1	54	37.8
19	127	01.6	127	05.2	222	39.9	58	37.0	69	39.9
20	142	04.1	142	08.0	237	41.6	73	39.0	84	42.1
21	157	06.5	157	10.9	252	43.3	88	40.9	99	44.3
22	172	09.0	172	13.7	267	45.0	103	42.9	114	46.5
23	187	11.4	187	16.5	282	46.7	118	44.8	129	48.6
24	202	13.9	202	19.3	297	48.4	133	46.8	144	50.8
Dif	—		+29	-8	+17	-1	+20	+1	+22	+1

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: 19 ^d 9 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7 SD: 15'0 PMG: 5 ^h 07 ^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	179	54.7	+9 21.0	285	46.2	-22 59.9	60 N	19 16	20 02	21 03	2 13 48	8 01 56	
1	194	54.8		300	15.5 ¹⁰³	-23 01.2	58	10	19 53	20 49	1 53 49	20 55	
2	209	55.0	22.8	314	44.8 ¹⁰³	02.3	56	05	45	36	38 49	36 55	
3	224	55.2	23.7	329	14.1 ¹⁰³	03.4	54	19 00	38	26	24 49	8 50 54	
4	239	55.3	24.6	343	43.5 ¹⁰⁴	04.3	52	18 56	32	16	12 50	9 02 53	
5	254	55.5	+9 25.5	358	12.8 ¹⁰³	-23 05.1	50	18 52	19 26	20 08	1 02 49	9 13 53	
6	269	55.6	+9 26.4	12	42.2 ¹⁰⁴	-23 05.8	45	18 44	19 15	19 52	0 39 50	9 35 52	
7	284	55.8	27.3	27	11.7 ¹⁰⁵	06.3	40	37	19 05	39	22 50	9 52 53	
8	299	55.9	28.2	41	41.1 ¹⁰⁴	06.8	35	32	18 58	29	0 07 50	10 07 52	
9	314	56.1	29.1	56	10.6 ¹⁰⁵	07.1	30	27	51	20	** ** *	20 52	
10	329	56.2	30.0	70	40.0 ¹⁰⁴	07.4	20	18	40	19 07	** ** *	10 43 50	
11	344	56.4	+9 30.9	85	09.5 ¹⁰⁵	-23 07.5	10 N	18 10	18 32	18 57	** ** *	11 02 50	
12	359	56.6	+9 31.8	99	39.1 ¹⁰⁶	-23 07.5	0	18 04	18 25	18 49	23 46 49	11 20 49	
13	14	56.7	32.7	114	08.6 ¹⁰⁵	07.4	10 S	17 57	18	43	28 50	37 50	
14	29	56.9	33.6	128	38.2 ¹⁰⁶	07.2	20	50	12	38	23 09 51	11 57 48	
15	44	57.0	34.5	143	07.8 ¹⁰⁶	06.8	30	42	06	34	22 47 52	12 19 48	
16	59	57.2	35.4	157	37.5 ¹⁰⁷	06.4	35	37	18 03	32	34 53	32 47	
17	74	57.3	+9 36.3	172	07.1 ¹⁰⁶	-23 05.8	40	17 32	17 59	18 31	22 19 54	12 46 47	
18	89	57.5	+9 37.2	186	36.8 ¹⁰⁷	-23 05.1	45	17 26	17 56	18 30	22 02 55	13 04 46	
19	104	57.6	38.1	201	06.5 ¹⁰⁷	04.3	50	19	52	29	21 40 56	26 45	
20	119	57.8	39.0	215	36.3 ¹⁰⁸	03.4	52	16	50	29	30 56	36 45	
21	134	57.9	39.9	230	06.1 ¹⁰⁸	02.4	54	12	48	29	18 57	13 48 44	
22	149	58.1	40.8	244	35.9 ¹⁰⁸	01.3	56	08	46	29	21 04 59	14 02 43	
23	164	58.2	41.7	259	05.7 ¹⁰⁸	-23 00.1	58	17 04	44	29	20 49 59	17 43	
24	179	58.4	+9 42.5	273	35.6 ¹⁰⁹	-22 58.7	60 S	16 59	17 42	18 30	20 30 61	14 36 41	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO		
	PMG: 10 ^h 29 ^m 3		Mag: -4.5 PMG: 10 ^h 29 ^m			Mag: -0.5 PMG: 4 ^h 08 ^m			Mag: -2.1 PMG: 15 ^h 03 ^m		Mag: +0.2 PMG: 14 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	'	°	°	'
0	202	13.9	202	19.3	+5 48.2	297	48.4	-23 23.9	133	46.8	+21 31.0	144	50.8
1	217	16.4	217	22.1	47.4	312	50.1	24.0	148	48.7	31.1	159	53.0
2	232	18.8	232	24.9	46.6	327	51.8	24.1	163	50.7	31.2	174	55.1
3	247	21.3	247	27.7	45.9	342	53.5	24.2	178	52.6	31.2	189	57.3
4	262	23.8	262	30.5	45.1	357	55.2	24.3	193	54.5	31.3	204	59.5
5	277	26.2	277	33.3	+5 44.3	12	56.9	-23 24.4	208	56.5	+21 31.4	220	01.7
6	292	28.7	292	36.1	+5 43.6	27	58.6	-23 24.5	223	58.4	+21 31.5	235	03.8
7	307	31.2	307	38.9	42.8	43	00.4	24.6	239	00.4	31.6	250	06.0
8	322	33.6	322	41.7	42.0	58	02.1	24.7	254	02.3	31.6	265	08.2
9	337	36.1	337	44.5	41.3	73	03.8	24.8	269	04.3	31.7	280	10.4
10	352	38.6	352	47.2	40.5	88	05.5	24.9	284	06.2	31.8	295	12.5
11	7	41.0	7	50.0	+5 39.8	103	07.2	-23 25.0	299	08.2	+21 31.9	310	14.7
12	22	43.5	22	52.8	+5 39.0	118	08.9	-23 25.2	314	10.1	+21 31.9	325	16.9
13	37	45.9	37	55.5	38.2	133	10.7	25.3	329	12.1	32.0	340	19.0
14	52	48.4	52	58.3	37.5	148	12.4	25.4	344	14.0	32.1	355	21.2
15	67	50.9	68	01.1	36.7	163	14.1	25.5	359	16.0	32.2	10	23.4
16	82	53.3	83	03.8	36.0	178	15.8	25.6	14	17.9	32.2	25	25.6
17	97	55.8	98	06.6	+5 35.2	193	17.5	-23 25.7	29	19.9	+21 32.3	40	27.7
18	112	58.3	113	09.3	+5 34.5	208	19.3	-23 25.8	44	21.8	+21 32.4	55	29.9
19	128	00.7	128	12.0	33.7	223	21.0	25.9	59	23.8	32.5	70	32.1
20	143	03.2	143	14.8	33.0	238	22.7	26.0	74	25.7	32.6	85	34.2
21	158	05.7	158	17.5	32.3	253	24.4	26.1	89	27.6	32.6	100	36.4
22	173	08.1	173	20.2	31.5	268	26.1	26.2	104	29.6	32.7	115	38.6
23	188	10.6	188	23.0	30.8	283	27.9	26.3	119	31.5	32.8	130	40.7
24	203	13.1	203	25.7	+5 30.0	298	29.6	-23 26.5	134	33.5	+21 32.9	145	42.9
Dif	—		+28	-8		+17	-1		+19	+1		+22	+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: 20 ^d 9 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 5 ^h 58 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	58.4	+9 42.5	273	35.6	-22 58.7	60 N	2 56	3 57	4 43		3 01	34	8 57	66
1	194	58.6		288	05.5 ¹⁰⁹	57.3 ¹⁴	58	3 11	4 06	49		2 42	37	9 15	64
2	209	58.7		302	35.4 ¹⁰⁹	55.7 ¹⁶	56	23	14	55		27	38	31	62
3	224	58.9		317	05.4 ¹¹⁰	54.0 ¹⁷	54	34	21	4 59		13	39	44	61
4	239	59.0		331	35.4 ¹¹⁰	52.3 ¹⁷	52	43	28	5 03		2 02	40	9 55	60
5	254	59.2	+9 47.0	346	05.4 ¹¹⁰	-22 50.4 ¹⁹	50	3 51	4 33	5 07		1 51	41	10 06	59
6	269	59.3	+9 47.9	0	35.4 ¹¹⁰	-22 48.4 ²⁰	45	4 08	4 45	5 15		1 29	43	10 27	57
7	284	59.5		15	05.5 ¹¹¹	46.3 ²¹	40	21	4 54	22		1 12	44	45	55
8	299	59.6		29	35.7 ¹¹²	44.0 ²³	35	31	5 02	28		0 57	45	10 59	54
9	314	59.8		44	05.8 ¹¹¹	41.7 ²³	30	40	09	33		44	46	11 12	53
10	329	59.9		58	36.0 ¹¹²	39.3 ²⁴	20	4 53	20	42		22	47	33	52
11	345	00.1	+9 52.4	73	06.3 ¹¹³	-22 36.8 ²⁵	10 N	5 03	5 28	5 50		0 03	48	11 52	50
12	0	00.2	+9 53.3	87	36.5 ¹¹²	-22 34.1 ²⁷	0	5 11	5 36	5 57	** * *			12 09	49
13	15	00.4		102	06.8 ¹¹³	31.4 ²⁷	10 S	18	42	6 04	** * *			27	47
14	30	00.5		116	37.2 ¹¹⁴	28.5 ²⁹	20	23	49	11	** * *			12 45	46
15	45	00.7		131	07.6 ¹¹⁴	25.6 ²⁹	30	27	55	19	23 39	54	13 07	43	
16	60	00.8		145	38.0 ¹¹⁴	22.5 ³¹	35	29	5 58	24	27	55	19	43	
17	75	01.0	+9 57.7	160	08.4 ¹¹⁴	-22 19.4 ³¹	40	5 30	6 02	6 29	23 13	56	13 33	42	
18	90	01.1	+9 58.6	174	38.9 ¹¹⁵	-22 16.1 ³³	45	5 31	6 05	6 35	22 57	58	13 50	40	
19	105	01.3	+9 59.5	189	09.4 ¹¹⁵	12.7 ³⁴	50	32	09	42	36	61	14 11	37	
20	120	01.4	+10 00.4	203	40.0 ¹¹⁶	09.2 ³⁵	52	32	11	46	26	62	21	36	
21	135	01.6		218	10.6 ¹¹⁶	05.7 ³⁵	54	32	13	49	15	64	32	35	
22	150	01.7		232	41.3 ¹¹⁷	-22 02.0 ³⁷	56	32	15	53	22 03	65	14 45	33	
23	165	01.9		247	11.9 ¹¹⁶	-21 58.2 ³⁸	58	32	18	6 58	21 48	68	15 00	31	
24	180	02.0	+10 03.9	261	42.7 ¹¹⁸	-21 54.3 ³⁹	60 S	5 32	6 20	7 03	21 31	70	15 17	29	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 25 ^m 4			Mag: -4.5 PMG: 10 ^h 24 ^m			Mag: -0.6 PMG: 4 ^h 06 ^m			Mag: -2.1 PMG: 15 ^h 00 ^m			Mag: +0.2 PMG: 14 ^h 15 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	203	13.1		203	25.7	+5 30.0	298	29.6	-23 26.5	134	33.5	+21 32.9	145	42.9	+18 16.5
1	218	15.5		218	28.4		313	31.3	26.6	149	35.4	32.9	160	45.1	16.6
2	233	18.0		233	31.1	28.6	328	33.1	26.7	164	37.4	33.0	175	47.3	16.7
3	248	20.4		248	33.8	27.8	343	34.8	26.8	179	39.3	33.1	190	49.4	16.7
4	263	22.9		263	36.5	27.1	358	36.5	26.9	194	41.3	33.2	205	51.6	16.8
5	278	25.4		278	39.2	+5 26.4	13	38.2	-23 27.0	209	43.2	+21 33.2	220	53.8	+18 16.9
6	293	27.8		293	41.9	+5 25.6	28	40.0	-23 27.1	224	45.1	+21 33.3	235	55.9	+18 16.9
7	308	30.3		308	44.6	24.9	43	41.7	27.2	239	47.1	33.4	250	58.1	17.0
8	323	32.8		323	47.3	24.2	58	43.4	27.3	254	49.0	33.5	266	00.3	17.1
9	338	35.2		338	50.0	23.5	73	45.2	27.4	269	51.0	33.6	281	02.5	17.1
10	353	37.7		353	52.6	22.7	88	46.9	27.5	284	52.9	33.6	296	04.6	17.2
11	8	40.2		8	55.3	+5 22.0	103	48.7	-23 27.6	299	54.9	+21 33.7	311	06.8	+18 17.3
12	23	42.6		23	58.0	+5 21.3	118	50.4	-23 27.8	314	56.8	+21 33.8	326	09.0	+18 17.3
13	38	45.1		39	00.7	20.6	133	52.1	27.9	329	58.8	33.9	341	11.1	17.4
14	53	47.6		54	03.3	19.9	148	53.9	28.0	345	00.7	33.9	356	13.3	17.5
15	68	50.0		69	06.0	19.1	163	55.6	28.1	0	02.6	34.0	11	15.5	17.5
16	83	52.5		84	08.6	18.4	178	57.3	28.2	15	04.6	34.1	26	17.6	17.6
17	98	54.9		99	11.3	+5 17.7	193	59.1	-23 28.3	30	06.5	+21 34.2	41	19.8	+18 17.7
18	113	57.4		114	13.9	+5 17.0	209	00.8	-23 28.4	45	08.5	+21 34.2	56	22.0	+18 17.7
19	128	59.9		129	16.6	16.3	224	02.6	28.5	60	10.4	34.3	71	24.1	17.8
20	144	02.3		144	19.2	15.6	239	04.3	28.6	75	12.3	34.4	86	26.3	17.9
21	159	04.8		159	21.9	14.9	254	06.1	28.7	90	14.3	34.5	101	28.5	17.9
22	174	07.3		174	24.5	14.2	269	07.8	28.8	105	16.2	34.6	116	30.7	18.0
23	189	09.7		189	27.1	13.5	284	09.6	28.9	120	18.2	34.6	131	32.8	18.1
24	204	12.2		204	29.7	+5 12.8	299	11.3	-23 29.0	135	20.1	+21 34.7	146	35.0	+18 18.1
Dif	—			+27 -7			+17 -1			+19 +1			+22 +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: 21 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 6 ^h 46 ^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	02.0	+10 03.9	261	42.7	-21 54.3	39	60 N	19 21	20 07	21 11	3 35 24	10 03 74	
1	195	02.2	04.8	276	13.4 ¹¹⁷	50.4	41	58	14	19 58	20 55	19 26	19 71	
2	210	02.3	05.7	290	44.2 ¹¹⁸	46.3	41	56	09	49	42	3 05 28	33 68	
3	225	02.5	06.6	305	15.1 ¹¹⁹	42.1	42	54	19 04	42	30	2 52 31	45 66	
4	240	02.6	07.5	319	45.9 ¹¹⁸	37.8	43	52	18 59	36	21	42 32	10 55 64	
5	255	02.8	+10 08.4	334	16.9 ¹²⁰	-21 33.5	43	50	18 55	19 30	20 12	2 32 34	11 05 62	
6	270	02.9	+10 09.3	348	47.8 ¹¹⁹	-21 29.0	45	45	18 47	19 17	19 55	2 12 36	11 24 60	
7	285	03.1	10.1	3	18.8 ¹²⁰	24.4	46	40	39	19 08	41	1 56 38	40 57	
8	300	03.2	11.0	17	49.9 ¹²¹	19.8	46	35	33	18 59	30	42 40	11 53 56	
9	315	03.3	11.9	32	20.9 ¹²⁰	15.0	48	30	28	52	22	30 41	12 05 54	
10	330	03.5	12.8	46	52.1 ¹²²	10.1	49	20	19	41	19 07	1 09 44	25 51	
11	345	03.6	+10 13.7	61	23.2 ¹²¹	-21 05.2	49	10 N	18 11	18 32	18 57	0 51 46	12 42 49	
12	0	03.8	+10 14.6	75	54.4 ¹²²	-21 00.1	51	0	18 03	18 24	18 48	0 35 47	12 58 46	
13	15	03.9	15.4	90	25.7 ¹²³	-20 55.0	51	10 S	17 56	17	42	18 49	13 14 44	
14	30	04.1	16.3	104	56.9 ¹²²	49.8	52	20	48	10	36	0 00 51	31 42	
15	45	04.2	17.2	119	28.3 ¹²⁴	44.4	54	30	39	04	32	** ** *	13 50 40	
16	60	04.4	18.1	133	59.6 ¹²³	39.0	54	35	35	18 00	30	** ** *	14 02 37	
17	75	04.5	+10 19.0	148	31.0 ¹²⁴	-20 33.5	55	40	17 29	17 56	18 28	** ** *	14 15 35	
18	90	04.7	+10 19.9	163	02.5 ¹²⁵	-20 27.9	56	45	17 23	17 52	18 26	23 55 60	14 30 33	
19	105	04.8	20.7	177	34.0 ¹²⁵	22.2	57	50	15	48	25	37 64	48 31	
20	120	05.0	21.6	192	05.5 ¹²⁵	16.4	58	52	11	46	25	28 66	14 57 29	
21	135	05.1	22.5	206	37.1 ¹²⁶	10.6	58	54	08	44	25	19 67	15 07 27	
22	150	05.2	23.4	221	08.7 ¹²⁶	-20 04.6	60	56	17 03	41	24	23 08 69	18 26	
23	165	05.4	24.3	235	40.3 ¹²⁶	-19 58.5	61	58	16 59	39	24	22 56 72	31 23	
24	180	05.5	+10 25.2	250	12.0 ¹²⁷	-19 52.4	61	60 S	16 53	17 36	18 24	22 41 76	15 46 20	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 21 ^m 5		Mag: -4.6 PMG: 10 ^h 20 ^m			Mag: -0.6 PMG: 4 ^h 03 ^m			Mag: -2.1 PMG: 14 ^h 57 ^m			Mag: +0.2 PMG: 14 ^h 12 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	204	12.2	204 29.7	+5 12.8	299 11.3	-23 29.0	135 20.1	+21 34.7	146 35.0	+18 18.1				
1	219	14.7	219 32.4	12.1	314 13.1	29.2	150 22.1	34.8	161 37.2	18.2				
2	234	17.1	234 35.0	11.4	329 14.8	29.3	165 24.0	34.9	176 39.3	18.3				
3	249	19.6	249 37.6	10.7	344 16.6	29.4	180 25.9	34.9	191 41.5	18.3				
4	264	22.0	264 40.2	10.0	359 18.3	29.5	195 27.9	35.0	206 43.7	18.4				
5	279	24.5	279 42.8	+5 09.3	14 20.1	-23 29.6	210 29.8	+21 35.1	221 45.8	+18 18.5				
6	294	27.0	294 45.4	+5 08.6	29 21.8	-23 29.7	225 31.8	+21 35.2	236 48.0	+18 18.6				
7	309	29.4	309 48.0	07.9	44 23.6	29.8	240 33.7	35.2	251 50.2	18.6				
8	324	31.9	324 50.6	07.3	59 25.3	29.9	255 35.6	35.3	266 52.3	18.7				
9	339	34.4	339 53.2	06.6	74 27.1	30.0	270 37.6	35.4	281 54.5	18.8				
10	354	36.8	354 55.8	05.9	89 28.8	30.1	285 39.5	35.5	296 56.7	18.8				
11	9	39.3	9 58.4	+5 05.2	104 30.6	-23 30.2	300 41.5	+21 35.5	311 58.8	+18 18.9				
12	24	41.8	25 00.9	+5 04.5	119 32.4	-23 30.3	315 43.4	+21 35.6	327 01.0	+18 19.0				
13	39	44.2	40 03.5	03.8	134 34.1	30.4	330 45.3	35.7	342 03.2	19.0				
14	54	46.7	55 06.1	03.2	149 35.9	30.6	345 47.3	35.8	357 05.3	19.1				
15	69	49.2	70 08.6	02.5	164 37.6	30.7	0 49.2	35.9	12 07.5	19.2				
16	84	51.6	85 11.2	01.8	179 39.4	30.8	15 51.2	35.9	27 09.7	19.2				
17	99	54.1	100 13.8	+5 01.2	194 41.2	-23 30.9	30 53.1	+21 36.0	42 11.8	+18 19.3				
18	114	56.5	115 16.3	+5 00.5	209 42.9	-23 31.0	45 55.0	+21 36.1	57 14.0	+18 19.4				
19	129	59.0	130 18.9	+4 59.8	224 44.7	31.1	60 57.0	36.2	72 16.2	19.4				
20	145	01.5	145 21.4	59.2	239 46.5	31.2	75 58.9	36.2	87 18.3	19.5				
21	160	03.9	160 24.0	58.5	254 48.2	31.3	91 00.9	36.3	102 20.5	19.6				
22	175	06.4	175 26.5	57.8	269 50.0	31.4	106 02.8	36.4	117 22.7	19.6				
23	190	08.9	190 29.0	57.2	284 51.8	31.5	121 04.7	36.5	132 24.8	19.7				
24	205	11.3	205 31.6	+4 56.5	299 53.5	-23 31.6	136 06.7	+21 36.5	147 27.0	+18 19.8				
Dif	—		+26	-7	+18	-1	+19	+1	+22	+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 5				Edad: 22 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 PMG: 7 ^h 33 ^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	05.5	+10	25.2	250	12.0	-19	52.4	60 N	2	48	3	51	4	38	3	59
1	195	05.7		26.0	264	43.8 ¹²⁸		46.2	58	3	04	4	00	44	45	20	30
2	210	05.8		26.9	279	15.6 ¹²⁸		39.8	56	17	09		50		33	22	41
3	225	06.0		27.8	293	47.4 ¹²⁸		33.4	54	28	16		55		23	24	51
4	240	06.1		28.7	308	19.2 ¹²⁸		27.0	52	38	23	4	59		14	26	11
5	255	06.3	+10	29.6	322	51.1 ¹²⁹	-19	20.4	50	3	46	4	29	5	03	3	06
6	270	06.4	+10	30.4	337	23.1 ¹³⁰	-19	13.7	45	4	04	4	41	5	12	2	48
7	285	06.5		31.3	351	55.0 ¹²⁹		07.0	40	17	51		19		34	34	37
8	300	06.7		32.2	6	27.0 ¹³⁰	-19	00.1	35	28	4	59	26		22	36	49
9	315	06.8		33.1	20	59.1 ¹³¹	-18	53.2	30	37	5	06	31		2	11	38
10	330	07.0		33.9	35	31.2 ¹³¹		46.2	20	4	52	18	40		1	53	41
11	345	07.1	+10	34.8	50	03.3 ¹³¹	-18	39.2	10 N	5	02	5	27	5	49	1	37
12	0	07.3	+10	35.7	64	35.5 ¹³²	-18	32.0	0	5	11	5	35	5	56	1	22
13	15	07.4		36.6	79	07.7 ¹³²		24.7	10 S	18	42	6	04		1	07	48
14	30	07.5		37.5	93	40.0 ¹³³		17.4	20	23	49	11			0	51	51
15	45	07.7		38.3	108	12.3 ¹³³		10.0	30	28	5	56	20		33	54	30
16	60	07.8		39.2	122	44.6 ¹³³	-18	02.5	35	30	6	00	25		22	56	39
17	75	08.0	+10	40.1	137	17.0 ¹³⁴	-17	55.0	40	5	32	6	03	6	31	0	09
18	90	08.1	+10	41.0	151	49.4 ¹³⁴	-17	47.3	45	5	33	6	08	6	37	**	**
19	105	08.3		41.8	166	21.8 ¹³⁴		39.6	50	35	12		45		**	**	**
20	120	08.4		42.7	180	54.3 ¹³⁵		31.8	52	35	14		49		**	**	**
21	135	08.5		43.6	195	26.8 ¹³⁵		23.9	54	36	17		53		**	**	**
22	150	08.7		44.5	209	59.3 ¹³⁵		16.0	56	36	19	6	57		**	**	**
23	165	08.8		45.3	224	31.9 ¹³⁶	-17	08.0	58	36	22	7	02		**	**	**
24	180	09.0	+10	46.2	239	04.6 ¹³⁷	-16	59.9	60 S	5	36	6	25	7	08	23	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 17 ^m 6		Mag: -4.6 PMG: 10 ^h 16 ^m		Mag: -0.6 PMG: 4 ^h 00 ^m		Mag: -2.1 PMG: 14 ^h 54 ^m		Mag: +0.2 PMG: 14 ^h 08 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	205	11.3	205	31.6	+4	56.5	299	53.5	-23	31.6	136	06.7	+21	36.5	147	27.0	+18	19.8
1	220	13.8	220	34.1		55.8	314	55.3		31.7	151	08.6		36.6	162	29.2		19.8
2	235	16.3	235	36.6		55.2	329	57.1		31.8	166	10.5		36.7	177	31.3		19.9
3	250	18.7	250	39.1		54.5	344	58.8		32.0	181	12.5		36.8	192	33.5		20.0
4	265	21.2	265	41.6		53.9	0	00.6		32.1	196	14.4		36.8	207	35.7		20.0
5	280	23.7	280	44.1	+4	53.2	15	02.4	-23	32.2	211	16.4	+21	36.9	222	37.8	+18	20.1
6	295	26.1	295	46.7	+4	52.6	30	04.2	-23	32.3	226	18.3	+21	37.0	237	40.0	+18	20.2
7	310	28.6	310	49.2		51.9	45	05.9		32.4	241	20.2		37.1	252	42.2		20.3
8	325	31.0	325	51.7		51.3	60	07.7		32.5	256	22.2		37.2	267	44.3		20.3
9	340	33.5	340	54.2		50.7	75	09.5		32.6	271	24.1		37.2	282	46.5		20.4
10	355	36.0	355	56.6		50.0	90	11.3		32.7	286	26.0		37.3	297	48.7		20.5
11	10	38.4	10	59.1	+4	49.4	105	13.1	-23	32.8	301	28.0	+21	37.4	312	50.8	+18	20.5
12	25	40.9	26	01.6	+4	48.7	120	14.8	-23	32.9	316	29.9	+21	37.5	327	53.0	+18	20.6
13	40	43.4	41	04.1		48.1	135	16.6		33.0	331	31.8		37.5	342	55.2		20.7
14	55	45.8	56	06.6		47.5	150	18.4		33.1	346	33.8		37.6	357	57.3		20.7
15	70	48.3	71	09.0		46.8	165	20.2		33.2	1	35.7		37.7	12	59.5		20.8
16	85	50.8	86	11.5		46.2	180	22.0		33.4	16	37.7		37.8	28	01.7		20.9
17	100	53.2	101	14.0	+4	45.6	195	23.8	-23	33.5	31	39.6	+21	37.8	43	03.8	+18	20.9
18	115	55.7	116	16.4	+4	44.9	210	25.5	-23	33.6	46	41.5	+21	37.9	58	06.0	+18	21.0
19	130	58.1	131	18.9		44.3	225	27.3		33.7	61	43.5		38.0	73	08.2		21.1
20	146	00.6	146	21.3		43.7	240	29.1		33.8	76	45.4		38.1	88	10.3		21.1
21	161	03.1	161	23.8		43.1	255	30.9		33.9	91	47.3		38.1	103	12.5		21.2
22	176	05.5	176	26.2		42.5	270	32.7		34.0	106	49.3		38.2	118	14.7		21.3
23	191	08.0	191	28.7		41.8	285	34.5		34.1	121	51.2		38.3	133	16.8		21.3
24	206	10.5	206	31.1	+4	41.2	300	36.3	-23	34.2	136	53.1	+21	38.4	148	19.0	+18	21.4
Dif	—		+25		-6		+18		-1		+19		+1		+22		+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: 23 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 8 ^h 19 ^m R°: 44 ^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	09.0	+10 46.2	239	04.6	-16 59.9	82	60 N	19 26	20 13	21 18	4 15	12	12 33	78
1	195	09.1	47.1	253	37.2 ¹³⁶	51.7	82	58	19	20 03	21 01	4 05	15	43	75
2	210	09.2	48.0	268	09.9 ¹³⁷	43.4	83	56	13	19 54	20 47	3 55	18	52	72
3	225	09.4	48.8	282	42.6 ¹³⁷	35.1	83	54	08	46	35	47	20	12 59	70
4	240	09.5	49.7	297	15.4 ¹³⁸	26.7	84	52	19 03	39	25	40	22	13 06	68
5	255	09.7	+10 50.6	311	48.2 ¹³⁸	-16 18.3	84	50	18 58	19 33	20 16	3 34	23	13 12	66
6	270	09.8	+10 51.4	326	21.0 ¹³⁸	-16 09.7	86	45	18 49	19 20	19 58	3 19	28	13 25	62
7	285	09.9	52.3	340	53.9 ¹³⁹	-16 01.1	86	40	41	10	44	3 08	30	36	59
8	300	10.1	53.2	355	26.8 ¹³⁹	-15 52.4	87	35	35	19 01	32	2 58	32	45	56
9	315	10.2	54.1	9	59.7 ¹³⁹	43.7	87	30	29	18 54	23	49	35	13 53	54
10	330	10.4	54.9	24	32.7 ¹⁴⁰	34.9	88	20	19	42	19 08	34	38	14 06	51
11	345	10.5	+10 55.8	39	05.7 ¹⁴⁰	-15 26.0	89	10 N	18 11	18 32	18 57	2 20	42	14 18	47
12	0	10.6	+10 56.7	53	38.7 ¹⁴⁰	-15 17.0	90	0	18 03	18 24	18 48	2 08	44	14 30	43
13	15	10.8	57.5	68	11.8 ¹⁴¹	-15 08.0	90	10 S	17 55	16	41	1 55	48	41	40
14	30	10.9	58.4	82	44.9 ¹⁴¹	-14 58.9	91	20	47	09	35	42	50	14 52	38
15	45	11.0	+10 59.3	97	18.0 ¹⁴¹	49.7	92	30	37	18 02	30	27	54	15 06	33
16	60	11.2	+11 00.1	111	51.1 ¹⁴¹	40.5	92	35	32	17 58	27	18	56	13	32
17	75	11.3	+11 01.0	126	24.3 ¹⁴²	-14 31.2	93	40	17 26	17 54	18 25	1 07	59	15 22	29
18	90	11.5	+11 01.9	140	57.5 ¹⁴²	-14 21.9	93	45	17 19	17 49	18 23	0 55	62	15 32	26
19	105	11.6	02.8	155	30.8 ¹⁴³	12.5	94	50	11	44	22	41	65	44	22
20	120	11.7	03.6	170	04.0 ¹⁴²	-14 03.0	95	52	07	42	21	34	67	50	20
21	135	11.9	04.5	184	37.3 ¹⁴³	-13 53.4	96	54	17 03	39	20	26	69	15 56	19
22	150	12.0	05.4	199	10.6 ¹⁴³	43.8	96	56	16 58	37	20	17	72	16 03	16
23	165	12.1	06.2	213	44.0 ¹⁴⁴	34.2	96	58	53	34	19	0 08	74	11	14
24	180	12.3	+11 07.1	228	17.3 ¹⁴³	-13 24.4	98	60 S	16 48	17 31	18 19	** ** *	**	16 20	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 13 ^m 6		Mag: -4.6 PMG: 10 ^h 12 ^m			Mag: -0.7 PMG: 3 ^h 57 ^m			Mag: -2.1 PMG: 14 ^h 51 ^m			Mag: +0.2 PMG: 14 ^h 05 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	206	10.5	206 31.1	+4 41.2	300 36.3	-23 34.2	136 53.1	+21 38.4	148 19.0	+18 21.4					
1	221	12.9	221 33.6	40.6	315 38.1	34.3	151 55.1	38.4	163 21.2	21.5					
2	236	15.4	236 36.0	40.0	330 39.9	34.4	166 57.0	38.5	178 23.3	21.5					
3	251	17.9	251 38.4	39.4	345 41.7	34.5	181 58.9	38.6	193 25.5	21.6					
4	266	20.3	266 40.8	38.8	0 43.5	34.6	197 00.9	38.7	208 27.6	21.7					
5	281	22.8	281 43.2	+4 38.2	15 45.3	-23 34.8	212 02.8	+21 38.8	223 29.8	+18 21.7					
6	296	25.3	296 45.7	+4 37.6	30 47.1	-23 34.9	227 04.7	+21 38.8	238 32.0	+18 21.8					
7	311	27.7	311 48.1	37.0	45 48.9	35.0	242 06.7	38.9	253 34.1	21.9					
8	326	30.2	326 50.5	36.3	60 50.7	35.1	257 08.6	39.0	268 36.3	21.9					
9	341	32.6	341 52.9	35.7	75 52.5	35.2	272 10.5	39.1	283 38.5	22.0					
10	356	35.1	356 55.3	35.1	90 54.3	35.3	287 12.5	39.1	298 40.6	22.1					
11	11 37.6	11 57.7	+4 34.6	105 56.1	-23 35.4	302 14.4	+21 39.2	313 42.8	+18 22.2						
12	26 40.0	27 00.1	+4 34.0	120 57.9	-23 35.5	317 16.3	+21 39.3	328 45.0	+18 22.2						
13	41 42.5	42 02.5	33.4	135 59.7	35.6	332 18.3	39.4	343 47.1	22.3						
14	56 45.0	57 04.8	32.8	151 01.5	35.7	347 20.2	39.4	358 49.3	22.4						
15	71 47.4	72 07.2	32.2	166 03.3	35.8	2 22.1	39.5	13 51.5	22.4						
16	86 49.9	87 09.6	31.6	181 05.1	35.9	17 24.1	39.6	28 53.6	22.5						
17	101 52.4	102 12.0	+4 31.0	196 06.9	-23 36.0	32 26.0	+21 39.7	43 55.8	+18 22.6						
18	116 54.8	117 14.3	+4 30.4	211 08.7	-23 36.2	47 27.9	+21 39.7	58 57.9	+18 22.6						
19	131 57.3	132 16.7	29.8	226 10.5	36.3	62 29.9	39.8	74 00.1	22.7						
20	146 59.8	147 19.1	29.3	241 12.3	36.4	77 31.8	39.9	89 02.3	22.8						
21	162 02.2	162 21.4	28.7	256 14.1	36.5	92 33.7	40.0	104 04.4	22.8						
22	177 04.7	177 23.8	28.1	271 16.0	36.6	107 35.7	40.0	119 06.6	22.9						
23	192 07.1	192 26.1	27.5	286 17.8	36.7	122 37.6	40.1	134 08.8	23.0						
24	207 09.6	207 28.5	+4 27.0	301 19.6	-23 36.8	137 39.5	+21 40.2	149 10.9	+18 23.0						
Dif	—	+24	-6	+18	-1	+19	+1	+22	+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 1				Edad: 24 ^d 9 PHE { SD: 14 ^h 8 PMG: 9 ^h 03 ^m R°: 43 ^m 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		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	12.3	+11	07.1	228	17.3	-13	24.4	60 N	2 39	3 44	4 32	4 27 10	13 51 79				
1	195	12.4		08.0	242	50.7 ¹⁴⁴		14.6 ⁹⁸	58	2 56	3 55	39	20 12	13 58 76				
2	210	12.6		08.8	257	24.1 ¹⁴⁴	-13	04.8 ⁹⁸	56	3 10	4 03	45	13 15	14 04 73				
3	225	12.7		09.7	271	57.6 ¹⁴⁵	-12	54.9 ⁹⁹	54	22	11	50	07 17	09 71				
4	240	12.8		10.5	286	31.0 ¹⁴⁴		44.9 ¹⁰⁰	52	33	18	55	4 02 19	14 69				
5	255	13.0	+11	11.4	301	04.5 ¹⁴⁵	-12	34.9 ¹⁰⁰	50	3 42	4 24	4 59	3 57 21	14 18 67				
6	270	13.1	+11	12.3	315	38.0 ¹⁴⁵	-12	24.8 ¹⁰¹	45	4 00	4 38	5 09	3 47 24	14 27 63				
7	285	13.2		13.1	330	11.6 ¹⁴⁶		14.6 ¹⁰²	40	14	48	16	38 27	35 59				
8	300	13.4		14.0	344	45.1 ¹⁴⁵	-12	04.4 ¹⁰²	35	26	4 57	23	30 31	41 57				
9	315	13.5		14.9	359	18.7 ¹⁴⁶	-11	54.2 ¹⁰²	30	35	5 04	29	24 32	47 54				
10	330	13.6		15.7	13	52.3 ¹⁴⁶		43.9 ¹⁰³	20	4 50	16	39	12 37	14 57 50				
11	345	13.8	+11	16.6	28	25.9 ¹⁴⁶	-11	33.5 ¹⁰⁴	10 N	5 01	5 26	5 48	3 02 40	15 05 47				
12	0	13.9	+11	17.5	42	59.5 ¹⁴⁶	-11	23.1 ¹⁰⁴	0	5 10	5 35	5 56	2 52 44	15 13 43				
13	15	14.0		18.3	57	33.2 ¹⁴⁷		12.6 ¹⁰⁵	10 S	18	42	6 04	43 46	21 40				
14	30	14.2		19.2	72	06.9 ¹⁴⁷	-11	02.1 ¹⁰⁵	20	24	50	12	32 51	30 36				
15	45	14.3		20.0	86	40.5 ¹⁴⁶	-10	51.5 ¹⁰⁶	30	29	5 57	21	21 54	39 32				
16	60	14.4		20.9	101	14.2 ¹⁴⁷		40.9 ¹⁰⁶	35	32	6 01	27	14 57	45 29				
17	75	14.6	+11	21.8	115	48.0 ¹⁴⁸	-10	30.2 ¹⁰⁷	40	5 34	6 05	6 33	2 06 60	15 51 27				
18	90	14.7	+11	22.6	130	21.7 ¹⁴⁷	-10	19.5 ¹⁰⁷	45	5 36	6 10	6 40	1 57 63	15 58 24				
19	105	14.8		23.5	144	55.4 ¹⁴⁷	-10	08.7 ¹⁰⁸	50	38	15	48	46 67	16 06 20				
20	120	15.0		24.3	159	29.2 ¹⁴⁸	-9	57.9 ¹⁰⁸	52	38	18	52	41 68	10 19				
21	135	15.1		25.2	174	03.0 ¹⁴⁸		47.0 ¹⁰⁹	54	39	20	6 56	35 71	15 16				
22	150	15.2		26.1	188	36.7 ¹⁴⁷		36.1 ¹⁰⁹	56	40	23	7 01	29 73	19 15				
23	165	15.4		26.9	203	10.5 ¹⁴⁸		25.1 ¹¹⁰	58	40	26	06	22 75	25 11				
24	180	15.5	+11	27.8	217	44.4 ¹⁴⁹	-9	14.1 ¹¹⁰	60 S	5 41	6 29	7 12	1 14 78	16 31 9				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 09 ^m 7		Mag: -4.6 PMG: 10 ^h 09 ^m				Mag: -0.7 PMG: 3 ^h 54 ^m				Mag: -2.1 PMG: 14 ^h 47 ^m				Mag: +0.2 PMG: 14 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	207	09.6	207	28.5	+4	27.0	301	19.6	-23	36.8	137	39.5	+21	40.2	149	10.9	+18	23.0
1	222	12.1	222	30.8		26.4	316	21.4		36.9	152	41.4		40.3	164	13.1		23.1
2	237	14.5	237	33.1		25.8	331	23.2		37.0	167	43.4		40.3	179	15.2		23.2
3	252	17.0	252	35.5		25.2	346	25.0		37.1	182	45.3		40.4	194	17.4		23.2
4	267	19.5	267	37.8		24.7	1	26.8		37.2	197	47.2		40.5	209	19.6		23.3
5	282	21.9	282	40.1	+4	24.1	16	28.7	-23	37.3	212	49.2	+21	40.6	224	21.7	+18	23.4
6	297	24.4	297	42.5	+4	23.5	31	30.5	-23	37.4	227	51.1	+21	40.6	239	23.9	+18	23.4
7	312	26.9	312	44.8		23.0	46	32.3		37.6	242	53.0		40.7	254	26.1		23.5
8	327	29.3	327	47.1		22.4	61	34.1		37.7	257	55.0		40.8	269	28.2		23.6
9	342	31.8	342	49.4		21.9	76	36.0		37.8	272	56.9		40.9	284	30.4		23.6
10	357	34.2	357	51.7		21.3	91	37.8		37.9	287	58.8		41.0	299	32.5		23.7
11	12	36.7	12	54.0	+4	20.8	106	39.6	-23	38.0	303	00.7	+21	41.0	314	34.7	+18	23.8
12	27	39.2	27	56.3	+4	20.2	121	41.4	-23	38.1	318	02.7	+21	41.1	329	36.9	+18	23.9
13	42	41.6	42	58.6		19.7	136	43.3		38.2	333	04.6		41.2	344	39.0		23.9
14	57	44.1	58	00.9		19.1	151	45.1		38.3	348	06.5		41.3	359	41.2		24.0
15	72	46.6	73	03.2		18.6	166	46.9		38.4	3	08.5		41.3	14	43.4		24.1
16	87	49.0	88	05.5		18.0	181	48.7		38.5	18	10.4		41.4	29	45.5		24.1
17	102	51.5	103	07.8	+4	17.5	196	50.6	-23	38.6	33	12.3	+21	41.5	44	47.7	+18	24.2
18	117	54.0	118	10.0	+4	16.9	211	52.4	-23	38.7	48	14.2	+21	41.6	59	49.8	+18	24.3
19	132	56.4	133	12.3		16.4	226	54.2		38.8	63	16.2		41.6	74	52.0		24.3
20	147	58.9	148	14.6		15.9	241	56.1		39.0	78	18.1		41.7	89	54.2		24.4
21	163	01.4	163	16.9		15.3	256	57.9		39.1	93	20.0		41.8	104	56.3		24.5
22	178	03.8	178	19.1		14.8	271	59.8		39.2	108	22.0		41.9	119	58.5		24.5
23	193	06.3	193	21.4		14.3	287	01.6		39.3	123	23.9		41.9	135	00.6		24.6
24	208	08.7	208	23.6	+4	13.7	302	03.4	-23	39.4	138	25.8	+21	42.0	150	02.8	+18	24.7
Dif	—		+23		-6		+18		-1		+19		+1		+22		+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: 25 ^d 9 PHE { SD: 14'9 PMG: 9 ^h 46 ^m R°: 43 ^m 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1														
	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	180	15.5	+11	27.8	217	44.4	-9	14.1	60 N	19 31	20 19	21 26	4 37 9	15 10 80				
1	195	15.6		28.6	232	18.2 ¹⁴⁸	-9	03.1 ¹¹⁰	58	23	20 08	21 08	32 12	14 77				
2	210	15.8		29.5	246	52.0 ¹⁴⁸	-8	52.0 ¹¹¹	56	17	19 59	20 53	28 14	17 74				
3	225	15.9		30.4	261	25.8 ¹⁴⁸		40.8 ¹¹²	54	11	50	40	24 16	20 72				
4	240	16.0		31.2	275	59.7 ¹⁴⁹		29.6 ¹¹²	52	06	43	30	21 18	23 70				
5	255	16.2	+11	32.1	290	33.5 ¹⁴⁸	-8	18.4 ¹¹²	50	19 02	19 37	20 20	4 18 19	15 25 68				
6	270	16.3	+11	32.9	305	07.4 ¹⁴⁹	-8	07.1 ¹¹³	45	18 52	19 23	20 01	4 11 23	15 30 64				
7	285	16.4		33.8	319	41.3 ¹⁴⁹	-7	55.8 ¹¹³	40	43	12	19 46	05 27	34 61				
8	300	16.5		34.6	334	15.1 ¹⁴⁸		44.4 ¹¹⁴	35	36	19 03	34	4 01 29	38 58				
9	315	16.7		35.5	348	49.0 ¹⁴⁹		33.0 ¹¹⁴	30	30	18 55	24	3 56 32	41 55				
10	330	16.8		36.3	3	22.9 ¹⁴⁹		21.6 ¹¹⁴	20	20	42	19 09	49 35	47 51				
11	345	16.9	+11	37.2	17	56.8 ¹⁴⁹	-7	10.1 ¹¹⁵	10 N	18 11	18 32	18 57	3 42 40	15 52 47				
12	0	17.1	+11	38.1	32	30.7 ¹⁴⁹	-6	58.6 ¹¹⁵	0	18 02	18 23	18 48	3 36 43	15 56 44				
13	15	17.2		38.9	47	04.6 ¹⁴⁹		47.0 ¹¹⁶	10 S	17 54	15	40	29 47	16 01 39				
14	30	17.3		39.8	61	38.5 ¹⁴⁹		35.4 ¹¹⁶	20	45	08	33	23 50	06 35				
15	45	17.4		40.6	76	12.4 ¹⁴⁹		23.8 ¹¹⁶	30	35	18 00	28	15 55	11 31				
16	60	17.6		41.5	90	46.2 ¹⁴⁸		12.1 ¹¹⁷	35	30	17 55	25	11 57	14 29				
17	75	17.7	+11	42.3	105	20.1 ¹⁴⁹	-6	00.4 ¹¹⁷	40	17 23	17 51	18 22	3 06 60	16 18 26				
18	90	17.8	+11	43.2	119	54.0 ¹⁴⁹	-5	48.7 ¹¹⁷	45	17 16	17 46	18 20	3 00 63	16 22 22				
19	105	18.0		44.0	134	27.9 ¹⁴⁹		36.9 ¹¹⁸	50	07	40	18	2 53 67	26 19				
20	120	18.1		44.9	149	01.8 ¹⁴⁹		25.1 ¹¹⁸	52	17 03	38	17	49 70	29 17				
21	135	18.2		45.7	163	35.7 ¹⁴⁹		13.3 ¹¹⁸	54	16 59	35	16	46 71	31 15				
22	150	18.3		46.6	178	09.6 ¹⁴⁹	-5	01.4 ¹¹⁹	56	54	32	15	42 74	34 13				
23	165	18.5		47.4	192	43.4 ¹⁴⁸	-4	49.5 ¹¹⁹	58	48	29	15	37 77	36 11				
24	180	18.6	+11	48.3	207	17.3 ¹⁴⁹	-4	37.6 ¹¹⁹	60 S	16 42	17 25	18 14	2 32 80	16 40 8				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 05 ^m 8		Mag: -4.7 PMG: 10 ^h 05 ^m			Mag: -0.7 PMG: 3 ^h 51 ^m			Mag: -2.1 PMG: 14 ^h 44 ^m			Mag: +0.2 PMG: 13 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	208	08.7	208	23.6	+4	13.7	302	03.4	-23	39.4	138	25.8	+21	42.0	150	02.8	+18	24.7
1	223	11.2	223	25.9		13.2	317	05.3		39.5	153	27.7		42.1	165	05.0		24.7
2	238	13.7	238	28.1		12.7	332	07.1		39.6	168	29.7		42.2	180	07.1		24.8
3	253	16.1	253	30.4		12.2	347	08.9		39.7	183	31.6		42.2	195	09.3		24.9
4	268	18.6	268	32.6		11.6	2	10.8		39.8	198	33.5		42.3	210	11.5		24.9
5	283	21.1	283	34.9	+4	11.1	17	12.6	-23	39.9	213	35.5	+21	42.4	225	13.6	+18	25.0
6	298	23.5	298	37.1	+4	10.6	32	14.5	-23	40.0	228	37.4	+21	42.5	240	15.8	+18	25.1
7	313	26.0	313	39.3		10.1	47	16.3		40.1	243	39.3		42.5	255	17.9		25.1
8	328	28.5	328	41.6		09.6	62	18.2		40.3	258	41.2		42.6	270	20.1		25.2
9	343	30.9	343	43.8		09.0	77	20.0		40.4	273	43.2		42.7	285	22.3		25.3
10	358	33.4	358	46.0		08.5	92	21.9		40.5	288	45.1		42.8	300	24.4		25.4
11	13	35.8	13	48.2	+4	08.0	107	23.7	-23	40.6	303	47.0	+21	42.8	315	26.6	+18	25.4
12	28	38.3	28	50.4	+4	07.5	122	25.6	-23	40.7	318	48.9	+21	42.9	330	28.7	+18	25.5
13	43	40.8	43	52.6		07.0	137	27.4		40.8	333	50.9		43.0	345	30.9		25.6
14	58	43.2	58	54.8		06.5	152	29.3		40.9	348	52.8		43.1	0	33.1		25.6
15	73	45.7	73	57.0		06.0	167	31.1		41.0	3	54.7		43.1	15	35.2		25.7
16	88	48.2	88	59.2		05.5	182	33.0		41.1	18	56.6		43.2	30	37.4		25.8
17	103	50.6	104	01.4	+4	05.0	197	34.8	-23	41.2	33	58.6	+21	43.3	45	39.5	+18	25.8
18	118	53.1	119	03.6	+4	04.5	212	36.7	-23	41.3	49	00.5	+21	43.4	60	41.7	+18	25.9
19	133	55.6	134	05.8		04.0	227	38.5		41.4	64	02.4		43.4	75	43.9		26.0
20	148	58.0	149	08.0		03.5	242	40.4		41.5	79	04.3		43.5	90	46.0		26.0
21	164	00.5	164	10.2		03.0	257	42.3		41.7	94	06.3		43.6	105	48.2		26.1
22	179	03.0	179	12.3		02.5	272	44.1		41.8	109	08.2		43.7	120	50.3		26.2
23	194	05.4	194	14.5		02.1	287	46.0		41.9	124	10.1		43.7	135	52.5		26.2
24	209	07.9	209	16.7	+4	01.6	302	47.8	-23	42.0	139	12.0	+21	43.8	150	54.6	+18	26.3
Dif	—		+22		-5		+19		-1		+19		+1		+22		+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 7				Edad: 26 ^d 9 PHE { SD: 15'0 PMG: 10 ^h 29 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	18.6	+11	48.3	207	17.3	-4	37.6	60 N	2	31	3	38	4	26	4	46	8
1	195	18.7		49.1	221	51.2 ¹⁴⁹		25.7 ¹¹⁹	58	2	49		49	33		44	10	31 78
2	210	18.9		50.0	236	25.0 ¹⁴⁸		13.7 ¹²⁰	56	3	04	3	58	40		42	13	31 76
3	225	19.0		50.8	250	58.8 ¹⁴⁸	-4	01.7 ¹²⁰	54		16	4	06	45		40	15	32 74
4	240	19.1		51.7	265	32.7 ¹⁴⁹	-3	49.6 ¹²¹	52		27		14	51		39	17	33 71
5	255	19.2	+11	52.5	280	06.5 ¹⁴⁸	-3	37.6 ¹²⁰	50	3	37	4	20	4	55	4	37	19 16 33 70
6	270	19.4	+11	53.4	294	40.3 ¹⁴⁸	-3	25.5 ¹²¹	45	3	56	4	34	5	05	4	34	23 16 34 66
7	285	19.5		54.2	309	14.1 ¹⁴⁸		13.4 ¹²¹	40	4	11		45	14		32	26	35 62
8	300	19.6		55.1	323	47.9 ¹⁴⁸	-3	01.2 ¹²²	35		23	4	54	21		30	29	36 59
9	315	19.7		55.9	338	21.7 ¹⁴⁸	-2	49.1 ¹²¹	30		33	5	02	27		28	31	36 57
10	330	19.9		56.8	352	55.4 ¹⁴⁷		36.9 ¹²²	20	4	48		15	38		24	36	38 51
11	345	20.0	+11	57.6	7	29.2 ¹⁴⁸	-2	24.7 ¹²²	10 N	5	00	5	25	5	47	4	22	39 16 39 47
12	0	20.1	+11	58.5	22	02.9 ¹⁴⁷	-2	12.5 ¹²²	0	5	10	5	34	5	55	4	19	43 16 40 44
13	15	20.2	+11	59.3	36	36.6 ¹⁴⁷	-2	00.2 ¹²³	10 S		18		42	6	04	16	47	40 41
14	30	20.4	+12	00.2	51	10.3 ¹⁴⁷	-1	48.0 ¹²²	20		24		50	13		13	51	41 37
15	45	20.5		01.0	65	44.0 ¹⁴⁷		35.7 ¹²³	30		30	5	58	23		10	55	42 32
16	60	20.6		01.9	80	17.7 ¹⁴⁷		23.4 ¹²³	35		33	6	03	28		08	58	43 29
17	75	20.7	+12	02.7	94	51.3 ¹⁴⁶	-1	11.1 ¹²³	40	5	36	6	07	6	35	4	06	61 16 44 26
18	90	20.9	+12	03.5	109	25.0 ¹⁴⁷	-0	58.8 ¹²³	45	5	38	6	12	6	42	4	03	65 16 44 24
19	105	21.0		04.4	123	58.6 ¹⁴⁶		46.4 ¹²⁴	50		40		18	51		4	00	69 45 20
20	120	21.1		05.2	138	32.1 ¹⁴⁵		34.0 ¹²⁴	52		41		21	6	56	3	59	71 46 17
21	135	21.2		06.1	153	05.7 ¹⁴⁶		21.7 ¹²³	54		42		24	7	00	57	73	46 16
22	150	21.4		06.9	167	39.2 ¹⁴⁵	-0	09.3 ¹²⁴	56		43		27	05		56	75	47 13
23	165	21.5		07.8	182	12.7 ¹⁴⁵	+0	03.1 ¹²⁴	58		44		30	11		54	78	47 11
24	180	21.6	+12	08.6	196	46.2 ¹⁴⁵	+0	15.5 ¹²⁴	60 S	5	45	6	34	7	17	3	52	80 16 48 8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 01 ^m 8		Mag: -4.7 PMG: 10 ^h 01 ^m		Mag: -0.8 PMG: 3 ^h 48 ^m		Mag: -2.0 PMG: 14 ^h 41 ^m		Mag: +0.2 PMG: 13 ^h 54 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	209	07.9	209	16.7	+4	01.6	302	47.8	-23	42.0	139	12.0	+21	43.8	150	54.6	+18	26.3
1	224	10.3	224	18.8		01.1	317	49.7		42.1	154	14.0		43.9	165	56.8		26.4
2	239	12.8	239	21.0		00.6	332	51.6		42.2	169	15.9		44.0	180	59.0		26.4
3	254	15.3	254	23.2	+4	00.1	347	53.4		42.3	184	17.8		44.0	196	01.1		26.5
4	269	17.7	269	25.3	+3	59.6	2	55.3		42.4	199	19.7		44.1	211	03.3		26.6
5	284	20.2	284	27.5	+3	59.2	17	57.2	-23	42.5	214	21.7	+21	44.2	226	05.4	+18	26.6
6	299	22.7	299	29.6	+3	58.7	32	59.0	-23	42.6	229	23.6	+21	44.3	241	07.6	+18	26.7
7	314	25.1	314	31.7		58.2	48	00.9		42.7	244	25.5		44.3	256	09.8		26.8
8	329	27.6	329	33.9		57.7	63	02.8		42.8	259	27.4		44.4	271	11.9		26.8
9	344	30.1	344	36.0		57.3	78	04.6		43.0	274	29.4		44.5	286	14.1		26.9
10	359	32.5	359	38.2		56.8	93	06.5		43.1	289	31.3		44.6	301	16.2		27.0
11	14	35.0	14	40.3	+3	56.3	108	08.4	-23	43.2	304	33.2	+21	44.6	316	18.4	+18	27.1
12	29	37.4	29	42.4	+3	55.9	123	10.3	-23	43.3	319	35.1	+21	44.7	331	20.6	+18	27.1
13	44	39.9	44	44.5		55.4	138	12.1		43.4	334	37.0		44.8	346	22.7		27.2
14	59	42.4	59	46.6		55.0	153	14.0		43.5	349	39.0		44.9	1	24.9		27.3
15	74	44.8	74	48.8		54.5	168	15.9		43.6	4	40.9		44.9	16	27.0		27.3
16	89	47.3	89	50.9		54.0	183	17.8		43.7	19	42.8		45.0	31	29.2		27.4
17	104	49.8	104	53.0	+3	53.6	198	19.7	-23	43.8	34	44.7	+21	45.1	46	31.3	+18	27.5
18	119	52.2	119	55.1	+3	53.1	213	21.5	-23	43.9	49	46.7	+21	45.2	61	33.5	+18	27.5
19	134	54.7	134	57.2		52.7	228	23.4		44.0	64	48.6		45.2	76	35.7		27.6
20	149	57.2	149	59.3		52.2	243	25.3		44.2	79	50.5		45.3	91	37.8		27.7
21	164	59.6	165	01.4		51.8	258	27.2		44.3	94	52.4		45.4	106	40.0		27.7
22	180	02.1	180	03.5		51.3	273	29.1		44.4	109	54.3		45.5	121	42.1		27.8
23	195	04.6	195	05.5		50.9	288	31.0		44.5	124	56.3		45.5	136	44.3		27.9
24	210	07.0	210	07.6	+3	50.5	303	32.8	-23	44.6	139	58.2	+21	45.6	151	46.5	+18	27.9
Dif	—		+21		-5		+19		-1		+19		+1		+22		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 5			Edad: 27 ^d 9 PHE { 4 ^h : 55 ^h 8 12 ^h : 56 ^h 0 20 ^h : 56 ^h 2 R°: 45 ^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	180	21.6	+12	08.6	196	46.2	+0	15.5	60 N	19 36	20 25	21 34	4 54	8	17 51	85		
1	195	21.7		09.4	211	19.7 ¹⁴⁵		27.9 ¹²⁴	58	28	13	21 14	54	12	49	81		
2	210	21.8		10.3	225	53.1 ¹⁴⁴		40.4 ¹²⁵	56	21	20 03	20 59	55	14	47	79		
3	225	22.0		11.1	240	26.5 ¹⁴⁴	+0	52.8 ¹²⁴	54	15	19 55	45	55	16	46	75		
4	240	22.1		12.0	254	59.9 ¹⁴⁴	+1	05.2 ¹²⁴	52	10	47	34	56	18	44	74		
5	255	22.2	+12	12.8	269	33.3 ¹⁴⁴	+1	17.7 ¹²⁵	50	19 05	19 40	20 24	4 56	20	17 43	71		
6	270	22.3	+12	13.6	284	06.6 ¹⁴³	+1	30.1 ¹²⁴	45	18 54	19 26	20 04	4 57	24	17 40	67		
7	285	22.5		14.5	298	39.9 ¹⁴³		42.6 ¹²⁵	40	45	14	19 49	58	27	37	64		
8	300	22.6		15.3	313	13.1 ¹⁴²	+1	55.1 ¹²⁵	35	38	19 05	36	59	30	35	60		
9	315	22.7		16.2	327	46.4 ¹⁴³	+2	07.5 ¹²⁴	30	32	18 56	26	4 59	33	33	58		
10	330	22.8		17.0	342	19.5 ¹⁴¹		20.0 ¹²⁵	20	20	43	19 10	5 00	37	29	54		
11	345	22.9	+12	17.8	356	52.7 ¹⁴²	+2	32.5 ¹²⁵	10 N	18 11	18 32	18 57	5 01	41	17 26	50		
12	0	23.1	+12	18.7	11	25.8 ¹⁴¹	+2	44.9 ¹²⁴	0	18 02	18 23	18 48	5 02	45	17 24	45		
13	15	23.2		19.5	25	58.9 ¹⁴¹	+2	57.4 ¹²⁵	10 S	17 53	14	39	03	49	21	42		
14	30	23.3		20.4	40	32.0 ¹⁴¹	+3	09.9 ¹²⁵	20	44	18 06	32	04	53	18	38		
15	45	23.4		21.2	55	05.0 ¹⁴⁰		22.3 ¹²⁴	30	33	17 58	26	05	58	14	34		
16	60	23.5		22.0	69	38.0 ¹⁴⁰		34.8 ¹²⁵	35	27	53	23	06	60	12	31		
17	75	23.7	+12	22.9	84	10.9 ¹³⁹	+3	47.3 ¹²⁵	40	17 20	17 48	18 20	5 07	63	17 10	28		
18	90	23.8	+12	23.7	98	43.8 ¹³⁹	+3	59.7 ¹²⁴	45	17 13	17 43	18 17	5 08	66	17 08	24		
19	105	23.9		24.5	113	16.6 ¹³⁸	+4	12.1 ¹²⁴	50	17 03	37	14	09	71	05	20		
20	120	24.0		25.4	127	49.5 ¹³⁹		24.6 ¹²⁵	52	16 59	34	13	10	72	03	19		
21	135	24.1		26.2	142	22.2 ¹³⁷		37.0 ¹²⁴	54	54	31	12	10	75	02	16		
22	150	24.2		27.0	156	55.0 ¹³⁸	+4	49.4 ¹²⁴	56	49	28	11	11	77	17	00	14	
23	165	24.4		27.9	171	27.7 ¹³⁷	+5	01.8 ¹²⁴	58	43	24	10	12	79	16	58	12	
24	180	24.5	+12	28.7	186	00.3 ¹³⁶	+5	14.2 ¹²⁴	60 S	16 36	17 20	18 09	5 12	83	16 56	9		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 57 ^m 9		Mag: -4.7 PMG: 9 ^h 58 ^m		Mag: -0.8 PMG: 3 ^h 45 ^m		Mag: -2.0 PMG: 14 ^h 38 ^m		Mag: +0.2 PMG: 13 ^h 51 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	210	07.0	210	07.6	+3	50.5	303	32.8	-23	44.6	139	58.2	+21	45.6	151	46.5	+18	27.9
1	225	09.5	225	09.7		50.0	318	34.7		44.7	155	00.1		45.7	166	48.6		28.0
2	240	11.9	240	11.8		49.6	333	36.6		44.8	170	02.0		45.8	181	50.8		28.1
3	255	14.4	255	13.9		49.2	348	38.5		44.9	185	03.9		45.8	196	52.9		28.1
4	270	16.9	270	15.9		48.7	3	40.4		45.0	200	05.9		45.9	211	55.1		28.2
5	285	19.3	285	18.0	+3	48.3	18	42.3	-23	45.1	215	07.8	+21	46.0	226	57.2	+18	28.3
6	300	21.8	300	20.0	+3	47.9	33	44.2	-23	45.2	230	09.7	+21	46.1	241	59.4	+18	28.3
7	315	24.3	315	22.1		47.4	48	46.1		45.3	245	11.6		46.1	257	01.6		28.4
8	330	26.7	330	24.2		47.0	63	48.0		45.5	260	13.5		46.2	272	03.7		28.5
9	345	29.2	345	26.2		46.6	78	49.9		45.6	275	15.5		46.3	287	05.9		28.6
10	0	31.7	0	28.3		46.2	93	51.8		45.7	290	17.4		46.4	302	08.0		28.6
11	15	34.1	15	30.3	+3	45.7	108	53.7	-23	45.8	305	19.3	+21	46.4	317	10.2	+18	28.7
12	30	36.6	30	32.3	+3	45.3	123	55.6	-23	45.9	320	21.2	+21	46.5	332	12.3	+18	28.8
13	45	39.1	45	34.4		44.9	138	57.5		46.0	335	23.1		46.6	347	14.5		28.8
14	60	41.5	60	36.4		44.5	153	59.4		46.1	350	25.1		46.7	2	16.6		28.9
15	75	44.0	75	38.4		44.1	169	01.3		46.2	5	27.0		46.7	17	18.8		29.0
16	90	46.4	90	40.5		43.7	184	03.2		46.3	20	28.9		46.8	32	21.0		29.0
17	105	48.9	105	42.5	+3	43.2	199	05.1	-23	46.4	35	30.8	+21	46.9	47	23.1	+18	29.1
18	120	51.4	120	44.5	+3	42.8	214	07.0	-23	46.5	50	32.7	+21	47.0	62	25.3	+18	29.2
19	135	53.8	135	46.5		42.4	229	08.9		46.7	65	34.7		47.0	77	27.4		29.2
20	150	56.3	150	48.5		42.0	244	10.8		46.8	80	36.6		47.1	92	29.6		29.3
21	165	58.8	165	50.5		41.6	259	12.7		46.9	95	38.5		47.2	107	31.7		29.4
22	181	01.2	180	52.6		41.2	274	14.6		47.0	110	40.4		47.2	122	33.9		29.4
23	196	03.7	195	54.6		40.8	289	16.5		47.1	125	42.3		47.3	137	36.1		29.5
24	211	06.2	210	56.6	+3	40.4	304	18.4	-23	47.2	140	44.3	+21	47.4	152	38.2	+18	29.6
Dif	—		+20		-4		+19		-1		+19		+1		+22		+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: 28 ^d 9 SD: 15'3 PMG: 11 ^h 58 ^m	PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 Rº: 48 ^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	24.5	+12 28.7	186	00.3	+5 14.2	60 N	2 22	3 31	4 20	5 02	10	19 16	86			
1	195	24.6	29.5	200	32.9 ¹³⁶	26.6 ¹²⁴	58	41	43	28	06	13	10	84			
2	210	24.7	30.4	215	05.5 ¹³⁶	39.0 ¹²⁴	56	2 57	3 53	35	09	15	06	80			
3	225	24.8	31.2	229	38.0 ¹³⁵	+5 51.3 ¹²³	54	3 11	4 01	41	11	18	19 01	78			
4	240	24.9	32.0	244	10.4 ¹³⁴	+6 03.7 ¹²⁴	52	22	09	46	14	20	18 58	75			
5	255	25.1	+12 32.9	258	42.8 ¹³⁴	+6 16.0 ¹²³	50	3 32	4 16	4 51	5 16	22	18 54	74			
6	270	25.2	+12 33.7	273	15.2 ¹³⁴	+6 28.3 ¹²³	45	3 52	4 31	5 02	5 21	26	18 47	69			
7	285	25.3	34.5	287	47.5 ¹³³	40.6 ¹²³	40	4 08	42	11	25	29	41	65			
8	300	25.4	35.4	302	19.8 ¹³³	+6 52.9 ¹²³	35	20	4 52	18	29	32	35	63			
9	315	25.5	36.2	316	52.0 ¹³²	+7 05.1 ¹²²	30	30	5 00	25	32	35	31	60			
10	330	25.6	37.0	331	24.1 ¹³¹	17.3 ¹²²	20	47	13	36	37	40	23	55			
11	345	25.8	+12 37.9	345	56.2 ¹³¹	+7 29.5 ¹²²	10 N	4 59	5 24	5 46	5 42	44	18 16	51			
12	0	25.9	+12 38.7	0	28.3 ¹³¹	+7 41.7 ¹²²	0	5 09	5 34	5 55	5 47	47	18 09	48			
13	15	26.0	39.5	15	00.3 ¹³⁰	+7 53.9 ¹²²	10 S	18	42	6 04	52	50	18 03	44			
14	30	26.1	40.4	29	32.2 ¹²⁹	+8 06.0 ¹²¹	20	25	51	13	5 57	54	17 56	40			
15	45	26.2	41.2	44	04.1 ¹²⁹	18.1 ¹²¹	30	31	5 59	24	6 03	59	48	36			
16	60	26.3	42.0	58	35.9 ¹²⁸	30.1 ¹²⁰	35	34	6 04	30	06	62	43	34			
17	75	26.5	+12 42.8	73	07.7 ¹²⁸	+8 42.2 ¹²¹	40	5 37	6 09	6 37	6 10	65	17 38	31			
18	90	26.6	+12 43.7	87	39.4 ¹²⁷	+8 54.2 ¹²⁰	45	5 40	6 15	6 45	6 14	69	17 32	28			
19	105	26.7	44.5	102	11.1 ¹²⁷	+9 06.2 ¹²⁰	50	43	21	54	20	73	25	23			
20	120	26.8	45.3	116	42.7 ¹²⁶	18.1 ¹¹⁹	52	44	24	6 59	22	75	22	21			
21	135	26.9	46.1	131	14.2 ¹²⁵	30.0 ¹¹⁹	54	46	27	7 04	25	77	18	19			
22	150	27.0	47.0	145	45.7 ¹²⁵	41.9 ¹¹⁹	56	47	30	09	28	80	14	17			
23	165	27.1	47.8	160	17.1 ¹²⁴	+9 53.7 ¹¹⁸	58	48	34	15	31	83	10	14			
24	180	27.2	+12 48.6	174	48.5 ¹²⁴	+10 05.5 ¹¹⁸	60 S	5 49	6 38	7 22	6 35	86	17 05	11			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 54 ^m 0		Mag: -4.7 PMG: 9 ^h 55 ^m		Mag: -0.8 PMG: 3 ^h 42 ^m		Mag: -2.0 PMG: 14 ^h 35 ^m		Mag: +0.2 PMG: 13 ^h 47 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	211	06.2	210	56.6	+3 40.4	304	18.4	-23 47.2	140	44.3	+21 47.4	152	38.2	+18 29.6
1	226	08.6	225	58.5	40.0	319	20.3	47.3	155	46.2	47.5	167	40.4	29.6
2	241	11.1	241	00.5	39.6	334	22.3	47.4	170	48.1	47.5	182	42.5	29.7
3	256	13.5	256	02.5	39.2	349	24.2	47.5	185	50.0	47.6	197	44.7	29.8
4	271	16.0	271	04.5	38.9	4	26.1	47.6	200	51.9	47.7	212	46.8	29.8
5	286	18.5	286	06.5	+3 38.5	19	28.0	-23 47.7	215	53.8	+21 47.8	227	49.0	+18 29.9
6	301	20.9	301	08.5	+3 38.1	34	29.9	-23 47.9	230	55.8	+21 47.8	242	51.1	+18 30.0
7	316	23.4	316	10.4	37.7	49	31.8	48.0	245	57.7	47.9	257	53.3	30.0
8	331	25.9	331	12.4	37.3	64	33.8	48.1	260	59.6	48.0	272	55.5	30.1
9	346	28.3	346	14.4	36.9	79	35.7	48.2	276	01.5	48.1	287	57.6	30.2
10	1	30.8	1	16.4	36.6	94	37.6	48.3	291	03.4	48.1	302	59.8	30.3
11	16	33.3	16	18.3	+3 36.2	109	39.5	-23 48.4	306	05.3	+21 48.2	318	01.9	+18 30.3
12	31	35.7	31	20.3	+3 35.8	124	41.5	-23 48.5	321	07.3	+21 48.3	333	04.1	+18 30.4
13	46	38.2	46	22.2	35.4	139	43.4	48.6	336	09.2	48.4	348	06.2	30.5
14	61	40.7	61	24.2	35.1	154	45.3	48.7	351	11.1	48.4	3	08.4	30.5
15	76	43.1	76	26.1	34.7	169	47.2	48.8	6	13.0	48.5	18	10.5	30.6
16	91	45.6	91	28.1	34.3	184	49.2	49.0	21	14.9	48.6	33	12.7	30.7
17	106	48.0	106	30.0	+3 34.0	199	51.1	-23 49.1	36	16.8	+21 48.7	48	14.8	+18 30.7
18	121	50.5	121	31.9	+3 33.6	214	53.0	-23 49.2	51	18.8	+21 48.7	63	17.0	+18 30.8
19	136	53.0	136	33.9	33.2	229	55.0	49.3	66	20.7	48.8	78	19.2	30.9
20	151	55.4	151	35.8	32.9	244	56.9	49.4	81	22.6	48.9	93	21.3	30.9
21	166	57.9	166	37.7	32.5	259	58.8	49.5	96	24.5	49.0	108	23.5	31.0
22	182	00.4	181	39.7	32.2	275	00.8	49.6	111	26.4	49.0	123	25.6	31.1
23	197	02.8	196	41.6	31.8	290	02.7	49.7	126	28.3	49.1	138	27.8	31.1
24	212	05.3	211	43.5	+3 31.5	305	04.6	-23 49.8	141	30.2	+21 49.2	153	29.9	+18 31.2
Dif	—		+20	-4		+19	-1		+19		+1		+22	+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 1			Edad: 29 ^d 9 PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/3 PMG: 12 ^h 46 ^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	180	27.2	+12 48.6	174	48.5	+10 05.5	60 N	19 40	20 31	21 43	5 12 13	20 42 89		
1	195	27.4	49.5	189	19.7 ¹²²	17.3 ¹¹⁸	58	32	18	21	19 16	34 85		
2	210	27.5	50.3	203	51.0 ¹²³	29.0 ¹¹⁷	56	25	20 08	21 04	24 19	26 82		
3	225	27.6	51.1	218	22.1 ¹²¹	40.7 ¹¹⁷	54	19	19 59	20 50	29 22	19 79		
4	240	27.7	51.9	232	53.2 ¹²¹	+10 52.3 ¹¹⁶	52	13	51	39	34 23	13 77		
5	255	27.8	+12 52.7	247	24.3 ¹²¹	+11 03.9 ¹¹⁶	50	19 08	19 43	20 28	5 38 25	20 08 75		
6	270	27.9	+12 53.6	261	55.2 ¹¹⁹	+11 15.5 ¹¹⁶	45	18 57	19 28	20 07	5 47 29	19 56 71		
7	285	28.0	54.4	276	26.1 ¹¹⁹	27.0 ¹¹⁵	40	48	16	19 51	5 54 33	46 68		
8	300	28.1	55.2	290	57.0 ¹¹⁹	38.4 ¹¹⁴	35	40	19 06	38	6 01 36	38 65		
9	315	28.3	56.0	305	27.7 ¹¹⁷	+11 49.8 ¹¹⁴	30	33	18 58	28	07 38	31 62		
10	330	28.4	56.9	319	58.4 ¹¹⁷	+12 01.2 ¹¹⁴	20	21	44	19 11	17 42	18 58		
11	345	28.5	+12 57.7	334	29.0 ¹¹⁶	+12 12.5 ¹¹³	10 N	18 11	18 33	18 58	6 26 46	19 07 55		
12	0	28.6	+12 58.5	348	59.6 ¹¹⁶	+12 23.7 ¹¹²	0	18 01	18 23	18 47	6 34 50	18 57 51		
13	15	28.7	+12 59.3	3	30.1 ¹¹⁵	34.9 ¹¹²	10 S	17 52	14	39	42 53	47 48		
14	30	28.8	+13 00.1	18	00.5 ¹¹⁴	46.1 ¹¹²	20	42	18 05	31	6 51 57	36 45		
15	45	28.9	01.0	32	30.9 ¹¹⁴	+12 57.2 ¹¹¹	30	31	17 56	24	7 02 61	24 40		
16	60	29.0	01.8	47	01.1 ¹¹²	+13 08.2 ¹¹⁰	35	25	51	21	08 64	17 38		
17	75	29.1	+13 02.6	61	31.3 ¹¹²	+13 19.2 ¹¹⁰	40	17 18	17 46	18 17	7 15 66	18 09 35		
18	90	29.2	+13 03.4	76	01.5 ¹¹²	+13 30.1 ¹⁰⁹	45	17 09	17 40	18 14	7 23 70	18 00 32		
19	105	29.4	04.2	90	31.5 ¹¹⁰	41.0 ¹⁰⁹	50	16 59	33	11	33 74	17 48 28		
20	120	29.5	05.1	105	01.5 ¹¹⁰	+13 51.7 ¹⁰⁷	52	55	30	09	37 77	43 26		
21	135	29.6	05.9	119	31.4 ¹⁰⁹	+14 02.5 ¹⁰⁸	54	50	27	08	42 79	37 24		
22	150	29.7	06.7	134	01.3 ¹⁰⁹	13.1 ¹⁰⁶	56	44	23	07	48 81	31 21		
23	165	29.8	07.5	148	31.0 ¹⁰⁷	23.7 ¹⁰⁶	58	38	19	05	7 54 85	24 18		
24	180	29.9	+13 08.3	163	00.7 ¹⁰⁷	+14 34.3 ¹⁰⁶	60 S	16 31	17 15	18 04	8 01 88	17 16 15		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 50 ^m 0		Mag: -4.7 PMG: 9 ^h 52 ^m		Mag: -0.8 PMG: 3 ^h 39 ^m		Mag: -2.0 PMG: 14 ^h 32 ^m		Mag: +0.2 PMG: 13 ^h 44 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	212	05.3	211	43.5	305	04.6	141	30.2	153	29.9
1	227	07.8	226	45.4	320	06.6	156	32.2	168	32.1
2	242	10.2	241	47.3	335	08.5	171	34.1	183	34.2
3	257	12.7	256	49.2	350	10.4	186	36.0	198	36.4
4	272	15.1	271	51.1	5	12.4	201	37.9	213	38.5
5	287	17.6	286	53.0	20	14.3	216	39.8	228	40.7
6	302	20.1	301	54.9	35	16.3	231	41.7	243	42.9
7	317	22.5	316	56.8	50	18.2	246	43.6	258	45.0
8	332	25.0	331	58.7	65	20.2	261	45.6	273	47.2
9	347	27.5	347	00.6	80	22.1	276	47.5	288	49.3
10	2	29.9	2	02.5	95	24.1	291	49.4	303	51.5
11	17	32.4	17	04.4	110	26.0	306	51.3	318	53.6
12	32	34.9	32	06.3	125	28.0	321	53.2	333	55.8
13	47	37.3	47	08.1	140	29.9	336	55.1	348	57.9
14	62	39.8	62	10.0	155	31.9	351	57.0	4	00.1
15	77	42.3	77	11.9	170	33.8	6	59.0	19	02.2
16	92	44.7	92	13.7	185	35.8	22	00.9	34	04.4
17	107	47.2	107	15.6	200	37.7	37	02.8	49	06.5
18	122	49.6	122	17.5	215	39.7	52	04.7	64	08.7
19	137	52.1	137	19.3	230	41.6	67	06.6	79	10.8
20	152	54.6	152	21.2	245	43.6	82	08.5	94	13.0
21	167	57.0	167	23.0	260	45.6	97	10.4	109	15.2
22	182	59.5	182	24.9	275	47.5	112	12.3	124	17.3
23	198	02.0	197	26.7	290	49.5	127	14.3	139	19.5
24	213	04.4	212	28.5	305	51.4	142	16.2	154	21.6
Dif	—		+19	-3	+20	-1	+19	+1	+22	+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 9				Edad: 1 ^d 4 PHE { 4 ^h : 57/5 12 ^h : 57/6 20 ^h : 57/8 PMG: 13 ^h 36 ^m R°: 54 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	29.9	+13	08.3	163	00.7	+14	34.3	60 N	2	13	3	25	4	15	5	25	19	22	
1	195	30.0		09.1	177	30.3	106	44.7	58		34		37		23	35	22	21	59	
2	210	30.1		10.0	191	59.9	106	55.1	56	2	51		47		30	43	25	48	80	
3	225	30.2		10.8	206	29.3	104	05.4	54	3	05	3	57		36	51	27	38	78	
4	240	30.3		11.6	220	58.7	104	15.7	52		17	4	05		42	5	57	30	76	
5	255	30.4	+13	12.4	235	28.0	103	25.9	50	3	27	4	12	4	47	6	03	32	21	
6	270	30.5	+13	13.2	249	57.3	103	36.0	45	3	48	4	27	4	59	6	16	36	21	
7	285	30.6		14.0	264	26.4	101	46.0	40	4	04		39	5	08	27	39	20	54	
8	300	30.8		14.8	278	55.5	101	55.9	35		17		49	16		37	40	43	65	
9	315	30.9		15.7	293	24.5	100	05.8	30		28	4	58	23		45	43	33	63	
10	330	31.0		16.5	307	53.4	99	15.6	20		45	5	12	35		6	59	47	16	
11	345	31.1	+13	17.3	322	22.3	99	25.3	10 N	4	58	5	23	5	45	7	12	50	20	
12	0	31.2	+13	18.1	336	51.1	98	34.9	0	5	09	5	33	5	55	7	24	53	19	
13	15	31.3		18.9	351	19.8	97	44.5	10 S		18		42	6	04	35	56	35	52	
14	30	31.4		19.7	5	48.4	96	53.9	20		25	5	51	14		7	48	59	21	
15	45	31.5		20.5	20	16.9	95	03.3	30		32	6	01	25		8	03	63	19	
16	60	31.6		21.3	34	45.4	95	12.6	35		36		06	32		12	65	18	55	
17	75	31.7	+13	22.1	49	13.7	93	21.8	40	5	39	6	11	6	39	8	21	68	18	
18	90	31.8	+13	23.0	63	42.1	94	30.9	45	5	43	6	17	6	47	8	33	71	18	
19	105	31.9		23.8	78	10.3	92	39.9	50		46	24	6	58		47	75	16	35	
20	120	32.0		24.6	92	38.4	91	48.8	52		47	27	7	02		8	54	77	09	
21	135	32.1		25.4	107	06.5	91	57.6	54		49	30	7			9	01	79	18	
22	150	32.2		26.2	121	34.5	90	06.3	56		50	34	13			9	82	17	52	
23	165	32.3		27.0	136	02.4	89	15.0	58		52	38	19			19	84	42	26	
24	180	32.4	+13	27.8	150	30.2	88	23.5	60 S	5	53	6	42	7	27	9	29	89	17	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 46 ^m 1				Mag: -4.7 PMG: 9 ^h 49 ^m				Mag: -0.9 PMG: 3 ^h 36 ^m				Mag: -2.0 PMG: 14 ^h 29 ^m				Mag: +0.2 PMG: 13 ^h 41 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	04.4	212	28.5	+3	23.5	305	51.4	-23	52.5	142	16.2	+21	50.9	154	21.6	+18	32.8		
1	228	06.9	227	30.4		23.2	320	53.4		52.6	157	18.1		51.0	169	23.8		32.9		
2	243	09.4	242	32.2		22.9	335	55.4		52.7	172	20.0		51.1	184	25.9		33.0		
3	258	11.8	257	34.0		22.6	350	57.3		52.8	187	21.9		51.2	199	28.1		33.0		
4	273	14.3	272	35.9		22.3	5	59.3		52.9	202	23.8		51.2	214	30.2		33.1		
5	288	16.8	287	37.7	+3	22.0	21	01.3	-23	53.0	217	25.7	+21	51.3	229	32.4	+18	33.2		
6	303	19.2	302	39.5	+3	21.7	36	03.2	-23	53.1	232	27.6	+21	51.4	244	34.5	+18	33.2		
7	318	21.7	317	41.3		21.4	51	05.2		53.3	247	29.5		51.5	259	36.7		33.3		
8	333	24.1	332	43.1		21.1	66	07.2		53.4	262	31.5		51.5	274	38.8		33.4		
9	348	26.6	347	45.0		20.8	81	09.2		53.5	277	33.4		51.6	289	41.0		33.4		
10	3	29.1	2	46.8		20.5	96	11.1		53.6	292	35.3		51.7	304	43.1		33.5		
11	18	31.5	17	48.6	+3	20.2	111	13.1	-23	53.7	307	37.2	+21	51.7	319	45.3	+18	33.6		
12	33	34.0	32	50.4	+3	20.0	126	15.1	-23	53.8	322	39.1	+21	51.8	334	47.4	+18	33.7		
13	48	36.5	47	52.2		19.7	141	17.1		53.9	337	41.0		51.9	349	49.6		33.7		
14	63	38.9	62	54.0		19.4	156	19.0		54.0	352	42.9		52.0	4	51.7		33.8		
15	78	41.4	77	55.7		19.1	171	21.0		54.2	7	44.8		52.0	19	53.9		33.9		
16	93	43.9	92	57.5		18.8	186	23.0		54.3	22	46.7		52.1	34	56.0		33.9		
17	108	46.3	107	59.3	+3	18.6	201	25.0	-23	54.4	37	48.6	+21	52.2	49	58.2	+18	34.0		
18	123	48.8	123	01.1	+3	18.3	216	27.0	-23	54.5	52	50.6	+21	52.3	65	00.3	+18	34.1		
19	138	51.2	138	02.9		18.0	231	29.0		54.6	67	52.5		52.3	80	02.5		34.1		
20	153	53.7	153	04.7		17.7	246	30.9		54.7	82	54.4		52.4	95	04.7		34.2		
21	168	56.2	168	06.4		17.5	261	32.9		54.8	97	56.3		52.5	110	06.8		34.3		
22	183	58.6	183	08.2		17.2	276	34.9		54.9	112	58.2		52.5	125	09.0		34.3		
23	199	01.1	198	10.0		16.9	291	36.9		55.0	128	00.1		52.6	140	11.1		34.4		
24	214	03.6	213	11.7	+3	16.7	306	38.9	-23	55.2	143	02.0	+21	52.7	155	13.3	+18	34.5		
Dif	—		+18		-3		+20		-1		+19		+1		+22		+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 8			Edad: 2 ^d 4 PHE { 4 ^h : 58'0 12 ^h : 58'1 20 ^h : 58'2 PMG: 14 ^h 30 ^m R°: 56 ^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	180	32.4	+13 27.8	150	30.2	+18 23.5	88	60 N	19 45	20 36	21 51	5 44 27	23 38 77	
1	195	32.5	28.6	164	58.0	31.9	84	58	37	24	29	5 57 31	22 75	
2	210	32.6	29.4	179	25.7	40.3	84	56	29	12	21 10	6 08 34	23 08 73	
3	225	32.7	30.2	193	53.3	48.5	82	54	22	20 03	20 56	18 36	22 56 72	
4	240	32.8	31.0	208	20.8	+18 56.6	81	52	16	19 54	43	27 37	46 70	
5	255	32.9	+13 31.8	222	48.3	+19 04.7	81	50	19 11	19 47	20 32	6 35 39	22 36 70	
6	270	33.0	+13 32.6	237	15.6	+19 12.6	79	45	18 59	19 31	20 10	6 52 42	22 17 67	
7	285	33.1	33.5	251	42.9	20.4	78	40	50	19	19 54	7 06 45	22 01 65	
8	300	33.2	34.3	266	10.2	28.1	77	35	41	19 08	40	17 48	21 48 64	
9	315	33.3	35.1	280	37.3	35.7	76	30	34	18 59	29	28 49	36 63	
10	330	33.4	35.9	295	04.4	43.2	75	20	22	45	19 12	7 46 51	21 16 61	
11	345	33.5	+13 36.7	309	31.4	+19 50.5	73	10 N	18 11	18 33	18 58	8 02 54	20 59 59	
12	0	33.6	+13 37.5	323	58.3	+19 57.8	73	0	18 01	18 22	18 47	8 17 56	20 43 57	
13	15	33.7	38.3	338	25.2	+20 04.9	71	10 S	17 51	13	38	31 59	27 56	
14	30	33.8	39.1	352	51.9	12.0	71	20	41	18 04	30	8 47 61	20 10 54	
15	45	33.9	39.9	7	18.6	18.9	69	30	29	17 54	22	9 06 63	19 50 52	
16	60	34.0	40.7	21	45.3	25.7	68	35	23	49	18	17 65	39 50	
17	75	34.1	+13 41.5	36	11.8	+20 32.4	67	40	17 15	17 43	18 15	9 29 67	19 25 49	
18	90	34.2	+13 42.3	50	38.3	+20 38.9	65	45	17 06	17 37	18 11	9 44 69	19 10 47	
19	105	34.3	43.1	65	04.8	45.3	64	50	16 56	29	07	10 02 72	18 51 44	
20	120	34.4	43.9	79	31.1	51.7	64	52	51	26	06	11 73	42 43	
21	135	34.5	44.7	93	57.4	+20 57.9	62	54	46	23	04	20 76	32 41	
22	150	34.6	45.5	108	23.6	+21 03.9	60	56	40	19	03	31 78	21 39	
23	165	34.7	46.3	122	49.8	09.9	60	58	33	15	18 01	43 81	18 08 37	
24	180	34.8	+13 47.1	137	15.9	+21 15.7	58	60 S	16 25	17 10	17 59	10 58 84	17 53 33	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 42 ^m 2		Mag: -4.7 PMG: 9 ^h 46 ^m			Mag: -0.9 PMG: 3 ^h 33 ^m			Mag: -2.0 PMG: 14 ^h 26 ^m			Mag: +0.2 PMG: 13 ^h 37 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	214	03.6	213 11.7	+3 16.7	306 38.9	-23 55.2	143 02.0	+21 52.7	155 13.3	+18 34.5				
1	229	06.0	228 13.5	16.4	321 40.9	55.3	158 03.9	52.8	170 15.4	34.5				
2	244	08.5	243 15.2	16.1	336 42.9	55.4	173 05.8	52.8	185 17.6	34.6				
3	259	11.0	258 17.0	15.9	351 44.9	55.5	188 07.7	52.9	200 19.7	34.7				
4	274	13.4	273 18.8	15.6	6 46.9	55.6	203 09.6	53.0	215 21.9	34.7				
5	289	15.9	288 20.5	+3 15.4	21 48.9	-23 55.7	218 11.6	+21 53.1	230 24.0	+18 34.8				
6	304	18.4	303 22.2	+3 15.1	36 50.8	-23 55.8	233 13.5	+21 53.1	245 26.2	+18 34.9				
7	319	20.8	318 24.0	14.8	51 52.8	55.9	248 15.4	53.2	260 28.3	34.9				
8	334	23.3	333 25.7	14.6	66 54.8	56.1	263 17.3	53.3	275 30.5	35.0				
9	349	25.7	348 27.5	14.3	81 56.8	56.2	278 19.2	53.3	290 32.6	35.1				
10	4	28.2	3 29.2	14.1	96 58.8	56.3	293 21.1	53.4	305 34.8	35.1				
11	19	30.7	18 30.9	+3 13.8	112 00.8	-23 56.4	308 23.0	+21 53.5	320 36.9	+18 35.2				
12	34	33.1	33 32.6	+3 13.6	127 02.9	-23 56.5	323 24.9	+21 53.6	335 39.1	+18 35.3				
13	49	35.6	48 34.4	13.4	142 04.9	56.6	338 26.8	53.6	350 41.2	35.4				
14	64	38.1	63 36.1	13.1	157 06.9	56.7	353 28.7	53.7	5 43.4	35.4				
15	79	40.5	78 37.8	12.9	172 08.9	56.8	8 30.6	53.8	20 45.5	35.5				
16	94	43.0	93 39.5	12.6	187 10.9	56.9	23 32.5	53.9	35 47.7	35.6				
17	109	45.5	108 41.2	+3 12.4	202 12.9	-23 57.1	38 34.4	+21 53.9	50 49.8	+18 35.6				
18	124	47.9	123 42.9	+3 12.2	217 14.9	-23 57.2	53 36.4	+21 54.0	65 52.0	+18 35.7				
19	139	50.4	138 44.6	11.9	232 16.9	57.3	68 38.3	54.1	80 54.1	35.8				
20	154	52.9	153 46.3	11.7	247 18.9	57.4	83 40.2	54.1	95 56.3	35.8				
21	169	55.3	168 48.0	11.5	262 20.9	57.5	98 42.1	54.2	110 58.4	35.9				
22	184	57.8	183 49.7	11.3	277 22.9	57.6	113 44.0	54.3	126 00.6	36.0				
23	200	00.2	198 51.4	11.0	292 25.0	57.7	128 45.9	54.4	141 02.7	36.0				
24	215	02.7	213 53.1	+3 10.8	307 27.0	-23 57.9	143 47.8	+21 54.4	156 04.9	+18 36.1				
Dif	—		+17		-2		+20		-1		+19		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9			Edad: 3 ^d 4	PHE	4 ^h : 58'4		12 ^h : 58'5	20 ^h : 58'6		R ^o : 59 ^m	h	m	h	m			
	PMG: 11 ^h 57 ^m 6																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil			Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	34.8	+13	47.1	137	15.9	+21	15.7	60 N	2 03	3 18	4 09	6 11	42	***	***		
1	195	34.9		47.9	151	41.9	70	21.4	58	26	31	18	28	44	***	***		
2	210	35.0		48.7	166	07.9	70	26.9	56	44	42	25	42	46	***	***		
3	225	35.1		49.5	180	33.8	69	32.4	54	2 59	3 52	32	6 54	48	***	***		
4	240	35.2		50.3	194	59.6	68	37.7	52	3 12	4 00	38	7 04	49	23 56	61		
5	255	35.3	+13	51.1	209	25.4	68	+21	50	3 22	4 08	4 44	7 14	50	23 46	60		
6	270	35.4	+13	51.9	223	51.1	67	+21	45	3 44	4 24	4 56	7 34	52	23 24	60		
7	285	35.5		52.6	238	16.7	66		40	4 01	36	5 05	7 51	53	23 06	61		
8	300	35.6		53.4	252	42.3	66	+21	35	15	47	14	8 05	54	22 52	60		
9	315	35.7		54.2	267	07.9	66	+22	30	26	4 56	21	17	54	39	60		
10	330	35.8		55.0	281	33.4	65		20	44	5 10	33	37	57	22 17	60		
11	345	35.9	+13	55.8	295	58.8	64	+22	10 N	4 57	5 22	5 44	8 56	57	21 58	59		
12	0	36.0	+13	56.6	310	24.2	64	+22	0	5 08	5 33	5 54	9 13	58	21 40	59		
13	15	36.1		57.4	324	49.5	63		10 S	18	43	6 04	30	59	23	58		
14	30	36.2		58.2	339	14.8	63		20	26	5 52	15	9 48	60	21 04	58		
15	45	36.3		59.0	353	40.0	62		30	34	6 02	26	10 09	62	20 42	57		
16	60	36.4	+13	59.8	8	05.1	61		35	37	07	33	22	62	29	57		
17	75	36.5	+14	00.6	22	30.3	62	+22	40	5 41	6 13	6 41	10 36	63	20 14	57		
18	90	36.6	+14	01.4	36	55.3	60	+22	45	5 45	6 19	6 50	10 53	64	19 57	56		
19	105	36.7		02.2	51	20.4	61		50	49	27	7 01	11 14	66	35	56		
20	120	36.8		02.9	65	45.4	60		52	50	30	06	24	66	25	55		
21	135	36.8		03.7	80	10.3	59		54	52	34	11	36	67	13	55		
22	150	36.9		04.5	94	35.2	59		56	54	38	17	11 49	67	19 00	54		
23	165	37.0		05.3	109	00.1	59		58	56	42	24	12 04	69	18 45	52		
24	180	37.1	+14	06.1	123	24.9	58	+22	60 S	5 57	6 47	7 31	12 22	70	18 26	52		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG		Mag: -4.7			Mag: -0.9			Mag: -2.0			Mag: +0.2						
	9 ^h 38 ^m 2		PMG: 9 ^h 43 ^m			PMG: 3 ^h 30 ^m			PMG: 14 ^h 23 ^m			PMG: 13 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	°	°	'	°	'	°	'	°	'		
0	215	02.7	213	53.1	+3	10.8	307	27.0	-23	57.9	143	47.8	+21	54.4	156	04.9	+18	36.1
1	230	05.2	228	54.8		10.6	322	29.0		58.0	158	49.7		54.5	171	07.0		36.2
2	245	07.6	243	56.5		10.4	337	31.0		58.1	173	51.6		54.6	186	09.2		36.2
3	260	10.1	258	58.2		10.1	352	33.0		58.2	188	53.5		54.7	201	11.3		36.3
4	275	12.6	273	59.9		09.9	7	35.1		58.3	203	55.4		54.7	216	13.5		36.4
5	290	15.0	289	01.5	+3	09.7	22	37.1	-23	58.4	218	57.3	+21	54.8	231	15.6	+18	36.4
6	305	17.5	304	03.2	+3	09.5	37	39.1	-23	58.5	233	59.2	+21	54.9	246	17.8	+18	36.5
7	320	20.0	319	04.9		09.3	52	41.1		58.6	249	01.1		54.9	261	19.9		36.6
8	335	22.4	334	06.5		09.1	67	43.1		58.8	264	03.0		55.0	276	22.1		36.6
9	350	24.9	349	08.2		08.9	82	45.2		58.9	279	04.9		55.1	291	24.2		36.7
10	5	27.4	4	09.9		08.7	97	47.2		59.0	294	06.8		55.2	306	26.4		36.8
11	20	29.8	19	11.5	+3	08.5	112	49.2	-23	59.1	309	08.7	+21	55.2	321	28.5	+18	36.8
12	35	32.3	34	13.2	+3	08.3	127	51.3	-23	59.2	324	10.7	+21	55.3	336	30.7	+18	36.9
13	50	34.7	49	14.8		08.1	142	53.3		59.3	339	12.6		55.4	351	32.8		37.0
14	65	37.2	64	16.5		07.9	157	55.3		59.4	354	14.5		55.5	6	35.0		37.1
15	80	39.7	79	18.1		07.7	172	57.4		59.5	9	16.4		55.5	21	37.1		37.1
16	95	42.1	94	19.8		07.5	187	59.4		59.7	24	18.3		55.6	36	39.2		37.2
17	110	44.6	109	21.4	+3	07.3	203	01.4	-23	59.8	39	20.2	+21	55.7	51	41.4	+18	37.3
18	125	47.1	124	23.0	+3	07.1	218	03.5	-23	59.9	54	22.1	+21	55.7	66	43.5	+18	37.3
19	140	49.5	139	24.7		06.9	233	05.5	-24	00.0	69	24.0		55.8	81	45.7		37.4
20	155	52.0	154	26.3		06.7	248	07.5	-24	00.1	84	25.9		55.9	96	47.8		37.5
21	170	54.5	169	27.9		06.5	263	09.6		00.2	99	27.8		56.0	111	50.0		37.5
22	185	56.9	184	29.5		06.3	278	11.6		00.3	114	29.7		56.0	126	52.1		37.6
23	200	59.4	199	31.2		06.2	293	13.7		00.5	129	31.6		56.1	141	54.3		37.7
24	216	01.8	214	32.8	+3	06.0	308	15.7	-24	00.6	144	33.5	+21	56.2	156	56.4	+18	37.7
Dif	—		+17		-2		+20		-1		+19		+1		+21		+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 5				Edad: 4 ^d 4 PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9 PMG: 16 ^h 25 ^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	180	37.1	+14	06.1	123	24.9	+22 55.0	60 N	19 50	20 42	22 01	6 53 62	0 55 62					
1	195	37.2		06.9	137	49.7 58	57.4 24	58	41	29	21 36	7 12 62	37 61					
2	210	37.3		07.7	152	14.4 57	+22 59.6 22	56	33	17	17	28 62	21 61					
3	225	37.4		08.5	166	39.1 57	+23 01.7 21	54	26	20 07	21 01	42 61	0 08 61					
4	240	37.5		09.3	181	03.8 57	03.6 19	52	20	19 58	20 48	7 53 62	** ** *	** ** *				
5	255	37.6	+14	10.0	195	28.5 57	+23 05.4 18	50	19 14	19 50	20 36	8 04 61	** ** *	** ** *				
6	270	37.7	+14	10.8	209	53.1 56	+23 07.0 16	45	19 02	19 34	20 14	8 26 61	** ** *	** ** *				
7	285	37.8		11.6	224	17.7 56	08.5 15	40	18 52	21	19 56	44 60	** ** *	** ** *				
8	300	37.9		12.4	238	42.3 56	09.8 13	35	43	10	42	8 59 60	23 52 54					
9	315	37.9		13.2	253	06.8 55	11.0 12	30	35	19 01	31	9 11 61	39 55					
10	330	38.0		14.0	267	31.3 55	12.0 10	20	22	18 45	19 12	34 60	23 17 57					
11	345	38.1	+14	14.8	281	55.8 55	+23 12.9 9	10 N	18 11	18 33	18 58	9 53 60	22 57 58					
12	0	38.2	+14	15.5	296	20.3 55	+23 13.6 7	0	18 01	18 22	18 47	10 11 59	22 39 59					
13	15	38.3		16.3	310	44.8 55	14.2 6	10 S	17 51	12	37	29 59	21 60					
14	30	38.4		17.1	325	09.2 54	14.6 4	20	40	18 02	29	10 48 59	22 02 61					
15	45	38.5		17.9	339	33.6 54	14.9 3	30	28	17 52	20	11 11 58	21 39 63					
16	60	38.6		18.7	353	58.0 54	15.0 1	35	20	47	16	24 58	26 64					
17	75	38.7	+14	19.4	8	22.4 54	+23 14.9 1	40	17 13	17 41	18 12	11 39 57	21 11 64					
18	90	38.8	+14	20.2	22	46.8 54	+23 14.7 2	45	17 03	17 34	18 08	11 57 57	20 53 65					
19	105	38.8		21.0	37	11.2 54	14.4 3	50	16 52	26	04	12 20 55	31 66					
20	120	38.9		21.8	51	35.6 54	13.9 5	52	47	23	02	30 56	20 67					
21	135	39.0		22.6	65	59.9 53	13.3 6	54	41	19	18 00	43 54	20 08 68					
22	150	39.1		23.3	80	24.3 54	12.5 8	56	35	15	17 59	12 56 54	19 54 69					
23	165	39.2		24.1	94	48.7 54	11.5 10	58	28	10	56	13 13 53	37 71					
24	180	39.3	+14	24.9	109	13.0 53	+23 10.4 11	60 S	16 20	17 05	17 54	13 32 52	19 18 72					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 34 ^m 3		Mag: -4.7 PMG: 9 ^h 41 ^m				Mag: -1.0 PMG: 3 ^h 26 ^m				Mag: -2.0 PMG: 14 ^h 20 ^m				Mag: +0.2 PMG: 13 ^h 30 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	216	01.8	214	32.8	+3	06.0	308	15.7	-24	00.6	144	33.5	+21	56.2	156	56.4	+18	37.7
1	231	04.3	229	34.4		05.8	323	17.8		00.7	159	35.4		56.2	171	58.6		37.8
2	246	06.8	244	36.0		05.6	338	19.8		00.8	174	37.3		56.3	187	00.7		37.9
3	261	09.2	259	37.6		05.4	353	21.9		00.9	189	39.2		56.4	202	02.9		37.9
4	276	11.7	274	39.2		05.3	8	23.9		01.0	204	41.1		56.5	217	05.0		38.0
5	291	14.2	289	40.8	+3	05.1	23	26.0	-24	01.1	219	43.0	+21	56.5	232	07.2	+18	38.1
6	306	16.6	304	42.4	+3	04.9	38	28.0	-24	01.3	234	44.9	+21	56.6	247	09.3	+18	38.1
7	321	19.1	319	44.0		04.8	53	30.1		01.4	249	46.8		56.7	262	11.5		38.2
8	336	21.6	334	45.6		04.6	68	32.1		01.5	264	48.7		56.7	277	13.6		38.3
9	351	24.0	349	47.2		04.4	83	34.2		01.6	279	50.6		56.8	292	15.8		38.3
10	6	26.5	4	48.8		04.3	98	36.2		01.7	294	52.5		56.9	307	17.9		38.4
11	21	29.0	19	50.4	+3	04.1	113	38.3	-24	01.8	309	54.4	+21	57.0	322	20.1	+18	38.5
12	36	31.4	34	52.0	+3	03.9	128	40.3	-24	01.9	324	56.3	+21	57.0	337	22.2	+18	38.5
13	51	33.9	49	53.6		03.8	143	42.4		02.1	339	58.2		57.1	352	24.4		38.6
14	66	36.3	64	55.1		03.6	158	44.4		02.2	355	00.1		57.2	7	26.5		38.7
15	81	38.8	79	56.7		03.5	173	46.5		02.3	10	02.0		57.2	22	28.7		38.7
16	96	41.3	94	58.3		03.3	188	48.6		02.4	25	03.9		57.3	37	30.8		38.8
17	111	43.7	109	59.9	+3	03.2	203	50.6	-24	02.5	40	05.8	+21	57.4	52	32.9	+18	38.9
18	126	46.2	125	01.4	+3	03.0	218	52.7	-24	02.6	55	07.7	+21	57.5	67	35.1	+18	39.0
19	141	48.7	140	03.0		02.9	233	54.8		02.8	70	09.6		57.5	82	37.2		39.0
20	156	51.1	155	04.6		02.7	248	56.8		02.9	85	11.5		57.6	97	39.4		39.1
21	171	53.6	170	06.1		02.6	263	58.9		03.0	100	13.4		57.7	112	41.5		39.2
22	186	56.1	185	07.7		02.4	279	01.0		03.1	115	15.3		57.7	127	43.7		39.2
23	201	58.5	200	09.2		02.3	294	03.0		03.2	130	17.2		57.8	142	45.8		39.3
24	217	01.0	215	10.8	+3	02.1	309	05.1	-24	03.3	145	19.1	+21	57.9	157	48.0	+18	39.4
Dif	—		+16				-2				+21				+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 3				Edad: 5 ^d 4 PHE { 4 ^h : 59 ^m 0 12 ^h : 59 ^m 1 20 ^h : 59 ^m 1 PMG: 17 ^h 24 ^m R ^o : 59 ^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	39.3	+14	24.9	109	13.0	+23	10.4	13	58	60 N	1	53	3	11	4	03	7	55	80	1	57	42	
1	195	39.4		25.7	123	37.4	54	09.1	13	58		2	18		25	13		8	14	77		38	45	
2	210	39.5		26.5	138	01.7	53	07.7	14	56			37		37	21			30	75		22	47	
3	225	39.5		27.2	152	26.1	54	06.1	16	54		2	53		47	28			43	73	1	09	48	
4	240	39.6		28.0	166	50.4	53	04.4	17	52		3	06	3	56	34			8	55	72	0	57	49
5	255	39.7	+14	28.8	181	14.8	54	+23	02.6	18	50		3	18	4	04	4	40	9	05	71	0	46	51
6	270	39.8	+14	29.6	195	39.2	54	+23	00.5	21	45	3	41	4	20	4	52	9	27	68	0	24	53	
7	285	39.9		30.3	210	03.6	54	+22	58.4	21	40	3	58		34	5	03		44	67	0	07	53	
8	300	40.0		31.1	224	27.9	53		56.0	24	35	4	12		44	11		9	59	65	**	**	**	
9	315	40.1		31.9	238	52.4	55		53.5	25	30		24	4	54	19		10	12	64	**	**	**	
10	330	40.2		32.7	253	16.8	54		50.9	26	20		42	5	09	32		34	62		**	**	**	
11	345	40.2	+14	33.4	267	41.2	54	+22	48.1	28	10 N	4	56	5	22	5	43	10	53	60	23	55	56	
12	0	40.3	+14	34.2	282	05.7	55	+22	45.2	29	0	5	08	5	33	5	54	11	10	59	23	38	58	
13	15	40.4		35.0	296	30.1	54		42.1	31	10 S		18		43	6	04		28	57		21	60	
14	30	40.5		35.8	310	54.6	55		38.9	32	20		26	5	53	15		11	47	55	23	03	63	
15	45	40.6		36.5	325	19.1	55		35.5	34	30		35	6	03	28		12	09	53	22	42	65	
16	60	40.7		37.3	339	43.7	56		31.9	36	35		39		09	35		22	51		30	67		
17	75	40.7	+14	38.1	354	08.2	55	+22	28.3	36	40	5	43	6	15	6	43	12	36	50	22	15	69	
18	90	40.8	+14	38.8	8	32.8	56	+22	24.4	39	45	5	47	6	22	6	52	12	54	47	21	58	72	
19	105	40.9		39.6	22	57.4	56		20.5	39	50		51		30	7	04	13	15	45	37	75		
20	120	41.0		40.4	37	22.0	56		16.3	42	52		53		33	09		26	43		27	76		
21	135	41.1		41.2	51	46.7	57		12.1	42	54		55		37	15		37	42		16	78		
22	150	41.2		41.9	66	11.4	57		07.6	45	56		57		41	21		13	50	40	21	03	80	
23	165	41.2		42.7	80	36.1	57	+22	03.1	45	58	5	59	46	28			14	06	37	20	48	83	
24	180	41.3	+14	43.5	95	00.9	58	+21	58.4	47	60 S	6	02	6	51	7	36	14	24	34	20	30	86	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 30 ^m 4		Mag: -4.7 PMG: 9 ^h 38 ^m				Mag: -1.0 PMG: 3 ^h 23 ^m				Mag: -2.0 PMG: 14 ^h 17 ^m				Mag: +0.2 PMG: 13 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	217	01.0	215	10.8	+3	02.1	309	05.1	-24	03.3	145	19.1	+21	57.9	157	48.0	+18	39.4
1	232	03.5	230	12.3		02.0	324	07.2		03.4	160	21.0		58.0	172	50.1		39.4
2	247	05.9	245	13.9		01.9	339	09.3		03.6	175	22.9		58.0	187	52.3		39.5
3	262	08.4	260	15.4		01.7	354	11.3		03.7	190	24.8		58.1	202	54.4		39.6
4	277	10.8	275	17.0		01.6	9	13.4		03.8	205	26.7		58.2	217	56.6		39.6
5	292	13.3	290	18.5	+3	01.5	24	15.5	-24	03.9	220	28.6	+21	58.2	232	58.7	+18	39.7
6	307	15.8	305	20.0	+3	01.3	39	17.6	-24	04.0	235	30.5	+21	58.3	248	00.9	+18	39.8
7	322	18.2	320	21.6		01.2	54	19.7		04.1	250	32.4		58.4	263	03.0		39.8
8	337	20.7	335	23.1		01.1	69	21.7		04.3	265	34.3		58.5	278	05.1		39.9
9	352	23.2	350	24.6		01.0	84	23.8		04.4	280	36.2		58.5	293	07.3		40.0
10	7	25.6	5	26.1		00.8	99	25.9		04.5	295	38.1		58.6	308	09.4		40.0
11	22	28.1	20	27.6	+3	00.7	114	28.0	-24	04.6	310	40.0	+21	58.7	323	11.6	+18	40.1
12	37	30.6	35	29.2	+3	00.6	129	30.1	-24	04.7	325	41.9	+21	58.7	338	13.7	+18	40.2
13	52	33.0	50	30.7		00.5	144	32.2		04.8	340	43.8		58.8	353	15.9		40.2
14	67	35.5	65	32.2		00.4	159	34.2		04.9	355	45.7		58.9	8	18.0		40.3
15	82	38.0	80	33.7		00.2	174	36.3		05.1	10	47.6		59.0	23	20.2		40.4
16	97	40.4	95	35.2	+3	00.1	189	38.4		05.2	25	49.5		59.0	38	22.3		40.4
17	112	42.9	110	36.7	+3	00.0	204	40.5	-24	05.3	40	51.4	+21	59.1	53	24.5	+18	40.5
18	127	45.3	125	38.2	+2	59.9	219	42.6	-24	05.4	55	53.3	+21	59.2	68	26.6	+18	40.6
19	142	47.8	140	39.7		59.8	234	44.7		05.5	70	55.2		59.2	83	28.8		40.6
20	157	50.3	155	41.2		59.7	249	46.8		05.6	85	57.1		59.3	98	30.9		40.7
21	172	52.7	170	42.7		59.6	264	48.9		05.8	100	59.0		59.4	113	33.0		40.8
22	187	55.2	185	44.2		59.5	279	51.0		05.9	116	00.9		59.5	128	35.2		40.8
23	202	57.7	200	45.7		59.4	294	53.1		06.0	131	02.8		59.5	143	37.3		40.9
24	218	00.1	215	47.2	+2	59.3	309	55.2	-24	06.1	146	04.7	+21	59.6	158	39.5	+18	41.0
Dif	—		+15		-1		+21		-1		+19		+1		+21		+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: 6 ^d 4 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3 PMG: 18 ^h 23 ^m R°: 56 ^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	41.3	+14	43.5	95	00.9	+21	58.4	60 N	19 55	20 49	22 11	9 15 91		2 39 28			
1	195	41.4		44.2	109	25.7 58		53.5 49	58	46	34	21 44	31 87		23 31			
2	210	41.5		45.0	123	50.5 58		48.5 50	56	37	22	23	45 83		2 09 34			
3	225	41.6		45.8	138	15.3 58		43.4 51	54	30	11	21 06	9 56 82		1 57 37			
4	240	41.7		46.5	152	40.2 59		38.1 53	52	23	20 02	20 52	10 07 79		46 39			
5	255	41.7	+14	47.3	167	05.2 60	+21	32.6 55	50	19 17	19 54	20 40	10 16 77		1 37 40			
6	270	41.8	+14	48.1	181	30.2 60	+21	27.1 55	45	19 04	19 37	20 17	10 35 74		1 17 43			
7	285	41.9		48.8	195	55.2 60		21.4 57	40	18 54	23	19 59	10 51 71		1 00 46			
8	300	42.0		49.6	210	20.2 60		15.5 59	35	45	12	44	11 04 68		0 46 49			
9	315	42.1		50.4	224	45.3 61		09.5 60	30	37	19 02	32	16 66		34 50			
10	330	42.1		51.1	239	10.5 62	+21	03.4 61	20	23	18 46	19 13	36 62		0 14 53			
11	345	42.2	+14	51.9	253	35.7 62	+20	57.2 62	10 N	18 11	18 33	18 59	11 53 59	**	**	**		
12	0	42.3	+14	52.7	268	00.9 62	+20	50.8 64	0	18 01	18 22	18 47	12 09 57	**	**	**		
13	15	42.4		53.4	282	26.2 63		44.2 66	10 S	17 50	12	37	25 54	**	**	**		
14	30	42.5		54.2	296	51.5 63		37.6 66	20	39	18 01	27	12 42 51	**	**	**		
15	45	42.5		54.9	311	16.9 64		30.8 68	30	26	17 50	19	13 02 47		23 47 66			
16	60	42.6		55.7	325	42.3 64		23.8 70	35	18	45	15	13 45		37 68			
17	75	42.7	+14	56.5	340	07.8 65	+20	16.8 70	40	17 10	17 38	18 10	13 26 43		23 24 71			
18	90	42.8	+14	57.2	354	33.3 65	+20	09.6 72	45	17 00	17 31	18 06	13 41 40		23 10 74			
19	105	42.8		58.0	8	58.9 66	+20	02.3 73	50	16 49	23	18 01	14 00 36		22 52 79			
20	120	42.9		58.7	23	24.5 66	+19	54.8 75	52	43	19	17 59	09 34		43 81			
21	135	43.0	+14	59.5	37	50.2 67		47.2 76	54	37	15	57	19 32		34 83			
22	150	43.1	+15	00.3	52	15.9 67		39.5 77	56	31	10	55	30 30		23 86			
23	165	43.2		01.0	66	41.7 68		31.7 78	58	23	06	52	43 26		22 11 89			
24	180	43.2	+15	01.8	81	07.5 68	+19	23.7 80	60 S	16 15	17 00	17 50	14 58 22		21 56 94			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 26 ^m 4		Mag: -4.7 PMG: 9 ^h 36 ^m				Mag: -1.0 PMG: 3 ^h 20 ^m				Mag: -2.0 PMG: 14 ^h 14 ^m				Mag: +0.1 PMG: 13 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	218	00.1	215	47.2	+2	59.3	309	55.2	-24	06.1	146	04.7	+21	59.6	158	39.5	+18	41.0
1	233	02.6	230	48.6		59.2	324	57.3		06.2	161	06.6		59.7	173	41.6		41.1
2	248	05.1	245	50.1		59.1	339	59.4		06.3	176	08.5		59.7	188	43.8		41.1
3	263	07.5	260	51.6		59.0	355	01.5		06.5	191	10.4		59.8	203	45.9		41.2
4	278	10.0	275	53.1		58.9	10	03.6		06.6	206	12.3	+21	59.9	218	48.1		41.3
5	293	12.5	290	54.5	+2	58.8	25	05.7	-24	06.7	221	14.2	+22	00.0	233	50.2	+18	41.3
6	308	14.9	305	56.0	+2	58.7	40	07.8	-24	06.8	236	16.1	+22	00.0	248	52.4	+18	41.4
7	323	17.4	320	57.5		58.6	55	09.9		06.9	251	18.0	+22	00.1	263	54.5		41.5
8	338	19.8	335	58.9		58.5	70	12.0		07.0	266	19.9		00.2	278	56.6		41.5
9	353	22.3	351	00.4		58.5	85	14.1		07.2	281	21.8		00.2	293	58.8		41.6
10	8	24.8	6	01.9		58.4	100	16.3		07.3	296	23.7		00.3	309	00.9		41.7
11	23	27.2	21	03.3	+2	58.3	115	18.4	-24	07.4	311	25.6	+22	00.4	324	03.1	+18	41.7
12	38	29.7	36	04.8	+2	58.2	130	20.5	-24	07.5	326	27.5	+22	00.4	339	05.2	+18	41.8
13	53	32.2	51	06.2		58.1	145	22.6		07.6	341	29.4		00.5	354	07.4		41.9
14	68	34.6	66	07.7		58.1	160	24.7		07.8	356	31.3		00.6	9	09.5		41.9
15	83	37.1	81	09.1		58.0	175	26.8		07.9	11	33.2		00.7	24	11.7		42.0
16	98	39.6	96	10.5		57.9	190	29.0		08.0	26	35.1		00.7	39	13.8		42.1
17	113	42.0	111	12.0	+2	57.8	205	31.1	-24	08.1	41	37.0	+22	00.8	54	15.9	+18	42.1
18	128	44.5	126	13.4	+2	57.8	220	33.2	-24	08.2	56	38.9	+22	00.9	69	18.1	+18	42.2
19	143	46.9	141	14.9		57.7	235	35.3		08.3	71	40.8		00.9	84	20.2		42.3
20	158	49.4	156	16.3		57.6	250	37.4		08.5	86	42.7		01.0	99	22.4		42.3
21	173	51.9	171	17.7		57.6	265	39.6		08.6	101	44.6		01.1	114	24.5		42.4
22	188	54.3	186	19.1		57.5	280	41.7		08.7	116	46.5		01.2	129	26.7		42.5
23	203	56.8	201	20.6		57.4	295	43.8		08.8	131	48.3		01.2	144	28.8		42.5
24	218	59.3	216	22.0	+2	57.4	310	45.9	-24	08.9	146	50.2	+22	01.3	159	31.0	+18	42.6
Dif	—		+15		-1		+21		-1		+19		+1		+21		+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 1				Edad: 7 ^d 4 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 3 20 ^h : 59 ^h 4 PMG: 19 ^h 19 ^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	180	43.2	+15	01.8	81	07.5	+19	23.7	80	60 N	1	42	3	05	3	58	10	46	94	3	07	19		
1	195	43.3		02.5	95	33.4	69	15.7	80	58	2	10		19	4	08	10	58	90	2	54	23		
2	210	43.4		03.3	109	59.4	70	+19	07.5	82	56		31		32	16	11	08	87		43	26		
3	225	43.5		04.1	124	25.4	70	+18	59.1	84	54	2	47		42	24		18	84		34	28		
4	240	43.5		04.8	138	51.4	70		50.7	84	52	3	01	3	52	30		26	82		25	30		
5	255	43.6	+15	05.6	153	17.5	71	+18	42.1	86	50	3	13	4	00	4	36	11	33	80	2	17	32	
6	270	43.7	+15	06.3	167	43.7	72	+18	33.5	86	45	3	37	4	17	4	49	11	49	75	2	00	37	
7	285	43.8		07.1	182	09.9	72		24.7	88	40	3	55		31	5	00	12	02	71	1	46	40	
8	300	43.8		07.8	196	36.2	73		15.8	89	35	4	10		42	09		12	69		35	42		
9	315	43.9		08.6	211	02.6	74	+18	06.7	91	30		22	4	52	17		22	66		24	45		
10	330	44.0		09.3	225	29.0	74	+17	57.6	91	20		41	5	08	31		38	62	1	07	48		
11	345	44.1	+15	10.1	239	55.4	74	+17	48.4	92	10 N	4	55	5	21	5	43	12	52	58	0	51	52	
12	0	44.1	+15	10.8	254	22.0	76	+17	39.0	94	0	5	07	5	32	5	54	13	06	54	0	36	56	
13	15	44.2		11.6	268	48.5	75		29.5	95	10 S		18		43	6	04	19	50		21	59		
14	30	44.3		12.4	283	15.2	77		19.9	96	20		27	5	53	16		33	47		0	06	62	
15	45	44.4		13.1	297	41.9	77		10.3	96	30		36	6	04	29		49	42		**	**	**	
16	60	44.4		13.9	312	08.6	77	+17	00.5	98	35		40		10	36		13	58	40		**	**	**
17	75	44.5	+15	14.6	326	35.4	78	+16	50.6	99	40	5	45	6	17	6	45	14	09	37		**	**	**
18	90	44.6	+15	15.4	341	02.3	79	+16	40.6	100	45	5	49	6	24	6	55	14	21	34		**	**	**
19	105	44.7		16.1	355	29.2	79		30.5	101	50		54		32	7	07		36	29		**	**	**
20	120	44.7		16.9	9	56.2	80		20.3	102	52		56		36	12		43	27		**	**	**	
21	135	44.8		17.6	24	23.3	81	+16	10.0	103	54	5	58		40	18		14	51	25	23	57	85	
22	150	44.9		18.4	38	50.4	81	+15	59.6	104	56	6	01		45	25		15	00	22		49	88	
23	165	44.9		19.1	53	17.6	82		49.1	105	58		03		50	32		09	19		40	91		
24	180	45.0	+15	19.9	67	44.8	82	+15	38.5	106	60 S	6	06	6	55	7	41	15	20	16	23	30	94	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 9 ^h 22 ^m 5		Mag: -4.7 PMG: 9 ^h 34 ^m			Mag: -1.1 PMG: 3 ^h 16 ^m			Mag: -2.0 PMG: 14 ^h 11 ^m			Mag: +0.1 PMG: 13 ^h 20 ^m				
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	218	59.3	216	22.0	+2	310	45.9	-24	146	50.2	+22	159	31.0	+18	42.6	
1	234	01.7	231	23.4		325	48.1		161	52.1		174	33.1		42.7	
2	249	04.2	246	24.8		340	50.2		176	54.0		189	35.2		42.7	
3	264	06.7	261	26.2		355	52.3		191	55.9		204	37.4		42.8	
4	279	09.1	276	27.6		10	54.5		206	57.8		219	39.5		42.9	
5	294	11.6	291	29.0	+2	25	56.6	-24	221	59.7	+22	234	41.7	+18	42.9	
6	309	14.1	306	30.5	+2	40	58.7	-24	237	01.6	+22	249	43.8	+18	43.0	
7	324	16.5	321	31.9		56	00.9		252	03.5		264	46.0		43.1	
8	339	19.0	336	33.3		71	03.0		267	05.4		279	48.1		43.1	
9	354	21.4	351	34.7		86	05.2		282	07.3		294	50.3		43.2	
10	9	23.9	6	36.1		101	07.3		297	09.2		309	52.4		43.3	
11	24	26.4	21	37.4	+2	116	09.4	-24	312	11.1	+22	324	54.5	+18	43.4	
12	39	28.8	36	38.8	+2	131	11.6	-24	327	13.0	+22	339	56.7	+18	43.4	
13	54	31.3	51	40.2		146	13.7		342	14.9		354	58.8		43.5	
14	69	33.8	66	41.6		161	15.9		357	16.8		10	01.0		43.6	
15	84	36.2	81	43.0		176	18.0		12	18.7		25	03.1		43.6	
16	99	38.7	96	44.4		191	20.2		27	20.6		40	05.3		43.7	
17	114	41.2	111	45.7	+2	206	22.3	-24	42	22.4	+22	55	07.4	+18	43.8	
18	129	43.6	126	47.1	+2	221	24.5	-24	57	24.3	+22	70	09.5	+18	43.8	
19	144	46.1	141	48.5		236	26.6		72	26.2		85	11.7		43.9	
20	159	48.6	156	49.9		251	28.8		87	28.1		100	13.8		44.0	
21	174	51.0	171	51.2		266	30.9		102	30.0		115	16.0		44.0	
22	189	53.5	186	52.6		281	33.1		117	31.9		130	18.1		44.1	
23	204	55.9	201	54.0		296	35.2		132	33.8		145	20.3		44.2	
24	219	58.4	216	55.3	+2	311	37.4	-24	147	35.7	+22	160	22.4	+18	44.2	
Dif	—		+14			0			+19			+1			+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 9				Edad: 8 ^d 4 PHE { SD: 16'2 PMG: 20 ^h 12 ^m 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 R°: 52 ^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	180	45.0	+15	19.9	67	44.8	+15	38.5	60 N	20 00	20 55	22 22	12 20 94		3 26 13			
1	195	45.1		20.6	82	12.1	83	27.8	58	19 50	39	21 52	28 91		17 17			
2	210	45.2		21.3	96	39.4	83	17.0	56	41	27	29	35 88		09 20			
3	225	45.2		22.1	111	06.8	84	+15 06.2	54	34	15	21 12	42 84		3 02 22			
4	240	45.3		22.8	125	34.3	85	+14 55.2	52	27	20 06	20 57	48 82		2 55 25			
5	255	45.4	+15	23.6	140	01.8	85	+14 44.1	50	19 20	19 57	20 45	12 53 80		2 49 27			
6	270	45.4	+15	24.3	154	29.4	86	+14 33.0	45	19 07	19 39	20 20	13 04 75		2 37 31			
7	285	45.5		25.1	168	57.0	86	21.8	40	18 56	25	20 01	13 71		26 35			
8	300	45.6		25.8	183	24.7	87	+14 10.5	35	46	13	19 46	21 68		17 38			
9	315	45.7		26.6	197	52.5	88	+13 59.1	30	38	19 03	34	28 65		2 09 41			
10	330	45.7		27.3	212	20.3	88	47.6	20	24	18 47	19 14	40 60		1 55 46			
11	345	45.8	+15	28.0	226	48.1	88	+13 36.0	10 N	18 12	18 34	18 59	13 50 56		1 43 49			
12	0	45.9	+15	28.8	241	16.1	90	+13 24.4	0	18 00	18 22	18 47	14 00 52		1 32 53			
13	15	45.9		29.5	255	44.0	89	12.7	10 S	17 49	11	36	09 48		20 57			
14	30	46.0		30.3	270	12.1	91	+13 00.9	20	37	18 00	26	20 43		1 08 61			
15	45	46.1		31.0	284	40.2	91	+12 49.0	30	24	17 49	17	31 39		0 53 66			
16	60	46.1		31.8	299	08.3	91	37.1	35	16	43	13	38 36		45 68			
17	75	46.2	+15	32.5	313	36.5	92	+12 25.1	40	17 08	17 36	18 08	14 46 33		0 35 72			
18	90	46.3	+15	33.2	328	04.7	92	+12 13.0	45	16 57	17 28	18 03	14 55 29		0 24 76			
19	105	46.3		34.0	342	33.0	93	+12 00.8	50	45	19	17 58	15 05 25		11 80			
20	120	46.4		34.7	357	01.4	94	+11 48.6	52	40	15	56	10 23		0 04 82			
21	135	46.5		35.4	11	29.8	94	36.3	54	33	11	53	16 20	**	** *	**		
22	150	46.5		36.2	25	58.3	95	24.0	56	26	06	51	22 18	**	** *	**		
23	165	46.6		36.9	40	26.8	95	+11 11.5	58	19	17 01	48	28 15	**	** *	**		
24	180	46.7	+15	37.7	54	55.3	95	+10 59.0	60 S	16 10	16 56	17 45	15 36 12	**	** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 18 ^m 6		Mag: -4.7 PMG: 9 ^h 31 ^m				Mag: -1.1 PMG: 3 ^h 13 ^m				Mag: -2.0 PMG: 14 ^h 08 ^m				Mag: +0.1 PMG: 13 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	219	58.4	216	55.3	+2	56.4	311	37.4	-24	11.8	147	35.7	+22	03.0	160	22.4	+18	44.2
1	235	00.9	231	56.7		56.4	326	39.6		11.9	162	37.6		03.0	175	24.6		44.3
2	250	03.3	246	58.0		56.4	341	41.7		12.0	177	39.5		03.1	190	26.7		44.4
3	265	05.8	261	59.4		56.3	356	43.9		12.1	192	41.4		03.2	205	28.8		44.4
4	280	08.3	277	00.7		56.3	11	46.0		12.3	207	43.3		03.3	220	31.0		44.5
5	295	10.7	292	02.1	+2	56.3	26	48.2	-24	12.4	222	45.2	+22	03.3	235	33.1	+18	44.6
6	310	13.2	307	03.4	+2	56.3	41	50.4	-24	12.5	237	47.1	+22	03.4	250	35.3	+18	44.6
7	325	15.7	322	04.8		56.3	56	52.5		12.6	252	48.9		03.5	265	37.4		44.7
8	340	18.1	337	06.1		56.3	71	54.7		12.7	267	50.8		03.5	280	39.5		44.8
9	355	20.6	352	07.4		56.3	86	56.9		12.9	282	52.7		03.6	295	41.7		44.8
10	10	23.0	7	08.8		56.3	101	59.1		13.0	297	54.6		03.7	310	43.8		44.9
11	25	25.5	22	10.1	+2	56.3	117	01.2	-24	13.1	312	56.5	+22	03.7	325	46.0	+18	45.0
12	40	28.0	37	11.4	+2	56.3	132	03.4	-24	13.2	327	58.4	+22	03.8	340	48.1	+18	45.0
13	55	30.4	52	12.8		56.3	147	05.6		13.3	343	00.3		03.9	355	50.3		45.1
14	70	32.9	67	14.1		56.3	162	07.7		13.5	358	02.2		03.9	10	52.4		45.2
15	85	35.4	82	15.4		56.3	177	09.9		13.6	13	04.1		04.0	25	54.5		45.2
16	100	37.8	97	16.7		56.3	192	12.1		13.7	28	06.0		04.1	40	56.7		45.3
17	115	40.3	112	18.0	+2	56.3	207	14.3	-24	13.8	43	07.9	+22	04.2	55	58.8	+18	45.4
18	130	42.8	127	19.4	+2	56.3	222	16.5	-24	14.0	58	09.8	+22	04.2	71	01.0	+18	45.4
19	145	45.2	142	20.7		56.3	237	18.6		14.1	73	11.6		04.3	86	03.1		45.5
20	160	47.7	157	22.0		56.3	252	20.8		14.2	88	13.5		04.4	101	05.3		45.6
21	175	50.2	172	23.3		56.3	267	23.0		14.3	103	15.4		04.4	116	07.4		45.6
22	190	52.6	187	24.6		56.3	282	25.2		14.4	118	17.3		04.5	131	09.5		45.7
23	205	55.1	202	25.9		56.3	297	27.4		14.6	133	19.2		04.6	146	11.7		45.8
24	220	57.5	217	27.2	+2	56.3	312	29.6	-24	14.7	148	21.1	+22	04.6	161	13.8	+18	45.8
Dif	—		+13		0		+22		-1		+19		+1		+21		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 9 ^d 4	PHE {	4 ^h : 59 ^h /3 12 ^h : 59 ^h /3 20 ^h : 59 ^h /2												
	PMG: 11 ^h 56 ^m 8						SD: 16 ^h 2	PMG: 21 ^h 04 ^m									R°: 50 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec				Dif	Náutico		Civil	Hora	R°	Hora		R°
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	180	46.7	+15	37.7	54	55.3	+10	59.0	60 N	1 31	2 58	3 53	13 54	93		3 39	11	
1	195	46.7		38.4	69	23.9	96	46.5	58	2 01	3 14	4 03	13 59	89		34	14	
2	210	46.8		39.1	83	52.6	97	33.9	56	24	27	12	14 03	86		29	16	
3	225	46.9		39.9	98	21.3	97	21.2	54	41	38	20	06 84			24	19	
4	240	46.9		40.6	112	50.1	98	+10 08.5	52	2 56	47	27	10 81			20	21	
5	255	47.0	+15	41.3	127	18.9	98	+9 55.7	50	3 09	3 56	4 33	14 13	79		3 16	24	
6	270	47.1	+15	42.1	141	47.7	98	+9 42.9	45	3 33	4 14	4 47	14 19	74		3 08	28	
7	285	47.1		42.8	156	16.6	99	30.0	40	3 52	28	4 58	24 71			3 01	32	
8	300	47.2		43.5	170	45.6	100	17.0	35	4 07	40	5 07	29 67			2 55	35	
9	315	47.3		44.3	185	14.5	99	+9 04.0	30	20	4 50	15	33 64			50	37	
10	330	47.3		45.0	199	43.6	101	+8 51.0	20	39	5 07	30	40 59			41	42	
11	345	47.4	+15	45.7	214	12.7	101	+8 37.9	10 N	4 54	5 20	5 42	14 46	54		2 32	47	
12	0	47.4	+15	46.5	228	41.8	101	+8 24.8	0	5 07	5 32	5 53	14 52	50		2 25	51	
13	15	47.5		47.2	243	10.9	101	+8 11.6	10 S	18	43	6 05	14 57	46		17	55	
14	30	47.6		47.9	257	40.1	102	+7 58.4	20	28	5 54	17	15 03	42		2 09	59	
15	45	47.6		48.7	272	09.4	103	45.1	30	37	6 05	30	10 37			1 59	65	
16	60	47.7		49.4	286	38.7	103	31.8	35	42	12	38	14 34			53	68	
17	75	47.8	+15	50.1	301	08.0	103	+7 18.4	40	5 46	6 18	6 47	15 19	30		1 47	71	
18	90	47.8	+15	50.8	315	37.3	103	+7 05.0	45	5 51	6 26	6 57	15 24	27		1 40	74	
19	105	47.9		51.6	330	06.7	104	+6 51.6	50	57	35	7 10	30 23			31	79	
20	120	47.9		52.3	344	36.2	105	38.2	52	5 59	39	15	33 20			26	82	
21	135	48.0		53.0	359	05.7	105	24.7	54	6 01	44	22	36 18			22	84	
22	150	48.1		53.8	13	35.2	105	+6 11.1	56	04	48	29	40 15			17	87	
23	165	48.1		54.5	28	04.7	105	+5 57.6	58	07	6 54	37	43 13			11	90	
24	180	48.2	+15	55.2	42	34.3	106	+5 44.0	60 S	6 09	7 00	7 46	15 48	9		1 04	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 14 ^m 6		Mag: -4.7 PMG: 9 ^h 29 ^m		Mag: -1.1 PMG: 3 ^h 10 ^m		Mag: -2.0 PMG: 14 ^h 05 ^m		Mag: +0.1 PMG: 13 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	220	57.5	217	27.2	+2	56.3	312	29.6	-24	14.7	148	21.1	+22	04.6	161	13.8	+18	45.8
1	236	00.0	232	28.5		56.4	327	31.8		14.8	163	23.0		04.7	176	16.0		45.9
2	251	02.5	247	29.8		56.4	342	33.9		14.9	178	24.9		04.8	191	18.1		46.0
3	266	04.9	262	31.1		56.4	357	36.1		15.0	193	26.8		04.8	206	20.3		46.0
4	281	07.4	277	32.4		56.4	12	38.3		15.2	208	28.7		04.9	221	22.4		46.1
5	296	09.9	292	33.7	+2	56.4	27	40.5	-24	15.3	223	30.5	+22	05.0	236	24.5	+18	46.2
6	311	12.3	307	35.0	+2	56.5	42	42.7	-24	15.4	238	32.4	+22	05.1	251	26.7	+18	46.2
7	326	14.8	322	36.2		56.5	57	44.9		15.5	253	34.3		05.1	266	28.8		46.3
8	341	17.3	337	37.5		56.5	72	47.1		15.7	268	36.2		05.2	281	31.0		46.4
9	356	19.7	352	38.8		56.5	87	49.3		15.8	283	38.1		05.3	296	33.1		46.5
10	11	22.2	7	40.1		56.6	102	51.5		15.9	298	40.0		05.3	311	35.2		46.5
11	26	24.7	22	41.3	+2	56.6	117	53.7	-24	16.0	313	41.9	+22	05.4	326	37.4	+18	46.6
12	41	27.1	37	42.6	+2	56.6	132	55.9	-24	16.1	328	43.8	+22	05.5	341	39.5	+18	46.7
13	56	29.6	52	43.9		56.7	147	58.1		16.3	343	45.7		05.5	356	41.7		46.7
14	71	32.0	67	45.2		56.7	163	00.3		16.4	358	47.6		05.6	11	43.8		46.8
15	86	34.5	82	46.4		56.8	178	02.5		16.5	13	49.4		05.7	26	45.9		46.9
16	101	37.0	97	47.7		56.8	193	04.7		16.6	28	51.3		05.7	41	48.1		46.9
17	116	39.4	112	48.9	+2	56.8	208	06.9	-24	16.8	43	53.2	+22	05.8	56	50.2	+18	47.0
18	131	41.9	127	50.2	+2	56.9	223	09.2	-24	16.9	58	55.1	+22	05.9	71	52.4	+18	47.1
19	146	44.4	142	51.5		56.9	238	11.4		17.0	73	57.0		05.9	86	54.5		47.1
20	161	46.8	157	52.7		57.0	253	13.6		17.1	88	58.9		06.0	101	56.7		47.2
21	176	49.3	172	54.0		57.0	268	15.8		17.2	104	00.8		06.1	116	58.8		47.3
22	191	51.8	187	55.2		57.1	283	18.0		17.4	119	02.7		06.2	132	00.9		47.3
23	206	54.2	202	56.5		57.1	298	20.2		17.5	134	04.5		06.2	147	03.1		47.4
24	221	56.7	217	57.7	+2	57.2	313	22.4	-24	17.6	149	06.4	+22	06.3	162	05.2	+18	47.5
Dif	—		+13		0		+22		-1		+19		+1		+21		+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: 10 ^d 4 PHE { SD: 16:1 PMG: 21 ^h 54 ^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	48.2	+15 55.2	42	34.3	+5 44.0		60 N	20 05	21 01	22 34	15 27 91	3 50 10	
1	195	48.2	55.9	57	03.9 ¹⁰⁶	30.4 ¹³⁶		58	19 55	20 45	22 00	28 88	48 12	
2	210	48.3	56.7	71	33.5 ¹⁰⁶	16.7 ¹³⁷		56	45	31	21 36	29 85	45 15	
3	225	48.4	57.4	86	03.2 ¹⁰⁷	+5 03.1 ¹³⁶		54	37	20	17	30 83	43 18	
4	240	48.4	58.1	100	32.9 ¹⁰⁷	+4 49.4 ¹³⁷		52	30	10	21 02	31 80	41 20	
5	255	48.5	+15 58.8	115	02.6 ¹⁰⁷	+4 35.6 ¹³⁸		50	19 23	20 01	20 49	15 32 78	3 40 21	
6	270	48.5	+15 59.6	129	32.4 ¹⁰⁸	+4 21.9 ¹³⁷		45	19 09	19 42	20 23	15 33 74	3 36 26	
7	285	48.6	+16 00.3	144	02.2 ¹⁰⁸	+4 08.1 ¹³⁸		40	18 58	27	20 04	35 69	33 30	
8	300	48.7	01.0	158	32.0 ¹⁰⁸	+3 54.4 ¹³⁷		35	48	15	19 48	36 66	30 33	
9	315	48.7	01.7	173	01.9 ¹⁰⁹	40.6 ¹³⁸		30	39	19 05	35	37 63	27 37	
10	330	48.8	02.4	187	31.7 ¹⁰⁸	26.8 ¹³⁸		20	25	18 48	15	39 58	23 41	
11	345	48.8	+16 03.2	202	01.6 ¹⁰⁹	+3 12.9 ¹³⁹		10 N	18 12	18 34	19 00	15 40 54	3 19 46	
12	0	48.9	+16 03.9	216	31.6 ¹¹⁰	+2 59.1 ¹³⁸		0	18 00	18 22	18 47	15 42 49	3 16 49	
13	15	49.0	04.6	231	01.5 ¹⁰⁹	45.2 ¹³⁹		10 S	17 49	18 10	36	43 46	12 54	
14	30	49.0	05.3	245	31.5 ¹¹⁰	31.4 ¹³⁸		20	36	17 59	25	45 41	08 58	
15	45	49.1	06.0	260	01.5 ¹¹⁰	17.5 ¹³⁹		30	22	47	16	47 36	04 63	
16	60	49.1	06.8	274	31.5 ¹¹⁰	+2 03.6 ¹³⁹		35	14	41	11	48 33	3 01 66	
17	75	49.2	+16 07.5	289	01.5 ¹¹⁰	+1 49.7 ¹³⁹		40	17 05	17 34	18 06	15 49 30	2 58 70	
18	90	49.2	+16 08.2	303	31.6 ¹¹¹	+1 35.8 ¹³⁹		45	16 55	17 26	18 01	15 51 26	2 54 74	
19	105	49.3	08.9	318	01.6 ¹¹⁰	21.9 ¹³⁹		50	42	16	17 55	53 21	50 79	
20	120	49.4	09.6	332	31.7 ¹¹¹	+1 08.0 ¹³⁹		52	36	12	52	53 20	48 81	
21	135	49.4	10.3	347	01.8 ¹¹¹	+0 54.1 ¹³⁹		54	29	08	50	54 18	46 83	
22	150	49.5	11.1	1	31.9 ¹¹¹	40.2 ¹³⁹		56	22	17 03	47	55 15	44 86	
23	165	49.5	11.8	16	02.1 ¹¹²	26.3 ¹³⁹		58	14	16 57	44	56 12	41 89	
24	180	49.6	+16 12.5	30	32.2 ¹¹¹	+0 12.4 ¹³⁹		60 S	16 05	16 51	17 41	15 57 10	2 38 92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 10 ^m 7		Mag: -4.7 PMG: 9 ^h 27 ^m		Mag: -1.2 PMG: 3 ^h 06 ^m		Mag: -2.0 PMG: 14 ^h 02 ^m		Mag: +0.1 PMG: 13 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	221	56.7	217	57.7	313	22.4	149	06.4	162	05.2
1	236	59.1	232	58.9	328	24.7	164	08.3	177	07.4
2	252	01.6	248	00.2	343	26.9	179	10.2	192	09.5
3	267	04.1	263	01.4	358	29.1	194	12.1	207	11.6
4	282	06.5	278	02.7	13	31.3	209	14.0	222	13.8
5	297	09.0	293	03.9	28	33.5	224	15.9	237	15.9
6	312	11.5	308	05.1	43	35.8	239	17.8	252	18.1
7	327	13.9	323	06.3	58	38.0	254	19.6	267	20.2
8	342	16.4	338	07.6	73	40.2	269	21.5	282	22.3
9	357	18.9	353	08.8	88	42.5	284	23.4	297	24.5
10	12	21.3	8	10.0	103	44.7	299	25.3	312	26.6
11	27	23.8	23	11.2	118	46.9	314	27.2	327	28.8
12	42	26.3	38	12.4	133	49.2	329	29.1	342	30.9
13	57	28.7	53	13.7	148	51.4	344	31.0	357	33.0
14	72	31.2	68	14.9	163	53.6	359	32.9	12	35.2
15	87	33.6	83	16.1	178	55.9	14	34.7	27	37.3
16	102	36.1	98	17.3	193	58.1	29	36.6	42	39.5
17	117	38.6	113	18.5	209	00.3	44	38.5	57	41.6
18	132	41.0	128	19.7	224	02.6	59	40.4	72	43.7
19	147	43.5	143	20.9	239	04.8	74	42.3	87	45.9
20	162	46.0	158	22.1	254	07.1	89	44.2	102	48.0
21	177	48.4	173	23.3	269	09.3	104	46.1	117	50.2
22	192	50.9	188	24.5	284	11.5	119	47.9	132	52.3
23	207	53.4	203	25.7	299	13.8	134	49.8	147	54.4
24	222	55.8	218	26.9	314	16.0	149	51.7	162	56.6
Dif	—		+12	+1	+22	-1	+19	+1	+21	+1

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 11 ^d 4	PHE { 4 ^h : 58 ^h 9 12 ^h : 58 ^h 7 20 ^h : 58 ^h 6 Rº: 49 ^m										
	PMG: 11 ^h 56 ^m 7														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	49.6	+16 12.5	30	32.2	+0 12.4		60 N	1 18	2 52	3 47	16 58	91	4 00	9
1	195	49.6		45	02.4 ¹¹²	-0 01.5 ¹³⁹		58	1 53	3 08	3 58	56 88		00 13	
2	210	49.7		59	32.6 ¹¹²		15.3 ¹³⁸	56	2 17	21	4 07	54 85		00 16	
3	225	49.7		74	02.8 ¹¹²		29.2 ¹³⁹	54	36	33	16	53 81		01 1	
4	240	49.8		88	33.0 ¹¹²		43.1 ¹³⁹	52	2 51	43	23	51 80		01 20	
5	255	49.8	+16 16.1	103	03.2 ¹¹²	-0 57.0 ¹³⁹		50	3 04	3 52	4 30	16 50	77	4 01	22
6	270	49.9	+16 16.8	117	33.4 ¹¹²	-1 10.8 ¹³⁸		45	3 30	4 11	4 44	16 47	72	4 02	26
7	285	50.0		132	03.6 ¹¹²		24.7 ¹³⁹	40	3 49	26	4 55	44 69		03 29	
8	300	50.0		146	33.9 ¹¹³		38.5 ¹³⁸	35	4 05	38	5 05	42 65		03 33	
9	315	50.1		161	04.1 ¹¹²	-1 52.3 ¹³⁸		30	18	4 48	14	40 63		04 35	
10	330	50.1		175	34.4 ¹¹³	-2 06.1 ¹³⁸		20	38	5 05	29	37 57		04 41	
11	345	50.2	+16 20.3	190	04.6 ¹¹²	-2 19.9 ¹³⁸		10 N	4 54	5 19	5 41	16 34	53	4 05	45
12	0	50.2	+16 21.0	204	34.9 ¹¹³	-2 33.6 ¹³⁷		0	5 07	5 32	5 53	16 31	49	4 05	50
13	15	50.3		219	05.2 ¹¹³	-2 47.4 ¹³⁸		10 S	18	43	6 05	29 45		06 53	
14	30	50.3		233	35.4 ¹¹²	-3 01.1 ¹³⁷		20	28	5 54	17	26 41		06 58	
15	45	50.4		248	05.7 ¹¹³		14.8 ¹³⁷	30	38	6 07	31	23 36		07 63	
16	60	50.4		262	36.0 ¹¹³		28.5 ¹³⁷	35	43	13	40	21 33		07 66	
17	75	50.5	+16 24.6	277	06.3 ¹¹³	-3 42.1 ¹³⁶		40	5 48	6 20	6 49	16 19	30	4 08	69
18	90	50.5	+16 25.3	291	36.5 ¹¹²	-3 55.7 ¹³⁶		45	5 53	6 28	7 00	16 17	26	4 08	73
19	105	50.6		306	06.8 ¹¹³	-4 09.3 ¹³⁶		50	5 59	38	12	14 22		09 78	
20	120	50.6		320	37.1 ¹¹³		22.9 ¹³⁶	52	6 02	42	19	13 20		09 80	
21	135	50.7		335	07.4 ¹¹³		36.4 ¹³⁵	54	04	47	25	12 18		09 83	
22	150	50.7		349	37.7 ¹¹³	-4 49.9 ¹³⁵		56	07	52	33	10 16		10 84	
23	165	50.8		4	07.9 ¹¹²	-5 03.4 ¹³⁵		58	10	6 57	41	08 13		10 88	
24	180	50.8	+16 29.5	18	38.2 ¹¹³	-5 16.8 ¹³⁴		60 S	6 13	7 04	7 50	16 07	10	4 10	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 06 ^m 8		Mag: -4.7 PMG: 9 ^h 25 ^m		Mag: -1.2 PMG: 3 ^h 02 ^m		Mag: -2.0 PMG: 13 ^h 59 ^m		Mag: +0.1 PMG: 13 ^h 06 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	222	55.8	218 26.9	+2 58.9	314 16.0	-24 20.6	149 51.7	+22 07.9	162 56.6	+18 49.1
1	237	58.3	233 28.0	59.0	329 18.3	20.7	164 53.6	08.0	177 58.7	49.1
2	253	00.7	248 29.2	59.0	344 20.5	20.8	179 55.5	08.1	193 00.9	49.2
3	268	03.2	263 30.4	59.1	359 22.8	21.0	194 57.4	08.1	208 03.0	49.3
4	283	05.7	278 31.6	59.2	14 25.0	21.1	209 59.3	08.2	223 05.1	49.3
5	298	08.1	293 32.8	+2 59.3	29 27.3	-24 21.2	225 01.1	+22 08.3	238 07.3	+18 49.4
6	313	10.6	308 33.9	+2 59.4	44 29.6	-24 21.3	240 03.0	+22 08.3	253 09.4	+18 49.5
7	328	13.1	323 35.1	59.5	59 31.8	21.5	255 04.9	08.4	268 11.6	49.5
8	343	15.5	338 36.3	59.6	74 34.1	21.6	270 06.8	08.5	283 13.7	49.6
9	358	18.0	353 37.5	59.7	89 36.3	21.7	285 08.7	08.5	298 15.8	49.7
10	13	20.5	8 38.6	59.8	104 38.6	21.8	300 10.6	08.6	313 18.0	49.7
11	28	22.9	23 39.8	+2 59.9	119 40.9	-24 22.0	315 12.5	+22 08.7	328 20.1	+18 49.8
12	43	25.4	38 41.0	+3 00.0	134 43.1	-24 22.1	330 14.3	+22 08.7	343 22.3	+18 49.9
13	58	27.9	53 42.1	+3 00.1	149 45.4	22.2	345 16.2	08.8	358 24.4	49.9
14	73	30.3	68 43.3	00.2	164 47.7	22.3	0 18.1	08.9	13 26.5	50.0
15	88	32.8	83 44.4	00.4	179 49.9	22.5	15 20.0	08.9	28 28.7	50.1
16	103	35.2	98 45.6	00.5	194 52.2	22.6	30 21.9	09.0	43 30.8	50.1
17	118	37.7	113 46.7	+3 00.6	209 54.5	-24 22.7	45 23.8	+22 09.1	58 32.9	+18 50.2
18	133	40.2	128 47.9	+3 00.7	224 56.7	-24 22.8	60 25.6	+22 09.1	73 35.1	+18 50.3
19	148	42.6	143 49.0	00.8	239 59.0	23.0	75 27.5	09.2	88 37.2	50.3
20	163	45.1	158 50.2	00.9	255 01.3	23.1	90 29.4	09.3	103 39.4	50.4
21	178	47.6	173 51.3	01.0	270 03.6	23.2	105 31.3	09.3	118 41.5	50.5
22	193	50.0	188 52.5	01.2	285 05.8	23.4	120 33.2	09.4	133 43.6	50.5
23	208	52.5	203 53.6	01.3	300 08.1	23.5	135 35.1	09.5	148 45.8	50.6
24	223	55.0	218 54.7	+3 01.4	315 10.4	-24 23.6	150 36.9	+22 09.5	163 47.9	+18 50.7
Dif	—		+12	+1	+23	-1	+19	+1	+21	+1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9		Edad: 12 ^d 4 PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'1															
	PMG: 11 ^h 56 ^m 6		SD: 15°9 PMG: 23 ^h 32 ^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	m	h m m	m				
0	180	50.8	+16	29.5	18	38.2	-5 16.8	60 N	20 10	21 07	22 48	18 29 90	4 09 11					
1	195	50.9		30.2	33	08.5 ¹¹³	30.2 ¹³⁴	58	19 59	20 50	22 09	24 86	13 13					
2	210	50.9		30.9	47	38.7 ¹¹²	43.6 ¹³⁴	56	49	36	21 43	19 83	16 16					
3	225	51.0		31.6	62	09.0 ¹¹³	-5 56.9 ¹³³	54	41	24	23	14 81	18 19					
4	240	51.0		32.3	76	39.2 ¹¹²	-6 10.2 ¹³³	52	33	13	21 07	11 78	21 21					
5	255	51.1	+16	33.0	91	09.5 ¹¹³	-6 23.5 ¹³³	50	19 26	20 04	20 53	18 07 76	4 23 23					
6	270	51.1	+16	33.7	105	39.7 ¹¹²	-6 36.7 ¹³²	45	19 12	19 45	20 26	17 59 72	4 28 28					
7	285	51.2		34.4	120	09.9 ¹¹²	-6 49.8 ¹³¹	40	19 00	29	20 06	53 68	32 31					
8	300	51.2		35.1	134	40.1 ¹¹²	-7 03.0 ¹³²	35	18 49	17	19 50	47 65	36 34					
9	315	51.3		35.8	149	10.4 ¹¹³	16.0 ¹³⁰	30	41	19 06	37	43 62	39 37					
10	330	51.3		36.5	163	40.5 ¹¹¹	29.1 ¹³¹	20	25	18 49	16	34 58	45 41					
11	345	51.3	+16	37.2	178	10.7 ¹¹²	-7 42.0 ¹²⁹	10 N	18 12	18 34	19 00	17 27 54	4 50 46					
12	0	51.4	+16	37.9	192	40.9 ¹¹²	-7 55.0 ¹³⁰	0	18 00	18 22	18 47	17 20 50	4 55 49					
13	15	51.4		38.6	207	11.1 ¹¹²	-8 07.9 ¹²⁹	10 S	17 48	18 10	35	14 46	4 59 54					
14	30	51.5		39.3	221	41.2 ¹¹¹	20.7 ¹²⁸	20	35	17 58	25	17 07 42	5 04 58					
15	45	51.5		40.0	236	11.4 ¹¹²	33.5 ¹²⁸	30	21	46	14	16 59 38	10 62					
16	60	51.6		40.7	250	41.5 ¹¹¹	46.2 ¹²⁷	35	12	39	09	54 35	13 66					
17	75	51.6	+16	41.4	265	11.6 ¹¹¹	-8 58.9 ¹²⁷	40	17 03	17 31	18 04	16 49 32	5 17 68					
18	90	51.7	+16	42.1	279	41.7 ¹¹¹	-9 11.5 ¹²⁶	45	16 52	17 23	17 58	16 43 29	5 21 73					
19	105	51.7		42.8	294	11.8 ¹¹¹	24.0 ¹²⁵	50	39	13	52	36 25	27 76					
20	120	51.8		43.5	308	41.9 ¹¹¹	36.5 ¹²⁵	52	32	09	49	33 22	29 79					
21	135	51.8		44.2	323	11.9 ¹¹⁰	-9 49.0 ¹²⁵	54	26	17 04	47	30 20	32 81					
22	150	51.8		44.9	337	42.0 ¹¹¹	-10 01.4 ¹²⁴	56	18	16 59	44	26 17	34 84					
23	165	51.9		45.6	352	12.0 ¹¹⁰	13.7 ¹²³	58	09	53	40	21 15	38 87					
24	180	51.9	+16	46.2	6	42.0 ¹¹⁰	-10 25.9 ¹²²	60 S	16 00	16 46	17 37	16 17 11	5 41 91					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 02 ^m 8		Mag: -4.7 PMG: 9 ^h 24 ^m		Mag: -1.2 PMG: 2 ^h 59 ^m		Mag: -2.0 PMG: 13 ^h 56 ^m		Mag: +0.1 PMG: 13 ^h 03 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	223	55.0	218	54.7	+3	01.4	315	10.4	-24	23.6	150	36.9	+22	09.5	163	47.9	+18	50.7
1	238	57.4	233	55.9		01.5	330	12.7		23.7	165	38.8		09.6	178	50.1		50.7
2	253	59.9	248	57.0		01.6	345	14.9		23.9	180	40.7		09.7	193	52.2		50.8
3	269	02.4	263	58.1		01.8	0	17.2		24.0	195	42.6		09.7	208	54.3		50.9
4	284	04.8	278	59.3		01.9	15	19.5		24.1	210	44.5		09.8	223	56.5		50.9
5	299	07.3	294	00.4	+3	02.0	30	21.8	-24	24.2	225	46.4	+22	09.9	238	58.6	+18	51.0
6	314	09.7	309	01.5	+3	02.2	45	24.1	-24	24.4	240	48.2	+22	09.9	254	00.8	+18	51.1
7	329	12.2	324	02.6		02.3	60	26.4		24.5	255	50.1		10.0	269	02.9		51.1
8	344	14.7	339	03.7		02.4	75	28.7		24.6	270	52.0		10.1	284	05.0		51.2
9	359	17.1	354	04.9		02.6	90	31.0		24.7	285	53.9		10.1	299	07.2		51.3
10	14	19.6	9	06.0		02.7	105	33.3		24.9	300	55.8		10.2	314	09.3		51.3
11	29	22.1	24	07.1	+3	02.8	120	35.5	-24	25.0	315	57.7	+22	10.3	329	11.4	+18	51.4
12	44	24.5	39	08.2	+3	03.0	135	37.8	-24	25.1	330	59.5	+22	10.3	344	13.6	+18	51.5
13	59	27.0	54	09.3		03.1	150	40.1		25.3	346	01.4		10.4	359	15.7		51.5
14	74	29.5	69	10.4		03.3	165	42.4		25.4	1	03.3		10.5	14	17.9		51.6
15	89	31.9	84	11.5		03.4	180	44.7		25.5	16	05.2		10.5	29	20.0		51.7
16	104	34.4	99	12.6		03.5	195	47.0		25.6	31	07.1		10.6	44	22.1		51.7
17	119	36.8	114	13.7	+3	03.7	210	49.3	-24	25.8	46	09.0	+22	10.7	59	24.3	+18	51.8
18	134	39.3	129	14.8	+3	03.8	225	51.6	-24	25.9	61	10.8	+22	10.7	74	26.4	+18	51.9
19	149	41.8	144	15.9		04.0	240	53.9		26.0	76	12.7		10.8	89	28.5		51.9
20	164	44.2	159	17.0		04.1	255	56.2		26.2	91	14.6		10.9	104	30.7		52.0
21	179	46.7	174	18.1		04.3	270	58.6		26.3	106	16.5		10.9	119	32.8		52.1
22	194	49.2	189	19.2		04.4	286	00.9		26.4	121	18.4		11.0	134	35.0		52.1
23	209	51.6	204	20.3		04.6	301	03.2		26.5	136	20.2		11.1	149	37.1		52.2
24	224	54.1	219	21.4	+3	04.8	316	05.5	-24	26.7	151	22.1	+22	11.1	164	39.2	+18	52.3
Dif	—	+11	+1	+23	-1	+19	+1	+21	+1	+1	+21	+1	+1	+1	+21	+1	+1	+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 5				Edad: 13 ^d 4 PHE SD: 15'8 PMG: **h **m R°: **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	46.2	6	42.0	-10	25.9	60 N	1	04	2	45	3	42	19	59
1	195	52.0		46.9	21	12.0 ¹¹⁰		38.1 ¹²²	58	1	44	3	02	3	53	50	84
2	210	52.0		47.6	35	41.9 ¹⁰⁹	-10	50.3 ¹²²	56	2	10		16	4	03	42	81
3	225	52.1		48.3	50	11.9 ¹¹⁰	-11	02.3 ¹²⁰	54		30		29	12	35	78	37
4	240	52.1		49.0	64	41.8 ¹⁰⁹		14.3 ¹²⁰	52	2	46		39	19		29	76
5	255	52.1	+16	49.7	79	11.7 ¹⁰⁹	-11	26.3 ¹²⁰	50	3	00	3	48	4	26	19	23
6	270	52.2	+16	50.4	93	41.6 ¹⁰⁹	-11	38.1 ¹¹⁸	45	3	26	4	08	4	41	19	11
7	285	52.2		51.1	108	11.5 ¹⁰⁹	-11	49.9 ¹¹⁸	40	3	47		23	4	53	19	01
8	300	52.3		51.8	122	41.4 ¹⁰⁹	-12	01.6 ¹¹⁷	35	4	03		36	5	03	18	52
9	315	52.3		52.5	137	11.2 ¹⁰⁸		13.3 ¹¹⁷	30		16	4	47	12		45	61
10	330	52.3		53.1	151	41.0 ¹⁰⁸		24.8 ¹¹⁵	20		37		5	04	28	32	57
11	345	52.4	+16	53.8	166	10.8 ¹⁰⁸	-12	36.3 ¹¹⁵	10 N	4	53	5	19	5	41	18	21
12	0	52.4	+16	54.5	180	40.6 ¹⁰⁸	-12	47.8 ¹¹⁵	0	5	06	5	31	5	53	18	10
13	15	52.5		55.2	195	10.3 ¹⁰⁷	-12	59.1 ¹¹³	10 S		18		43	6	05	18	00
14	30	52.5		55.9	209	40.0 ¹⁰⁷	-13	10.4 ¹¹³	20		29	5	55	18		17	49
15	45	52.5		56.6	224	09.8 ¹⁰⁸		21.6 ¹¹²	30		39	6	08	33		37	40
16	60	52.6		57.2	238	39.4 ¹⁰⁶		32.7 ¹¹¹	35		44	15		41		29	38
17	75	52.6	+16	57.9	253	09.1 ¹⁰⁷	-13	43.7 ¹¹⁰	40	5	50	6	22	6	51	17	21
18	90	52.7	+16	58.6	267	38.7 ¹⁰⁶	-13	54.6 ¹⁰⁹	45	5	55	6	31	7	02	17	12
19	105	52.7	+16	59.3	282	08.4 ¹⁰⁷	-14	05.5 ¹⁰⁹	50	6	02		41	15		17	01
20	120	52.7	+17	00.0	296	38.0 ¹⁰⁶		16.3 ¹⁰⁸	52		04		45	22		16	55
21	135	52.8	+17	00.7	311	07.5 ¹⁰⁵		27.0 ¹⁰⁷	54		07		50	29		50	23
22	150	52.8		01.3	325	37.1 ¹⁰⁶		37.6 ¹⁰⁶	56		10	6	55	36		43	22
23	165	52.9		02.0	340	06.6 ¹⁰⁵		48.1 ¹⁰⁵	58		14	7	01	45		36	19
24	180	52.9	+17	02.7	354	36.1 ¹⁰⁵	-14	58.6 ¹⁰⁵	60 S	6	17	7	08	7	55	16	28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 58 ^m 9		Mag: -4.7 PMG: 9 ^h 22 ^m		Mag: -1.3 PMG: 2 ^h 55 ^m		Mag: -2.0 PMG: 13 ^h 53 ^m		Mag: +0.1 PMG: 13 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	224	54.1	219	21.4	+3	04.8	316	05.5	-24	26.7	151	22.1	+22	11.1	164	39.2	+18	52.3
1	239	56.6	234	22.5		04.9	331	07.8		26.8	166	24.0		11.2	179	41.4		52.3
2	254	59.0	249	23.5		05.1	346	10.1		26.9	181	25.9		11.3	194	43.5		52.4
3	270	01.5	264	24.6		05.2	1	12.4		27.1	196	27.8		11.3	209	45.6		52.5
4	285	04.0	279	25.7		05.4	16	14.7		27.2	211	29.6		11.4	224	47.8		52.5
5	300	06.4	294	26.8	+3	05.6	31	17.1	-24	27.3	226	31.5	+22	11.5	239	49.9	+18	52.6
6	315	08.9	309	27.8	+3	05.7	46	19.4	-24	27.4	241	33.4	+22	11.5	254	52.1	+18	52.7
7	330	11.3	324	28.9		05.9	61	21.7		27.6	256	35.3		11.6	269	54.2		52.7
8	345	13.8	339	30.0		06.0	76	24.0		27.7	271	37.2		11.7	284	56.3		52.8
9	0	16.3	354	31.0		06.2	91	26.3		27.8	286	39.0		11.7	299	58.5		52.9
10	15	18.7	9	32.1		06.4	106	28.7		28.0	301	40.9		11.8	315	00.6		52.9
11	30	21.2	24	33.2	+3	06.6	121	31.0	-24	28.1	316	42.8	+22	11.9	330	02.7	+18	53.0
12	45	23.7	39	34.2	+3	06.7	136	33.3	-24	28.2	331	44.7	+22	11.9	345	04.9	+18	53.1
13	60	26.1	54	35.3		06.9	151	35.6		28.3	346	46.6		12.0	0	07.0		53.1
14	75	28.6	69	36.4		07.1	166	38.0		28.5	1	48.4		12.1	15	09.2		53.2
15	90	31.1	84	37.4		07.3	181	40.3		28.6	16	50.3		12.1	30	11.3		53.3
16	105	33.5	99	38.5		07.4	196	42.6		28.7	31	52.2		12.2	45	13.4		53.3
17	120	36.0	114	39.5	+3	07.6	211	45.0	-24	28.9	46	54.1	+22	12.3	60	15.6	+18	53.4
18	135	38.5	129	40.6	+3	07.8	226	47.3	-24	29.0	61	56.0	+22	12.3	75	17.7	+18	53.5
19	150	40.9	144	41.6		08.0	241	49.6		29.1	76	57.8		12.4	90	19.8		53.5
20	165	43.4	159	42.7		08.2	256	52.0		29.3	91	59.7		12.5	105	22.0		53.6
21	180	45.8	174	43.7		08.3	271	54.3		29.4	107	01.6		12.5	120	24.1		53.7
22	195	48.3	189	44.7		08.5	286	56.7		29.5	122	03.5		12.6	135	26.3		53.7
23	210	50.8	204	45.8		08.7	301	59.0		29.6	137	05.4		12.7	150	28.4		53.8
24	225	53.2	219	46.8	+3	08.9	317	01.3	-24	29.8	152	07.2	+22	12.7	165	30.5	+18	53.9
Dif	—		+11		+2		+23		-1		+19		+1		+21		+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: 14 ^d 4 PHE { SD: 15 ^h 6 PMG: 0 ^h 22 ^m R°: 51 ^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	52.9	+17 02.7	354	36.1	-14 58.6	105	60 N	20 15	21 14	23 05	21 27 82	4 33 17	
1	195	52.9	03.4	9	05.6	-15 08.9	103	58	20 03	20 56	22 18	14 79	43 21	
2	210	53.0	04.1	23	35.0	19.2	103	56	19 53	41	21 50	21 03 76	51 24	
3	225	53.0	04.7	38	04.5	29.3	101	54	44	28	28	20 53 74	4 59 26	
4	240	53.0	05.4	52	33.9	39.4	101	52	36	17	21 11	45 71	5 06 28	
5	255	53.1	+17 06.1	67	03.3	-15 49.4	100	50	19 29	20 07	20 57	20 37 70	5 12 30	
6	270	53.1	+17 06.8	81	32.6	-15 59.3	99	45	19 14	19 47	20 29	20 21 66	5 26 34	
7	285	53.1	07.5	96	02.0	-16 09.1	98	40	19 02	32	20 09	20 07 64	37 37	
8	300	53.2	08.1	110	31.3	18.8	97	35	18 51	19	19 52	19 56 62	47 39	
9	315	53.2	08.8	125	00.6	28.4	96	30	42	19 08	39	46 60	5 55 42	
10	330	53.3	09.5	139	29.9	38.0	96	20	26	18 50	17	29 57	6 10 45	
11	345	53.3	+17 10.2	153	59.1	-16 47.4	94	10 N	18 13	18 35	19 00	19 15 54	6 22 49	
12	0	53.3	+17 10.8	168	28.3	-16 56.7	93	0	18 00	18 22	18 47	19 01 52	6 34 52	
13	15	53.4	11.5	182	57.6	-17 05.9	92	10 S	17 47	18 09	35	18 48 49	47 54	
14	30	53.4	12.2	197	26.7	15.1	92	20	34	17 57	24	33 47	6 59 58	
15	45	53.4	12.8	211	55.9	24.1	90	30	19	44	13	17 43	7 14 61	
16	60	53.5	13.5	226	25.0	33.0	89	35	11	37	08	18 07 42	23 63	
17	75	53.5	+17 14.2	240	54.2	-17 41.8	88	40	17 01	17 29	18 02	17 56 40	7 33 65	
18	90	53.5	+17 14.9	255	23.2	-17 50.6	88	45	16 49	17 21	17 56	17 44 36	7 44 69	
19	105	53.6	15.5	269	52.3	-17 59.2	86	50	35	10	49	28 34	7 59 72	
20	120	53.6	16.2	284	21.4	-18 07.7	85	52	29	06	46	21 32	8 05 74	
21	135	53.6	16.9	298	50.4	16.1	84	54	22	17 01	43	13 30	13 76	
22	150	53.7	17.5	313	19.4	24.4	83	56	14	16 55	40	17 05 27	21 79	
23	165	53.7	18.2	327	48.4	32.6	82	58	16 05	49	37	16 55 24	30 82	
24	180	53.7	+17 18.9	342	17.4	-18 40.7	81	60 S	15 55	16 42	17 33	16 43 21	8 41 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 55 ^m 0		Mag: -4.7 PMG: 9 ^h 20 ^m		Mag: -1.3 PMG: 2 ^h 51 ^m		Mag: -2.0 PMG: 13 ^h 50 ^m		Mag: +0.1 PMG: 12 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	225	53.2	219	46.8	317	01.3	152	07.2	165	30.5
1	240	55.7	234	47.8	332	03.7	167	09.1	180	32.7
2	255	58.2	249	48.9	347	06.0	182	11.0	195	34.8
3	271	00.6	264	49.9	9.5	2 08.4	197	12.9	210	36.9
4	286	03.1	279	50.9	9.7	17 10.7	212	14.8	225	39.1
5	301	05.6	294	52.0	+3 09.9	32 13.1	227	16.6	240	41.2
6	316	08.0	309	53.0	+3 10.1	47 15.4	242	18.5	255	43.3
7	331	10.5	324	54.0	10.3	62 17.8	257	20.4	270	45.5
8	346	12.9	339	55.0	10.5	77 20.1	272	22.3	285	47.6
9	1	15.4	354	56.1	10.7	92 22.5	287	24.2	300	49.8
10	16	17.9	9	57.1	10.9	107 24.8	302	26.0	315	51.9
11	31	20.3	24	58.1	+3 11.1	122 27.2	317	27.9	330	54.0
12	46	22.8	39	59.1	+3 11.3	137 29.6	332	29.8	345	56.2
13	61	25.3	55	00.1	11.5	152 31.9	347	31.7	0	58.3
14	76	27.7	70	01.1	11.7	167 34.3	2	33.5	16	00.4
15	91	30.2	85	02.1	11.9	182 36.6	17	35.4	31	02.6
16	106	32.7	100	03.1	12.1	197 39.0	32	37.3	46	04.7
17	121	35.1	115	04.1	+3 12.3	212 41.4	47	39.2	61	06.8
18	136	37.6	130	05.1	+3 12.5	227 43.7	62	41.1	76	09.0
19	151	40.1	145	06.1	12.7	242 46.1	77	42.9	91	11.1
20	166	42.5	160	07.1	12.9	257 48.5	92	44.8	106	13.3
21	181	45.0	175	08.1	13.2	272 50.8	107	46.7	121	15.4
22	196	47.4	190	09.1	13.4	287 53.2	122	48.6	136	17.5
23	211	49.9	205	10.1	13.6	302 55.6	137	50.4	151	19.7
24	226	52.4	220	11.1	+3 13.8	317 58.0	152	52.3	166	21.8
Dif	—		+10	+2	+24	-1	+19	+1	+21	+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: 15 ^d 4 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 5 20 ^h : 56 ^m 3 R ^o : 52 ^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	53.7	+17	18.9	342	17.4	-18	40.7	80	58	0 47	2 39	3 37	22 49	72	4 50	25	
1	195	53.7		19.5	356	46.3	99	48.7	79	58	1 34	2 57	49	33 69		5 04	28	
2	210	53.8		20.2	11	15.3	100	-18	56.6	79	2 03	3 12	3 59	19 67		15 31		
3	225	53.8		20.9	25	44.2	99	-19	04.4	78	54	24	24	4 08	22 07	65	25 33	
4	240	53.8		21.5	40	13.1	99	12.0	76	52	41	35	16	21 56	65	34 35		
5	255	53.9	+17	22.2	54	42.0	99	-19	19.6	76	50	2 55	3 45	4 23	21 47	63	5 42 37	
6	270	53.9	+17	22.9	69	10.8	98	-19	27.0	74	45	3 23	4 05	4 38	21 27	61	6 00 39	
7	285	53.9		23.5	83	39.7	99	34.4	74	40	3 44	21	4 51	21 11	60		14 42	
8	300	54.0		24.2	98	08.5	98	41.6	72	35	4 00	34	5 01	20 58	58		26 44	
9	315	54.0		24.9	112	37.3	98	48.7	71	30	14	4 45	11	46 57			37 45	
10	330	54.0		25.5	127	06.1	98	-19	55.7	70	20	36	5 03	27	26 55		6 55 48	
11	345	54.0	+17	26.2	141	34.9	98	-20	02.6	69	10 N	4 52	5 18	5 40	20 09	53	7 11 50	
12	0	54.1	+17	26.9	156	03.6	97	-20	09.4	68	0	5 06	5 31	5 53	19 53	52	7 26 52	
13	15	54.1		27.5	170	32.4	98	16.0	66	66	10 S	18	44	6 06	37 50		41 54	
14	30	54.1		28.2	185	01.1	97	22.6	66	20	20	29	5 56	19	20 48		7 57 56	
15	45	54.2		28.8	199	29.9	98	29.0	64	30	30	40	6 09	34	19 00	47	8 15 59	
16	60	54.2		29.5	213	58.6	97	35.3	63	35	35	46	16	43	18 49	45	26 60	
17	75	54.2	+17	30.2	228	27.3	97	-20	41.5	62	40	5 51	6 24	6 53	18 36	44	8 38 62	
18	90	54.2	+17	30.8	242	56.0	97	-20	47.6	61	45	5 58	6 33	7 04	18 20	43	8 53 64	
19	105	54.3		31.5	257	24.6	96	53.6	60	60	50	6 04	43	18	18 02	39	9 11 67	
20	120	54.3		32.1	271	53.3	97	-20	59.5	59	52	07	48	25	17 53	38	19 69	
21	135	54.3		32.8	286	22.0	97	-21	05.2	57	54	10	53	32	43 37		29 70	
22	150	54.3		33.5	300	50.6	96	10.8	56	56	56	14	6 59	40	32 35		40 71	
23	165	54.4		34.1	315	19.3	97	16.3	55	55	58	17	7 05	7 49	19 33		9 52 74	
24	180	54.4	+17	34.8	329	47.9	96	-21	21.7	54	60 S	6 21	7 12	8 00	17 04	30	10 06 78	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 8 ^h 51 ^m 1		Mag: -4.7 PMG: 9 ^h 19 ^m			Mag: -1.3 PMG: 2 ^h 48 ^m			Mag: -2.0 PMG: 13 ^h 47 ^m				Mag: +0.1 PMG: 12 ^h 53 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	52.4	220	11.1	+3	13.8	317	58.0	-24	32.9	152	52.3	+22	14.3	166	21.8	+18	55.5
1	241	54.8	235	12.1		14.0	333	00.3		33.1	167	54.2		14.4	181	23.9		55.5
2	256	57.3	250	13.1		14.3	348	02.7		33.2	182	56.1		14.4	196	26.1		55.6
3	271	59.8	265	14.1		14.5	3	05.1		33.3	197	57.9		14.5	211	28.2		55.7
4	287	02.2	280	15.1		14.7	18	07.5		33.5	212	59.8		14.6	226	30.3		55.7
5	302	04.7	295	16.0	+3	14.9	33	09.9	-24	33.6	228	01.7	+22	14.6	241	32.5	+18	55.8
6	317	07.2	310	17.0	+3	15.2	48	12.3	-24	33.7	243	03.6	+22	14.7	256	34.6	+18	55.9
7	332	09.6	325	18.0		15.4	63	14.6		33.8	258	05.5		14.8	271	36.7		55.9
8	347	12.1	340	19.0		15.6	78	17.0		34.0	273	07.3		14.8	286	38.9		56.0
9	2	14.6	355	19.9		15.9	93	19.4		34.1	288	09.2		14.9	301	41.0		56.1
10	17	17.0	10	20.9		16.1	108	21.8		34.2	303	11.1		14.9	316	43.1		56.1
11	32	19.5	25	21.9	+3	16.3	123	24.2	-24	34.4	318	13.0	+22	15.0	331	45.3	+18	56.2
12	47	21.9	40	22.8	+3	16.6	138	26.6	-24	34.5	333	14.8	+22	15.1	346	47.4	+18	56.3
13	62	24.4	55	23.8		16.8	153	29.0		34.6	348	16.7		15.1	1	49.6		56.3
14	77	26.9	70	24.8		17.0	168	31.4		34.8	3	18.6		15.2	16	51.7		56.4
15	92	29.3	85	25.7		17.3	183	33.8		34.9	18	20.5		15.3	31	53.8		56.5
16	107	31.8	100	26.7		17.5	198	36.2		35.0	33	22.3		15.3	46	56.0		56.5
17	122	34.3	115	27.7	+3	17.7	213	38.6	-24	35.2	48	24.2	+22	15.4	61	58.1	+18	56.6
18	137	36.7	130	28.6	+3	18.0	228	41.0	-24	35.3	63	26.1	+22	15.5	77	00.2	+18	56.6
19	152	39.2	145	29.6		18.2	243	43.4		35.4	78	28.0		15.5	92	02.4		56.7
20	167	41.7	160	30.5		18.5	258	45.8		35.6	93	29.8		15.6	107	04.5		56.8
21	182	44.1	175	31.5		18.7	273	48.2		35.7	108	31.7		15.7	122	06.6		56.8
22	197	46.6	190	32.4		19.0	288	50.6		35.8	123	33.6		15.7	137	08.8		56.9
23	212	49.1	205	33.4		19.2	303	53.0		36.0	138	35.5		15.8	152	10.9		57.0
24	227	51.5	220	34.3	+3	19.5	318	55.4	-24	36.1	153	37.3	+22	15.9	167	13.0	+18	57.0
Dif	—		+10		+2		+24		-1		+19		+1		+21		+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: 16 ^d 4 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^h 8 20 ^h : 55 ^h 6 PMG: 2 ^h 05 ^m R ^o : 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	180	54.4	+17	34.8	329	47.9	-21	21.7	60 N	20 20	21 20	23 31	** ** *	** ** *	5 15	36
1	195	54.4		35.4	344	16.5	96	27.0	58	20 08	21 01	22 28	23 42	56	32	38
2	210	54.4		36.1	358	45.1	96	32.1	56	19 57	20 45	21 57	26	55	46	40
3	225	54.5		36.7	13	13.8	96	37.2	54	48	32	34	12	56	5	58
4	240	54.5		37.4	27	42.4	96	42.1	52	40	21	16	23	01	54	6
5	255	54.5	+17	38.0	42	11.0	96	-21	50	19 32	20 11	21 01	22	50	55	6
6	270	54.5	+17	38.7	56	39.6	96	-21	45	19 16	19 50	20 33	22	28	54	6
7	285	54.6		39.3	71	08.2	96	-21	40	19 04	34	20 11	22	11	53	6
8	300	54.6		40.0	85	36.8	96	-22	35	18 53	20	19 54	21	56	53	7
9	315	54.6		40.6	100	05.4	96	04.9	30	43	19 09	40	43	53	22	48
10	330	54.6		41.3	114	34.0	96	09.0	20	27	18 50	18	21	53	7	43
11	345	54.7	+17	41.9	129	02.6	96	-22	10 N	18 13	18 35	19 01	21	02	52	8
12	0	54.7	+17	42.6	143	31.2	96	-22	0	18 00	18 22	18 47	20	45	51	8
13	15	54.7		43.2	157	59.8	96	20.9	10 S	17 47	18 09	34	27	51	35	53
14	30	54.7		43.9	172	28.4	96	24.6	20	33	17 56	23	20	08	51	8
15	45	54.7		44.5	186	57.0	96	28.2	30	18	43	12	19	47	50	9
16	60	54.8		45.2	201	25.6	96	31.7	35	17 09	36	06	34	50	26	56
17	75	54.8	+17	45.8	215	54.2	96	-22	40	16 59	17 27	18 00	19	20	49	9
18	90	54.8	+17	46.5	230	22.9	97	-22	45	16 47	17 18	17 54	19	03	48	9
19	105	54.8		47.1	244	51.5	96	41.4	50	32	08	47	18	41	48	10
20	120	54.8		47.8	259	20.1	96	44.4	52	26	17 03	44	31	47	28	59
21	135	54.9		48.4	273	48.8	97	47.2	54	18	16 57	40	20	46	39	60
22	150	54.9		49.1	288	17.4	96	50.0	56	10	52	37	18	07	45	10
23	165	54.9		49.7	302	46.1	97	52.6	58	16 01	45	33	17	52	44	11
24	180	54.9	+17	50.4	317	14.8	97	-22	60 S	15 50	16 38	17 29	17	34	43	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 47 ^m 1		Mag: -4.7 PMG: 9 ^h 17 ^m			Mag: -1.4 PMG: 2 ^h 44 ^m			Mag: -2.0 PMG: 13 ^h 44 ^m			Mag: +0.1 PMG: 12 ^h 49 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	227	51.5	220	34.3	+3	19.5	318	55.4	-24	36.1	153	37.3	+22	15.9	167	13.0
1	242	54.0	235	35.3		19.7	333	57.8		36.2	168	39.2		15.9	182	15.2
2	257	56.4	250	36.2		20.0	349	00.2		36.4	183	41.1		16.0	197	17.3
3	272	58.9	265	37.1		20.2	4	02.6		36.5	198	43.0		16.0	212	19.4
4	288	01.4	280	38.1		20.5	19	05.0		36.7	213	44.8		16.1	227	21.6
5	303	03.8	295	39.0	+3	20.7	34	07.5	-24	36.8	228	46.7	+22	16.2	242	23.7
6	318	06.3	310	39.9	+3	21.0	49	09.9	-24	36.9	243	48.6	+22	16.2	257	25.8
7	333	08.8	325	40.9		21.3	64	12.3		37.1	258	50.5		16.3	272	28.0
8	348	11.2	340	41.8		21.5	79	14.7		37.2	273	52.3		16.4	287	30.1
9	3	13.7	355	42.7		21.8	94	17.1		37.3	288	54.2		16.4	302	32.3
10	18	16.2	10	43.7		22.0	109	19.5		37.5	303	56.1		16.5	317	34.4
11	33	18.6	25	44.6	+3	22.3	124	22.0	-24	37.6	318	58.0	+22	16.6	332	36.5
12	48	21.1	40	45.5	+3	22.6	139	24.4	-24	37.7	333	59.8	+22	16.6	347	38.7
13	63	23.5	55	46.4		22.8	154	26.8		37.9	349	01.7		16.7	2	40.8
14	78	26.0	70	47.4		23.1	169	29.3		38.0	4	03.6		16.7	17	42.9
15	93	28.5	85	48.3		23.4	184	31.7		38.1	19	05.4		16.8	32	45.1
16	108	30.9	100	49.2		23.6	199	34.1		38.3	34	07.3		16.9	47	47.2
17	123	33.4	115	50.1	+3	23.9	214	36.5	-24	38.4	49	09.2	+22	16.9	62	49.3
18	138	35.9	130	51.0	+3	24.2	229	39.0	-24	38.5	64	11.1	+22	17.0	77	51.5
19	153	38.3	145	51.9		24.5	244	41.4		38.7	79	12.9		17.1	92	53.6
20	168	40.8	160	52.8		24.7	259	43.8		38.8	94	14.8		17.1	107	55.7
21	183	43.3	175	53.7		25.0	274	46.3		38.9	109	16.7		17.2	122	57.9
22	198	45.7	190	54.7		25.3	289	48.7		39.1	124	18.6		17.3	138	00.0
23	213	48.2	205	55.6		25.6	304	51.2		39.2	139	20.4		17.3	153	02.1
24	228	50.7	220	56.5	+3	25.9	319	53.6	-24	39.4	154	22.3	+22	17.4	168	04.3
Dif	—		+9 +3		+24 -1				+19 +1				+21 +1			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna																	
	SD: 15 ^h 8				Edad: 17 ^d 4 PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 3 20 ^h : 55 ^m 1																															
	PMG: 11 ^h 56 ^m 3				SD: 15 ^h 1 PMG: 2 ^h 57 ^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	m															
0	180	54.9	+17	50.4	317	14.8			-22	55.1	24	60 N	0 21	2 32	3 32		0 01	56		5 51	50															
1	195	54.9		51.0	331	43.5	97			57.5	23	58	1 24	2 51	44		** ** *			6 10	51															
2	210	55.0		51.6	346	12.2	97		-22	59.8	23	56	1 55	3 07	3 55		** ** *			26	51															
3	225	55.0		52.3	0	40.9	97		-23	01.9	21	54	2 18		20	4 04	** ** *			40	51															
4	240	55.0		52.9	15	09.6	97			03.9	20	52		36	31	12	23 55	45		6 52	51															
5	255	55.0	+17	53.6	29	38.3	97		-23	05.8	19	50	2 51	3 41	4 20		23 45	45		7 02	51															
6	270	55.0	+17	54.2	44	07.1	98		-23	07.6	18	45	3 20	4 02	4 36		23 22	47		7 24	52															
7	285	55.1		54.8	58	35.9	98			09.2	16	40		41	18	4 49	23 04	48		42	51															
8	300	55.1		55.5	73	04.7	98			10.8	16	35	3 58	32	5 00		22 49	48		7 57	51															
9	315	55.1		56.1	87	33.5	98			12.2	14	30	4 12	4 43	09		36	48		8 10	51															
10	330	55.1		56.8	102	02.3	98			13.5	13	20		34	5 02	26	22 14	49		32	52															
11	345	55.1	+17	57.4	116	31.1	98		-23	14.7	12	10 N	4 52	5 18	5 40		21 54	50		8 52	51															
12	0	55.1	+17	58.0	131	00.0	99		-23	15.7	10	0	5 06	5 31	5 53		21 36	51		9 10	51															
13	15	55.2		58.7	145	28.9	99			16.7	10	10 S		18	44	6 06	21 18	51		28	51															
14	30	55.2	+17	59.3	159	57.8	99			17.5	8	20		30	5 56	20	20 59	52		9 47	51															
15	45	55.2	+18	00.0	174	26.7	99			18.2	7	30	41	6 10	35		37	52		10 09	51															
16	60	55.2	+18	00.6	188	55.7	100			18.8	6	35	47	17	44		24	52		22	51															
17	75	55.2	+18	01.2	203	24.7	100		-23	19.2	4	40	5 53	6 26	6 55		20 09	53		10 37	51															
18	90	55.2	+18	01.9	217	53.7	100		-23	19.6	4	45	6 00	6 35	7 07		19 51	53		10 55	50															
19	105	55.2		02.5	232	22.7	100			19.8	2	50	07	46	21		29	54		11 17	50															
20	120	55.3		03.1	246	51.8	101			19.9	1	52	10	51	28		18	55		27	50															
21	135	55.3		03.8	261	20.8	100			19.9	0	54	13	6 56	35		19 06	55		39	50															
22	150	55.3		04.4	275	50.0	102			19.7	2	56	17	7 02	44		18 52	56		11 53	49															
23	165	55.3		05.0	290	19.1	101			19.5	2	58	20	09	7 53		36	56		12 09	49															
24	180	55.3	+18	05.7	304	48.3	102		-23	19.1	4	60 S	6 25	7 16	8 04		18 17	57		12 28	49															
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO																			
	PMG 8 ^h 43 ^m 2				Mag: -4.7 PMG: 9 ^h 16 ^m				Mag: -1.4 PMG: 2 ^h 40 ^m				Mag: -2.0 PMG: 13 ^h 41 ^m				Mag: +0.1 PMG: 12 ^h 46 ^m																			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec																	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'																
0	228	50.7			220	56.5	+3	25.9	319	53.6	-24	39.4	154	22.3	+22	17.4	168	04.3	+18	58.6																
1	243	53.1			235	57.4		26.1	334	56.1		39.5	169	24.2		17.4	183	06.4		58.7																
2	258	55.6			250	58.3		26.4	349	58.5		39.6	184	26.1		17.5	198	08.5		58.8																
3	273	58.0			265	59.2		26.7	5	00.9		39.8	199	27.9		17.6	213	10.7		58.8																
4	289	00.5			281	00.0		27.0	20	03.4		39.9	214	29.8		17.6	228	12.8		58.9																
5	304	03.0			296	00.9	+3	27.3	35	05.8	-24	40.0	229	31.7	+22	17.7	243	14.9	+18	59.0																
6	319	05.4			311	01.8	+3	27.6	50	08.3	-24	40.2	244	33.5	+22	17.8	258	17.1	+18	59.0																
7	334	07.9			326	02.7		27.8	65	10.7		40.3	259	35.4		17.8	273	19.2		59.1																
8	349	10.4			341	03.6		28.1	80	13.2		40.4	274	37.3		17.9	288	21.3		59.2																
9	4	12.8			356	04.5		28.4	95	15.6		40.6	289	39.2		18.0	303	23.5		59.2																
10	19	15.3			11	05.4		28.7	110	18.1		40.7	304	41.0		18.0	318	25.6		59.3																
11	34	17.8			26	06.3	+3	29.0	125	20.6	-24	40.9	319	42.9	+22	18.1	333	27.7	+18	59.4																
12	49	20.2			41	07.1	+3	29.3	140	23.0	-24	41.0	334	44.8	+22	18.1	348	29.9	+18	59.4																
13	64	22.7			56	08.0		29.6	155	25.5		41.1	349	46.6		18.2	3	32.0		59.5																
14	79	25.2			71	08.9		29.9	170	27.9		41.3	4	48.5		18.3	18	34.1		59.5																
15	94	27.6			86	09.8		30.2	185	30.4		41.4	19	50.4		18.3	33	36.3		59.6																
16	109	30.1			101	10.7		30.5	200	32.9		41.5	34	52.3		18.4	48	38.4		59.7																
17	124	32.5			116	11.5	+3	30.8	215	35.3	-24	41.7	49	54.1	+22	18.5	63	40.5	+18	59.7																
18	139	35.0			131	12.4	+3	31.1	230	37.8	-24	41.8	64	56.0	+22	18.5	78	42.7	+18	59.8																
19	154	37.5			146	13.3		31.4	245	40.3		41.9	79	57.9		18.6	93	44.8		59.9																
20	169	39.9			161	14.1		31.7	260	42.7		42.1	94	59.7		18.7	108	46.9	+18	59.9																
21	184	42.4			176	15.0		32.0	275	45.2		42.2	110	01.6		18.7	123	49.1	+19	00.0																
22	199	44.9			191	15.9		32.3	290	47.7		42.4	125	03.5		18.8	138	51.2	+19	00.1																
23	214	47.3			206	16.7		32.6	305	50.2		42.5	140	05.4		18.8	153	53.3		00.1																
24	229	49.8			221	17.6	+3	32.9	320	52.6	-24	42.6	155	07.2	+22	18.9	168	55.5	+19	00.2																
Dif	—				+9				+3				+25				-1				+19				+1				+21				+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: 18 ^d 4 PHE { SD: 15/0 PMG: 3 ^h 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	55.3	+18	05.7	304	48.3	-23 19.1	60 N	20 25	21 26	** **	0 57 40	6 41 63		
1	195	55.3		06.3	319	17.5 ¹⁰²	18.6	58	12	21 06	22 39	38 42	7 01 61		
2	210	55.3		06.9	333	46.7 ¹⁰²	18.0	56	20 01	20 50	22 04	21 43	17 60		
3	225	55.4		07.5	348	16.0 ¹⁰³	17.3	54	19 51	36	21 40	0 08 43	31 58		
4	240	55.4		08.2	2	45.2 ¹⁰²	16.5	52	43	24	21	** ** *	43 58		
5	255	55.4	+18	08.8	17	14.6 ¹⁰⁴	-23 15.6	50	19 35	20 14	21 06	** ** *	7 53 58		
6	270	55.4	+18	09.4	31	43.9 ¹⁰³	-23 14.5	45	19 19	19 53	20 36	** ** *	8 16 55		
7	285	55.4		10.1	46	13.3 ¹⁰⁴	13.3	40	19 06	36	20 13	23 52 40	33 55		
8	300	55.4		10.7	60	42.8 ¹⁰⁵	12.0	35	18 54	22	19 56	37 42	8 48 54		
9	315	55.4		11.3	75	12.2 ¹⁰⁴	10.6	30	44	19 10	42	24 44	9 01 54		
10	330	55.4		11.9	89	41.7 ¹⁰⁵	09.1	20	28	18 51	19	23 03 45	24 51		
11	345	55.4	+18	12.6	104	11.3 ¹⁰⁶	-23 07.5	10 N	18 13	18 35	19 01	22 44 47	9 43 51		
12	0	55.5	+18	13.2	118	40.8 ¹⁰⁵	-23 05.7	0	18 00	18 22	18 47	22 27 48	10 01 49		
13	15	55.5		13.8	133	10.4 ¹⁰⁶	03.9	10 S	17 47	18 09	34	22 09 50	19 48		
14	30	55.5		14.4	147	40.1 ¹⁰⁷	-23 01.9	20	32	17 56	22	21 51 51	10 38 47		
15	45	55.5		15.1	162	09.8 ¹⁰⁷	-22 59.9	20	30	16	42	11	29 53		
16	60	55.5		15.7	176	39.5 ¹⁰⁷	57.7	22	35	17 07	34	18 05	16 55		
17	75	55.5	+18	16.3	191	09.3 ¹⁰⁸	-22 55.4	23	40	16 57	17 26	17 58	21 02 56		
18	90	55.5	+18	16.9	205	39.1 ¹⁰⁸	-22 53.0	24	45	16 44	17 16	17 52	20 44 58		
19	105	55.5		17.5	220	08.9 ¹⁰⁸	50.5	25	50	30	05	44	23 60		
20	120	55.5		18.2	234	38.8 ¹⁰⁹	47.8	27	52	23	17 00	41	13 60		
21	135	55.5		18.8	249	08.7 ¹⁰⁹	45.1	27	54	15	16 54	37	20 01 62		
22	150	55.5		19.4	263	38.7 ¹¹⁰	42.3	28	56	16 06	48	34	19 48 63		
23	165	55.5		20.0	278	08.7 ¹¹⁰	39.3	30	58	15 57	42	30	32 66		
24	180	55.6	+18	20.6	292	38.8 ¹¹¹	-22 36.3	30	60 S	15 45	16 34	17 25	19 14 68		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 39 ^m 3		Mag: -4.7 PMG: 9 ^h 14 ^m		Mag: -1.4 PMG: 2 ^h 36 ^m		Mag: -2.0 PMG: 13 ^h 38 ^m		Mag: +0.1 PMG: 12 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	229	49.8	221	17.6	+3	32.9	320	52.6	-24	42.6
1	244	52.3	236	18.4		33.2	335	55.1		42.8
2	259	54.7	251	19.3		33.5	350	57.6		42.9
3	274	57.2	266	20.2		33.9	6	00.1		43.1
4	289	59.7	281	21.0		34.2	21	02.6		43.2
5	305	02.1	296	21.9	+3	34.5	36	05.0	-24	43.3
6	320	04.6	311	22.7	+3	34.8	51	07.5	-24	43.5
7	335	07.0	326	23.6		35.1	66	10.0		43.6
8	350	09.5	341	24.4		35.4	81	12.5		43.7
9	5	12.0	356	25.3		35.7	96	15.0		43.9
10	20	14.4	11	26.1		36.1	111	17.5		44.0
11	35	16.9	26	26.9	+3	36.4	126	20.0	-24	44.2
12	50	19.4	41	27.8	+3	36.7	141	22.5	-24	44.3
13	65	21.8	56	28.6		37.0	156	24.9		44.4
14	80	24.3	71	29.5		37.4	171	27.4		44.6
15	95	26.8	86	30.3		37.7	186	29.9		44.7
16	110	29.2	101	31.1		38.0	201	32.4		44.8
17	125	31.7	116	32.0	+3	38.3	216	34.9	-24	45.0
18	140	34.2	131	32.8	+3	38.7	231	37.4	-24	45.1
19	155	36.6	146	33.6		39.0	246	39.9		45.3
20	170	39.1	161	34.5		39.3	261	42.4		45.4
21	185	41.5	176	35.3		39.7	276	45.0		45.5
22	200	44.0	191	36.1		40.0	291	47.5		45.7
23	215	46.5	206	36.9		40.3	306	50.0		45.8
24	230	48.9	221	37.7	+3	40.7	321	52.5	-24	46.0
Dif	—		+8		+3		+25		-1	
							+19		+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: 19 ^d 4 PHE { SD: 14'9 PMG: 4 ^h 39 ^m R°: 48 ^m 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	55.6	+18	20.6	292	38.8	-22	36.3	32	60 N	** **	2 26	3 27	1 37	28	7 44	72		
1	195	55.6		21.3	307	08.9		33.1	33	58	1 13	2 46	40	20	30	8 02	69		
2	210	55.6		21.9	321	39.0		29.8	33	56	1 48	3 02	3 51	1 04	33	17	66		
3	225	55.6		22.5	336	09.2		26.5	33	54	2 12	16	4 01	0 51	35	29	65		
4	240	55.6		23.1	350	39.4		23.0	35	52	31	28	09	40	36	41	63		
5	255	55.6	+18	23.7	5	09.7	-22	19.4	36	50	2 47	3 38	4 17	0 30	37	8 51	61		
6	270	55.6	+18	24.3	19	40.0	-22	15.7	37	45	3 17	3 59	4 33	0 09	39	9 11	60		
7	285	55.6		25.0	34	10.4		11.9	38	40	39	4 16	47	** **	**	28	57		
8	300	55.6		25.6	48	40.8		08.0	39	35	3 56	30	4 58	** **	**	42	56		
9	315	55.6		26.2	63	11.3	-22	04.1	39	30	4 11	4 42	5 08	** **	**	9 55	54		
10	330	55.6		26.8	77	41.8	-22	00.0	41	20	33	5 01	25	23 48	42	10 15	52		
11	345	55.6	+18	27.4	92	12.3	-21	55.8	42	10 N	4 51	5 17	5 39	23 31	45	10 34	49		
12	0	55.6	+18	28.0	106	42.9	-21	51.5	43	0	5 06	5 31	5 53	23 15	47	10 50	48		
13	15	55.6		28.6	121	13.5		47.1	44	10 S	19	44	6 06	22 59	49	11 07	46		
14	30	55.6		29.2	135	44.2		42.6	45	20	31	5 57	20	42	52	25	44		
15	45	55.6		29.9	150	15.0		38.0	46	30	42	6 11	36	22	55	46	41		
16	60	55.6		30.5	164	45.8		33.3	47	35	48	19	46	22 11	56	11 58	40		
17	75	55.6	+18	31.1	179	16.6	-21	28.5	48	40	5 55	6 27	6 56	21 58	57	12 12	38		
18	90	55.6	+18	31.7	193	47.5	-21	23.6	49	45	6 02	6 37	7 09	21 42	60	12 28	36		
19	105	55.6		32.3	208	18.4		18.6	50	50	09	48	24	23	63	48	33		
20	120	55.6		32.9	222	49.4		13.6	50	52	12	54	31	13	65	12 57	32		
21	135	55.6		33.5	237	20.4		08.4	52	54	16	6 59	39	21 03	66	13 08	30		
22	150	55.6		34.1	251	51.5	-21	03.1	53	56	20	7 05	48	20 51	69	20	28		
23	165	55.6		34.7	266	22.6	-20	57.8	53	58	24	12	7 57	38	71	34	26		
24	180	55.6	+18	35.3	280	53.8	-20	52.3	55	60 S	6 28	7 20	8 09	20 22	74	13 50	23		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 35 ^m 3		Mag: -4.7 PMG: 9 ^h 13 ^m		Mag: -1.5 PMG: 2 ^h 32 ^m		Mag: -2.0 PMG: 13 ^h 35 ^m		Mag: +0.1 PMG: 12 ^h 39 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	230	48.9	221	37.7	+3	40.7	321	52.5	-24	46.0
1	245	51.4	236	38.6		41.0	336	55.0		46.1
2	260	53.9	251	39.4		41.3	351	57.5		46.2
3	275	56.3	266	40.2		41.7	7	00.0		46.4
4	290	58.8	281	41.0		42.0	22	02.5		46.5
5	306	01.3	296	41.8	+3	42.4	37	05.1	-24	46.7
6	321	03.7	311	42.6	+3	42.7	52	07.6	-24	46.8
7	336	06.2	326	43.4		43.0	67	10.1		46.9
8	351	08.6	341	44.3		43.4	82	12.6		47.1
9	6	11.1	356	45.1		43.7	97	15.1		47.2
10	21	13.6	11	45.9		44.1	112	17.7		47.4
11	36	16.0	26	46.7	+3	44.4	127	20.2	-24	47.5
12	51	18.5	41	47.5	+3	44.8	142	22.7	-24	47.6
13	66	21.0	56	48.3		45.1	157	25.2		47.8
14	81	23.4	71	49.1		45.5	172	27.8		47.9
15	96	25.9	86	49.9		45.8	187	30.3		48.1
16	111	28.4	101	50.7		46.2	202	32.8		48.2
17	126	30.8	116	51.5	+3	46.5	217	35.4	-24	48.3
18	141	33.3	131	52.2	+3	46.9	232	37.9	-24	48.5
19	156	35.8	146	53.0		47.2	247	40.4		48.6
20	171	38.2	161	53.8		47.6	262	43.0		48.8
21	186	40.7	176	54.6		48.0	277	45.5		48.9
22	201	43.1	191	55.4		48.3	292	48.1		49.0
23	216	45.6	206	56.2		48.7	307	50.6		49.2
24	231	48.1	221	57.0	+3	49.0	322	53.2	-24	49.3
Dif	—		+8		+3		+25		-1	
									+19	
									+1	
									+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: 20 ^d 4 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 5 ^h 27 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		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	180	55.6	+18	35.3	280	53.8	-20	52.3	60 N	20 30	21 33	** **	2 05 18	8 56 76				
1	195	55.6		35.9	295	25.0 ¹²²		46.8 ⁵⁵	58	16	21 12	22 51	1 50 22	9 11 73				
2	210	55.6		36.5	309	56.2 ¹²²		41.1 ⁵⁷	56	20 05	20 55	22 12	37 24	23 70				
3	225	55.6		37.1	324	27.6 ¹²⁴		35.4 ⁵⁷	54	19 55	40	21 46	26 26	34 68				
4	240	55.6		37.7	338	58.9 ¹²³		29.6 ⁵⁸	52	46	28	26	16 28	44 66				
5	255	55.6	+18	38.3	353	30.3 ¹²⁴	-20	23.7 ⁵⁹	50	19 38	20 17	21 10	1 07 30	9 52 65				
6	270	55.6	+18	38.9	8	01.8 ¹²⁵	-20	17.7 ⁶⁰	45	19 21	19 55	20 39	0 48 33	10 11 60				
7	285	55.6		39.5	22	33.3 ¹²⁵		11.6 ⁶¹	40	19 07	38	20 16	32 36	25 58				
8	300	55.6		40.2	37	04.8 ¹²⁵	-20	05.4 ⁶²	35	18 56	24	19 58	19 38	38 56				
9	315	55.6		40.8	51	36.4 ¹²⁶	-19	59.1 ⁶³	30	46	19 12	43	0 08 39	10 49 54				
10	330	55.6		41.4	66	08.1 ¹²⁷		52.8 ⁶³	20	29	18 52	20	** ** *	11 07 51				
11	345	55.6	+18	42.0	80	39.8 ¹²⁷	-19	46.3 ⁶⁵	10 N	18 14	18 36	19 02	** ** *	11 23 48				
12	0	55.6	+18	42.6	95	11.5 ¹²⁷	-19	39.8 ⁶⁵	0	18 00	18 22	18 47	** ** *	11 38 46				
13	15	55.6		43.1	109	43.3 ¹²⁸		33.2 ⁶⁶	10 S	17 46	18 08	34	23 48 48	11 53 43				
14	30	55.6		43.7	124	15.2 ¹²⁹		26.5 ⁶⁷	20	32	17 55	22	34 50	12 09 40				
15	45	55.6		44.3	138	47.0 ¹²⁸		19.7 ⁶⁸	30	15	41	09	17 54	27 37				
16	60	55.6		44.9	153	19.0 ¹³⁰		12.8 ⁶⁹	35	17 06	33	18 03	23 07 56	38 35				
17	75	55.6	+18	45.5	167	51.0 ¹³⁰	-19	05.9 ⁶⁹	40	16 55	17 24	17 57	22 55 59	12 50 33				
18	90	55.6	+18	46.1	182	23.0 ¹³⁰	-18	58.8 ⁷¹	45	16 42	17 14	17 50	22 42 61	13 04 30				
19	105	55.6		46.7	196	55.0 ¹³⁰		51.7 ⁷¹	50	27	17 02	42	26 65	21 27				
20	120	55.6		47.3	211	27.2 ¹³²		44.5 ⁷²	52	20	16 57	38	18 67	29 26				
21	135	55.6		47.9	225	59.3 ¹³¹		37.2 ⁷³	54	12	51	35	09 69	38 24				
22	150	55.6		48.5	240	31.5 ¹³²		29.9 ⁷³	56	16 03	45	31	22 00 71	13 48 22				
23	165	55.6		49.1	255	03.8 ¹³³		22.4 ⁷⁵	58	15 53	38	27	21 49 73	14 00 19				
24	180	55.6	+18	49.7	269	36.1 ¹³³	-18	14.9 ⁷⁵	60 S	15 41	16 30	17 22	21 36 77	14 13 16				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 31 ^m 4		Mag: -4.7 PMG: 9 ^h 12 ^m				Mag: -1.5 PMG: 2 ^h 28 ^m				Mag: -2.0 PMG: 13 ^h 32 ^m				Mag: +0.1 PMG: 12 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	231	48.1	221	57.0	+3	49.0	322	53.2	-24	49.3	156	36.9	+22	21.9	170	37.8	+19	03.3
1	246	50.5	236	57.7		49.4	337	55.7		49.5	171	38.8		21.9	185	40.0		03.4
2	261	53.0	251	58.5		49.8	352	58.2		49.6	186	40.7		22.0	200	42.1		03.5
3	276	55.5	266	59.3		50.1	8	00.8		49.8	201	42.5		22.1	215	44.2		03.5
4	291	57.9	282	00.1		50.5	23	03.3		49.9	216	44.4		22.1	230	46.4		03.6
5	307	00.4	297	00.9	+3	50.9	38	05.9	-24	50.0	231	46.3	+22	22.2	245	48.5	+19	03.7
6	322	02.9	312	01.6	+3	51.2	53	08.5	-24	50.2	246	48.1	+22	22.3	260	50.6	+19	03.7
7	337	05.3	327	02.4		51.6	68	11.0		50.3	261	50.0		22.3	275	52.8		03.8
8	352	07.8	342	03.2		52.0	83	13.6		50.5	276	51.9		22.4	290	54.9		03.9
9	7	10.3	357	03.9		52.3	98	16.1		50.6	291	53.7		22.4	305	57.0		03.9
10	22	12.7	12	04.7		52.7	113	18.7		50.7	306	55.6		22.5	320	59.2		04.0
11	37	15.2	27	05.5	+3	53.1	128	21.2	-24	50.9	321	57.5	+22	22.6	336	01.3	+19	04.1
12	52	17.6	42	06.2	+3	53.5	143	23.8	-24	51.0	336	59.3	+22	22.6	351	03.4	+19	04.1
13	67	20.1	57	07.0		53.8	158	26.4		51.2	352	01.2		22.7	6	05.5		04.2
14	82	22.6	72	07.8		54.2	173	28.9		51.3	7	03.1		22.7	21	07.7		04.3
15	97	25.0	87	08.5		54.6	188	31.5		51.5	22	04.9		22.8	36	09.8		04.3
16	112	27.5	102	09.3		55.0	203	34.1		51.6	37	06.8		22.9	51	11.9		04.4
17	127	30.0	117	10.0	+3	55.4	218	36.6	-24	51.7	52	08.7	+22	22.9	66	14.1	+19	04.4
18	142	32.4	132	10.8	+3	55.7	233	39.2	-24	51.9	67	10.5	+22	23.0	81	16.2	+19	04.5
19	157	34.9	147	11.5		56.1	248	41.8		52.0	82	12.4		23.0	96	18.3		04.6
20	172	37.4	162	12.3		56.5	263	44.4		52.2	97	14.3		23.1	111	20.5		04.6
21	187	39.8	177	13.0		56.9	278	46.9		52.3	112	16.1		23.2	126	22.6		04.7
22	202	42.3	192	13.8		57.3	293	49.5		52.5	127	18.0		23.2	141	24.7		04.8
23	217	44.7	207	14.5		57.7	308	52.1		52.6	142	19.9		23.3	156	26.9		04.8
24	232	47.2	222	15.3	+3	58.0	323	54.7	-24	52.7	157	21.7	+22	23.4	171	29.0	+19	04.9
Dif	—		+8		+4		+26		-1		+19		+1		+21		+	

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: 21 ^d 4 PHE SD: 14/8 PMG: 6 ^h 13 ^m					R°: 44 ^m			R°		R°							
	hG ☉	Dec			hG ☾	Dif				Dif			Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	180	55.6	+18	49.7	269	36.1	-18	14.9	60 N	** **	2	19	3	22	2	23	14	10	12	78		
1	195	55.6		50.3	284	08.4 ¹³³	-18	07.3 ⁷⁶	58	1	01		40		12	16		24	74			
2	210	55.6		50.9	298	40.8 ¹³⁴	-17	59.7 ⁷⁶	56	1	40	2	57		2	01	19	33	72			
3	225	55.6		51.5	313	13.3 ¹³⁵		51.9 ⁷⁸	54	2	06	3	12	3	57	1	52	21	42	66		
4	240	55.6		52.1	327	45.7 ¹³⁴		44.1 ⁷⁸	52		26		24	4	06		44	23	50	67		
5	255	55.6	+18	52.7	342	18.3 ¹³⁶	-17	36.2 ⁷⁹	50	2	42	3	35	4	14	1	37	24	10	57	65	
6	270	55.6	+18	53.2	356	50.8 ¹³⁵	-17	28.2 ⁸⁰	45	3	13	3	57	4	31	1	21	28	11	11	62	
7	285	55.6		53.8	11	23.4 ¹³⁶		20.2 ⁸⁰	40		36	4	14		45	1	08	31		23	59	
8	300	55.5		54.4	25	56.1 ¹³⁷		12.0 ⁸²	35	3	54		28	4	56	0	57	33		34	56	
9	315	55.5		55.0	40	28.8 ¹³⁷	-17	03.8 ⁸²	30	4	09	4	40	5	07		47	36		43	54	
10	330	55.5		55.6	55	01.5 ¹³⁷	-16	55.6 ⁸²	20		32	5	00		24	30	39		11	58	50	
11	345	55.5	+18	56.2	69	34.3 ¹³⁸	-16	47.2 ⁸⁴	10 N	4	50	5	17	5	39	0	16	42		12	11	47
12	0	55.5	+18	56.8	84	07.1 ¹³⁸	-16	38.8 ⁸⁴	0	5	06	5	31	5	53	0	02	45		12	24	44
13	15	55.5		57.3	98	39.9 ¹³⁸		30.3 ⁸⁵	10 S		19		44	6	07	** **	** **	**		36	41	
14	30	55.5		57.9	113	12.8 ¹³⁹		21.7 ⁸⁶	20	31	5	58		21		** **	** **	**		12	49	38
15	45	55.5		58.5	127	45.7 ¹³⁹		13.1 ⁸⁶	30	43	6	12		38		** **	** **	**		13	04	35
16	60	55.5		59.1	142	18.7 ¹⁴⁰	-16	04.4 ⁸⁷	35		50		20	47		** **	** **	**		13	32	
17	75	55.5	+18	59.7	156	51.7 ¹⁴⁰	-15	55.7 ⁸⁷	40	5	56	6	29	6	58	23	54	59		13	23	29
18	90	55.5	+19	00.3	171	24.8 ¹⁴¹	-15	46.8 ⁸⁹	45	6	03	6	39	7	11	23	43	62		13	34	27
19	105	55.4		00.9	185	57.8 ¹⁴⁰		37.9 ⁸⁹	50		11		51	27		31	66			48	23	
20	120	55.4		01.4	200	31.0 ¹⁴²		29.0 ⁸⁹	52	15	6	56		34		25	67			13	55	21
21	135	55.4		02.0	215	04.1 ¹⁴¹		19.9 ⁹¹	54	19	7	02		42		18	70			14	02	19
22	150	55.4		02.6	229	37.3 ¹⁴²		10.8 ⁹¹	56	23		09	7	51		11	72			10	17	
23	165	55.4		03.2	244	10.5 ¹⁴²	-15	01.6 ⁹²	58	27	16	8	01		01	23	02	75		19	14	
24	180	55.4	+19	03.8	258	43.8 ¹⁴³	-14	52.4 ⁹²	60 S	6	32	7	24	8	13	22	53	78		14	29	11
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 8 ^h 27 ^m 5				Mag: -4.7 PMG: 9 ^h 11 ^m				Mag: -1.5 PMG: 2 ^h 24 ^m				Mag: -2.0 PMG: 13 ^h 29 ^m				Mag: +0.1 PMG: 12 ^h 32 ^m					
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	232	47.2	222	15.3	+3	58.0	323	54.7	-24	52.7	157	21.7	+22	23.4	171	29.0	+19	04.9				
1	247	49.7	237	16.0		58.4	338	57.2		52.9	172	23.6		23.4	186	31.1		05.0				
2	262	52.1	252	16.8		58.8	353	59.8		53.0	187	25.5		23.5	201	33.3		05.0				
3	277	54.6	267	17.5		59.2	9	02.4		53.2	202	27.3		23.5	216	35.4		05.1				
4	292	57.1	282	18.3	+3	59.6	24	05.0		53.3	217	29.2		23.6	231	37.5		05.2				
5	307	59.5	297	19.0	+4	00.0	39	07.6	-24	53.5	232	31.1	+22	23.7	246	39.6	+19	05.2				
6	323	02.0	312	19.7	+4	00.4	54	10.2	-24	53.6	247	32.9	+22	23.7	261	41.8	+19	05.3				
7	338	04.5	327	20.5		00.8	69	12.8		53.7	262	34.8		23.8	276	43.9		05.4				
8	353	06.9	342	21.2		01.2	84	15.4		53.9	277	36.7		23.8	291	46.0		05.4				
9	8	09.4	357	21.9		01.6	99	17.9		54.0	292	38.5		23.9	306	48.2		05.5				
10	23	11.9	12	22.7		02.0	114	20.5		54.2	307	40.4		24.0	321	50.3		05.5				
11	38	14.3	27	23.4	+4	02.4	129	23.1	-24	54.3	322	42.2	+22	24.0	336	52.4	+19	05.6				
12	53	16.8	42	24.1	+4	02.8	144	25.7	-24	54.5	337	44.1	+22	24.1	351	54.6	+19	05.7				
13	68	19.2	57	24.9		03.2	159	28.3		54.6	352	46.0		24.1	6	56.7		05.7				
14	83	21.7	72	25.6		03.6	174	30.9		54.7	7	47.8		24.2	21	58.8		05.8				
15	98	24.2	87	26.3		04.0	189	33.5		54.9	22	49.7		24.3	37	01.0		05.9				
16	113	26.6	102	27.0		04.4	204	36.1		55.0	37	51.6		24.3	52	03.1		05.9				
17	128	29.1	117	27.7	+4	04.8	219	38.7	-24	55.2	52	53.4	+22	24.4	67	05.2	+19	06.0				
18	143	31.6	132	28.5	+4	05.2	234	41.3	-24	55.3	67	55.3	+22	24.4	82	07.3	+19	06.1				
19	158	34.0	147	29.2		05.6	249	44.0		55.5	82	57.2		24.5	97	09.5		06.1				
20	173	36.5	162	29.9		06.0	264	46.6		55.6	97	59.0		24.6	112	11.6		06.2				
21	188	39.0	177	30.6		06.4	279	49.2		55.7	113	00.9		24.6	127	13.7		06.3				
22	203	41.4	192	31.3		06.8	294	51.8		55.9	128	02.8		24.7	142	15.9		06.3				
23	218	43.9	207	32.0		07.2	309	54.4		56.0	143	04.6		24.7	157	18.0		06.4				
24	233	46.4	222	32.8	+4	07.6	324	57.0	-24	56.2	158	06.5	+22	24.8	172	20.1	+19	06.5				
Dif	—		+7		+4		+26		-1		+19		+1		+21		+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: 22 ^d 4 PHE { SD: 14'8 PMG: 6 ^h 57 ^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	h m m
0	180	55.4	+19 03.8	258	43.8	-14 52.4	60 N	20 34	21 39	** **	2 37 10	11 30 78		
1	195	55.4	04.3	273	17.1 ¹⁴³	43.1 ⁹³	58	20	21 17	23 06	28 13	38 75		
2	210	55.4	04.9	287	50.4 ¹⁴³	33.8 ⁹³	56	20 09	20 59	22 20	20 16	45 73		
3	225	55.4	05.5	302	23.8 ¹⁴⁴	24.3 ⁹⁵	54	19 58	44	21 52	13 18	51 71		
4	240	55.3	06.1	316	57.2 ¹⁴⁴	14.9 ⁹⁴	52	49	32	31	07 20	11 57 68		
5	255	55.3	+19 06.6	331	30.6 ¹⁴⁴	-14 05.3 ⁹⁶	50	19 41	20 21	21 14	2 01 22	12 02 66		
6	270	55.3	+19 07.2	346	04.0 ¹⁴⁴	-13 55.7 ⁹⁶	45	19 23	19 58	20 42	1 49 25	12 13 62		
7	285	55.3	07.8	0	37.5 ¹⁴⁵	46.0 ⁹⁷	40	19 09	40	18	39 28	22 59		
8	300	55.3	08.4	15	11.0 ¹⁴⁵	36.3 ⁹⁷	35	18 57	26	20 00	30 31	30 56		
9	315	55.3	08.9	29	44.6 ¹⁴⁶	26.5 ⁹⁸	30	47	19 13	19 45	23 33	37 54		
10	330	55.3	09.5	44	18.1 ¹⁴⁵	16.7 ⁹⁸	20	29	18 53	21	1 09 37	48 50		
11	345	55.3	+19 10.1	58	51.7 ¹⁴⁶	-13 06.8 ⁹⁹	10 N	18 14	18 36	19 03	0 58 40	12 58 47		
12	0	55.2	+19 10.7	73	25.4 ¹⁴⁷	-12 56.8 ¹⁰⁰	0	18 00	18 22	18 47	0 47 43	13 08 43		
13	15	55.2	11.2	87	59.0 ¹⁴⁶	46.8 ¹⁰⁰	10 S	17 46	18 08	34	36 46	17 40		
14	30	55.2	11.8	102	32.7 ¹⁴⁷	36.7 ¹⁰¹	20	31	17 54	21	24 50	27 36		
15	45	55.2	12.4	117	06.4 ¹⁴⁷	26.6 ¹⁰¹	30	14	39	08	11 54	39 32		
16	60	55.2	12.9	131	40.1 ¹⁴⁷	16.4 ¹⁰²	35	17 04	31	18 02	0 03 56	45 30		
17	75	55.2	+19 13.5	146	13.9 ¹⁴⁸	-12 06.2 ¹⁰²	40	16 53	17 22	17 55	** ** **	13 52 28		
18	90	55.2	+19 14.1	160	47.7 ¹⁴⁸	-11 55.9 ¹⁰³	45	16 40	17 12	17 48	** ** **	14 01 24		
19	105	55.1	14.7	175	21.5 ¹⁴⁸	45.5 ¹⁰⁴	50	24	17 00	40	** ** **	11 21		
20	120	55.1	15.2	189	55.3 ¹⁴⁸	35.1 ¹⁰⁴	52	17	16 54	36	** ** **	16 18		
21	135	55.1	15.8	204	29.1 ¹⁴⁸	24.7 ¹⁰⁴	54	16 08	49	32	** ** **	21 17		
22	150	55.1	16.4	219	03.0 ¹⁴⁹	14.2 ¹⁰⁵	56	15 59	42	28	** ** **	27 14		
23	165	55.1	16.9	233	36.9 ¹⁴⁹	-11 03.6 ¹⁰⁶	58	49	35	24	** ** **	33 12		
24	180	55.1	+19 17.5	248	10.8 ¹⁴⁹	-10 53.0 ¹⁰⁶	60 S	15 37	16 26	17 19	** ** **	14 40 10		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 23 ^m 5		Mag: -4.7 PMG: 9 ^h 09 ^m			Mag: -1.6 PMG: 2 ^h 20 ^m			Mag: -2.0 PMG: 13 ^h 26 ^m			Mag: +0.1 PMG: 12 ^h 29 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	233	46.4	222	32.8	+4 07.6	324	57.0	-24 56.2	158	06.5	+22 24.8	172	20.1	+19 06.5
1	248	48.8	237	33.5	08.0	339	59.6	56.3	173	08.3	24.9	187	22.3	06.5
2	263	51.3	252	34.2	08.5	355	02.2	56.5	188	10.2	24.9	202	24.4	06.6
3	278	53.7	267	34.9	08.9	10	04.9	56.6	203	12.1	25.0	217	26.5	06.6
4	293	56.2	282	35.6	09.3	25	07.5	56.8	218	13.9	25.0	232	28.7	06.7
5	308	58.7	297	36.3	+4 09.7	40	10.1	-24 56.9	233	15.8	+22 25.1	247	30.8	+19 06.8
6	324	01.1	312	37.0	+4 10.1	55	12.7	-24 57.0	248	17.7	+22 25.2	262	32.9	+19 06.8
7	339	03.6	327	37.7	10.5	70	15.4	57.2	263	19.5	25.2	277	35.0	06.9
8	354	06.1	342	38.4	11.0	85	18.0	57.3	278	21.4	25.3	292	37.2	07.0
9	9	08.5	357	39.1	11.4	100	20.6	57.5	293	23.2	25.3	307	39.3	07.0
10	24	11.0	12	39.8	11.8	115	23.2	57.6	308	25.1	25.4	322	41.4	07.1
11	39	13.5	27	40.5	+4 12.2	130	25.9	-24 57.8	323	27.0	+22 25.5	337	43.6	+19 07.2
12	54	15.9	42	41.2	+4 12.6	145	28.5	-24 57.9	338	28.8	+22 25.5	352	45.7	+19 07.2
13	69	18.4	57	41.9	13.1	160	31.1	58.1	353	30.7	25.6	7	47.8	07.3
14	84	20.8	72	42.6	13.5	175	33.8	58.2	8	32.6	25.6	22	50.0	07.4
15	99	23.3	87	43.2	13.9	190	36.4	58.3	23	34.4	25.7	37	52.1	07.4
16	114	25.8	102	43.9	14.3	205	39.1	58.5	38	36.3	25.7	52	54.2	07.5
17	129	28.2	117	44.6	+4 14.8	220	41.7	-24 58.6	53	38.1	+22 25.8	67	56.3	+19 07.5
18	144	30.7	132	45.3	+4 15.2	235	44.3	-24 58.8	68	40.0	+22 25.9	82	58.5	+19 07.6
19	159	33.2	147	46.0	15.6	250	47.0	58.9	83	41.9	25.9	98	00.6	07.7
20	174	35.6	162	46.7	16.1	265	49.6	59.1	98	43.7	26.0	113	02.7	07.7
21	189	38.1	177	47.4	16.5	280	52.3	59.2	113	45.6	26.0	128	04.9	07.8
22	204	40.6	192	48.0	16.9	295	54.9	59.4	128	47.5	26.1	143	07.0	07.9
23	219	43.0	207	48.7	17.4	310	57.6	59.5	143	49.3	26.2	158	09.1	07.9
24	234	45.5	222	49.4	+4 17.8	326	00.2	-24 59.7	158	51.2	+22 26.2	173	11.3	+19 08.0
Dif	—		+7		+4	+26		-1	+19		+1	+21		+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: 23 ^d 4 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 PMG: 7 ^h 41 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	55.1	+19	17.5	248	10.8	-10	53.0	60 N	**	**	2	13	3	18	2	47	
1	195	55.0		18.1	262	44.7 ¹⁴⁹		42.4 ¹⁰⁶	58	0	47	35	32	41	11		53	
2	210	55.0		18.6	277	18.7 ¹⁵⁰		31.7 ¹⁰⁷	56	1	32	2	53	36	13	12	58	
3	225	55.0		19.2	291	52.6 ¹⁴⁹		20.9 ¹⁰⁸	54	2	00	3	08	31	16	13	02	
4	240	55.0		19.7	306	26.6 ¹⁵⁰	-10	10.1 ¹⁰⁸	52		21	21	4	03	27	17	05	
5	255	55.0	+19	20.3	321	00.6 ¹⁵⁰	-9	59.3 ¹⁰⁸	50	2	38	3	32	4	11	2	23	
6	270	54.9	+19	20.9	335	34.6 ¹⁵⁰	-9	48.4 ¹⁰⁹	45	3	10	3	54	4	29	2	14	
7	285	54.9		21.4	350	08.6 ¹⁵⁰		37.4 ¹¹⁰	40		34	4	12	43	07	27	21	
8	300	54.9		22.0	4	42.6 ¹⁵⁰		26.4 ¹¹⁰	35	3	52	27	4	55	2	01	29	
9	315	54.9		22.6	19	16.7 ¹⁵¹		15.4 ¹¹⁰	30	4	08	39	5	05	1	56	31	
10	330	54.9		23.1	33	50.7 ¹⁵⁰	-9	04.3 ¹¹¹	20		31	4	59	23	46	36	38	
11	345	54.8	+19	23.7	48	24.8 ¹⁵¹	-8	53.2 ¹¹¹	10 N	4	50	5	16	5	39	1	38	
12	0	54.8	+19	24.2	62	58.8 ¹⁵⁰	-8	42.1 ¹¹¹	0	5	05	5	31	5	53	1	30	
13	15	54.8		24.8	77	32.9 ¹⁵¹		30.8 ¹¹³	10 S		19	45	6	07	22	47	13	
14	30	54.8		25.3	92	07.0 ¹⁵¹		19.6 ¹¹²	20	32	5	59	22	14	50	14	03	
15	45	54.8		25.9	106	41.1 ¹⁵¹	-8	08.3 ¹¹³	30	44	6	14	39	1	05	54	11	
16	60	54.7		26.5	121	15.2 ¹⁵¹	-7	57.0 ¹¹³	35	51	22	6	49	0	59	57	15	
17	75	54.7	+19	27.0	135	49.3 ¹⁵¹	-7	45.6 ¹¹⁴	40	5	58	6	31	7	00	0	53	
18	90	54.7	+19	27.6	150	23.4 ¹⁵¹	-7	34.2 ¹¹⁴	45	6	05	6	41	7	13	0	45	
19	105	54.7		28.1	164	57.6 ¹⁵²		22.7 ¹¹⁵	50	14	53	29		37	66	32	18	
20	120	54.7		28.7	179	31.7 ¹⁵¹	-7	11.3 ¹¹⁴	52	17	6	59	37	32	69	34	18	
21	135	54.6		29.2	194	05.8 ¹⁵¹	-6	59.7 ¹¹⁶	54	21	7	05	45	28	71	38	15	
22	150	54.6		29.8	208	39.9 ¹⁵¹		48.2 ¹¹⁵	56	25	12	7	55	23	73	41	13	
23	165	54.6		30.3	223	14.1 ¹⁵²		36.6 ¹¹⁶	58	30	19	8	05	17	76	45	11	
24	180	54.6	+19	30.9	237	48.2 ¹⁵¹	-6	24.9 ¹¹⁷	60 S	6	35	7	27	8	18	0	11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 19 ^m 6		Mag: -4.7 PMG: 9 ^h 08 ^m				Mag: -1.6 PMG: 2 ^h 16 ^m				Mag: -2.0 PMG: 13 ^h 23 ^m				Mag: +0.1 PMG: 12 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	234	45.5	222	49.4	+4	17.8	326	00.2	-24	59.7	158	51.2	+22	26.2	173	11.3	+19	08.0
1	249	48.0	237	50.1		18.2	341	02.9		59.8	173	53.0		26.3	188	13.4		08.1
2	264	50.4	252	50.7		18.7	356	05.5	-24	59.9	188	54.9		26.3	203	15.5		08.1
3	279	52.9	267	51.4		19.1	11	08.2	-25	00.1	203	56.8		26.4	218	17.6		08.2
4	294	55.3	282	52.1		19.5	26	10.8		00.2	218	58.6		26.5	233	19.8		08.3
5	309	57.8	297	52.8	+4	20.0	41	13.5	-25	00.4	234	00.5	+22	26.5	248	21.9	+19	08.3
6	325	00.3	312	53.4	+4	20.4	56	16.1	-25	00.5	249	02.4	+22	26.6	263	24.0	+19	08.4
7	340	02.7	327	54.1		20.9	71	18.8		00.7	264	04.2		26.6	278	26.2		08.4
8	355	05.2	342	54.8		21.3	86	21.5		00.8	279	06.1		26.7	293	28.3		08.5
9	10	07.7	357	55.4		21.7	101	24.1		01.0	294	07.9		26.8	308	30.4		08.6
10	25	10.1	12	56.1		22.2	116	26.8		01.1	309	09.8		26.8	323	32.6		08.6
11	40	12.6	27	56.7	+4	22.6	131	29.5	-25	01.3	324	11.7	+22	26.9	338	34.7	+19	08.7
12	55	15.1	42	57.4	+4	23.1	146	32.1	-25	01.4	339	13.5	+22	26.9	353	36.8	+19	08.8
13	70	17.5	57	58.1		23.5	161	34.8		01.6	354	15.4		27.0	8	38.9		08.8
14	85	20.0	72	58.7		24.0	176	37.5		01.7	9	17.2		27.0	23	41.1		08.9
15	100	22.5	87	59.4		24.4	191	40.1		01.8	24	19.1		27.1	38	43.2		09.0
16	115	24.9	103	00.0		24.9	206	42.8		02.0	39	21.0		27.2	53	45.3		09.0
17	130	27.4	118	00.7	+4	25.3	221	45.5	-25	02.1	54	22.8	+22	27.2	68	47.5	+19	09.1
18	145	29.8	133	01.3	+4	25.8	236	48.2	-25	02.3	69	24.7	+22	27.3	83	49.6	+19	09.2
19	160	32.3	148	02.0		26.2	251	50.8		02.4	84	26.5		27.3	98	51.7		09.2
20	175	34.8	163	02.6		26.7	266	53.5		02.6	99	28.4		27.4	113	53.9		09.3
21	190	37.2	178	03.3		27.1	281	56.2		02.7	114	30.3		27.5	128	56.0		09.3
22	205	39.7	193	03.9		27.6	296	58.9		02.9	129	32.1		27.5	143	58.1		09.4
23	220	42.2	208	04.6		28.0	312	01.6		03.0	144	34.0		27.6	159	00.2		09.5
24	235	44.6	223	05.2	+4	28.5	327	04.3	-25	03.2	159	35.9	+22	27.6	174	02.4	+19	09.5
Dif	—		+7		+4		+27		-1		+19		+1		+21		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 4	PHE {	4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 4			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 4								SD: 15 ^h 0			PMG: 8 ^h 23 ^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	m	h m m	m
0	180	54.6	+ 19 30.9	237	48.2	-6 24.9		60 N	20 39	21 46	** **	2 56 7		14 07 81	
1	195	54.5		31.4	252 22.3 ¹⁵¹	13.3 ¹¹⁶		58	25	22	23 25	52 11		09 78	
2	210	54.5		32.0	266 56.4 ¹⁵¹	-6 01.5 ¹¹⁸		56	12	21 04	22 28	49 13		11 75	
3	225	54.5		32.5	281 30.6 ¹⁵²	-5 49.8 ¹¹⁷		54	20 01	20 48	21 58	47 15		13 72	
4	240	54.5		33.1	296 04.7 ¹⁵¹	38.0 ¹¹⁸		52	19 52	35	36	44 17		14 71	
5	255	54.4	+ 19 33.6	310	38.8 ¹⁵¹	-5 26.2 ¹¹⁸		50	19 44	20 24	21 18	2 42 19		14 16 68	
6	270	54.4	+ 19 34.2	325	12.9 ¹⁵¹	-5 14.4 ¹¹⁸		45	19 26	20 00	20 45	2 38 22		14 19 64	
7	285	54.4		34.7	339 47.0 ¹⁵¹	-5 02.5 ¹¹⁹		40	19 11	19 42	21	34 25		21 61	
8	300	54.4		35.3	354 21.1 ¹⁵¹	-4 50.6 ¹¹⁹		35	18 59	27	20 02	30 29		23 58	
9	315	54.3		35.8	8 55.2 ¹⁵¹	38.7 ¹¹⁹		30	48	19 15	19 46	27 31		25 55	
10	330	54.3		36.4	23 29.3 ¹⁵¹	26.7 ¹²⁰		20	30	18 54	22	22 35		28 51	
11	345	54.3	+ 19 36.9	38	03.4 ¹⁵¹	-4 14.7 ¹²⁰		10 N	18 14	18 37	19 03	2 17 40		14 31 47	
12	0	54.3	+ 19 37.5	52	37.4 ¹⁵⁰	-4 02.7 ¹²⁰		0	18 00	18 22	18 47	2 13 43		14 34 43	
13	15	54.2		38.0	67 11.5 ¹⁵¹	-3 50.7 ¹²⁰		10 S	17 46	18 08	33	09 46		36 40	
14	30	54.2		38.6	81 45.5 ¹⁵⁰	38.6 ¹²¹		20	30	17 54	20	2 04 50		39 35	
15	45	54.2		39.1	96 19.5 ¹⁵⁰	26.5 ¹²¹		30	13	38	08	1 59 55		42 31	
16	60	54.2		39.6	110 53.5 ¹⁵⁰	14.4 ¹²¹		35	17 03	30	18 01	56 57		44 28	
17	75	54.1	+ 19 40.2	125	27.5 ¹⁵⁰	-3 02.2 ¹²²		40	16 51	17 21	17 54	1 52 60		14 45 26	
18	90	54.1	+ 19 40.7	140	01.5 ¹⁵⁰	-2 50.1 ¹²¹		45	16 38	17 10	17 46	1 48 64		14 48 22	
19	105	54.1		41.3	154 35.5 ¹⁵⁰	37.9 ¹²²		50	22	16 58	37	43 68		50 19	
20	120	54.0		41.8	169 09.4 ¹⁴⁹	25.7 ¹²²		52	14	52	34	41 70		52 16	
21	135	54.0		42.4	183 43.4 ¹⁵⁰	13.4 ¹²³		54	16 05	46	30	39 71		53 15	
22	150	54.0		42.9	198 17.3 ¹⁴⁹	-2 01.2 ¹²²		56	15 56	39	25	36 74		54 13	
23	165	54.0		43.4	212 51.2 ¹⁴⁹	-1 48.9 ¹²³		58	45	31	21	33 76		56 10	
24	180	53.9	+ 19 44.0	227	25.0 ¹⁴⁸	-1 36.6 ¹²³		60 S	15 32	16 23	17 15	1 29 80		14 58 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 15 ^m 7		Mag: -4.6 PMG: 9 ^h 07 ^m		Mag: -1.6 PMG: 2 ^h 11 ^m		Mag: -2.0 PMG: 13 ^h 20 ^m		Mag: +0.1 PMG: 12 ^h 22 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	
h	°	°	°	°	°	°	°	°	°	°
0	235	44.6	223 05.2	+4 28.5	327 04.3	-25 03.2	159 35.9	+22 27.6	174 02.4	+19 09.5
1	250	47.1	238 05.9	29.0	342 06.9	03.3	174 37.7	27.7	189 04.5	09.6
2	265	49.6	253 06.5	29.4	357 09.6	03.5	189 39.6	27.7	204 06.6	09.7
3	280	52.0	268 07.1	29.9	12 12.3	03.6	204 41.4	27.8	219 08.8	09.7
4	295	54.5	283 07.8	30.3	27 15.0	03.8	219 43.3	27.9	234 10.9	09.8
5	310	56.9	298 08.4	+4 30.8	42 17.7	-25 03.9	234 45.2	+22 27.9	249 13.0	+19 09.9
6	325	59.4	313 09.1	+4 31.3	57 20.4	-25 04.0	249 47.0	+22 28.0	264 15.1	+19 09.9
7	341	01.9	328 09.7	31.7	72 23.1	04.2	264 48.9	28.0	279 17.3	10.0
8	356	04.3	343 10.3	32.2	87 25.8	04.3	279 50.7	28.1	294 19.4	10.0
9	11	06.8	358 11.0	32.7	102 28.5	04.5	294 52.6	28.1	309 21.5	10.1
10	26	09.3	13 11.6	33.1	117 31.2	04.6	309 54.5	28.2	324 23.7	10.2
11	41	11.7	28 12.2	+4 33.6	132 33.9	-25 04.8	324 56.3	+22 28.3	339 25.8	+19 10.2
12	56	14.2	43 12.9	+4 34.1	147 36.6	-25 04.9	339 58.2	+22 28.3	354 27.9	+19 10.3
13	71	16.7	58 13.5	34.5	162 39.3	05.1	355 00.0	28.4	9 30.1	10.4
14	86	19.1	73 14.1	35.0	177 42.0	05.2	10 01.9	28.4	24 32.2	10.4
15	101	21.6	88 14.7	35.5	192 44.7	05.4	25 03.7	28.5	39 34.3	10.5
16	116	24.1	103 15.4	35.9	207 47.4	05.5	40 05.6	28.6	54 36.4	10.6
17	131	26.5	118 16.0	+4 36.4	222 50.1	-25 05.7	55 07.5	+22 28.6	69 38.6	+19 10.6
18	146	29.0	133 16.6	+4 36.9	237 52.9	-25 05.8	70 09.3	+22 28.7	84 40.7	+19 10.7
19	161	31.4	148 17.2	37.3	252 55.6	06.0	85 11.2	28.7	99 42.8	10.7
20	176	33.9	163 17.8	37.8	267 58.3	06.1	100 13.0	28.8	114 45.0	10.8
21	191	36.4	178 18.5	38.3	283 01.0	06.3	115 14.9	28.8	129 47.1	10.9
22	206	38.8	193 19.1	38.8	298 03.7	06.4	130 16.8	28.9	144 49.2	10.9
23	221	41.3	208 19.7	39.3	313 06.4	06.6	145 18.6	29.0	159 51.3	11.0
24	236	43.8	223 20.3	+4 39.7	328 09.2	-25 06.7	160 20.5	+22 29.0	174 53.5	+19 11.1
Dif	—		+6	+5	+27	-1	+19	+1	+21	+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: 25 ^d 4 PHE { SD: 15 ^h 1 PMG: 9 ^h 06 ^m										
				R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	180	53.9	+19 44.0	227	25.0	-1 36.6	60 N	** **	2 06	3 13	3 03 8		15 28 83	
1	195	53.9	44.5	241	58.9 ¹⁴⁹	24.3 ¹²³	58	0 27	30	28	03 10		27 80	
2	210	53.9	45.0	256	32.7 ¹⁴⁸	-1 11.9 ¹²⁴	56	1 24	2 48	40	02 13		26 77	
3	225	53.8	45.6	271	06.5 ¹⁴⁸	-0 59.6 ¹²³	54	1 55	3 04	3 51	02 15		25 75	
4	240	53.8	46.1	285	40.3 ¹⁴⁸	47.2 ¹²⁴	52	2 17	17	4 00	01 18		25 73	
5	255	53.8	+19 46.7	300	14.0 ¹⁴⁷	-0 34.8 ¹²⁴	50	2 34	3 29	4 09	3 01 19		15 24 71	
6	270	53.8	+19 47.2	314	47.7 ¹⁴⁷	-0 22.4 ¹²⁴	45	3 08	3 52	4 27	3 00 23		15 23 67	
7	285	53.7	47.7	329	21.4 ¹⁴⁷	-0 10.0 ¹²⁴	40	32	4 10	41	2 59 27		22 63	
8	300	53.7	48.3	343	55.1 ¹⁴⁷	+0 02.4 ¹²⁴	35	3 51	25	4 54	59 29		21 60	
9	315	53.7	48.8	358	28.7 ¹⁴⁶	14.9 ¹²⁵	30	4 06	38	5 04	58 32		20 58	
10	330	53.6	49.3	13	02.3 ¹⁴⁶	27.3 ¹²⁴	20	31	4 59	23	57 37		19 53	
11	345	53.6	+19 49.9	27	35.9 ¹⁴⁶	+0 39.8 ¹²⁵	10 N	4 50	5 16	5 38	2 57 40		15 18 48	
12	0	53.6	+19 50.4	42	09.5 ¹⁴⁶	+0 52.3 ¹²⁵	0	5 05	5 31	5 53	2 56 44		15 17 44	
13	15	53.5	50.9	56	43.0 ¹⁴⁵	+1 04.8 ¹²⁵	10 S	19	45	6 07	55 48		16 41	
14	30	53.5	51.4	71	16.4 ¹⁴⁴	17.2 ¹²⁴	20	32	5 59	23	54 52		14 37	
15	45	53.5	52.0	85	49.9 ¹⁴⁵	29.7 ¹²⁵	30	46	6 15	40	54 56		13 32	
16	60	53.4	52.5	100	23.3 ¹⁴⁴	42.3 ¹²⁶	35	52	23	6 50	53 59		12 30	
17	75	53.4	+19 53.0	114	56.6 ¹⁴³	+1 54.8 ¹²⁵	40	5 59	6 33	7 02	2 52 62		15 11 27	
18	90	53.4	+19 53.6	129	30.0 ¹⁴⁴	+2 07.3 ¹²⁵	45	6 07	6 43	7 15	2 52 65		15 10 24	
19	105	53.3	54.1	144	03.3 ¹⁴³	19.8 ¹²⁵	50	16	6 56	32	51 70		09 19	
20	120	53.3	54.6	158	36.5 ¹⁴²	32.3 ¹²⁵	52	20	7 02	40	51 71		08 18	
21	135	53.3	55.1	173	09.7 ¹⁴²	44.9 ¹²⁶	54	24	08	48	50 74		08 15	
22	150	53.2	55.7	187	42.9 ¹⁴²	+2 57.4 ¹²⁵	56	28	15	7 58	50 76		07 13	
23	165	53.2	56.2	202	16.0 ¹⁴¹	+3 09.9 ¹²⁵	58	33	22	8 09	49 79		06 11	
24	180	53.2	+19 56.7	216	49.1 ¹⁴¹	+3 22.5 ¹²⁶	60 S	6 38	7 31	8 22	2 49 82		15 05 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 8 ^h 11 ^m 7		Mag: -4.6 PMG: 9 ^h 06 ^m		Mag: -1.7 PMG: 2 ^h 07 ^m		Mag: -2.0 PMG: 13 ^h 17 ^m		Mag: +0.1 PMG: 12 ^h 19 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	236	43.8	223	20.3	+4 39.7	328 09.2	-25 06.7	160 20.5	+22 29.0	174 53.5	+19 11.1
1	251	46.2	238	20.9	40.2	343 11.9	06.9	175 22.3	29.1	189 55.6	11.1
2	266	48.7	253	21.5	40.7	358 14.6	07.0	190 24.2	29.1	204 57.7	11.2
3	281	51.2	268	22.1	41.2	13 17.3	07.1	205 26.1	29.2	219 59.9	11.3
4	296	53.6	283	22.7	41.7	28 20.1	07.3	220 27.9	29.2	235 02.0	11.3
5	311	56.1	298	23.3	+4 42.1	43 22.8	-25 07.4	235 29.8	+22 29.3	250 04.1	+19 11.4
6	326	58.6	313	23.9	+4 42.6	58 25.5	-25 07.6	250 31.6	+22 29.4	265 06.2	+19 11.4
7	342	01.0	328	24.6	43.1	73 28.3	07.7	265 33.5	29.4	280 08.4	11.5
8	357	03.5	343	25.2	43.6	88 31.0	07.9	280 35.3	29.5	295 10.5	11.6
9	12	05.9	358	25.8	44.1	103 33.7	08.0	295 37.2	29.5	310 12.6	11.6
10	27	08.4	13	26.4	44.6	118 36.5	08.2	310 39.1	29.6	325 14.8	11.7
11	42	10.9	28	27.0	+4 45.0	133 39.2	-25 08.3	325 40.9	+22 29.6	340 16.9	+19 11.8
12	57	13.3	43	27.6	+4 45.5	148 41.9	-25 08.5	340 42.8	+22 29.7	355 19.0	+19 11.8
13	72	15.8	58	28.1	46.0	163 44.7	08.6	355 44.6	29.8	10 21.1	11.9
14	87	18.3	73	28.7	46.5	178 47.4	08.8	10 46.5	29.8	25 23.3	12.0
15	102	20.7	88	29.3	47.0	193 50.2	08.9	25 48.4	29.9	40 25.4	12.0
16	117	23.2	103	29.9	47.5	208 52.9	09.1	40 50.2	29.9	55 27.5	12.1
17	132	25.7	118	30.5	+4 48.0	223 55.7	-25 09.2	55 52.1	+22 30.0	70 29.7	+19 12.1
18	147	28.1	133	31.1	+4 48.5	238 58.4	-25 09.4	70 53.9	+22 30.0	85 31.8	+19 12.2
19	162	30.6	148	31.7	49.0	254 01.2	09.5	85 55.8	30.1	100 33.9	12.3
20	177	33.0	163	32.3	49.5	269 03.9	09.7	100 57.6	30.2	115 36.0	12.3
21	192	35.5	178	32.9	50.0	284 06.7	09.8	115 59.5	30.2	130 38.2	12.4
22	207	38.0	193	33.5	50.5	299 09.4	10.0	131 01.4	30.3	145 40.3	12.5
23	222	40.4	208	34.0	51.0	314 12.2	10.1	146 03.2	30.3	160 42.4	12.5
24	237	42.9	223	34.6	+4 51.5	329 14.9	-25 10.3	161 05.1	+22 30.4	175 44.6	+19 12.6
Dif	—		+6	+5		+27	-1	+19	+1	+21	+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: 26 ^d 4 PHE { 4 ^h : 56/3 12 ^h : 56/5 20 ^h : 56/7 SD: 15/3 PMG: 9 ^h 51 ^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	180	53.2	+19 56.7	216	49.1	+3 22.5	60 N	20 43	21 53	** **	3 11	9	16 51	86	
1	195	53.1	57.2	231	22.1 ¹⁴⁰	35.0 ¹²⁵	58	28	28	** **	13	12	47	83	
2	210	53.1	57.8	245	55.1 ¹⁴⁰	+3 47.5 ¹²⁵	56	16	21 08	22 37	15	15	43	81	
3	225	53.1	58.3	260	28.1 ¹⁴⁰	+4 00.1 ¹²⁶	54	20 05	20 52	22 04	17	17	40	78	
4	240	53.0	58.8	275	01.0 ¹³⁹	12.6 ¹²⁵	52	19 55	39	21 40	19	18	38	75	
5	255	53.0	+19 59.3	289	33.8 ¹³⁸	+4 25.1 ¹²⁵	50	19 46	20 27	21 22	3 20	21	16 35	73	
6	270	52.9	+19 59.8	304	06.6 ¹³⁸	+4 37.6 ¹²⁵	45	19 28	20 03	20 48	3 23	25	16 30	68	
7	285	52.9	+20 00.4	318	39.4 ¹³⁸	+4 50.1 ¹²⁵	40	13	19 44	23	26	28	25	65	
8	300	52.9	00.9	333	12.1 ¹³⁷	+5 02.6 ¹²⁵	35	19 00	29	20 04	28	31	21	62	
9	315	52.8	01.4	347	44.7 ¹³⁶	15.1 ¹²⁵	30	18 50	19 16	19 48	30	34	18	59	
10	330	52.8	01.9	2	17.3 ¹³⁶	27.6 ¹²⁵	20	31	18 55	23	34	38	12	55	
11	345	52.8	+20 02.4	16	49.9 ¹³⁶	+5 40.0 ¹²⁴	10 N	18 15	18 37	19 04	3 37	42	16 06	51	
12	0	52.7	+20 03.0	31	22.4 ¹³⁵	+5 52.5 ¹²⁵	0	18 00	18 22	18 48	3 40	46	16 01	48	
13	15	52.7	03.5	45	54.8 ¹³⁴	+6 04.9 ¹²⁴	10 S	17 45	18 08	33	43	50	15 57	43	
14	30	52.6	04.0	60	27.2 ¹³⁴	17.4 ¹²⁵	20	30	17 53	20	46	54	51	40	
15	45	52.6	04.5	74	59.5 ¹³³	29.8 ¹²⁴	30	12	38	07	50	58	45	35	
16	60	52.6	05.0	89	31.7 ¹³²	42.2 ¹²⁴	35	17 02	29	18 00	52	61	42	32	
17	75	52.5	+20 05.5	104	04.0 ¹³³	+6 54.6 ¹²⁴	40	16 50	17 19	17 52	3 54	65	15 38	30	
18	90	52.5	+20 06.0	118	36.1 ¹³¹	+7 06.9 ¹²³	45	16 36	17 08	17 44	3 57	68	15 34	26	
19	105	52.4	06.6	133	08.2 ¹³¹	19.3 ¹²⁴	50	19	16 56	35	4 01	72	28	22	
20	120	52.4	07.1	147	40.2 ¹³⁰	31.6 ¹²³	52	11	50	32	02	75	26	20	
21	135	52.4	07.6	162	12.2 ¹³⁰	43.9 ¹²³	54	16 03	43	27	04	77	23	18	
22	150	52.3	08.1	176	44.1 ¹²⁹	+7 56.2 ¹²³	56	15 53	36	23	06	79	20	16	
23	165	52.3	08.6	191	15.9 ¹²⁸	+8 08.5 ¹²³	58	41	28	18	08	82	17	13	
24	180	52.2	+20 09.1	205	47.7 ¹²⁸	+8 20.7 ¹²²	60 S	15 28	16 19	17 12	4 11	85	15 14	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 07 ^m 8		Mag: -4.6 PMG: 9 ^h 05 ^m		Mag: -1.7 PMG: 2 ^h 03 ^m		Mag: -2.0 PMG: 13 ^h 14 ^m		Mag: +0.1 PMG: 12 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	237	42.9	223	34.6	+4 51.5	329	14.9	-25 10.3	161	05.1
1	252	45.4	238	35.2	52.0	344	17.7	10.4	176	06.9
2	267	47.8	253	35.8	52.5	359	20.4	10.6	191	08.8
3	282	50.3	268	36.4	53.0	14	23.2	10.7	206	10.6
4	297	52.8	283	36.9	53.5	29	26.0	10.9	221	12.5
5	312	55.2	298	37.5	+4 54.0	44	28.7	-25 11.0	236	14.4
6	327	57.7	313	38.1	+4 54.5	59	31.5	-25 11.2	251	16.2
7	343	00.2	328	38.7	55.0	74	34.3	11.3	266	18.1
8	358	02.6	343	39.2	55.5	89	37.0	11.5	281	19.9
9	13	05.1	358	39.8	56.0	104	39.8	11.6	296	21.8
10	28	07.5	13	40.4	56.5	119	42.6	11.8	311	23.6
11	43	10.0	28	41.0	+4 57.0	134	45.3	-25 11.9	326	25.5
12	58	12.5	43	41.5	+4 57.5	149	48.1	-25 12.1	341	27.4
13	73	14.9	58	42.1	58.0	164	50.9	12.2	356	29.2
14	88	17.4	73	42.7	58.5	179	53.7	12.4	11	31.1
15	103	19.9	88	43.2	59.0	194	56.4	12.5	26	32.9
16	118	22.3	103	43.8	+4 59.5	209	59.2	12.7	41	34.8
17	133	24.8	118	44.4	+5 00.1	225	02.0	-25 12.8	56	36.6
18	148	27.3	133	44.9	+5 00.6	240	04.8	-25 13.0	71	38.5
19	163	29.7	148	45.5	01.1	255	07.6	13.1	86	40.3
20	178	32.2	163	46.0	01.6	270	10.4	13.3	101	42.2
21	193	34.6	178	46.6	02.1	285	13.2	13.4	116	44.1
22	208	37.1	193	47.1	02.6	300	15.9	13.5	131	45.9
23	223	39.6	208	47.7	03.1	315	18.7	13.7	146	47.8
24	238	42.0	223	48.3	+5 03.7	330	21.5	-25 13.8	161	49.6
Dif	—		+6	+5		+28	-1		+19	+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 6				Edad: 27 ^d 4 PHE { 4 ^h : 57 ^h 0 12 ^h : 57 ^h 2 20 ^h : 57 ^h 4 R°: 50 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	52.2	+20	09.1	205	47.7	+8	20.7	60 N	** **	2 00	3 09	3 20	12	18 17	90				
1	195	52.2		09.6	220	19.4 ¹²⁷		32.9 ¹²²	58	** **	25	24	25	15	10	86				
2	210	52.2		10.1	234	51.0 ¹²⁶		45.1 ¹²²	56	1 16	2 44	37	30	17	18 04	83				
3	225	52.1		10.6	249	22.6 ¹²⁶	+8	57.2 ¹²¹	54	1 49	3 00	48	34	19	17 58	80				
4	240	52.1		11.1	263	54.1 ¹²⁵	+9	09.4 ¹²²	52	2 12	14	3 58	37	22	53	78				
5	255	52.0	+20	11.7	278	25.5 ¹²⁴	+9	21.4 ¹²⁰	50	2 31	3 26	4 06	3 41	23	17 48	76				
6	270	52.0	+20	12.2	292	56.8 ¹²³	+9	33.5 ¹²¹	45	3 05	3 50	4 25	3 48	28	17 38	72				
7	285	52.0		12.7	307	28.1 ¹²³		45.5 ¹²⁰	40	30	4 09	40	54	31	30	68				
8	300	51.9		13.2	321	59.4 ¹²³	+9	57.5 ¹²⁰	35	3 49	24	4 52	3 59	34	23	65				
9	315	51.9		13.7	336	30.5 ¹²¹	+10	09.5 ¹²⁰	30	4 05	37	5 03	4 04	37	17	62				
10	330	51.8		14.2	351	01.6 ¹²¹		21.4 ¹¹⁹	20	30	4 58	22	12	41	17 07	57				
11	345	51.8	+20	14.7	5	32.6 ¹²⁰	+10	33.3 ¹¹⁹	10 N	4 49	5 16	5 38	4 19	45	16 57	54				
12	0	51.7	+20	15.2	20	03.5 ¹¹⁹	+10	45.1 ¹¹⁸	0	5 05	5 31	5 53	4 26	49	16 49	50				
13	15	51.7		15.7	34	34.3 ¹¹⁸	+10	57.0 ¹¹⁹	10 S	20	5 45	6 08	33	52	40	47				
14	30	51.7		16.2	49	05.1 ¹¹⁸	+11	08.7 ¹¹⁷	20	33	6 00	24	40	56	31	43				
15	45	51.6		16.7	63	35.8 ¹¹⁷		20.4 ¹¹⁷	30	47	16	41	48	61	20	39				
16	60	51.6		17.2	78	06.4 ¹¹⁶		32.1 ¹¹⁷	35	5 54	25	6 52	53	64	14	37				
17	75	51.5	+20	17.7	92	37.0 ¹¹⁶	+11	43.8 ¹¹⁷	40	6 01	6 34	7 04	4 59	66	16 08	33				
18	90	51.5	+20	18.2	107	07.4 ¹¹⁴	+11	55.3 ¹¹⁵	45	6 09	6 45	7 18	5 05	71	16 00	30				
19	105	51.4		18.7	121	37.8 ¹¹⁴	+12	06.9 ¹¹⁶	50	18	6 58	35	13	75	15 50	26				
20	120	51.4		19.2	136	08.1 ¹¹³		18.4 ¹¹⁵	52	22	7 04	43	17	77	46	24				
21	135	51.3		19.7	150	38.3 ¹¹²		29.8 ¹¹⁴	54	26	11	7 51	21	79	41	22				
22	150	51.3		20.2	165	08.5 ¹¹²		41.2 ¹¹⁴	56	31	18	8 01	25	82	36	19				
23	165	51.2		20.7	179	38.6 ¹¹¹	+12	52.5 ¹¹³	58	36	26	13	30	85	30	16				
24	180	51.2	+20	21.2	194	08.5 ¹⁰⁹	+13	03.8 ¹¹³	60 S	6 41	7 35	8 26	5 36	88	15 23	13				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 03 ^m 9				Mag: -4.6 PMG: 9 ^h 04 ^m				Mag: -1.7 PMG: 1 ^h 58 ^m				Mag: -2.0 PMG: 13 ^h 11 ^m				Mag: +0.1 PMG: 12 ^h 12 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	42.0	223	48.3	+5	03.7	330	21.5	-25	13.8	161	49.6	+22	31.7	176	35.6	+19	14.1		
1	253	44.5	238	48.8		04.2	345	24.3		14.0	176	51.5		31.8	191	37.8		14.2		
2	268	47.0	253	49.4		04.7	0	27.1		14.1	191	53.3		31.8	206	39.9		14.2		
3	283	49.4	268	49.9		05.2	15	29.9		14.3	206	55.2		31.9	221	42.0		14.3		
4	298	51.9	283	50.5		05.7	30	32.7		14.4	221	57.0		31.9	236	44.2		14.4		
5	313	54.4	298	51.0	+5	06.3	45	35.5	-25	14.6	236	58.9	+22	32.0	251	46.3	+19	14.4		
6	328	56.8	313	51.6	+5	06.8	60	38.3	-25	14.7	252	00.8	+22	32.1	266	48.4	+19	14.5		
7	343	59.3	328	52.1		07.3	75	41.1		14.9	267	02.6		32.1	281	50.5		14.5		
8	359	01.8	343	52.6		07.8	90	43.9		15.0	282	04.5		32.2	296	52.7		14.6		
9	14	04.2	358	53.2		08.4	105	46.7		15.2	297	06.3		32.2	311	54.8		14.7		
10	29	06.7	13	53.7		08.9	120	49.5		15.3	312	08.2		32.3	326	56.9		14.7		
11	44	09.1	28	54.3	+5	09.4	135	52.3	-25	15.5	327	10.0	+22	32.3	341	59.1	+19	14.8		
12	59	11.6	43	54.8	+5	09.9	150	55.1	-25	15.6	342	11.9	+22	32.4	357	01.2	+19	14.9		
13	74	14.1	58	55.3		10.5	165	58.0		15.8	357	13.7		32.4	12	03.3		14.9		
14	89	16.5	73	55.9		11.0	181	00.8		15.9	12	15.6		32.5	27	05.4		15.0		
15	104	19.0	88	56.4		11.5	196	03.6		16.1	27	17.5		32.6	42	07.6		15.0		
16	119	21.5	103	57.0		12.0	211	06.4		16.2	42	19.3		32.6	57	09.7		15.1		
17	134	23.9	118	57.5	+5	12.6	226	09.2	-25	16.4	57	21.2	+22	32.7	72	11.8	+19	15.2		
18	149	26.4	133	58.0	+5	13.1	241	12.0	-25	16.5	72	23.0	+22	32.7	87	13.9	+19	15.2		
19	164	28.9	148	58.6		13.6	256	14.9		16.7	87	24.9		32.8	102	16.1		15.3		
20	179	31.3	163	59.1		14.2	271	17.7		16.8	102	26.7		32.8	117	18.2		15.4		
21	194	33.8	178	59.6		14.7	286	20.5		17.0	117	28.6		32.9	132	20.3		15.4		
22	209	36.3	194	00.1		15.2	301	23.3		17.1	132	30.4		32.9	147	22.5		15.5		
23	224	38.7	209	00.7		15.8	316	26.2		17.3	147	32.3		33.0	162	24.6		15.6		
24	239	41.2	224	01.2	+5	16.3	331	29.0	-25	17.4	162	34.1	+22	33.0	177	26.7	+19	15.6		
Dif	—		+5		+5		+28		-1		+19		+1		+21		+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 6				Edad: 28 ^d 4 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1 R°: 53 ^m												
	hG ☉		Dec		hG ☾		Dif							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	51.2	+20	21.2	194	08.5	+13	03.8	60 N	20 48	21 59	** **	3 32 15	19 47 90			
1	195	51.2		21.7	208	38.4 ¹⁰⁹		15.0 ¹¹²	58	32	33	** **	40 19	36 86			
2	210	51.1		22.2	223	08.2 ¹⁰⁸		26.2 ¹¹²	56	19	21 13	22 46	47 22	27 83			
3	225	51.1		22.7	237	38.0 ¹⁰⁸		37.3 ¹¹¹	54	20 08	20 56	22 10	53 25	18 8			
4	240	51.0		23.1	252	07.6 ¹⁰⁶		48.3 ¹¹⁰	52	19 58	42	21 45	3 59 27	11 78			
5	255	51.0	+20	23.6	266	37.2 ¹⁰⁶	+13	59.3 ¹¹⁰	50	19 49	20 30	21 26	4 04 29	19 04 76			
6	270	50.9	+20	24.1	281	06.6 ¹⁰⁴	+14	10.3 ¹¹⁰	45	19 30	20 05	20 51	4 16 33	18 50 72			
7	285	50.9		24.6	295	36.0 ¹⁰⁴		21.1 ¹⁰⁸	40	15	19 46	25	25 36	38 69			
8	300	50.8		25.1	310	05.3 ¹⁰³		31.9 ¹⁰⁸	35	19 02	31	20 05	33 39	28 67			
9	315	50.8		25.6	324	34.6 ¹⁰³		42.6 ¹⁰⁷	30	18 51	19 17	19 49	41 41	19 65			
10	330	50.7		26.1	339	03.7 ¹⁰¹	+14	53.3 ¹⁰⁷	20	32	18 56	24	4 53 46	18 04 61			
11	345	50.7	+20	26.6	353	32.7 ¹⁰⁰	+15	03.9 ¹⁰⁶	10 N	18 15	18 38	19 04	5 04 49	17 51 58			
12	0	50.6	+20	27.1	8	01.7 ¹⁰⁰	+15	14.4 ¹⁰⁵	0	18 00	18 22	18 48	5 15 52	17 39 54			
13	15	50.6		27.6	22	30.5 ⁹⁸		24.8 ¹⁰⁴	10 S	17 45	18 08	33	25 56	27 51			
14	30	50.5		28.0	36	59.3 ⁹⁸		35.2 ¹⁰⁴	20	29	17 53	20	36 60	17 14 48			
15	45	50.5		28.5	51	28.0 ⁹⁷		45.5 ¹⁰³	30	11	37	18 06	49 64	16 59 44			
16	60	50.4		29.0	65	56.6 ⁹⁶	+15	55.7 ¹⁰²	35	17 00	28	17 59	5 57 66	51 42			
17	75	50.4	+20	29.5	80	25.1 ⁹⁵	+16	05.9 ¹⁰²	40	16 48	17 18	17 51	6 05 69	16 41 39			
18	90	50.3	+20	30.0	94	53.5 ⁹⁴	+16	15.9 ¹⁰⁰	45	16 34	17 07	17 43	6 16 72	16 30 36			
19	105	50.3		30.5	109	21.9 ⁹⁴		25.9 ¹⁰⁰	50	17	16 54	34	28 77	16 32			
20	120	50.2		31.0	123	50.1 ⁹²		35.8 ⁹⁹	52	09	48	30	34 78	10 30			
21	135	50.2		31.4	138	18.3 ⁹²		45.6 ⁹⁸	54	16 00	41	25	40 81	16 03 28			
22	150	50.1		31.9	152	46.3 ⁹⁰	+16	55.3 ⁹⁷	56	15 50	34	20	47 84	15 55 25			
23	165	50.1		32.4	167	14.3 ⁹⁰	+17	05.0 ⁹⁷	58	38	25	15	6 55 87	46 22			
24	180	50.0	+20	32.9	181	42.2 ⁸⁹	+17	14.5 ⁹⁵	60 S	15 25	16 16	17 10	7 04 91	15 36 19			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 59 ^m 9		Mag: -4.6 PMG: 9 ^h 04 ^m		Mag: -1.8 PMG: 1 ^h 54 ^m		Mag: -2.0 PMG: 13 ^h 08 ^m		Mag: +0.1 PMG: 12 ^h 08 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	239	41.2	224	01.2	+5	16.3	331	29.0	-25	17.4	162	34.1	+22	33.0	177	26.7	+19	15.6
1	254	43.6	239	01.7		16.8	346	31.8		17.6	177	36.0		33.1	192	28.8		15.7
2	269	46.1	254	02.2		17.4	1	34.6		17.7	192	37.9		33.2	207	31.0		15.7
3	284	48.6	269	02.8		17.9	16	37.5		17.9	207	39.7		33.2	222	33.1		15.8
4	299	51.0	284	03.3		18.5	31	40.3		18.0	222	41.6		33.3	237	35.2		15.9
5	314	53.5	299	03.8	+5	19.0	46	43.1	-25	18.2	237	43.4	+22	33.3	252	37.4	+19	15.9
6	329	56.0	314	04.3	+5	19.5	61	46.0	-25	18.3	252	45.3	+22	33.4	267	39.5	+19	16.0
7	344	58.4	329	04.8		20.1	76	48.8		18.5	267	47.1		33.4	282	41.6		16.1
8	0	00.9	344	05.4		20.6	91	51.7		18.6	282	49.0		33.5	297	43.7		16.1
9	15	03.4	359	05.9		21.2	106	54.5		18.8	297	50.8		33.5	312	45.9		16.2
10	30	05.8	14	06.4		21.7	121	57.3		18.9	312	52.7		33.6	327	48.0		16.2
11	45	08.3	29	06.9	+5	22.3	137	00.2	-25	19.1	327	54.5	+22	33.6	342	50.1	+19	16.3
12	60	10.7	44	07.4	+5	22.8	152	03.0	-25	19.3	342	56.4	+22	33.7	357	52.2	+19	16.4
13	75	13.2	59	07.9		23.3	167	05.9		19.4	357	58.2		33.8	12	54.4		16.4
14	90	15.7	74	08.4		23.9	182	08.7		19.6	13	00.1		33.8	27	56.5		16.5
15	105	18.1	89	08.9		24.4	197	11.6		19.7	28	02.0		33.9	42	58.6		16.6
16	120	20.6	104	09.5		25.0	212	14.4		19.9	43	03.8		33.9	58	00.8		16.6
17	135	23.1	119	10.0	+5	25.5	227	17.3	-25	20.0	58	05.7	+22	34.0	73	02.9	+19	16.7
18	150	25.5	134	10.5	+5	26.1	242	20.1	-25	20.2	73	07.5	+22	34.0	88	05.0	+19	16.7
19	165	28.0	149	11.0		26.6	257	23.0		20.3	88	09.4		34.1	103	07.1		16.8
20	180	30.5	164	11.5		27.2	272	25.8		20.5	103	11.2		34.1	118	09.3		16.9
21	195	32.9	179	12.0		27.7	287	28.7		20.6	118	13.1		34.2	133	11.4		16.9
22	210	35.4	194	12.5		28.3	302	31.6		20.8	133	14.9		34.2	148	13.5		17.0
23	225	37.9	209	13.0		28.8	317	34.4		20.9	148	16.8		34.3	163	15.7		17.1
24	240	40.3	224	13.5	+5	29.4	332	37.3	-25	21.1	163	18.6	+22	34.4	178	17.8	+19	17.1
Dif	—		+5		+5		+28		-2		+19		+1		+21		+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 7				Edad: 29 ^d 4 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 5 20 ^h : 58 ^h 7 Rº: 57 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	180	50.0	+20	32.9	181	42.2	+17	14.5	60 N	** **	1 53	3 05	3 47 24	21 17 85						
1	195	50.0		33.4	196	10.0 88		24.0 95	58	** *	2 20	20	3 59 27	21 02 82						
2	210	49.9		33.8	210	37.7 87		33.3 93	56	1 07	40	34	4 09 30	20 50 79						
3	225	49.9		34.3	225	05.3 86		42.6 93	54	1 43	2 57	45	18 32	39 77						
4	240	49.8		34.8	239	32.8 85	+17	51.8 92	52	2 08	3 11	3 55	26 35	29 75						
5	255	49.8	+20	35.3	254	00.3 85	+18	00.9 91	50	2 27	3 23	4 04	4 33 37	20 20 74						
6	270	49.7	+20	35.8	268	27.6 83	+18	09.9 90	45	3 02	3 48	4 23	4 49 40	20 02 71						
7	285	49.7		36.2	282	54.9 83		18.7 88	40	28	4 07	38	5 01 43	19 47 69						
8	300	49.6		36.7	297	22.0 81		27.5 88	35	3 48	23	4 51	12 46	35 66						
9	315	49.5		37.2	311	49.1 81		36.2 87	30	4 04	36	5 02	22 47	24 65						
10	330	49.5		37.7	326	16.1 80		44.8 86	20	29	4 57	21	39 50	19 05 62						
11	345	49.4	+20	38.1	340	43.0 79	+18	53.3 85	10 N	4 49	5 15	5 38	5 53 54	18 49 60						
12	0	49.4	+20	38.6	355	09.8 78	+19	01.6 83	0	5 05	5 31	5 53	6 07 56	18 33 58						
13	15	49.3		39.1	9	36.5 77		09.9 83	10 S	20	5 46	6 08	21 59	18 56						
14	30	49.3		39.5	24	03.2 77		18.1 82	20	34	6 01	24	36 61	18 02 53						
15	45	49.2		40.0	38	29.7 75		26.1 80	30	48	17	43	6 53 65	17 43 51						
16	60	49.2		40.5	52	56.2 75		34.0 79	35	5 55	26	6 53	7 03 67	33 48						
17	75	49.1	+20	41.0	67	22.6 74	+19	41.9 79	40	6 03	6 36	7 05	7 14 70	17 20 47						
18	90	49.0	+20	41.4	81	48.9 73	+19	49.6 77	45	6 11	6 47	7 20	7 28 72	17 06 44						
19	105	49.0		41.9	96	15.1 72	+19	57.2 76	50	20	7 00	37	45 75	16 48 41						
20	120	48.9		42.4	110	41.2 71	+20	04.6 74	52	24	06	45	7 52 78	40 39						
21	135	48.9		42.8	125	07.3 71		12.0 74	54	29	13	7 54	8 01 80	31 37						
22	150	48.8		43.3	139	33.2 69		19.2 72	56	34	21	8 05	11 82	20 35						
23	165	48.8		43.8	153	59.1 69		26.3 71	58	39	29	16	22 86	16 08 33						
24	180	48.7	+20	44.2	168	24.9 68	+20	33.3 70	60 S	6 44	7 38	8 30	8 35 90	15 55 28						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 56 ^m 0				Mag: -4.6 PMG: 9 ^h 03 ^m				Mag: -1.8 PMG: 1 ^h 49 ^m				Mag: -2.0 PMG: 13 ^h 05 ^m				Mag: +0.1 PMG: 12 ^h 05 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	240	40.3		224	13.5	+5	29.4	332	37.3	-25	21.1	163	18.6	+22	34.4	178	17.8	+19	17.1	
1	255	42.8		239	14.0		30.0	347	40.1		21.2	178	20.5		34.4	193	19.9		17.2	
2	270	45.2		254	14.5		30.5	2	43.0		21.4	193	22.3		34.5	208	22.0		17.2	
3	285	47.7		269	15.0		31.1	17	45.9		21.5	208	24.2		34.5	223	24.2		17.3	
4	300	50.2		284	15.5		31.6	32	48.7		21.7	223	26.0		34.6	238	26.3		17.4	
5	315	52.6		299	16.0	+5	32.2	47	51.6	-25	21.8	238	27.9	+22	34.6	253	28.4	+19	17.4	
6	330	55.1		314	16.5	+5	32.7	62	54.5	-25	22.0	253	29.8	+22	34.7	268	30.5	+19	17.5	
7	345	57.6		329	16.9		33.3	77	57.3		22.1	268	31.6		34.7	283	32.7		17.6	
8	1	00.0		344	17.4		33.8	93	00.2		22.3	283	33.5		34.8	298	34.8		17.6	
9	16	02.5		359	17.9		34.4	108	03.1		22.4	298	35.3		34.8	313	36.9		17.7	
10	31	05.0		14	18.4		35.0	123	06.0		22.6	313	37.2		34.9	328	39.1		17.7	
11	46	07.4		29	18.9	+5	35.5	138	08.9	-25	22.7	328	39.0	+22	34.9	343	41.2	+19	17.8	
12	61	09.9		44	19.4	+5	36.1	153	11.7	-25	22.9	343	40.9	+22	35.0	358	43.3	+19	17.9	
13	76	12.4		59	19.9		36.7	168	14.6		23.0	358	42.7		35.0	13	45.4		17.9	
14	91	14.8		74	20.3		37.2	183	17.5		23.2	13	44.6		35.1	28	47.6		18.0	
15	106	17.3		89	20.8		37.8	198	20.4		23.3	28	46.4		35.2	43	49.7		18.0	
16	121	19.7		104	21.3		38.3	213	23.3		23.5	43	48.3		35.2	58	51.8		18.1	
17	136	22.2		119	21.8	+5	38.9	228	26.2	-25	23.6	58	50.1	+22	35.3	73	53.9	+19	18.2	
18	151	24.7		134	22.3	+5	39.5	243	29.0	-25	23.8	73	52.0	+22	35.3	88	56.1	+19	18.2	
19	166	27.1		149	22.8		40.0	258	31.9		23.9	88	53.8		35.4	103	58.2		18.3	
20	181	29.6		164	23.2		40.6	273	34.8		24.1	103	55.7		35.4	119	00.3		18.4	
21	196	32.1		179	23.7		41.2	288	37.7		24.2	118	57.5		35.5	134	02.5		18.4	
22	211	34.5		194	24.2		41.7	303	40.6		24.4	133	59.4		35.5	149	04.6		18.5	
23	226	37.0		209	24.7		42.3	318	43.5		24.5	149	01.2		35.6	164	06.7		18.5	
24	241	39.5		224	25.1	+5	42.9	333	46.4	-25	24.7	164	03.1	+22	35.6	179	08.8	+19	18.6	
Dif	—		+5		+6		+29		-2		+19		+1		+21		+1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 30 ^d 4	PHE {	4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 8								SD: 16 ^h 0	PMG: 13 ^h 17 ^m	R°: 60 ^m	Final del crepúsculo			Salida de Luna
hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil	Náutico				Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	48.7	+20	44.2	168	24.9	+20	33.3	60 N	20 52	22 06	** **	4 11 36	22 42 70	
1	195	48.7		44.7	182	50.6	67	40.2	58	36	21 38	** **	26 40	24 69	
2	210	48.6		45.2	197	16.3	67	46.9	56	23	17	22 56	39 42	22 09 68	
3	225	48.5		45.6	211	41.8	65	+20	53.5	54	11	21 00	22 16	4 50 44	21 56 67
4	240	48.5		46.1	226	07.3	65	+21	00.0	52	20 01	20 45	21 50	5 01 45	44 67
5	255	48.4	+20	46.6	240	32.7	64	+21	06.4	50	19 51	20 33	21 30	5 10 46	21 34 66
6	270	48.4	+20	47.0	254	58.1	64	+21	12.6	45	19 32	20 08	20 53	5 29 49	21 13 65
7	285	48.3		47.5	269	23.3	62	18.7	40	16	19 48	27	44 52	20 56 64	
8	300	48.2		47.9	283	48.5	62	24.7	35	19 03	32	20 07	5 58 52	41 64	
9	315	48.2		48.4	298	13.6	61	30.5	30	18 52	19 19	19 51	6 09 54	29 63	
10	330	48.1		48.9	312	38.7	61	36.2	20	33	18 57	25	29 56	20 07 62	
11	345	48.1	+20	49.3	327	03.6	59	+21	41.7	10 N	18 16	18 39	19 05	6 47 58	19 49 61
12	0	48.0	+20	49.8	341	28.5	59	+21	47.2	0	18 00	18 23	18 48	7 03 59	19 31 60
13	15	47.9		50.2	355	53.4	59	52.4	10 S	17 45	18 07	33	20 60	19 14 59	
14	30	47.9		50.7	10	18.1	57	+21	57.6	20	29	17 52	19	37 63	18 55 59
15	45	47.8		51.2	24	42.8	57	+22	02.6	30	17 10	36	18 05	7 58 64	34 57
16	60	47.8		51.6	39	07.5	57	07.5	35	16 59	27	17 58	8 10 65	21 57	
17	75	47.7	+20	52.1	53	32.1	56	+22	12.2	40	16 47	17 17	17 50	8 24 66	18 07 56
18	90	47.6	+20	52.5	67	56.6	55	+22	16.7	45	16 33	17 05	17 42	8 40 68	17 50 54
19	105	47.6		53.0	82	21.0	54	21.2	50	15	16 52	32	9 00 71	29 53	
20	120	47.5		53.4	96	45.4	54	25.5	52	16 07	46	28	10 72	19 52	
21	135	47.5		53.9	111	09.8	54	29.6	41	15 57	39	23	21 73	17 08 51	
22	150	47.4		54.3	125	34.1	53	33.6	40	47	31	18	33 75	16 55 50	
23	165	47.3		54.8	139	58.3	52	37.4	38	35	23	13	9 48 76	41 47	
24	180	47.3	+20	55.2	154	22.5	52	+22	41.1	37	15 21	16 13	17 07	10 05 79	16 23 45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 52 ^m 1		Mag: -4.6 PMG: 9 ^h 02 ^m		Mag: -1.8 PMG: 1 ^h 45 ^m		Mag: -2.0 PMG: 13 ^h 02 ^m		Mag: +0.1 PMG: 12 ^h 02 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	241	39.5	224	25.1	+5	42.9	333	46.4	-25	24.7	
1	256	41.9	239	25.6		43.5	348	49.3		24.8	
2	271	44.4	254	26.1		44.0	3	52.2		25.0	
3	286	46.9	269	26.5		44.6	18	55.1		25.1	
4	301	49.3	284	27.0		45.2	33	58.0		25.3	
5	316	51.8	299	27.5	+5	45.7	49	00.9	-25	25.4	
6	331	54.2	314	27.9	+5	46.3	64	03.8	-25	25.6	
7	346	56.7	329	28.4		46.9	79	06.7		25.7	
8	1	59.2	344	28.9		47.5	94	09.6		25.9	
9	17	01.6	359	29.3		48.0	109	12.5		26.0	
10	32	04.1	14	29.8		48.6	124	15.4		26.2	
11	47	06.6	29	30.3	+5	49.2	139	18.4	-25	26.3	
12	62	09.0	44	30.7	+5	49.8	154	21.3	-25	26.5	
13	77	11.5	59	31.2		50.4	169	24.2		26.6	
14	92	14.0	74	31.6		50.9	184	27.1		26.8	
15	107	16.4	89	32.1		51.5	199	30.0		26.9	
16	122	18.9	104	32.5		52.1	214	32.9		27.1	
17	137	21.4	119	33.0	+5	52.7	229	35.9	-25	27.2	
18	152	23.8	134	33.5	+5	53.3	244	38.8	-25	27.4	
19	167	26.3	149	33.9		53.8	259	41.7		27.5	
20	182	28.7	164	34.4		54.4	274	44.6		27.7	
21	197	31.2	179	34.8		55.0	289	47.6		27.8	
22	212	33.7	194	35.3		55.6	304	50.5		28.0	
23	227	36.1	209	35.7		56.2	319	53.4		28.1	
24	242	38.6	224	36.2	+5	56.8	334	56.3	-25	28.3	
Dif	—		+5	+6		+29	-2	+19	+1	+21	+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 9				Edad: 1 ^d 9 SD: 16 ^h 1 PMG: 14 ^h 17 ^m												PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 3 20 ^h : 59 ^m 4 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	47.3	+20	55.2	154	22.5	+22	41.1	60 N	** **	1 47	3 01	4 47	56	23 52	50	
1	195	47.2		55.7	168	46.6	51	44.7	36	58	** **	2 15	17	5 06	57	33 52	
2	210	47.1		56.1	183	10.7	51	48.0	33	56	0 58	36	31	21 58	17 53		
3	225	47.1		56.6	197	34.7	50	51.3	33	54	1 37	2 54	42	34 58	23 03	53	
4	240	47.0		57.0	211	58.7	50	54.4	31	52	2 03	3 08	3 53	46 58	22 51	55	
5	255	47.0	+20	57.5	226	22.7	50	57.3	29	50	2 23	3 21	4 02	5 56	59	22 40	56
6	270	46.9	+20	57.9	240	46.6	49	00.1	28	45	3 00	3 46	4 21	6 18	59	22 18	56
7	285	46.8		58.4	255	10.4	48	02.7	26	40	26	4 05	37	36 59	22 00	57	
8	300	46.8		58.8	269	34.3	49	05.2	25	35	3 46	21	4 50	6 50	60	21 45	58
9	315	46.7		59.3	283	58.0	47	07.5	23	30	4 03	35	5 02	7 03	60	32 58	
10	330	46.6	+20	59.7	298	21.8	48	09.6	21	20	28	4 57	21	25 61	21 09	60	
11	345	46.6	+21	00.2	312	45.5	47	+23 11.6	20	10 N	4 49	5 15	5 38	7 45	60	20 50	60
12	0	46.5	+21	00.6	327	09.2	47	+23 13.5	19	0	5 05	5 31	5 53	8 02	61	20 31	61
13	15	46.4		01.0	341	32.9	47	15.2	17	10 S	20	5 46	6 09	20 61	20 13	62	
14	30	46.4		01.5	355	56.5	46	16.7	15	20	34	6 02	25	8 40	61	19 54	62
15	45	46.3		01.9	10	20.1	46	18.1	14	30	49	18	44	9 02	61	31 63	
16	60	46.2		02.4	24	43.7	46	19.3	12	35	5 56	27	6 55	15 61	18 63		
17	75	46.2	+21	02.8	39	07.3	46	+23 20.3	10	40	6 04	6 37	7 07	9 30	61	19 03	63
18	90	46.1	+21	03.3	53	30.8	45	+23 21.2	9	45	6 13	6 49	7 22	9 48	61	18 44	64
19	105	46.0		03.7	67	54.3	45	21.9	7	50	22	7 03	39	10 11	61	22 64	
20	120	46.0		04.1	82	17.9	46	22.5	6	52	26	09	48	22 61	18 11	65	
21	135	45.9		04.6	96	41.4	45	22.9	4	54	31	16	7 57	34 61	17 59	65	
22	150	45.8		05.0	111	04.8	44	23.2	3	56	36	23	8 08	10 48	60	45 65	
23	165	45.8		05.4	125	28.3	45	23.3	1	58	41	32	20	11 04	61	28 66	
24	180	45.7	+21	05.9	139	51.8	45	+23 23.2	1	60 S	6 47	7 41	8 34	11 24	60	17 08	67
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 7 ^h 48 ^m 1			Mag: -4.6 PMG: 9 ^h 01 ^m			Mag: -1.9 PMG: 1 ^h 40 ^m			Mag: -1.9 PMG: 12 ^h 59 ^m			Mag: +0.1 PMG: 11 ^h 58 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	242	38.6		224	36.2	+5	334	56.3	-25	164	47.5	+22	179	59.9	+19	20.1	
1	257	41.1		239	36.6		349	59.3	28.4	179	49.4		195	02.0		20.1	
2	272	43.5		254	37.1		5	02.2	28.6	194	51.2		210	04.1		20.2	
3	287	46.0		269	37.5		20	05.1	28.7	209	53.1		225	06.3		20.3	
4	302	48.5		284	37.9		35	08.1	28.9	224	54.9		240	08.4		20.3	
5	317	50.9		299	38.4	+5	50	11.0	-25	239	56.8	+22	255	10.5	+19	20.4	
6	332	53.4		314	38.8	+6	65	14.0	-25	254	58.6	+22	270	12.7	+19	20.5	
7	347	55.8		329	39.3		80	16.9	29.3	270	00.5		285	14.8		20.5	
8	2	58.3		344	39.7		95	19.8	29.5	285	02.3		300	16.9		20.6	
9	18	00.8		359	40.1		110	22.8	29.6	300	04.2		315	19.0		20.6	
10	33	03.2		14	40.6		125	25.7	29.8	315	06.0		330	21.2		20.7	
11	48	05.7		29	41.0	+6	140	28.7	-25	330	07.9	+22	345	23.3	+19	20.8	
12	63	08.2		44	41.5	+6	155	31.6	-25	345	09.7	+22	0	25.4	+19	20.8	
13	78	10.6		59	41.9		170	34.6	30.2	0	11.6		15	27.5		20.9	
14	93	13.1		74	42.3		185	37.5	30.4	15	13.4		30	29.7		20.9	
15	108	15.6		89	42.8		200	40.5	30.5	30	15.3		45	31.8		21.0	
16	123	18.0		104	43.2		215	43.4	30.7	45	17.1		60	33.9		21.1	
17	138	20.5		119	43.6	+6	230	46.4	-25	60	19.0	+22	75	36.1	+19	21.1	
18	153	23.0		134	44.0	+6	245	49.3	-25	75	20.8	+22	90	38.2	+19	21.2	
19	168	25.4		149	44.5		260	52.3	31.2	90	22.7		105	40.3		21.3	
20	183	27.9		164	44.9		275	55.2	31.3	105	24.5		120	42.4		21.3	
21	198	30.3		179	45.3		290	58.2	31.5	120	26.4		135	44.6		21.4	
22	213	32.8		194	45.7		306	01.2	31.6	135	28.2		150	46.7		21.4	
23	228	35.3		209	46.2		321	04.1	31.8	150	30.1		165	48.8		21.5	
24	243	37.7		224	46.6	+6	336	07.1	-25	165	31.9	+22	180	50.9	+19	21.6	
Dif	—			+4	+6		+29	-2		+19	+1		+21		+1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 0			Edad: 2 ^d 9 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'6 R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	45.7	+21 05.9	139	51.8	+23 23.2	2	60 N	20 56	22 13	** **	5 43	76	** **	**	
1	195	45.6	06.3	154	15.2	23.0	44	58	40	21 43	** **	6 03	74	** **	**	
2	210	45.6	06.7	168	38.7	22.6	4	56	26	21	23 07	19	72	** **	**	
3	225	45.5	07.2	183	02.2	22.0	6	54	14	21 03	22 22	32	72	23 57	41	
4	240	45.4	07.6	197	25.6	21.3	7	52	20 03	20 48	21 54	44	71	46	42	
5	255	45.4	+21 08.0	211	49.1	+23 20.4	9	50	19 54	20 36	21 34	6 55	70	23 36	44	
6	270	45.3	+21 08.5	226	12.5	+23 19.4	10	45	19 34	20 10	20 56	7 17	68	23 14	47	
7	285	45.2	08.9	240	36.0	18.2	12	40	18	19 50	30	35	67	22 57	50	
8	300	45.2	09.3	254	59.5	16.8	14	35	19 05	34	20 09	7 50	66	43	51	
9	315	45.1	09.8	269	22.9	15.3	15	30	18 53	19 20	19 52	8 03	65	30	53	
10	330	45.0	10.2	283	46.4	13.6	17	20	33	18 58	26	26	63	22 09	55	
11	345	45.0	+21 10.6	298	09.9	+23 11.8	18	10 N	18 16	18 39	19 06	8 45	62	21 50	57	
12	0	44.9	+21 11.1	312	33.5	+23 09.8	20	0	18 01	18 23	18 49	9 03	61	21 32	60	
13	15	44.8	11.5	326	57.0	07.6	22	10 S	17 45	18 07	33	21	59	21 15	61	
14	30	44.8	11.9	341	20.5	05.3	23	20	28	17 52	19	9 41	57	20 56	63	
15	45	44.7	12.3	355	44.1	02.8	25	30	17 09	35	18 05	10 03	56	34	65	
16	60	44.6	12.8	10	07.7	+23 00.2	26	35	16 58	26	17 57	16	55	21	67	
17	75	44.5	+21 13.2	24	31.3	+22 57.4	28	40	16 46	17 16	17 49	10 31	54	20 06	69	
18	90	44.5	+21 13.6	38	55.0	+22 54.4	30	45	16 31	17 04	17 40	10 49	52	19 48	71	
19	105	44.4	14.0	53	18.7	51.3	31	50	13	16 50	30	11 12	49	26	74	
20	120	44.3	14.5	67	42.4	48.0	33	52	16 05	44	26	23	48	16	75	
21	135	44.3	14.9	82	06.1	44.6	34	54	15 55	37	21	35	46	19 04	76	
22	150	44.2	15.3	96	29.9	41.0	36	56	44	29	16	11 48	46	18 50	79	
23	165	44.1	15.7	110	53.7	37.3	37	58	32	20	11	12 05	42	34	81	
24	180	44.0	+21 16.2	125	17.5	+22 33.4	39	60 S	15 18	16 11	17 05	12 24	40	18 15	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 44 ^m 2		Mag: -4.6 PMG: 9 ^h 01 ^m		Mag: -1.9 PMG: 1 ^h 35 ^m		Mag: -1.9 PMG: 12 ^h 56 ^m		Mag: +0.1 PMG: 11 ^h 55 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	243	37.7	224	46.6	+6 11.0	336 07.1	-25 31.9	165 31.9	+22 38.1	180 50.9	+19 21.6
1	258	40.2	239	47.0	11.6	351 10.1	32.1	180 33.8	38.2	195 53.1	21.6
2	273	42.7	254	47.4	12.2	6 13.0	32.2	195 35.6	38.2	210 55.2	21.7
3	288	45.1	269	47.9	12.8	21 16.0	32.4	210 37.5	38.3	225 57.3	21.7
4	303	47.6	284	48.3	13.4	36 19.0	32.5	225 39.3	38.3	240 59.5	21.8
5	318	50.1	299	48.7	+6 14.0	51 21.9	-25 32.7	240 41.2	+22 38.4	256 01.6	+19 21.9
6	333	52.5	314	49.1	+6 14.6	66 24.9	-25 32.8	255 43.0	+22 38.4	271 03.7	+19 21.9
7	348	55.0	329	49.5	15.2	81 27.9	33.0	270 44.9	38.5	286 05.8	22.0
8	3	57.5	344	49.9	15.8	96 30.9	33.1	285 46.7	38.5	301 08.0	22.1
9	18	59.9	359	50.4	16.4	111 33.8	33.3	300 48.6	38.6	316 10.1	22.1
10	34	02.4	14	50.8	17.1	126 36.8	33.4	315 50.4	38.6	331 12.2	22.2
11	49	04.8	29	51.2	+6 17.7	141 39.8	-25 33.6	330 52.3	+22 38.7	346 14.3	+19 22.2
12	64	07.3	44	51.6	+6 18.3	156 42.8	-25 33.7	345 54.1	+22 38.7	1 16.5	+19 22.3
13	79	09.8	59	52.0	18.9	171 45.7	33.9	0 56.0	38.8	16 18.6	22.4
14	94	12.2	74	52.4	19.5	186 48.7	34.0	15 57.8	38.8	31 20.7	22.4
15	109	14.7	89	52.8	20.1	201 51.7	34.2	30 59.7	38.9	46 22.9	22.5
16	124	17.2	104	53.2	20.7	216 54.7	34.3	46 01.5	39.0	61 25.0	22.5
17	139	19.6	119	53.6	+6 21.3	231 57.7	-25 34.5	61 03.4	+22 39.0	76 27.1	+19 22.6
18	154	22.1	134	54.0	+6 21.9	247 00.7	-25 34.6	76 05.2	+22 39.1	91 29.2	+19 22.7
19	169	24.6	149	54.4	22.5	262 03.7	34.8	91 07.1	39.1	106 31.4	22.7
20	184	27.0	164	54.9	23.2	277 06.7	34.9	106 08.9	39.2	121 33.5	22.8
21	199	29.5	179	55.3	23.8	292 09.6	35.1	121 10.7	39.2	136 35.6	22.8
22	214	32.0	194	55.7	24.4	307 12.6	35.2	136 12.6	39.3	151 37.7	22.9
23	229	34.4	209	56.1	25.0	322 15.6	35.4	151 14.4	39.3	166 39.9	23.0
24	244	36.9	224	56.5	+6 25.6	337 18.6	-25 35.5	166 16.3	+22 39.4	181 42.0	+19 23.0
Dif	—		+4	+6		+30	-2	+18	+1	+21	+1

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: 3 ^d 9 PHE { 4 ^h : 59 ^h 6 12 ^h : 59 ^h 6 20 ^h : 59 ^h 6 PMG: 16 ^h 18 ^m R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	44.0	+21	16.2	125	17.5	+22	33.4	60 N	**	**	1	41	2	57	6	59	90
1	195	44.0		16.6	139	41.4	49	29.4	58	**	**	2	11	3	14	7	17	86
2	210	43.9		17.0	154	05.3	49	25.2	56	0	47	33	28	31	83	0	10	38
3	225	43.8		17.4	168	29.3	50	20.9	54	1	32	2	50	40	44	80	**	**
4	240	43.7		17.8	182	53.2	49	16.4	52	1	59	3	05	3	51	7	55	78
5	255	43.7	+21	18.2	197	17.3	51	+22	50	2	20	3	18	4	00	8	05	76
6	270	43.6	+21	18.7	211	41.4	51	+22	45	2	58	3	44	4	20	8	25	73
7	285	43.5		19.1	226	05.5	51	+22	40	3	24	4	04	36	42	70	23	47
8	300	43.5		19.5	240	29.7	52	+21	35	3	45	20	4	49	8	56	68	
9	315	43.4		19.9	254	53.9	52		30	4	02	34	5	01	9	08	66	
10	330	43.3		20.3	269	18.2	53		20	28	4	56	21	29	63	23	04	
11	345	43.2	+21	20.7	283	42.5	53	+21	10 N	4	48	5	15	5	38	9	47	
12	0	43.2	+21	21.2	298	06.9	54	+21	0	5	06	5	31	5	54	10	04	
13	15	43.1		21.6	312	31.3	54		10 S	21	5	47	6	09	20	56		
14	30	43.0		22.0	326	55.8	55		20	35	6	02	26	38	53	21	59	
15	45	42.9		22.4	341	20.4	56		30	50	19	45	45	10	59	50		
16	60	42.9		22.8	355	45.0	56		35	5	57	28	6	56	11	11		
17	75	42.8	+21	23.2	10	09.7	57	+21	40	6	05	6	39	7	09	11	25	
18	90	42.7	+21	23.6	24	34.4	57	+20	45	6	14	6	51	7	24	11	41	
19	105	42.6		24.0	38	59.2	58		50	24	7	05	42	12	01	39		
20	120	42.6		24.4	53	24.0	58		52	29	11	7	50	11	37	31		
21	135	42.5		24.8	67	48.9	59		54	33	18	8	00	21	35	20		
22	150	42.4		25.3	82	13.9	60		56	38	26	11		34	32	20		
23	165	42.3		25.7	96	39.0	61		58	44	35	23		12	47	30		
24	180	42.2	+21	26.1	111	04.1	61	+20	60 S	6	50	7	45	8	38	13	04	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 40 ^m 3		Mag: -4.6 PMG: 9 ^h 00 ^m				Mag: -1.9 PMG: 1 ^h 30 ^m				Mag: -1.9 PMG: 12 ^h 53 ^m				Mag: +0.1 PMG: 11 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	36.9	224	56.5	+6	25.6	337	18.6	-25	35.5	166	16.3	+22	39.4	181	42.0	+19	23.0
1	259	39.3	239	56.9		26.2	352	21.6		35.7	181	18.1		39.4	196	44.1		23.1
2	274	41.8	254	57.3		26.8	7	24.6		35.8	196	20.0		39.5	211	46.3		23.2
3	289	44.3	269	57.7		27.5	22	27.6		36.0	211	21.8		39.5	226	48.4		23.2
4	304	46.7	284	58.0		28.1	37	30.6		36.1	226	23.7		39.6	241	50.5		23.3
5	319	49.2	299	58.4	+6	28.7	52	33.6	-25	36.3	241	25.5	+22	39.6	256	52.6	+19	23.3
6	334	51.7	314	58.8	+6	29.3	67	36.6	-25	36.4	256	27.4	+22	39.7	271	54.8	+19	23.4
7	349	54.1	329	59.2		29.9	82	39.6		36.6	271	29.2		39.7	286	56.9		23.5
8	4	56.6	344	59.6		30.5	97	42.6		36.7	286	31.1		39.8	301	59.0		23.5
9	19	59.1	0	00.0		31.2	112	45.7		36.9	301	32.9		39.8	317	01.1		23.6
10	35	01.5	15	00.4		31.8	127	48.7		37.0	316	34.8		39.9	332	03.3		23.6
11	50	04.0	30	00.8	+6	32.4	142	51.7	-25	37.2	331	36.6	+22	39.9	347	05.4	+19	23.7
12	65	06.5	45	01.2	+6	33.0	157	54.7	-25	37.3	346	38.5	+22	40.0	2	07.5	+19	23.8
13	80	08.9	60	01.6		33.6	172	57.7		37.5	1	40.3		40.0	17	09.6		23.8
14	95	11.4	75	01.9		34.3	188	00.7		37.6	16	42.2		40.1	32	11.8		23.9
15	110	13.8	90	02.3		34.9	203	03.7		37.8	31	44.0		40.1	47	13.9		23.9
16	125	16.3	105	02.7		35.5	218	06.8		37.9	46	45.9		40.2	62	16.0		24.0
17	140	18.8	120	03.1	+6	36.1	233	09.8	-25	38.1	61	47.7	+22	40.2	77	18.2	+19	24.1
18	155	21.2	135	03.5	+6	36.8	248	12.8	-25	38.2	76	49.6	+22	40.3	92	20.3	+19	24.1
19	170	23.7	150	03.9		37.4	263	15.8		38.3	91	51.4		40.3	107	22.4		24.2
20	185	26.2	165	04.2		38.0	278	18.8		38.5	106	53.3		40.4	122	24.5		24.2
21	200	28.6	180	04.6		38.6	293	21.9		38.6	121	55.1		40.4	137	26.7		24.3
22	215	31.1	195	05.0		39.3	308	24.9		38.8	136	56.9		40.5	152	28.8		24.4
23	230	33.6	210	05.4		39.9	323	27.9		38.9	151	58.8		40.5	167	30.9		24.4
24	245	36.0	225	05.8	+6	40.5	338	30.9	-25	39.1	167	00.6	+22	40.6	182	33.0	+19	24.5
Dif	—		+4		+6		+30		-1		+18		0		+21		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 2			Edad: 4 ^d 9 PHE { SD: 16'2 PMG: 17 ^h 15 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	42.2	+21	26.1	111	04.1	+20	16.1	60 N	21 00	22 19	** **	8 29	94	1 14	21
1	195	42.2		26.5	125	29.2		08.6	58	20 43	21 48	** **	43	90	1 00	25
2	210	42.1		26.9	139	54.5	+20	01.0	56	29	25	23 20	8 54	87	0 48	28
3	225	42.0		27.3	154	19.8	+19	53.3	54	16	21 07	22 28	9 04	84	38	30
4	240	41.9		27.7	168	45.1		45.5	52	20 06	20 51	21 59	13	82	28	33
5	255	41.9	+21	28.1	183	10.6	+19	37.5	50	19 56	20 38	21 37	9 21	80	0 20	34
6	270	41.8	+21	28.5	197	36.1	+19	29.4	45	19 36	20 12	20 59	9 38	76	0 01	39
7	285	41.7		28.9	212	01.7		21.2	40	20	19 52	32	9 52	72	** **	** **
8	300	41.6		29.3	226	27.3		12.9	35	19 06	35	20 11	10 04	69	** **	** **
9	315	41.5		29.7	240	53.0	+19	04.4	30	18 54	19 21	19 54	14	67	** **	** **
10	330	41.5		30.1	255	18.8	+18	55.8	20	34	18 58	27	32	62	23 54	46
11	345	41.4	+21	30.5	269	44.7	+18	47.1	10 N	18 17	18 40	19 06	10 47	59	23 41	50
12	0	41.3	+21	30.9	284	10.6	+18	38.3	0	18 01	18 23	18 49	11 02	55	23 28	54
13	15	41.2		31.3	298	36.7		29.4	10 S	17 45	18 07	33	16	52	16	57
14	30	41.2		31.7	313	02.7		20.4	20	28	17 52	19	31	48	23	02
15	45	41.1		32.1	327	28.9		11.2	30	17 09	35	18 04	49	44	22	46
16	60	41.0		32.5	341	55.1	+18	02.0	35	16 58	25	17 56	11 59	41	37	68
17	75	40.9	+21	32.9	356	21.4	+17	52.6	40	16 45	17 15	17 48	12 10	39	22	26
18	90	40.8	+21	33.2	10	47.8	+17	43.1	45	16 30	17 03	17 39	12 24	35	22	14
19	105	40.8		33.6	25	14.2		33.5	50	11	16 48	29	40	31	21	59
20	120	40.7		34.0	39	40.8		23.8	52	16 03	42	25	48	29	52	82
21	135	40.6		34.4	54	07.4		14.0	54	15 53	35	20	12	56	27	44
22	150	40.5		34.8	68	34.0	+17	04.2	56	42	27	14	13	06	24	35
23	165	40.4		35.2	83	00.8	+16	54.2	58	29	18	09	17	20	25	90
24	180	40.3	+21	35.6	97	27.6	+16	44.1	60 S	15 14	16 08	17 02	13 29	17	21	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 36 ^m 3		Mag: -4.5 PMG: 8 ^h 59 ^m		Mag: -1.9 PMG: 1 ^h 26 ^m		Mag: -1.9 PMG: 12 ^h 50 ^m		Mag: +0.1 PMG: 11 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	245	36.0	225	05.8	+6	40.5	338	30.9	-25	39.1
1	260	38.5	240	06.1		41.2	353	34.0		39.2
2	275	41.0	255	06.5		41.8	8	37.0		39.4
3	290	43.4	270	06.9		42.4	23	40.0		39.5
4	305	45.9	285	07.3		43.0	38	43.1		39.7
5	320	48.3	300	07.6	+6	43.7	53	46.1	-25	39.8
6	335	50.8	315	08.0	+6	44.3	68	49.1	-25	40.0
7	350	53.3	330	08.4		44.9	83	52.2		40.1
8	5	55.7	345	08.7		45.6	98	55.2		40.3
9	20	58.2	0	09.1		46.2	113	58.3		40.4
10	36	00.7	15	09.5		46.8	129	01.3		40.6
11	51	03.1	30	09.8	+6	47.5	144	04.3	-25	40.7
12	66	05.6	45	10.2	+6	48.1	159	07.4	-25	40.9
13	81	08.1	60	10.6		48.7	174	10.4		41.0
14	96	10.5	75	10.9		49.4	189	13.5		41.2
15	111	13.0	90	11.3		50.0	204	16.5		41.3
16	126	15.4	105	11.7		50.6	219	19.6		41.5
17	141	17.9	120	12.0	+6	51.3	234	22.6	-25	41.6
18	156	20.4	135	12.4	+6	51.9	249	25.7	-25	41.8
19	171	22.8	150	12.7		52.6	264	28.7		41.9
20	186	25.3	165	13.1		53.2	279	31.8		42.1
21	201	27.8	180	13.4		53.8	294	34.8		42.2
22	216	30.2	195	13.8		54.5	309	37.9		42.4
23	231	32.7	210	14.2		55.1	324	40.9		42.5
24	246	35.2	225	14.5	+6	55.8	339	44.0	-25	42.7
Dif	—		+4		+6		+30		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 57 ^m 4			Edad: 5 ^d 9	PHE { 4 ^h : 59/4 12 ^h : 59/3 20 ^h : 59/2	R°: 52 ^m								
	hG ☉	Dec		hG ☾				Dif	Dec		Dif	Náutico	Civil	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	40.3	+21 35.6	97	27.6	+16 44.1	60 N	** **	1 35	2 54	10 03	94	1 35	15
1	195	40.3	36.0	111	54.5	79 33.9	58	** **	2 06	3 11	13 90		25	18
2	210	40.2	36.4	126	21.5	80 23.6	56	0 35	29	25	21 87		16	21
3	225	40.1	36.8	140	48.5	80 13.2	54	1 26	2 48	38	28 85		08	24
4	240	40.0	37.1	155	15.6	81 +16 02.7	52	1 55	3 03	49	35 82		1 01	26
5	255	39.9	+21 37.5	169	42.8	82 +15 52.1	50	2 17	3 16	3 58	10 41	79	0 54	28
6	270	39.9	+21 37.9	184	10.1	83 +15 41.4	45	2 56	3 42	4 18	10 54	74	0 40	33
7	285	39.8	38.3	198	37.4	83 30.7	40	3 23	4 03	35	11 04	71	28	36
8	300	39.7	38.7	213	04.8	84 19.8	35	3 44	19	4 48	13 68		18	39
9	315	39.6	39.1	227	32.3	85 +15 08.9	30	4 01	33	5 00	21 65		0 10	41
10	330	39.5	39.5	241	59.8	85 +14 57.9	20	27	4 56	20	34 60		** **	**
11	345	39.4	+21 39.8	256	27.4	86 +14 46.8	10 N	4 48	5 15	5 38	11 46	56	** **	**
12	0	39.4	+21 40.2	270	55.1	87 +14 35.6	0	5 06	5 32	5 54	11 57	52	** **	**
13	15	39.3	40.6	285	22.9	88 24.3	10 S	21	5 47	6 10	12 08	48	** **	**
14	30	39.2	41.0	299	50.7	88 13.0	20	36	6 03	27	19 45		** **	**
15	45	39.1	41.4	314	18.6	89 +14 01.5	30	51	20	46	33 39		23 52	64
16	60	39.0	41.7	328	46.6	90 +13 50.0	35	5 58	30	6 57	40 37		45	67
17	75	38.9	+21 42.1	343	14.7	91 +13 38.4	40	6 07	6 40	7 10	12 49	33	23 38	70
18	90	38.9	+21 42.5	357	42.8	91 +13 26.8	45	6 16	6 52	7 25	12 59	30	23 29	74
19	105	38.8	42.9	12	11.0	92 15.0	50	26	7 07	44	13 11	26	19	79
20	120	38.7	43.3	26	39.2	92 +13 03.2	52	31	13	7 53	17 23		14	81
21	135	38.6	43.6	41	07.5	93 +12 51.4	54	35	20	8 03	23 21		08	84
22	150	38.5	44.0	55	35.9	94 39.4	56	41	28	14	30 18		23 02	87
23	165	38.4	44.4	70	04.3	94 27.4	58	46	37	26	37 16		22 55	90
24	180	38.3	+21 44.8	84	32.9	96 +12 15.3	60 S	6 53	7 48	8 41	13 46	12	22 48	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 32 ^m 4		Mag: -4.5 PMG: 8 ^h 59 ^m		Mag: -2.0 PMG: 1 ^h 21 ^m		Mag: -1.9 PMG: 12 ^h 47 ^m		Mag: +0.1 PMG: 11 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	246	35.2	225 14.5	+6 55.8	339 44.0	-25 42.7	167 45.0	+22 41.7	183 24.1	+19 25.9
1	261	37.6	240 14.9	56.4	354 47.1	42.8	182 46.8	41.8	198 26.2	26.0
2	276	40.1	255 15.2	57.0	9 50.1	43.0	197 48.7	41.8	213 28.3	26.1
3	291	42.6	270 15.6	57.7	24 53.2	43.1	212 50.5	41.9	228 30.5	26.1
4	306	45.0	285 15.9	58.3	39 56.2	43.3	227 52.4	41.9	243 32.6	26.2
5	321	47.5	300 16.3	+6 59.0	54 59.3	-25 43.4	242 54.2	+22 42.0	258 34.7	+19 26.2
6	336	49.9	315 16.6	+6 59.6	70 02.4	-25 43.5	257 56.0	+22 42.0	273 36.9	+19 26.3
7	351	52.4	330 17.0	+7 00.2	85 05.4	43.7	272 57.9	42.1	288 39.0	26.4
8	6	54.9	345 17.3	00.9	100 08.5	43.8	287 59.7	42.1	303 41.1	26.4
9	21	57.3	0 17.7	01.5	115 11.6	44.0	303 01.6	42.2	318 43.2	26.5
10	36	59.8	15 18.0	02.2	130 14.7	44.1	318 03.4	42.2	333 45.4	26.5
11	52	02.3	30 18.3	+7 02.8	145 17.7	-25 44.3	333 05.3	+22 42.3	348 47.5	+19 26.6
12	67	04.7	45 18.7	+7 03.5	160 20.8	-25 44.4	348 07.1	+22 42.3	3 49.6	+19 26.7
13	82	07.2	60 19.0	04.1	175 23.9	44.6	3 09.0	42.4	18 51.7	26.7
14	97	09.7	75 19.4	04.8	190 27.0	44.7	18 10.8	42.4	33 53.9	26.8
15	112	12.1	90 19.7	05.4	205 30.0	44.9	33 12.7	42.4	48 56.0	26.8
16	127	14.6	105 20.1	06.1	220 33.1	45.0	48 14.5	42.5	63 58.1	26.9
17	142	17.1	120 20.4	+7 06.7	235 36.2	-25 45.2	63 16.4	+22 42.5	79 00.3	+19 27.0
18	157	19.5	135 20.7	+7 07.4	250 39.3	-25 45.3	78 18.2	+22 42.6	94 02.4	+19 27.0
19	172	22.0	150 21.1	08.0	265 42.4	45.5	93 20.0	42.6	109 04.5	27.1
20	187	24.4	165 21.4	08.7	280 45.4	45.6	108 21.9	42.7	124 06.6	27.1
21	202	26.9	180 21.7	09.3	295 48.5	45.8	123 23.7	42.7	139 08.8	27.2
22	217	29.4	195 22.1	10.0	310 51.6	45.9	138 25.6	42.8	154 10.9	27.3
23	232	31.8	210 22.4	10.6	325 54.7	46.0	153 27.4	42.8	169 13.0	27.3
24	247	34.3	225 22.7	+7 11.3	340 57.8	-25 46.2	168 29.3	+22 42.9	184 15.1	+19 27.4
Dif	—		+3	+6	+31	-1	+18	0	+21	+1

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: 6 ^d 9 SD: 16 ^h 1 PMG: 19 ^h 01 ^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	38.3	+21 44.8	84	32.9	+12 15.3		60 N	21 04	22 26	** **	11 37 92	1 50 11	
1	195	38.3	45.1	99	01.4	+12 03.2 ¹²¹		58	20 46	21 53	** **	43 88	43 14	
2	210	38.2	45.5	113	30.1	+11 51.0 ¹²²		56	32	29	23 38	48 85	37 17	
3	225	38.1	45.9	127	58.8	38.7 ¹²³		54	19	21 10	22 34	53 82	32 19	
4	240	38.0	46.2	142	27.6	26.4 ¹²³		52	20 08	20 54	22 03	11 57 80	27 22	
5	255	37.9	+21 46.6	156	56.4	+11 14.0 ¹²⁴		50	19 58	20 41	21 41	12 00 78	1 22 24	
6	270	37.8	+21 47.0	171	25.3	+11 01.6 ¹²⁴		45	19 38	20 14	21 01	12 08 74	1 13 28	
7	285	37.7	47.4	185	54.2	+10 49.1 ¹²⁵		40	21	19 53	20 34	15 69	1 04 32	
8	300	37.7	47.7	200	23.3	36.5 ¹²⁶		35	19 07	37	20 12	21 66	0 57 36	
9	315	37.6	48.1	214	52.3	23.9 ¹²⁶		30	18 55	19 22	19 55	26 63	51 38	
10	330	37.5	48.5	229	21.5	+10 11.2 ¹²⁷		20	35	18 59	28	34 59	40 43	
11	345	37.4	+21 48.8	243	50.7	+9 58.5 ¹²⁷		10 N	18 17	18 40	19 07	12 42 54	0 31 47	
12	0	37.3	+21 49.2	258	19.9	+9 45.8 ¹²⁸		0	18 01	18 23	18 49	12 49 50	0 22 51	
13	15	37.2	49.6	272	49.2	33.0 ¹²⁸		10 S	17 45	18 08	34	12 56 46	13 55	
14	30	37.1	49.9	287	18.6	20.1 ¹²⁹		20	28	17 52	19	13 04 41	0 03 59	
15	45	37.0	50.3	301	48.0	+9 07.2 ¹²⁹		30	17 08	34	18 04	12 37	** ** *	
16	60	36.9	50.7	316	17.4	+8 54.3 ¹²⁹		35	16 57	25	17 56	17 34	** ** *	
17	75	36.9	+21 51.0	330	47.0	+8 41.3 ¹³⁰		40	16 44	17 14	17 47	13 22 31	** ** *	
18	90	36.8	+21 51.4	345	16.5	+8 28.2 ¹³¹		45	16 29	17 02	17 38	13 29 27	** ** *	
19	105	36.7	51.7	359	46.2	15.2 ¹³⁰		50	10	16 47	28	37 22	** ** *	
20	120	36.6	52.1	14	15.8	+8 02.0 ¹³²		52	16 01	40	23	40 20	** ** *	
21	135	36.5	52.5	28	45.6	+7 48.9 ¹³¹		54	15 51	33	18	44 18	** ** *	
22	150	36.4	52.8	43	15.3	35.7 ¹³²		56	40	25	13	48 16	** ** *	
23	165	36.3	53.2	57	45.1	22.5 ¹³²		58	27	16	07	53 13	** ** *	
24	180	36.2	+21 53.5	72	15.0	+7 09.2 ¹³³		60 S	15 11	16 06	17 00	13 58 10	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 28 ^m 5		Mag: -4.5 PMG: 8 ^h 58 ^m			Mag: -2.0 PMG: 1 ^h 16 ^m			Mag: -1.9 PMG: 12 ^h 44 ^m			Mag: +0.1 PMG: 11 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	34.3	225 22.7	+7 11.3	340 57.8	-25 46.2		168 29.3	+22 42.9	184 15.1	+19 27.4			
1	262	36.8	240 23.1	11.9	356 00.9	46.3		183 31.1	42.9	199 17.3	27.4			
2	277	39.2	255 23.4	12.6	11 04.0	46.5		198 33.0	43.0	214 19.4	27.5			
3	292	41.7	270 23.7	13.2	26 07.1	46.6		213 34.8	43.0	229 21.5	27.6			
4	307	44.2	285 24.1	13.9	41 10.2	46.8		228 36.7	43.1	244 23.7	27.6			
5	322	46.6	300 24.4	+7 14.5	56 13.2	-25 46.9		243 38.5	+22 43.1	259 25.8	+19 27.7			
6	337	49.1	315 24.7	+7 15.2	71 16.3	-25 47.1		258 40.3	+22 43.2	274 27.9	+19 27.7			
7	352	51.5	330 25.0	15.8	86 19.4	47.2		273 42.2	43.2	289 30.0	27.8			
8	7	54.0	345 25.4	16.5	101 22.5	47.4		288 44.0	43.3	304 32.2	27.9			
9	22	56.5	0 25.7	17.2	116 25.6	47.5		303 45.9	43.3	319 34.3	27.9			
10	37	58.9	15 26.0	17.8	131 28.7	47.7		318 47.7	43.4	334 36.4	28.0			
11	53	01.4	30 26.3	+7 18.5	146 31.8	-25 47.8		333 49.6	+22 43.4	349 38.5	+19 28.0			
12	68	03.9	45 26.6	+7 19.1	161 34.9	-25 47.9		348 51.4	+22 43.4	4 40.7	+19 28.1			
13	83	06.3	60 27.0	19.8	176 38.0	48.1		3 53.3	43.5	19 42.8	28.2			
14	98	08.8	75 27.3	20.4	191 41.2	48.2		18 55.1	43.5	34 44.9	28.2			
15	113	11.3	90 27.6	21.1	206 44.3	48.4		33 57.0	43.6	49 47.1	28.3			
16	128	13.7	105 27.9	21.8	221 47.4	48.5		48 58.8	43.6	64 49.2	28.3			
17	143	16.2	120 28.2	+7 22.4	236 50.5	-25 48.7		64 00.6	+22 43.7	79 51.3	+19 28.4			
18	158	18.7	135 28.6	+7 23.1	251 53.6	-25 48.8		79 02.5	+22 43.7	94 53.4	+19 28.5			
19	173	21.1	150 28.9	23.7	266 56.7	49.0		94 04.3	43.8	109 55.6	28.5			
20	188	23.6	165 29.2	24.4	281 59.8	49.1		109 06.2	43.8	124 57.7	28.6			
21	203	26.0	180 29.5	25.1	297 02.9	49.3		124 08.0	43.9	139 59.8	28.6			
22	218	28.5	195 29.8	25.7	312 06.0	49.4		139 09.9	43.9	155 01.9	28.7			
23	233	31.0	210 30.1	26.4	327 09.2	49.5		154 11.7	44.0	170 04.1	28.8			
24	248	33.4	225 30.4	+7 27.0	342 12.3	-25 49.7		169 13.6	+22 44.0	185 06.2	+19 28.8			
Dif	—		+3	+7	+31	-1		+18	0	+21	+1			

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: 7 ^d 9 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 7 20 ^h : 58 ^m 6 PMG: 19 ^h 50 ^m R°: 48 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	36.2	+21	53.5	72	15.0	+7	09.2	60 N	** **	1 29	2 51	13 09	90	2 01	9
1	195	36.1		53.9	86	44.9 ¹⁰⁹	+6	56.0 ¹³²	58	** **	2 02	3 08	11 87		1 57	13
2	210	36.1		54.2	101	14.9 ¹¹⁰		42.6 ¹³⁴	56	0 17	26	23	13 84		54	15
3	225	36.0		54.6	115	44.9 ¹¹⁰		29.3 ¹³³	54	1 21	2 45	36	15 82		51	18
4	240	35.9		55.0	130	14.9 ¹¹⁰		15.9 ¹³⁴	52	1 52	3 01	47	17 79		49	19
5	255	35.8	+21	55.3	144	45.0 ¹¹¹	+6	02.5 ¹³⁴	50	2 14	3 14	3 57	13 18	77	1 46	22
6	270	35.7	+21	55.7	159	15.1 ¹¹¹	+5	49.1 ¹³⁴	45	2 54	3 41	4 17	13 22	72	1 41	26
7	285	35.6		56.0	173	45.3 ¹¹²		35.6 ¹³⁵	40	3 21	4 02	34	24 69		36	30
8	300	35.5		56.4	188	15.5 ¹¹²		22.2 ¹³⁴	35	3 43	18	4 48	27 65		33	32
9	315	35.4		56.7	202	45.8 ¹¹³	+5	08.7 ¹³⁵	30	4 00	33	5 00	29 62		29	36
10	330	35.3		57.1	217	16.0 ¹¹²	+4	55.1 ¹³⁶	20	27	4 56	20	33 56		23	41
11	345	35.2	+21	57.4	231	46.4 ¹¹⁴	+4	41.6 ¹³⁵	10 N	4 48	5 15	5 38	13 36	52	1 18	45
12	0	35.1	+21	57.8	246	16.7 ¹¹³	+4	28.0 ¹³⁶	0	5 06	5 32	5 54	13 39	48	1 13	49
13	15	35.1		58.1	260	47.1 ¹¹⁴		14.5 ¹³⁵	10 S	22	5 48	6 10	42 44		08	53
14	30	35.0		58.5	275	17.5 ¹¹⁴	+4	00.9 ¹³⁶	20	37	6 04	27	45 40		1 02	58
15	45	34.9		58.8	289	48.0 ¹¹⁵	+3	47.3 ¹³⁶	30	5 52	21	47	49 35		0 56	63
16	60	34.8		59.2	304	18.5 ¹¹⁵		33.6 ¹³⁷	35	6 00	31	6 59	51 32		52	66
17	75	34.7	+21	59.5	318	49.0 ¹¹⁵	+3	20.0 ¹³⁶	40	6 08	6 42	7 12	13 53	29	0 48	69
18	90	34.6	+21	59.9	333	19.5 ¹¹⁵	+3	06.4 ¹³⁶	45	6 17	6 54	7 27	13 56	25	0 43	73
19	105	34.5	+22	00.2	347	50.1 ¹¹⁶	+2	52.7 ¹³⁷	50	28	7 09	46	13 59	21	38	77
20	120	34.4		00.6	2	20.7 ¹¹⁶		39.1 ¹³⁶	52	32	15	7 55	14 00	19	35	80
21	135	34.3		00.9	16	51.4 ¹¹⁷		25.4 ¹³⁷	54	37	23	8 05	02 17		32	82
22	150	34.2		01.2	31	22.0 ¹¹⁶	+2	11.7 ¹³⁷	56	43	31	16	04 14		29	84
23	165	34.1		01.6	45	52.7 ¹¹⁷	+1	58.1 ¹³⁶	58	49	40	29	06 12		25	88
24	180	34.0	+22	01.9	60	23.4 ¹¹⁷	+1	44.4 ¹³⁷	60 S	6 55	7 50	8 45	14 08	9	0 21	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 24 ^m 6		Mag: -4.5 PMG: 8 ^h 58 ^m		Mag: -2.0 PMG: 1 ^h 11 ^m		Mag: -1.9 PMG: 12 ^h 42 ^m		Mag: +0.1 PMG: 11 ^h 38 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	248	33.4	225	30.4	+7	27.0	342	12.3	-25	49.7
1	263	35.9	240	30.7		27.7	357	15.4		49.8
2	278	38.4	255	31.1		28.4	12	18.5		50.0
3	293	40.8	270	31.4		29.0	27	21.6		50.1
4	308	43.3	285	31.7		29.7	42	24.8		50.3
5	323	45.8	300	32.0	+7	30.4	57	27.9	-25	50.4
6	338	48.2	315	32.3	+7	31.0	72	31.0	-25	50.6
7	353	50.7	330	32.6		31.7	87	34.1		50.7
8	8	53.2	345	32.9		32.4	102	37.3		50.9
9	23	55.6	0	33.2		33.0	117	40.4		51.0
10	38	58.1	15	33.5		33.7	132	43.5		51.1
11	54	00.5	30	33.8	+7	34.4	147	46.6	-25	51.3
12	69	03.0	45	34.1	+7	35.0	162	49.8	-25	51.4
13	84	05.5	60	34.4		35.7	177	52.9		51.6
14	99	07.9	75	34.7		36.4	192	56.0		51.7
15	114	10.4	90	35.0		37.0	207	59.2		51.9
16	129	12.9	105	35.3		37.7	223	02.3		52.0
17	144	15.3	120	35.6	+7	38.4	238	05.5	-25	52.1
18	159	17.8	135	35.9	+7	39.0	253	08.6	-25	52.3
19	174	20.3	150	36.2		39.7	268	11.7		52.4
20	189	22.7	165	36.5		40.4	283	14.9		52.6
21	204	25.2	180	36.8		41.1	298	18.0		52.7
22	219	27.6	195	37.0		41.7	313	21.2		52.9
23	234	30.1	210	37.3		42.4	328	24.3		53.0
24	249	32.6	225	37.6	+7	43.1	343	27.4	-25	53.1
Dif	—		+3		+7		+31		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 8 ^d 9	PHE {	4 ^h : 58 ^h /4 12 ^h : 58 ^h /3 20 ^h : 58 ^h /2 R°: 49 ^m			Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 57 ^m 8	hG ☉	Dec						hG ☾	Dif				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	34.0	+22 01.9	60	23.4	+1 44.4		60 N	21 08	22 32	** **	14 39 89	2 10 9	
1	195	33.9	02.3	74	54.1 ¹¹⁷	30.7 ¹³⁷		58	20 50	21 57	** **	38 86	10 11	
2	210	33.8	02.6	89	24.9 ¹¹⁸	17.0 ¹³⁷		56	35	32	** **	37 83	09 14	
3	225	33.7	03.0	103	55.7 ¹¹⁸	+1 03.3 ¹³⁷		54	22	21 13	22 40	37 80	09 16	
4	240	33.7	03.3	118	26.5 ¹¹⁸	+0 49.6 ¹³⁷		52	10	20 57	22 07	36 78	08 19	
5	255	33.6	+22 03.6	132	57.3 ¹¹⁸	+0 36.0 ¹³⁶		50	20 00	20 43	21 44	14 35 76	2 08 21	
6	270	33.5	+22 04.0	147	28.1 ¹¹⁸	+0 22.3 ¹³⁷		45	19 40	20 16	21 04	14 34 71	2 07 25	
7	285	33.4	04.3	161	59.0 ¹¹⁹	+0 08.6 ¹³⁷		40	23	19 55	20 35	33 67	06 29	
8	300	33.3	04.6	176	29.8 ¹¹⁸	-0 05.1 ¹³⁷		35	19 09	38	20 14	32 64	05 32	
9	315	33.2	05.0	191	00.7 ¹¹⁹	18.7 ¹³⁶		30	18 56	24	19 56	31 61	05 35	
10	330	33.1	05.3	205	31.6 ¹¹⁹	32.4 ¹³⁷		20	36	19 00	29	29 57	04 39	
11	345	33.0	+22 05.7	220	02.5 ¹¹⁹	-0 46.0 ¹³⁶		10 N	18 18	18 41	19 08	14 28 52	2 03 44	
12	0	32.9	+22 06.0	234	33.4 ¹¹⁹	-0 59.6 ¹³⁶		0	18 01	18 24	18 50	14 27 48	2 02 48	
13	15	32.8	06.3	249	04.4 ¹²⁰	-1 13.2 ¹³⁶		10 S	17 45	18 08	34	26 44	01 52	
14	30	32.7	06.7	263	35.3 ¹¹⁹	26.9 ¹³⁷		20	28	17 51	19	25 39	2 00 56	
15	45	32.6	07.0	278	06.3 ¹²⁰	40.4 ¹³⁵		30	17 08	34	18 03	24 34	1 59 61	
16	60	32.5	07.3	292	37.2 ¹¹⁹	-1 54.0 ¹³⁶		35	16 56	24	17 55	23 32	58 64	
17	75	32.4	+22 07.6	307	08.2 ¹²⁰	-2 07.6 ¹³⁶		40	16 43	17 13	17 47	14 22 29	1 57 68	
18	90	32.3	+22 08.0	321	39.2 ¹²⁰	-2 21.1 ¹³⁵		45	16 27	17 01	17 37	14 21 25	1 56 72	
19	105	32.2	08.3	336	10.2 ¹²⁰	34.6 ¹³⁵		50	16 08	16 46	27	20 21	55 76	
20	120	32.1	08.6	350	41.2 ¹²⁰	-2 48.1 ¹³⁵		52	15 59	39	22	19 19	55 78	
21	135	32.0	09.0	5	12.2 ¹²⁰	-3 01.6 ¹³⁵		54	49	32	17	19 17	54 81	
22	150	31.9	09.3	19	43.2 ¹²⁰	15.1 ¹³⁵		56	38	23	11	18 15	53 84	
23	165	31.8	09.6	34	14.2 ¹²⁰	28.5 ¹³⁴		58	24	14	17 05	18 12	53 86	
24	180	31.7	+22 09.9	48	45.2 ¹²⁰	-3 41.9 ¹³⁴		60 S	15 09	16 04	16 59	14 17 9	1 52 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 20 ^m 6		Mag: -4.5 PMG: 8 ^h 57 ^m		Mag: -2.1 PMG: 1 ^h 06 ^m		Mag: -1.9 PMG: 12 ^h 39 ^m		Mag: +0.1 PMG: 11 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	249	32.6	225 37.6	+7 43.1	343 27.4	-25 53.1	169 57.8	+22 45.1	185 57.3	+19 30.2
1	264	35.0	240 37.9	43.8	358 30.6	53.3	184 59.7	45.2	200 59.4	30.3
2	279	37.5	255 38.2	44.4	13 33.7	53.4	200 01.5	45.2	216 01.5	30.3
3	294	40.0	270 38.5	45.1	28 36.9	53.6	215 03.4	45.2	231 03.6	30.4
4	309	42.4	285 38.8	45.8	43 40.0	53.7	230 05.2	45.3	246 05.8	30.5
5	324	44.9	300 39.1	+7 46.4	58 43.2	-25 53.9	245 07.0	+22 45.3	261 07.9	+19 30.5
6	339	47.4	315 39.3	+7 47.1	73 46.3	-25 54.0	260 08.9	+22 45.4	276 10.0	+19 30.6
7	354	49.8	330 39.6	47.8	88 49.5	54.1	275 10.7	45.4	291 12.1	30.6
8	9	52.3	345 39.9	48.5	103 52.6	54.3	290 12.6	45.5	306 14.3	30.7
9	24	54.8	0 40.2	49.2	118 55.8	54.4	305 14.4	45.5	321 16.4	30.8
10	39	57.2	15 40.5	49.8	133 59.0	54.6	320 16.3	45.6	336 18.5	30.8
11	54	59.7	30 40.8	+7 50.5	149 02.1	-25 54.7	335 18.1	+22 45.6	351 20.7	+19 30.9
12	70	02.1	45 41.0	+7 51.2	164 05.3	-25 54.9	350 20.0	+22 45.7	6 22.8	+19 30.9
13	85	04.6	60 41.3	51.9	179 08.4	55.0	5 21.8	45.7	21 24.9	31.0
14	100	07.1	75 41.6	52.5	194 11.6	55.1	20 23.6	45.7	36 27.0	31.1
15	115	09.5	90 41.9	53.2	209 14.8	55.3	35 25.5	45.8	51 29.2	31.1
16	130	12.0	105 42.1	53.9	224 17.9	55.4	50 27.3	45.8	66 31.3	31.2
17	145	14.5	120 42.4	+7 54.6	239 21.1	-25 55.6	65 29.2	+22 45.9	81 33.4	+19 31.2
18	160	16.9	135 42.7	+7 55.3	254 24.3	-25 55.7	80 31.0	+22 45.9	96 35.6	+19 31.3
19	175	19.4	150 43.0	55.9	269 27.4	55.8	95 32.9	46.0	111 37.7	31.3
20	190	21.9	165 43.2	56.6	284 30.6	56.0	110 34.7	46.0	126 39.8	31.4
21	205	24.3	180 43.5	57.3	299 33.8	56.1	125 36.5	46.1	141 41.9	31.5
22	220	26.8	195 43.8	58.0	314 36.9	56.3	140 38.4	46.1	156 44.1	31.5
23	235	29.3	210 44.0	58.7	329 40.1	56.4	155 40.2	46.1	171 46.2	31.6
24	250	31.7	225 44.3	+7 59.3	344 43.3	-25 56.6	170 42.1	+22 46.2	186 48.3	+19 31.6
Dif	—	+3	+7	+32	-1	+18	0	+21	+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 9 ^d 9 PHE SD: 15 ^h 8 PMG: 21 ^h 27 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	31.7	+22	09.9	48	45.2	-3	41.9	60 N	** **	1 23	2 48	16 08	89	2 19	10		
1	195	31.6		10.3	63	16.2 ¹²⁰	-3	55.3 ¹³⁴	58	** **	1 58	3 06	04 85		21	13		
2	210	31.5		10.6	77	47.2 ¹²⁰	-4	08.7 ¹³⁴	56	** **	2 23	21	16 00	82	23	16		
3	225	31.4		10.9	92	18.2 ¹²⁰		22.0 ¹³³	54	1 16	42	34	15 57	79	25	18		
4	240	31.3		11.2	106	49.2 ¹²⁰		35.3 ¹³³	52	1 48	2 59	45	54 77		27	20		
5	255	31.2	+22	11.6	121	20.2 ¹²⁰	-4	48.6 ¹³³	50	2 11	3 12	3 55	15 51	75	2 29	21		
6	270	31.1	+22	11.9	135	51.2 ¹²⁰	-5	01.8 ¹³²	45	2 52	3 40	4 16	15 45	71	2 32	26		
7	285	31.0		12.2	150	22.2 ¹²⁰		15.0 ¹³²	40	3 20	4 01	33	40 67		35	29		
8	300	30.9		12.5	164	53.2 ¹²⁰		28.2 ¹³²	35	42	18	47	36 64		37	33		
9	315	30.8		12.8	179	24.2 ¹²⁰		41.3 ¹³¹	30	3 59	32	4 59	32 61		40	35		
10	330	30.7		13.2	193	55.2 ¹²⁰	-5	54.4 ¹³¹	20	4 27	4 56	5 20	26 56		43	40		
11	345	30.6	+22	13.5	208	26.2 ¹²⁰	-6	07.5 ¹³¹	10 N	4 48	5 15	5 38	15 20	52	2 47	44		
12	0	30.5	+22	13.8	222	57.1 ¹¹⁹	-6	20.5 ¹³⁰	0	5 06	5 32	5 54	15 15	48	2 50	48		
13	15	30.4		14.1	237	28.1 ¹²⁰		33.5 ¹³⁰	10 S	22	5 48	6 11	10 44		53	52		
14	30	30.3		14.4	251	59.0 ¹¹⁹		46.5 ¹³⁰	20	37	6 04	28	15 04	41	2 56	57		
15	45	30.2		14.8	266	30.0 ¹²⁰	-6	59.4 ¹²⁹	30	5 52	22	6 48	14 58	36	3 00	61		
16	60	30.1		15.1	281	00.9 ¹¹⁹	-7	12.2 ¹²⁸	35	6 01	32	7 00	55 33		02	64		
17	75	30.0	+22	15.4	295	31.8 ¹¹⁹	-7	25.1 ¹²⁹	40	6 09	6 43	7 13	14 51	30	3 05	67		
18	90	29.9	+22	15.7	310	02.7 ¹¹⁹	-7	37.8 ¹²⁷	45	6 19	6 55	7 29	14 46	27	3 08	71		
19	105	29.8		16.0	324	33.6 ¹¹⁹	-7	50.6 ¹²⁸	50	29	7 10	48	41 23		11	76		
20	120	29.7		16.3	339	04.5 ¹¹⁹	-8	03.3 ¹²⁷	52	34	17	7 57	38 21		13	78		
21	135	29.6		16.6	353	35.4 ¹¹⁹		15.9 ¹²⁶	54	39	25	8 07	36 18		15	80		
22	150	29.5		16.9	8	06.2 ¹¹⁸		28.5 ¹²⁶	56	45	33	19	33 16		17	82		
23	165	29.4		17.3	22	37.0 ¹¹⁸		41.0 ¹²⁵	58	51	42	32	30 13		19	85		
24	180	29.3	+22	17.6	37	07.9 ¹¹⁹	-8	53.5 ¹²⁵	60 S	6 58	7 53	8 48	14 26	10	3 21	89		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 16 ^m 7		Mag: -4.5 PMG: 8 ^h 57 ^m				Mag: -2.1 PMG: 1 ^h 01 ^m				Mag: -1.9 PMG: 12 ^h 36 ^m				Mag: +0.1 PMG: 11 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	31.7	225	44.3	+7	59.3	344	43.3	-25	56.6	170	42.1	+22	46.2	186	48.3	+19	31.6
1	265	34.2	240	44.6	+8	00.0	359	46.4		56.7	185	43.9		46.2	201	50.4		31.7
2	280	36.6	255	44.9	+8	00.7	14	49.6		56.8	200	45.8		46.3	216	52.6		31.8
3	295	39.1	270	45.1		01.4	29	52.8		57.0	215	47.6		46.3	231	54.7		31.8
4	310	41.6	285	45.4		02.1	44	56.0		57.1	230	49.4		46.4	246	56.8		31.9
5	325	44.0	300	45.7	+8	02.8	59	59.1	-25	57.3	245	51.3	+22	46.4	261	59.0	+19	31.9
6	340	46.5	315	45.9	+8	03.4	75	02.3	-25	57.4	260	53.1	+22	46.5	277	01.1	+19	32.0
7	355	49.0	330	46.2		04.1	90	05.5		57.5	275	55.0		46.5	292	03.2		32.0
8	10	51.4	345	46.4		04.8	105	08.7		57.7	290	56.8		46.5	307	05.3		32.1
9	25	53.9	0	46.7		05.5	120	11.9		57.8	305	58.7		46.6	322	07.5		32.2
10	40	56.4	15	47.0		06.2	135	15.0		58.0	321	00.5		46.6	337	09.6		32.2
11	55	58.8	30	47.2	+8	06.9	150	18.2	-25	58.1	336	02.3	+22	46.7	352	11.7	+19	32.3
12	71	01.3	45	47.5	+8	07.6	165	21.4	-25	58.2	351	04.2	+22	46.7	7	13.8	+19	32.3
13	86	03.7	60	47.7		08.2	180	24.6		58.4	6	06.0		46.8	22	16.0		32.4
14	101	06.2	75	48.0		08.9	195	27.8		58.5	21	07.9		46.8	37	18.1		32.5
15	116	08.7	90	48.3		09.6	210	31.0		58.7	36	09.7		46.9	52	20.2		32.5
16	131	11.1	105	48.5		10.3	225	34.2		58.8	51	11.6		46.9	67	22.4		32.6
17	146	13.6	120	48.8	+8	11.0	240	37.4	-25	58.9	66	13.4	+22	46.9	82	24.5	+19	32.6
18	161	16.1	135	49.0	+8	11.7	255	40.5	-25	59.1	81	15.2	+22	47.0	97	26.6	+19	32.7
19	176	18.5	150	49.3		12.4	270	43.7		59.2	96	17.1		47.0	112	28.7		32.7
20	191	21.0	165	49.5		13.1	285	46.9		59.3	111	18.9		47.1	127	30.9		32.8
21	206	23.5	180	49.8		13.8	300	50.1		59.5	126	20.8		47.1	142	33.0		32.9
22	221	25.9	195	50.0		14.4	315	53.3		59.6	141	22.6		47.2	157	35.1		32.9
23	236	28.4	210	50.3		15.1	330	56.5		59.8	156	24.5		47.2	172	37.3		33.0
24	251	30.9	225	50.5	+8	15.8	345	59.7	-25	59.9	171	26.3	+22	47.2	187	39.4	+19	33.0
Dif	—		+3		+7		+32		-1		+18		0		+21		+1	

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 1			Edad: 10 ^d 9 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/3 PMG: 22 ^h 15 ^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	h m	h m				
0	180	29.3	+22	17.6	37	07.9	-8	53.5	60 N	21 11	22 39	** **	17 37 87	2 29 11				
1	195	29.2		17.9	51	38.7 ¹¹⁸	-9	06.0 ¹²⁵	58	20 52	22 01	** **	29 84	34 14				
2	210	29.1		18.2	66	09.4 ¹¹⁷		18.4 ¹²⁴	56	37	21 36	** **	22 81	39 17				
3	225	29.0		18.5	80	40.2 ¹¹⁸		30.7 ¹²³	54	24	16	22 46	16 79	43 20				
4	240	28.9		18.8	95	10.9 ¹¹⁷		43.0 ¹²³	52	12	21 00	22 11	11 76	47 22				
5	255	28.8	+22	19.1	109	41.7 ¹¹⁸	-9	55.2 ¹²²	50	20 02	20 46	21 47	17 06 74	2 50 24				
6	270	28.7	+22	19.4	124	12.4 ¹¹⁷	-10	07.3 ¹²¹	45	19 41	20 18	21 06	16 56 69	2 58 28				
7	285	28.6		19.7	138	43.1 ¹¹⁷		19.4 ¹²¹	40	24	19 56	20 37	47 66	3 04 32				
8	300	28.5		20.0	153	13.7 ¹¹⁶		31.5 ¹²¹	35	19 10	39	20 15	40 63	10 34				
9	315	28.4		20.3	167	44.4 ¹¹⁷		43.5 ¹²⁰	30	18 58	25	19 58	33 61	15 37				
10	330	28.3		20.6	182	15.0 ¹¹⁶	-10	55.4 ¹¹⁹	20	37	19 01	30	22 57	23 42				
11	345	28.2	+22	20.9	196	45.6 ¹¹⁶	-11	07.3 ¹¹⁹	10 N	18 19	18 41	19 08	16 12 53	3 31 45				
12	0	28.1	+22	21.2	211	16.2 ¹¹⁶	-11	19.1 ¹¹⁸	0	18 02	18 24	18 50	16 03 50	3 38 49				
13	15	28.0		21.5	225	46.7 ¹¹⁵		30.8 ¹¹⁷	10 S	17 45	18 08	34	15 54 47	45 53				
14	30	27.9		21.8	240	17.3 ¹¹⁶		42.5 ¹¹⁷	20	28	17 51	19	45 42	3 53 56				
15	45	27.8		22.1	254	47.8 ¹¹⁵	-11	54.1 ¹¹⁶	30	17 07	34	18 03	34 39	4 01 61				
16	60	27.7		22.4	269	18.2 ¹¹⁴	-12	05.6 ¹¹⁵	35	16 56	24	17 55	28 36	06 64				
17	75	27.6	+22	22.7	283	48.7 ¹¹⁵	-12	17.1 ¹¹⁵	40	16 42	17 12	17 46	15 21 33	4 12 67				
18	90	27.5	+22	23.0	298	19.1 ¹¹⁴	-12	28.5 ¹¹⁴	45	16 26	17 00	17 37	15 13 30	4 19 70				
19	105	27.4		23.3	312	49.5 ¹¹⁴		39.8 ¹¹³	50	16 07	16 45	26	15 04 25	27 74				
20	120	27.3		23.6	327	19.9 ¹¹⁴	-12	51.1 ¹¹³	52	15 58	38	21	14 59 24	31 76				
21	135	27.2		23.9	341	50.3 ¹¹⁴	-13	02.2 ¹¹¹	54	47	30	16	54 22	35 79				
22	150	27.1		24.2	356	20.6 ¹¹³		13.4 ¹¹²	56	36	22	10	49 19	39 82				
23	165	27.0		24.5	10	50.9 ¹¹³		24.4 ¹¹⁰	58	22	12	17 04	43 16	44 85				
24	180	26.8	+22	24.8	25	21.1 ¹¹²	-13	35.4 ¹¹⁰	60 S	15 06	16 02	16 57	14 36 13	4 50 88				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 12 ^m 8		Mag: -4.5 PMG: 8 ^h 56 ^m			Mag: -2.1 PMG: 0 ^h 56 ^m			Mag: -1.9 PMG: 12 ^h 33 ^m			Mag: +0.1 PMG: 11 ^h 28 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♊	Dec		hG ♉	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	251	30.9	225	50.5	+8	15.8	345	59.7	-25	59.9	171	26.3	+22	47.2	187	39.4	+19	33.0
1	266	33.3	240	50.8		16.5	1	02.9	-26	00.0	186	28.1		47.3	202	41.5		33.1
2	281	35.8	255	51.0		17.2	16	06.1	-26	00.2	201	30.0		47.3	217	43.6		33.1
3	296	38.2	270	51.3		17.9	31	09.3		00.3	216	31.8		47.4	232	45.8		33.2
4	311	40.7	285	51.5		18.6	46	12.5		00.5	231	33.7		47.4	247	47.9		33.3
5	326	43.2	300	51.8	+8	19.3	61	15.7	-26	00.6	246	35.5	+22	47.5	262	50.0	+19	33.3
6	341	45.6	315	52.0	+8	20.0	76	18.9	-26	00.7	261	37.4	+22	47.5	277	52.2	+19	33.4
7	356	48.1	330	52.2		20.7	91	22.1		00.9	276	39.2		47.6	292	54.3		33.4
8	11	50.6	345	52.5		21.4	106	25.3		01.0	291	41.0		47.6	307	56.4		33.5
9	26	53.0	0	52.7		22.1	121	28.5		01.1	306	42.9		47.6	322	58.5		33.6
10	41	55.5	15	53.0		22.8	136	31.7		01.3	321	44.7		47.7	338	00.7		33.6
11	56	58.0	30	53.2	+8	23.5	151	34.9	-26	01.4	336	46.6	+22	47.7	353	02.8	+19	33.7
12	72	00.4	45	53.4	+8	24.1	166	38.2	-26	01.6	351	48.4	+22	47.8	8	04.9	+19	33.7
13	87	02.9	60	53.7		24.8	181	41.4		01.7	6	50.3		47.8	23	07.0		33.8
14	102	05.4	75	53.9		25.5	196	44.6		01.8	21	52.1		47.9	38	09.2		33.8
15	117	07.8	90	54.2		26.2	211	47.8		02.0	36	53.9		47.9	53	11.3		33.9
16	132	10.3	105	54.4		26.9	226	51.0		02.1	51	55.8		47.9	68	13.4		34.0
17	147	12.7	120	54.6	+8	27.6	241	54.2	-26	02.2	66	57.6	+22	48.0	83	15.6	+19	34.0
18	162	15.2	135	54.9	+8	28.3	256	57.4	-26	02.4	81	59.5	+22	48.0	98	17.7	+19	34.1
19	177	17.7	150	55.1		29.0	272	00.7		02.5	97	01.3		48.1	113	19.8		34.1
20	192	20.1	165	55.3		29.7	287	03.9		02.6	112	03.2		48.1	128	21.9		34.2
21	207	22.6	180	55.6		30.4	302	07.1		02.8	127	05.0		48.2	143	24.1		34.2
22	222	25.1	195	55.8		31.1	317	10.3		02.9	142	06.8		48.2	158	26.2		34.3
23	237	27.5	210	56.0		31.8	332	13.5		03.1	157	08.7		48.2	173	28.3		34.4
24	252	30.0	225	56.2	+8	32.5	347	16.7	-26	03.2	172	10.5	+22	48.3	188	30.5	+19	34.4
Dif	—		+2		+7		+32		-1		+18		0		+21		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 58 ^m 3			Edad: 11 ^d 9 PHE { SD: 15/6 PMG: 23 ^h 05 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	26.8	+22 24.8	25	21.1	-13 35.4		60 N	** **	1 18	2 45	19 04	85	2 40	15
1	195	26.7	25.1	39	51.4 ¹¹³	46.2 ¹⁰⁸		58	** **	1 55	3 04	18 53	81	48	19
2	210	26.6	25.4	54	21.6 ¹¹²	-13 57.1 ¹⁰⁹		56	** **	2 20	19	43	78	2 56	21
3	225	26.5	25.7	68	51.8 ¹¹²	-14 07.8 ¹⁰⁷		54	1 11	40	32	35	75	3 03	23
4	240	26.4	26.0	83	21.9 ¹¹¹	18.4 ¹⁰⁶		52	1 45	2 57	44	27	73	09	25
5	255	26.3	+22 26.3	97	52.1 ¹¹²	-14 29.0 ¹⁰⁶		50	2 09	3 11	3 54	18 20	71	3 14	28
6	270	26.2	+22 26.5	112	22.2 ¹¹¹	-14 39.5 ¹⁰⁵		45	2 50	3 38	4 15	18 05	68	3 26	32
7	285	26.1	26.8	126	52.2 ¹¹⁰	-14 49.9 ¹⁰⁴		40	3 19	4 00	32	17 53	65	36	35
8	300	26.0	27.1	141	22.3 ¹¹¹	-15 00.2 ¹⁰³		35	41	17	46	43	62	44	38
9	315	25.9	27.4	155	52.3 ¹¹⁰	10.5 ¹⁰³		30	3 59	32	4 59	34	60	3 52	40
10	330	25.8	27.7	170	22.2 ¹⁰⁹	20.6 ¹⁰¹		20	4 27	4 55	5 20	19 56	4 05	43	
11	345	25.7	+22 28.0	184	52.2 ¹¹⁰	-15 30.7 ¹⁰¹		10 N	4 48	5 15	5 38	17 05	54	4 16	47
12	0	25.6	+22 28.3	199	22.1 ¹⁰⁹	-15 40.7 ¹⁰⁰		0	5 06	5 32	5 55	16 53	51	4 27	50
13	15	25.5	28.6	213	52.0 ¹⁰⁹	-15 50.6 ⁹⁹		10 S	22	5 49	6 11	41	47	38	53
14	30	25.4	28.8	228	21.9 ¹⁰⁹	-16 00.4 ⁹⁸		20	38	6 05	29	27	45	4 49	57
15	45	25.3	29.1	242	51.7 ¹⁰⁸	10.1 ⁹⁷		30	5 53	23	6 49	13	41	5 02	61
16	60	25.1	29.4	257	21.5 ¹⁰⁸	19.8 ⁹⁷		35	6 02	33	7 01	16 04	39	10	63
17	75	25.0	+22 29.7	271	51.2 ¹⁰⁷	-16 29.3 ⁹⁵		40	6 10	6 44	7 14	15 54	37	5 19	65
18	90	24.9	+22 30.0	286	21.0 ¹⁰⁸	-16 38.8 ⁹⁵		45	6 20	6 57	7 30	15 43	34	5 29	69
19	105	24.8	30.3	300	50.7 ¹⁰⁷	48.1 ⁹³		50	31	7 12	50	29	30	41	73
20	120	24.7	30.5	315	20.4 ¹⁰⁷	-16 57.4 ⁹³		52	36	19	7 59	23	28	47	75
21	135	24.6	30.8	329	50.0 ¹⁰⁶	-17 06.6 ⁹²		54	41	27	8 10	16	26	5 54	77
22	150	24.5	31.1	344	19.6 ¹⁰⁶	15.7 ⁹¹		56	47	35	21	15 08	24	6 01	79
23	165	24.4	31.4	358	49.2 ¹⁰⁶	24.6 ⁸⁹		58	6 53	45	35	14 59	21	09	82
24	180	24.3	+22 31.6	13	18.8 ¹⁰⁶	-17 33.5 ⁸⁹		60 S	7 00	7 56	8 51	14 49	18	6 18	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 08 ^m 8		Mag: -4.5 PMG: 8 ^h 56 ^m		Mag: -2.2 PMG: 0 ^h 51 ^m		Mag: -1.9 PMG: 12 ^h 30 ^m		Mag: +0.1 PMG: 11 ^h 24 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	252	30.0	225	56.2	+8 32.5	347	16.7	-26 03.2	172	10.5	+22 48.3	188	30.5	+19 34.4	
1	267	32.5	240	56.5	33.2	2	20.0	03.3	187	12.4	48.3	203	32.6	34.5	
2	282	34.9	255	56.7	33.9	17	23.2	03.5	202	14.2	48.4	218	34.7	34.5	
3	297	37.4	270	56.9	34.6	32	26.4	03.6	217	16.0	48.4	233	36.8	34.6	
4	312	39.8	285	57.1	35.3	47	29.6	03.7	232	17.9	48.5	248	39.0	34.7	
5	327	42.3	300	57.4	+8 36.0	62	32.9	-26 03.9	247	19.7	+22 48.5	263	41.1	+19 34.7	
6	342	44.8	315	57.6	+8 36.7	77	36.1	-26 04.0	262	21.6	+22 48.5	278	43.2	+19 34.8	
7	357	47.2	330	57.8	37.4	92	39.3	04.1	277	23.4	48.6	293	45.4	34.8	
8	12	49.7	345	58.0	38.1	107	42.6	04.3	292	25.3	48.6	308	47.5	34.9	
9	27	52.2	0	58.3	38.8	122	45.8	04.4	307	27.1	48.7	323	49.6	34.9	
10	42	54.6	15	58.5	39.5	137	49.0	04.5	322	28.9	48.7	338	51.7	35.0	
11	57	57.1	30	58.7	+8 40.2	152	52.2	-26 04.7	337	30.8	+22 48.7	353	53.9	+19 35.1	
12	72	59.6	45	58.9	+8 40.9	167	55.5	-26 04.8	352	32.6	+22 48.8	8	56.0	+19 35.1	
13	88	02.0	60	59.1	41.6	182	58.7	04.9	7	34.5	48.8	23	58.1	35.2	
14	103	04.5	75	59.4	42.3	198	01.9	05.1	22	36.3	48.9	39	00.3	35.2	
15	118	07.0	90	59.6	43.0	213	05.2	05.2	37	38.2	48.9	54	02.4	35.3	
16	133	09.4	105	59.8	43.7	228	08.4	05.3	52	40.0	49.0	69	04.5	35.3	
17	148	11.9	121	00.0	+8 44.4	243	11.7	-26 05.5	67	41.8	+22 49.0	84	06.6	+19 35.4	
18	163	14.3	136	00.2	+8 45.2	258	14.9	-26 05.6	82	43.7	+22 49.0	99	08.8	+19 35.5	
19	178	16.8	151	00.4	45.9	273	18.1	05.7	97	45.5	49.1	114	10.9	35.5	
20	193	19.3	166	00.6	46.6	288	21.4	05.9	112	47.4	49.1	129	13.0	35.6	
21	208	21.7	181	00.9	47.3	303	24.6	06.0	127	49.2	49.2	144	15.2	35.6	
22	223	24.2	196	01.1	48.0	318	27.9	06.1	142	51.0	49.2	159	17.3	35.7	
23	238	26.7	211	01.3	48.7	333	31.1	06.3	157	52.9	49.3	174	19.4	35.7	
24	253	29.1	226	01.5	+8 49.4	348	34.3	-26 06.4	172	54.7	+22 49.3	189	21.5	+19 35.8	
Dif	—		+2	+7		+32	-1		+18		0	+21		+1	

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 5			Edad: 12 ^d 9 PHE { 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/2 Rº: 52 ^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	180	24.3	+22	31.6	13	18.8	-17	33.5	60 N	21 14	22 45	** **	20 29 76	2 55 20				
1	195	24.2		31.9	27	48.3 ¹⁰⁵		42.3 ⁸⁸	58	20 55	22 05	** **	14 73	3 07 24				
2	210	24.1		32.2	42	17.8 ¹⁰⁵		51.0 ⁸⁷	56	39	21 39	** **	20 01 71	17 27				
3	225	24.0		32.5	56	47.3 ¹⁰⁵	-17	59.6 ⁸⁶	54	26	19	22 51	19 50 69	26 30				
4	240	23.8		32.7	71	16.7 ¹⁰⁴	-18	08.1 ⁸⁵	52	14	21 02	22 15	40 67	34 32				
5	255	23.7	+22	33.0	85	46.1 ¹⁰⁴	-18	16.5 ⁸⁴	50	20 04	20 48	21 50	19 31 66	3 42 33				
6	270	23.6	+22	33.3	100	15.5 ¹⁰⁴	-18	24.8 ⁸³	45	19 43	20 19	21 08	19 13 63	3 58 36				
7	285	23.5		33.6	114	44.9 ¹⁰⁴		33.0 ⁸²	40	25	19 58	20 39	18 58 61	4 11 39				
8	300	23.4		33.8	129	14.2 ¹⁰³		41.1 ⁸¹	35	19 11	40	20 17	45 59	22 41				
9	315	23.3		34.1	143	43.5 ¹⁰³		49.1 ⁸⁰	30	18 58	26	19 59	34 58	32 43				
10	330	23.2		34.4	158	12.7 ¹⁰²	-18	57.0 ⁷⁹	20	37	19 02	31	18 15 56	4 48 47				
11	345	23.1	+22	34.6	172	42.0 ¹⁰³	-19	04.7 ⁷⁷	10 N	18 19	18 42	19 09	17 59 53	5 03 49				
12	0	23.0	+22	34.9	187	11.2 ¹⁰²	-19	12.4 ⁷⁷	0	18 02	18 25	18 51	17 44 51	5 17 51				
13	15	22.9		35.2	201	40.4 ¹⁰²		20.0 ⁷⁶	10 S	17 45	18 08	34	28 50	31 54				
14	30	22.7		35.5	216	09.6 ¹⁰²		27.5 ⁷⁵	20	28	17 51	19	17 12 48	5 46 56				
15	45	22.6		35.7	230	38.7 ¹⁰¹		34.8 ⁷³	30	17 07	33	18 03	16 54 45	6 03 59				
16	60	22.5		36.0	245	07.8 ¹⁰¹		42.1 ⁷³	35	16 55	23	17 55	43 44	13 61				
17	75	22.4	+22	36.3	259	36.9 ¹⁰¹	-19	49.2 ⁷¹	40	16 42	17 12	17 46	16 31 42	6 24 63				
18	90	22.3	+22	36.5	274	06.0 ¹⁰¹	-19	56.2 ⁷⁰	45	16 26	16 59	17 36	16 17 39	6 38 65				
19	105	22.2		36.8	288	35.0 ¹⁰⁰	-20	03.2 ⁷⁰	50	16 06	44	25	15 59 37	6 54 69				
20	120	22.1		37.0	303	04.0 ¹⁰⁰		10.0 ⁶⁸	52	15 57	37	20	51 35	7 02 71				
21	135	22.0		37.3	317	33.0 ¹⁰⁰		16.7 ⁶⁷	54	46	29	15	42 33	11 72				
22	150	21.9		37.6	332	02.0 ¹⁰⁰		23.3 ⁶⁶	56	34	21	09	32 31	20 75				
23	165	21.7		37.8	346	30.9 ⁹⁹		29.8 ⁶⁵	58	20	11	17 03	20 29	31 78				
24	180	21.6	+22	38.1	0	59.9 ¹⁰⁰	-20	36.1 ⁶³	60 S	15 04	16 00	16 56	15 07 25	7 44 81				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 7 ^h 04 ^m 9		Mag: -4.5 PMG: 8 ^h 56 ^m			Mag: -2.2 PMG: 0 ^h 46 ^m			Mag: -1.9 PMG: 12 ^h 27 ^m				Mag: +0.1 PMG: 11 ^h 21 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♏	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	253	29.1	226	01.5	+8	49.4	348	34.3	-26	06.4	172	54.7	+22	49.3	189	21.5	+19	35.8
1	268	31.6	241	01.7		50.1	3	37.6		06.5	187	56.6		49.3	204	23.7		35.9
2	283	34.1	256	01.9		50.8	18	40.8		06.7	202	58.4		49.4	219	25.8		35.9
3	298	36.5	271	02.1		51.5	33	44.1		06.8	218	00.2		49.4	234	27.9		36.0
4	313	39.0	286	02.3		52.2	48	47.3		06.9	233	02.1		49.5	249	30.1		36.0
5	328	41.5	301	02.5	+8	52.9	63	50.6	-26	07.1	248	03.9	+22	49.5	264	32.2	+19	36.1
6	343	43.9	316	02.7	+8	53.6	78	53.8	-26	07.2	263	05.8	+22	49.5	279	34.3	+19	36.1
7	358	46.4	331	02.9		54.3	93	57.1		07.3	278	07.6		49.6	294	36.4		36.2
8	13	48.8	346	03.1		55.0	109	00.3		07.5	293	09.5		49.6	309	38.6		36.3
9	28	51.3	1	03.3		55.8	124	03.6		07.6	308	11.3		49.7	324	40.7		36.3
10	43	53.8	16	03.5		56.5	139	06.8		07.7	323	13.1		49.7	339	42.8		36.4
11	58	56.2	31	03.7	+8	57.2	154	10.1	-26	07.8	338	15.0	+22	49.7	354	45.0	+19	36.4
12	73	58.7	46	03.9	+8	57.9	169	13.3	-26	08.0	353	16.8	+22	49.8	9	47.1	+19	36.5
13	89	01.2	61	04.1		58.6	184	16.6		08.1	8	18.7		49.8	24	49.2		36.5
14	104	03.6	76	04.3	+8	59.3	199	19.9		08.2	23	20.5		49.9	39	51.3		36.6
15	119	06.1	91	04.5	+9	00.0	214	23.1		08.4	38	22.3		49.9	54	53.5		36.7
16	134	08.6	106	04.7	+9	00.7	229	26.4		08.5	53	24.2		50.0	69	55.6		36.7
17	149	11.0	121	04.9	+9	01.4	244	29.6	-26	08.6	68	26.0	+22	50.0	84	57.7	+19	36.8
18	164	13.5	136	05.1	+9	02.1	259	32.9	-26	08.8	83	27.9	+22	50.0	99	59.9	+19	36.8
19	179	16.0	151	05.3		02.9	274	36.2		08.9	98	29.7		50.1	115	02.0		36.9
20	194	18.4	166	05.5		03.6	289	39.4		09.0	113	31.6		50.1	130	04.1		36.9
21	209	20.9	181	05.7		04.3	304	42.7		09.1	128	33.4		50.2	145	06.2		37.0
22	224	23.3	196	05.9		05.0	319	45.9		09.3	143	35.2		50.2	160	08.4		37.1
23	239	25.8	211	06.1		05.7	334	49.2		09.4	158	37.1		50.2	175	10.5		37.1
24	254	28.3	226	06.3	+9	06.4	349	52.5	-26	09.5	173	38.9	+22	50.3	190	12.6	+19	37.2
Dif	—		+2		+7		+33		-1		+18		0		+21		+1	

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 6				Edad: 13 ^d 9 PHE { 4 ^h : 56 ^h 1 12 ^h : 55 ^h 9 20 ^h : 55 ^h 7 R°: ***																	
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°		/		°		/		°		/		°	h	m	h	m	h	m	h	m	
0	180	21.6	+22	38.1	0	59.9	-20	36.1	63	60 N	** *	1	12	2	43	21	45	64	3	15	31	
1	195	21.5		38.4	15	28.8	99	42.4	63	58	** *	1	51	3	02	27	62		31	33		
2	210	21.4		38.6	29	57.7	99	48.5	61	56	** *	2	18		17	21	12	61		44	36	
3	225	21.3		38.9	44	26.5	98	-20	54.6	61	54	1	06		31	20	59	60		3	56	37
4	240	21.2		39.1	58	55.4	99	-21	00.5	59	52	1	42		42	47	60		4	06	39	
5	255	21.1	+22	39.4	73	24.2	98	-21	06.3	58	50	2	07		3	20	37	59		4	15	40
6	270	21.0	+22	39.6	87	53.0	98	-21	12.0	57	45	2	49		3	20	16	57		4	34	43
7	285	20.8		39.9	102	21.8	98		17.5	55	40	3	18		3	19	59	56		4	50	44
8	300	20.7		40.2	116	50.6	98		23.0	55	35		40		4	44	56		5	03	46	
9	315	20.6		40.4	131	19.4	98		28.3	53	30	3	58		31	32	55		15	47		
10	330	20.5		40.7	145	48.1	97		33.6	53	20	4	26		4	19	11	54		35	49	
11	345	20.4	+22	40.9	160	16.9	98	-21	38.7	51	10 N	4	48		5	18	52	53		5	52	50
12	0	20.3	+22	41.2	174	45.6	97	-21	43.7	50	0	5	07		5	18	35	52		6	08	52
13	15	20.2		41.4	189	14.3	97		48.5	48	10 S		23		5	18		51		25	53	
14	30	20.1		41.7	203	43.0	97		53.3	48	20		38		6	18	00	50		6	42	55
15	45	19.9		41.9	218	11.7	97	-21	57.9	46	30	5	54		24	17	39	49		7	02	57
16	60	19.8		42.2	232	40.4	97	-22	02.4	45	35	6	03		34	27	48		14	58		
17	75	19.7	+22	42.4	247	09.0	96	-22	06.8	44	40	6	11		6	17	13	47		7	27	59
18	90	19.6	+22	42.7	261	37.7	97	-22	11.1	43	45	6	21		6	16	56	46		7	43	61
19	105	19.5		42.9	276	06.4	97		15.3	42	50		32		7	36	44		8	03	63	
20	120	19.4		43.2	290	35.0	96		19.3	40	52		37		21	26	43		13	63		
21	135	19.3		43.4	305	03.7	97		23.2	39	54		43		28	15	42		23	65		
22	150	19.1		43.7	319	32.3	96		27.0	38	56		49		37	16	03	41		35	67	
23	165	19.0		43.9	334	00.9	96		30.7	37	58	6	55		47	15	49	39		8	49	68
24	180	18.9	+22	44.1	348	29.6	97	-22	34.3	36	60 S	7	02		7	15	32	37		9	05	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 01 ^m 0		Mag: -4.5 PMG: 8 ^h 55 ^m		Mag: -2.2 PMG: 0 ^h 40 ^m		Mag: -1.9 PMG: 12 ^h 24 ^m		Mag: +0.1 PMG: 11 ^h 18 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°		/		°		/		°		/							
0	254	28.3	226	06.3	+9	06.4	349	52.5	-26	09.5	173	38.9	+22	50.3	190	12.6	+19	37.2
1	269	30.7	241	06.5		07.1	4	55.7		09.7	188	40.8		50.3	205	14.8		37.2
2	284	33.2	256	06.6		07.8	19	59.0		09.8	203	42.6		50.4	220	16.9		37.3
3	299	35.7	271	06.8		08.6	35	02.3		09.9	218	44.4		50.4	235	19.0		37.3
4	314	38.1	286	07.0		09.3	50	05.5		10.0	233	46.3		50.4	250	21.1		37.4
5	329	40.6	301	07.2	+9	10.0	65	08.8	-26	10.2	248	48.1	+22	50.5	265	23.3	+19	37.4
6	344	43.1	316	07.4	+9	10.7	80	12.1	-26	10.3	263	50.0	+22	50.5	280	25.4	+19	37.5
7	359	45.5	331	07.6		11.4	95	15.4		10.4	278	51.8		50.6	295	27.5		37.6
8	14	48.0	346	07.8		12.1	110	18.6		10.6	293	53.6		50.6	310	29.7		37.6
9	29	50.4	1	07.9		12.8	125	21.9		10.7	308	55.5		50.6	325	31.8		37.7
10	44	52.9	16	08.1		13.6	140	25.2		10.8	323	57.3		50.7	340	33.9		37.7
11	59	55.4	31	08.3	+9	14.3	155	28.4	-26	10.9	338	59.2	+22	50.7	355	36.0	+19	37.8
12	74	57.8	46	08.5	+9	15.0	170	31.7	-26	11.1	354	01.0	+22	50.8	10	38.2	+19	37.8
13	90	00.3	61	08.7		15.7	185	35.0		11.2	9	02.8		50.8	25	40.3		37.9
14	105	02.8	76	08.8		16.4	200	38.3		11.3	24	04.7		50.8	40	42.4		38.0
15	120	05.2	91	09.0		17.1	215	41.6		11.5	39	06.5		50.9	55	44.6		38.0
16	135	07.7	106	09.2		17.9	230	44.8		11.6	54	08.4		50.9	70	46.7		38.1
17	150	10.2	121	09.4	+9	18.6	245	48.1	-26	11.7	69	10.2	+22	51.0	85	48.8	+19	38.1
18	165	12.6	136	09.5	+9	19.3	260	51.4	-26	11.8	84	12.0	+22	51.0	100	50.9	+19	38.2
19	180	15.1	151	09.7		20.0	275	54.7		12.0	99	13.9		51.0	115	53.1		38.2
20	195	17.6	166	09.9		20.7	290	58.0		12.1	114	15.7		51.1	130	55.2		38.3
21	210	20.0	181	10.1		21.4	306	01.2		12.2	129	17.6		51.1	145	57.3		38.4
22	225	22.5	196	10.2		22.2	321	04.5		12.3	144	19.4		51.2	160	59.5		38.4
23	240	24.9	211	10.4		22.9	336	07.8		12.5	159	21.3		51.2	176	01.6		38.5
24	255	27.4	226	10.6	+9	23.6	351	11.1	-26	12.6	174	23.1	+22	51.2	191	03.7	+19	38.5
Dif	—		+2		+7		+33		-1		+18		0		+21		+	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 14 ^d 9 PHE	4 ^h : 55°6 12 ^h : 55°4 20 ^h : 55°2									
	PMG: 11 ^h 58 ^m 8				SD: 15°2				PMG: 0 ^h 48 ^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	h m m
0	180	18.9	+22 44.1	348	29.6	-22 34.3	34	60 N	21 17	22 51	** **	22 49 47	3 46 44	
1	195	18.8	44.4	2	58.2	37.7	33	58	20 58	22 09	** **	29 48	4 04 46	
2	210	18.7	44.6	17	26.8	41.0	32	56	42	21 42	** **	22 13 48	20 46	
3	225	18.6	44.9	31	55.4	44.2	31	54	28	21	22 56	21 59 49	33 47	
4	240	18.4	45.1	46	24.1	47.3	31	52	16	21 04	22 18	47 49	45 47	
5	255	18.3	+22 45.4	60	52.7	50.3	30	50	20 06	20 50	21 53	21 36 49	4 55 48	
6	270	18.2	+22 45.6	75	21.3	53.1	28	45	19 44	20 21	21 10	21 13 50	5 17 48	
7	285	18.1	45.8	89	49.9	55.8	27	40	27	19 59	20 40	20 55 51	34 50	
8	300	18.0	46.1	104	18.6	58.4	26	35	19 12	42	18	40 51	5 49 50	
9	315	17.9	46.3	118	47.2	00.9	25	30	18 59	27	20 00	27 51	6 02 50	
10	330	17.7	46.5	133	15.9	03.2	23	20	38	19 02	19 31	20 05 51	24 50	
11	345	17.6	+22 46.8	147	44.5	05.5	23	10 N	18 20	18 43	19 09	19 45 51	6 42 52	
12	0	17.5	+22 47.0	162	13.2	07.6	21	0	18 02	18 25	18 51	19 27 51	7 00 52	
13	15	17.4	47.3	176	41.8	09.6	20	10 S	17 46	18 08	35	19 09 51	18 52	
14	30	17.3	47.5	191	10.5	11.4	18	20	28	17 51	19	18 50 51	37 53	
15	45	17.2	47.7	205	39.2	13.2	16	30	17 07	33	18 03	28 51	7 59 53	
16	60	17.0	48.0	220	07.9	14.8	15	35	16 55	23	17 55	15 51	8 12 53	
17	75	16.9	+22 48.2	234	36.6	16.3	15	40	16 41	17 12	17 45	18 00 51	8 26 54	
18	90	16.8	+22 48.4	249	05.3	17.7	14	45	16 25	16 59	17 36	17 42 51	8 44 54	
19	105	16.7	48.6	263	34.1	18.9	12	50	16 05	43	24	20 51	9 06 54	
20	120	16.6	48.9	278	02.8	20.1	10	52	15 56	36	19	17 09 52	16 55	
21	135	16.5	49.1	292	31.6	21.1	10	54	45	28	14	16 57 52	28 55	
22	150	16.3	49.3	307	00.4	22.0	9	56	33	19	08	44 51	42 55	
23	165	16.2	49.6	321	29.2	22.7	7	58	19	16 10	17 02	28 51	9 57 56	
24	180	16.1	+22 49.8	335	58.0	23.4	7	60 S	15 02	15 59	16 55	16 09 51	10 16 56	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 57 ^m 0		Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: -2.2 PMG: 0 ^h 35 ^m			Mag: -1.9 PMG: 12 ^h 21 ^m			Mag: +0.1 PMG: 11 ^h 14 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	255	27.4	226 10.6	+9 23.6	351 11.1	-26 12.6	174 23.1	+22 51.2	191 03.7	+19 38.5				
1	270	29.9	241 10.8	24.3	6 14.4	12.7	189 24.9	51.3	206 05.9	38.6				
2	285	32.3	256 10.9	25.0	21 17.7	12.8	204 26.8	51.3	221 08.0	38.6				
3	300	34.8	271 11.1	25.8	36 21.0	13.0	219 28.6	51.4	236 10.1	38.7				
4	315	37.3	286 11.3	26.5	51 24.2	13.1	234 30.5	51.4	251 12.2	38.7				
5	330	39.7	301 11.4	+9 27.2	66 27.5	-26 13.2	249 32.3	+22 51.4	266 14.4	+19 38.8				
6	345	42.2	316 11.6	+9 27.9	81 30.8	-26 13.3	264 34.1	+22 51.5	281 16.5	+19 38.9				
7	0	44.7	331 11.8	28.6	96 34.1	13.5	279 36.0	51.5	296 18.6	38.9				
8	15	47.1	346 11.9	29.4	111 37.4	13.6	294 37.8	51.6	311 20.8	39.0				
9	30	49.6	1 12.1	30.1	126 40.7	13.7	309 39.7	51.6	326 22.9	39.0				
10	45	52.1	16 12.2	30.8	141 44.0	13.8	324 41.5	51.6	341 25.0	39.1				
11	60	54.5	31 12.4	+9 31.5	156 47.3	-26 14.0	339 43.3	+22 51.7	356 27.1	+19 39.1				
12	75	57.0	46 12.6	+9 32.2	171 50.6	-26 14.1	354 45.2	+22 51.7	11 29.3	+19 39.2				
13	90	59.4	61 12.7	33.0	186 53.9	14.2	9 47.0	51.8	26 31.4	39.3				
14	106	01.9	76 12.9	33.7	201 57.2	14.3	24 48.9	51.8	41 33.5	39.3				
15	121	04.4	91 13.1	34.4	217 00.5	14.4	39 50.7	51.8	56 35.7	39.4				
16	136	06.8	106 13.2	35.1	232 03.8	14.6	54 52.5	51.9	71 37.8	39.4				
17	151	09.3	121 13.4	+9 35.9	247 07.1	-26 14.7	69 54.4	+22 51.9	86 39.9	+19 39.5				
18	166	11.8	136 13.5	+9 36.6	262 10.4	-26 14.8	84 56.2	+22 52.0	101 42.1	+19 39.5				
19	181	14.2	151 13.7	37.3	277 13.7	14.9	99 58.1	52.0	116 44.2	39.6				
20	196	16.7	166 13.8	38.0	292 17.0	15.1	114 59.9	52.0	131 46.3	39.6				
21	211	19.2	181 14.0	38.8	307 20.3	15.2	130 01.7	52.1	146 48.4	39.7				
22	226	21.6	196 14.1	39.5	322 23.6	15.3	145 03.6	52.1	161 50.6	39.8				
23	241	24.1	211 14.3	40.2	337 26.9	15.4	160 05.4	52.1	176 52.7	39.8				
24	256	26.6	226 14.5	+9 40.9	352 30.2	-26 15.5	175 07.3	+22 52.2	191 54.8	+19 39.9				
Dif	—		+2	+7	+33	-1	+18	0	+21	+1				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 59 ^m 0			Edad: 15 ^d 9 PHE { 4 ^h : 55/1 12 ^h : 54/9 20 ^h : 54/8 PMG: 1 ^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	180	16.1	+22	49.8	335	58.0	-23	23.4	5	60 N	** **	1 07	2 41	23 36	33	4 30	58	
1	195	16.0		50.0	350	26.9	99	23.9	5	58	** **	1 48	3 00		17 35	4 50	57	
2	210	15.9		50.2	4	55.7	98	24.4	2	56	** **	2 16	16	23 01	37	5 06	57	
3	225	15.8		50.5	19	24.6	99	24.6	2	54	1 01	37	30	22 48	38	20	55	
4	240	15.6		50.7	33	53.5	99	24.8	2	52	1 39	2 54	41	36	39	32	56	
5	255	15.5	+22	50.9	48	22.4	99	-23	24.9	1	50	2 05	3 08	3 52	22 25	41	5 43	55
6	270	15.4	+22	51.1	62	51.4	100	-23	24.8	1	45	2 48	3 37	4 14	22 03	43	6 05	55
7	285	15.3		51.4	77	20.4	100	24.6	2	40	3 17	3 59	31	21 46	43	24	53	
8	300	15.2		51.6	91	49.4	100	24.3	3	35	40	4 16	46	31	45	39	53	
9	315	15.0		51.8	106	18.4	100	23.9	4	30	3 58	31	4 58	21 18	45	6 52	53	
10	330	14.9		52.0	120	47.5	101	23.4	5	20	4 26	4 55	5 20	20 56	47	7 14	52	
11	345	14.8	+22	52.3	135	16.5	100	-23	22.7	7	10 N	4 48	5 15	5 38	20 36	49	7 34	51
12	0	14.7	+22	52.5	149	45.7	102	-23	21.9	8	0	5 07	5 33	5 55	20 18	50	7 52	51
13	15	14.6		52.7	164	14.8	101	21.1	8	10 S	23	5 50	6 12	20 00	51	8 10	50	
14	30	14.4		52.9	178	44.0	102	20.1	10	20	39	6 06	30	19 41	52	30	49	
15	45	14.3		53.1	193	13.2	102	18.9	12	30	5 55	25	6 51	19 54		8 52	48	
16	60	14.2		53.3	207	42.4	102	17.7	12	35	6 03	35	7 03	19 06	54	9 05	48	
17	75	14.1	+22	53.6	222	11.7	103	-23	16.3	14	40	6 13	6 46	7 17	18 51	55	9 20	47
18	90	14.0	+22	53.8	236	41.0	103	-23	14.9	14	45	6 22	7 00	7 33	18 33	57	9 38	46
19	105	13.8		54.0	251	10.3	103	13.3	16	50	34	15	7 53	11 58	10 00	45		
20	120	13.7		54.2	265	39.7	104	11.6	17	52	39	22	8 03	18 01	59	11 44		
21	135	13.6		54.4	280	09.1	104	09.8	18	54	44	30	13	17 49	60	23 43		
22	150	13.5		54.6	294	38.6	105	07.9	19	56	50	39	26	35 61		37 42		
23	165	13.4		54.8	309	08.1	105	05.8	21	58	6 57	7 49	40	19 62	10 53	41		
24	180	13.2	+22	55.0	323	37.6	105	-23	03.7	21	60 S	7 04	8 00	8 56	17 00	64	11 12	40
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 6 ^h 53 ^m 1			Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: -2.3 PMG: 0 ^h 30 ^m			Mag: -1.9 PMG: 12 ^h 18 ^m			Mag: +0.1 PMG: 11 ^h 11 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	256	26.6	226	14.5	+9	40.9	352	30.2	-26	15.5	175	07.3	+22	52.2	191	54.8	+19	39.9
1	271	29.0	241	14.6		41.6	7	33.5		15.7	190	09.1		52.2	206	57.0		39.9
2	286	31.5	256	14.8		42.4	22	36.8		15.8	205	10.9		52.3	221	59.1		40.0
3	301	33.9	271	14.9		43.1	37	40.1		15.9	220	12.8		52.3	237	01.2		40.0
4	316	36.4	286	15.1		43.8	52	43.4		16.0	235	14.6		52.3	252	03.4		40.1
5	331	38.9	301	15.2	+9	44.5	67	46.7	-26	16.1	250	16.5	+22	52.4	267	05.5	+19	40.1
6	346	41.3	316	15.3	+9	45.3	82	50.0	-26	16.3	265	18.3	+22	52.4	282	07.6	+19	40.2
7	1	43.8	331	15.5		46.0	97	53.3		16.4	280	20.1		52.5	297	09.7		40.3
8	16	46.3	346	15.6		46.7	112	56.6		16.5	295	22.0		52.5	312	11.9		40.3
9	31	48.7	1	15.8		47.4	127	59.9		16.6	310	23.8		52.5	327	14.0		40.4
10	46	51.2	16	15.9		48.2	143	03.2		16.7	325	25.7		52.6	342	16.1		40.4
11	61	53.7	31	16.1	+9	48.9	158	06.6	-26	16.9	340	27.5	+22	52.6	357	18.3	+19	40.5
12	76	56.1	46	16.2	+9	49.6	173	09.9	-26	17.0	355	29.3	+22	52.6	12	20.4	+19	40.5
13	91	58.6	61	16.4		50.4	188	13.2		17.1	10	31.2		52.7	27	22.5		40.6
14	107	01.1	76	16.5		51.1	203	16.5		17.2	25	33.0		52.7	42	24.7		40.6
15	122	03.5	91	16.6		51.8	218	19.8		17.3	40	34.9		52.8	57	26.8		40.7
16	137	06.0	106	16.8		52.5	233	23.1		17.5	55	36.7		52.8	72	28.9		40.8
17	152	08.4	121	16.9	+9	53.3	248	26.4	-26	17.6	70	38.5	+22	52.8	87	31.0	+19	40.8
18	167	10.9	136	17.1	+9	54.0	263	29.8	-26	17.7	85	40.4	+22	52.9	102	33.2	+19	40.9
19	182	13.4	151	17.2		54.7	278	33.1		17.8	100	42.2		52.9	117	35.3		40.9
20	197	15.8	166	17.3		55.4	293	36.4		17.9	115	44.1		52.9	132	37.4		41.0
21	212	18.3	181	17.5		56.2	308	39.7		18.1	130	45.9		53.0	147	39.6		41.0
22	227	20.8	196	17.6		56.9	323	43.0		18.2	145	47.7		53.0	162	41.7		41.1
23	242	23.2	211	17.7		57.6	338	46.3		18.3	160	49.6		53.1	177	43.8		41.1
24	257	25.7	226	17.9	+9	58.4	353	49.7	-26	18.4	175	51.4	+22	53.1	192	46.0	+19	41.2
Dif	—			+1 +7			+33 -1			+18 0			+21 +1					

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 2			Edad: 16 ^d 9 PHE { SD: 14 ^h 9 PMG: 2 ^h 31 ^m R°: 49 ^m 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5										
	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	13.2	+22 55.0	323	37.6	-23 03.7	23	60 N	21 19	22 56	** **	** ** *	5 28	69
1	195	13.1	55.3	338	07.2 ¹⁰⁶	-23 01.4	23	58	21 00	22 12	** **	23 52	5 47	67
2	210	13.0	55.5	352	36.8 ¹⁰⁶	-22 59.0	24	56	20 44	21 45	** **	38 28	6 03	64
3	225	12.9	55.7	7	06.4 ¹⁰⁶	56.5	25	54	30	23	23 01	26 29	16	63
4	240	12.8	55.9	21	36.1 ¹⁰⁷	53.9	26	52	18	21 06	22 21	15 31	28	61
5	255	12.6	+22 56.1	36	05.8 ¹⁰⁷	-22 51.2	27	50	20 07	20 51	21 55	23 06	6 38	61
6	270	12.5	+22 56.3	50	35.6 ¹⁰⁸	-22 48.4	28	45	19 45	20 22	21 11	22 46	7 00	58
7	285	12.4	56.5	65	05.4 ¹⁰⁸	45.5	29	40	28	20 00	20 42	29 38	17	57
8	300	12.3	56.7	79	35.3 ¹⁰⁹	42.5	30	35	13	19 43	19	16 39	32	55
9	315	12.1	56.9	94	05.1 ¹⁰⁸	39.3	32	30	19 00	28	20 01	22 03	7 45	54
10	330	12.0	57.1	108	35.1 ¹¹⁰	36.1	32	20	18 39	19 03	19 32	21 43	8 06	52
11	345	11.9	+22 57.3	123	05.1 ¹¹⁰	-22 32.7	34	10 N	18 20	18 43	19 10	21 25	8 25	51
12	0	11.8	+22 57.5	137	35.1 ¹¹⁰	-22 29.3	34	0	18 03	18 25	18 51	21 08	8 43	48
13	15	11.7	57.7	152	05.2 ¹¹¹	25.7	36	10 S	17 46	18 09	35	20 51	9 00	47
14	30	11.5	57.9	166	35.3 ¹¹¹	22.0	37	20	28	17 52	19	33 52	19	45
15	45	11.4	58.1	181	05.5 ¹¹²	18.2	38	30	17 07	33	18 03	13 54	40	44
16	60	11.3	58.3	195	35.7 ¹¹²	14.4	38	35	16 55	23	17 54	20 00	9 53	42
17	75	11.2	+22 58.5	210	06.0 ¹¹³	-22 10.4	40	40	16 41	17 11	17 45	19 46	10 07	41
18	90	11.0	+22 58.7	224	36.3 ¹¹³	-22 06.3	41	45	16 25	16 58	17 35	19 30	10 24	39
19	105	10.9	58.9	239	06.6 ¹¹³	-22 02.1	42	50	16 04	43	24	09 63	45	37
20	120	10.8	59.1	253	37.0 ¹¹⁴	-21 57.8	43	52	15 55	35	19	19 00	10 55	35
21	135	10.7	59.3	268	07.5 ¹¹⁵	53.4	44	54	44	27	13	18 49	11 06	34
22	150	10.5	59.5	282	38.0 ¹¹⁵	48.9	45	56	32	19	07	36 67	19	32
23	165	10.4	59.7	297	08.6 ¹¹⁶	44.3	46	58	18	16 09	17 01	21 70	34	30
24	180	10.3	+22 59.9	311	39.2 ¹¹⁶	-21 39.6	47	60 S	15 01	15 57	16 54	18 04	11 52	26
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 49 ^m 2		Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: -2.3 PMG: 0 ^h 25 ^m			Mag: -1.9 PMG: 12 ^h 15 ^m			Mag: +0.1 PMG: 11 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	°	'
0	257	25.7	226 17.9	+9 58.4	353 49.7	-26 18.4	175 51.4	+22 53.1	192 46.0	+19 41.2	192 46.0	+19 41.2	192 46.0	+19 41.2
1	272	28.2	241 18.0	59.1	8 53.0	18.5	190 53.3	53.1	207 48.1	41.3	207 48.1	41.3	207 48.1	41.3
2	287	30.6	256 18.1	+9 59.8	23 56.3	18.6	205 55.1	53.2	222 50.2	41.3	222 50.2	41.3	222 50.2	41.3
3	302	33.1	271 18.3	+10 00.5	38 59.6	18.8	220 56.9	53.2	237 52.3	41.4	237 52.3	41.4	237 52.3	41.4
4	317	35.6	286 18.4	01.3	54 02.9	18.9	235 58.8	53.3	252 54.5	41.4	252 54.5	41.4	252 54.5	41.4
5	332	38.0	301 18.5	+10 02.0	69 06.3	-26 19.0	251 00.6	+22 53.3	267 56.6	+19 41.5	267 56.6	+19 41.5	267 56.6	+19 41.5
6	347	40.5	316 18.7	+10 02.7	84 09.6	-26 19.1	266 02.5	+22 53.3	282 58.7	+19 41.5	282 58.7	+19 41.5	282 58.7	+19 41.5
7	2	42.9	331 18.8	03.5	99 12.9	19.2	281 04.3	53.4	298 00.9	41.6	298 00.9	41.6	298 00.9	41.6
8	17	45.4	346 18.9	04.2	114 16.2	19.3	296 06.1	53.4	313 03.0	41.6	313 03.0	41.6	313 03.0	41.6
9	32	47.9	1 19.0	04.9	129 19.6	19.5	311 08.0	53.4	328 05.1	41.7	328 05.1	41.7	328 05.1	41.7
10	47	50.3	16 19.2	05.7	144 22.9	19.6	326 09.8	53.5	343 07.3	41.8	343 07.3	41.8	343 07.3	41.8
11	62	52.8	31 19.3	+10 06.4	159 26.2	-26 19.7	341 11.7	+22 53.5	358 09.4	+19 41.8	358 09.4	+19 41.8	358 09.4	+19 41.8
12	77	55.3	46 19.4	+10 07.1	174 29.6	-26 19.8	356 13.5	+22 53.5	13 11.5	+19 41.9	13 11.5	+19 41.9	13 11.5	+19 41.9
13	92	57.7	61 19.5	07.8	189 32.9	19.9	11 15.3	53.6	28 13.7	41.9	28 13.7	41.9	28 13.7	41.9
14	108	00.2	76 19.7	08.6	204 36.2	20.0	26 17.2	53.6	43 15.8	42.0	43 15.8	42.0	43 15.8	42.0
15	123	02.7	91 19.8	09.3	219 39.5	20.1	41 19.0	53.7	58 17.9	42.0	58 17.9	42.0	58 17.9	42.0
16	138	05.1	106 19.9	10.0	234 42.9	20.3	56 20.8	53.7	73 20.0	42.1	73 20.0	42.1	73 20.0	42.1
17	153	07.6	121 20.0	+10 10.8	249 46.2	-26 20.4	71 22.7	+22 53.7	88 22.2	+19 42.1	88 22.2	+19 42.1	88 22.2	+19 42.1
18	168	10.0	136 20.1	+10 11.5	264 49.5	-26 20.5	86 24.5	+22 53.8	103 24.3	+19 42.2	103 24.3	+19 42.2	103 24.3	+19 42.2
19	183	12.5	151 20.3	12.2	279 52.9	20.6	101 26.4	53.8	118 26.4	42.2	118 26.4	42.2	118 26.4	42.2
20	198	15.0	166 20.4	13.0	294 56.2	20.7	116 28.2	53.8	133 28.6	42.3	133 28.6	42.3	133 28.6	42.3
21	213	17.4	181 20.5	13.7	309 59.5	20.8	131 30.0	53.9	148 30.7	42.4	148 30.7	42.4	148 30.7	42.4
22	228	19.9	196 20.6	14.4	325 02.9	20.9	146 31.9	53.9	163 32.8	42.4	163 32.8	42.4	163 32.8	42.4
23	243	22.4	211 20.7	15.2	340 06.2	21.0	161 33.7	54.0	178 35.0	42.5	178 35.0	42.5	178 35.0	42.5
24	258	24.8	226 20.9	+10 15.9	355 09.5	-26 21.2	176 35.6	+22 54.0	193 37.1	+19 42.5	193 37.1	+19 42.5	193 37.1	+19 42.5
Dif	—		+1	+7	+33	-1	+18	0	+21	+1				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 59 ^m 4				Edad: 17 ^d 9 PHE { SD: 14'8 PMG: 3 ^h 20 ^m R°: 47 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	10.3	+22	59.9	311	39.2	-21	39.6	60 N	** **	1 02	2 39	0 09	21	6 37	76		
1	195	10.2	+23	00.1	326	09.8 ¹¹⁶		34.8 ⁴⁸	58	** **	1 46	2 59	** **	**	6 54	71		
2	210	10.1		00.3	340	40.5 ¹¹⁷		29.9 ⁴⁹	56	** **	2 14	3 15	** **	**	7 07	60		
3	225	09.9		00.5	355	11.3 ¹¹⁸		24.9 ⁵⁰	54		0 57	35	29	23 55	23	19	6	
4	240	09.8		00.7	9	42.1 ¹¹⁸		19.9 ⁵⁰	52		1 37	2 52	41	46	25	29	66	
5	255	09.7	+23	00.9	24	13.0 ¹¹⁹	-21	14.7 ⁵²	50		2 03	3 07	3 51	23 38	27	7 39	63	
6	270	09.6	+23	01.0	38	43.9 ¹¹⁹	-21	09.4 ⁵³	45		2 47	3 36	4 13	23 21	30	7 58	61	
7	285	09.4		01.2	53	14.8 ¹¹⁹	-21	04.0 ⁵⁴	40		3 17	3 58	31	23 07	33	8 14	58	
8	300	09.3		01.4	67	45.8 ¹²⁰	-20	58.6 ⁵⁴	35		39	4 16	45	22 55	35	27	56	
9	315	09.2		01.6	82	16.9 ¹²¹		53.0 ⁵⁶	30		3 58	31	4 58	45	37	39	54	
10	330	09.1		01.8	96	48.0 ¹²¹		47.3 ⁵⁷	20		4 26	4 55	5 20	26	41	8 58	52	
11	345	08.9	+23	02.0	111	19.2 ¹²²	-20	41.6 ⁵⁷	10 N		4 48	5 15	5 38	22 11	43	9 16	49	
12	0	08.8	+23	02.2	125	50.4 ¹²²	-20	35.8 ⁵⁸	0		5 07	5 33	5 56	21 56	45	9 31	47	
13	15	08.7		02.4	140	21.7 ¹²³		29.8 ⁶⁰	10 S		24	5 50	6 13	41 48	9	9 47	45	
14	30	08.6		02.5	154	53.0 ¹²³		23.8 ⁶⁰	20		40	6 07	31	25 51	10	04	42	
15	45	08.4		02.7	169	24.4 ¹²⁴		17.7 ⁶¹	30		5 56	26	6 52	21 07	54	24	39	
16	60	08.3		02.9	183	55.8 ¹²⁴		11.5 ⁶²	35		6 04	36	7 04	20 56	56	35	37	
17	75	08.2	+23	03.1	198	27.3 ¹²⁵	-20	05.2 ⁶³	40		6 13	6 47	7 18	20 44	58	10 48	35	
18	90	08.1	+23	03.3	212	58.8 ¹²⁵	-19	58.8 ⁶⁴	45		6 24	7 01	7 34	20 29	61	11 03	33	
19	105	07.9		03.4	227	30.4 ¹²⁶		52.4 ⁶⁴	50		35	16	7 55	12 64	22	29		
20	120	07.8		03.6	242	02.1 ¹²⁷		45.8 ⁶⁶	52		40	24	8 04	20 03	66	30	28	
21	135	07.7		03.8	256	33.7 ¹²⁶		39.2 ⁶⁶	54		46	32	15	19 54	68	40	26	
22	150	07.6		04.0	271	05.5 ¹²⁸		32.5 ⁶⁷	56		52	40	27	43 71	11	51	24	
23	165	07.4		04.2	285	37.3 ¹²⁸		25.7 ⁶⁸	58		6 58	7 50	42	31 73	12	04	21	
24	180	07.3	+23	04.3	300	09.1 ¹²⁸	-19	18.8 ⁶⁹	60 S		7 05	8 02	8 59	19 17	76	12 18	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 45 ^m 2		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: -2.3 PMG: 0 ^h 19 ^m		Mag: -1.9 PMG: 12 ^h 12 ^m		Mag: +0.1 PMG: 11 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	258	24.8	226	20.9	+10	15.9	355	09.5	-26	21.2	176	35.6	+22	54.0	193	37.1	+19	42.5
1	273	27.3	241	21.0		16.6	10	12.9		21.3	191	37.4		54.0	208	39.2		42.6
2	288	29.8	256	21.1		17.4	25	16.2		21.4	206	39.2		54.1	223	41.4		42.6
3	303	32.2	271	21.2		18.1	40	19.5		21.5	221	41.1		54.1	238	43.5		42.7
4	318	34.7	286	21.3		18.8	55	22.9		21.6	236	42.9		54.1	253	45.6		42.7
5	333	37.2	301	21.4	+10	19.6	70	26.2	-26	21.7	251	44.8	+22	54.2	268	47.7	+19	42.8
6	348	39.6	316	21.5	+10	20.3	85	29.5	-26	21.8	266	46.6	+22	54.2	283	49.9	+19	42.9
7	3	42.1	331	21.6		21.0	100	32.9		21.9	281	48.4		54.2	298	52.0		42.9
8	18	44.5	346	21.7		21.8	115	36.2		22.1	296	50.3		54.3	313	54.1		43.0
9	33	47.0	1	21.9		22.5	130	39.6		22.2	311	52.1		54.3	328	56.3		43.0
10	48	49.5	16	22.0		23.2	145	42.9		22.3	326	54.0		54.4	343	58.4		43.1
11	63	51.9	31	22.1	+10	24.0	160	46.2	-26	22.4	341	55.8	+22	54.4	359	00.5	+19	43.1
12	78	54.4	46	22.2	+10	24.7	175	49.6	-26	22.5	356	57.6	+22	54.4	14	02.7	+19	43.2
13	93	56.9	61	22.3		25.4	190	52.9		22.6	11	59.5		54.5	29	04.8		43.2
14	108	59.3	76	22.4		26.2	205	56.3		22.7	27	01.3		54.5	44	06.9		43.3
15	124	01.8	91	22.5		26.9	220	59.6		22.8	42	03.2		54.5	59	09.1		43.3
16	139	04.3	106	22.6		27.6	236	03.0		22.9	57	05.0		54.6	74	11.2		43.4
17	154	06.7	121	22.7	+10	28.4	251	06.3	-26	23.0	72	06.8	+22	54.6	89	13.3	+19	43.5
18	169	09.2	136	22.8	+10	29.1	266	09.6	-26	23.2	87	08.7	+22	54.6	104	15.5	+19	43.5
19	184	11.7	151	22.9		29.8	281	13.0		23.3	102	10.5		54.7	119	17.6		43.6
20	199	14.1	166	23.0		30.6	296	16.3		23.4	117	12.3		54.7	134	19.7		43.6
21	214	16.6	181	23.1		31.3	311	19.7		23.5	132	14.2		54.8	149	21.8		43.7
22	229	19.0	196	23.2		32.0	326	23.0		23.6	147	16.0		54.8	164	24.0		43.7
23	244	21.5	211	23.3		32.8	341	26.4		23.7	162	17.9		54.8	179	26.1		43.8
24	259	24.0	226	23.4	+10	33.5	356	29.7	-26	23.8	177	19.7	+22	54.9	194	28.2	+19	43.8
Dif	—		+1		+7		+33		-1		+18		0		+21		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 59 ^m 6			Edad: 18 ^d 9 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 SD: 14°8 PMG: 4 ^h 07 ^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	07.3	+23 04.3	300	09.1	-19 18.8	70	60 N	21 22	23 01	** **	0 30 15	7 53 77	
1	195	07.2	04.5	314	41.0 ¹²⁹	11.8	70	58	21 02	22 15	** **	17 18	8 05 75	
2	210	07.1	04.7	329	13.0 ¹³⁰	-19 04.8	70	56	20 45	21 47	** **	0 06 20	16 72	
3	225	06.9	04.9	343	45.0 ¹³⁰	-18 57.6	72	54	31	25	23 06	** **	26 69	
4	240	06.8	05.0	358	17.0 ¹³⁰	50.4	72	52	19	21 08	22 24	** **	35 67	
5	255	06.7	+23 05.2	12	49.1 ¹³¹	-18 43.1	73	50	20 09	20 53	21 57	** **	8 42 65	
6	270	06.5	+23 05.4	27	21.3 ¹³²	-18 35.8	73	45	19 47	20 24	21 13	23 51 26	8 59 61	
7	285	06.4	05.6	41	53.5 ¹³²	28.3	75	40	29	20 01	20 43	40 29	9 12 58	
8	300	06.3	05.7	56	25.7 ¹³²	20.8	75	35	14	19 44	20	30 32	23 56	
9	315	06.2	05.9	70	58.0 ¹³³	13.2	76	30	19 01	28	20 02	22 33	33 54	
10	330	06.0	06.1	85	30.4 ¹³⁴	-18 05.5	77	20	18 39	19 04	19 33	23 07 37	9 50 50	
11	345	05.9	+23 06.2	100	02.8 ¹³⁴	-17 57.7	78	10 N	18 21	18 44	19 11	22 54 40	10 05 47	
12	0	05.8	+23 06.4	114	35.2 ¹³⁴	-17 49.9	78	0	18 03	18 26	18 52	22 41 44	10 18 45	
13	15	05.7	06.6	129	07.7 ¹³⁵	42.0	79	10 S	17 46	18 09	35	29 47	32 42	
14	30	05.5	06.7	143	40.3 ¹³⁶	34.0	80	20	28	17 52	19	16 50	10 46 39	
15	45	05.4	06.9	158	12.9 ¹³⁶	25.9	81	30	17 07	33	18 03	22 01 54	11 03 35	
16	60	05.3	07.1	172	45.5 ¹³⁶	17.8	81	35	16 55	23	17 54	21 52 56	12 33	
17	75	05.2	+23 07.2	187	18.2 ¹³⁷	-17 09.6	82	40	16 41	17 11	17 45	21 42 59	11 23 31	
18	90	05.0	+23 07.4	201	50.9 ¹³⁷	-17 01.3	83	45	16 24	16 58	17 35	21 30 62	11 36 28	
19	105	04.9	07.6	216	23.7 ¹³⁸	-16 52.9	84	50	16 04	42	23	16 65	51 24	
20	120	04.8	07.7	230	56.5 ¹³⁸	44.5	84	52	15 54	35	18	09 68	11 58 23	
21	135	04.6	07.9	245	29.4 ¹³⁹	36.0	85	54	43	27	13	21 02 69	12 06 21	
22	150	04.5	08.1	260	02.3 ¹³⁹	27.5	85	56	31	18	07	20 54 71	15 19	
23	165	04.4	08.2	274	35.3 ¹⁴⁰	18.8	87	58	15 16	16 08	17 00	44 74	25 16	
24	180	04.3	+23 08.4	289	08.3 ¹⁴⁰	-16 10.2	86	60 S	14 59	15 56	16 53	20 33 78	12 37 13	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 41 ^m 3		Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: -2.3 PMG: 0 ^h 14 ^m			Mag: -1.9 PMG: 12 ^h 09 ^m			Mag: +0.1 PMG: 11 ^h 01 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	259	24.0	226 23.4	+10 33.5	356 29.7	-26 23.8	177 19.7	+22 54.9	194 28.2	+19 43.8				
1	274	26.4	241 23.5	34.2	11 33.1	23.9	192 21.5	54.9	209 30.4	43.9				
2	289	28.9	256 23.6	35.0	26 36.4	24.0	207 23.4	54.9	224 32.5	43.9				
3	304	31.4	271 23.7	35.7	41 39.8	24.1	222 25.2	55.0	239 34.6	44.0				
4	319	33.8	286 23.8	36.5	56 43.1	24.2	237 27.1	55.0	254 36.8	44.1				
5	334	36.3	301 23.9	+10 37.2	71 46.5	-26 24.3	252 28.9	+22 55.0	269 38.9	+19 44.1				
6	349	38.8	316 24.0	+10 37.9	86 49.8	-26 24.5	267 30.7	+22 55.1	284 41.0	+19 44.2				
7	4	41.2	331 24.1	38.7	101 53.2	24.6	282 32.6	55.1	299 43.2	44.2				
8	19	43.7	346 24.1	39.4	116 56.5	24.7	297 34.4	55.1	314 45.3	44.3				
9	34	46.2	1 24.2	40.1	131 59.9	24.8	312 36.3	55.2	329 47.4	44.3				
10	49	48.6	16 24.3	40.9	147 03.2	24.9	327 38.1	55.2	344 49.6	44.4				
11	64	51.1	31 24.4	+10 41.6	162 06.6	-26 25.0	342 39.9	+22 55.3	359 51.7	+19 44.4				
12	79	53.5	46 24.5	+10 42.3	177 09.9	-26 25.1	357 41.8	+22 55.3	14 53.8	+19 44.5				
13	94	56.0	61 24.6	43.1	192 13.3	25.2	12 43.6	55.3	29 56.0	44.5				
14	109	58.5	76 24.7	43.8	207 16.6	25.3	27 45.4	55.4	44 58.1	44.6				
15	125	00.9	91 24.8	44.6	222 20.0	25.4	42 47.3	55.4	60 00.2	44.6				
16	140	03.4	106 24.9	45.3	237 23.3	25.5	57 49.1	55.4	75 02.3	44.7				
17	155	05.9	121 24.9	+10 46.0	252 26.7	-26 25.6	72 51.0	+22 55.5	90 04.5	+19 44.8				
18	170	08.3	136 25.0	+10 46.8	267 30.1	-26 25.7	87 52.8	+22 55.5	105 06.6	+19 44.8				
19	185	10.8	151 25.1	47.5	282 33.4	25.8	102 54.6	55.5	120 08.7	44.9				
20	200	13.3	166 25.2	48.2	297 36.8	25.9	117 56.5	55.6	135 10.9	44.9				
21	215	15.7	181 25.3	49.0	312 40.1	26.0	132 58.3	55.6	150 13.0	45.0				
22	230	18.2	196 25.4	49.7	327 43.5	26.1	148 00.2	55.6	165 15.1	45.0				
23	245	20.6	211 25.4	50.5	342 46.8	26.2	163 02.0	55.7	180 17.3	45.1				
24	260	23.1	226 25.5	+10 51.2	357 50.2	-26 26.3	178 03.8	+22 55.7	195 19.4	+19 45.1				
Dif	—		+1	+7	+34	-1	+18	0	+21	+1				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15'8 PMG: 11 ^h 59 ^m 8				Edad: 19 ^d 9 PHE { SD: 14'8 PMG: 4 ^h 52 ^m R°: 44 ^m																	
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	h	m	m
0	180	04.3	+23	08.4	289	08.3	-16	10.2	60 N	** ** *	0 58	2 38	0 45	11	9	10	78					
1	195	04.1		08.5	303	41.4 ¹⁴¹	-16	01.4	88	** ** *	1 44	2 57	35	14	20	74						
2	210	04.0		08.7	318	14.4 ¹⁴⁰	-15	52.6	88	** ** *	2 12	3 14	26	17	28	72						
3	225	03.9		08.9	332	47.6 ¹⁴²		43.7	89	0 53	34	28	18	19	35	70						
4	240	03.7		09.0	347	20.8 ¹⁴²		34.7	90	1 35	2 52	40	11	21	42	67						
5	255	03.6	+23	09.2	1	54.0 ¹⁴²	-15	25.7	90	2 02	3 06	3 51	0 05	22	9	47	66					
6	270	03.5	+23	09.3	16	27.3 ¹⁴³	-15	16.6	91	2 46	3 36	4 13	** ** *	**	10	00	62					
7	285	03.4		09.5	31	00.6 ¹⁴³	-15	07.4	92	3 16	3 58	31	** ** *	**	10	59						
8	300	03.2		09.6	45	33.9 ¹⁴³	-14	58.2	92	39	4 16	45	** ** *	**	19	56						
9	315	03.1		09.8	60	07.3 ¹⁴⁴		48.9	93	3 58	31	4 58	23	55	32	27	54					
10	330	03.0		09.9	74	40.7 ¹⁴⁴		39.6	93	4 26	4 56	5 20	44	36	40	50						
11	345	02.8	+23	10.1	89	14.2 ¹⁴⁵	-14	30.2	94	4 49	5 16	5 39	23	34	40	10	52	46				
12	0	02.7	+23	10.2	103	47.7 ¹⁴⁵	-14	20.7	95	0	5 07	5 34	23	25	43	11	03	43				
13	15	02.6		10.4	118	21.2 ¹⁴⁵		11.2	95	24	5 51	6 13	16	46	14	39						
14	30	02.5		10.5	132	54.8 ¹⁴⁶	-14	01.7	95	20	40	6 08	23	06	50	25	36					
15	45	02.3		10.7	147	28.4 ¹⁴⁶	-13	52.0	97	30	5 57	26	6	53	22	55	53	38	32			
16	60	02.2		10.8	162	02.1 ¹⁴⁷		42.3	97	35	6 05	37	7	05	48	56	45	31				
17	75	02.1	+23	11.0	176	35.7 ¹⁴⁶	-13	32.6	97	40	6 14	6 48	7	19	22	41	58	11	54	28		
18	90	01.9	+23	11.1	191	09.5 ¹⁴⁸	-13	22.8	98	45	6 25	7 02	7	35	22	32	62	12	04	24		
19	105	01.8		11.3	205	43.2 ¹⁴⁷		12.9	99	50	36	18	7	56	21	66	15	21				
20	120	01.7		11.4	220	17.0 ¹⁴⁸	-13	03.0	99	52	41	25	8	06	17	67	21	19				
21	135	01.5		11.6	234	50.8 ¹⁴⁸	-12	53.0	100	54	47	33	17	11	70	27	17					
22	150	01.4		11.7	249	24.7 ¹⁴⁹		43.0	100	56	6 53	42	29	22	05	72	34	15				
23	165	01.3		11.9	263	58.5 ¹⁴⁸		32.9	101	58	7 00	7 52	8	43	21	58	75	41	13			
24	180	01.2	+23	12.0	278	32.4 ¹⁴⁹	-12	22.8	101	60 S	7 07	8 03	9	01	21	51	77	12	50	9		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 6 ^h 37 ^m 4			Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: -2.3 PMG: 0 ^h 09 ^m			Mag: -1.9 PMG: 12 ^h 06 ^m			Mag: +0.1 PMG: 10 ^h 57 ^m									
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	260	23.1	226	25.5	+10	51.2	357	50.2	-26	26.3	178	03.8	+22	55.7	195	19.4	+19	45.1				
1	275	25.6	241	25.6		51.9	12	53.6		26.4	193	05.7		55.7	210	21.5		45.2				
2	290	28.0	256	25.7		52.7	27	56.9		26.5	208	07.5		55.8	225	23.7		45.2				
3	305	30.5	271	25.7		53.4	43	00.3		26.6	223	09.4		55.8	240	25.8		45.3				
4	320	33.0	286	25.8		54.2	58	03.6		26.7	238	11.2		55.8	255	27.9		45.4				
5	335	35.4	301	25.9	+10	54.9	73	07.0	-26	26.9	253	13.0	+22	55.9	270	30.1	+19	45.4				
6	350	37.9	316	26.0	+10	55.6	88	10.4	-26	27.0	268	14.9	+22	55.9	285	32.2	+19	45.5				
7	5	40.4	331	26.0		56.4	103	13.7		27.1	283	16.7		55.9	300	34.3		45.5				
8	20	42.8	346	26.1		57.1	118	17.1		27.2	298	18.5		56.0	315	36.5		45.6				
9	35	45.3	1	26.2		57.8	133	20.4		27.3	313	20.4		56.0	330	38.6		45.6				
10	50	47.8	16	26.3		58.6	148	23.8		27.4	328	22.2		56.0	345	40.7		45.7				
11	65	50.2	31	26.3	+10	59.3	163	27.2	-26	27.5	343	24.1	+22	56.1	0	42.9	+19	45.7				
12	80	52.7	46	26.4	+11	00.1	178	30.5	-26	27.6	358	25.9	+22	56.1	15	45.0	+19	45.8				
13	95	55.1	61	26.5		00.8	193	33.9		27.7	13	27.7		56.2	30	47.1		45.8				
14	110	57.6	76	26.5		01.5	208	37.3		27.8	28	29.6		56.2	45	49.3		45.9				
15	126	00.1	91	26.6		02.3	223	40.6		27.9	43	31.4		56.2	60	51.4		45.9				
16	141	02.5	106	26.7		03.0	238	44.0		28.0	58	33.3		56.3	75	53.5		46.0				
17	156	05.0	121	26.8	+11	03.8	253	47.4	-26	28.1	73	35.1	+22	56.3	90	55.7	+19	46.1				
18	171	07.5	136	26.8	+11	04.5	268	50.7	-26	28.2	88	36.9	+22	56.3	105	57.8	+19	46.1				
19	186	09.9	151	26.9		05.2	283	54.1		28.3	103	38.8		56.4	120	59.9		46.2				
20	201	12.4	166	27.0		06.0	298	57.5		28.4	118	40.6		56.4	136	02.1		46.2				
21	216	14.9	181	27.0		06.7	314	00.8		28.5	133	42.5		56.4	151	04.2		46.3				
22	231	17.3	196	27.1		07.5	329	04.2		28.6	148	44.3		56.5	166	06.3		46.3				
23	246	19.8	211	27.1		08.2	344	07.6		28.7	163	46.1		56.5	181	08.4		46.4				
24	261	22.3	226	27.2	+11	08.9	359	10.9	-26	28.7	178	48.0	+22	56.5	196	10.6	+19	46.4				
Dif	—		+1		+7		+34		-1		+18		0		+21		+1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 9	PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 4 20 ^h : 54 ^h 5											
	PMG: 12 ^h 00 ^m 0					SD: 14 ^h 8			PMG: 5 ^h 36 ^m			R°: 42 ^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	180	01.2	+23	12.0	278	32.4	-12	22.8	60 N	21 24	23 06	** ** *	0 56	9	10 28	77
1	195	01.0		12.2	293	06.4 ¹⁵⁰		12.6 ¹⁰²	58	21 03	22 18	** ** *	49	12	34	75
2	210	00.9		12.3	307	40.3 ¹⁴⁹	-12	02.3 ¹⁰³	56	20 47	21 49	** ** *	43	14	40	72
3	225	00.8		12.4	322	14.3 ¹⁵⁰	-11	52.1 ¹⁰²	54	33	27	23 10	37	16	45	69
4	240	00.6		12.6	336	48.4 ¹⁵¹		41.7 ¹⁰⁴	52	21	21 09	22 26	32	18	49	68
5	255	00.5	+23	12.7	351	22.4 ¹⁵⁰	-11	31.3 ¹⁰⁴	50	20 10	20 54	21 59	0 27	20	10 53	66
6	270	00.4	+23	12.9	5	56.5 ¹⁵¹	-11	20.9 ¹⁰⁴	45	19 48	20 25	21 14	0 17	24	11 02	62
7	285	00.2		13.0	20	30.6 ¹⁵¹	-11	10.4 ¹⁰⁵	40	30	20 02	20 44	09	27	09	59
8	300	00.1		13.1	35	04.7 ¹⁵¹	-10	59.9 ¹⁰⁵	35	15	19 44	21	0 02	29	15	56
9	315	00.0		13.3	49	38.9 ¹⁵²		49.3 ¹⁰⁶	30	19 02	29	20 03	** ** *	**	21	53
10	329	59.9		13.4	64	13.0 ¹⁵¹		38.7 ¹⁰⁶	20	18 40	19 05	19 34	** ** *	**	30	49
11	344	59.7	+23	13.5	78	47.2 ¹⁵²	-10	28.0 ¹⁰⁷	10 N	18 21	18 44	19 11	** ** *	**	11 38	46
12	359	59.6	+23	13.7	93	21.4 ¹⁵²	-10	17.3 ¹⁰⁷	0	18 04	18 26	18 52	** ** *	**	11 46	42
13	14	59.5		13.8	107	55.7 ¹⁵³	-10	06.5 ¹⁰⁸	10 S	17 46	18 09	36	** ** *	**	11 53	39
14	29	59.3		13.9	122	29.9 ¹⁵²	-9	55.7 ¹⁰⁸	20	28	17 52	19	23 56	49	12 01	35
15	44	59.2		14.1	137	04.2 ¹⁵³		44.8 ¹⁰⁹	30	17 07	33	18 03	48	54	10	31
16	59	59.1		14.2	151	38.5 ¹⁵³		33.9 ¹⁰⁹	35	16 55	23	17 54	44	56	16	28
17	74	58.9	+23	14.3	166	12.8 ¹⁵³	-9	23.0 ¹⁰⁹	40	16 41	17 11	17 45	23 39	59	12 22	25
18	89	58.8	+23	14.5	180	47.1 ¹⁵³	-9	12.0 ¹¹⁰	45	16 24	16 58	17 35	23 34	62	12 28	23
19	104	58.7		14.6	195	21.5 ¹⁵⁴	-9	01.0 ¹¹⁰	50	16 03	42	23	27	67	36	19
20	119	58.5		14.7	209	55.8 ¹⁵³	-8	49.9 ¹¹¹	52	15 54	34	18	24	69	40	17
21	134	58.4		14.9	224	30.2 ¹⁵⁴		38.8 ¹¹¹	54	43	26	13	21	70	44	16
22	149	58.3		15.0	239	04.6 ¹⁵⁴		27.7 ¹¹¹	56	30	17	06	17	73	49	13
23	164	58.1		15.1	253	39.0 ¹⁵⁴		16.5 ¹¹²	58	15 16	16 07	17 00	13	75	54	11
24	179	58.0	+23	15.2	268	13.4 ¹⁵⁴	-8	05.3 ¹¹²	60 S	14 58	15 56	16 52	23 08	78	12 59	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 33 ^m 4		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: -2.4 PMG: 0 ^h 03 ^m		Mag: -1.9 PMG: 12 ^h 03 ^m		Mag: +0.1 PMG: 10 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	261	22.3	226	27.2	+11	08.9	359	10.9	-26	28.7	178	48.0	+22	56.5	196	10.6	+19	46.4
1	276	24.7	241	27.3		09.7	14	14.3		28.8	193	49.8		56.6	211	12.7		46.5
2	291	27.2	256	27.3		10.4	29	17.7		28.9	208	51.6		56.6	226	14.8		46.5
3	306	29.6	271	27.4		11.2	44	21.0		29.0	223	53.5		56.6	241	17.0		46.6
4	321	32.1	286	27.4		11.9	59	24.4		29.1	238	55.3		56.7	256	19.1		46.6
5	336	34.6	301	27.5	+11	12.6	74	27.8	-26	29.2	253	57.2	+22	56.7	271	21.2	+19	46.7
6	351	37.0	316	27.6	+11	13.4	89	31.1	-26	29.3	268	59.0	+22	56.7	286	23.4	+19	46.7
7	6	39.5	331	27.6		14.1	104	34.5		29.4	284	00.8		56.8	301	25.5		46.8
8	21	42.0	346	27.7		14.9	119	37.9		29.5	299	02.7		56.8	316	27.6		46.9
9	36	44.4	1	27.7		15.6	134	41.2		29.6	314	04.5		56.8	331	29.8		46.9
10	51	46.9	16	27.8		16.3	149	44.6		29.7	329	06.4		56.9	346	31.9		47.0
11	66	49.4	31	27.8	+11	17.1	164	48.0	-26	29.8	344	08.2	+22	56.9	1	34.0	+19	47.0
12	81	51.8	46	27.9	+11	17.8	179	51.4	-26	29.9	359	10.0	+22	56.9	16	36.2	+19	47.1
13	96	54.3	61	27.9		18.6	194	54.7		30.0	14	11.9		57.0	31	38.3		47.1
14	111	56.7	76	28.0		19.3	209	58.1		30.1	29	13.7		57.0	46	40.4		47.2
15	126	59.2	91	28.0		20.0	225	01.5		30.2	44	15.5		57.0	61	42.6		47.2
16	142	01.7	106	28.1		20.8	240	04.8		30.3	59	17.4		57.1	76	44.7		47.3
17	157	04.1	121	28.1	+11	21.5	255	08.2	-26	30.4	74	19.2	+22	57.1	91	46.8	+19	47.3
18	172	06.6	136	28.2	+11	22.3	270	11.6	-26	30.5	89	21.1	+22	57.1	106	49.0	+19	47.4
19	187	09.1	151	28.2		23.0	285	15.0		30.6	104	22.9		57.2	121	51.1		47.4
20	202	11.5	166	28.3		23.7	300	18.3		30.7	119	24.7		57.2	136	53.2		47.5
21	217	14.0	181	28.3		24.5	315	21.7		30.8	134	26.6		57.2	151	55.4		47.5
22	232	16.5	196	28.4		25.2	330	25.1		30.9	149	28.4		57.2	166	57.5		47.6
23	247	18.9	211	28.4		26.0	345	28.5		30.9	164	30.2		57.3	181	59.6		47.6
24	262	21.4	226	28.5	+11	26.7	0	31.8	-26	31.0	179	32.1	+22	57.3	197	01.8	+19	47.7
Dif	—		+1		+7		-8966		-1		+18		0		+21		+1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 00 ^m 2				Edad: 21 ^d 9 PHE { SD: 14'9 PMG: 6 ^h 18 ^m								R°: 42 ^m							
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	58.0	+23	15.2	268	13.4	-8	05.3	60 N	** **	0 55	2 37	1 05	8	11 45	79				
1	194	57.9		15.4	282	47.8 ¹⁵⁴	-7	54.0 ¹¹³	58	** **	1 42	2 57	1 01	10	49	76				
2	209	57.7		15.5	297	22.3 ¹⁵⁵		42.7 ¹¹³	56	** **	2 11	3 13	0 57	13	52	73				
3	224	57.6		15.6	311	56.7 ¹⁵⁴		31.4 ¹¹³	54	0 50	33	27	53	15	54	71				
4	239	57.5		15.7	326	31.1 ¹⁵⁴		20.0 ¹¹⁴	52	1 34	2 51	40	50	17	57	69				
5	254	57.3	+23	15.9	341	05.6 ¹⁵⁵	-7	08.6 ¹¹⁴	50	2 01	3 06	3 50	0 47	19	11 59	67				
6	269	57.2	+23	16.0	355	40.1 ¹⁵⁵	-6	57.1 ¹¹⁵	45	2 46	3 35	4 13	0 41	22	12 04	63				
7	284	57.1		16.1	10	14.5 ¹⁵⁴		45.7 ¹¹⁴	40	3 16	3 58	30	36	25	08	59				
8	299	57.0		16.2	24	49.0 ¹⁵⁵		34.1 ¹¹⁶	35	39	4 16	45	31	28	11	57				
9	314	56.8		16.3	39	23.5 ¹⁵⁵		22.6 ¹¹⁵	30	3 58	31	4 58	27	31	14	54				
10	329	56.7		16.5	53	57.9 ¹⁵⁴	-6	11.0 ¹¹⁶	20	4 27	4 56	5 20	20	35	19	50				
11	344	56.6	+23	16.6	68	32.4 ¹⁵⁵	-5	59.4 ¹¹⁶	10 N	4 49	5 16	5 39	0 14	38	12 24	46				
12	359	56.4	+23	16.7	83	06.9 ¹⁵⁵	-5	47.8 ¹¹⁶	0	5 08	5 34	5 57	0 08	42	12 28	42				
13	14	56.3		16.8	97	41.4 ¹⁵⁵		36.1 ¹¹⁷	10 S	25	5 51	6 14	0 02	45	32	39				
14	29	56.2		16.9	112	15.8 ¹⁵⁴		24.4 ¹¹⁷	20	41	6 08	32	** **	** **	36	35				
15	44	56.0		17.0	126	50.3 ¹⁵⁵		12.7 ¹¹⁷	30	5 57	27	6 53	** **	** **	41	31				
16	59	55.9		17.2	141	24.8 ¹⁵⁵	-5	00.9 ¹¹⁸	35	6 06	38	7 06	** **	** **	44	28				
17	74	55.8	+23	17.3	155	59.3 ¹⁵⁵	-4	49.1 ¹¹⁸	40	6 15	6 49	7 20	** **	** **	12 47	26				
18	89	55.6	+23	17.4	170	33.7 ¹⁵⁴	-4	37.3 ¹¹⁸	45	6 25	7 03	7 36	** **	** **	12 51	22				
19	104	55.5		17.5	185	08.2 ¹⁵⁵		25.4 ¹¹⁹	50	37	19	7 57	** **	** **	55	19				
20	119	55.4		17.6	199	42.6 ¹⁵⁴		13.6 ¹¹⁸	52	42	26	8 07	** **	** **	12 57	17				
21	134	55.2		17.7	214	17.1 ¹⁵⁵	-4	01.7 ¹¹⁹	54	48	34	18	** **	** **	13 00	14				
22	149	55.1		17.8	228	51.5 ¹⁵⁴	-3	49.8 ¹¹⁹	56	6 54	43	30	** **	** **	02	12				
23	164	55.0		17.9	243	26.0 ¹⁵⁵		37.8 ¹²⁰	58	7 01	7 53	8 45	** **	** **	05	10				
24	179	54.8	+23	18.1	258	00.4 ¹⁵⁴	-3	25.8 ¹²⁰	60 S	7 08	8 05	9 02	** **	** **	13 08	7				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 29 ^m 5		Mag: -4.4 PMG: 8 ^h 54 ^m				Mag: -2.4 PMG: 23 ^h 53 ^m				Mag: -1.9 PMG: 12 ^h 00 ^m				Mag: +0.1 PMG: 10 ^h 50 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	262	21.4	226	28.5	+11	26.7		0 31.8	-26	31.0		179	32.1	+22	57.3		197	01.8	+19	47.7
1	277	23.9	241	28.5		27.5		15 35.2		31.1		194	33.9		57.3		212	03.9		47.8
2	292	26.3	256	28.6		28.2		30 38.6		31.2		209	35.8		57.4		227	06.0		47.8
3	307	28.8	271	28.6		28.9		45 42.0		31.3		224	37.6		57.4		242	08.2		47.9
4	322	31.2	286	28.6		29.7		60 45.3		31.4		239	39.4		57.4		257	10.3		47.9
5	337	33.7	301	28.7	+11	30.4		75 48.7	-26	31.5		254	41.3	+22	57.5		272	12.4	+19	48.0
6	352	36.2	316	28.7	+11	31.2		90 52.1	-26	31.6		269	43.1	+22	57.5		287	14.6	+19	48.0
7	7 38.6		331	28.8		31.9		105 55.5		31.7		284	45.0		57.5		302	16.7		48.1
8	22 41.1		346	28.8		32.6		120 58.8		31.8		299	46.8		57.6		317	18.8		48.1
9	37 43.6		1 28.8			33.4		136 02.2		31.9		314	48.6		57.6		332	21.0		48.2
10	52 46.0		16 28.9			34.1		151 05.6		32.0		329	50.5		57.6		347	23.1		48.2
11	67 48.5		31 28.9	+11	34.9		166 09.0	-26	32.0		344	52.3	+22	57.7		2 25.2	+19	48.3		
12	82 51.0		46 29.0	+11	35.6		181 12.3	-26	32.1		359	54.2	+22	57.7		17 27.4	+19	48.3		
13	97 53.4		61 29.0		36.3		196 15.7		32.2		14 56.0		57.7		32 29.5		48.4			
14	112 55.9		76 29.0		37.1		211 19.1		32.3		29 57.8		57.7		47 31.7		48.4			
15	127 58.4		91 29.1		37.8		226 22.5		32.4		44 59.7		57.8		62 33.8		48.5			
16	143 00.8		106 29.1		38.6		241 25.8		32.5		60 01.5		57.8		77 35.9		48.5			
17	158 03.3		121 29.1	+11	39.3		256 29.2	-26	32.6		75 03.4	+22	57.8		92 38.1	+19	48.6			
18	173 05.7		136 29.2	+11	40.1		271 32.6	-26	32.7		90 05.2	+22	57.9		107 40.2	+19	48.7			
19	188 08.2		151 29.2		40.8		286 36.0		32.8		105 07.0		57.9		122 42.3		48.7			
20	203 10.7		166 29.2		41.5		301 39.4		32.8		120 08.9		57.9		137 44.5		48.8			
21	218 13.1		181 29.2		42.3		316 42.7		32.9		135 10.7		58.0		152 46.6		48.8			
22	233 15.6		196 29.3		43.0		331 46.1		33.0		150 12.6		58.0		167 48.7		48.9			
23	248 18.1		211 29.3		43.8		346 49.5		33.1		165 14.4		58.0		182 50.9		48.9			
24	263 20.5		226 29.3	+11	44.5		1 52.9	-26	33.2		180 16.2	+22	58.1		197 53.0	+19	49.0			
Dif	—		0		+7		+34		-1		+18		0		+21		+1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 22 ^d 9 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5														
	PMG: 12 ^h 00 ^m 5			SD: 15 ^h 0 PMG: 7 ^h 00 ^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	54.8	+23	18.1	258	00.4	-3	25.8	60 N	21 25	23 09	** **	1 13 8	13 04 81				
1	194	54.7		18.2	272	34.8 ¹⁵⁴		13.8 ¹²⁰	58	21 05	22 20	** **	11 10	05 77				
2	209	54.6		18.3	287	09.2 ¹⁵⁴	-3	01.8 ¹²⁰	56	20 48	21 50	** **	10 12	05 75				
3	224	54.4		18.4	301	43.5 ¹⁵³	-2	49.8 ¹²⁰	54	34	28	23 14	08 15	05 73				
4	239	54.3		18.5	316	17.9 ¹⁵⁴		37.7 ¹²¹	52	22	21 10	22 28	07 17	06 70				
5	254	54.2	+23	18.6	330	52.3 ¹⁵⁴	-2	25.6 ¹²¹	50	20 11	20 55	22 01	1 06 18	13 06 69				
6	269	54.0	+23	18.7	345	26.6 ¹⁵³	-2	13.5 ¹²¹	45	19 48	20 26	21 15	1 03 22	13 07 64				
7	284	53.9		18.8	0	00.9 ¹⁵³	-2	01.4 ¹²¹	40	31	20 03	20 45	1 01 25	07 61				
8	299	53.8		18.9	14	35.2 ¹⁵³	-1	49.3 ¹²¹	35	16	19 45	22	0 59 28	08 58				
9	314	53.6		19.0	29	09.5 ¹⁵³		37.1 ¹²²	30	19 03	30	20 03	58 30	08 56				
10	329	53.5		19.1	43	43.7 ¹⁵²		24.9 ¹²²	20	18 41	19 05	19 34	55 35	09 51				
11	344	53.4	+23	19.2	58	18.0 ¹⁵³	-1	12.7 ¹²²	10 N	18 22	18 45	19 12	0 52 39	13 10 46				
12	359	53.2	+23	19.3	72	52.2 ¹⁵²	-1	00.5 ¹²²	0	18 04	18 27	18 53	0 50 42	13 10 43				
13	14	53.1		19.4	87	26.4 ¹⁵²	-0	48.3 ¹²²	10 S	17 47	18 10	36	47 47	11 39				
14	29	52.9		19.5	102	00.6 ¹⁵²		36.0 ¹²³	20	28	17 52	20	45 50	11 36				
15	44	52.8		19.6	116	34.7 ¹⁵¹		23.8 ¹²²	30	17 07	33	18 03	42 55	12 31				
16	59	52.7		19.7	131	08.8 ¹⁵¹	-0	11.5 ¹²³	35	16 55	23	17 55	40 58	12 29				
17	74	52.5	+23	19.8	145	42.9 ¹⁵¹	+0	00.8 ¹²³	40	16 41	17 11	17 45	0 38 61	13 13 25				
18	89	52.4	+23	19.9	160	17.0 ¹⁵¹	+0	13.1 ¹²³	45	16 24	16 58	17 35	0 36 64	13 13 23				
19	104	52.3		20.0	174	51.0 ¹⁵⁰		25.4 ¹²³	50	16 03	42	23	34 67	14 18				
20	119	52.1		20.1	189	25.0 ¹⁵⁰		37.7 ¹²³	52	15 53	34	18	33 69	14 17				
21	134	52.0		20.2	203	59.0 ¹⁵⁰	+0	50.0 ¹²³	54	42	26	12	31 72	14 15				
22	149	51.9		20.3	218	32.9 ¹⁴⁹	+1	02.3 ¹²³	56	30	17	06	30 74	14 13				
23	164	51.7		20.4	233	06.8 ¹⁴⁹		14.7 ¹²⁴	58	15 15	16 07	17 00	28 77	15 10				
24	179	51.6	+23	20.5	247	40.7 ¹⁴⁹	+1	27.0 ¹²³	60 S	14 58	15 55	16 52	0 26 80	13 15 8				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 25 ^m 6		Mag: -4.4 PMG: 8 ^h 54 ^m				Mag: -2.4 PMG: 23 ^h 47 ^m				Mag: -1.9 PMG: 11 ^h 57 ^m				Mag: +0.1 PMG: 10 ^h 47 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	263	20.5	226	29.3	+11	44.5	1	52.9	-26	33.2	180	16.2	+22	58.1	197	53.0	+19	49.0
1	278	23.0	241	29.4		45.2	16	56.2		33.3	195	18.1		58.1	212	55.1		49.0
2	293	25.5	256	29.4		46.0	31	59.6		33.4	210	19.9		58.1	227	57.3		49.1
3	308	27.9	271	29.4		46.7	47	03.0		33.5	225	21.8		58.2	242	59.4		49.1
4	323	30.4	286	29.4		47.5	62	06.4		33.5	240	23.6		58.2	258	01.5		49.2
5	338	32.8	301	29.5	+11	48.2	77	09.8	-26	33.6	255	25.4	+22	58.2	273	03.7	+19	49.2
6	353	35.3	316	29.5	+11	49.0	92	13.1	-26	33.7	270	27.3	+22	58.3	288	05.8	+19	49.3
7	8	37.8	331	29.5		49.7	107	16.5		33.8	285	29.1		58.3	303	07.9		49.3
8	23	40.2	346	29.5		50.4	122	19.9		33.9	300	30.9		58.3	318	10.1		49.4
9	38	42.7	1	29.5		51.2	137	23.3		34.0	315	32.8		58.4	333	12.2		49.4
10	53	45.2	16	29.6		51.9	152	26.7		34.1	330	34.6		58.4	348	14.3		49.5
11	68	47.6	31	29.6	+11	52.7	167	30.0	-26	34.1	345	36.5	+22	58.4	3	16.5	+19	49.5
12	83	50.1	46	29.6	+11	53.4	182	33.4	-26	34.2	0	38.3	+22	58.5	18	18.6	+19	49.6
13	98	52.6	61	29.6		54.1	197	36.8		34.3	15	40.1		58.5	33	20.7		49.6
14	113	55.0	76	29.6		54.9	212	40.2		34.4	30	42.0		58.5	48	22.9		49.7
15	128	57.5	91	29.7		55.6	227	43.6		34.5	45	43.8		58.6	63	25.0		49.8
16	144	00.0	106	29.7		56.4	242	46.9		34.6	60	45.6		58.6	78	27.1		49.8
17	159	02.4	121	29.7	+11	57.1	257	50.3	-26	34.6	75	47.5	+22	58.6	93	29.3	+19	49.9
18	174	04.9	136	29.7	+11	57.9	272	53.7	-26	34.7	90	49.3	+22	58.6	108	31.4	+19	49.9
19	189	07.3	151	29.7		58.6	287	57.1		34.8	105	51.2		58.7	123	33.6		50.0
20	204	09.8	166	29.7	+11	59.3	303	00.5		34.9	120	53.0		58.7	138	35.7		50.0
21	219	12.3	181	29.7	+12	00.1	318	03.8		35.0	135	54.8		58.7	153	37.8		50.1
22	234	14.7	196	29.8		00.8	333	07.2		35.1	150	56.7		58.8	168	40.0		50.1
23	249	17.2	211	29.8		01.6	348	10.6		35.1	165	58.5		58.8	183	42.1		50.2
24	264	19.7	226	29.8	+12	02.3	3	14.0	-26	35.2	181	00.4	+22	58.8	198	44.2	+19	50.2
Dif	—		0		+7		+34		-1		+18		0		+21		+1	

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: 23 ^d 9 PHE { SD: 15:1 PMG: 7 ^h 43 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	179	51.6	+23	20.5	247	40.7	+1	27.0	60 N	** **	0 52	2 36	1 21	8	14 25	83				
1	194	51.5		20.5	262	14.5 ¹⁴⁸		39.4 ¹²⁴	58	** **	1 41	2 56	21 11		22 81					
2	209	51.3		20.6	276	48.3 ¹⁴⁸	+1	51.8 ¹²⁴	56	** **	2 11	3 13	22 13		20 78					
3	224	51.2		20.7	291	22.1 ¹⁴⁸	+2	04.1 ¹²³	54	0 47	33	27	23 15		18 75					
4	239	51.1		20.8	305	55.8 ¹⁴⁷		16.5 ¹²⁴	52	1 33	2 51	39	24 17		16 73					
5	254	50.9	+23	20.9	320	29.5 ¹⁴⁷	+2	28.9 ¹²⁴	50	2 00	3 06	3 50	1 24 19		14 15	71				
6	269	50.8	+23	21.0	335	03.1 ¹⁴⁶	+2	41.3 ¹²⁴	45	2 46	3 35	4 13	1 25 24		14 11	67				
7	284	50.7		21.1	349	36.7 ¹⁴⁶	+2	53.7 ¹²⁴	40	3 16	3 58	31	26 27		08 64					
8	299	50.5		21.2	4	10.3 ¹⁴⁶	+3	06.1 ¹²⁴	35	39	4 16	46	27 30		06 60					
9	314	50.4		21.3	18	43.8 ¹⁴⁵		18.5 ¹²⁴	30	3 58	31	4 59	28 32		04 57					
10	329	50.3		21.3	33	17.3 ¹⁴⁵		30.8 ¹²³	20	4 27	4 56	5 21	30 36		14 00	53				
11	344	50.1	+23	21.4	47	50.7 ¹⁴⁴	+3	43.2 ¹²⁴	10 N	4 49	5 16	5 39	1 31 41		13 56	49				
12	359	50.0	+23	21.5	62	24.1 ¹⁴⁴	+3	55.6 ¹²⁴	0	5 08	5 34	5 57	1 32 45		13 53	46				
13	14	49.8		21.6	76	57.4 ¹⁴³	+4	08.0 ¹²⁴	10 S	25	5 52	6 14	34 48		50 42					
14	29	49.7		21.7	91	30.7 ¹⁴³		20.4 ¹²⁴	20	41	6 09	33	35 52		47 37					
15	44	49.6		21.7	106	03.9 ¹⁴²		32.8 ¹²⁴	30	5 58	28	6 54	37 56		43 33					
16	59	49.4		21.8	120	37.1 ¹⁴²		45.1 ¹²³	35	6 07	38	7 06	38 59		41 30					
17	74	49.3	+23	21.9	135	10.2 ¹⁴¹	+4	57.5 ¹²⁴	40	6 16	6 50	7 21	1 39 62		13 38	28				
18	89	49.2	+23	22.0	149	43.3 ¹⁴¹	+5	09.9 ¹²⁴	45	6 26	7 03	7 37	1 40 66		13 36	24				
19	104	49.0		22.1	164	16.3 ¹⁴⁰		22.2 ¹²³	50	38	20	7 58	41 70		32 20					
20	119	48.9		22.1	178	49.3 ¹⁴⁰		34.5 ¹²³	52	43	27	8 08	42 72		31 18					
21	134	48.8		22.2	193	22.2 ¹³⁹		46.9 ¹²⁴	54	49	35	19	43 74		29 16					
22	149	48.6		22.3	207	55.0 ¹³⁸	+5	59.2 ¹²³	56	6 55	44	32	44 76		27 14					
23	164	48.5		22.4	222	27.8 ¹³⁸	+6	11.5 ¹²³	58	7 02	7 54	8 46	45 79		25 11					
24	179	48.4	+23	22.4	237	00.6 ¹³⁸	+6	23.8 ¹²³	60 S	7 09	8 06	9 04	1 46 82		13 23	8				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 6 ^h 21 ^m 6			Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: -2.4 PMG: 23 ^h 42 ^m			Mag: -1.9 PMG: 11 ^h 55 ^m			Mag: +0.1 PMG: 10 ^h 44 ^m							
h	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
0	264	19.7		226	29.8	+12	02.3	3	14.0	-26	35.2	181	00.4	+22	58.8	198	44.2	+19	50.2	
1	279	22.1		241	29.8		03.0	18	17.4		35.3	196	02.2		58.9	213	46.4		50.3	
2	294	24.6		256	29.8		03.8	33	20.8		35.4	211	04.0		58.9	228	48.5		50.3	
3	309	27.1		271	29.8		04.5	48	24.1		35.5	226	05.9		58.9	243	50.6		50.4	
4	324	29.5		286	29.8		05.3	63	27.5		35.6	241	07.7		59.0	258	52.8		50.4	
5	339	32.0		301	29.8	+12	06.0	78	30.9	-26	35.6	256	09.5	+22	59.0	273	54.9	+19	50.5	
6	354	34.4		316	29.8	+12	06.7	93	34.3	-26	35.7	271	11.4	+22	59.0	288	57.0	+19	50.5	
7	9	36.9		331	29.8		07.5	108	37.7		35.8	286	13.2		59.0	303	59.2		50.6	
8	24	39.4		346	29.8		08.2	123	41.0		35.9	301	15.1		59.1	319	01.3		50.6	
9	39	41.8		1	29.8		09.0	138	44.4		36.0	316	16.9		59.1	334	03.4		50.7	
10	54	44.3		16	29.8		09.7	153	47.8		36.0	331	18.7		59.1	349	05.6		50.7	
11	69	46.8		31	29.8	+12	10.5	168	51.2	-26	36.1	346	20.6	+22	59.2	4	07.7	+19	50.8	
12	84	49.2		46	29.9	+12	11.2	183	54.6	-26	36.2	1	22.4	+22	59.2	19	09.9	+19	50.8	
13	99	51.7		61	29.9		11.9	198	58.0		36.3	16	24.3		59.2	34	12.0		50.9	
14	114	54.2		76	29.9		12.7	214	01.3		36.3	31	26.1		59.3	49	14.1		50.9	
15	129	56.6		91	29.9		13.4	229	04.7		36.4	46	27.9		59.3	64	16.3		51.0	
16	144	59.1		106	29.9		14.2	244	08.1		36.5	61	29.8		59.3	79	18.4		51.0	
17	160	01.6		121	29.9	+12	14.9	259	11.5	-26	36.6	76	31.6	+22	59.3	94	20.5	+19	51.1	
18	175	04.0		136	29.8	+12	15.6	274	14.9	-26	36.7	91	33.4	+22	59.4	109	22.7	+19	51.2	
19	190	06.5		151	29.8		16.4	289	18.2		36.7	106	35.3		59.4	124	24.8		51.2	
20	205	08.9		166	29.8		17.1	304	21.6		36.8	121	37.1		59.4	139	26.9		51.3	
21	220	11.4		181	29.8		17.9	319	25.0		36.9	136	39.0		59.5	154	29.1		51.3	
22	235	13.9		196	29.8		18.6	334	28.4		37.0	151	40.8		59.5	169	31.2		51.4	
23	250	16.3		211	29.8		19.3	349	31.8		37.0	166	42.6		59.5	184	33.3		51.4	
24	265	18.8		226	29.8	+12	20.1	4	35.1	-26	37.1	181	44.5	+22	59.6	199	35.5	+19	51.5	
Dif	—		0		+7		+34		-1		+18		0		+21		+1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 9			Edad: 24 ^d 9 PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'0 SD: 15'3 PMG: 8 ^h 28 ^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	179	48.4	+23 22.4	237	00.6	+6 23.8	60 N	21 26	23 12	** **	1 29 9		15 48 88	
1	194	48.2	22.5	251	33.2 ¹³⁶	36.1 ¹²³	58	21 06	22 22	** **	32 13		43 84	
2	209	48.1	22.6	266	05.9 ¹³⁷	+6 48.4 ¹²³	56	20 49	21 52	** **	35 16		38 81	
3	224	47.9	22.7	280	38.4 ¹³⁵	+7 00.6 ¹²²	54	35	29	23 16	38 18		33 79	
4	239	47.8	22.7	295	10.9 ¹³⁵	12.9 ¹²³	52	23	21 11	22 30	41 20		29 77	
5	254	47.7	+23 22.8	309	43.3 ¹³⁴	+7 25.1 ¹²²	50	20 12	20 56	22 02	1 43 22		15 26 74	
6	269	47.5	+23 22.9	324	15.7 ¹³⁴	+7 37.3 ¹²²	45	19 49	20 27	21 16	1 49 25		15 18 70	
7	284	47.4	23.0	338	48.0 ¹³³	+7 49.5 ¹²²	40	31	20 04	20 46	53 29		12 66	
8	299	47.3	23.0	353	20.2 ¹³²	+8 01.6 ¹²¹	35	16	19 46	23	1 57 32		06 63	
9	314	47.1	23.1	7	52.3 ¹³¹	13.8 ¹²²	30	19 03	31	20 04	2 00 35		15 01 61	
10	329	47.0	23.2	22	24.4 ¹³¹	25.9 ¹²¹	20	18 41	19 06	19 35	06 40		14 53 56	
11	344	46.9	+23 23.2	36	56.4 ¹³⁰	+8 38.0 ¹²¹	10 N	18 22	18 45	19 12	2 12 43		14 45 53	
12	359	46.7	+23 23.3	51	28.4 ¹³⁰	+8 50.0 ¹²⁰	0	18 05	18 27	18 53	2 17 46		14 39 48	
13	14	46.6	23.4	66	00.3 ¹²⁹	+9 02.1 ¹²¹	10 S	17 47	18 10	36	22 50		32 44	
14	29	46.5	23.4	80	32.1 ¹²⁸	14.1 ¹²⁰	20	29	17 53	20	27 55		24 41	
15	44	46.3	23.5	95	03.8 ¹²⁷	26.1 ¹²⁰	30	17 07	34	18 04	33 59		16 37	
16	59	46.2	23.5	109	35.4 ¹²⁶	38.1 ¹²⁰	35	16 55	23	17 55	37 62		11 34	
17	74	46.0	+23 23.6	124	07.0 ¹²⁶	+9 50.0 ¹¹⁹	40	16 41	17 11	17 46	2 41 65		14 06 31	
18	89	45.9	+23 23.7	138	38.5 ¹²⁵	+10 01.9 ¹¹⁹	45	16 24	16 58	17 35	2 46 68		14 00 27	
19	104	45.8	23.7	153	09.9 ¹²⁴	13.8 ¹¹⁹	50	16 03	42	23	51 73		13 52 24	
20	119	45.6	23.8	167	41.3 ¹²⁴	25.6 ¹¹⁸	52	15 53	34	18	54 75		49 21	
21	134	45.5	23.9	182	12.5 ¹²²	37.4 ¹¹⁸	54	42	26	12	2 57 77		45 19	
22	149	45.4	23.9	196	43.7 ¹²²	+10 49.1 ¹¹⁷	56	30	17	06	3 00 80		41 17	
23	164	45.2	24.0	211	14.8 ¹²¹	+11 00.9 ¹¹⁸	58	15 15	16 07	17 00	04 83		36 14	
24	179	45.1	+23 24.0	225	45.8 ¹²⁰	+11 12.5 ¹¹⁶	60 S	14 58	15 55	16 52	3 08 86		13 31 11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 6 ^h 17 ^m 7		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: -2.3 PMG: 23 ^h 36 ^m		Mag: -1.9 PMG: 11 ^h 52 ^m		Mag: +0.1 PMG: 10 ^h 40 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	265	18.8	226	29.8	+12 20.1	4 35.1	-26 37.1	181	44.5	+22 59.6	199	35.5	+19 51.5
1	280	21.3	241	29.8	20.8	19 38.5	37.2	196	46.3	59.6	214	37.6	51.5
2	295	23.7	256	29.8	21.6	34 41.9	37.3	211	48.2	59.6	229	39.8	51.6
3	310	26.2	271	29.8	22.3	49 45.3	37.4	226	50.0	59.6	244	41.9	51.6
4	325	28.7	286	29.8	23.0	64 48.7	37.4	241	51.8	59.7	259	44.0	51.7
5	340	31.1	301	29.8	+12 23.8	79 52.1	-26 37.5	256	53.7	+22 59.7	274	46.2	+19 51.7
6	355	33.6	316	29.8	+12 24.5	94 55.4	-26 37.6	271	55.5	+22 59.7	289	48.3	+19 51.8
7	10	36.1	331	29.8	25.3	109 58.8	37.7	286	57.3	59.8	304	50.4	51.8
8	25	38.5	346	29.7	26.0	125 02.2	37.7	301	59.2	59.8	319	52.6	51.9
9	40	41.0	1	29.7	26.7	140 05.6	37.8	317	01.0	59.8	334	54.7	51.9
10	55	43.4	16	29.7	27.5	155 09.0	37.9	332	02.9	59.8	349	56.8	52.0
11	70	45.9	31	29.7	+12 28.2	170 12.3	-26 38.0	347	04.7	+22 59.9	4	59.0	+19 52.0
12	85	48.4	46	29.7	+12 29.0	185 15.7	-26 38.0	2	06.5	+22 59.9	20	01.1	+19 52.1
13	100	50.8	61	29.7	29.7	200 19.1	38.1	17	08.4	+22 59.9	35	03.3	52.1
14	115	53.3	76	29.7	30.4	215 22.5	38.2	32	10.2	+23 00.0	50	05.4	52.2
15	130	55.8	91	29.6	31.2	230 25.9	38.2	47	12.1	00.0	65	07.5	52.2
16	145	58.2	106	29.6	31.9	245 29.2	38.3	62	13.9	+23 00.0	80	09.7	52.3
17	161	00.7	121	29.6	+12 32.7	260 32.6	-26 38.4	77	15.7	+23 00.1	95	11.8	+19 52.3
18	176	03.2	136	29.6	+12 33.4	275 36.0	-26 38.5	92	17.6	+23 00.1	110	13.9	+19 52.4
19	191	05.6	151	29.6	34.1	290 39.4	38.5	107	19.4	00.1	125	16.1	52.4
20	206	08.1	166	29.5	34.9	305 42.8	38.6	122	21.2	00.1	140	18.2	52.5
21	221	10.5	181	29.5	35.6	320 46.1	38.7	137	23.1	00.2	155	20.3	52.5
22	236	13.0	196	29.5	36.4	335 49.5	38.7	152	24.9	00.2	170	22.5	52.6
23	251	15.5	211	29.5	37.1	350 52.9	38.8	167	26.8	00.2	185	24.6	52.6
24	266	17.9	226	29.5	+12 37.8	5 56.3	-26 38.9	182	28.6	+23 00.3	200	26.8	+19 52.7
Dif	—		0	+7	+34	-1		+18		0	+21		+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 01 ^m 1				Edad: 25 ^d 9 PHE { SD: 15'6 PMG: 9 ^h 15 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	45.1	+23	24.0	225	45.8	+11	12.5	60 N	** **	0 50	2 35	1 38	14	17 16	91	
1	194	44.9		24.1	240	16.7 ¹¹⁹		24.2 ¹¹⁷	58	** **	1 40	2 56	45	16	17 07	87	
2	209	44.8		24.1	254	47.6 ¹¹⁹		35.8 ¹¹⁶	56	** **	2 10	3 13	51	19	16 59	84	
3	224	44.7		24.2	269	18.3 ¹¹⁷		47.4 ¹¹⁶	54	0 46	32	27	1 56	22	52	81	
4	239	44.5		24.3	283	49.0 ¹¹⁷	+11	58.9 ¹¹⁵	52	1 32	2 50	39	2 01	24	46	78	
5	254	44.4	+23	24.3	298	19.6 ¹¹⁶	+12	10.4 ¹¹⁵	50	2 00	3 06	3 50	2 05	26	16 40	77	
6	269	44.3	+23	24.4	312	50.1 ¹¹⁵	+12	21.8 ¹¹⁴	45	2 46	3 35	4 13	2 14	31	16 28	72	
7	284	44.1		24.4	327	20.5 ¹¹⁴		33.2 ¹¹⁴	40	3 16	3 58	31	22	34	18	69	
8	299	44.0		24.5	341	50.9 ¹¹⁴		44.5 ¹¹³	35	39	4 16	46	29	36	09	66	
9	314	43.9		24.5	356	21.1 ¹¹²	+12	55.8 ¹¹³	30	3 58	31	4 59	35	39	16	02	63
10	329	43.7		24.6	10	51.2 ¹¹¹	+13	07.0 ¹¹²	20	4 27	4 56	5 21	46	43	15	49	59
11	344	43.6	+23	24.6	25	21.3 ¹¹¹	+13	18.2 ¹¹²	10 N	4 50	5 17	5 40	2 55	47	15	38	55
12	359	43.4	+23	24.7	39	51.2 ¹⁰⁹	+13	29.3 ¹¹¹	0	5 09	5 35	5 57	3 03	51	15	27	52
13	14	43.3		24.7	54	21.1 ¹⁰⁹		40.4 ¹¹¹	10 S	26	5 52	6 15	12	54	16	50	
14	29	43.2		24.8	68	50.9 ¹⁰⁸	+13	51.4 ¹¹⁰	20	42	6 09	33	22	57	15	05	46
15	44	43.0		24.8	83	20.6 ¹⁰⁷	+14	02.3 ¹⁰⁹	30	5 58	28	6 55	32	63	14	53	41
16	59	42.9		24.9	97	50.2 ¹⁰⁶		13.2 ¹⁰⁹	35	6 07	39	7 07	39	64	45	39	
17	74	42.8	+23	24.9	112	19.6 ¹⁰⁴	+14	24.1 ¹⁰⁹	40	6 17	6 51	7 21	3 46	68	14	37	36
18	89	42.6	+23	24.9	126	49.0 ¹⁰⁴	+14	34.8 ¹⁰⁷	45	6 27	7 04	7 38	3 54	72	14	27	33
19	104	42.5		25.0	141	18.3 ¹⁰³		45.5 ¹⁰⁷	50	39	20	7 59	4 04	76	16	28	
20	119	42.3		25.0	155	47.5 ¹⁰²	+14	56.2 ¹⁰⁷	52	44	28	8 09	09	78	10	27	
21	134	42.2		25.1	170	16.6 ¹⁰¹	+15	06.8 ¹⁰⁶	54	50	36	20	14	81	14	04	25
22	149	42.1		25.1	184	45.7 ¹⁰¹		17.3 ¹⁰⁵	56	6 56	45	32	20	83	13	58	21
23	164	41.9		25.2	199	14.6 ⁹⁹		27.7 ¹⁰⁴	58	7 03	7 55	8 47	27	86	50	19	
24	179	41.8	+23	25.2	213	43.4 ⁹⁸	+15	38.1 ¹⁰⁴	60 S	7 10	8 07	9 05	4 34	90	13	42	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 13 ^m 8	Mag: -4.3 PMG: 8 ^h 54 ^m	Mag: -2.3 PMG: 23 ^h 31 ^m	Mag: -1.9 PMG: 11 ^h 49 ^m	Mag: +0.1 PMG: 10 ^h 37 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	266	17.9	226	29.5	+12	37.8	5	56.3	-26	38.9	182	28.6	+23	00.3	200	26.8	+19	52.7
1	281	20.4	241	29.4		38.6	20	59.7		39.0	197	30.4		00.3	215	28.9		52.7
2	296	22.9	256	29.4		39.3	36	03.0		39.0	212	32.3		00.3	230	31.0		52.8
3	311	25.3	271	29.4		40.1	51	06.4		39.1	227	34.1		00.3	245	33.2		52.8
4	326	27.8	286	29.4		40.8	66	09.8		39.2	242	36.0		00.4	260	35.3		52.9
5	341	30.3	301	29.3	+12	41.5	81	13.2	-26	39.2	257	37.8	+23	00.4	275	37.4	+19	52.9
6	356	32.7	316	29.3	+12	42.3	96	16.6	-26	39.3	272	39.6	+23	00.4	290	39.6	+19	53.0
7	11	35.2	331	29.3		43.0	111	19.9		39.4	287	41.5		00.5	305	41.7		53.0
8	26	37.7	346	29.3		43.8	126	23.3		39.5	302	43.3		00.5	320	43.9		53.1
9	41	40.1	1	29.2		44.5	141	26.7		39.5	317	45.1		00.5	335	46.0		53.1
10	56	42.6	16	29.2		45.2	156	30.1		39.6	332	47.0		00.5	350	48.1		53.2
11	71	45.0	31	29.2	+12	46.0	171	33.4	-26	39.7	347	48.8	+23	00.6	5	50.3	+19	53.2
12	86	47.5	46	29.1	+12	46.7	186	36.8	-26	39.7	2	50.7	+23	00.6	20	52.4	+19	53.3
13	101	50.0	61	29.1		47.4	201	40.2		39.8	17	52.5		00.6	35	54.5		53.3
14	116	52.4	76	29.1		48.2	216	43.6		39.9	32	54.3		00.6	50	56.7		53.4
15	131	54.9	91	29.0		48.9	231	47.0		39.9	47	56.2		00.7	65	58.8		53.5
16	146	57.4	106	29.0		49.7	246	50.3		40.0	62	58.0		00.7	81	01.0		53.5
17	161	59.8	121	29.0	+12	50.4	261	53.7	-26	40.1	77	59.9	+23	00.7	96	03.1	+19	53.6
18	177	02.3	136	28.9	+12	51.1	276	57.1	-26	40.1	93	01.7	+23	00.8	111	05.2	+19	53.6
19	192	04.8	151	28.9		51.9	292	00.5		40.2	108	03.5		00.8	126	07.4		53.7
20	207	07.2	166	28.9		52.6	307	03.8		40.3	123	05.4		00.8	141	09.5		53.7
21	222	09.7	181	28.8		53.3	322	07.2		40.3	138	07.2		00.8	156	11.6		53.8
22	237	12.2	196	28.8		54.1	337	10.6		40.4	153	09.1		00.9	171	13.8		53.8
23	252	14.6	211	28.7		54.8	352	14.0		40.5	168	10.9		00.9	186	15.9		53.9
24	267	17.1	226	28.7	+12	55.6	7	17.3	-26	40.5	183	12.7	+23	00.9	201	18.1	+19	53.9
Dif	—		0		+7		+34		-1		+18		0		+21		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 3			Edad: 26 ^d 9 PHE { 4 ^h : 58 ^h /2 12 ^h : 58 ^h /4 20 ^h : 58 ^h /7 PMG: 10 ^h 07 ^m R°: 55 ^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	41.8	+23	25.2	213	43.4	+15	38.1	60 N	21 27	23 14	** **	1 52 19	18 47 89	
1	194	41.7		25.2	228	12.1		48.4	58	21 07	22 23	** **	2 01 23	34 86	
2	209	41.5		25.3	242	40.7	+15	58.6	56	20 50	21 53	** **	10 26	23 82	
3	224	41.4		25.3	257	09.2	+16	08.7	54	36	30	23 18	18 28	13 80	
4	239	41.3		25.3	271	37.6		18.8	52	23	21 12	22 31	25 30	18 04 78	
5	254	41.1	+23	25.4	286	05.9	+16	28.8	50	20 12	20 57	22 03	2 31 33	17 57 76	
6	269	41.0	+23	25.4	300	34.1	+16	38.7	45	19 50	20 27	21 17	2 45 36	17 40 73	
7	284	40.8		25.5	315	02.2		48.5	40	32	20 05	20 46	2 56 40	27 69	
8	299	40.7		25.5	329	30.2	+16	58.2	35	17	19 46	23	3 05 43	15 68	
9	314	40.6		25.5	343	58.1	+17	07.9	30	19 04	31	20 05	14 45	17 05 66	
10	329	40.4		25.6	358	25.9		17.5	20	18 42	19 06	19 35	29 48	16 48 62	
11	344	40.3	+23	25.6	12	53.6	+17	27.0	10 N	18 23	18 46	19 13	3 42 51	16 33 60	
12	359	40.2	+23	25.6	27	21.2	+17	36.4	0	18 05	18 28	18 54	3 54 55	16 19 57	
13	14	40.0		25.7	41	48.7		45.7	10 S	17 48	18 10	37	4 06 58	16 06 54	
14	29	39.9		25.7	56	16.1	+17	54.9	20	29	17 53	21	19 61	15 51 51	
15	44	39.7		25.7	70	43.4	+18	04.0	30	17 08	34	18 04	35 64	34 48	
16	59	39.6		25.7	85	10.6		13.0	35	16 55	24	17 55	43 68	24 46	
17	74	39.5	+23	25.8	99	37.6	+18	21.9	40	16 41	17 12	17 46	4 54 69	15 13 43	
18	89	39.3	+23	25.8	114	04.6	+18	30.8	45	16 24	16 58	17 35	5 06 73	15 00 41	
19	104	39.2		25.8	128	31.5		39.5	50	16 04	42	24	20 77	14 44 37	
20	119	39.1		25.9	142	58.3		48.1	52	15 54	35	18	27 79	37 35	
21	134	38.9		25.9	157	24.9	+18	56.6	54	43	26	13	35 81	29 32	
22	149	38.8		25.9	171	51.5	+19	05.0	56	30	17	06	43 84	19 31	
23	164	38.6		25.9	186	18.0		13.3	58	15 15	16 07	17 00	5 53 87	14 09 27	
24	179	38.5	+23	25.9	200	44.3	+19	21.5	60 S	14 58	15 55	16 52	6 04 92	13 57 23	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 09 ^m 8		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: -2.3 PMG: 23 ^h 26 ^m		Mag: -1.9 PMG: 11 ^h 46 ^m		Mag: +0.1 PMG: 10 ^h 33 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	267	17.1	226	28.7	+12	55.6	183	12.7	+23	00.9					
1	282	19.5	241	28.7		56.3	198	14.6		01.0					
2	297	22.0	256	28.6		57.0	213	16.4		01.0					
3	312	24.5	271	28.6		57.8	228	18.2		01.0					
4	327	26.9	286	28.5		58.5	243	20.1		01.0					
5	342	29.4	301	28.5	+12	59.2	258	21.9	+23	01.1					
6	357	31.9	316	28.5	+13	00.0	273	23.8	+23	01.1					
7	12	34.3	331	28.4	+13	00.7	288	25.6		01.1					
8	27	36.8	346	28.4		01.4	303	27.4		01.1					
9	42	39.3	1	28.3		02.2	318	29.3		01.2					
10	57	41.7	16	28.3		02.9	333	31.1		01.2					
11	72	44.2	31	28.2	+13	03.7	348	33.0	+23	01.2					
12	87	46.7	46	28.2	+13	04.4	3	34.8	+23	01.3					
13	102	49.1	61	28.1		05.1	18	36.6		01.3					
14	117	51.6	76	28.1		05.9	33	38.5		01.3					
15	132	54.0	91	28.0		06.6	48	40.3		01.3					
16	147	56.5	106	28.0		07.3	63	42.2		01.4					
17	162	59.0	121	27.9	+13	08.1	78	44.0	+23	01.4					
18	178	01.4	136	27.9	+13	08.8	93	45.8	+23	01.4					
19	193	03.9	151	27.8		09.5	108	47.7		01.4					
20	208	06.4	166	27.8		10.3	123	49.5		01.5					
21	223	08.8	181	27.7		11.0	138	51.3		01.5					
22	238	11.3	196	27.7		11.7	153	53.2		01.5					
23	253	13.8	211	27.6		12.5	168	55.0		01.5					
24	268	16.2	226	27.5	+13	13.2	183	56.9	+23	01.6					
Dif	—		0		+7		+34		-1						
							+18		0						
									+21						
									+1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 5			Edad: 27 ^d 9 SD: 16 ^h 0 PMG: 11 ^h 02 ^m	PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 2 20 ^h : 59 ^m 4 Rº: 60 ^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	179	38.5	+23	25.9	200	44.3	+19	21.5	60 N	** **	0 49	2 36	2 11	30	20 16	80		
1	194	38.4		26.0	215	10.6	73	29.6	58	** **	1 40	2 56	24 34		20 00	77		
2	209	38.2		26.0	229	36.8	72	37.6	56	** **	2 10	3 13	36 36		19 45	76		
3	224	38.1		26.0	244	02.8	70	45.5	54	0 45	33	27	46 39		33 74			
4	239	38.0		26.0	258	28.8	70	+19 53.2	52	1 32	2 51	40	2 55 41		22 73			
5	254	37.8	+23	26.1	272	54.7	69	+20 00.9	50	2 00	3 06	3 50	3 04 42		19 13	71		
6	269	37.7	+23	26.1	287	20.4	67	+20 08.4	45	2 46	3 36	4 13	3 21 46		18 53	69		
7	284	37.5		26.1	301	46.1	67	15.8	40	3 16	3 58	31	36 47		36 68			
8	299	37.4		26.1	316	11.7	66	23.1	35	40	4 16	46	48 50		23 66			
9	314	37.3		26.1	330	37.2	65	30.2	30	3 58	32	4 59	3 59 51		18 11	65		
10	329	37.1		26.1	345	02.5	63	37.3	20	4 27	4 57	5 21	4 17 54		17 50	64		
11	344	37.0	+23	26.2	359	27.8	63	+20 44.2	10 N	4 50	5 17	5 40	4 33 57		17 33	62		
12	359	36.9	+23	26.2	13	53.0	62	+20 51.0	0	5 09	5 35	5 58	4 49 58		17 16	61		
13	14	36.7		26.2	28	18.1	61	+20 57.6	10 S	26	5 52	6 15	5 04 61		17 00	59		
14	29	36.6		26.2	42	43.1	60	+21 04.1	20	42	6 10	34	20 64		16 42	57		
15	44	36.4		26.2	57	08.0	59	10.5	30	5 59	29	6 55	39 66		22 55			
16	59	36.3		26.2	71	32.9	59	16.8	35	6 08	39	7 08	5 51 67		16 10	54		
17	74	36.2	+23	26.2	85	57.6	57	+21 22.9	40	6 17	6 51	7 22	6 03 70		15 56	53		
18	89	36.0	+23	26.2	100	22.2	56	+21 28.9	45	6 27	7 05	7 39	6 19 71		15 41	50		
19	104	35.9		26.3	114	46.8	56	34.8	50	39	21	7 59	37 75		21 48			
20	119	35.8		26.3	129	11.3	55	40.5	52	45	28	8 09	46 77		12 46			
21	134	35.6		26.3	143	35.7	54	46.1	54	50	37	20	6 56 78		15 01	45		
22	149	35.5		26.3	158	00.0	53	51.5	56	6 56	46	33	7 07 81		14 50	43		
23	164	35.3		26.3	172	24.2	52	+21 56.8	58	7 03	7 56	8 48	20 83		36 41			
24	179	35.2	+23	26.3	186	48.3	51	+22 02.0	60 S	7 11	8 08	9 05	7 36 86		14 20	37		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 05 ^m 9		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: -2.3 PMG: 23 ^h 20 ^m		Mag: -1.9 PMG: 11 ^h 43 ^m		Mag: +0.1 PMG: 10 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	268	16.2	226	27.5	+13	13.2	8	38.2	-26	42.0	183	56.9	+23	01.6	202	09.4	+19	55.1
1	283	18.7	241	27.5		13.9	23	41.6		42.1	198	58.7		01.6	217	11.5		55.2
2	298	21.1	256	27.4		14.7	38	45.0		42.1	214	00.5		01.6	232	13.7		55.2
3	313	23.6	271	27.4		15.4	53	48.4		42.2	229	02.4		01.7	247	15.8		55.3
4	328	26.1	286	27.3		16.1	68	51.7		42.3	244	04.2		01.7	262	17.9		55.3
5	343	28.5	301	27.3	+13	16.9	83	55.1	-26	42.3	259	06.1	+23	01.7	277	20.1	+19	55.4
6	358	31.0	316	27.2	+13	17.6	98	58.5	-26	42.4	274	07.9	+23	01.7	292	22.2	+19	55.4
7	13	33.5	331	27.1		18.3	114	01.8		42.4	289	09.7		01.8	307	24.4		55.5
8	28	35.9	346	27.1		19.1	129	05.2		42.5	304	11.6		01.8	322	26.5		55.5
9	43	38.4	1	27.0		19.8	144	08.5		42.6	319	13.4		01.8	337	28.6		55.6
10	58	40.9	16	27.0		20.5	159	11.9		42.6	334	15.3		01.8	352	30.8		55.6
11	73	43.3	31	26.9	+13	21.3	174	15.3	-26	42.7	349	17.1	+23	01.9	7	32.9	+19	55.7
12	88	45.8	46	26.8	+13	22.0	189	18.6	-26	42.7	4	18.9	+23	01.9	22	35.0	+19	55.7
13	103	48.3	61	26.8		22.7	204	22.0		42.8	19	20.8		01.9	37	37.2		55.8
14	118	50.7	76	26.7		23.5	219	25.4		42.8	34	22.6		01.9	52	39.3		55.8
15	133	53.2	91	26.6		24.2	234	28.7		42.9	49	24.4		02.0	67	41.5		55.9
16	148	55.6	106	26.6		24.9	249	32.1		43.0	64	26.3		02.0	82	43.6		55.9
17	163	58.1	121	26.5	+13	25.7	264	35.5	-26	43.0	79	28.1	+23	02.0	97	45.7	+19	56.0
18	179	00.6	136	26.4	+13	26.4	279	38.8	-26	43.1	94	30.0	+23	02.0	112	47.9	+19	56.0
19	194	03.0	151	26.4		27.1	294	42.2		43.1	109	31.8		02.1	127	50.0		56.1
20	209	05.5	166	26.3		27.9	309	45.5		43.2	124	33.6		02.1	142	52.2		56.1
21	224	08.0	181	26.2		28.6	324	48.9		43.2	139	35.5		02.1	157	54.3		56.2
22	239	10.4	196	26.1		29.3	339	52.3		43.3	154	37.3		02.1	172	56.4		56.2
23	254	12.9	211	26.1		30.1	354	55.6		43.3	169	39.2		02.2	187	58.6		56.3
24	269	15.4	226	26.0	+13	30.8	9	59.0	-26	43.4	184	41.0	+23	02.2	203	00.7	+19	56.3
Dif	—		-1		+7		+34		-1		+18		0		+21			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 8			Edad: 28 ^d 9 PHE { 4 ^h : 59/6 12 ^h : 59/8 20 ^h : 60/0 PMG: 12 ^h 02 ^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	35.2	+23	26.3	186	48.3	+22	02.0	60 N	21 28	23 14	** **	2 41 47	21 36 61
1	194	35.1		26.3	201	12.4		51	58	21 07	22 23	** **	2 58 50	17 61
2	209	34.9		26.3	215	36.4		50	56	20 50	21 53	** **	3 12 52	21 01 61
3	224	34.8		26.3	230	00.3		49	54		36	31	23 19	20 47 62
4	239	34.7		26.3	244	24.1		48	52		24	21 13	22 31	35 62
5	254	34.5	+23	26.3	258	47.9	+22	25.6	50	20 13	20 58	22 03	3 46 54	20 24 62
6	269	34.4	+23	26.3	273	11.5	+22	29.8	45	19 50	20 28	21 18	4 07 56	20 02 62
7	284	34.2		26.3	287	35.2		47	40		32	20 05	20 47	19 44 63
8	299	34.1		26.3	301	58.7		45	35		17	19 47	24	29 63
9	314	34.0		26.3	316	22.2		45	30	19 04		32	20 05	19 16 63
10	329	33.8		26.3	330	45.6		44	20	18 42	19 07	19 36	5 11 60	18 54 63
11	344	33.7	+23	26.3	345	08.9	+22	48.9	10 N	18 23	18 46	19 13	5 30 61	18 35 62
12	359	33.6	+23	26.3	359	32.2	+22	52.3	0	18 05	18 28	18 54	5 47 62	18 17 62
13	14	33.4		26.3	13	55.5		43	10 S	17 48	18 11	37	6 05 63	17 59 62
14	29	33.3		26.3	28	18.6	+22	58.5	20		29	17 53	21	39 62
15	44	33.1		26.3	42	41.8	+23	01.3	30	17 08		35	18 04	17 62
16	59	33.0		26.3	57	04.8		40	35	16 56		24	17 56	17 04 62
17	74	32.9	+23	26.3	71	27.8	+23	06.6	40	16 42	17 12	17 46	7 13 65	16 49 61
18	89	32.7	+23	26.3	85	50.8	+23	09.0	45	16 25	16 59	17 36	7 30 67	16 31 61
19	104	32.6		26.3	100	13.7		39	50	16 04		42	24	16 09 61
20	119	32.5		26.3	114	36.6		39	52	15 54	35	19	8 03 67	15 58 61
21	134	32.3		26.2	128	59.4		38	54		43	27	13	46 60
22	149	32.2		26.2	143	22.2		38	56		30	18	07	33 59
23	164	32.1		26.2	157	44.9		37	58	15 15	16 07	17 00	8 43 70	15 17 59
24	179	31.9	+23	26.2	172	07.6	+23	19.9	60 S	14 58	15 56	16 53	9 02 71	14 57 59
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 02 ^m 0		Mag: -4.3 PMG: 8 ^h 54 ^m		Mag: -2.3 PMG: 23 ^h 15 ^m		Mag: -1.9 PMG: 11 ^h 40 ^m		Mag: +0.1 PMG: 10 ^h 26 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	269	15.4	226	26.0	9	59.0	184	41.0	203	00.7				
1	284	17.8	241	25.9	25	02.3	199	42.8	218	02.9				
2	299	20.3	256	25.9	40	05.7	214	44.7	233	05.0				
3	314	22.8	271	25.8	55	09.0	229	46.5	248	07.1				
4	329	25.2	286	25.7	70	12.4	244	48.4	263	09.3				
5	344	27.7	301	25.6	85	15.8	259	50.2	278	11.4				
6	359	30.1	316	25.6	100	19.1	274	52.0	293	13.6				
7	14	32.6	331	25.5	115	22.5	289	53.9	308	15.7				
8	29	35.1	346	25.4	130	25.8	304	55.7	323	17.8				
9	44	37.5	1	25.3	145	29.2	319	57.6	338	20.0				
10	59	40.0	16	25.2	160	32.5	334	59.4	353	22.1				
11	74	42.5	31	25.2	175	35.9	350	01.2	8	24.3				
12	89	44.9	46	25.1	190	39.2	5	03.1	23	26.4				
13	104	47.4	61	25.0	205	42.6	20	04.9	38	28.5				
14	119	49.9	76	24.9	220	46.0	35	06.8	53	30.7				
15	134	52.3	91	24.8	235	49.3	50	08.6	68	32.8				
16	149	54.8	106	24.8	250	52.7	65	10.4	83	35.0				
17	164	57.3	121	24.7	265	56.0	80	12.3	98	37.1				
18	179	59.7	136	24.6	280	59.4	95	14.1	113	39.3				
19	195	02.2	151	24.5	296	02.7	110	15.9	128	41.4				
20	210	04.6	166	24.4	311	06.1	125	17.8	143	43.5				
21	225	07.1	181	24.3	326	09.4	140	19.6	158	45.7				
22	240	09.6	196	24.2	341	12.8	155	21.5	173	47.8				
23	255	12.0	211	24.2	356	16.1	170	23.3	188	50.0				
24	270	14.5	226	24.1	11	19.5	185	25.1	203	52.1				
Dif	—		-1		+7		+18		+21					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 02 ^m 0				Edad: 0 ^d 5 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'3 PMG: 13 ^h 04 ^m R°: 63 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	31.9	+23	26.2	172	07.6	+23	19.9	12	60 N	** **	0 49	2 36	3 28	70	22 37	40
1	194	31.8		26.2	186	30.3		21.1	11	58	** **	1 41	2 56	3 48	69		18 43
2	209	31.6		26.2	200	52.9		22.2	9	56	** **	2 11	3 13	4 04	68	22 02	46
3	224	31.5		26.2	215	15.5		23.1	9	54	0 45	33	28	17	68	21 49	47
4	239	31.4		26.2	229	38.1		23.8	7	52	1 32	2 51	40	30	67	37	49
5	254	31.2	+23	26.1	244	00.7	+23	24.4	6	50	2 00	3 06	3 51	4 40	67	21 26	50
6	269	31.1	+23	26.1	258	23.2	+23	24.7	3	45	2 46	3 36	4 13	5 03	66	21 04	53
7	284	31.0		26.1	272	45.7		25.0	3	40	3 17	3 59	31	21	65	20 47	54
8	299	30.8		26.1	287	08.2		25.0	0	35	40	4 17	4 47	36	65		32 56
9	314	30.7		26.1	301	30.6		24.9	1	30	3 59	32	5 00	5 49	65	20 19	57
10	329	30.5		26.1	315	53.1		24.6	3	20	4 28	4 57	22	6 11	64	19 57	59
11	344	30.4	+23	26.0	330	15.5	+23	24.2	4	10 N	4 51	5 18	5 41	6 31	63	19 37	61
12	359	30.3	+23	26.0	344	38.0	+23	23.6	6	0	5 10	5 36	5 58	6 49	63	19 19	62
13	14	30.1		26.0	359	00.4		22.8	8	10 S	27	5 53	6 16	7 08	61	19 01	64
14	29	30.0		26.0	13	22.8		21.8	10	20	43	6 10	34	27	61	18 41	66
15	44	29.9		26.0	27	45.2		20.7	11	30	5 59	29	6 56	7 50	60		19 67
16	59	29.7		25.9	42	07.6		19.4	13	35	6 08	40	7 08	8 03	59	18 06	68
17	74	29.6	+23	25.9	56	30.0	+23	17.9	15	40	6 18	6 52	7 22	8 18	59	17 50	70
18	89	29.5	+23	25.9	70	52.5	+23	16.2	17	45	6 28	7 05	7 39	8 37	57	17 32	71
19	104	29.3		25.9	85	14.9		14.4	18	50	40	21	8 00	9 00	56	17 10	72
20	119	29.2		25.8	99	37.3		12.4	20	52	45	29	10	10	56	16 59	73
21	134	29.0		25.8	113	59.8		10.3	21	54	51	37	21	23	54		46 75
22	149	28.9		25.8	128	22.2		08.0	23	56	6 57	46	34	37	53		32 77
23	164	28.8		25.8	142	44.7		05.5	25	58	7 04	7 56	8 48	9 53	52	16 16	78
24	179	28.6	+23	25.7	157	07.2	+23	02.8	27	60 S	7 11	8 08	9 06	10 13	50	15 56	80

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 58 ^m 1		Mag: -4.3 PMG: 8 ^h 54 ^m			Mag: -2.3 PMG: 23 ^h 10 ^m			Mag: -1.9 PMG: 11 ^h 37 ^m			Mag: +0.1 PMG: 10 ^h 23 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	270	14.5	226	24.1	+13	48.3	11	19.5	-26	44.6	185	25.1	+23	02.8	203	52.1	+19	57.5
1	285	17.0	241	24.0		49.0	26	22.8		44.7	200	27.0		02.8	218	54.2		57.5
2	300	19.4	256	23.9		49.7	41	26.1		44.7	215	28.8		02.8	233	56.4		57.6
3	315	21.9	271	23.8		50.5	56	29.5		44.8	230	30.7		02.9	248	58.5		57.6
4	330	24.4	286	23.7		51.2	71	32.8		44.8	245	32.5		02.9	264	00.7		57.7
5	345	26.8	301	23.6	+13	51.9	86	36.2	-26	44.9	260	34.3	+23	02.9	279	02.8	+19	57.7
6	0	29.3	316	23.5	+13	52.6	101	39.5	-26	44.9	275	36.2	+23	02.9	294	04.9	+19	57.8
7	15	31.8	331	23.4		53.4	116	42.9		45.0	290	38.0		03.0	309	07.1		57.8
8	30	34.2	346	23.3		54.1	131	46.2		45.0	305	39.9		03.0	324	09.2		57.9
9	45	36.7	1	23.2		54.8	146	49.6		45.1	320	41.7		03.0	339	11.4		57.9
10	60	39.1	16	23.2		55.6	161	52.9		45.1	335	43.5		03.0	354	13.5		58.0
11	75	41.6	31	23.1	+13	56.3	176	56.2	-26	45.2	350	45.4	+23	03.1	9	15.7	+19	58.0
12	90	44.1	46	23.0	+13	57.0	191	59.6	-26	45.2	5	47.2	+23	03.1	24	17.8	+19	58.1
13	105	46.5	61	22.9		57.7	207	02.9		45.3	20	49.1		03.1	39	19.9		58.1
14	120	49.0	76	22.8		58.4	222	06.3		45.3	35	50.9		03.1	54	22.1		58.2
15	135	51.5	91	22.7		59.2	237	09.6		45.4	50	52.7		03.2	69	24.2		58.2
16	150	53.9	106	22.6	+13	59.9	252	12.9		45.4	65	54.6		03.2	84	26.4		58.3
17	165	56.4	121	22.5	+14	00.6	267	16.3	-26	45.5	80	56.4	+23	03.2	99	28.5	+19	58.3
18	180	58.9	136	22.4	+14	01.3	282	19.6	-26	45.5	95	58.3	+23	03.2	114	30.6	+19	58.4
19	196	01.3	151	22.3		02.1	297	23.0		45.5	111	00.1		03.2	129	32.8		58.4
20	211	03.8	166	22.2		02.8	312	26.3		45.6	126	01.9		03.3	144	34.9		58.5
21	226	06.3	181	22.1		03.5	327	29.6		45.6	141	03.8		03.3	159	37.1		58.5
22	241	08.7	196	22.0		04.2	342	33.0		45.7	156	05.6		03.3	174	39.2		58.5
23	256	11.2	211	21.9		05.0	357	36.3		45.7	171	07.5		03.3	189	41.4		58.6
24	271	13.6	226	21.8	+14	05.7	12	39.6	-26	45.8	186	09.3	+23	03.4	204	43.5	+19	58.6
Dif	—		-1			+7	+33			0	+18			0	+21			

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 2				Edad: 1 ^d 5 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 4 20 ^h : 60 ^h 4 PMG: 14 ^h 07 ^m 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	179	28.6	+23	25.7	157	07.2	+23	02.8	60 N	21 28	23 14	** **	4 38 89		23 17 25		
1	194	28.5		25.7	171	29.7	+23	00.0	58	21 07	22 23	** **	4 57 85		23 01 29		
2	209	28.4		25.7	185	52.2	+22	57.0	56	20 51	21 53	** **	5 12 82		22 48 32		
3	224	28.2		25.6	200	14.8		53.8	54	36	31	23 18	25 81		36 35		
4	239	28.1		25.6	214	37.4		50.5	52	24	21 13	22 31	37 78		26 37		
5	254	28.0	+23	25.6	229	00.0	+22	47.0	50	20 13	20 58	22 03	5 47 77		22 16 40		
6	269	27.8	+23	25.5	243	22.6	+22	43.3	45	19 51	20 28	21 18	6 09 74		21 57 43		
7	284	27.7		25.5	257	45.3		39.5	40	33	20 05	20 47	26 72		41 46		
8	299	27.5		25.5	272	08.0		35.5	35	18	19 47	24	41 70		28 48		
9	314	27.4		25.4	286	30.7		31.4	30	19 05	32	20 05	6 54 68		21 16 50		
10	329	27.3		25.4	300	53.5		27.1	20	18 42	19 07	19 36	7 15 66		20 56 54		
11	344	27.1	+23	25.4	315	16.3	+22	22.6	10 N	18 23	18 47	19 14	7 34 64		20 38 57		
12	359	27.0	+23	25.3	329	39.2	+22	18.0	0	18 06	18 28	18 55	7 52 61		20 21 60		
13	14	26.9		25.3	344	02.1		13.2	10 S	17 48	18 11	38	8 09 59		20 05 62		
14	29	26.7		25.3	358	25.0		08.2	20	30	17 54	21	28 57		19 47 65		
15	44	26.6		25.2	12	48.0	+22	03.1	30	17 09	35	18 05	8 50 54		26 69		
16	59	26.5		25.2	27	11.1	+21	57.8	35	16 56	24	17 56	9 02 53		14 71		
17	74	26.3	+23	25.1	41	34.2	+21	52.4	40	16 42	17 13	17 47	9 17 50		19 00 73		
18	89	26.2	+23	25.1	55	57.3	+21	46.8	45	16 25	16 59	17 36	9 34 48		18 43 76		
19	104	26.1		25.1	70	20.5		41.1	50	16 04	43	25	9 56 44		22 80		
20	119	25.9		25.0	84	43.8		35.2	52	15 55	36	19	10 06 42		12 82		
21	134	25.8		25.0	99	07.1		29.1	54	43	27	14	17 41		18 01 84		
22	149	25.6		24.9	113	30.5		23.0	56	31	18	07	30 38		17 49 86		
23	164	25.5		24.9	127	53.9		16.6	58	15 16	16 08	17 01	10 45 35		34 90		
24	179	25.4	+23	24.8	142	17.4	+21	10.1	60 S	14 58	15 56	16 53	11 03 31		17 16 95		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 5 ^h 54 ^m 1		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: -2.3 PMG: 23 ^h 04 ^m		Mag: -1.9 PMG: 11 ^h 34 ^m		Mag: +0.1 PMG: 10 ^h 20 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	271	13.6	226	21.8	+14	05.7	186	09.3	+23	03.4							
1	286	16.1	241	21.7		06.4	201	11.1		03.4							
2	301	18.6	256	21.5		07.1	216	13.0		03.4							
3	316	21.0	271	21.4		07.8	231	14.8		03.4							
4	331	23.5	286	21.3		08.6	246	16.7		03.5							
5	346	26.0	301	21.2	+14	09.3	261	18.5	+23	03.5							
6	1	28.4	316	21.1	+14	10.0	276	20.3	+23	03.5							
7	16	30.9	331	21.0		10.7	291	22.2		03.5							
8	31	33.4	346	20.9		11.5	306	24.0		03.6							
9	46	35.8	1	20.8		12.2	321	25.9		03.6							
10	61	38.3	16	20.7		12.9	336	27.7		03.6							
11	76	40.8	31	20.6	+14	13.6	351	29.5	+23	03.6							
12	91	43.2	46	20.5	+14	14.3	6	31.4	+23	03.6							
13	106	45.7	61	20.3		15.1	21	33.2		03.7							
14	121	48.1	76	20.2		15.8	36	35.1		03.7							
15	136	50.6	91	20.1		16.5	51	36.9		03.7							
16	151	53.1	106	20.0		17.2	66	38.7		03.7							
17	166	55.5	121	19.9	+14	17.9	81	40.6	+23	03.8							
18	181	58.0	136	19.8	+14	18.7	96	42.4	+23	03.8							
19	197	00.5	151	19.7		19.4	111	44.3		03.8							
20	212	02.9	166	19.5		20.1	126	46.1		03.8							
21	227	05.4	181	19.4		20.8	141	47.9		03.8							
22	242	07.9	196	19.3		21.5	156	49.8		03.9							
23	257	10.3	211	19.2		22.2	171	51.6		03.9							
24	272	12.8	226	19.1	+14	23.0	186	53.5	+23	03.9							
Dif	—		-1		+7		+18		0								

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 2 ^d 5	PHE { 4 ^h : 60 ^m 4 12 ^h : 60 ^m 3 20 ^h : 60 ^m 2	SD: 16 ^h 4		R ^o : 57 ^m	R ^o		R ^o				
	PMG: 12 ^h 02 ^m 4	hG ☉	Dec			hG ☾			Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	25.4	+23	24.8	142	17.4	+21	10.1	60 N	** **	0 51	2 37	6 07	96	23 42 17
1	194	25.2		24.8	156	41.0	+21	03.5	58	** **	1 41	2 57	22 92		30 21
2	209	25.1		24.7	171	04.6	+20	56.7	56	** **	2 11	3 14	34 89		20 24
3	224	25.0		24.7	185	28.3		49.8	54		0 47	34	46 86		11 26
4	239	24.8		24.6	199	52.1		42.7	52		1 33	2 52	41	6 55	84
5	254	24.7	+23	24.6	214	15.9	+20	35.5	50		2 01	3 07	3 51	7 04	82
6	269	24.6	+23	24.5	228	39.8	+20	28.1	45		2 47	3 37	4 14	7 23	77
7	284	24.4		24.5	243	03.8		20.6	40		3 17	3 59	32	38 74	
8	299	24.3		24.4	257	27.8		13.0	35		41	4 17	4 47	7 51	71
9	314	24.2		24.4	271	51.9	+20	05.2	30		3 59	33	5 00	8 02	69
10	329	24.0		24.3	286	16.1	+19	57.3	20		4 28	4 58	22	21 65	
11	344	23.9	+23	24.3	300	40.4	+19	49.3	10 N		4 51	5 18	5 41	8 38	61
12	359	23.8	+23	24.2	315	04.7	+19	41.1	0		5 10	5 36	5 59	8 53	58
13	14	23.6		24.2	329	29.1		32.8	10 S		27	5 53	6 16	9 08	55
14	29	23.5		24.1	343	53.6		24.3	20		5 43	6 11	35	25 51	
15	44	23.4		24.1	358	18.2		15.8	30		6 00	30	6 56	44 47	
16	59	23.2		24.0	12	42.9	+19	07.1	35		08	40	7 08	9 55	44
17	74	23.1	+23	23.9	27	07.6	+18	58.3	40		6 18	6 52	7 23	10 07	42
18	89	23.0	+23	23.9	41	32.4	+18	49.3	45		6 28	7 05	7 39	10 22	39
19	104	22.8		23.8	55	57.3		40.3	50		40	22	8 00	40 34	
20	119	22.7		23.8	70	22.3		31.1	52		45	29	10	48 33	
21	134	22.5		23.7	84	47.4		21.8	54		51	37	21	10 58	30
22	149	22.4		23.6	99	12.5		12.4	56		6 57	46	34	11 08	27
23	164	22.3		23.6	113	37.7	+18	02.8	58		7 04	7 57	8 48	20 24	
24	179	22.1	+23	23.5	128	03.1	+17	53.2	60 S		7 11	8 08	9 06	11 34	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.3		Mag: -2.3		Mag: -1.9		Mag: +0.1	
	5 ^h 50 ^m 2		PMG: 8 ^h 55 ^m		PMG: 22 ^h 59 ^m		PMG: 11 ^h 31 ^m		PMG: 10 ^h 16 ^m	
h	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	272	12.8	226	19.1	+14	23.0	13	59.4	-26	46.8
1	287	15.3	241	18.9		23.7	29	02.8		46.8
2	302	17.7	256	18.8		24.4	44	06.1		46.8
3	317	20.2	271	18.7		25.1	59	09.4		46.9
4	332	22.6	286	18.6		25.8	74	12.7		46.9
5	347	25.1	301	18.4	+14	26.5	89	16.0	-26	47.0
6	2	27.6	316	18.3	+14	27.3	104	19.3	-26	47.0
7	17	30.0	331	18.2		28.0	119	22.7		47.0
8	32	32.5	346	18.1		28.7	134	26.0		47.1
9	47	35.0	1	17.9		29.4	149	29.3		47.1
10	62	37.4	16	17.8		30.1	164	32.6		47.2
11	77	39.9	31	17.7	+14	30.8	179	35.9	-26	47.2
12	92	42.4	46	17.6	+14	31.5	194	39.2	-26	47.2
13	107	44.8	61	17.4		32.3	209	42.5		47.3
14	122	47.3	76	17.3		33.0	224	45.8		47.3
15	137	49.7	91	17.2		33.7	239	49.1		47.3
16	152	52.2	106	17.0		34.4	254	52.4		47.4
17	167	54.7	121	16.9	+14	35.1	269	55.7	-26	47.4
18	182	57.1	136	16.8	+14	35.8	284	59.0	-26	47.4
19	197	59.6	151	16.7		36.5	300	02.4		47.5
20	213	02.1	166	16.5		37.3	315	05.7		47.5
21	228	04.5	181	16.4		38.0	330	09.0		47.6
22	243	07.0	196	16.3		38.7	345	12.3		47.6
23	258	09.5	211	16.1		39.4	0	15.6		47.6
24	273	11.9	226	16.0	+14	40.1	15	18.9	-26	47.7
Dif	—		-1		+7		+33		0	
								+18		0
									+21	
										0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 8				Edad: 4 ^d 5 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'4 Rº: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	18.9	+23	21.8	114	36.1	+13	31.5	60 N	** **	0 53	2 38	9 20	94	** **	** **	** **	** **
1	194	18.8		21.7	129	03.5	84	19.6	58	** **	1 43	2 58	26	91	** **	** **	** **	** **
2	209	18.7		21.6	143	31.0	85	+13 07.5	56	** **	2 13	3 15	33	87	** **	** **	** **	** **
3	224	18.6		21.5	157	58.6	86	+12 55.4	54	0 49	35	29	38	85	23 58	18		
4	239	18.4		21.5	172	26.3	87	43.2	52	1 35	2 53	41	43	82	55	20		
5	254	18.3	+23	21.4	186	54.0	87	+12 30.9	50	2 02	3 08	3 52	9 47	80	23 52	22		
6	269	18.2	+23	21.3	201	21.8	88	+12 18.6	45	2 48	3 37	4 15	9 57	75	23 45	27		
7	284	18.0		21.2	215	49.7	89	+12 06.2	40	3 18	4 00	33	10 05	71	40	30		
8	299	17.9		21.1	230	17.7	90	+11 53.8	35	3 41	18	4 48	12	67	35	34		
9	314	17.8		21.0	244	45.8	91	41.3	30	4 00	33	5 01	18	64	31	36		
10	329	17.6		21.0	259	13.9	91	28.7	20	29	4 58	23	28	60	23	41		
11	344	17.5	+23	20.9	273	42.1	92	+11 16.1	10 N	4 51	5 19	5 42	10 37	55	23 16	46		
12	359	17.4	+23	20.8	288	10.4	93	+11 03.4	0	5 10	5 37	5 59	10 45	51	23 10	50		
13	14	17.2		20.7	302	38.8	94	+10 50.7	10 S	27	5 54	6 17	10 54	47	23 04	54		
14	29	17.1		20.6	317	07.2	94	37.9	20	5 44	6 11	35	11 03	42	22 57	58		
15	44	17.0		20.5	331	35.7	95	25.0	30	6 00	30	6 56	13	38	49	64		
16	59	16.8		20.4	346	04.3	96	+10 12.1	35	09	40	7 09	19	34	44	67		
17	74	16.7	+23	20.3	0	33.0	97	+9 59.2	40	6 18	6 52	7 23	11 25	32	22 39	70		
18	89	16.6	+23	20.2	15	01.7	97	+9 46.2	45	6 28	7 06	7 39	11 33	28	22 33	74		
19	104	16.4		20.1	29	30.5	98	33.2	50	40	22	8 00	42	23	26	78		
20	119	16.3		20.0	43	59.3	98	20.1	52	45	29	10	46	21	22	81		
21	134	16.2		19.9	58	28.3	100	+9 07.0	54	51	37	21	51	19	18	84		
22	149	16.1		19.9	72	57.3	100	+8 53.8	56	6 57	46	34	11 56	16	14	86		
23	164	15.9		19.8	87	26.3	100	40.6	58	7 04	7 57	8 48	12 01	14	09	90		
24	179	15.8	+23	19.7	101	55.5	102	+8 27.4	60 S	7 11	8 08	9 06	12 08	10	22 04	93		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 42 ^m 3		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: -2.2 PMG: 22 ^h 49 ^m			Mag: -1.9 PMG: 11 ^h 25 ^m			Mag: +0.1 PMG: 10 ^h 09 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	274	11.1	226	12.5	+14	57.1	16	37.8	-26	48.4	188	21.8	+23	04.9	207	17.9	+20	02.1
1	289	13.5	241	12.4		57.8	31	41.1		48.5	203	23.7		05.0	222	20.0		02.1
2	304	16.0	256	12.2		58.5	46	44.4		48.5	218	25.5		05.0	237	22.2		02.2
3	319	18.5	271	12.1		59.2	61	47.6		48.5	233	27.4		05.0	252	24.3		02.2
4	334	20.9	286	11.9	+14	59.9	76	50.9		48.6	248	29.2		05.0	267	26.5		02.3
5	349	23.4	301	11.8	+15	00.6	91	54.2	-26	48.6	263	31.0	+23	05.0	282	28.6	+20	02.3
6	4	25.8	316	11.6	+15	01.3	106	57.5	-26	48.6	278	32.9	+23	05.1	297	30.8	+20	02.3
7	19	28.3	331	11.4		02.0	122	00.7		48.6	293	34.7		05.1	312	32.9		02.4
8	34	30.8	346	11.3		02.7	137	04.0		48.7	308	36.6		05.1	327	35.1		02.4
9	49	33.2	1	11.1		03.4	152	07.3		48.7	323	38.4		05.1	342	37.2		02.5
10	64	35.7	16	11.0		04.1	167	10.6		48.7	338	40.3		05.1	357	39.4		02.5
11	79	38.2	31	10.8	+15	04.8	182	13.8	-26	48.8	353	42.1	+23	05.2	12	41.5	+20	02.6
12	94	40.6	46	10.7	+15	05.5	197	17.1	-26	48.8	8	43.9	+23	05.2	27	43.6	+20	02.6
13	109	43.1	61	10.5		06.2	212	20.4		48.8	23	45.8		05.2	42	45.8		02.7
14	124	45.6	76	10.3		06.9	227	23.6		48.8	38	47.6		05.2	57	47.9		02.7
15	139	48.0	91	10.2		07.6	242	26.9		48.9	53	49.5		05.2	72	50.1		02.8
16	154	50.5	106	10.0		08.3	257	30.2		48.9	68	51.3		05.3	87	52.2		02.8
17	169	53.0	121	09.9	+15	09.0	272	33.4	-26	48.9	83	53.2	+23	05.3	102	54.4	+20	02.9
18	184	55.4	136	09.7	+15	09.7	287	36.7	-26	48.9	98	55.0	+23	05.3	117	56.5	+20	02.9
19	199	57.9	151	09.5		10.4	302	40.0		49.0	113	56.8		05.3	132	58.7		03.0
20	215	00.3	166	09.4		11.1	317	43.2		49.0	128	58.7		05.3	148	00.8		03.0
21	230	02.8	181	09.2		11.8	332	46.5		49.0	144	00.5		05.4	163	03.0		03.0
22	245	05.3	196	09.0		12.5	347	49.7		49.1	159	02.4		05.4	178	05.1		03.1
23	260	07.7	211	08.9		13.2	2	53.0		49.1	174	04.2		05.4	193	07.3		03.1
24	275	10.2	226	08.7	+15	13.9	17	56.3	-26	49.1	189	06.0	+23	05.4	208	09.4	+20	03.2
Dif	—		-2 +7			+33 0			+18 0			0			+21 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 5	PHE { 4 ^h : 59 ^m /3 12 ^h : 59 ^m /1 20 ^h : 58 ^m /9	SD: 16 ^h 2			R°: 49 ^m							
	PMG: 12 ^h 03 ^m 1					PMG: 17 ^h 48 ^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	179	15.8	+23	19.7	101	55.5	+8	27.4	60 N	21 27	23 10	** **	10 54	91	0 11 10	
1	194	15.7		19.6	116	24.7 ¹⁰²		14.1 ¹³³	58	21 07	22 22	** **	10 57	88	06 13	
2	209	15.5		19.5	130	53.9 ¹⁰²	+8	00.8 ¹³³	56	20 50	21 52	** **	11 00	85	0 02 16	
3	224	15.4		19.4	145	23.2 ¹⁰³	+7	47.5 ¹³³	54		36	30	23 14	03 82	** **	
4	239	15.3		19.3	159	52.6 ¹⁰⁴		34.1 ¹³⁴	52	24	21 13	22 30	05 80	** **	** **	
5	254	15.1	+23	19.2	174	22.1 ¹⁰⁵	+7	20.7 ¹³⁴	50	20 13	20 58	22 03	11 07	78	** **	
6	269	15.0	+23	19.1	188	51.6 ¹⁰⁵	+7	07.3 ¹³⁴	45	19 51	20 28	21 18	11 12	73	** **	
7	284	14.9		19.0	203	21.1 ¹⁰⁵	+6	53.8 ¹³⁵	40		33	20 06	20 47	16 69	** **	
8	299	14.7		18.9	217	50.7 ¹⁰⁶		40.3 ¹³⁵	35		18	19 48	24	19 66	** **	
9	314	14.6		18.8	232	20.4 ¹⁰⁷		26.8 ¹³⁵	30	19 05	32	20 06	22 63	** **	** **	
10	329	14.5		18.6	246	50.1 ¹⁰⁷	+6	13.3 ¹³⁵	20	18 43	19 08	19 37	28 57	** **	** **	
11	344	14.4	+23	18.5	261	19.9 ¹⁰⁸	+5	59.7 ¹³⁶	10 N	18 24	18 47	19 14	11 32	53	** **	
12	359	14.2	+23	18.4	275	49.8 ¹⁰⁹	+5	46.2 ¹³⁵	0	18 07	18 29	18 55	11 36	49	** **	
13	14	14.1		18.3	290	19.7 ¹⁰⁹		32.6 ¹³⁶	10 S	17 49	18 12	39	41 45	23 58	52	
14	29	14.0		18.2	304	49.6 ¹⁰⁹		18.9 ¹³⁷	20		31	17 55	22	45 41	55 57	
15	44	13.8		18.1	319	19.6 ¹¹⁰	+5	05.3 ¹³⁶	30	17 10	36	18 06	51 35	53 61		
16	59	13.7		18.0	333	49.6 ¹¹⁰	+4	51.7 ¹³⁶	35	16 58	26	17 57	53 33	51 65		
17	74	13.6	+23	17.9	348	19.7 ¹¹¹	+4	38.0 ¹³⁷	40	16 43	17 14	17 48	11 57	29	23 49 68	
18	89	13.5	+23	17.8	2	49.9 ¹¹²	+4	24.3 ¹³⁷	45	16 27	17 01	17 38	12 01	25	23 47 72	
19	104	13.3		17.7	17	20.1 ¹¹²	+4	10.6 ¹³⁷	50	16 06	16 45	26	05 22	44 77		
20	119	13.2		17.6	31	50.3 ¹¹²	+3	56.9 ¹³⁷	52	15 56	37	21	07 20	43 79		
21	134	13.1		17.5	46	20.6 ¹¹³		43.2 ¹³⁷	54	45	29	15	10 17	42 81		
22	149	12.9		17.3	60	50.9 ¹¹³		29.5 ¹³⁷	56	33	20	09	12 15	40 84		
23	164	12.8		17.2	75	21.3 ¹¹⁴		15.8 ¹³⁷	58	18	16 10	17 02	15 12	39 86		
24	179	12.7	+23	17.1	89	51.7 ¹¹⁴	+3	02.1 ¹³⁷	60 S	15 01	15 58	16 55	12 18	9	23 37 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 38 ^m 4		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: -2.2 PMG: 22 ^h 43 ^m		Mag: -1.9 PMG: 11 ^h 22 ^m		Mag: +0.1 PMG: 10 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	275	10.2	226	08.7	17	56.3	189	06.0	208	09.4
1	290	12.7	241	08.5	32	59.5	204	07.9	223	11.6
2	305	15.1	256	08.4	48	02.8	219	09.7	238	13.7
3	320	17.6	271	08.2	63	06.0	234	11.6	253	15.9
4	335	20.1	286	08.0	78	09.3	249	13.4	268	18.0
5	350	22.5	301	07.9	93	12.5	264	15.3	283	20.2
6	5	25.0	316	07.7	108	15.8	279	17.1	298	22.3
7	20	27.5	331	07.5	123	19.0	294	18.9	313	24.5
8	35	29.9	346	07.3	138	22.3	309	20.8	328	26.6
9	50	32.4	1	07.2	153	25.5	324	22.6	343	28.7
10	65	34.8	16	07.0	168	28.8	339	24.5	358	30.9
11	80	37.3	31	06.8	183	32.0	354	26.3	13	33.0
12	95	39.8	46	06.6	198	35.3	9	28.2	28	35.2
13	110	42.2	61	06.5	213	38.5	24	30.0	43	37.3
14	125	44.7	76	06.3	228	41.8	39	31.8	58	39.5
15	140	47.2	91	06.1	243	45.0	54	33.7	73	41.6
16	155	49.6	106	05.9	258	48.3	69	35.5	88	43.8
17	170	52.1	121	05.8	273	51.5	84	37.4	103	45.9
18	185	54.6	136	05.6	288	54.7	99	39.2	118	48.1
19	200	57.0	151	05.4	303	58.0	114	41.1	133	50.2
20	215	59.5	166	05.2	319	01.2	129	42.9	148	52.4
21	231	01.9	181	05.0	334	04.5	144	44.7	163	54.5
22	246	04.4	196	04.9	349	07.7	159	46.6	178	56.7
23	261	06.9	211	04.7	4	10.9	174	48.4	193	58.8
24	276	09.3	226	04.5	19	14.2	189	50.3	209	01.0
Dif	—		-2		+7		+18		+21	

0	179	15.8	+23	19.7	101	55.5	+8	27.4	60 N	21 27	23 10	** **	10 54	91	0 11 10
1	194	15.7		19.6	116	24.7 ¹⁰²		14.1 ¹³³	58	21 07	22 22	** **	10 57	88	06 13
2	209	15.5		19.5	130	53.9 ¹⁰²	+8	00.8 ¹³³	56	20 50	21 52	** **	11 00	85	0 02 16
3	224	15.4		19.4	145	23.2 ¹⁰³	+7	47.5 ¹³³	54		36	30	23 14	03 82	** **
4	239	15.3		19.3	159	52.6 ¹⁰⁴		34.1 ¹³⁴	52	24	21 13	22 30	05 80	** **	** **
5	254	15.1	+23	19.2	174	22.1 ¹⁰⁵	+7	20.7 ¹³⁴	50	20 13	20 58	22 03	11 07	78	** **
6	269	15.0	+23	19.1	188	51.6 ¹⁰⁵	+7	07.3 ¹³⁴	45	19 51	20 28	21 18	11 12	73	** **
7	284	14.9		19.0	203	21.1 ¹⁰⁵	+6	53.8 ¹³⁵	40		33	20 06	20 47	16 69	** **
8	299	14.7		18.9	217	50.7 ¹⁰⁶		40.3 ¹³⁵	35		18	19 48	24	19 66	** **
9	314	14.6		18.8	232	20.4 ¹⁰⁷		26.8 ¹³⁵	30	19 05	32	20 06	22 63	** **	** **
10	329	14.5		18.6	246	50.1 ¹⁰⁷	+6	13.3 ¹³⁵	20	18 43	19 08	19 37	28 57	** **	** **
11	344	14.4	+23	18.5	261	19.9 ¹⁰⁸	+5	59.7 ¹³⁶	10 N	18 24	18 47	19 14	11 32	53	** **
12	359	14.2	+23	18.4	275	49.8 ¹⁰⁹	+5	46.2 ¹³⁵	0	18 07	18 29	18 55	11 36	49	** **
13	14	14.1		18.3	290	19.7 ¹⁰⁹		32.6 ¹³⁶	10 S	17 49	18 12	39	41 45	23 58	52
14	29	14.0		18.2	304	49.6 ¹⁰⁹		18.9 ¹³⁷	20		31	17 55	22	45 41	55 57
15	44	13.8		18.1	319	19.6 ¹¹⁰	+5	05.3 ¹³⁶	30	17 10	36	18 06	51 35	53 61	
16	59	13.7		18.0	333	49.6 ¹¹⁰	+4	51.7 ¹³⁶	35	16 58	26	17 57	53 33	51 65	
17	74	13.6	+23	17.9	348	19.7 ¹¹¹	+4	38.0 ¹³⁷	40	16 43	17 14	17 48	11 57	29	23 49 68
18	89	13.5	+23	17.8	2	49.9 ¹¹²	+4	24.3 ¹³⁷	45	16 27	17 01	17 38	12 01	25	23 47 72
19	104	13.3		17.7	17	20.1 ¹¹²	+4	10.6 ¹³⁷	50	16 06	16 45	26	05 22	44 77	
20	119	13.2		17.6	31	50.3 ¹¹²	+3	56.9 ¹³⁷	52	15 56	37	21	07 20	43 79	
21	134	13.1		17.5	46	20.6 ¹¹³		43.2 ¹³⁷	54	45	29	15	10 17	42 81	
22	149	12.9		17.3	60	50.9 ¹¹³		29.5 ¹³⁷	56	33	20	09	12 15	40 84	
23	164	12.8		17.2	75	21.3 ¹¹⁴		15.8 ¹³⁷	58	18	16 10	17 02	15 12	39 86	
24	179	12.7	+23	17.1	89	51.7 ¹¹⁴	+3	02.1 ¹³⁷	60 S	15 01	15 58	16 55	12 18	9	23 37 90

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 3			Edad: 6 ^d 5 SD: 16'0 PMG: 18 ^h 37 ^m	PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'3 R°: 48 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	12.7	+23	17.1	89	51.7	+3	02.1	60 N	** ** *	0 57	2 39	12 25	89	0 21 8
1	194	12.6		17.0	104	22.1 ¹¹⁴	+2	48.3 ¹³⁸	58	** ** *	1 45	2 59	25 85		19 12
2	209	12.4		16.9	118	52.6 ¹¹⁵		34.6 ¹³⁷	56	** ** *	2 14	3 16	25 82		18 14
3	224	12.3		16.8	133	23.1 ¹¹⁵		20.8 ¹³⁸	54	0 52	36	30	25 80		16 17
4	239	12.2		16.6	147	53.7 ¹¹⁶	+2	07.1 ¹³⁷	52	1 36	2 54	42	25 78		15 19
5	254	12.0	+23	16.5	162	24.3 ¹¹⁶	+1	53.4 ¹³⁷	50	2 04	3 09	3 53	12 25	76	0 14 21
6	269	11.9	+23	16.4	176	54.9 ¹¹⁶	+1	39.6 ¹³⁸	45	2 49	3 38	4 16	12 25	71	0 12 25
7	284	11.8		16.3	191	25.6 ¹¹⁷		25.9 ¹³⁷	40	3 19	4 01	33	25 67		10 29
8	299	11.7		16.2	205	56.3 ¹¹⁷	+1	12.2 ¹³⁷	35	3 42	19	4 48	25 64		09 32
9	314	11.5		16.1	220	27.0 ¹¹⁷	+0	58.4 ¹³⁸	30	4 01	34	5 01	25 61		07 35
10	329	11.4		15.9	234	57.8 ¹¹⁸		44.7 ¹³⁷	20	30	4 59	23	25 56		04 40
11	344	11.3	+23	15.8	249	28.6 ¹¹⁸	+0	31.0 ¹³⁷	10 N	4 52	5 19	5 42	12 25	52	0 02 44
12	359	11.1	+23	15.7	263	59.4 ¹¹⁸	+0	17.3 ¹³⁷	0	5 11	5 37	6 00	12 25	48	0 00 48
13	14	11.0		15.6	278	30.3 ¹¹⁹	+0	03.6 ¹³⁷	10 S	28	5 54	17	26 43		** ** ** *
14	29	10.9		15.4	293	01.1 ¹¹⁸	-0	10.0 ¹³⁶	20	5 44	6 11	35	26 39		** ** ** *
15	44	10.8		15.3	307	32.0 ¹¹⁹		23.7 ¹³⁷	30	6 00	30	6 56	26 35		** ** ** *
16	59	10.6		15.2	322	03.0 ¹²⁰		37.4 ¹³⁷	35	09	41	7 09	26 32		** ** ** *
17	74	10.5	+23	15.1	336	33.9 ¹¹⁹	-0	51.0 ¹³⁶	40	6 18	6 52	7 23	12 26	29	** ** ** *
18	89	10.4	+23	14.9	351	04.9 ¹²⁰	-1	04.6 ¹³⁶	45	6 28	7 06	7 39	12 26	26	** ** ** *
19	104	10.3		14.8	5	35.9 ¹²⁰		18.2 ¹³⁶	50	40	22	8 00	27 20		** ** ** *
20	119	10.1		14.7	20	06.9 ¹²⁰		31.8 ¹³⁶	52	45	29	10	27 19		** ** ** *
21	134	10.0		14.5	34	38.0 ¹²¹		45.4 ¹³⁶	54	51	37	21	27 17		** ** ** *
22	149	09.9		14.4	49	09.0 ¹²⁰	-1	58.9 ¹³⁵	56	6 57	46	33	27 14		** ** ** *
23	164	09.7		14.3	63	40.1 ¹²¹	-2	12.5 ¹³⁶	58	7 04	7 56	8 48	27 12		** ** ** *
24	179	09.6	+23	14.2	78	11.2 ¹²¹	-2	26.0 ¹³⁵	60 S	7 11	8 08	9 05	12 27	9	** ** ** *
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 34 ^m 5			Mag: -4.2 PMG: 8 ^h 56 ^m			Mag: -2.2 PMG: 22 ^h 38 ^m			Mag: -1.9 PMG: 11 ^h 19 ^m			Mag: +0.1 PMG: 10 ^h 02 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	276	09.3		226	04.5	+15	19	14.2	-26	189	50.3	+23	209	01.0	+20
1	291	11.8		241	04.3		34	17.4	49.7	204	52.1	05.9	224	03.1	04.3
2	306	14.3		256	04.1		49	20.6	49.7	219	54.0	05.9	239	05.3	04.4
3	321	16.7		271	03.9		64	23.9	49.7	234	55.8	05.9	254	07.4	04.4
4	336	19.2		286	03.8		79	27.1	49.8	249	57.6	05.9	269	09.6	04.5
5	351	21.7		301	03.6	+15	94	30.3	-26	264	59.5	+23	284	11.7	+20
6	6	24.1		316	03.4	+15	109	33.5	-26	280	01.3	+23	299	13.9	+20
7	21	26.6		331	03.2		124	36.8	49.8	295	03.2	06.0	314	16.0	04.6
8	36	29.1		346	03.0		139	40.0	49.9	310	05.0	06.0	329	18.2	04.6
9	51	31.5		1	02.8		154	43.2	49.9	325	06.9	06.0	344	20.3	04.7
10	66	34.0		16	02.6		169	46.4	49.9	340	08.7	06.0	359	22.5	04.7
11	81	36.4		31	02.4	+15	184	49.7	-26	355	10.5	+23	14	24.6	+20
12	96	38.9		46	02.2	+15	199	52.9	-26	10	12.4	+23	29	26.8	+20
13	111	41.4		61	02.1		214	56.1	50.0	25	14.2	06.1	44	28.9	04.9
14	126	43.8		76	01.9		229	59.3	50.0	40	16.1	06.1	59	31.1	04.9
15	141	46.3		91	01.7		245	02.5	50.0	55	17.9	06.1	74	33.2	05.0
16	156	48.8		106	01.5		260	05.8	50.0	70	19.8	06.2	89	35.4	05.0
17	171	51.2		121	01.3	+15	275	09.0	-26	85	21.6	+23	104	37.5	+20
18	186	53.7		136	01.1	+15	290	12.2	-26	100	23.5	+23	119	39.7	+20
19	201	56.2		151	00.9		305	15.4	50.1	115	25.3	06.2	134	41.8	05.1
20	216	58.6		166	00.7		320	18.6	50.1	130	27.1	06.2	149	44.0	05.2
21	232	01.1		181	00.5		335	21.8	50.1	145	29.0	06.2	164	46.1	05.2
22	247	03.6		196	00.3		350	25.0	50.1	160	30.8	06.3	179	48.3	05.3
23	262	06.0		211	00.1		5	28.3	50.1	175	32.7	06.3	194	50.4	05.3
24	277	08.5		225	59.9	+15	20	31.5	-26	190	34.5	+23	209	52.6	+20
Dif	—			-2 +7			+32 0			+18 0			+21 0		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 03 ^m 5				Edad: 7 ^d 5 PHE { SD: 15'8 PMG: 19 ^h 25 ^m 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'7 R°: 47 ^m																
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora		R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	R°	
0	179	09.6	+23	14.2	78	11.2	-2	26.0	60 N	21	26	23	06	**	**	13	54	87	0	29	9
1	194	09.5		14.0	92	42.3 ¹²¹		39.4 ¹³⁴	58	21	06	22	20	**	**	50	85		31	12	
2	209	09.4		13.9	107	13.4 ¹²¹	-2	52.9 ¹³⁵	56	20	50	21	51	**	**	47	82		32	15	
3	224	09.2		13.8	121	44.6 ¹²²	-3	06.3 ¹³⁴	54		36	30	23	11		45	79		33	17	
4	239	09.1		13.6	136	15.7 ¹²¹		19.7 ¹³⁴	52	24	21	12	22	29		43	76		34	19	
5	254	09.0	+23	13.5	150	46.9 ¹²²	-3	33.1 ¹³⁴	50	20	13	20	57	22	02	13	41	74	0	35	21
6	269	08.9	+23	13.4	165	18.0 ¹²¹	-3	46.5 ¹³⁴	45	19	51	20	28	21	17	13	36	70	0	37	26
7	284	08.7		13.2	179	49.2 ¹²²	-3	59.8 ¹³³	40		33	20	06	20	47	32	67		39	29	
8	299	08.6		13.1	194	20.4 ¹²²	-4	13.1 ¹³³	35		18	19	48	24		29	63		41	32	
9	314	08.5		12.9	208	51.6 ¹²²		26.3 ¹³²	30	19	05	33	20	06		26	61		42	35	
10	329	08.4		12.8	223	22.8 ¹²²		39.5 ¹³²	20	18	43	19	08	19	37	21	56		44	40	
11	344	08.2	+23	12.7	237	54.0 ¹²²	-4	52.7 ¹³²	10 N	18	25	18	48	19	15	13	17	52	0	46	44
12	359	08.1	+23	12.5	252	25.2 ¹²²	-5	05.9 ¹³²	0	18	07	18	30	18	56	13	13	48	0	48	48
13	14	08.0		12.4	266	56.5 ¹²³		19.0 ¹³¹	10 S	17	50	18	13	39		09	44		50	52	
14	29	07.9		12.2	281	27.7 ¹²²		32.1 ¹³¹	20		32	17	55	23		05	40		52	56	
15	44	07.7		12.1	295	58.9 ¹²²		45.1 ¹³⁰	30	17	11	37	18	07		13	01	35	54	61	
16	59	07.6		12.0	310	30.1 ¹²²	-5	58.1 ¹³⁰	35	16	58	26	17	58		12	58	32	56	63	
17	74	07.5	+23	11.8	325	01.4 ¹²³	-6	11.1 ¹³⁰	40	16	44	17	15	17	49	12	55	29	0	57	67
18	89	07.4	+23	11.7	339	32.6 ¹²²	-6	24.0 ¹²⁹	45	16	28	17	01	17	39	12	52	25	0	59	71
19	104	07.2		11.5	354	03.8 ¹²²		36.9 ¹²⁹	50	16	07	16	45	27		47	22		1	01	75
20	119	07.1		11.4	8	35.1 ¹²³	-6	49.7 ¹²⁸	52	15	57	38	22			46	19		02	77	
21	134	07.0		11.2	23	06.3 ¹²²	-7	02.5 ¹²⁸	54		46	30	16			44	17		03	80	
22	149	06.9		11.1	37	37.5 ¹²²		15.3 ¹²⁸	56		34	21	10			41	15		04	82	
23	164	06.7		10.9	52	08.7 ¹²²		28.0 ¹²⁷	58		19	11	17	03		39	12		05	85	
24	179	06.6	+23	10.8	66	39.9 ¹²²	-7	40.6 ¹²⁶	60 S	15	02	16	00	16	56	12	36	10	1	07	88

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 30 ^m 5			Mag: -4.2 PMG: 8 ^h 56 ^m			Mag: -2.2 PMG: 22 ^h 33 ^m			Mag: -1.9 PMG: 11 ^h 16 ^m			Mag: +0.1 PMG: 9 ^h 59 ^m					
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	277	08.5	225	59.9	+15	47.1	20	31.5	-26	50.2	190	34.5	+23	06.3	209	52.6	+20	05.4
1	292	10.9	240	59.7		47.7	35	34.7		50.2	205	36.4		06.3	224	54.7		05.4
2	307	13.4	255	59.5		48.4	50	37.9		50.2	220	38.2		06.3	239	56.9		05.5
3	322	15.9	270	59.3		49.1	65	41.1		50.2	235	40.0		06.3	254	59.0		05.5
4	337	18.3	285	59.1		49.8	80	44.3		50.2	250	41.9		06.4	270	01.2		05.5
5	352	20.8	300	58.9	+15	50.5	95	47.5	-26	50.3	265	43.7	+23	06.4	285	03.3	+20	05.6
6	7	23.3	315	58.7	+15	51.1	110	50.7	-26	50.3	280	45.6	+23	06.4	300	05.5	+20	05.6
7	22	25.7	330	58.5		51.8	125	53.9		50.3	295	47.4		06.4	315	07.6		05.7
8	37	28.2	345	58.3		52.5	140	57.1		50.3	310	49.3		06.4	330	09.8		05.7
9	52	30.7	0	58.1		53.2	156	00.3		50.3	325	51.1		06.4	345	11.9		05.8
10	67	33.1	15	57.9		53.9	171	03.5		50.3	340	53.0		06.5	0	14.1		05.8
11	82	35.6	30	57.7	+15	54.5	186	06.7	-26	50.4	355	54.8	+23	06.5	15	16.2	+20	05.9
12	97	38.0	45	57.5	+15	55.2	201	09.9	-26	50.4	10	56.6	+23	06.5	30	18.4	+20	05.9
13	112	40.5	60	57.3		55.9	216	13.1		50.4	25	58.5		06.5	45	20.5		06.0
14	127	43.0	75	57.1		56.6	231	16.3		50.4	41	00.3		06.5	60	22.7		06.0
15	142	45.4	90	56.9		57.3	246	19.5		50.4	56	02.2		06.5	75	24.8		06.0
16	157	47.9	105	56.6		57.9	261	22.7		50.4	71	04.0		06.6	90	27.0		06.1
17	172	50.4	120	56.4	+15	58.6	276	25.8	-26	50.5	86	05.9	+23	06.6	105	29.1	+20	06.1
18	187	52.8	135	56.2	+15	59.3	291	29.0	-26	50.5	101	07.7	+23	06.6	120	31.3	+20	06.2
19	202	55.3	150	56.0	+16	00.0	306	32.2		50.5	116	09.6		06.6	135	33.4		06.2
20	217	57.8	165	55.8	+16	00.6	321	35.4		50.5	131	11.4		06.6	150	35.6		06.3
21	233	00.2	180	55.6		01.3	336	38.6		50.5	146	13.2		06.6	165	37.7		06.3
22	248	02.7	195	55.4		02.0	351	41.8		50.5	161	15.1		06.7	180	39.9		06.4
23	263	05.2	210	55.2		02.7	6	45.0		50.5	176	16.9		06.7	195	42.1		06.4
24	278	07.6	225	55.0	+16	03.3	21	48.1	-26	50.6	191	18.8	+23	06.7	210	44.2	+20	06.4
Dif	—			-2 +7			+32 0			+18 0			+22 0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 03 ^m 7			Edad: 8 ^d 5 SD: 15/7 PMG: 20 ^h 12 ^m	PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 R°: 49 ^m	Dif		R°			R°			
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	06.6	+23	10.8	66	39.9	-7 40.6	60 N	** **	1 01	2 41	15 21	87	0 38 11
1	194	06.5		10.6	81	11.2 ¹²³	-7 53.3 ¹²⁷	58	** **	1 47	3 01	15 83		43 13
2	209	06.4		10.5	95	42.4 ¹²²	-8 05.8 ¹²⁵	56	** **	2 16	18	09 80		47 16
3	224	06.3		10.3	110	13.5 ¹²¹	18.3 ¹²⁵	54	0 56	38	31	15 04	77	50 19
4	239	06.1		10.2	124	44.7 ¹²²	30.8 ¹²⁵	52	1 39	2 55	44	14 59	75	53 21
5	254	06.0	+23	10.0	139	15.9 ¹²²	-8 43.2 ¹²⁴	50	2 05	3 10	3 54	14 55	73	0 56 23
6	269	05.9	+23	09.9	153	47.1 ¹²²	-8 55.5 ¹²³	45	2 50	3 39	4 17	14 46	69	1 03 27
7	284	05.8		09.7	168	18.2 ¹²¹	-9 07.9 ¹²⁴	40	3 20	4 02	34	39 65		08 30
8	299	05.6		09.6	182	49.4 ¹²²	20.1 ¹²²	35	3 43	20	4 49	32 63		13 33
9	314	05.5		09.4	197	20.5 ¹²¹	32.3 ¹²²	30	4 01	35	5 02	27 60		17 35
10	329	05.4		09.3	211	51.6 ¹²¹	44.4 ¹²¹	20	30	4 59	24	17 56		24 40
11	344	05.3	+23	09.1	226	22.7 ¹²¹	-9 56.5 ¹²¹	10 N	4 53	5 20	5 43	14 09	51	1 30 44
12	359	05.1	+23	09.0	240	53.8 ¹²¹	-10 08.5 ¹²⁰	0	5 11	5 37	6 00	14 01	48	1 36 48
13	14	05.0		08.8	255	24.9 ¹²¹	20.5 ¹²⁰	10 S	28	5 54	17	13 53	45	42 51
14	29	04.9		08.6	269	55.9 ¹²⁰	32.4 ¹¹⁹	20	5 44	6 12	36	45 41		48 56
15	44	04.8		08.5	284	27.0 ¹²¹	44.2 ¹¹⁸	30	6 00	30	6 57	36 36		55 60
16	59	04.7		08.3	298	58.0 ¹²⁰	-10 56.0 ¹¹⁸	35	09	41	7 09	30 35		1 59 63
17	74	04.5	+23	08.2	313	29.0 ¹²⁰	-11 07.7 ¹¹⁷	40	6 18	6 52	7 23	13 24	32	2 04 66
18	89	04.4	+23	08.0	328	00.0 ¹²⁰	-11 19.4 ¹¹⁷	45	6 28	7 06	7 39	13 17	28	2 10 69
19	104	04.3		07.8	342	31.0 ¹²⁰	31.0 ¹¹⁶	50	40	21	8 00	09 24		16 74
20	119	04.2		07.7	357	01.9 ¹¹⁹	42.5 ¹¹⁵	52	45	29	09	05 22		19 76
21	134	04.0		07.5	11	32.9 ¹²⁰	-11 54.0 ¹¹⁵	54	51	37	20	13 01	20	23 78
22	149	03.9		07.4	26	03.8 ¹¹⁹	-12 05.4 ¹¹⁴	56	6 57	46	33	12 56	18	26 81
23	164	03.8		07.2	40	34.7 ¹¹⁹	16.7 ¹¹³	58	7 03	7 56	8 47	51 15		30 84
24	179	03.7	+23	07.0	55	05.6 ¹¹⁹	-12 27.9 ¹¹²	60 S	7 11	8 07	9 04	12 46	11	2 35 87
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 26 ^m 6		Mag: -4.2 PMG: 8 ^h 56 ^m			Mag: -2.2 PMG: 22 ^h 28 ^m			Mag: -1.9 PMG: 11 ^h 13 ^m			Mag: +0.1 PMG: 9 ^h 56 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	278	07.6	225	55.0	+16	03.3	21	48.1	-26	50.6	191	18.8	+23	06.7
1	293	10.1	240	54.7		04.0	36	51.3		50.6	206	20.6		06.7
2	308	12.5	255	54.5		04.7	51	54.5		50.6	221	22.5		06.7
3	323	15.0	270	54.3		05.3	66	57.7		50.6	236	24.3		06.7
4	338	17.5	285	54.1		06.0	82	00.9		50.6	251	26.2		06.8
5	353	19.9	300	53.9	+16	06.7	97	04.0	-26	50.6	266	28.0	+23	06.8
6	8	22.4	315	53.7	+16	07.4	112	07.2	-26	50.6	281	29.8	+23	06.8
7	23	24.9	330	53.4		08.0	127	10.4		50.7	296	31.7		06.8
8	38	27.3	345	53.2		08.7	142	13.6		50.7	311	33.5		06.8
9	53	29.8	0	53.0		09.4	157	16.7		50.7	326	35.4		06.8
10	68	32.3	15	52.8		10.0	172	19.9		50.7	341	37.2		06.9
11	83	34.7	30	52.6	+16	10.7	187	23.1	-26	50.7	356	39.1	+23	06.9
12	98	37.2	45	52.3	+16	11.4	202	26.2	-26	50.7	11	40.9	+23	06.9
13	113	39.7	60	52.1		12.1	217	29.4		50.7	26	42.8		06.9
14	128	42.1	75	51.9		12.7	232	32.6		50.8	41	44.6		06.9
15	143	44.6	90	51.7		13.4	247	35.7		50.8	56	46.5		06.9
16	158	47.0	105	51.4		14.1	262	38.9		50.8	71	48.3		06.9
17	173	49.5	120	51.2	+16	14.7	277	42.1	-26	50.8	86	50.1	+23	07.0
18	188	52.0	135	51.0	+16	15.4	292	45.2	-26	50.8	101	52.0	+23	07.0
19	203	54.4	150	50.8		16.1	307	48.4		50.8	116	53.8		07.0
20	218	56.9	165	50.5		16.7	322	51.5		50.8	131	55.7		07.0
21	233	59.4	180	50.3		17.4	337	54.7		50.8	146	57.5		07.0
22	249	01.8	195	50.1		18.1	352	57.9		50.9	161	59.4		07.0
23	264	04.3	210	49.9		18.7	8	01.0		50.9	177	01.2		07.1
24	279	06.8	225	49.6	+16	19.4	23	04.2	-26	50.9	192	03.1	+23	07.1
Dif	—		-2		+7		+32		0		+18		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 5	PHE {	4 ^h : 56 ^m 9 12 ^h : 56 ^m 7 20 ^h : 56 ^m 6									
	PMG: 12 ^h 03 ^m 9														SD: 15 ^h 5
	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	03.7	+23 07.0	55	05.6	-12 27.9		60 N	21 25	23 02	** **	16 48 84	0 49 13		
1	194	03.6		69	36.4 ¹¹⁸	39.1 ¹¹²		58	21 05	22 18	** **	38 81	0 56 17		
2	209	03.4		84	07.2 ¹¹⁸	-12 50.2 ¹¹¹		56	20 49	21 50	** **	29 78	1 03 19		
3	224	03.3		98	38.0 ¹¹⁸	-13 01.3 ¹¹¹		54	35	29	23 08	21 76	09 21		
4	239	03.2		113	08.8 ¹¹⁸	12.3 ¹¹⁰		52	23	21 11	22 27	14 74	14 24		
5	254	03.1	+23 06.2	127	39.6 ¹¹⁸	-13 23.1 ¹⁰⁸		50	20 12	20 57	22 01	16 08 71	1 19 26		
6	269	03.0	+23 06.0	142	10.3 ¹¹⁷	-13 34.0 ¹⁰⁹		45	19 50	20 28	21 17	15 55 67	1 30 29		
7	284	02.8		156	41.0 ¹¹⁷	44.7 ¹⁰⁷		40	33	20 05	20 47	44 64	38 33		
8	299	02.7		171	11.7 ¹¹⁷	-13 55.4 ¹⁰⁷		35	18	19 48	24	35 61	46 36		
9	314	02.6		185	42.4 ¹¹⁷	-14 06.0 ¹⁰⁶		30	19 05	32	20 06	27 59	1 52 39		
10	329	02.5		200	13.0 ¹¹⁶	16.5 ¹⁰⁵		20	18 43	19 08	19 37	13 55	2 04 42		
11	344	02.4	+23 05.2	214	43.6 ¹¹⁶	-14 27.0 ¹⁰⁵		10 N	18 25	18 48	19 15	15 00 53	2 14 46		
12	359	02.2	+23 05.0	229	14.2 ¹¹⁶	-14 37.3 ¹⁰³		0	18 08	18 30	18 56	14 49 50	2 24 49		
13	14	02.1		243	44.7 ¹¹⁵	47.6 ¹⁰³		10 S	17 50	18 13	39	38 46	33 52		
14	29	02.0		258	15.3 ¹¹⁶	-14 57.8 ¹⁰²		20	32	17 56	24	26 43	44 55		
15	44	01.9		272	45.8 ¹¹⁵	-15 07.9 ¹⁰¹		30	17 11	38	18 07	12 40	2 55 60		
16	59	01.8		287	16.2 ¹¹⁴	18.0 ¹⁰¹		35	16 59	27	17 59	14 05 37	3 02 62		
17	74	01.6	+23 04.1	301	46.7 ¹¹⁵	-15 27.9 ⁹⁹		40	16 45	17 16	17 50	13 56 34	3 10 65		
18	89	01.5	+23 03.9	316	17.1 ¹¹⁴	-15 37.8 ⁹⁹		45	16 29	17 02	17 39	13 45 32	3 19 68		
19	104	01.4		330	47.5 ¹¹⁴	47.6 ⁹⁸		50	16 08	16 47	28	33 28	30 72		
20	119	01.3		345	17.8 ¹¹³	-15 57.3 ⁹⁷		52	15 59	39	23	27 26	35 75		
21	134	01.2		359	48.2 ¹¹⁴	-16 06.9 ⁹⁶		54	48	31	17	21 24	41 76		
22	149	01.1		14	18.5 ¹¹³	16.4 ⁹⁵		56	35	22	11	14 22	47 79		
23	164	00.9		30.0	28.48 ¹¹²	25.9 ⁹⁵		58	21	12	17 05	13 06 19	3 54 82		
24	179	00.8	+23 02.8	43	19.0 ¹¹³	-16 35.2 ⁹³		60 S	15 04	16 01	16 57	12 57 16	4 02 86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 22 ^m 7		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: -2.2 PMG: 22 ^h 23 ^m		Mag: -1.9 PMG: 11 ^h 10 ^m		Mag: +0.1 PMG: 9 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	279	06.8	225 49.6	+16 19.4	23 04.2	-26 50.9	192 03.1	+23 07.1	211 35.9	+20 07.5
1	294	09.2	240 49.4	20.1	38 07.3	50.9	207 04.9	07.1	226 38.0	07.5
2	309	11.7	255 49.2	20.7	53 10.5	50.9	222 06.8	07.1	241 40.2	07.6
3	324	14.1	270 48.9	21.4	68 13.6	50.9	237 08.6	07.1	256 42.3	07.6
4	339	16.6	285 48.7	22.0	83 16.8	50.9	252 10.4	07.1	271 44.5	07.7
5	354	19.1	300 48.5	+16 22.7	98 19.9	-26 50.9	267 12.3	+23 07.1	286 46.6	+20 07.7
6	9	21.5	315 48.2	+16 23.4	113 23.1	-26 50.9	282 14.1	+23 07.2	301 48.8	+20 07.8
7	24	24.0	330 48.0	24.0	128 26.2	51.0	297 16.0	07.2	316 50.9	07.8
8	39	26.5	345 47.8	24.7	143 29.4	51.0	312 17.8	07.2	331 53.1	07.9
9	54	28.9	0 47.5	25.4	158 32.5	51.0	327 19.7	07.2	346 55.3	07.9
10	69	31.4	15 47.3	26.0	173 35.6	51.0	342 21.5	07.2	1 57.4	07.9
11	84	33.9	30 47.1	+16 26.7	188 38.8	-26 51.0	357 23.4	+23 07.2	16 59.6	+20 08.0
12	99	36.3	45 46.8	+16 27.3	203 41.9	-26 51.0	12 25.2	+23 07.2	32 01.7	+20 08.0
13	114	38.8	60 46.6	28.0	218 45.1	51.0	27 27.1	07.3	47 03.9	08.1
14	129	41.3	75 46.3	28.7	233 48.2	51.0	42 28.9	07.3	62 06.0	08.1
15	144	43.7	90 46.1	29.3	248 51.3	51.0	57 30.7	07.3	77 08.2	08.2
16	159	46.2	105 45.9	30.0	263 54.5	51.0	72 32.6	07.3	92 10.3	08.2
17	174	48.6	120 45.6	+16 30.6	278 57.6	-26 51.1	87 34.4	+23 07.3	107 12.5	+20 08.2
18	189	51.1	135 45.4	+16 31.3	294 00.7	-26 51.1	102 36.3	+23 07.3	122 14.6	+20 08.3
19	204	53.6	150 45.1	31.9	309 03.9	51.1	117 38.1	07.3	137 16.8	08.3
20	219	56.0	165 44.9	32.6	324 07.0	51.1	132 40.0	07.4	152 19.0	08.4
21	234	58.5	180 44.7	33.3	339 10.1	51.1	147 41.8	07.4	167 21.1	08.4
22	250	01.0	195 44.4	33.9	354 13.2	51.1	162 43.7	07.4	182 23.3	08.5
23	265	03.4	210 44.2	34.6	9 16.4	51.1	177 45.5	07.4	197 25.4	08.5
24	280	05.9	225 43.9	+16 35.2	24 19.5	-26 51.1	192 47.4	+23 07.4	212 27.6	+20 08.5
Dif	—		-2	+7	+31	0	+18	0	+22	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/7 PMG: 12 ^h 04 ^m 0			Edad: 10 ^d 5 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 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	179	00.8	+23	02.8	43	19.0	-16	35.2	93	60 N	** **	1 06	2 43	18	12	79	1 02	18
1	194	00.7		02.7	57	49.2 ¹¹²		44.5	93	58	** **	1 50	3 03	17	59	75	13	21
2	209	00.6		02.5	72	19.4 ¹¹²	-16	53.7	92	56	** **	2 18	19	47	73	22	24	
3	224	00.5		02.3	86	49.5 ¹¹¹	-17	02.7	90	54	1 00	39	33	37	70	30	27	
4	239	00.3		02.1	101	19.6 ¹¹¹		11.7	90	52	1 41	2 57	45	28	68	38	29	
5	254	00.2	+23	01.9	115	49.7 ¹¹¹	-17	20.6	89	50	2 07	3 11	3 56	17	19	68	1 45	30
6	269	00.1	+23	01.7	130	19.8 ¹¹¹	-17	29.4	88	45	2 51	3 41	4 18	17	02	64	1 59	34
7	284	00.0		01.6	144	49.8 ¹¹⁰		38.1	87	40	3 21	4 03	35	16	48	62	2 11	37
8	298	59.9		01.4	159	19.8 ¹¹⁰		46.8	87	35	3 44	20	4 50	36	60	22	39	
9	313	59.8		01.2	173	49.8 ¹¹⁰	-17	55.3	85	30	4 02	4 35	5 03	26	58	31	41	
10	328	59.6		01.0	188	19.7 ¹⁰⁹	-18	03.7	84	20	31	5 00	24	16	08	55	2 46	45
11	343	59.5	+23	00.8	202	49.7 ¹¹⁰	-18	12.0	83	10 N	4 53	5 20	5 43	15	53	53	3 00	47
12	358	59.4	+23	00.6	217	19.5 ¹⁰⁸	-18	20.3	83	0	5 12	5 38	6 00	15	39	50	3 13	50
13	13	59.3		00.4	231	49.4 ¹⁰⁹		28.4	81	10 S	28	5 55	18	24	49	25	53	
14	28	59.2	+23	00.2	246	19.2 ¹⁰⁸		36.4	80	20	5 44	6 12	36	15	09	46	39	56
15	43	59.1	+23	00.0	260	49.0 ¹⁰⁸		44.4	80	30	6 00	30	6 57	14	52	43	3 55	59
16	58	58.9	+22	59.8	275	18.8 ¹⁰⁸	-18	52.2	78	35	09	41	7 09	42	41	4 04	61	
17	73	58.8	+22	59.6	289	48.5 ¹⁰⁷	-19	00.0	78	40	6 18	6 52	7 23	14	30	40	4 15	63
18	88	58.7	+22	59.5	304	18.2 ¹⁰⁷	-19	07.6	76	45	6 28	7 05	7 39	14	17	37	4 27	66
19	103	58.6		59.3	318	47.9 ¹⁰⁷		15.1	75	50	40	21	7 59	14	01	33	42	70
20	118	58.5		59.1	333	17.6 ¹⁰⁷		22.6	75	52	45	28	8 09	13	53	32	50	71
21	133	58.4		58.9	347	47.2 ¹⁰⁶		29.9	73	54	50	36	20	45	30	4 57	74	
22	148	58.2		58.7	2	16.8 ¹⁰⁶		37.1	72	56	6 56	45	32	36	27	5 06	76	
23	163	58.1		58.5	16	46.4 ¹⁰⁶		44.2	71	58	7 03	7 55	8 46	25	25	16	79	
24	178	58.0	+22	58.3	31	15.9 ¹⁰⁵	-19	51.2	70	60 S	7 10	8 06	9 03	13	13	21	5 28	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 18 ^m 7		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: -2.1 PMG: 22 ^h 18 ^m		Mag: -1.9 PMG: 11 ^h 07 ^m		Mag: +0.1 PMG: 9 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	280	05.9	225	43.9	+16	35.2	24	19.5	-26	51.1	192	47.4	+23	07.4	212	27.6	+20	08.5
1	295	08.4	240	43.7		35.9	39	22.6		51.1	207	49.2		07.4	227	29.7		08.6
2	310	10.8	255	43.4		36.5	54	25.7		51.1	222	51.1		07.4	242	31.9		08.6
3	325	13.3	270	43.2		37.2	69	28.8		51.1	237	52.9		07.5	257	34.0		08.7
4	340	15.8	285	42.9		37.8	84	32.0		51.2	252	54.7		07.5	272	36.2		08.7
5	355	18.2	300	42.7	+16	38.5	99	35.1	-26	51.2	267	56.6	+23	07.5	287	38.4	+20	08.8
6	10	20.7	315	42.4	+16	39.1	114	38.2	-26	51.2	282	58.4	+23	07.5	302	40.5	+20	08.8
7	25	23.1	330	42.2		39.8	129	41.3		51.2	298	00.3		07.5	317	42.7		08.8
8	40	25.6	345	41.9		40.4	144	44.4		51.2	313	02.1		07.5	332	44.8		08.9
9	55	28.1	0	41.7		41.1	159	47.5		51.2	328	04.0		07.5	347	47.0		08.9
10	70	30.5	15	41.4		41.7	174	50.7		51.2	343	05.8		07.6	2	49.1		09.0
11	85	33.0	30	41.2	+16	42.4	189	53.8	-26	51.2	358	07.7	+23	07.6	17	51.3	+20	09.0
12	100	35.5	45	40.9	+16	43.0	204	56.9	-26	51.2	13	09.5	+23	07.6	32	53.4	+20	09.1
13	115	37.9	60	40.7		43.7	220	00.0		51.2	28	11.4		07.6	47	55.6		09.1
14	130	40.4	75	40.4		44.3	235	03.1		51.2	43	13.2		07.6	62	57.8		09.2
15	145	42.9	90	40.2		45.0	250	06.2		51.2	58	15.1		07.6	77	59.9		09.2
16	160	45.3	105	39.9		45.6	265	09.3		51.2	73	16.9		07.6	93	02.1		09.2
17	175	47.8	120	39.7	+16	46.3	280	12.4	-26	51.3	88	18.8	+23	07.7	108	04.2	+20	09.3
18	190	50.3	135	39.4	+16	46.9	295	15.5	-26	51.3	103	20.6	+23	07.7	123	06.4	+20	09.3
19	205	52.7	150	39.2		47.6	310	18.6		51.3	118	22.5		07.7	138	08.5		09.4
20	220	55.2	165	38.9		48.2	325	21.7		51.3	133	24.3		07.7	153	10.7		09.4
21	235	57.6	180	38.6		48.9	340	24.8		51.3	148	26.1		07.7	168	12.9		09.5
22	251	00.1	195	38.4		49.5	355	27.9		51.3	163	28.0		07.7	183	15.0		09.5
23	266	02.6	210	38.1		50.2	10	31.0		51.3	178	29.8		07.7	198	17.2		09.5
24	281	05.0	225	37.9	+16	50.8	25	34.1	-26	51.3	193	31.7	+23	07.7	213	19.3	+20	09.6
Dif	—		-3		+6		+31		0		+18		0		+22			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 11 ^d 5 PHE { 4 ^h : 55 ^m /9 12 ^h : 55 ^m /7 20 ^h : 55 ^m /6 R°: 52 ^m												
	PMG: 12 ^h 04 ^m 2			PMG: 22 ^h 41 ^m							Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	58.0	+22 58.3	31	15.9	-19 51.2	70	60 N	21 23	22 58	** ** *	19 31	69	1 20	26	
1	193	57.9	58.1	45	45.4 ¹⁰⁵	-19 58.2	70	58	21 04	22 16	** ** *	14	66	34	30	
2	208	57.8	57.9	60	14.9 ¹⁰⁵	-20 05.0	68	56	20 48	21 48	** ** *	19 00	64	46	32	
3	223	57.7	57.7	74	44.4 ¹⁰⁵	11.7	67	54	34	27	23 04	18 47	63	1 57	34	
4	238	57.6	57.5	89	13.8 ¹⁰⁴	18.3	66	52	22	21 10	22 25	36	62	2 07	35	
5	253	57.4	+22 57.3	103	43.2 ¹⁰⁴	-20 24.7	64	50	20 12	20 56	21 59	18 27	61	2 15	37	
6	268	57.3	+22 57.1	118	12.6 ¹⁰⁴	-20 31.1	64	45	19 50	20 27	21 16	18 06	59	2 33	40	
7	283	57.2	56.9	132	42.0 ¹⁰⁴	37.4	63	40	32	20 05	20 46	17 50	58	2 48	42	
8	298	57.1	56.7	147	11.4 ¹⁰⁴	43.5	61	35	18	19 47	24	36	57	3 01	43	
9	313	57.0	56.4	161	40.7 ¹⁰³	49.6	61	30	19 05	32	20 05	24	56	12	45	
10	328	56.9	56.2	176	10.0 ¹⁰³	-20 55.5	59	20	18 44	19 08	19 37	17 03	54	31	47	
11	343	56.8	+22 56.0	190	39.2 ¹⁰²	-21 01.3	58	10 N	18 25	18 48	19 15	16 46	52	3 47	49	
12	358	56.6	+22 55.8	205	08.5 ¹⁰³	-21 07.1	58	0	18 08	18 30	18 56	16 29	51	4 03	51	
13	13	56.5	55.6	219	37.7 ¹⁰²	12.7	56	10 S	17 51	18 14	40	16 13	50	18	53	
14	28	56.4	55.4	234	06.9 ¹⁰²	18.2	55	20	33	17 57	24	15 55	49	35	55	
15	43	56.3	55.2	248	36.1 ¹⁰²	23.5	53	30	12	38	08	35	47	4 54	57	
16	58	56.2	55.0	263	05.3 ¹⁰²	28.8	53	35	17 00	28	18 00	23	46	5 05	59	
17	73	56.1	+22 54.8	277	34.5 ¹⁰²	-21 34.0	52	40	16 46	17 17	17 51	15 10	44	5 18	60	
18	88	56.0	+22 54.6	292	03.6 ¹⁰¹	-21 39.0	50	45	16 30	17 03	17 41	14 54	43	5 33	62	
19	103	55.9	54.4	306	32.7 ¹⁰¹	43.9	49	50	10	16 48	29	34	41	5 52	64	
20	118	55.7	54.1	321	01.8 ¹⁰¹	48.7	48	52	16 00	41	24	25	40	6 01	66	
21	133	55.6	53.9	335	30.9 ¹⁰¹	53.4	47	54	15 49	33	19	15	38	11	67	
22	148	55.5	53.7	350	00.0 ¹⁰¹	-21 58.0	46	56	37	24	13	14 03	37	22	69	
23	163	55.4	53.5	4	29.0 ¹⁰⁰	-22 02.5	45	58	23	14	17 06	13 50	35	35	71	
24	178	55.3	+22 53.3	18	58.1 ¹⁰¹	-22 06.8	43	60 S	15 06	16 03	16 59	13 34	32	6 50	74	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -4.2		Mag: -2.1		Mag: -1.9		Mag: +0.1		
	5 ^h 14 ^m 8		PMG: 8 ^h 58 ^m		PMG: 22 ^h 13 ^m		PMG: 11 ^h 05 ^m		PMG: 9 ^h 45 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	281	05.0	225	37.9	+16 50.8	25 34.1	-26 51.3	193 31.7	+23 07.7	213 19.3	+20 09.6
1	296	07.5	240	37.6	51.5	40 37.2	51.3	208 33.5	07.8	228 21.5	09.6
2	311	10.0	255	37.3	52.1	55 40.3	51.3	223 35.4	07.8	243 23.6	09.7
3	326	12.4	270	37.1	52.7	70 43.4	51.3	238 37.2	07.8	258 25.8	09.7
4	341	14.9	285	36.8	53.4	85 46.4	51.3	253 39.1	07.8	273 28.0	09.7
5	356	17.4	300	36.5	+16 54.0	100 49.5	-26 51.3	268 40.9	+23 07.8	288 30.1	+20 09.8
6	11	19.8	315	36.3	+16 54.7	115 52.6	-26 51.3	283 42.8	+23 07.8	303 32.3	+20 09.8
7	26	22.3	330	36.0	55.3	130 55.7	51.3	298 44.6	07.8	318 34.4	09.9
8	41	24.7	345	35.8	56.0	145 58.8	51.3	313 46.5	07.9	333 36.6	09.9
9	56	27.2	0	35.5	56.6	161 01.9	51.3	328 48.3	07.9	348 38.7	10.0
10	71	29.7	15	35.2	57.2	176 04.9	51.4	343 50.2	07.9	3 40.9	10.0
11	86	32.1	30	35.0	+16 57.9	191 08.0	-26 51.4	358 52.0	+23 07.9	18 43.1	+20 10.0
12	101	34.6	45	34.7	+16 58.5	206 11.1	-26 51.4	13 53.9	+23 07.9	33 45.2	+20 10.1
13	116	37.1	60	34.4	59.2	221 14.2	51.4	28 55.7	07.9	48 47.4	10.1
14	131	39.5	75	34.1	+16 59.8	236 17.2	51.4	43 57.6	07.9	63 49.5	10.2
15	146	42.0	90	33.9	+17 00.4	251 20.3	51.4	58 59.4	07.9	78 51.7	10.2
16	161	44.5	105	33.6	01.1	266 23.4	51.4	74 01.3	08.0	93 53.8	10.3
17	176	46.9	120	33.3	+17 01.7	281 26.5	-26 51.4	89 03.1	+23 08.0	108 56.0	+20 10.3
18	191	49.4	135	33.1	+17 02.3	296 29.5	-26 51.4	104 04.9	+23 08.0	123 58.2	+20 10.3
19	206	51.9	150	32.8	03.0	311 32.6	51.4	119 06.8	08.0	139 00.3	10.4
20	221	54.3	165	32.5	03.6	326 35.7	51.4	134 08.6	08.0	154 02.5	10.4
21	236	56.8	180	32.2	04.2	341 38.7	51.4	149 10.5	08.0	169 04.6	10.5
22	251	59.2	195	32.0	04.9	356 41.8	51.4	164 12.3	08.0	184 06.8	10.5
23	267	01.7	210	31.7	05.5	11 44.9	51.4	179 14.2	08.0	199 09.0	10.6
24	282	04.2	225	31.4	+17 06.2	26 47.9	-26 51.4	194 16.0	+23 08.1	214 11.1	+20 10.6
Dif	—		-3	+6		+31	0	+18	0	+22	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 12 ^d 5	PHE { 4 ^h : 55 ^m .4 12 ^h : 55 ^m .3 20 ^h : 55 ^m .1										
	PMG: 12 ^h 04 ^m 4					SD: 15 ^h 1		PMG: 23 ^h 33 ^m			Rº: 51 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	55.3	+22 53.3	18	58.1	-22 06.8	43	60 N	** *	1 11	2 46	20 40	53	1 46	38
1	193	55.2	53.1	33	27.1	11.1	100	58	** *	1 53	3 05	20 53		2 04	40
2	208	55.1	52.9	47	56.1	15.2	41	56	** *	2 21	21	20 04	53	18	42
3	223	55.0	52.6	62	25.1	19.2	40	54	1 05	42	35	19 50	53	31	43
4	238	54.9	52.4	76	54.1	23.1	39	52	1 44	2 59	47	38 53		42	44
5	253	54.7	+22 52.2	91	23.1	-22 26.8	37	50	2 10	3 13	3 57	19 28	52	2 52	45
6	268	54.6	+22 52.0	105	52.1	-22 30.5	37	45	2 53	3 42	4 19	19 05	53	3 13	46
7	283	54.5	51.8	120	21.0	34.0	35	40	3 23	4 04	36	18 48	52	30	47
8	298	54.4	51.5	134	50.0	37.4	34	35	3 45	21	4 51	33 52		44	48
9	313	54.3	51.3	149	18.9	40.7	33	30	4 03	4 36	5 04	18 20	52	3 57	48
10	328	54.2	51.1	163	47.9	43.9	32	20	32	5 01	25	17 57	52	4 18	50
11	343	54.1	+22 50.9	178	16.8	-22 47.0	31	10 N	4 54	5 21	5 44	17 38	52	4 36	51
12	358	54.0	+22 50.7	192	45.8	-22 49.9	29	0	5 12	5 38	6 01	17 20	52	4 54	51
13	13	53.9	50.4	207	14.7	52.7	28	10 S	29	5 55	18	17 03	51	5 11	52
14	28	53.7	50.2	221	43.6	55.5	28	20	5 44	6 12	36	16 44	50	30	53
15	43	53.6	50.0	236	12.5	-22 58.0	25	30	6 00	30	6 56	22 50		5 51	54
16	58	53.5	49.8	250	41.5	-23 00.5	25	35	09	40	7 08	16 09	50	6 04	54
17	73	53.4	+22 49.5	265	10.4	-23 02.8	23	40	6 18	6 52	7 22	15 54	50	6 18	55
18	88	53.3	+22 49.3	279	39.3	-23 05.1	23	45	6 28	7 05	7 39	15 37	49	6 35	56
19	103	53.2	49.1	294	08.2	07.2	21	50	39	20	7 59	15 49		6 56	57
20	118	53.1	48.8	308	37.2	09.2	20	52	44	28	8 08	15 05	48	7 07	57
21	133	53.0	48.6	323	06.1	11.0	18	54	50	36	19	14 53	48	18	58
22	148	52.9	48.4	337	35.0	12.8	18	56	6 56	44	31	40 47		31	59
23	163	52.8	48.1	352	04.0	14.4	16	58	7 02	7 54	8 45	25 46		7 46	60
24	178	52.7	+22 47.9	6	32.9	-23 15.9	15	60 S	7 09	8 05	9 02	14 06	46	8 04	62

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 10 ^m 9			Mag: -4.2 PMG: 8 ^h 58 ^m			Mag: -2.1 PMG: 22 ^h 08 ^m			Mag: -1.9 PMG: 11 ^h 02 ^m			Mag: +0.2 PMG: 9 ^h 42 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	282	04.2	225 31.4	+17 06.2	26 47.9	-26 51.4	194 16.0	+23 08.1	214 11.1	+20 10.6					
1	297	06.6	240 31.1	06.8	41 51.0	51.4	209 17.9	08.1	229 13.3	10.6					
2	312	09.1	255 30.9	07.4	56 54.0	51.4	224 19.7	08.1	244 15.4	10.7					
3	327	11.6	270 30.6	08.0	71 57.1	51.4	239 21.6	08.1	259 17.6	10.7					
4	342	14.0	285 30.3	08.7	87 00.2	51.4	254 23.4	08.1	274 19.7	10.8					
5	357	16.5	300 30.0	+17 09.3	102 03.2	-26 51.4	269 25.3	+23 08.1	289 21.9	+20 10.8					
6	12	19.0	315 29.8	+17 09.9	117 06.3	-26 51.4	284 27.1	+23 08.1	304 24.1	+20 10.9					
7	27	21.4	330 29.5	10.6	132 09.3	51.4	299 29.0	08.1	319 26.2	10.9					
8	42	23.9	345 29.2	11.2	147 12.4	51.4	314 30.8	08.1	334 28.4	10.9					
9	57	26.4	0 28.9	11.8	162 15.4	51.4	329 32.7	08.2	349 30.5	11.0					
10	72	28.8	15 28.6	12.5	177 18.5	51.5	344 34.5	08.2	4 32.7	11.0					
11	87	31.3	30 28.3	+17 13.1	192 21.5	-26 51.5	359 36.4	+23 08.2	19 34.9	+20 11.1					
12	102	33.7	45 28.1	+17 13.7	207 24.6	-26 51.5	14 38.2	+23 08.2	34 37.0	+20 11.1					
13	117	36.2	60 27.8	14.3	222 27.6	51.5	29 40.1	08.2	49 39.2	11.1					
14	132	38.7	75 27.5	15.0	237 30.6	51.5	44 41.9	08.2	64 41.3	11.2					
15	147	41.1	90 27.2	15.6	252 33.7	51.5	59 43.8	08.2	79 43.5	11.2					
16	162	43.6	105 26.9	16.2	267 36.7	51.5	74 45.6	08.2	94 45.7	11.3					
17	177	46.1	120 26.6	+17 16.9	282 39.8	-26 51.5	89 47.5	+23 08.3	109 47.8	+20 11.3					
18	192	48.5	135 26.3	+17 17.5	297 42.8	-26 51.5	104 49.3	+23 08.3	124 50.0	+20 11.4					
19	207	51.0	150 26.1	18.1	312 45.8	51.5	119 51.2	08.3	139 52.1	11.4					
20	222	53.5	165 25.8	18.7	327 48.9	51.5	134 53.0	08.3	154 54.3	11.4					
21	237	55.9	180 25.5	19.4	342 51.9	51.5	149 54.9	08.3	169 56.5	11.5					
22	252	58.4	195 25.2	20.0	357 54.9	51.5	164 56.7	08.3	184 58.6	11.5					
23	268	00.9	210 24.9	20.6	12 58.0	51.5	179 58.6	08.3	200 00.8	11.6					
24	283	03.3	225 24.6	+17 21.2	28 01.0	-26 51.5	195 00.4	+23 08.3	215 02.9	+20 11.6					
Dif	—		-3	+6	+30	0	+18	0	+22	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 6			Edad: 13 ^d 5 PHE { 4 ^h : 55°0 12 ^h : 54°9 20 ^h : 54°8 R°: ***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	178	52.7	+22	47.9	6	32.9	-23	15.9	60 N	21	21	22	53	*** **	21	33	37	2	24	53						
1	193	52.5		47.7	21	01.9 ¹⁰⁰		17.3	58	21	02	22	13	*** **	21	13	40	2	44	52						
2	208	52.4		47.5	35	30.8 ⁹⁹		18.6	56	20	46	21	46	*** **	20	57	41	3	00	53						
3	223	52.3		47.2	49	59.8 ¹⁰⁰		19.7	54		33	26	22	59		43	42		14	52						
4	238	52.2		47.0	64	28.8 ¹⁰⁰		20.8	52	21		21	09	22	22		31	43		26	52					
5	253	52.1	+22	46.7	78	57.8 ¹⁰⁰	-23	21.7	50	20	11	20	55	21	57	20	20	44	3	37	52					
6	268	52.0	+22	46.5	93	26.8 ¹⁰⁰	-23	22.5	45	19	49	20	26	21	15	19	58	45	3	59	52					
7	283	51.9		46.3	107	55.8 ¹⁰⁰		23.2	40		32	20	04	20	45		40	46	4	17	52					
8	298	51.8		46.0	122	24.9 ¹⁰¹		23.7	35		17	19	47		23		25	47		32	52					
9	313	51.7		45.8	136	53.9 ¹⁰⁰		24.2	30	19	05	32	20	05		19	12	47	4	45	52					
10	328	51.6		45.6	151	23.0 ¹⁰¹		24.5	20	18	44	19	08	19	37	18	49	49	5	08	51					
11	343	51.5	+22	45.3	165	52.0 ¹⁰⁰	-23	24.7	10 N	18	25	18	48	19	15	18	30	49	5	27	51					
12	358	51.4	+22	45.1	180	21.1 ¹⁰¹	-23	24.8	0	18	08	18	31	18	57	18	12	50	5	45	51					
13	13	51.3		44.8	194	50.2 ¹⁰¹		24.7	10 S	17	51	18	14		40	17	54	51	6	03	51					
14	28	51.2		44.6	209	19.4 ¹⁰²		24.6	20		33	17	57		25		34	52		23	50					
15	43	51.0		44.4	223	48.5 ¹⁰¹		24.3	30		13		39		09	17	12	53		45	50					
16	58	50.9		44.1	238	17.7 ¹⁰²		23.9	35	17	01		29	18	00	16	59	53	6	58	50					
17	73	50.8	+22	43.9	252	46.9 ¹⁰²	-23	23.4	40	16	47	17	18	17	51	16	44	54	7	13	50					
18	88	50.7	+22	43.6	267	16.1 ¹⁰²	-23	22.8	45	16	31	17	05	17	42	16	26	55	7	31	49					
19	103	50.6		43.4	281	45.4 ¹⁰³		22.1	50		11	16	49		30	16	04	55	7	53	49					
20	118	50.5		43.1	296	14.6 ¹⁰²		21.2	52	16	02		42		25	15	53	56	8	04	48					
21	133	50.4		42.9	310	43.9 ¹⁰³		20.2	54	15	51	34		20		41	57		16	48						
22	148	50.3		42.6	325	13.2 ¹⁰³		19.1	56		39		26		14		27	57		30	47					
23	163	50.2		42.4	339	42.6 ¹⁰⁴		17.9	58		25		16		08	15	11	58	8	46	46					
24	178	50.1	+22	42.1	354	11.9 ¹⁰³	-23	16.6	60 S	15	09	16	05	17	01	14	52	59	9	06	45					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO													
	PMG: 5 ^h 06 ^m 9			Mag: -4.2 PMG: 8 ^h 59 ^m			Mag: -2.1 PMG: 22 ^h 04 ^m			Mag: -1.9 PMG: 10 ^h 59 ^m			Mag: +0.2 PMG: 9 ^h 38 ^m													
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	283	03.3	225	24.6	+17	21.2	28	01.0	-26	51.5	195	00.4	+23	08.3	215	02.9	+20	11.6								
1	298	05.8	240	24.3		21.8	43	04.0		51.5	210	02.3		08.3	230	05.1		11.6								
2	313	08.2	255	24.0		22.5	58	07.0		51.5	225	04.1		08.4	245	07.3		11.7								
3	328	10.7	270	23.7		23.1	73	10.1		51.5	240	06.0		08.4	260	09.4		11.7								
4	343	13.2	285	23.4		23.7	88	13.1		51.5	255	07.8		08.4	275	11.6		11.8								
5	358	15.6	300	23.1	+17	24.3	103	16.1	-26	51.5	270	09.7	+23	08.4	290	13.7	+20	11.8								
6	13	18.1	315	22.9	+17	25.0	118	19.1	-26	51.5	285	11.5	+23	08.4	305	15.9	+20	11.9								
7	28	20.6	330	22.6		25.6	133	22.1		51.5	300	13.4		08.4	320	18.1		11.9								
8	43	23.0	345	22.3		26.2	148	25.2		51.5	315	15.2		08.4	335	20.2		11.9								
9	58	25.5	0	22.0		26.8	163	28.2		51.5	330	17.1		08.4	350	22.4		12.0								
10	73	28.0	15	21.7		27.4	178	31.2		51.5	345	18.9		08.4	5	24.5		12.0								
11	88	30.4	30	21.4	+17	28.0	193	34.2	-26	51.5	0	20.8	+23	08.5	20	26.7	+20	12.1								
12	103	32.9	45	21.1	+17	28.7	208	37.2	-26	51.5	15	22.6	+23	08.5	35	28.9	+20	12.1								
13	118	35.4	60	20.8		29.3	223	40.2		51.5	30	24.5		08.5	50	31.0		12.1								
14	133	37.8	75	20.5		29.9	238	43.2		51.5	45	26.3		08.5	65	33.2		12.2								
15	148	40.3	90	20.2		30.5	253	46.2		51.5	60	28.2		08.5	80	35.3		12.2								
16	163	42.7	105	19.9		31.1	268	49.2		51.5	75	30.0		08.5	95	37.5		12.3								
17	178	45.2	120	19.6	+17	31.7	283	52.3	-26	51.5	90	31.9	+23	08.5	110	39.7	+20	12.3								
18	193	47.7	135	19.3	+17	32.3	298	55.3	-26	51.5	105	33.7	+23	08.5	125	41.8	+20	12.3								
19	208	50.1	150	19.0		33.0	313	58.3		51.5	120	35.6		08.5	140	44.0		12.4								
20	223	52.6	165	18.7		33.6	329	01.3		51.5	135	37.4		08.5	155	46.2		12.4								
21	238	55.1	180	18.4		34.2	344	04.3		51.5	150	39.3		08.6	170	48.3		12.5								
22	253	57.5	195	18.1		34.8	359	07.3		51.5	165	41.1		08.6	185	50.5		12.5								
23	269	00.0	210	17.7		35.4	14	10.3		51.5	180	43.0		08.6	200	52.6		12.6								
24	284	02.5	225	17.4	+17	36.0	29	13.2	-26	51.5	195	44.8	+23	08.6	215	54.8	+20	12.6								
Dif	—			-3			+6			+30			0			+19			0			+22			0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 14 ^d 5 PHE { 4 ^h : 54 ^m /7 12 ^h : 54 ^m /6 20 ^h : 54 ^m /5						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 7			SD: 14 ^h 9 PMG: 0 ^h 24 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	m
0	178	50.1	+22	42.1	354	11.9	-23	16.6	60 N	** **	1 17	2 48	22 10	25	3 17	66
1	193	50.0		41.9	8	41.3 ¹⁰⁴		15.2 ¹⁴	58	** **	1 57	3 07	21 53	28	36	64
2	208	49.9		41.6	23	10.8 ¹⁰⁵		13.6 ¹⁶	56	** **	2 23	23	38 31		3 53	61
3	223	49.8		41.4	37	40.2 ¹⁰⁴		12.0 ¹⁶	54	1 10	2 44	37	25 33		4 06	61
4	238	49.7		41.1	52	09.7 ¹⁰⁵		10.2 ¹⁸	52	1 47	3 01	48	14 34		18	60
5	253	49.6	+22	40.9	66	39.2 ¹⁰⁵	-23	08.3 ¹⁹	50	2 12	3 15	3 59	21 04	35	4 29	59
6	268	49.5	+22	40.6	81	08.8 ¹⁰⁶	-23	06.3 ²⁰	45	2 55	3 43	4 20	20 43	38	4 51	57
7	283	49.4		40.4	95	38.4 ¹⁰⁶		04.2 ²¹	40	3 24	4 05	38	26 40		5 09	56
8	298	49.3		40.1	110	08.0 ¹⁰⁶	-23	02.0 ²²	35	3 46	23	4 52	20 12	41	24	55
9	313	49.2		39.9	124	37.7 ¹⁰⁷	-22	59.6 ²⁴	30	4 04	4 37	5 05	19 59	43	37	54
10	328	49.1		39.6	139	07.4 ¹⁰⁷		57.2 ²⁴	20	32	5 01	26	38 45		5 59	52
11	343	49.0	+22	39.4	153	37.1 ¹⁰⁷	-22	54.6 ²⁶	10 N	4 54	5 21	5 44	19 19	47	6 18	51
12	358	48.9	+22	39.1	168	06.9 ¹⁰⁸	-22	51.9 ²⁷	0	5 13	5 39	6 01	19 02	49	6 36	50
13	13	48.8		38.9	182	36.7 ¹⁰⁸		49.2 ²⁷	10 S	29	5 55	18	18 45	50	6 54	48
14	28	48.6		38.6	197	06.5 ¹⁰⁸		46.3 ²⁹	20	5 45	6 12	36	26 52		7 13	47
15	43	48.5		38.3	211	36.4 ¹⁰⁹		43.3 ³⁰	30	6 00	30	6 56	18 05	54	35	45
16	58	48.4		38.1	226	06.3 ¹⁰⁹		40.2 ³¹	35	09	40	7 08	17 52	56	7 48	44
17	73	48.3	+22	37.8	240	36.3 ¹¹⁰	-22	36.9 ³³	40	6 18	6 51	7 22	17 38	57	8 03	43
18	88	48.2	+22	37.6	255	06.3 ¹¹⁰	-22	33.6 ³³	45	6 27	7 04	7 38	17 21	58	8 20	42
19	103	48.1		37.3	269	36.3 ¹¹⁰		30.2 ³⁴	50	39	20	7 58	16 59	61	42	39
20	118	48.0		37.0	284	06.4 ¹¹¹		26.7 ³⁵	52	44	27	8 07	49 62		8 52	38
21	133	47.9		36.8	298	36.5 ¹¹¹		23.0 ³⁷	54	49	35	18	38 63		9 04	37
22	148	47.8		36.5	313	06.7 ¹¹²		19.3 ³⁷	56	6 55	43	30	24 66		17	36
23	163	47.7		36.2	327	36.9 ¹¹²		15.4 ³⁹	58	7 01	7 53	8 43	16 09	68	32	34
24	178	47.6	+22	36.0	342	07.2 ¹¹³	-22	11.5 ³⁹	60 S	7 08	8 04	9 00	15 51	70	9 51	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 03 ^m 0		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: -2.1 PMG: 21 ^h 59 ^m		Mag: -1.9 PMG: 10 ^h 56 ^m		Mag: +0.2 PMG: 9 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	284	02.5	225	17.4	+17	36.0	29	13.2	-26	51.5	195	44.8	+23	08.6	215	54.8	+20	12.6
1	299	04.9	240	17.1		36.6	44	16.2		51.5	210	46.7		08.6	230	57.0		12.6
2	314	07.4	255	16.8		37.2	59	19.2		51.5	225	48.5		08.6	245	59.1		12.7
3	329	09.9	270	16.5		37.9	74	22.2		51.5	240	50.4		08.6	261	01.3		12.7
4	344	12.3	285	16.2		38.5	89	25.2		51.5	255	52.2		08.6	276	03.5		12.8
5	359	14.8	300	15.9	+17	39.1	104	28.2	-26	51.5	270	54.1	+23	08.6	291	05.6	+20	12.8
6	14	17.2	315	15.6	+17	39.7	119	31.2	-26	51.5	285	55.9	+23	08.6	306	07.8	+20	12.8
7	29	19.7	330	15.3		40.3	134	34.2		51.5	300	57.8		08.7	321	09.9		12.9
8	44	22.2	345	15.0		40.9	149	37.1		51.5	315	59.6		08.7	336	12.1		12.9
9	59	24.6	0	14.7		41.5	164	40.1		51.5	331	01.5		08.7	351	14.3		13.0
10	74	27.1	15	14.3		42.1	179	43.1		51.5	346	03.3		08.7	6	16.4		13.0
11	89	29.6	30	14.0	+17	42.7	194	46.1	-26	51.5	1	05.2	+23	08.7	21	18.6	+20	13.0
12	104	32.0	45	13.7	+17	43.3	209	49.1	-26	51.5	16	07.0	+23	08.7	36	20.8	+20	13.1
13	119	34.5	60	13.4		43.9	224	52.0		51.5	31	08.9		08.7	51	22.9		13.1
14	134	37.0	75	13.1		44.5	239	55.0		51.5	46	10.7		08.7	66	25.1		13.2
15	149	39.4	90	12.8		45.1	254	58.0		51.5	61	12.6		08.7	81	27.2		13.2
16	164	41.9	105	12.5		45.7	270	01.0		51.5	76	14.4		08.7	96	29.4		13.2
17	179	44.3	120	12.1	+17	46.3	285	03.9	-26	51.5	91	16.3	+23	08.8	111	31.6	+20	13.3
18	194	46.8	135	11.8	+17	46.9	300	06.9	-26	51.5	106	18.1	+23	08.8	126	33.7	+20	13.3
19	209	49.3	150	11.5		47.5	315	09.9		51.5	121	20.0		08.8	141	35.9		13.4
20	224	51.7	165	11.2		48.1	330	12.8		51.5	136	21.8		08.8	156	38.1		13.4
21	239	54.2	180	10.9		48.7	345	15.8		51.5	151	23.7		08.8	171	40.2		13.5
22	254	56.7	195	10.5		49.3	0	18.8		51.5	166	25.5		08.8	186	42.4		13.5
23	269	59.1	210	10.2		49.9	15	21.7		51.5	181	27.4		08.8	201	44.6		13.5
24	285	01.6	225	09.9	+17	50.5	30	24.7	-26	51.5	196	29.2	+23	08.8	216	46.7	+20	13.6
Dif	—		-3		+6		+30		0		+19		0		+22		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 5 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2										
	PMG: 12 ^h 04 ^m 9			SD: 14 ^h 8					PMG: 1 ^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	47.6	+22	36.0	342	07.2	-22 11.5	60 N	21 19	22 48	** **	22 35 18	4 23 73	
1	193	47.5		35.7	356	37.5 ¹¹³	07.4 41	58	21 00	22 10	** **	21 20	40 70	
2	208	47.4		35.5	11	07.8 ¹¹³	-22 03.2 42	56	20 45	21 44	** **	22 09 23	4 54 69	
3	223	47.3		35.2	25	38.2 ¹¹⁴	-21 59.0 42	54	32	24	22 54	21 58 25	5 07 66	
4	238	47.2		34.9	40	08.7 ¹¹⁵	54.6 44	52	20	21 07	22 19	48 27	18 64	
5	253	47.1	+22	34.6	54	39.2 ¹¹⁵	-21 50.1 45	50	20 10	20 53	21 55	21 39 29	5 28 63	
6	268	47.0	+22	34.4	69	09.7 ¹¹⁵	-21 45.5 46	45	19 49	20 25	21 13	21 21 32	5 48 60	
7	283	46.9		34.1	83	40.3 ¹¹⁶	40.9 46	40	31	20 04	20 45	21 06 34	6 05 57	
8	298	46.8		33.8	98	10.9 ¹¹⁶	36.1 48	35	17	19 46	23	20 53 37	19 56	
9	313	46.7		33.6	112	41.6 ¹¹⁷	31.2 49	30	19 05	32	20 05	42 38	31 54	
10	328	46.6		33.3	127	12.3 ¹¹⁷	26.3 49	20	18 44	19 08	19 37	23 41	6 51 52	
11	343	46.5	+22	33.0	141	43.1 ¹¹⁸	-21 21.2 51	10 N	18 25	18 48	19 15	20 06 44	7 09 50	
12	358	46.4	+22	32.8	156	13.9 ¹¹⁸	-21 16.0 52	0	18 09	18 31	18 57	19 51 46	7 26 47	
13	13	46.3		32.5	170	44.8 ¹¹⁹	10.8 52	10 S	17 52	18 15	41	35 49	7 42 46	
14	28	46.2		32.2	185	15.7 ¹¹⁹	-21 05.4 54	20	34	17 58	25	19 18 52	8 00 43	
15	43	46.1		31.9	199	46.7 ¹²⁰	-21 00.0 54	30	14	40	10	18 59 54	20 41	
16	58	46.0		31.7	214	17.7 ¹²⁰	-20 54.4 56	35	17 02	30	18 01	48 56	32 39	
17	73	45.9	+22	31.4	228	48.8 ¹²¹	-20 48.8 56	40	16 48	17 19	17 53	18 35 58	8 46 37	
18	88	45.8	+22	31.1	243	19.9 ¹²¹	-20 43.1 57	45	16 33	17 06	17 43	18 19 61	9 02 34	
19	103	45.7		30.8	257	51.1 ¹²²	37.3 58	50	13	16 51	32	18 00 64	21 32	
20	118	45.6		30.5	272	22.3 ¹²²	31.3 60	52	16 04	44	27	17 51 66	30 31	
21	133	45.5		30.3	286	53.6 ¹²³	25.3 60	54	15 53	36	22	41 68	41 29	
22	148	45.5		30.0	301	25.0 ¹²⁴	19.2 61	56	41	27	16	30 69	9 53 26	
23	163	45.4		29.7	315	56.3 ¹²³	13.1 61	58	27	18	10	17 72	10 06 24	
24	178	45.3	+22	29.4	330	27.8 ¹²⁵	-20 06.8 63	60 S	15 11	16 07	17 03	17 01 76	10 22 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 59 ^m 1		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: -2.0 PMG: 21 ^h 54 ^m		Mag: -1.9 PMG: 10 ^h 53 ^m		Mag: +0.2 PMG: 9 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	285	01.6	225	09.9	+17	50.5	30	24.7	-26	51.5
1	300	04.1	240	09.6		51.1	45	27.6		51.5
2	315	06.5	255	09.3		51.7	60	30.6		51.5
3	330	09.0	270	08.9		52.3	75	33.6		51.5
4	345	11.5	285	08.6		52.9	90	36.5		51.5
5	0	13.9	300	08.3	+17	53.5	105	39.5	-26	51.5
6	15	16.4	315	08.0	+17	54.1	120	42.4	-26	51.5
7	30	18.8	330	07.6		54.7	135	45.4		51.5
8	45	21.3	345	07.3		55.3	150	48.3		51.5
9	60	23.8	0	07.0		55.9	165	51.3		51.5
10	75	26.2	15	06.7		56.5	180	54.2		51.5
11	90	28.7	30	06.3	+17	57.1	195	57.1	-26	51.5
12	105	31.2	45	06.0	+17	57.7	211	00.1	-26	51.5
13	120	33.6	60	05.7		58.3	226	03.0		51.5
14	135	36.1	75	05.3		58.8	241	06.0		51.5
15	150	38.6	90	05.0	+17	59.4	256	08.9		51.5
16	165	41.0	105	04.7	+18	00.0	271	11.8		51.5
17	180	43.5	120	04.3	+18	00.6	286	14.8	-26	51.4
18	195	46.0	135	04.0	+18	01.2	301	17.7	-26	51.4
19	210	48.4	150	03.7		01.8	316	20.6		51.4
20	225	50.9	165	03.3		02.4	331	23.6		51.4
21	240	53.3	180	03.0		03.0	346	26.5		51.4
22	255	55.8	195	02.7		03.6	1	29.4		51.4
23	270	58.3	210	02.3		04.1	16	32.4		51.4
24	286	00.7	225	02.0	+18	04.7	31	35.3	-26	51.4
Dif	—		-3		+6		+29		0	
								+19		0
									+22	
										0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 05 ^m 1			Edad: 16 ^d 5 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 SD: 14'8 PMG: 2 ^h 02 ^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	178	45.3	+22	29.4	330	27.8	-20 06.8	60 N	** **	1 23	2 51	22 53	12	5 36	77
1	193	45.2		29.1	344	59.3 ¹²⁵	-20 00.4 ⁶⁴	58	** **	2 00	3 10	41 16		5 50	74
2	208	45.1		28.9	359	30.8 ¹²⁵	-19 54.0 ⁶⁴	56	** **	26	25	32 17		6 03	70
3	223	45.0		28.6	14	02.4 ¹²⁶	47.4 ⁶⁶	54	1 16	2 46	39	23 20		13	68
4	238	44.9		28.3	28	34.1 ¹²⁷	40.8 ⁶⁶	52	1 51	3 03	3 50	15 22		22	67
5	253	44.8	+22	28.0	43	05.7 ¹²⁶	-19 34.1 ⁶⁷	50	2 15	3 17	4 00	22 08	24	6 31	64
6	268	44.7	+22	27.7	57	37.5 ¹²⁸	-19 27.3 ⁶⁸	45	2 57	3 45	4 22	21 53	27	6 48	61
7	283	44.6		27.4	72	09.3 ¹²⁸	20.4 ⁶⁹	40	3 26	4 06	39	40 31		7 02	59
8	298	44.5		27.2	86	41.2 ¹²⁹	13.5 ⁶⁹	35	3 48	24	4 53	30 33		15	56
9	313	44.4		26.9	101	13.1 ¹²⁹	-19 06.4 ⁷¹	30	4 05	4 38	5 05	20 35		25	54
10	328	44.3		26.6	115	45.0 ¹²⁹	-18 59.3 ⁷¹	20	33	5 02	27	21 04	39	43	51
11	343	44.2	+22	26.3	130	17.0 ¹³⁰	-18 52.1 ⁷²	10 N	4 55	5 22	5 45	20 50	42	7 59	48
12	358	44.1	+22	26.0	144	49.1 ¹³¹	-18 44.8 ⁷³	0	5 13	5 39	6 01	20 37	44	8 13	46
13	13	44.0		25.7	159	21.2 ¹³¹	37.4 ⁷⁴	10 S	29	5 55	18	24 47		28	43
14	28	43.9		25.4	173	53.4 ¹³²	30.0 ⁷⁴	20	5 45	6 12	36	20 10	50	8 43	40
15	43	43.8		25.1	188	25.6 ¹³²	22.5 ⁷⁵	30	6 00	30	6 56	19 53	54	9 01	36
16	58	43.7		24.8	202	57.8 ¹³²	14.9 ⁷⁶	35	08	40	7 08	44 56		11	35
17	73	43.6	+22	24.5	217	30.2 ¹³⁴	-18 07.2 ⁷⁷	40	6 17	6 51	7 21	19 33	58	9 23	32
18	88	43.5	+22	24.3	232	02.5 ¹³³	-17 59.4 ⁷⁸	45	6 27	7 04	7 37	19 20	61	9 36	30
19	103	43.4		24.0	246	34.9 ¹³⁴	51.6 ⁷⁸	50	38	19	7 57	19 04	65	9 53	26
20	118	43.4		23.7	261	07.4 ¹³⁵	43.7 ⁷⁹	52	43	26	8 06	18 57	67	10 01	24
21	133	43.3		23.4	275	39.9 ¹³⁵	35.7 ⁸⁰	54	48	33	16	49 68		10	22
22	148	43.2		23.1	290	12.5 ¹³⁶	27.7 ⁸⁰	56	6 54	42	28	39 72		19	21
23	163	43.1		22.8	304	45.1 ¹³⁶	19.5 ⁸²	58	7 00	7 51	42	29 74		30	18
24	178	43.0	+22	22.5	319	17.8 ¹³⁷	-17 11.3 ⁸²	60 S	7 07	8 02	8 58	18 17	77	10 43	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 55 ^m 1		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: -2.0 PMG: 21 ^h 49 ^m		Mag: -1.9 PMG: 10 ^h 50 ^m		Mag: +0.2 PMG: 9 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	286	00.7	225	02.0	31	35.3	-26	51.4	197	13.7	+23	09.0	217	38.7	+20	14.5		
1	301	03.2	240	01.7		05.3		51.4	212	15.6		09.0	232	40.8		14.6		
2	316	05.7	255	01.3		05.9		51.4	227	17.4		09.0	247	43.0		14.6		
3	331	08.1	270	01.0		06.5		51.4	242	19.3		09.1	262	45.2		14.7		
4	346	10.6	285	00.7		07.1		51.4	257	21.1		09.1	277	47.3		14.7		
5	1	13.1	300	00.3	+18	07.6	106	49.9	-26	51.4	272	23.0	+23	09.1	292	49.5	+20	14.7
6	16	15.5	315	00.0	+18	08.2	121	52.8	-26	51.4	287	24.8	+23	09.1	307	51.7	+20	14.8
7	31	18.0	329	59.6		08.8	136	55.7		51.4	302	26.7		09.1	322	53.8		14.8
8	46	20.5	344	59.3		09.4	151	58.6		51.4	317	28.5		09.1	337	56.0		14.9
9	61	22.9	359	59.0		10.0	167	01.5		51.4	332	30.4		09.1	352	58.2		14.9
10	76	25.4	14	58.6		10.6	182	04.4		51.4	347	32.2		09.1	8	00.3		14.9
11	91	27.8	29	58.3	+18	11.1	197	07.3	-26	51.4	2	34.1	+23	09.1	23	02.5	+20	15.0
12	106	30.3	44	57.9	+18	11.7	212	10.3	-26	51.4	17	35.9	+23	09.1	38	04.7	+20	15.0
13	121	32.8	59	57.6		12.3	227	13.2		51.4	32	37.8		09.1	53	06.8		15.1
14	136	35.2	74	57.2		12.9	242	16.1		51.4	47	39.6		09.1	68	09.0		15.1
15	151	37.7	89	56.9		13.4	257	19.0		51.4	62	41.5		09.1	83	11.2		15.1
16	166	40.2	104	56.5		14.0	272	21.9		51.4	77	43.4		09.2	98	13.3		15.2
17	181	42.6	119	56.2	+18	14.6	287	24.8	-26	51.4	92	45.2	+23	09.2	113	15.5	+20	15.2
18	196	45.1	134	55.8	+18	15.2	302	27.7	-26	51.4	107	47.1	+23	09.2	128	17.7	+20	15.3
19	211	47.6	149	55.5		15.7	317	30.6		51.4	122	48.9		09.2	143	19.8		15.3
20	226	50.0	164	55.1		16.3	332	33.4		51.4	137	50.8		09.2	158	22.0		15.3
21	241	52.5	179	54.8		16.9	347	36.3		51.4	152	52.6		09.2	173	24.2		15.4
22	256	54.9	194	54.5		17.5	2	39.2		51.4	167	54.5		09.2	188	26.3		15.4
23	271	57.4	209	54.1		18.0	17	42.1		51.4	182	56.3		09.2	203	28.5		15.4
24	286	59.9	224	53.7	+18	18.6	32	45.0	-26	51.3	197	58.2	+23	09.2	218	30.7	+20	15.5
Dif	—		-3		+6		+29		0		+19		0		+22		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 5	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1									
	PMG: 12 ^h 05 ^m 2					SD: 14 ^h 7			PMG: 2 ^h 48 ^m		R°: 44 ^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	43.0	+22 22.5	319	17.8	-17 11.3	82	60 N	21 16	22 42	** **	23 05 9	6 53 78	
1	193	42.9	22.2	333	50.5 ¹³⁷	-17 03.1	84	58	20 58	22 06	** **	22 57 12	7 04 74	
2	208	42.8	21.9	348	23.3 ¹³⁸	-16 54.7	84	56	43	21 41	** **	49 15	13 72	
3	223	42.7	21.6	2	56.1 ¹³⁸	46.3	84	54	30	22	22 49	43 17	21 70	
4	238	42.6	21.3	17	29.0 ¹³⁹	37.8	85	52	19	21 05	22 16	37 19	29 67	
5	253	42.5	+22 21.0	32	01.9 ¹³⁹	-16 29.3	85	50	20 09	20 52	21 53	22 32 20	7 35 66	
6	268	42.4	+22 20.7	46	34.8 ¹³⁹	-16 20.7	86	45	19 48	20 24	21 12	22 20 25	7 49 62	
7	283	42.3	20.4	61	07.9 ¹⁴¹	12.0	87	40	31	20 03	20 44	11 27	8 01 58	
8	298	42.2	20.1	75	40.9 ¹⁴⁰	-16 03.2	88	35	17	19 46	22	22 03 29	11 56	
9	313	42.2	19.8	90	14.0 ¹⁴¹	-15 54.4	88	30	19 04	31	20 04	21 55 32	19 54	
10	328	42.1	19.5	104	47.2 ¹⁴²	45.5	89	20	18 43	19 08	19 37	43 36	34 50	
11	343	42.0	+22 19.2	119	20.3 ¹⁴¹	-15 36.6	89	10 N	18 25	18 48	19 15	21 32 39	8 47 46	
12	358	41.9	+22 18.9	133	53.6 ¹⁴³	-15 27.6	90	0	18 09	18 31	18 57	21 21 43	8 59 43	
13	13	41.8	18.6	148	26.9 ¹⁴³	18.5	91	10 S	17 52	18 15	41	11 46	9 11 40	
14	28	41.7	18.3	163	00.2 ¹⁴³	09.4	91	20	35	17 59	26	21 00 49	23 37	
15	43	41.6	17.9	177	33.6 ¹⁴⁴	-15 00.2	92	30	15	41	10	20 47 53	37 34	
16	58	41.5	17.6	192	07.0 ¹⁴⁴	-14 50.9	93	35	17 03	31	18 02	40 55	46 31	
17	73	41.4	+22 17.3	206	40.4 ¹⁴⁴	-14 41.6	93	40	16 50	17 20	17 54	20 31 59	9 55 29	
18	88	41.3	+22 17.0	221	13.9 ¹⁴⁵	-14 32.2	94	45	16 34	17 07	17 44	20 21 62	10 06 26	
19	103	41.2	16.7	235	47.5 ¹⁴⁶	22.8	94	50	15	16 52	33	09 66	19 22	
20	118	41.2	16.4	250	21.1 ¹⁴⁶	13.3	95	52	16 05	45	29	20 04 67	25 21	
21	133	41.1	16.1	264	54.7 ¹⁴⁶	-14 03.7	96	54	15 55	38	23	19 57 70	32 18	
22	148	41.0	15.8	279	28.4 ¹⁴⁷	-13 54.1	96	56	43	29	18	51 71	40 16	
23	163	40.9	15.5	294	02.1 ¹⁴⁷	44.4	97	58	30	20	12	43 74	48 14	
24	178	40.8	+22 15.2	308	35.8 ¹⁴⁷	-13 34.7	97	60 S	15 14	16 09	17 05	19 34 77	10 58 10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 51 ^m 2		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: -2.0 PMG: 21 ^h 45 ^m		Mag: -1.9 PMG: 10 ^h 47 ^m		Mag: +0.2 PMG: 9 ^h 25 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	286	59.9	224	53.7	+18 18.6	32 45.0	-26 51.3	197 58.2	+23 09.2	218 30.7	+20 15.5
1	302	02.3	239	53.4	19.2	47 47.9	51.3	213 00.0	09.2	233 32.8	15.5
2	317	04.8	254	53.0	19.8	62 50.8	51.3	228 01.9	09.2	248 35.0	15.6
3	332	07.3	269	52.7	20.3	77 53.7	51.3	243 03.7	09.2	263 37.2	15.6
4	347	09.7	284	52.3	20.9	92 56.5	51.3	258 05.6	09.2	278 39.3	15.6
5	2	12.2	299	52.0	+18 21.5	107 59.4	-26 51.3	273 07.5	+23 09.2	293 41.5	+20 15.7
6	17	14.7	314	51.6	+18 22.0	123 02.3	-26 51.3	288 09.3	+23 09.3	308 43.7	+20 15.7
7	32	17.1	329	51.3	22.6	138 05.2	51.3	303 11.2	09.3	323 45.9	15.8
8	47	19.6	344	50.9	23.2	153 08.1	51.3	318 13.0	09.3	338 48.0	15.8
9	62	22.1	359	50.6	23.7	168 10.9	51.3	333 14.9	09.3	353 50.2	15.8
10	77	24.5	14	50.2	24.3	183 13.8	51.3	348 16.7	09.3	8 52.4	15.9
11	92	27.0	29	49.8	+18 24.9	198 16.7	-26 51.3	3 18.6	+23 09.3	23 54.5	+20 15.9
12	107	29.4	44	49.5	+18 25.4	213 19.5	-26 51.3	18 20.4	+23 09.3	38 56.7	+20 16.0
13	122	31.9	59	49.1	26.0	228 22.4	51.3	33 22.3	09.3	53 58.9	16.0
14	137	34.4	74	48.8	26.6	243 25.3	51.3	48 24.2	09.3	69 01.0	16.0
15	152	36.8	89	48.4	27.1	258 28.2	51.3	63 26.0	09.3	84 03.2	16.1
16	167	39.3	104	48.0	27.7	273 31.0	51.3	78 27.9	09.3	99 05.4	16.1
17	182	41.8	119	47.7	+18 28.3	288 33.9	-26 51.3	93 29.7	+23 09.3	114 07.5	+20 16.2
18	197	44.2	134	47.3	+18 28.8	303 36.7	-26 51.3	108 31.6	+23 09.3	129 09.7	+20 16.2
19	212	46.7	149	47.0	29.4	318 39.6	51.3	123 33.4	09.3	144 11.9	16.2
20	227	49.2	164	46.6	29.9	333 42.5	51.3	138 35.3	09.3	159 14.0	16.3
21	242	51.6	179	46.2	30.5	348 45.3	51.3	153 37.1	09.4	174 16.2	16.3
22	257	54.1	194	45.9	31.1	3 48.2	51.3	168 39.0	09.4	189 18.4	16.3
23	272	56.6	209	45.5	31.6	18 51.0	51.3	183 40.8	09.4	204 20.6	16.4
24	287	59.0	224	45.1	+18 32.2	33 53.9	-26 51.2	198 42.7	+23 09.4	219 22.7	+20 16.4
Dif	—	-4	+6	+29	0	+19	0	+22	0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 05 ^m 4			Edad: 18 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 PMG: 3 ^h 32 ^m R°: 42 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	40.8	+22	15.2	308	35.8	-13	34.7	98	60 N	** **	1 29	2 55	23 14	8	8 11	77
1	193	40.7		14.8	323	09.6 ¹⁴⁸		24.9	98	58	** **	2 05	3 13	09 11		18	75
2	208	40.6		14.5	337	43.4 ¹⁴⁸		15.1	98	56	** **	30	28	04 13		25	71
3	223	40.5		14.2	352	17.3 ¹⁴⁹		-13	05.2	99	54	1 22	2 49	23 00	15	31	69
4	238	40.4		13.9	6	51.2 ¹⁴⁹		-12	55.3	99	52	1 55	3 05	22 56	17	36	67
5	253	40.4	+22	13.6	21	25.1 ¹⁴⁹		-12	45.3 ¹⁰⁰	50	2 18	3 19	4 02	22 52	19	8 41	65
6	268	40.3	+22	13.3	35	59.1 ¹⁵⁰		-12	35.3 ¹⁰⁰	45	2 59	3 47	4 23	22 45	22	8 51	61
7	283	40.2		12.9	50	33.1 ¹⁵⁰		25.2 ¹⁰¹	40	3 27	4 08	40	38 26	8 59	59		
8	298	40.1		12.6	65	07.1 ¹⁵⁰		15.0 ¹⁰²	35	3 49	25	4 54	32 29	9 07	55		
9	313	40.0		12.3	79	41.2 ¹⁵¹		-12	04.8 ¹⁰²	30	4 07	4 39	5 06	27 31	13	53	
10	328	39.9		12.0	94	15.3 ¹⁵¹		-11	54.6 ¹⁰²	20	34	5 03	27	19 34	24	49	
11	343	39.8	+22	11.7	108	49.4 ¹⁵¹		-11	44.3 ¹⁰³	10 N	4 55	5 22	5 45	22 11	38	9 33	46
12	358	39.7	+22	11.3	123	23.6 ¹⁵²		-11	33.9 ¹⁰⁴	0	5 13	5 39	6 02	22 04	42	9 42	42
13	13	39.7		11.0	137	57.8 ¹⁵²		23.6 ¹⁰³	10 S	29	5 56	18	21 57	45	9 51	39	
14	28	39.6		10.7	152	32.0 ¹⁵²		13.1 ¹⁰⁵	20	5 45	6 12	36	49 49		10 00	35	
15	43	39.5		10.4	167	06.3 ¹⁵³		-11	02.7 ¹⁰⁴	30	6 00	30	6 56	40 53		11 31	
16	58	39.4		10.1	181	40.6 ¹⁵³		-10	52.1 ¹⁰⁶	35	08	39	7 07	35 56		17 29	
17	73	39.3	+22	09.7	196	14.9 ¹⁵³		-10	41.6 ¹⁰⁵	40	6 17	6 50	7 20	21 30	58	10 24	26
18	88	39.2	+22	09.4	210	49.2 ¹⁵³		-10	30.9 ¹⁰⁷	45	6 26	7 03	7 36	21 23	61	10 32	23
19	103	39.1		09.1	225	23.6 ¹⁵⁴		20.3 ¹⁰⁶	50	37	18	7 55	15 65	41	20		
20	118	39.1		08.8	239	58.0 ¹⁵⁴		-10	09.6 ¹⁰⁷	52	42	25	8 05	11 67	46	17	
21	133	39.0		08.4	254	32.4 ¹⁵⁴		-9	58.9 ¹⁰⁷	54	47	32	15	07 69	50	16	
22	148	38.9		08.1	269	06.9 ¹⁵⁵		48.1 ¹⁰⁸	56	52	41	26	21 02	72	10 56	13	
23	163	38.8		07.8	283	41.3 ¹⁵⁴		37.2 ¹⁰⁹	58	6 58	7 50	40	20 57	74	11 02	11	
24	178	38.7	+22	07.4	298	15.8 ¹⁵⁵		-9	26.4 ¹⁰⁸	60 S	7 05	8 00	8 55	20 51	77	11 08	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 47 ^m 3		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: -2.0 PMG: 21 ^h 40 ^m		Mag: -1.9 PMG: 10 ^h 44 ^m		Mag: +0.2 PMG: 9 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	287	59.0	224	45.1	+18	32.2	33	53.9	-26	51.2	198	42.7	+23	09.4	219	22.7	+20	16.4
1	303	01.5	239	44.8		32.7	48	56.7		51.2	213	44.6		09.4	234	24.9		16.5
2	318	03.9	254	44.4		33.3	63	59.6		51.2	228	46.4		09.4	249	27.1		16.5
3	333	06.4	269	44.0		33.8	79	02.4		51.2	243	48.3		09.4	264	29.2		16.5
4	348	08.9	284	43.7		34.4	94	05.3		51.2	258	50.1		09.4	279	31.4		16.6
5	3	11.3	299	43.3	+18	35.0	109	08.1	-26	51.2	273	52.0	+23	09.4	294	33.6	+20	16.6
6	18	13.8	314	42.9	+18	35.5	124	10.9	-26	51.2	288	53.8	+23	09.4	309	35.7	+20	16.7
7	33	16.3	329	42.6		36.1	139	13.8		51.2	303	55.7		09.4	324	37.9		16.7
8	48	18.7	344	42.2		36.6	154	16.6		51.2	318	57.6		09.4	339	40.1		16.7
9	63	21.2	359	41.8		37.2	169	19.5		51.2	333	59.4		09.4	354	42.3		16.8
10	78	23.7	14	41.4		37.7	184	22.3		51.2	349	01.3		09.4	9	44.4		16.8
11	93	26.1	29	41.1	+18	38.3	199	25.1	-26	51.2	4	03.1	+23	09.4	24	46.6	+20	16.9
12	108	28.6	44	40.7	+18	38.8	214	28.0	-26	51.2	19	05.0	+23	09.4	39	48.8	+20	16.9
13	123	31.0	59	40.3		39.4	229	30.8		51.2	34	06.8		09.5	54	50.9		16.9
14	138	33.5	74	40.0		39.9	244	33.6		51.2	49	08.7		09.5	69	53.1		17.0
15	153	36.0	89	39.6		40.5	259	36.5		51.2	64	10.5		09.5	84	55.3		17.0
16	168	38.4	104	39.2		41.0	274	39.3		51.2	79	12.4		09.5	99	57.5		17.0
17	183	40.9	119	38.8	+18	41.6	289	42.1	-26	51.2	94	14.3	+23	09.5	114	59.6	+20	17.1
18	198	43.4	134	38.5	+18	42.1	304	44.9	-26	51.2	109	16.1	+23	09.5	130	01.8	+20	17.1
19	213	45.8	149	38.1		42.7	319	47.8		51.2	124	18.0		09.5	145	04.0		17.2
20	228	48.3	164	37.7		43.2	334	50.6		51.1	139	19.8		09.5	160	06.1		17.2
21	243	50.8	179	37.3		43.8	349	53.4		51.1	154	21.7		09.5	175	08.3		17.2
22	258	53.2	194	36.9		44.3	4	56.2		51.1	169	23.5		09.5	190	10.5		17.3
23	273	55.7	209	36.6		44.8	19	59.0		51.1	184	25.4		09.5	205	12.7		17.3
24	288	58.2	224	36.2	+18	45.4	35	01.8	-26	51.1	199	27.3	+23	09.5	220	14.8	+20	17.3
Dif	—		-4		+6		+28		0		+19		0		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 19 ^d 5 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5										
	PMG: 12 ^h 05 ^m 5			SD: 14 ^h 8 PMG: 4 ^h 14 ^m R°: 42 ^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	38.7	+22 07.4	298	15.8	-9 26.4		60 N	21 14	22 36	** **	23 22	8	9 28 77
1	193	38.6	07.1	312	50.3 ¹⁵⁵	15.5 ¹⁰⁹		58	20 56	22 03	** **	20 9		33 74
2	208	38.6	06.8	327	24.9 ¹⁵⁶	-9 04.5 ¹¹⁰		56	41	21 38	** **	17 12		36 72
3	223	38.5	06.5	341	59.4 ¹⁵⁵	-8 53.6 ¹⁰⁹		54	28	19	22 44	15 14		40 70
4	238	38.4	06.1	356	34.0 ¹⁵⁶	42.5 ¹¹¹		52	17	21 03	22 13	13 16		43 68
5	253	38.3	+22 05.8	11	08.6 ¹⁵⁶	-8 31.5 ¹¹⁰		50	20 07	20 50	21 50	23 11	18	9 46 66
6	268	38.2	+22 05.5	25	43.2 ¹⁵⁶	-8 20.4 ¹¹¹		45	19 47	20 23	21 10	23 07	22	9 52 62
7	283	38.1	05.1	40	17.9 ¹⁵⁷	-8 09.3 ¹¹¹		40	30	20 02	20 42	04 24		9 58 58
8	298	38.1	04.8	54	52.5 ¹⁵⁶	-7 58.1 ¹¹²		35	16	19 45	21	23 01	27	10 02 56
9	313	38.0	04.5	69	27.2 ¹⁵⁷	46.9 ¹¹²		30	19 04	31	20 04	22 58	30	06 53
10	328	37.9	04.1	84	01.9 ¹⁵⁷	35.7 ¹¹²		20	18 43	19 08	19 36	53 35		13 49
11	343	37.8	+22 03.8	98	36.5 ¹⁵⁶	-7 24.4 ¹¹³		10 N	18 26	18 48	19 15	22 49	39	10 19 45
12	358	37.7	+22 03.4	113	11.3 ¹⁵⁸	-7 13.1 ¹¹³		0	18 09	18 31	18 57	22 46	41	10 24 42
13	13	37.6	03.1	127	46.0 ¹⁵⁷	-7 01.8 ¹¹³		10 S	17 53	18 15	42	42 45		30 38
14	28	37.6	02.8	142	20.7 ¹⁵⁷	-6 50.4 ¹¹⁴		20	36	17 59	27	38 49		35 35
15	43	37.5	02.4	156	55.5 ¹⁵⁸	39.0 ¹¹⁴		30	16	42	11	33 54		42 30
16	58	37.4	02.1	171	30.2 ¹⁵⁷	27.6 ¹¹⁴		35	17 04	32	18 03	31 56		46 27
17	73	37.3	+22 01.7	186	05.0 ¹⁵⁸	-6 16.2 ¹¹⁴		40	16 51	17 21	17 55	22 28	59	10 50 25
18	88	37.2	+22 01.4	200	39.7 ¹⁵⁷	-6 04.7 ¹¹⁵		45	16 36	17 09	17 45	22 24	62	10 55 22
19	103	37.2	01.1	215	14.5 ¹⁵⁸	-5 53.2 ¹¹⁵		50	17	16 54	35	20 66		11 01 18
20	118	37.1	00.7	229	49.3 ¹⁵⁸	41.6 ¹¹⁶		52	16 07	47	30	18 68		03 17
21	133	37.0	+22 00.4	244	24.1 ¹⁵⁸	30.1 ¹¹⁵		54	15 57	40	25	16 70		06 15
22	148	36.9	+22 00.0	258	58.9 ¹⁵⁸	18.5 ¹¹⁶		56	46	32	20	14 72		09 13
23	163	36.8	+21 59.7	273	33.7 ¹⁵⁸	-5 06.8 ¹¹⁷		58	33	22	14	11 75		13 10
24	178	36.8	+21 59.3	288	08.5 ¹⁵⁸	-4 55.2 ¹¹⁶		60 S	15 17	16 12	17 07	22 08	78	11 17 7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 43 ^m 3		Mag: -4.1 PMG: 9 ^h 02 ^m			Mag: -2.0 PMG: 21 ^h 36 ^m			Mag: -1.9 PMG: 10 ^h 41 ^m			Mag: +0.2 PMG: 9 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°
0	288	58.2	224	36.2	+18 45.4	35 01.8	-26 51.1	199 27.3	+23 09.5	220 14.8	+20 17.3			
1	304	00.6	239	35.8	45.9	50 04.6	51.1	214 29.1	09.5	235 17.0	17.4			
2	319	03.1	254	35.4	46.5	65 07.5	51.1	229 31.0	09.5	250 19.2	17.4			
3	334	05.5	269	35.0	47.0	80 10.3	51.1	244 32.8	09.5	265 21.3	17.5			
4	349	08.0	284	34.6	47.6	95 13.1	51.1	259 34.7	09.5	280 23.5	17.5			
5	4	10.5	299	34.3	+18 48.1	110 15.9	-26 51.1	274 36.5	+23 09.5	295 25.7	+20 17.5			
6	19	12.9	314	33.9	+18 48.6	125 18.7	-26 51.1	289 38.4	+23 09.5	310 27.9	+20 17.6			
7	34	15.4	329	33.5	49.2	140 21.5	51.1	304 40.3	09.5	325 30.0	17.6			
8	49	17.9	344	33.1	49.7	155 24.3	51.1	319 42.1	09.6	340 32.2	17.7			
9	64	20.3	359	32.7	50.3	170 27.1	51.1	334 44.0	09.6	355 34.4	17.7			
10	79	22.8	14	32.3	50.8	185 29.9	51.1	349 45.8	09.6	10 36.5	17.7			
11	94	25.3	29	32.0	+18 51.3	200 32.7	-26 51.1	4 47.7	+23 09.6	25 38.7	+20 17.8			
12	109	27.7	44	31.6	+18 51.9	215 35.5	-26 51.1	19 49.5	+23 09.6	40 40.9	+20 17.8			
13	124	30.2	59	31.2	52.4	230 38.3	51.1	34 51.4	09.6	55 43.1	17.8			
14	139	32.7	74	30.8	52.9	245 41.1	51.1	49 53.3	09.6	70 45.2	17.9			
15	154	35.1	89	30.4	53.5	260 43.9	51.0	64 55.1	09.6	85 47.4	17.9			
16	169	37.6	104	30.0	54.0	275 46.6	51.0	79 57.0	09.6	100 49.6	18.0			
17	184	40.0	119	29.6	+18 54.5	290 49.4	-26 51.0	94 58.8	+23 09.6	115 51.8	+20 18.0			
18	199	42.5	134	29.2	+18 55.1	305 52.2	-26 51.0	110 00.7	+23 09.6	130 53.9	+20 18.0			
19	214	45.0	149	28.8	55.6	320 55.0	51.0	125 02.5	09.6	145 56.1	18.1			
20	229	47.4	164	28.4	56.1	335 57.8	51.0	140 04.4	09.6	160 58.3	18.1			
21	244	49.9	179	28.1	56.7	351 00.6	51.0	155 06.3	09.6	176 00.4	18.1			
22	259	52.4	194	27.7	57.2	6 03.3	51.0	170 08.1	09.6	191 02.6	18.2			
23	274	54.8	209	27.3	57.7	21 06.1	51.0	185 10.0	09.6	206 04.8	18.2			
24	289	57.3	224	26.9	+18 58.2	36 08.9	-26 51.0	200 11.8	+23 09.6	221 07.0	+20 18.3			
Dif	—		-4		+5	+28	0	+19	0	+22				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 05 ^m 6			Edad: 20 ^d 5 PHE { SD: 14'8 PMG: 4 ^h 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	178	36.8	+21 59.3	288	08.5	-4 55.2	60 N	** **	1 35	2 58	23 30	7	10 45	78
1	193	36.7	59.0	302	43.3 ¹⁵⁸	43.5 ¹¹⁷	58	** **	2 09	3 16	29 11		47 75	
2	208	36.6	58.7	317	18.1 ¹⁵⁸	31.8 ¹¹⁷	56	** **	33	31	29 13		48 73	
3	223	36.5	58.3	331	52.9 ¹⁵⁸	20.1 ¹¹⁷	54	1 27	2 52	43	29 15		50 70	
4	238	36.4	58.0	346	27.7 ¹⁵⁸	-4 08.4 ¹¹⁷	52	1 59	3 08	3 54	29 16		51 68	
5	253	36.4	+21 57.6	1	02.5 ¹⁵⁸	-3 56.6 ¹¹⁸	50	2 21	3 22	4 04	23 29	18	10 52	66
6	268	36.3	+21 57.3	15	37.3 ¹⁵⁸	-3 44.8 ¹¹⁸	45	3 01	3 49	4 25	23 29	22	10 54	63
7	283	36.2	56.9	30	12.1 ¹⁵⁸	33.0 ¹¹⁸	40	29	4 09	41	28 26		56 59	
8	298	36.1	56.6	44	46.9 ¹⁵⁸	21.2 ¹¹⁸	35	3 50	26	4 55	28 28		58 56	
9	313	36.0	56.2	59	21.7 ¹⁵⁸	-3 09.3 ¹¹⁹	30	4 08	4 40	5 07	28 31		10 59	54
10	328	36.0	55.9	73	56.5 ¹⁵⁸	-2 57.5 ¹¹⁸	20	35	5 04	28	28 35		11 02	49
11	343	35.9	+21 55.5	88	31.2 ¹⁵⁷	-2 45.6 ¹¹⁹	10 N	4 56	5 23	5 46	23 28	38	11 04	45
12	358	35.8	+21 55.2	103	06.0 ¹⁵⁸	-2 33.7 ¹¹⁹	0	5 14	5 40	6 02	23 27	43	11 06	42
13	13	35.7	54.8	117	40.8 ¹⁵⁸	21.8 ¹¹⁹	10 S	30	5 56	18	27 46		08 38	
14	28	35.7	54.5	132	15.5 ¹⁵⁷	-2 09.8 ¹²⁰	20	5 45	6 12	35	27 50		10 34	
15	43	35.6	54.1	146	50.2 ¹⁵⁷	-1 57.9 ¹¹⁹	30	6 00	29	6 55	27 54		12 30	
16	58	35.5	53.7	161	25.0 ¹⁵⁸	45.9 ¹²⁰	35	08	39	7 07	27 57		13 28	
17	73	35.4	+21 53.4	175	59.7 ¹⁵⁷	-1 33.9 ¹²⁰	40	6 16	6 50	7 20	23 27	60	11 15	25
18	88	35.4	+21 53.0	190	34.4 ¹⁵⁷	-1 21.9 ¹²⁰	45	6 25	7 02	7 35	23 26	64	11 17	21
19	103	35.3	52.7	205	09.0 ¹⁵⁶	-1 09.9 ¹²⁰	50	36	17	7 54	26 68		19 18	
20	118	35.2	52.3	219	43.7 ¹⁵⁷	-0 57.8 ¹²¹	52	40	23	8 03	26 70		20 16	
21	133	35.1	52.0	234	18.3 ¹⁵⁶	45.8 ¹²⁰	54	46	31	13	26 72		21 14	
22	148	35.0	51.6	248	53.0 ¹⁵⁷	33.7 ¹²¹	56	51	39	24	26 74		22 12	
23	163	35.0	51.2	263	27.6 ¹⁵⁶	21.7 ¹²⁰	58	6 57	48	37	26 76		23 10	
24	178	34.9	+21 50.9	278	02.2 ¹⁵⁶	-0 09.6 ¹²¹	60 S	7 03	7 58	8 53	23 26	79	11 24	8

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 39 ^m 4		Mag: -4.1 PMG: 9 ^h 02 ^m			Mag: -1.9 PMG: 21 ^h 31 ^m			Mag: -1.9 PMG: 10 ^h 38 ^m			Mag: +0.2 PMG: 9 ^h 14 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	289	57.3	224	26.9	+18 58.2	36	08.9	-26 51.0	200	11.8	+23 09.6	221	07.0	+20 18.3
1	304	59.8	239	26.5	58.8	51	11.7	51.0	215	13.7	09.6	236	09.1	18.3
2	320	02.2	254	26.1	59.3	66	14.4	51.0	230	15.6	09.6	251	11.3	18.3
3	335	04.7	269	25.7	+18 59.8	81	17.2	51.0	245	17.4	09.6	266	13.5	18.4
4	350	07.1	284	25.3	+19 00.4	96	20.0	51.0	260	19.3	09.6	281	15.7	18.4
5	5	09.6	299	24.9	+19 00.9	111	22.8	-26 51.0	275	21.1	+23 09.7	296	17.8	+20 18.4
6	20	12.1	314	24.5	+19 01.4	126	25.5	-26 51.0	290	23.0	+23 09.7	311	20.0	+20 18.5
7	35	14.5	329	24.1	01.9	141	28.3	51.0	305	24.8	09.7	326	22.2	18.5
8	50	17.0	344	23.7	02.5	156	31.1	51.0	320	26.7	09.7	341	24.4	18.6
9	65	19.5	359	23.3	03.0	171	33.8	50.9	335	28.6	09.7	356	26.5	18.6
10	80	21.9	14	22.9	03.5	186	36.6	50.9	350	30.4	09.7	11	28.7	18.6
11	95	24.4	29	22.5	+19 04.0	201	39.3	-26 50.9	5	32.3	+23 09.7	26	30.9	+20 18.7
12	110	26.9	44	22.1	+19 04.5	216	42.1	-26 50.9	20	34.1	+23 09.7	41	33.1	+20 18.7
13	125	29.3	59	21.7	05.1	231	44.8	50.9	35	36.0	09.7	56	35.2	18.7
14	140	31.8	74	21.3	05.6	246	47.6	50.9	50	37.9	09.7	71	37.4	18.8
15	155	34.3	89	20.9	06.1	261	50.4	50.9	65	39.7	09.7	86	39.6	18.8
16	170	36.7	104	20.5	06.6	276	53.1	50.9	80	41.6	09.7	101	41.8	18.9
17	185	39.2	119	20.1	+19 07.1	291	55.9	-26 50.9	95	43.4	+23 09.7	116	43.9	+20 18.9
18	200	41.6	134	19.7	+19 07.7	306	58.6	-26 50.9	110	45.3	+23 09.7	131	46.1	+20 18.9
19	215	44.1	149	19.3	08.2	322	01.3	50.9	125	47.2	09.7	146	48.3	19.0
20	230	46.6	164	18.9	08.7	337	04.1	50.9	140	49.0	09.7	161	50.5	19.0
21	245	49.0	179	18.4	09.2	352	06.8	50.9	155	50.9	09.7	176	52.6	19.0
22	260	51.5	194	18.0	09.7	7	09.6	50.9	170	52.7	09.7	191	54.8	19.1
23	275	54.0	209	17.6	10.2	22	12.3	50.9	185	54.6	09.7	206	57.0	19.1
24	290	56.4	224	17.2	+19 10.7	37	15.1	-26 50.9	200	56.5	+23 09.7	221	59.2	+20 19.2
Dif	—		-4	+5		+28	0		+19		0	+22	0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 21 ^d 5	PHE {	4 ^h : 55 ^m 1 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5									
	PMG: 12 ^h 05 ^m 7								SD: 15 ^h 0		PMG: 5 ^h 37 ^m		Rº: 43 ^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	178	34.9	+21 50.9	278	02.2	-0 09.6	121	60 N	21 10	22 30	** **	23 37 9	12 03 81		
1	193	34.8	50.5	292	36.7 ¹⁵⁵	+0 02.5 ¹²¹	121	58	20 53	21 58	** **	40 11	02 78		
2	208	34.7	50.2	307	11.3 ¹⁵⁶	14.6 ¹²¹	121	56	39	35	23 34	42 14	01 75		
3	223	34.7	49.8	321	45.8 ¹⁵⁵	26.7 ¹²¹	121	54	26	17	22 39	44 16	12 00 73		
4	238	34.6	49.4	336	20.3 ¹⁵⁵	38.8 ¹²¹	121	52	15	21 01	22 09	45 19	11 59 71		
5	253	34.5	+21 49.1	350	54.8 ¹⁵⁵	+0 50.9 ¹²¹	121	50	20 06	20 48	21 47	23 47 20	11 58 69		
6	268	34.5	+21 48.7	5	29.2 ¹⁵⁴	+1 03.0 ¹²¹	121	45	19 45	20 21	21 08	23 51 24	11 57 64		
7	283	34.4	48.3	20	03.6 ¹⁵⁴	15.2 ¹²²	122	40	29	20 01	20 41	54 27	55 61		
8	298	34.3	48.0	34	38.0 ¹⁵⁴	27.3 ¹²¹	121	35	15	19 44	20	56 30	54 58		
9	313	34.2	47.6	49	12.4 ¹⁵⁴	39.5 ¹²²	122	30	19 03	30	20 03	23 59 32	53 55		
10	328	34.2	47.2	63	46.7 ¹⁵³	+1 51.6 ¹²¹	121	20	18 43	19 07	19 36	** ** *	51 51		
11	343	34.1	+21 46.9	78	21.0 ¹⁵³	+2 03.8 ¹²²	122	10 N	18 26	18 48	19 15	** ** *	11 49 47		
12	358	34.0	+21 46.5	92	55.3 ¹⁵³	+2 15.9 ¹²¹	121	0	18 09	18 32	18 57	** ** *	11 48 43		
13	13	33.9	46.1	107	29.5 ¹⁵²	28.1 ¹²²	122	10 S	17 53	16	42	** ** *	46 40		
14	28	33.9	45.8	122	03.7 ¹⁵²	40.2 ¹²¹	121	20	36	18 00	27	** ** *	44 36		
15	43	33.8	45.4	136	37.9 ¹⁵²	+2 52.4 ¹²²	122	30	17	17 43	12	** ** *	42 32		
16	58	33.7	45.0	151	12.0 ¹⁵¹	+3 04.5 ¹²¹	121	35	17 05	33	18 04	** ** *	41 29		
17	73	33.7	+21 44.7	165	46.1 ¹⁵¹	+3 16.7 ¹²²	122	40	16 52	17 22	17 56	** ** *	11 40 26		
18	88	33.6	+21 44.3	180	20.1 ¹⁵⁰	+3 28.8 ¹²¹	121	45	16 37	17 10	17 47	** ** *	11 38 23		
19	103	33.5	43.9	194	54.1 ¹⁵⁰	41.0 ¹²²	122	50	19	16 56	37	** ** *	37 18		
20	118	33.4	43.5	209	28.1 ¹⁵⁰	+3 53.1 ¹²¹	121	52	10	49	32	** ** *	36 17		
21	133	33.4	43.2	224	02.0 ¹⁴⁹	+4 05.3 ¹²²	122	54	16 00	42	27	** ** *	35 15		
22	148	33.3	42.8	238	35.9 ¹⁴⁹	17.4 ¹²¹	121	56	15 49	34	22	** ** *	34 13		
23	163	33.2	42.4	253	09.7 ¹⁴⁸	29.6 ¹²²	122	58	36	25	16	** ** *	33 10		
24	178	33.2	+21 42.0	267	43.5 ¹⁴⁸	+4 41.7 ¹²¹	121	60 S	15 21	16 15	17 09	** ** *	11 32 7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 35 ^m 5		Mag: -4.1 PMG: 9 ^h 03 ^m		Mag: -1.9 PMG: 21 ^h 27 ^m		Mag: -1.9 PMG: 10 ^h 35 ^m		Mag: +0.2 PMG: 9 ^h 11 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	290	56.4	224	17.2	+19 10.7	37 15.1	-26 50.9	200 56.5	+23 09.7	221 59.2	+20 19.2
1	305	58.9	239	16.8	11.3	52 17.8	50.9	215 58.3	09.7	237 01.3	19.2
2	321	01.4	254	16.4	11.8	67 20.5	50.9	231 00.2	09.7	252 03.5	19.2
3	336	03.8	269	16.0	12.3	82 23.3	50.8	246 02.0	09.7	267 05.7	19.3
4	351	06.3	284	15.6	12.8	97 26.0	50.8	261 03.9	09.7	282 07.9	19.3
5	6	08.7	299	15.2	+19 13.3	112 28.7	-26 50.8	276 05.8	+23 09.7	297 10.0	+20 19.3
6	21	11.2	314	14.8	+19 13.8	127 31.4	-26 50.8	291 07.6	+23 09.7	312 12.2	+20 19.4
7	36	13.7	329	14.3	14.3	142 34.2	50.8	306 09.5	09.7	327 14.4	19.4
8	51	16.1	344	13.9	14.8	157 36.9	50.8	321 11.3	09.7	342 16.6	19.4
9	66	18.6	359	13.5	15.3	172 39.6	50.8	336 13.2	09.8	357 18.7	19.5
10	81	21.1	14	13.1	15.8	187 42.3	50.8	351 15.1	09.8	12 20.9	19.5
11	96	23.5	29	12.7	+19 16.4	202 45.1	-26 50.8	6 16.9	+23 09.8	27 23.1	+20 19.6
12	111	26.0	44	12.3	+19 16.9	217 47.8	-26 50.8	21 18.8	+23 09.8	42 25.3	+20 19.6
13	126	28.5	59	11.9	17.4	232 50.5	50.8	36 20.6	09.8	57 27.5	19.6
14	141	30.9	74	11.4	17.9	247 53.2	50.8	51 22.5	09.8	72 29.6	19.7
15	156	33.4	89	11.0	18.4	262 55.9	50.8	66 24.4	09.8	87 31.8	19.7
16	171	35.9	104	10.6	18.9	277 58.6	50.8	81 26.2	09.8	102 34.0	19.7
17	186	38.3	119	10.2	+19 19.4	293 01.4	-26 50.8	96 28.1	+23 09.8	117 36.2	+20 19.8
18	201	40.8	134	09.8	+19 19.9	308 04.1	-26 50.8	111 29.9	+23 09.8	132 38.3	+20 19.8
19	216	43.2	149	09.3	20.4	323 06.8	50.8	126 31.8	09.8	147 40.5	19.9
20	231	45.7	164	08.9	20.9	338 09.5	50.8	141 33.7	09.8	162 42.7	19.9
21	246	48.2	179	08.5	21.4	353 12.2	50.7	156 35.5	09.8	177 44.9	19.9
22	261	50.6	194	08.1	21.9	8 14.9	50.7	171 37.4	09.8	192 47.1	20.0
23	276	53.1	209	07.7	22.4	23 17.6	50.7	186 39.2	09.8	207 49.2	20.0
24	291	55.6	224	07.2	+19 22.9	38 20.3	-26 50.7	201 41.1	+23 09.8	222 51.4	+20 20.0
Dif	—		-4	+5		+27	0	+19	0	+22	

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 8			Edad: 22 ^d 5 PHE { SD: 15 ^h 1 PMG: 6 ^h 20 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	33.2	+21	42.0	267	43.5	+4	41.7	60 N	** **	1 42	3 02	23	46	11	13	24 84
1	193	33.1		41.7	282	17.3 ¹⁴⁸	+4	53.8 ¹²¹	58	** **	2 14	19		51	14		20 80
2	208	33.0		41.3	296	51.0 ¹⁴⁷	+5	05.9 ¹²¹	56	0 38	37	33	23	56	16		16 78
3	223	32.9		40.9	311	24.6 ¹⁴⁶		18.0 ¹²¹	54	1 33	2 55	46	** **	** **			13 75
4	238	32.9		40.5	325	58.2 ¹⁴⁶		30.1 ¹²¹	52	2 03	3 11	3 57	** **	** **			10 73
5	253	32.8	+21	40.1	340	31.8 ¹⁴⁶	+5	42.2 ¹²¹	50	2 25	3 24	4 06	** **	** **		13 07	71
6	268	32.7	+21	39.8	355	05.3 ¹⁴⁵	+5	54.3 ¹²¹	45	3 04	3 51	4 27	** **	** **		13 01	67
7	283	32.7		39.4	9	38.7 ¹⁴⁴	+6	06.3 ¹²⁰	40	31	4 11	43	** **	** **		12 56	63
8	298	32.6		39.0	24	12.1 ¹⁴⁴		18.4 ¹²¹	35	3 52	28	4 57	** **	** **			52 60
9	313	32.5		38.6	38	45.5 ¹⁴⁴		30.4 ¹²⁰	30	4 09	4 42	5 09	** **	** **			48 58
10	328	32.5		38.2	53	18.7 ¹⁴²		42.4 ¹²⁰	20	36	5 05	29	0 03	37		42	53
11	343	32.4	+21	37.9	67	52.0 ¹⁴³	+6	54.5 ¹²¹	10 N	4 57	5 23	5 46	0 06	41		12 36	49
12	358	32.3	+21	37.5	82	25.1 ¹⁴¹	+7	06.4 ¹¹⁹	0	5 14	5 40	6 02	0 10	44		12 31	46
13	13	32.3		37.1	96	58.2 ¹⁴¹		18.4 ¹²⁰	10 S	30	5 56	18	13	48		26	42
14	28	32.2		36.7	111	31.3 ¹⁴¹		30.4 ¹²⁰	20	44	6 12	35	17	52		20	38
15	43	32.1		36.3	126	04.3 ¹⁴⁰		42.3 ¹¹⁹	30	5 59	29	6 55	21	57		14	34
16	58	32.1		35.9	140	37.2 ¹³⁹	+7	54.2 ¹¹⁹	35	6 07	38	7 06	24	59		10	31
17	73	32.0	+21	35.5	155	10.1 ¹³⁹	+8	06.1 ¹¹⁹	40	6 15	6 49	7 19	0 27	62		12 06	28
18	88	31.9	+21	35.2	169	42.9 ¹³⁸	+8	18.0 ¹¹⁹	45	6 24	7 01	7 34	0 30	65		12 01	25
19	103	31.9		34.8	184	15.6 ¹³⁷		29.8 ¹¹⁸	50	35	15	7 52	34	70		11 55	21
20	118	31.8		34.4	198	48.3 ¹³⁷		41.7 ¹¹⁹	52	39	22	8 01	36	71		53	19
21	133	31.7		34.0	213	20.9 ¹³⁶	+8	53.5 ¹¹⁸	54	44	29	11	38	74		50	17
22	148	31.7		33.6	227	53.4 ¹³⁵	+9	05.3 ¹¹⁸	56	49	37	22	40	76		47	15
23	163	31.6		33.2	242	25.8 ¹³⁴		17.0 ¹¹⁷	58	6 55	46	35	42	79		43	13
24	178	31.5	+21	32.8	256	58.2 ¹³⁴	+9	28.7 ¹¹⁷	60 S	7 01	7 56	8 50	0 45	82		11 39	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 31 ^m 6		Mag: -4.1 PMG: 9 ^h 04 ^m		Mag: -1.9 PMG: 21 ^h 23 ^m		Mag: -2.0 PMG: 10 ^h 32 ^m		Mag: +0.2 PMG: 9 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	291	55.6	224	07.2	+19	22.9	38	20.3	-26	50.7
1	306	58.0	239	06.8		23.4	53	23.0		50.7
2	322	00.5	254	06.4		23.9	68	25.7		50.7
3	337	03.0	269	06.0		24.4	83	28.4		50.7
4	352	05.4	284	05.5		24.9	98	31.1		50.7
5	7	07.9	299	05.1	+19	25.3	113	33.8	-26	50.7
6	22	10.4	314	04.7	+19	25.8	128	36.4	-26	50.7
7	37	12.8	329	04.3		26.3	143	39.1		50.7
8	52	15.3	344	03.8		26.8	158	41.8		50.7
9	67	17.7	359	03.4		27.3	173	44.5		50.7
10	82	20.2	14	03.0		27.8	188	47.2		50.7
11	97	22.7	29	02.5	+19	28.3	203	49.9	-26	50.7
12	112	25.1	44	02.1	+19	28.8	218	52.5	-26	50.7
13	127	27.6	59	01.7		29.3	233	55.2		50.7
14	142	30.1	74	01.3		29.8	248	57.9		50.7
15	157	32.5	89	00.8		30.2	264	00.6		50.6
16	172	35.0	104	00.4		30.7	279	03.2		50.6
17	187	37.5	119	00.0	+19	31.2	294	05.9	-26	50.6
18	202	39.9	133	59.5	+19	31.7	309	08.6	-26	50.6
19	217	42.4	148	59.1		32.2	324	11.3		50.6
20	232	44.8	163	58.7		32.7	339	13.9		50.6
21	247	47.3	178	58.2		33.2	354	16.6		50.6
22	262	49.8	193	57.8		33.6	9	19.3		50.6
23	277	52.2	208	57.4		34.1	24	21.9		50.6
24	292	54.7	223	56.9	+19	34.6	39	24.6	-26	50.6
Dif	—		-4		+5		+27		0	
							+19		0	
									+22	
									0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 23 ^d 5	PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 8 20 ^h : 57 ^s 0	SD: 15 ^h 3				Civil		Náutico		Hora	R°	Hora	R°	
	PMG: 12 ^h 05 ^m 9						PMG: 7 ^h 05 ^m				R°: 49 ^m								
	hG ☉	Dec			hG ☾	Dif													
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m	
0	178	31.5	+21	32.8	256	58.2	+9	28.7	60 N	21	07	22	24	** **	23	57	15	14 48 87	
1	193	31.5		32.4	271	30.5 ¹³³		40.4 ¹¹⁷	58	20	50	21	54	** **	** **	**		40 84	
2	208	31.4		32.0	286	02.8 ¹³³	+9	52.1 ¹¹⁷	56		36		32	23	20	** **	**	34 81	
3	223	31.3		31.6	300	35.0 ¹³²	+10	03.7 ¹¹⁶	54		24	21	14	22	33	0	00	19 28 78	
4	238	31.3		31.2	315	07.1 ¹³¹		15.3 ¹¹⁶	52		13	20	59	22	05	04	21	23 76	
5	253	31.2	+21	30.9	329	39.1 ¹³⁰	+10	26.9 ¹¹⁶	50	20	04	20	46	21	44	0	07	23 14 18 74	
6	268	31.1	+21	30.5	344	11.0 ¹²⁹	+10	38.5 ¹¹⁶	45	19	44	20	20	21	06	0	15	27 14 08 69	
7	283	31.1		30.1	358	42.9 ¹²⁹	+10	50.0 ¹¹⁵	40		28	20	00	20	39	21	30	13 59 67	
8	298	31.0		29.7	13	14.7 ¹²⁸	+11	01.4 ¹¹⁴	35		14	19	43	19		26	34	52 63	
9	313	30.9		29.3	27	46.4 ¹²⁷		12.9 ¹¹⁵	30	19	03	29	20	02		31	36	46 61	
10	328	30.9		28.9	42	18.0 ¹²⁶		24.3 ¹¹⁴	20	18	43	19	07	19	35	40	40	35 56	
11	343	30.8	+21	28.5	56	49.5 ¹²⁵	+11	35.6 ¹¹³	10 N	18	25	18	48	19	15	0	47	44 13 25 53	
12	358	30.8	+21	28.1	71	21.0 ¹²⁵	+11	46.9 ¹¹³	0	18	10	18	32	18	58	0	54	48 13 17 49	
13	13	30.7		27.7	85	52.4 ¹²⁴	+11	58.2 ¹¹³	10 S	17	54		16	42		1	01	51 13 08 46	
14	28	30.6		27.3	100	23.7 ¹²³	+12	09.4 ¹¹²	20		37	18	01	28		09	55	12 58 42	
15	43	30.6		26.9	114	54.9 ¹²²		20.6 ¹¹²	30		18	17	44	13		18	59	48 37	
16	58	30.5		26.5	129	26.0 ¹²¹		31.8 ¹¹²	35	17	07		34	18	05	23	62	41 36	
17	73	30.4	+21	26.1	143	57.0 ¹²⁰	+12	42.9 ¹¹¹	40	16	54	17	24	17	57	1	29	65 12 34 33	
18	88	30.4	+21	25.7	158	28.0 ¹²⁰	+12	53.9 ¹¹⁰	45	16	39	17	12	17	48	1	35	69 12 26 30	
19	103	30.3		25.3	172	58.8 ¹¹⁸	+13	04.9 ¹¹⁰	50		21	16	58	38		44	72	16 26	
20	118	30.3		24.9	187	29.6 ¹¹⁸		15.9 ¹¹⁰	52		12		51	34		47	75	12 23	
21	133	30.2		24.5	202	00.3 ¹¹⁷		26.8 ¹⁰⁹	54	16	02		44	29		52	77	07 21	
22	148	30.1		24.0	216	30.9 ¹¹⁶		37.6 ¹⁰⁸	56	15	51		36	24		1	56	80 12 02 18	
23	163	30.1		23.6	231	01.4 ¹¹⁵		48.4 ¹⁰⁸	58		39		28	18		2	01	83 11 56 15	
24	178	30.0	+21	23.2	245	31.8 ¹¹⁴	+13	59.2 ¹⁰⁸	60 S	15	24	16	18	17	12	2	07	87 11 49 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 27 ^m 6		Mag: -4.1 PMG: 9 ^h 04 ^m		Mag: -1.9 PMG: 21 ^h 19 ^m		Mag: -2.0 PMG: 10 ^h 29 ^m		Mag: +0.2 PMG: 9 ^h 04 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	292	54.7	223	56.9	+19	34.6	39	24.6	+23	09.8	223	43.7	+20	20.9
1	307	57.2	238	56.5		35.1	54	27.2		09.8	238	45.9		20.9
2	322	59.6	253	56.0		35.6	69	29.9		09.8	253	48.1		21.0
3	338	02.1	268	55.6		36.0	84	32.5		09.8	268	50.2		21.0
4	353	04.6	283	55.2		36.5	99	35.2		09.8	283	52.4		21.0
5	8	07.0	298	54.7	+19	37.0	114	37.9	+23	09.8	298	54.6	+20	21.1
6	23	09.5	313	54.3	+19	37.5	129	40.5	+23	09.8	313	56.8	+20	21.1
7	38	12.0	328	53.8		37.9	144	43.2		09.8	328	59.0		21.1
8	53	14.4	343	53.4		38.4	159	45.8		09.8	344	01.2		21.2
9	68	16.9	358	53.0		38.9	174	48.4		09.9	359	03.3		21.2
10	83	19.3	13	52.5		39.4	189	51.1		09.9	14	05.5		21.3
11	98	21.8	28	52.1	+19	39.8	204	53.7	+23	09.9	29	07.7	+20	21.3
12	113	24.3	43	51.6	+19	40.3	219	56.4	+23	09.9	44	09.9	+20	21.3
13	128	26.7	58	51.2		40.8	234	59.0		09.9	59	12.1		21.4
14	143	29.2	73	50.7		41.3	250	01.7		09.9	74	14.2		21.4
15	158	31.7	88	50.3		41.7	265	04.3		09.9	89	16.4		21.4
16	173	34.1	103	49.9		42.2	280	06.9		09.9	104	18.6		21.5
17	188	36.6	118	49.4	+19	42.7	295	09.6	+23	09.9	119	20.8	+20	21.5
18	203	39.1	133	49.0	+19	43.1	310	12.2	+23	09.9	134	23.0	+20	21.5
19	218	41.5	148	48.5		43.6	325	14.8		09.9	149	25.1		21.6
20	233	44.0	163	48.1		44.1	340	17.4		09.9	164	27.3		21.6
21	248	46.5	178	47.6		44.5	355	20.1		09.9	179	29.5		21.6
22	263	48.9	193	47.2		45.0	10	22.7		09.9	194	31.7		21.7
23	278	51.4	208	46.7		45.5	25	25.3		09.9	209	33.9		21.7
24	293	53.8	223	46.3	+19	45.9	40	27.9	+23	09.9	224	36.1	+20	21.8
Dif	—		-4	+5		+26	0		+19	0		+22		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 0				Edad: 24 ^d 5 PHE { SD: 15'6 PMG: 7 ^h 54 ^m											
					R°: 52 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	30.0	+21	23.2	245	31.8	+13	59.2	60 N	** **	1 48	3 05	** **	**	16 15	90
1	193	30.0		22.8	260	02.1 ¹¹³	+14	09.9 ¹⁰⁷	58	** **	2 18	22	0 05	19	16 04	86
2	208	29.9		22.4	274	32.3 ¹¹²		20.5 ¹⁰⁶	56	0 52	41	36	12 22	15 55	82	
3	223	29.8		22.0	289	02.4 ¹¹¹		31.1 ¹⁰⁶	54	1 39	2 59	48	19 24	46	8	
4	238	29.8		21.6	303	32.4 ¹¹⁰		41.6 ¹⁰⁵	52	2 07	3 14	3 59	25 26	39	77	
5	253	29.7	+21	21.2	318	02.3 ¹⁰⁹	+14	52.1 ¹⁰⁵	50	2 28	3 27	4 09	0 30	29	15 32	75
6	268	29.7	+21	20.8	332	32.1 ¹⁰⁸	+15	02.4 ¹⁰³	45	3 06	3 53	4 28	0 42	32	15 17	72
7	283	29.6		20.4	347	01.8 ¹⁰⁷		12.8 ¹⁰⁴	40	33	4 13	44	0 51	36	15 06	68
8	298	29.5		20.0	1	31.5 ¹⁰⁷		23.0 ¹⁰²	35	3 54	29	4 58	1 00	38	14 55	66
9	313	29.5		19.5	16	01.0 ¹⁰⁵		33.2 ¹⁰²	30	4 10	4 43	5 10	07 41	47	63	
10	328	29.4		19.1	30	30.4 ¹⁰⁴		43.4 ¹⁰²	20	37	5 05	29	20 45	31	60	
11	343	29.4	+21	18.7	44	59.7 ¹⁰³	+15	53.4 ¹⁰⁰	10 N	4 57	5 24	5 47	1 31	48	14 18	57
12	358	29.3	+21	18.3	59	28.9 ¹⁰²	+16	03.4 ¹⁰⁰	0	5 14	5 40	6 02	1 42	51	14 06	54
13	13	29.3		17.9	73	58.1 ¹⁰²		13.3 ⁹⁹	10 S	30	5 56	18	1 52	55	13 54	50
14	28	29.2		17.5	88	27.1 ¹⁰⁰		23.2 ⁹⁹	20	44	6 11	35	2 04	58	40	48
15	43	29.1		17.1	102	56.0 ⁹⁹		33.0 ⁹⁸	30	5 59	28	6 54	17 63	25	44	
16	58	29.1		16.6	117	24.8 ⁹⁸		42.6 ⁹⁶	35	6 06	37	7 05	25 65	17	41	
17	73	29.0	+21	16.2	131	53.5 ⁹⁷	+16	52.3 ⁹⁷	40	6 14	6 48	7 18	2 34	67	13 07	39
18	88	29.0	+21	15.8	146	22.1 ⁹⁶	+17	01.8 ⁹⁵	45	6 23	7 00	7 33	2 44	71	12 56	35
19	103	28.9		15.4	160	50.6 ⁹⁵		11.3 ⁹⁵	50	33	14	51	2 56	76	42	31
20	118	28.9		15.0	175	18.9 ⁹³		20.6 ⁹³	52	38	20	7 59	3 02	78	35	30
21	133	28.8		14.6	189	47.2 ⁹³		29.9 ⁹³	54	42	27	8 09	09 79	28	28	
22	148	28.7		14.1	204	15.4 ⁹²		39.1 ⁹²	56	48	35	20	16 82	20	25	
23	163	28.7		13.7	218	43.4 ⁹⁰		48.3 ⁹²	58	53	44	32	24 86	11	22	
24	178	28.6	+21	13.3	233	11.4 ⁹⁰	+17	57.3 ⁹⁰	60 S	6 59	7 54	8 47	3 34	89	12 01	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 23 ^m 7		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: -1.9 PMG: 21 ^h 14 ^m		Mag: -2.0 PMG: 10 ^h 26 ^m		Mag: +0.2 PMG: 9 ^h 00 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	293	53.8	223	46.3	+19	45.9	203	10.5	+23	09.9
1	308	56.3	238	45.8		46.4	218	12.4		09.9
2	323	58.8	253	45.4		46.9	233	14.3		09.9
3	339	01.2	268	44.9		47.3	248	16.1		09.9
4	354	03.7	283	44.5		47.8	263	18.0		09.9
5	9	06.2	298	44.0	+19	48.2	278	19.9	+23	09.9
6	24	08.6	313	43.6	+19	48.7	293	21.7	+23	09.9
7	39	11.1	328	43.1		49.2	308	23.6		09.9
8	54	13.6	343	42.7		49.6	323	25.5		09.9
9	69	16.0	358	42.2		50.1	338	27.3		09.9
10	84	18.5	13	41.7		50.5	353	29.2		09.9
11	99	20.9	28	41.3	+19	51.0	8	31.0	+23	09.9
12	114	23.4	43	40.8	+19	51.4	23	32.9	+23	09.9
13	129	25.9	58	40.4		51.9	38	34.8		09.9
14	144	28.3	73	39.9		52.4	53	36.6		09.9
15	159	30.8	88	39.5		52.8	68	38.5		09.9
16	174	33.3	103	39.0		53.3	83	40.4		09.9
17	189	35.7	118	38.5	+19	53.7	98	42.2	+23	09.9
18	204	38.2	133	38.1	+19	54.2	113	44.1	+23	09.9
19	219	40.7	148	37.6		54.6	128	46.0		09.9
20	234	43.1	163	37.2		55.1	143	47.8		09.9
21	249	45.6	178	36.7		55.5	158	49.7		09.9
22	264	48.1	193	36.2		56.0	173	51.6		09.9
23	279	50.5	208	35.8		56.4	188	53.4		09.9
24	294	53.0	223	35.3	+19	56.9	203	55.3	+23	09.9
Dif	—		-5		+5		+19		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 1				Edad: 25 ^d 5 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'9 PMG: 8 ^h 46 ^m R°: 57 ^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	178	28.6	+21	13.3	233	11.4	+17	57.3	60 N	21 03	22 18	** **	0 12 24	17 45	85			
1	193	28.6		12.9	247	39.2	+18	06.2	58	20 47	21 50	** **	24 27	30	82			
2	208	28.5		12.4	262	07.0		15.1	56	33	28	23 09	34 30	17	79			
3	223	28.5		12.0	276	34.6		23.9	54	22	21 11	22 28	43 33	17 06	77			
4	238	28.4		11.6	291	02.1		32.5	52	11	20 56	22 01	51 35	16 56	76			
5	253	28.4	+21	11.2	305	29.5	+18	41.1	50	20 02	20 43	21 41	0 59 36	16 47	74			
6	268	28.3	+21	10.7	319	56.8	+18	49.6	45	19 42	20 18	21 04	1 14 40	16 29	71			
7	283	28.3		10.3	334	24.0	+18	58.0	40	27	19 58	20 38	27 43	14	69			
8	298	28.2		09.9	348	51.1	+19	06.2	35	13	42	17	38 46	16 01	67			
9	313	28.1		09.5	3	18.1		14.4	30	19 02	29	20 01	1 48 47	15 50	65			
10	328	28.1		09.0	17	45.0		22.5	20	18 42	19 06	19 35	2 05 50	31	63			
11	343	28.0	+21	08.6	32	11.7	+19	30.5	10 N	18 25	18 48	19 15	2 19 54	15 15	60			
12	358	28.0	+21	08.2	46	38.4	+19	38.3	0	18 10	18 32	18 58	2 33 56	15 00	58			
13	13	27.9		07.7	61	04.9		46.1	10 S	17 54	17	43	2 47 59	14 44	56			
14	28	27.9		07.3	75	31.3	+19	53.7	20	38	18 01	28	3 02 62	28	54			
15	43	27.8		06.9	89	57.7	+20	01.3	30	19	17 45	14	20 64	14 09	51			
16	58	27.8		06.5	104	23.9		08.7	35	17 08	35	18 07	30 66	13 58	50			
17	73	27.7	+21	06.0	118	50.0	+20	16.0	40	16 55	17 25	17 59	3 41 69	13 46	47			
18	88	27.7	+21	05.6	133	16.0	+20	23.2	45	16 41	17 14	17 50	3 55 72	13 31	45			
19	103	27.6		05.2	147	41.9		30.3	50	23	17 00	40	4 12 75	13	42			
20	118	27.6		04.7	162	07.7		37.2	52	14	16 53	36	20 77	13 05	40			
21	133	27.5		04.3	176	33.4		44.1	54	16 05	47	31	28 80	12 56	38			
22	148	27.5		03.9	190	59.0		50.8	56	15 54	39	26	38 82	45	36			
23	163	27.4		03.4	205	24.5	+20	57.4	58	42	30	21	4 50 85	33	33			
24	178	27.4	+21	03.0	219	49.8	+21	03.9	60 S	15 28	16 21	17 15	5 03 89	12 19	29			
UT	ARIES		VENUS				MARTE				JÚPITER			SATURNO				
	PMG: 4 ^h 19 ^m 8		Mag: -4.1 PMG: 9 ^h 06 ^m				Mag: -1.8 PMG: 21 ^h 10 ^m				Mag: -2.0 PMG: 10 ^h 23 ^m			Mag: +0.2 PMG: 8 ^h 57 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	53.0	223	35.3	+19	56.9	41	30.4	-26	50.4	203	55.3	+23	09.9	225	28.5	+20	22.6
1	309	55.4	238	34.8		57.3	56	32.9		50.4	218	57.2		09.9	240	30.7		22.6
2	324	57.9	253	34.4		57.7	71	35.5		50.4	233	59.0		09.9	255	32.8		22.7
3	340	00.4	268	33.9		58.2	86	38.1		50.4	249	00.9		09.9	270	35.0		22.7
4	355	02.8	283	33.4		58.6	101	40.7		50.4	264	02.8		09.9	285	37.2		22.7
5	10	05.3	298	33.0	+19	59.1	116	43.2	-26	50.4	279	04.6	+23	09.9	300	39.4	+20	22.8
6	25	07.8	313	32.5	+19	59.5	131	45.8	-26	50.4	294	06.5	+23	09.9	315	41.6	+20	22.8
7	40	10.2	328	32.1	+20	00.0	146	48.4		50.4	309	08.4		09.9	330	43.8		22.8
8	55	12.7	343	31.6	+20	00.4	161	50.9		50.3	324	10.2		09.9	345	45.9		22.9
9	70	15.2	358	31.1		00.8	176	53.5		50.3	339	12.1		09.9	0	48.1		22.9
10	85	17.6	13	30.6		01.3	191	56.1		50.3	354	14.0		09.9	15	50.3		22.9
11	100	20.1	28	30.2	+20	01.7	206	58.6	-26	50.3	9	15.8	+23	09.9	30	52.5	+20	23.0
12	115	22.6	43	29.7	+20	02.2	222	01.2	-26	50.3	24	17.7	+23	09.9	45	54.7	+20	23.0
13	130	25.0	58	29.2		02.6	237	03.8		50.3	39	19.6		09.9	60	56.9		23.0
14	145	27.5	73	28.8		03.0	252	06.3		50.3	54	21.4		09.9	75	59.1		23.1
15	160	29.9	88	28.3		03.5	267	08.9		50.3	69	23.3		09.9	91	01.2		23.1
16	175	32.4	103	27.8		03.9	282	11.4		50.3	84	25.2		09.9	106	03.4		23.1
17	190	34.9	118	27.4	+20	04.3	297	14.0	-26	50.3	99	27.0	+23	09.9	121	05.6	+20	23.2
18	205	37.3	133	26.9	+20	04.8	312	16.5	-26	50.3	114	28.9	+23	09.9	136	07.8	+20	23.2
19	220	39.8	148	26.4		05.2	327	19.1		50.3	129	30.8		09.9	151	10.0		23.2
20	235	42.3	163	25.9		05.6	342	21.6		50.3	144	32.6		09.9	166	12.2		23.3
21	250	44.7	178	25.5		06.1	357	24.2		50.3	159	34.5		09.9	181	14.4		23.3
22	265	47.2	193	25.0		06.5	12	26.7		50.3	174	36.4		09.8	196	16.6		23.3
23	280	49.7	208	24.5		06.9	27	29.3		50.3	189	38.3		09.8	211	18.7		23.4
24	295	52.1	223	24.0	+20	07.4	42	31.8	-26	50.3	204	40.1	+23	09.8	226	20.9	+20	23.4
Dif	—		-5		+4		+26		0		+19		0		+22			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 2			Edad: 26 ^d 5 PHE { 4 ^h : 59'2 12 ^h : 59'5 20 ^h : 59'8 SD: 16'1 PMG: 9 ^h 43 ^m 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	178	27.4	+21	03.0	219	49.8	+21	03.9	60 N	** *	1 55	3 09	0 36	37	19 10	71
1	193	27.3		02.5	234	15.1		10.2	58	** *	2 23	26	0 51	41	18 52	69
2	208	27.3		02.1	248	40.3		16.4	56	1 04	2 45	39	1 04	44	36	69
3	223	27.2		01.7	263	05.4		22.5	54	1 45	3 02	3 51	16	45	23	68
4	238	27.2		01.2	277	30.3		28.5	52	2 12	17	4 02	26	47	12	67
5	253	27.1	+21	00.8	291	55.2	+21	34.3	50	2 32	3 29	4 11	1 35	48	18 01	68
6	268	27.1	+21	00.3	306	20.0	+21	40.0	45	3 09	3 55	4 30	1 54	51	17 40	66
7	283	27.0	+20	59.9	320	44.6		45.5	40	35	4 14	46	2 10	53	23	65
8	298	27.0		59.5	335	09.2		50.9	35	3 55	30	4 59	24	53	17 08	65
9	313	26.9		59.0	349	33.7	+21	56.2	30	4 12	4 44	5 11	35	55	16 55	65
10	328	26.9		58.6	3	58.1	+22	01.4	20	38	5 06	30	2 55	57	34	63
11	343	26.8	+20	58.1	18	22.4	+22	06.4	10 N	4 58	5 24	5 47	3 13	59	16 15	63
12	358	26.8	+20	57.7	32	46.6	+22	11.2	0	5 15	5 40	6 03	3 29	61	15 58	62
13	13	26.8		57.2	47	10.7		15.9	10 S	30	5 56	18	3 46	62	40	61
14	28	26.7		56.8	61	34.7		20.5	20	44	6 11	34	4 04	63	22	60
15	43	26.7		56.4	75	58.6		24.9	30	5 58	27	6 53	24	66	15 00	59
16	58	26.6		55.9	90	22.5		29.2	35	6 06	37	7 04	36	67	14 48	58
17	73	26.6	+20	55.5	104	46.2	+22	33.3	40	6 13	6 47	7 16	4 50	68	14 33	57
18	88	26.5	+20	55.0	119	09.9	+22	37.3	45	6 22	6 58	7 31	5 07	69	14 16	56
19	103	26.5		54.6	133	33.5		41.1	50	32	7 12	49	27	72	13 55	54
20	118	26.4		54.1	147	57.0		44.8	52	36	18	7 57	37	73	45	53
21	133	26.4		53.7	162	20.4		48.3	54	41	25	8 07	5 48	74	34	52
22	148	26.3		53.2	176	43.8		51.7	56	46	33	17	6 00	76	21	51
23	163	26.3		52.8	191	07.1		54.9	58	51	41	29	15	77	13 06	49
24	178	26.3	+20	52.3	205	30.3	+22	58.0	60 S	6 57	7 51	8 43	6 32	80	12 48	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 15 ^m 8		Mag: -4.1 PMG: 9 ^h 07 ^m		Mag: -1.8 PMG: 21 ^h 06 ^m		Mag: -2.0 PMG: 10 ^h 20 ^m		Mag: +0.2 PMG: 8 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	295	52.1	223	24.0	+20	07.4	42	31.8	-26	50.3	204	40.1	+23	09.8	226	20.9	+20	23.4
1	310	54.6	238	23.6		07.8	57	34.4		50.3	219	42.0		09.8	241	23.1		23.4
2	325	57.1	253	23.1		08.2	72	36.9		50.3	234	43.9		09.8	256	25.3		23.5
3	340	59.5	268	22.6		08.6	87	39.4		50.3	249	45.7		09.8	271	27.5		23.5
4	356	02.0	283	22.1		09.1	102	42.0		50.3	264	47.6		09.8	286	29.7		23.5
5	11	04.4	298	21.6	+20	09.5	117	44.5	-26	50.3	279	49.5	+23	09.8	301	31.9	+20	23.6
6	26	06.9	313	21.2	+20	09.9	132	47.0	-26	50.3	294	51.3	+23	09.8	316	34.1	+20	23.6
7	41	09.4	328	20.7		10.3	147	49.6		50.3	309	53.2		09.8	331	36.2		23.7
8	56	11.8	343	20.2		10.8	162	52.1		50.3	324	55.1		09.8	346	38.4		23.7
9	71	14.3	358	19.7		11.2	177	54.6		50.3	339	56.9		09.8	1	40.6		23.7
10	86	16.8	13	19.2		11.6	192	57.2		50.3	354	58.8		09.8	16	42.8		23.8
11	101	19.2	28	18.8	+20	12.0	207	59.7	-26	50.3	10	00.7	+23	09.8	31	45.0	+20	23.8
12	116	21.7	43	18.3	+20	12.4	223	02.2	-26	50.3	25	02.5	+23	09.8	46	47.2	+20	23.8
13	131	24.2	58	17.8		12.9	238	04.7		50.3	40	04.4		09.8	61	49.4		23.9
14	146	26.6	73	17.3		13.3	253	07.2		50.3	55	06.3		09.8	76	51.6		23.9
15	161	29.1	88	16.8		13.7	268	09.8		50.2	70	08.1		09.8	91	53.7		23.9
16	176	31.6	103	16.3		14.1	283	12.3		50.2	85	10.0		09.8	106	55.9		24.0
17	191	34.0	118	15.9	+20	14.5	298	14.8	-26	50.2	100	11.9	+23	09.8	121	58.1	+20	24.0
18	206	36.5	133	15.4	+20	14.9	313	17.3	-26	50.2	115	13.8	+23	09.8	137	00.3	+20	24.0
19	221	38.9	148	14.9		15.4	328	19.8		50.2	130	15.6		09.8	152	02.5		24.1
20	236	41.4	163	14.4		15.8	343	22.3		50.2	145	17.5		09.8	167	04.7		24.1
21	251	43.9	178	13.9		16.2	358	24.8		50.2	160	19.4		09.8	182	06.9		24.1
22	266	46.3	193	13.4		16.6	13	27.3		50.2	175	21.2		09.8	197	09.1		24.2
23	281	48.8	208	12.9		17.0	28	29.8		50.2	190	23.1		09.8	212	11.3		24.2
24	296	51.3	223	12.5	+20	17.4	43	32.3	-26	50.2	205	25.0	+23	09.8	227	13.4	+20	24.2
Dif	—		-5		+4		+25		0		+19		0		+22			

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: 27 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 R°: 63 ^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	26.3	+20 52.3	205	30.3	+22 58.0	29	60 N	21 00	22 12	** **	1 13 60	20 21 50	
1	193	26.2	51.9	219	53.4	+23 00.9	27	58	20 44	21 45	** **	32 60	20 01 53	
2	208	26.2	51.4	234	16.5	03.6	27	56	30	24	22 59	1 48 60	19 45 54	
3	223	26.1	51.0	248	39.4	06.2	26	54	19	21 07	22 22	2 01 61	31 56	
4	238	26.1	50.5	263	02.4	08.6	24	52	09	20 53	21 57	13 61	19 56	
5	253	26.0	+20 50.0	277	25.2	+23 10.8	22	50	20 00	20 41	21 37	2 23 62	19 09 56	
6	268	26.0	+20 49.6	291	48.0	+23 12.9	21	45	19 41	20 16	21 02	2 45 62	18 46 59	
7	283	26.0	49.1	306	10.7	14.9	20	40	25	19 57	20 36	3 03 62	28 60	
8	298	25.9	48.7	320	33.4	16.6	17	35	12	41	16	17 63	13 60	
9	313	25.9	48.2	334	56.0	18.2	16	30	19 01	28	20 00	30 63	18 00 61	
10	328	25.8	47.8	349	18.6	19.6	14	20	18 42	19 06	19 34	3 52 63	17 37 62	
11	343	25.8	+20 47.3	3	41.1	+23 20.9	13	10 N	18 25	18 48	19 14	4 12 63	17 18 63	
12	358	25.7	+20 46.9	18	03.6	+23 22.0	11	0	18 10	18 32	18 58	4 30 63	17 00 63	
13	13	25.7	46.4	32	26.0	22.9	9	10 S	17 55	17	43	4 48 63	16 41 64	
14	28	25.7	45.9	46	48.3	23.7	8	20	38	18 02	29	5 07 63	16 22 65	
15	43	25.6	45.5	61	10.6	24.2	5	30	20	17 46	15	30 63	15 59 66	
16	58	25.6	45.0	75	32.9	24.6	4	35	17 09	37	08	43 63	46 66	
17	73	25.5	+20 44.5	89	55.2	+23 24.9	3	40	16 57	17 27	18 00	5 58 63	15 30 67	
18	88	25.5	+20 44.1	104	17.4	+23 25.0	1	45	16 43	17 15	17 52	6 16 63	15 12 67	
19	103	25.5	43.6	118	39.5	24.8	2	50	25	17 02	42	39 62	14 49 68	
20	118	25.4	43.2	133	01.7	24.6	2	52	17	16 56	38	6 50 62	38 69	
21	133	25.4	42.7	147	23.8	24.1	5	54	16 08	49	33	7 02 62	26 69	
22	148	25.3	42.2	161	45.8	23.5	6	56	15 57	41	29	16 62	14 12 70	
23	163	25.3	41.8	176	07.9	22.7	8	58	45	33	23	32 62	13 55 71	
24	178	25.3	+20 41.3	190	29.9	+23 21.7	10	60 S	15 31	16 24	17 18	7 52 61	13 35 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 11 ^m 9		Mag: -4.1 PMG: 9 ^h 07 ^m			Mag: -1.8 PMG: 21 ^h 02 ^m			Mag: -2.0 PMG: 10 ^h 17 ^m			Mag: +0.2 PMG: 8 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	296	51.3	223 12.5	+20 17.4	43 32.3	-26 50.2	205 25.0	+23 09.8	227 13.4	+20 09.8	227 13.4	+20 24.2		
1	311	53.7	238 12.0	17.8	58 34.8	50.2	220 26.8	09.8	242 15.6	24.3	242 15.6	24.3		
2	326	56.2	253 11.5	18.2	73 37.3	50.2	235 28.7	09.8	257 17.8	24.3	257 17.8	24.3		
3	341	58.7	268 11.0	18.6	88 39.8	50.2	250 30.6	09.8	272 20.0	24.3	272 20.0	24.3		
4	357	01.1	283 10.5	19.1	103 42.3	50.2	265 32.5	09.8	287 22.2	24.4	287 22.2	24.4		
5	12	03.6	298 10.0	+20 19.5	118 44.8	-26 50.2	280 34.3	+23 09.8	302 24.4	+20 24.4	302 24.4	+20 24.4		
6	27	06.1	313 09.5	+20 19.9	133 47.3	-26 50.2	295 36.2	+23 09.8	317 26.6	+20 24.4	317 26.6	+20 24.4		
7	42	08.5	328 09.0	20.3	148 49.8	50.2	310 38.1	09.8	332 28.8	24.5	332 28.8	24.5		
8	57	11.0	343 08.5	20.7	163 52.3	50.2	325 39.9	09.8	347 31.0	24.5	347 31.0	24.5		
9	72	13.4	358 08.0	21.1	178 54.8	50.2	340 41.8	09.8	2 33.2	24.5	2 33.2	24.5		
10	87	15.9	13 07.5	21.5	193 57.3	50.2	355 43.7	09.8	17 35.3	24.6	17 35.3	24.6		
11	102	18.4	28 07.0	+20 21.9	208 59.8	-26 50.2	10 45.6	+23 09.8	32 37.5	+20 24.6	32 37.5	+20 24.6		
12	117	20.8	43 06.6	+20 22.3	224 02.2	-26 50.2	25 47.4	+23 09.8	47 39.7	+20 24.6	47 39.7	+20 24.6		
13	132	23.3	58 06.1	22.7	239 04.7	50.2	40 49.3	09.8	62 41.9	24.7	62 41.9	24.7		
14	147	25.8	73 05.6	23.1	254 07.2	50.2	55 51.2	09.8	77 44.1	24.7	77 44.1	24.7		
15	162	28.2	88 05.1	23.5	269 09.7	50.2	70 53.0	09.8	92 46.3	24.7	92 46.3	24.7		
16	177	30.7	103 04.6	23.9	284 12.2	50.2	85 54.9	09.8	107 48.5	24.8	107 48.5	24.8		
17	192	33.2	118 04.1	+20 24.3	299 14.6	-26 50.2	100 56.8	+23 09.8	122 50.7	+20 24.8	122 50.7	+20 24.8		
18	207	35.6	133 03.6	+20 24.7	314 17.1	-26 50.2	115 58.6	+23 09.8	137 52.9	+20 24.8	137 52.9	+20 24.8		
19	222	38.1	148 03.1	25.1	329 19.6	50.2	131 00.5	09.8	152 55.1	24.9	152 55.1	24.9		
20	237	40.5	163 02.6	25.5	344 22.0	50.2	146 02.4	09.8	167 57.3	24.9	167 57.3	24.9		
21	252	43.0	178 02.1	25.9	359 24.5	50.2	161 04.3	09.8	182 59.5	24.9	182 59.5	24.9		
22	267	45.5	193 01.6	26.3	14 27.0	50.2	176 06.1	09.8	198 01.6	25.0	198 01.6	25.0		
23	282	47.9	208 01.1	26.7	29 29.4	50.2	191 08.0	09.7	213 03.8	25.0	213 03.8	25.0		
24	297	50.4	223 00.6	+20 27.0	44 31.9	-26 50.2	206 09.9	+23 09.7	228 06.0	+20 25.0	228 06.0	+20 25.0		
Dif	—		-5 +4		+25 0		+19 0		+22 0		+22 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 28 ^d 5	PHE { 4 ^h : 60'6 12 ^h : 60'8 20 ^h : 60'9											
	PMG: 12 ^h 06 ^m 3					PMG: 11 ^h 48 ^m		R°: 63 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.3	+20 41.3	190	29.9	+23 21.7	11	60 N	** **	2 01	3 14	2 13	82	21 11	32	
1	193	25.2	40.8	204	51.9	20.6	13	58	** *	28	29	32	80	20 54	36	
2	208	25.2	40.4	219	13.9	19.3	15	56	1 14	2 49	43	2 48	78	39	39	
3	223	25.1	39.9	233	35.9	17.8	17	54	1 51	3 06	3 54	3 02	76	27	44	
4	238	25.1	39.4	247	57.8	16.1	18	52	2 16	20	4 04	14	75	15	44	
5	253	25.1	+20 39.0	262	19.8	+23 14.3	21	50	2 36	3 32	4 13	3 25	74	20 05	46	
6	268	25.0	+20 38.5	276	41.7	+23 12.2	22	45	3 11	3 57	4 32	3 47	72	19 45	48	
7	283	25.0	38.0	291	03.6	10.0	23	40	37	4 16	4 48	4 05	70	28	51	
8	298	25.0	37.5	305	25.6	07.7	24	35	3 57	32	5 01	20	69	13	53	
9	313	24.9	37.1	319	47.5	05.1	26	30	4 13	4 45	12	33	68	19 01	55	
10	328	24.9	36.6	334	09.4	+23 02.4	27	20	39	5 07	31	4 55	67	18 39	58	
11	343	24.9	+20 36.1	348	31.3	+22 59.5	29	10 N	4 58	5 25	5 47	5 15	65	18 21	60	
12	358	24.8	+20 35.7	2	53.3	+22 56.5	30	0	5 15	5 41	6 03	5 33	63	18 03	63	
13	13	24.8	35.2	17	15.2	53.2	33	10 S	30	5 56	18	5 51	62	17 45	65	
14	28	24.7	34.7	31	37.2	49.8	34	20	44	6 11	34	6 10	60	27	67	
15	43	24.7	34.2	45	59.2	46.2	36	30	5 57	27	6 52	33	58	17 05	70	
16	58	24.7	33.8	60	21.1	42.5	37	35	6 05	36	7 03	6 46	57	16 52	71	
17	73	24.6	+20 33.3	74	43.1	+22 38.5	40	40	6 12	6 46	7 15	7 01	55	16 37	74	
18	88	24.6	+20 32.8	89	05.2	+22 34.4	41	45	6 21	6 57	7 29	7 19	53	16 19	76	
19	103	24.6	32.3	103	27.2	30.2	42	50	30	7 10	47	41	51	15 57	80	
20	118	24.5	31.9	117	49.3	25.7	45	52	34	16	7 55	7 52	49	47	81	
21	133	24.5	31.4	132	11.4	21.1	46	54	39	23	8 04	8 04	48	35	83	
22	148	24.5	30.9	146	33.5	16.4	47	56	43	30	14	18	46	22	84	
23	163	24.4	30.4	160	55.6	11.4	50	58	49	39	26	34	43	15 06	87	
24	178	24.4	+20 29.9	175	17.8	+22 06.3	51	60 S	6 54	7 48	8 40	8 53	40	14 47	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 08 ^m 0		Mag: -4.1 PMG: 9 ^h 08 ^m		Mag: -1.8 PMG: 20 ^h 58 ^m		Mag: -2.0 PMG: 10 ^h 14 ^m		Mag: +0.2 PMG: 8 ^h 46 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	297	50.4	223	00.6	+20 27.0	44	31.9	-26 50.2	206	09.9	+23 09.7	228	06.0	+20 25.0	
1	312	52.9	238	00.1	27.4	59	34.4	50.2	221	11.8	09.7	243	08.2	25.1	
2	327	55.3	252	59.6	27.8	74	36.8	50.2	236	13.6	09.7	258	10.4	25.1	
3	342	57.8	267	59.1	28.2	89	39.3	50.2	251	15.5	09.7	273	12.6	25.1	
4	358	00.3	282	58.6	28.6	104	41.7	50.2	266	17.4	09.7	288	14.8	25.2	
5	13	02.7	297	58.1	+20 29.0	119	44.2	-26 50.2	281	19.2	+23 09.7	303	17.0	+20 25.2	
6	28	05.2	312	57.6	+20 29.4	134	46.6	-26 50.2	296	21.1	+23 09.7	318	19.2	+20 25.2	
7	43	07.7	327	57.1	29.8	149	49.1	50.2	311	23.0	09.7	333	21.4	25.3	
8	58	10.1	342	56.6	30.2	164	51.5	50.2	326	24.9	09.7	348	23.6	25.3	
9	73	12.6	357	56.0	30.5	179	54.0	50.2	341	26.7	09.7	3	25.8	25.3	
10	88	15.0	12	55.5	30.9	194	56.4	50.2	356	28.6	09.7	18	28.0	25.3	
11	103	17.5	27	55.0	+20 31.3	209	58.9	-26 50.2	11	30.5	+23 09.7	33	30.1	+20 25.4	
12	118	20.0	42	54.5	+20 31.7	225	01.3	-26 50.2	26	32.3	+23 09.7	48	32.3	+20 25.4	
13	133	22.4	57	54.0	32.1	240	03.8	50.2	41	34.2	09.7	63	34.5	25.4	
14	148	24.9	72	53.5	32.4	255	06.2	50.2	56	36.1	09.7	78	36.7	25.5	
15	163	27.4	87	53.0	32.8	270	08.6	50.2	71	38.0	09.7	93	38.9	25.5	
16	178	29.8	102	52.5	33.2	285	11.1	50.2	86	39.8	09.7	108	41.1	25.5	
17	193	32.3	117	52.0	+20 33.6	300	13.5	-26 50.2	101	41.7	+23 09.7	123	43.3	+20 25.6	
18	208	34.8	132	51.5	+20 34.0	315	16.0	-26 50.2	116	43.6	+23 09.7	138	45.5	+20 25.6	
19	223	37.2	147	51.0	34.3	330	18.4	50.2	131	45.5	09.7	153	47.7	25.6	
20	238	39.7	162	50.5	34.7	345	20.8	50.2	146	47.3	09.7	168	49.9	25.7	
21	253	42.2	177	49.9	35.1	0	23.2	50.2	161	49.2	09.7	183	52.1	25.7	
22	268	44.6	192	49.4	35.5	15	25.7	50.2	176	51.1	09.7	198	54.3	25.7	
23	283	47.1	207	48.9	35.8	30	28.1	50.2	191	53.0	09.7	213	56.5	25.8	
24	298	49.5	222	48.4	+20 36.2	45	30.5	-26 50.2	206	54.8	+23 09.7	228	58.7	+20 25.8	
Dif	—		-5		+4		+24	0		+19		0		+22	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 29 ^d 5 PHE { 4 ^h : 61 ^o 0 12 ^h : 61 ^o 1 20 ^h : 61 ^o 1 R ^o : 60 ^m												
	PMG: 12 ^h 06 ^m 4				SD: 16 ^h 6 PMG: 12 ^h 51 ^m												
	hG ☉ Dec				hG ☾ Dif Dec Dif						Civil	Náutico	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	24.4	+20	29.9	175	17.8	+22	06.3	60 N	20 56	22 06	** **	3 35	96	21 43	21	
1	193	24.4		29.5	189	40.0	32	+22	01.0	53	58	40	21 40	** **	3 52	92	
2	208	24.3		29.0	204	02.3	33	+21	55.6	54	56	27	20	22 50	4 06	89	
3	223	24.3		28.5	218	24.6	33		50.0	56	54	16	21 04	22 16	18 87	21 08 31	
4	238	24.3		28.0	232	46.9	33		44.2	58	52	20 06	20 50	21 53	29 84	20 59 33	
5	253	24.2	+20	27.5	247	09.3	34	+21	38.3	59	50	19 57	20 38	21 34	4 39	82	
6	268	24.2	+20	27.0	261	31.7	34	+21	32.2	61	45	19 39	20 14	20 59	4 59	78	
7	283	24.2		26.6	275	54.2	35		25.9	63	40	24	19 55	34	5 15	76	
8	298	24.2		26.1	290	16.7	35		19.5	64	35	11	40	20 14	29 73	20 06 46	
9	313	24.1		25.6	304	39.3	36		12.9	66	30	19 00	27	19 59	5 41	71	
10	328	24.1		25.1	319	01.9	36	+21	06.2	67	20	18 41	19 05	33	6 02	67	
11	343	24.1	+20	24.6	333	24.6	37	+20	59.3	69	10 N	18 25	18 48	19 14	6 20	64	
12	358	24.0	+20	24.1	347	47.4	38	+20	52.2	71	0	18 10	18 32	18 58	6 36	61	
13	13	24.0		23.6	2	10.2	38		45.0	72	10 S	17 55	17	43	6 53	58	
14	28	24.0		23.1	16	33.0	38		37.7	73	20	39	18 03	30	7 10	56	
15	43	23.9		22.7	30	55.9	39		30.2	75	30	21	17 47	16	31	51	
16	58	23.9		22.2	45	18.9	40		22.5	77	35	17 11	38	09	43	49	
17	73	23.9	+20	21.7	59	41.9	40	+20	14.7	78	40	16 59	17 28	18 01	7 56	47	
18	88	23.9	+20	21.2	74	05.0	41	+20	06.8	79	45	16 45	17 17	17 53	8 12	44	
19	103	23.8		20.7	88	28.2	42	+19	58.7	81	50	28	17 04	44	32	40	
20	118	23.8		20.2	102	51.5	43		50.4	83	52	19	16 58	40	41	38	
21	133	23.8		19.7	117	14.8	43		42.1	83	54	10	51	36	8 52	35	
22	148	23.8		19.2	131	38.1	43		33.5	86	56	16 00	44	31	9 04	32	
23	163	23.7		18.7	146	01.6	45		24.9	86	58	15 49	36	26	17	29	
24	178	23.7	+20	18.2	160	25.1	45	+19	16.1	88	60 S	15 35	16 27	17 20	9 33	25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 04 ^m 0		Mag: -4.1 PMG: 9 ^h 09 ^m		Mag: -1.7 PMG: 20 ^h 55 ^m		Mag: -2.0 PMG: 10 ^h 11 ^m		Mag: +0.2 PMG: 8 ^h 43 ^m	
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec	hG ♅ Dec				
h	°	'	°	'	°	'	°	'	°	'
0	298	49.5	222	48.4	+20	36.2	45	30.5	-26	50.2
1	313	52.0	237	47.9		36.6	60	32.9		50.2
2	328	54.5	252	47.4		37.0	75	35.4		50.2
3	343	56.9	267	46.9		37.3	90	37.8		50.2
4	358	59.4	282	46.4		37.7	105	40.2		50.2
5	14	01.9	297	45.8	+20	38.1	120	42.6	-26	50.2
6	29	04.3	312	45.3	+20	38.4	135	45.0	-26	50.2
7	44	06.8	327	44.8		38.8	150	47.4		50.2
8	59	09.3	342	44.3		39.2	165	49.8		50.2
9	74	11.7	357	43.8		39.5	180	52.2		50.2
10	89	14.2	12	43.3		39.9	195	54.7		50.2
11	104	16.7	27	42.7	+20	40.3	210	57.1	-26	50.2
12	119	19.1	42	42.2	+20	40.6	225	59.5	-26	50.2
13	134	21.6	57	41.7		41.0	241	01.9		50.2
14	149	24.0	72	41.2		41.3	256	04.3		50.2
15	164	26.5	87	40.7		41.7	271	06.7		50.2
16	179	29.0	102	40.1		42.1	286	09.1		50.2
17	194	31.4	117	39.6	+20	42.4	301	11.5	-26	50.2
18	209	33.9	132	39.1	+20	42.8	316	13.8	-26	50.2
19	224	36.4	147	38.6		43.1	331	16.2		50.2
20	239	38.8	162	38.1		43.5	346	18.6		50.2
21	254	41.3	177	37.5		43.9	1	21.0		50.2
22	269	43.8	192	37.0		44.2	16	23.4		50.2
23	284	46.2	207	36.5		44.6	31	25.8		50.2
24	299	48.7	222	36.0	+20	44.9	46	28.2	-26	50.2
Dif	—		-5 +4		+24		0		+19 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 4			Edad: 1 ^d 2 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 0 20 ^h : 60 ^m 9 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	178	23.7	+20 18.2	160	25.1	+19 16.1	89	60 N	2 08	3 18	5 11	101	22 04	14	
1	193	23.7	17.7	174	48.7	+19 07.2	89	58	33	33	24	96	21 54	18	
2	208	23.6	17.2	189	12.4	+18 58.1	91	56	1 23	2 53	35	93	46	21	
3	223	23.6	16.7	203	36.1	48.9	92	54	1 57	3 09	45	90	39	23	
4	238	23.6	16.2	218	00.0	39.5	94	52	2 21	23	4 57	5 53	87	32 26	
5	253	23.6	+20 15.7	232	23.9	+18 30.1	94	50	2 39	3 35	4 16	6 01	85	21 26 28	
6	268	23.5	+20 15.2	246	47.8	+18 20.5	96	45	3 14	3 59	4 34	6 17	80	21 13 33	
7	283	23.5	14.7	261	11.9	10.8	97	40	39	4 18	4 49	31	76	21 02 37	
8	298	23.5	14.2	275	36.0	+18 00.9	99	35	3 59	33	5 02	42	73	20 52 41	
9	313	23.5	13.7	290	00.3	+17 51.0	99	30	4 15	4 46	13	6 52	70	44 43	
10	328	23.4	13.2	304	24.6	40.9	101	20	40	5 08	32	7 09	66	30 48	
11	343	23.4	+20 12.7	318	49.0	+17 30.7	102	10 N	4 59	5 25	5 48	7 24	61	20 17 52	
12	358	23.4	+20 12.2	333	13.4	+17 20.3	104	0	5 15	5 41	6 03	7 37	58	20 05 56	
13	13	23.4	11.7	347	38.0	+17 09.9	104	10 S	30	5 55	18	7 51	54	19 53 60	
14	28	23.3	11.2	2	02.6	+16 59.3	106	20	43	6 10	33	8 06	50	40 65	
15	43	23.3	10.7	16	27.3	48.7	106	30	5 57	26	6 51	22	46	26 69	
16	58	23.3	10.2	30	52.1	37.9	108	35	6 04	35	7 02	32	43	17 72	
17	73	23.3	+20 09.7	45	17.0	+16 27.0	109	40	6 11	6 44	7 14	8 43	40	19 07 76	
18	88	23.3	+20 09.2	59	42.0	+16 16.0	110	45	6 19	6 55	7 28	8 56	36	18 55 80	
19	103	23.2	08.7	74	07.1	+16 04.9	111	50	28	7 08	45	9 12	31	41 85	
20	118	23.2	08.2	88	32.2	+15 53.7	112	52	32	14	7 53	19	29	34 87	
21	133	23.2	07.7	102	57.4	42.4	113	54	36	21	8 01	27	27	27 90	
22	148	23.2	07.2	117	22.8	31.0	114	56	41	28	11	36	24	18 93	
23	163	23.2	06.7	131	48.2	19.5	115	58	46	36	23	46	21	18 09 96	
24	178	23.1	+20 06.2	146	13.7	+15 07.9	116	60 S	6 52	7 45	8 36	9 58	17	17 58 101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 00 ^m 1		Mag: -4.1 PMG: 9 ^h 10 ^m		Mag: -1.7 PMG: 20 ^h 51 ^m		Mag: -2.0 PMG: 10 ^h 08 ^m		Mag: +0.2 PMG: 8 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	299	48.7	222	36.0	+20 44.9	46	28.2	-26 50.2	207	39.8	+23 09.6	229	51.4	+20 26.6
1	314	51.2	237	35.4	45.3	61	30.6	50.2	222	41.7	09.6	244	53.6	26.6
2	329	53.6	252	34.9	45.6	76	32.9	50.2	237	43.6	09.5	259	55.8	26.6
3	344	56.1	267	34.4	46.0	91	35.3	50.2	252	45.5	09.5	274	58.0	26.7
4	359	58.5	282	33.9	46.3	106	37.7	50.2	267	47.3	09.5	290	00.2	26.7
5	15	01.0	297	33.3	+20 46.7	121	40.1	-26 50.2	282	49.2	+23 09.5	305	02.4	+20 26.7
6	30	03.5	312	32.8	+20 47.0	136	42.4	-26 50.2	297	51.1	+23 09.5	320	04.5	+20 26.8
7	45	05.9	327	32.3	47.4	151	44.8	50.2	312	53.0	09.5	335	06.7	26.8
8	60	08.4	342	31.8	47.7	166	47.2	50.2	327	54.8	09.5	350	08.9	26.8
9	75	10.9	357	31.2	48.1	181	49.6	50.2	342	56.7	09.5	5	11.1	26.9
10	90	13.3	12	30.7	48.4	196	51.9	50.2	357	58.6	09.5	20	13.3	26.9
11	105	15.8	27	30.2	+20 48.8	211	54.3	-26 50.2	13	00.5	+23 09.5	35	15.5	+20 26.9
12	120	18.3	42	29.6	+20 49.1	226	56.6	-26 50.2	28	02.3	+23 09.5	50	17.7	+20 27.0
13	135	20.7	57	29.1	49.4	241	59.0	50.2	43	04.2	09.5	65	19.9	27.0
14	150	23.2	72	28.6	49.8	257	01.4	50.2	58	06.1	09.5	80	22.1	27.0
15	165	25.6	87	28.1	50.1	272	03.7	50.2	73	08.0	09.5	95	24.3	27.0
16	180	28.1	102	27.5	50.5	287	06.1	50.2	88	09.9	09.5	110	26.5	27.1
17	195	30.6	117	27.0	+20 50.8	302	08.4	-26 50.2	103	11.7	+23 09.5	125	28.7	+20 27.1
18	210	33.0	132	26.5	+20 51.1	317	10.8	-26 50.2	118	13.6	+23 09.5	140	30.9	+20 27.1
19	225	35.5	147	25.9	51.5	332	13.2	50.2	133	15.5	09.5	155	33.1	27.2
20	240	38.0	162	25.4	51.8	347	15.5	50.2	148	17.4	09.5	170	35.3	27.2
21	255	40.4	177	24.9	52.1	2	17.9	50.2	163	19.2	09.5	185	37.5	27.2
22	270	42.9	192	24.3	52.5	17	20.2	50.3	178	21.1	09.4	200	39.7	27.3
23	285	45.4	207	23.8	52.8	32	22.5	50.3	193	23.0	09.4	215	41.9	27.3
24	300	47.8	222	23.3	+20 53.1	47	24.9	-26 50.3	208	24.9	+23 09.4	230	44.1	+20 27.3

Dif	—	-5	+3	+24	0	+19	0	+22	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: 2 ^d 2 SD: 16'6 PMG: 14 ^h 48 ^m					PHE { 4 ^h : 60'8 12 ^h : 60'7 20 ^h : 60'5 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		
0	178	23.1	+20 06.2	146	13.7	+15 07.9	65	60 N	20 51	21 59	** **	6 52 99	22 18 11		
1	193	23.1	05.7	160	39.2	+14 56.2	117	58	37	35	** **	7 00 95	12 14		
2	208	23.1	05.2	175	04.9	67	44.4	56	24	16	22 42	08 91	07 17		
3	223	23.1	04.6	189	30.7	68	32.5	54	13	21 00	22 11	15 88	22 02 20		
4	238	23.1	04.1	203	56.5	68	20.5	52	20 04	20 47	21 48	20 86	21 58 22		
5	253	23.0	+20 03.6	218	22.4	69	+14 08.5	50	19 55	20 35	21 30	7 26 84	21 54 24		
6	268	23.0	+20 03.1	232	48.4	70	+13 56.3	45	19 37	20 12	20 56	7 37 79	21 46 29		
7	283	23.0	02.6	247	14.5	71	44.1	40	22	19 53	32	47 75	39 32		
8	298	23.0	02.1	261	40.7	72	31.8	35	19 10	38	20 13	7 55 71	33 36		
9	313	23.0	01.6	276	07.0	73	19.4	30	18 59	25	19 57	8 02 68	27 39		
10	328	22.9	01.1	290	33.3	73	+13 07.0	20	41	19 04	33	15 62	18 44		
11	343	22.9	+20 00.5	304	59.8	75	+12 54.4	10 N	18 25	18 47	19 14	8 25 59	21 09 49		
12	358	22.9	+20 00.0	319	26.3	75	+12 41.8	0	18 10	18 32	18 58	8 35 55	21 01 53		
13	13	22.9	+19 59.5	333	52.9	76	29.2	10 S	17 55	18	43	45 50	20 53 57		
14	28	22.9	59.0	348	19.6	77	16.4	20	40	18 03	30	8 56 46	45 61		
15	43	22.9	58.5	2	46.4	78	+12 03.6	30	22	17 48	17	9 08 41	35 67		
16	58	22.8	58.0	17	13.2	78	+11 50.7	35	12	39	10	15 38	29 70		
17	73	22.8	+19 57.4	31	40.2	80	+11 37.8	40	17 00	17 30	18 03	9 23 34	20 23 73		
18	88	22.8	+19 56.9	46	07.2	80	+11 24.8	45	16 47	17 19	17 55	9 32 31	20 15 78		
19	103	22.8	56.4	60	34.3	81	+11 11.7	50	30	06	46	43 26	06 82		
20	118	22.8	55.9	75	01.5	82	+10 58.5	52	22	17 00	42	48 24	20 01 85		
21	133	22.8	55.4	89	28.8	83	45.4	54	13	16 54	38	9 54 21	19 57 87		
22	148	22.7	54.8	103	56.1	83	32.1	56	16 04	47	34	10 00 18	51 91		
23	163	22.7	54.3	118	23.5	84	18.8	58	15 52	39	29	07 15	45 94		
24	178	22.7	+19 53.8	132	51.0	85	+10 05.5	60 S	15 39	16 30	17 23	10 15 12	19 39 97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 56 ^m 2		Mag: -4.1 PMG: 9 ^h 11 ^m		Mag: -1.7 PMG: 20 ^h 47 ^m		Mag: -2.0 PMG: 10 ^h 05 ^m		Mag: +0.2 PMG: 8 ^h 36 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	300	47.8	222	23.3	+20 53.1	47 24.9	-26 50.3	208 24.9	+23 09.4	230 44.1	+20 27.3
1	315	50.3	237	22.7	53.5	62 27.2	50.3	223 26.8	09.4	245 46.3	27.4
2	330	52.8	252	22.2	53.8	77 29.6	50.3	238 28.6	09.4	260 48.5	27.4
3	345	55.2	267	21.6	54.1	92 31.9	50.3	253 30.5	09.4	275 50.7	27.4
4	0	57.7	282	21.1	54.5	107 34.2	50.3	268 32.4	09.4	290 52.9	27.5
5	16	00.1	297	20.6	+20 54.8	122 36.6	-26 50.3	283 34.3	+23 09.4	305 55.1	+20 27.5
6	31	02.6	312	20.0	+20 55.1	137 38.9	-26 50.3	298 36.1	+23 09.4	320 57.3	+20 27.5
7	46	05.1	327	19.5	55.5	152 41.3	50.3	313 38.0	09.4	335 59.5	27.5
8	61	07.5	342	19.0	55.8	167 43.6	50.3	328 39.9	09.4	351 01.7	27.6
9	76	10.0	357	18.4	56.1	182 45.9	50.3	343 41.8	09.4	6 03.9	27.6
10	91	12.5	12	17.9	56.4	197 48.2	50.3	358 43.7	09.4	21 06.1	27.6
11	106	14.9	27	17.3	+20 56.8	212 50.6	-26 50.3	13 45.5	+23 09.4	36 08.3	+20 27.7
12	121	17.4	42	16.8	+20 57.1	227 52.9	-26 50.3	28 47.4	+23 09.4	51 10.5	+20 27.7
13	136	19.9	57	16.3	57.4	242 55.2	50.3	43 49.3	09.4	66 12.7	27.7
14	151	22.3	72	15.7	57.7	257 57.5	50.3	58 51.2	09.4	81 14.9	27.8
15	166	24.8	87	15.2	58.1	272 59.9	50.3	73 53.1	09.3	96 17.1	27.8
16	181	27.3	102	14.6	58.4	288 02.2	50.3	88 54.9	09.3	111 19.3	27.8
17	196	29.7	117	14.1	+20 58.7	303 04.5	-26 50.3	103 56.8	+23 09.3	126 21.5	+20 27.9
18	211	32.2	132	13.5	+20 59.0	318 06.8	-26 50.3	118 58.7	+23 09.3	141 23.7	+20 27.9
19	226	34.6	147	13.0	59.3	333 09.1	50.3	134 00.6	09.3	156 25.9	27.9
20	241	37.1	162	12.5	+20 59.6	348 11.4	50.3	149 02.5	09.3	171 28.1	27.9
21	256	39.6	177	11.9	+21 00.0	3 13.7	50.3	164 04.3	09.3	186 30.3	28.0
22	271	42.0	192	11.4	+21 00.3	18 16.0	50.3	179 06.2	09.3	201 32.5	28.0
23	286	44.5	207	10.8	00.6	33 18.4	50.3	194 08.1	09.3	216 34.8	28.0
24	301	47.0	222	10.3	+21 00.9	48 20.7	-26 50.3	209 10.0	+23 09.3	231 37.0	+20 28.1
Dif	—		-5	+3		+23	0	+19	0	+22	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 5				Edad: 3 ^d 2 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 1 20 ^h : 59 ^h 9 PMG: 15 ^h 42 ^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	22.7	+19	53.8	132	51.0	+10	05.5	60 N	**	**	2	14	3	22	8	31			
1	193	22.7		53.3	147	18.6	86	+9	52.1 ¹³⁴	58	0	26	38	37	35	92				
2	208	22.7		52.7	161	46.3	87		38.6 ¹³⁵	56	1	32	2	57	39	89				
3	223	22.7		52.2	176	14.0	87		25.1 ¹³⁵	54	2	03	3	13	43	86				
4	238	22.7		51.7	190	41.8	88	+9	11.6 ¹³⁵	52	25	26	10	46	84					
5	253	22.6	+19	51.2	205	09.7	89	+8	58.0 ¹³⁶	50	2	43	3	38	8	50				
6	268	22.6	+19	50.6	219	37.7	90	+8	44.4 ¹³⁶	45	3	17	4	02	8	56				
7	283	22.6		50.1	234	05.7	90		30.7 ¹³⁷	40	3	41	20	4	51	9				
8	298	22.6		49.6	248	33.8	91		17.0 ¹³⁷	35	4	00	35	5	03	06				
9	313	22.6		49.1	263	02.0	92	+8	03.3 ¹³⁷	30	16	4	48	14	10	66				
10	328	22.6		48.5	277	30.2	92	+7	49.5 ¹³⁸	20	4	40	5	09	17	61				
11	343	22.6	+19	48.0	291	58.5	93	+7	35.7 ¹³⁸	10 N	5	00	5	26	9	24				
12	358	22.6	+19	47.5	306	26.9	94	+7	21.9 ¹³⁸	0	5	15	5	41	9	30				
13	13	22.5		46.9	320	55.4	95	+7	08.0 ¹³⁹	10 S	29	5	55	17	35	47				
14	28	22.5		46.4	335	23.9	95	+6	54.1 ¹³⁹	20	43	6	09	33	42	42				
15	43	22.5		45.9	349	52.5	96		40.2 ¹³⁹	30	5	56	25	6	50	49				
16	58	22.5		45.4	4	21.2	97		26.3 ¹³⁹	35	6	03	33	7	01	53				
17	73	22.5	+19	44.8	18	49.9	97	+6	12.3 ¹⁴⁰	40	6	10	6	43	9	57				
18	88	22.5	+19	44.3	33	18.7	98	+5	58.3 ¹⁴⁰	45	6	18	6	53	7	26				
19	103	22.5		43.8	47	47.5	98		44.3 ¹⁴⁰	50	26	7	06	42	09	23				
20	118	22.5		43.2	62	16.4	99		30.3 ¹⁴⁰	52	30	12	50	12	20					
21	133	22.5		42.7	76	45.4 ¹⁰⁰			16.2 ¹⁴¹	54	34	18	7	59	15	18				
22	148	22.5		42.1	91	14.4 ¹⁰⁰		+5	02.2 ¹⁴⁰	56	39	25	8	08	18	16				
23	163	22.5		41.6	105	43.5 ¹⁰¹		+4	48.1 ¹⁴¹	58	43	33	19	22	13					
24	178	22.4	+19	41.1	120	12.7 ¹⁰²		+4	34.0 ¹⁴¹	60 S	6	49	7	41	8	32				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 52 ^m 2				Mag: -4.1 PMG: 9 ^h 12 ^m				Mag: -1.7 PMG: 20 ^h 43 ^m				Mag: -2.0 PMG: 10 ^h 02 ^m				Mag: +0.2 PMG: 8 ^h 32 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	301	47.0	222	10.3	+21	00.9		48	20.7	-26	50.3		209	10.0	+23	09.3	231	37.0	+20	28.1
1	316	49.4	237	09.7		01.2		63	23.0		50.4		224	11.9		09.3	246	39.2		28.1
2	331	51.9	252	09.2		01.5		78	25.3		50.4		239	13.7		09.3	261	41.4		28.1
3	346	54.4	267	08.6		01.8		93	27.6		50.4		254	15.6		09.3	276	43.6		28.2
4	1	56.8	282	08.1		02.1		108	29.9		50.4		269	17.5		09.3	291	45.8		28.2
5	16	59.3	297	07.5	+21	02.5		123	32.2	-26	50.4		284	19.4	+23	09.3	306	48.0	+20	28.2
6	32	01.7	312	07.0	+21	02.8		138	34.5	-26	50.4		299	21.3	+23	09.3	321	50.2	+20	28.2
7	47	04.2	327	06.4		03.1		153	36.7		50.4		314	23.1		09.2	336	52.4		28.3
8	62	06.7	342	05.9		03.4		168	39.0		50.4		329	25.0		09.2	351	54.6		28.3
9	77	09.1	357	05.3		03.7		183	41.3		50.4		344	26.9		09.2	6	56.8		28.3
10	92	11.6	12	04.8		04.0		198	43.6		50.4		359	28.8		09.2	21	59.0		28.4
11	107	14.1	27	04.2	+21	04.3		213	45.9	-26	50.4		14	30.7	+23	09.2	37	01.2	+20	28.4
12	122	16.5	42	03.7	+21	04.6		228	48.2	-26	50.4		29	32.5	+23	09.2	52	03.4	+20	28.4
13	137	19.0	57	03.1		04.9		243	50.5		50.4		44	34.4		09.2	67	05.6		28.5
14	152	21.5	72	02.6		05.2		258	52.8		50.4		59	36.3		09.2	82	07.8		28.5
15	167	23.9	87	02.0		05.5		273	55.0		50.4		74	38.2		09.2	97	10.0		28.5
16	182	26.4	102	01.5		05.8		288	57.3		50.4		89	40.1		09.2	112	12.2		28.5
17	197	28.9	117	00.9	+21	06.1		303	59.6	-26	50.4		104	42.0	+23	09.2	127	14.4	+20	28.6
18	212	31.3	132	00.4	+21	06.4		319	01.9	-26	50.4		119	43.8	+23	09.2	142	16.6	+20	28.6
19	227	33.8	146	59.8		06.7		334	04.1		50.4		134	45.7		09.2	157	18.8		28.6
20	242	36.2	161	59.3		07.0		349	06.4		50.5		149	47.6		09.2	172	21.0		28.7
21	257	38.7	176	58.7		07.3		4	08.7		50.5		164	49.5		09.1	187	23.2		28.7
22	272	41.2	191	58.2		07.6		19	11.0		50.5		179	51.4		09.1	202	25.4		28.7
23	287	43.6	206	57.6		07.9		34	13.2		50.5		194	53.3		09.1	217	27.6		28.8
24	302	46.1	221	57.0	+21	08.2		49	15.5	-26	50.5		209	55.1	+23	09.1	232	29.8	+20	28.8
Dif	—		-6		+3		+23		0		+19		0		+22		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: 4 ^d 2 SD: 16:3 PMG: 16 ^h 33 ^m	PHE { 4 ^h : 59:7 12 ^h : 59:4 20 ^h : 59:2 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	h m	h m		
0	178	22.4	+19	41.1	120	12.7	+4 34.0	60 N	20 47	21 53	** **	10 06 92	22 38 10				
1	193	22.4		40.5	134	41.9 ¹⁰²	19.9 ¹⁴¹	58	33	30	23 23	07 88	39 12				
2	208	22.4		40.0	149	11.1 ¹⁰²	+4 05.8 ¹⁴¹	56	21	21 12	22 34	08 85	39 15				
3	223	22.4		39.5	163	40.5 ¹⁰⁴	+3 51.7 ¹⁴¹	54	10	20 57	22 05	09 83	40 17				
4	238	22.4		38.9	178	09.8 ¹⁰³	37.6 ¹⁴¹	52	20 01	44	21 43	10 80	40 19				
5	253	22.4	+19	38.4	192	39.3 ¹⁰⁵	+3 23.5 ¹⁴¹	50	19 52	20 32	21 26	10 10 79	22 40 22				
6	268	22.4	+19	37.8	207	08.7 ¹⁰⁴	+3 09.3 ¹⁴²	45	19 35	20 09	20 54	10 12 74	22 41 26				
7	283	22.4		37.3	221	38.3 ¹⁰⁶	+2 55.2 ¹⁴¹	40	21	19 51	30	14 69	42 29				
8	298	22.4		36.8	236	07.8 ¹⁰⁵	41.1 ¹⁴¹	35	19 08	37	20 11	15 66	42 33				
9	313	22.4		36.2	250	37.5 ¹⁰⁷	26.9 ¹⁴²	30	18 58	24	19 56	16 63	43 35				
10	328	22.4		35.7	265	07.1 ¹⁰⁶	+2 12.8 ¹⁴¹	20	40	19 04	32	18 58	43 41				
11	343	22.4	+19	35.1	279	36.9 ¹⁰⁸	+1 58.7 ¹⁴¹	10 N	18 24	18 47	19 13	10 19 54	22 44 45				
12	358	22.4	+19	34.6	294	06.6 ¹⁰⁷	+1 44.6 ¹⁴¹	0	18 10	18 32	18 57	10 21 49	22 44 49				
13	13	22.4		34.1	308	36.4 ¹⁰⁸	30.5 ¹⁴¹	10 S	17 56	18	44	22 45	45 53				
14	28	22.4		33.5	323	06.3 ¹⁰⁹	16.4 ¹⁴¹	20	41	18 04	31	24 41	46 57				
15	43	22.4		33.0	337	36.2 ¹⁰⁹	+1 02.3 ¹⁴¹	30	23	17 49	18	26 36	46 63				
16	58	22.4		32.4	352	06.2 ¹¹⁰	+0 48.2 ¹⁴¹	35	13	41	11	27 33	47 65				
17	73	22.3	+19	31.9	6	36.1 ¹⁰⁹	+0 34.1 ¹⁴¹	40	17 02	17 31	18 04	10 28 30	22 47 69				
18	88	22.3	+19	31.3	21	06.2 ¹¹¹	+0 20.1 ¹⁴⁰	45	16 49	17 21	17 57	10 30 26	22 47 73				
19	103	22.3		30.8	35	36.2 ¹¹⁰	+0 06.0 ¹⁴¹	50	32	09	48	32 21	48 77				
20	118	22.3		30.2	50	06.3 ¹¹¹	-0 08.0 ¹⁴⁰	52	25	17 03	45	32 20	48 80				
21	133	22.3		29.7	64	36.5 ¹¹²	22.0 ¹⁴⁰	54	16	16 57	41	33 17	48 82				
22	148	22.3		29.1	79	06.6 ¹¹¹	36.0 ¹⁴⁰	56	16 07	50	36	34 15	49 84				
23	163	22.3		28.6	93	36.8 ¹¹²	-0 50.0 ¹⁴⁰	58	15 56	42	32	35 12	49 87				
24	178	22.3	+19	28.0	108	07.1 ¹¹³	-1 03.9 ¹³⁹	60 S	15 44	16 34	17 27	10 36 9	22 49 91				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 48 ^m 3		Mag: -4.1 PMG: 9 ^h 13 ^m			Mag: -1.7 PMG: 20 ^h 40 ^m			Mag: -2.0 PMG: 9 ^h 59 ^m			Mag: +0.2 PMG: 8 ^h 29 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	302	46.1	221	57.0	+21	08.2	49 15.5	-26	50.5	209	55.1	+23	09.1	232	29.8	+20	28.8
1	317	48.6	236	56.5		08.4	64 17.8		50.5	224	57.0		09.1	247	32.0		28.8
2	332	51.0	251	55.9		08.7	79 20.0		50.5	239	58.9		09.1	262	34.3		28.8
3	347	53.5	266	55.4		09.0	94 22.3		50.5	255	00.8		09.1	277	36.5		28.9
4	2	56.0	281	54.8		09.3	109 24.5		50.5	270	02.7		09.1	292	38.7		28.9
5	17	58.4	296	54.3	+21	09.6	124 26.8	-26	50.5	285	04.5	+23	09.1	307	40.9	+20	28.9
6	33	00.9	311	53.7	+21	09.9	139 29.0	-26	50.5	300	06.4	+23	09.1	322	43.1	+20	29.0
7	48	03.4	326	53.1		10.2	154 31.3		50.5	315	08.3		09.1	337	45.3		29.0
8	63	05.8	341	52.6		10.5	169 33.6		50.5	330	10.2		09.1	352	47.5		29.0
9	78	08.3	356	52.0		10.7	184 35.8		50.5	345	12.1		09.1	7	49.7		29.1
10	93	10.7	11	51.5		11.0	199 38.1		50.5	0	14.0		09.1	22	51.9		29.1
11	108	13.2	26	50.9	+21	11.3	214 40.3	-26	50.5	15	15.8	+23	09.0	37	54.1	+20	29.1
12	123	15.7	41	50.3	+21	11.6	229 42.6	-26	50.6	30	17.7	+23	09.0	52	56.3	+20	29.1
13	138	18.1	56	49.8		11.9	244 44.8		50.6	45	19.6		09.0	67	58.5		29.2
14	153	20.6	71	49.2		12.2	259 47.0		50.6	60	21.5		09.0	83	00.7		29.2
15	168	23.1	86	48.6		12.4	274 49.3		50.6	75	23.4		09.0	98	02.9		29.2
16	183	25.5	101	48.1		12.7	289 51.5		50.6	90	25.3		09.0	113	05.1		29.3
17	198	28.0	116	47.5	+21	13.0	304 53.8	-26	50.6	105	27.2	+23	09.0	128	07.3	+20	29.3
18	213	30.5	131	47.0	+21	13.3	319 56.0	-26	50.6	120	29.0	+23	09.0	143	09.6	+20	29.3
19	228	32.9	146	46.4		13.5	334 58.2		50.6	135	30.9		09.0	158	11.8		29.4
20	243	35.4	161	45.8		13.8	350 00.5		50.6	150	32.8		09.0	173	14.0		29.4
21	258	37.8	176	45.3		14.1	5 02.7		50.6	165	34.7		09.0	188	16.2		29.4
22	273	40.3	191	44.7		14.4	20 04.9		50.6	180	36.6		09.0	203	18.4		29.4
23	288	42.8	206	44.1		14.6	35 07.2		50.6	195	38.5		08.9	218	20.6		29.5
24	303	45.2	221	43.6	+21	14.9	50 09.4	-26	50.6	210	40.3	+23	08.9	233	22.8	+20	29.5
Dif	—		-6 +3		+22		0		+19		0		+22				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 2	PHE {	SD: 16 ^h 1		R°: 48 ^m	Náutico		Civil	Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 5														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m	m
0	178	22.3	+19 28.0	108	07.1	-1 03.9	60 N	** **	2 21	3 27	11 38	89	22 48	10	
1	193	22.3		122	37.4 ¹¹³	17.9 ¹⁴⁰	58	0 51	2 44	41	35	87	51	13	
2	208	22.3		137	07.7 ¹¹³	31.8 ¹³⁹	56	1 40	3 02	3 53	33	84	54	16	
3	223	22.3		151	38.0 ¹¹³	45.7 ¹³⁹	54	2 09	17	4 03	32	80	57	18	
4	238	22.3		166	08.4 ¹¹⁴	-1 59.5 ¹³⁸	52	30	30	13	30	78	22 59	21	
5	253	22.3	+19 25.3	180	38.8 ¹¹⁴	-2 13.4 ¹³⁹	50	2 47	3 41	4 21	11 29	76	23 02	22	
6	268	22.3	+19 24.7	195	09.2 ¹¹⁴	-2 27.2 ¹³⁸	45	3 20	4 04	4 39	11 26	71	23 07	26	
7	283	22.3		209	39.6 ¹¹⁴	40.9 ¹³⁷	40	3 44	22	4 53	23	68	11	30	
8	298	22.3		224	10.1 ¹¹⁵	-2 54.7 ¹³⁸	35	4 02	37	5 05	21	64	15	33	
9	313	22.3		238	40.6 ¹¹⁵	-3 08.4 ¹³⁷	30	17	4 49	15	19	62	18	36	
10	328	22.3		253	11.1 ¹¹⁵	22.1 ¹³⁷	20	4 41	5 09	33	16	56	24	40	
11	343	22.3	+19 21.9	267	41.7 ¹¹⁶	-3 35.7 ¹³⁶	10 N	5 00	5 26	5 49	11 13	52	23 29	44	
12	358	22.3	+19 21.4	282	12.3 ¹¹⁶	-3 49.3 ¹³⁶	0	5 16	5 41	6 03	11 10	48	23 33	49	
13	13	22.3		296	42.8 ¹¹⁵	-4 02.9 ¹³⁶	10 S	29	5 55	17	07	45	38	52	
14	28	22.3		311	13.5 ¹¹⁷	16.5 ¹³⁶	20	42	6 09	32	05	40	43	56	
15	43	22.3		325	44.1 ¹¹⁶	30.0 ¹³⁵	30	5 55	24	49	02	35	49	61	
16	58	22.3		340	14.7 ¹¹⁶	43.4 ¹³⁴	35	6 01	32	6 59	11 00	32	52	64	
17	73	22.3	+19 18.6	354	45.4 ¹¹⁷	-4 56.9 ¹³⁵	40	6 08	6 41	7 10	10 58	29	23 56	67	
18	88	22.3	+19 18.0	9	16.1 ¹¹⁷	-5 10.3 ¹³⁴	45	6 16	6 52	7 24	10 56	25	** ** *	**	
19	103	22.4		23	46.8 ¹¹⁷	23.6 ¹³³	50	24	7 04	40	53	21	** ** *	**	
20	118	22.4		38	17.5 ¹¹⁷	36.9 ¹³³	52	28	09	47	52	19	** ** *	**	
21	133	22.4		52	48.2 ¹¹⁷	-5 50.1 ¹³²	54	32	15	7 56	50	18	** ** *	**	
22	148	22.4		67	18.9 ¹¹⁷	-6 03.4 ¹³³	56	36	22	8 05	49	15	** ** *	**	
23	163	22.4		81	49.7 ¹¹⁸	16.5 ¹³¹	58	41	30	16	47	12	** ** *	**	
24	178	22.4	+19 14.7	96	20.4 ¹¹⁷	-6 29.6 ¹³¹	60 S	6 45	7 38	8 28	10 45	10	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 44 ^m 4		Mag: -4.1 PMG: 9 ^h 13 ^m		Mag: -1.6 PMG: 20 ^h 36 ^m		Mag: -2.0 PMG: 9 ^h 56 ^m		Mag: +0.2 PMG: 8 ^h 25 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	303	45.2	221	43.6	+21 14.9	50 09.4	-26 50.6	210 40.3	+23 08.9	233 22.8	+20 29.5
1	318	47.7	236	43.0	15.2	65 11.6	50.6	225 42.2	08.9	248 25.0	29.5
2	333	50.2	251	42.4	15.5	80 13.8	50.7	240 44.1	08.9	263 27.2	29.6
3	348	52.6	266	41.9	15.7	95 16.1	50.7	255 46.0	08.9	278 29.4	29.6
4	3	55.1	281	41.3	16.0	110 18.3	50.7	270 47.9	08.9	293 31.6	29.6
5	18	57.6	296	40.7	+21 16.3	125 20.5	-26 50.7	285 49.8	+23 08.9	308 33.8	+20 29.6
6	34	00.0	311	40.2	+21 16.5	140 22.7	-26 50.7	300 51.7	+23 08.9	323 36.1	+20 29.7
7	49	02.5	326	39.6	16.8	155 24.9	50.7	315 53.5	08.9	338 38.3	29.7
8	64	05.0	341	39.0	17.1	170 27.2	50.7	330 55.4	08.9	353 40.5	29.7
9	79	07.4	356	38.4	17.3	185 29.4	50.7	345 57.3	08.9	8 42.7	29.8
10	94	09.9	11	37.9	17.6	200 31.6	50.7	0 59.2	08.9	23 44.9	29.8
11	109	12.3	26	37.3	+21 17.8	215 33.8	-26 50.7	16 01.1	+23 08.8	38 47.1	+20 29.8
12	124	14.8	41	36.7	+21 18.1	230 36.0	-26 50.7	31 03.0	+23 08.8	53 49.3	+20 29.8
13	139	17.3	56	36.2	18.4	245 38.2	50.7	46 04.9	08.8	68 51.5	29.9
14	154	19.7	71	35.6	18.6	260 40.4	50.7	61 06.7	08.8	83 53.7	29.9
15	169	22.2	86	35.0	18.9	275 42.6	50.8	76 08.6	08.8	98 55.9	29.9
16	184	24.7	101	34.4	19.1	290 44.8	50.8	91 10.5	08.8	113 58.1	30.0
17	199	27.1	116	33.9	+21 19.4	305 47.0	-26 50.8	106 12.4	+23 08.8	129 00.4	+20 30.0
18	214	29.6	131	33.3	+21 19.6	320 49.2	-26 50.8	121 14.3	+23 08.8	144 02.6	+20 30.0
19	229	32.1	146	32.7	19.9	335 51.4	50.8	136 16.2	08.8	159 04.8	30.1
20	244	34.5	161	32.2	20.2	350 53.6	50.8	151 18.1	08.8	174 07.0	30.1
21	259	37.0	176	31.6	20.4	5 55.8	50.8	166 20.0	08.8	189 09.2	30.1
22	274	39.4	191	31.0	20.7	20 58.0	50.8	181 21.8	08.8	204 11.4	30.1
23	289	41.9	206	30.4	20.9	36 00.2	50.8	196 23.7	08.7	219 13.6	30.2
24	304	44.4	221	29.8	+21 21.2	51 02.4	-26 50.8	211 25.6	+23 08.7	234 15.8	+20 30.2
Dif	—		-6	+3		+22	0	+19	0	+22	

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: 6 ^d 2 PHE { 4 ^h : 58:1 12 ^h : 57:8 20 ^h : 57:6 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	178	22.4	+19	14.7	96	20.4	-6	29.6	60 N	20 42	21 46	** **	13 07	88		22 58	12			
1	193	22.4		14.1	110	51.2 ¹¹⁸		42.7 ¹³¹	58	29	25	23 07	13 02	84		23 04	15			
2	208	22.4		13.5	125	22.0 ¹¹⁸	-6	55.7 ¹³⁰	56	17	21 07	22 26	12 57	81		10	18			
3	223	22.4		13.0	139	52.7 ¹¹⁷	-7	08.7 ¹³⁰	54	20 07	20 53	21 59	52	79		15	21			
4	238	22.4		12.4	154	23.5 ¹¹⁸		21.6 ¹²⁹	52	19 58	40	39	48	77		20	23			
5	253	22.4	+19	11.8	168	54.3 ¹¹⁸	-7	34.5 ¹²⁹	50	19 50	20 29	21 22	12 45	74		23 24	25			
6	268	22.4	+19	11.3	183	25.1 ¹¹⁸	-7	47.3 ¹²⁸	45	19 33	20 07	20 51	12 37	70		23 33	29			
7	283	22.4		10.7	197	55.9 ¹¹⁸	-8	00.1 ¹²⁸	40	19	19 49	27	31	66		41	32			
8	298	22.4		10.1	212	26.7 ¹¹⁸		12.8 ¹²⁷	35	19 07	35	20 09	25	63		48	35			
9	313	22.4		09.6	226	57.5 ¹¹⁸		25.4 ¹²⁶	30	18 57	23	19 54	21	60		23 54	37			
10	328	22.4		09.0	241	28.3 ¹¹⁸		38.0 ¹²⁶	20	39	19 03	31	12	56		** **	**			
11	343	22.4	+19	08.4	255	59.2 ¹¹⁹	-8	50.5 ¹²⁵	10 N	18 24	18 46	19 13	12 05	52		** **	**			
12	358	22.5	+19	07.9	270	30.0 ¹¹⁸	-9	03.0 ¹²⁵	0	18 10	18 32	18 57	11 58	49		** **	**			
13	13	22.5		07.3	285	00.8 ¹¹⁸		15.4 ¹²⁴	10 S	17 56	18	44	52	45		** **	**			
14	28	22.5		06.7	299	31.6 ¹¹⁸		27.8 ¹²⁴	20	41	18 05	31	45	41		** **	**			
15	43	22.5		06.2	314	02.4 ¹¹⁸		40.1 ¹²³	30	25	17 50	19	37	36		** **	**			
16	58	22.5		05.6	328	33.2 ¹¹⁸	-9	52.3 ¹²²	35	15	42	13	32	34		** **	**			
17	73	22.5	+19	05.0	343	04.0 ¹¹⁸	-10	04.5 ¹²²	40	17 04	17 33	18 06	11 27	31		** **	**			
18	88	22.5	+19	04.4	357	34.8 ¹¹⁸	-10	16.6 ¹²¹	45	16 51	17 23	17 59	11 21	28		0 00	71			
19	103	22.5		03.9	12	05.6 ¹¹⁸		28.6 ¹²⁰	50	35	11	50	14	24		05	75			
20	118	22.5		03.3	26	36.4 ¹¹⁸		40.6 ¹²⁰	52	28	05	47	11	21		08	77			
21	133	22.5		02.7	41	07.2 ¹¹⁸	-10	52.5 ¹¹⁹	54	19	17 00	43	08	19		10	80			
22	148	22.5		02.1	55	37.9 ¹¹⁷	-11	04.4 ¹¹⁹	56	10	16 53	39	11	04	16		13	82		
23	163	22.6		01.6	70	08.7 ¹¹⁸		16.1 ¹¹⁷	58	16 00	46	35	10	59	14		16	86		
24	178	22.6	+19	01.0	84	39.5 ¹¹⁸	-11	27.8 ¹¹⁷	60 S	15 48	16 38	17 30	10 55	11		0 20	89			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 40 ^m 4		Mag: -4.1 PMG: 9 ^h 14 ^m				Mag: -1.6 PMG: 20 ^h 33 ^m				Mag: -2.0 PMG: 9 ^h 53 ^m				Mag: +0.2 PMG: 8 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	304	44.4	221	29.8	+21	21.2	51	02.4	-26	50.8	211	25.6	+23	08.7	234	15.8	+20	30.2
1	319	46.8	236	29.3		21.4	66	04.6		50.8	226	27.5		08.7	249	18.0		30.2
2	334	49.3	251	28.7		21.7	81	06.8		50.9	241	29.4		08.7	264	20.2		30.3
3	349	51.8	266	28.1		21.9	96	08.9		50.9	256	31.3		08.7	279	22.5		30.3
4	4	54.2	281	27.5		22.2	111	11.1		50.9	271	33.2		08.7	294	24.7		30.3
5	19	56.7	296	27.0	+21	22.4	126	13.3	-26	50.9	286	35.1	+23	08.7	309	26.9	+20	30.3
6	34	59.2	311	26.4	+21	22.6	141	15.5	-26	50.9	301	36.9	+23	08.7	324	29.1	+20	30.4
7	50	01.6	326	25.8		22.9	156	17.7		50.9	316	38.8		08.7	339	31.3		30.4
8	65	04.1	341	25.2		23.1	171	19.8		50.9	331	40.7		08.7	354	33.5		30.4
9	80	06.6	356	24.6		23.4	186	22.0		50.9	346	42.6		08.7	9	35.7		30.5
10	95	09.0	11	24.1		23.6	201	24.2		50.9	1	44.5		08.6	24	37.9		30.5
11	110	11.5	26	23.5	+21	23.9	216	26.4	-26	50.9	16	46.4	+23	08.6	39	40.2	+20	30.5
12	125	13.9	41	22.9	+21	24.1	231	28.5	-26	50.9	31	48.3	+23	08.6	54	42.4	+20	30.5
13	140	16.4	56	22.3		24.3	246	30.7		51.0	46	50.2		08.6	69	44.6		30.6
14	155	18.9	71	21.7		24.6	261	32.9		51.0	61	52.0		08.6	84	46.8		30.6
15	170	21.3	86	21.2		24.8	276	35.0		51.0	76	53.9		08.6	99	49.0		30.6
16	185	23.8	101	20.6		25.0	291	37.2		51.0	91	55.8		08.6	114	51.2		30.7
17	200	26.3	116	20.0	+21	25.3	306	39.4	-26	51.0	106	57.7	+23	08.6	129	53.4	+20	30.7
18	215	28.7	131	19.4	+21	25.5	321	41.5	-26	51.0	121	59.6	+23	08.6	144	55.6	+20	30.7
19	230	31.2	146	18.8		25.7	336	43.7		51.0	137	01.5		08.6	159	57.9		30.7
20	245	33.7	161	18.2		26.0	351	45.8		51.0	152	03.4		08.5	175	00.1		30.8
21	260	36.1	176	17.7		26.2	6	48.0		51.0	167	05.3		08.5	190	02.3		30.8
22	275	38.6	191	17.1		26.4	21	50.2		51.0	182	07.2		08.5	205	04.5		30.8
23	290	41.1	206	16.5		26.7	36	52.3		51.1	197	09.0		08.5	220	06.7		30.8
24	305	43.5	221	15.9	+21	26.9	51	54.5	-26	51.1	212	10.9	+23	08.5	235	08.9	+20	30.9
Dif	—		-6		+2		+22		0		+19		0		+22			

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 5				Edad: 7 ^d 2 SD: 15 ^h 6 PMG: 18 ^h 59 ^m																
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	178	22.6	+19	01.0	84	39.5	-11	27.8	60 N	** ** *	2	27	3	31	14	35	85	23	10	16	
1	193	22.6	+19	00.4	99	10.2 ¹¹⁷		39.5 ¹¹⁷	58	1	06	2	49	45	26	81		19	20		
2	208	22.6	+18	59.8	113	40.9 ¹¹⁷	-11	51.0 ¹¹⁵	56	1	48	3	06	3	56	18	79	28	23		
3	223	22.6		59.3	128	11.7 ¹¹⁸	-12	02.5 ¹¹⁵	54	2	15	21	4	07	11	76		36	25		
4	238	22.6		58.7	142	42.4 ¹¹⁷		14.0 ¹¹⁵	52	35	33	16			14	05	74	43	26		
5	253	22.6	+18	58.1	157	13.1 ¹¹⁷	-12	25.3 ¹¹³	50	2	51	3	44	4	24	13	59	72	23	29	
6	268	22.6	+18	57.5	171	43.8 ¹¹⁷	-12	36.6 ¹¹³	45	3	23	4	06	4	41	13	47	68	**	**	
7	283	22.7		56.9	186	14.5 ¹¹⁷		47.8 ¹¹²	40	3	46	24	4	55	37	65		**	**	**	
8	298	22.7		56.4	200	45.1 ¹¹⁶	-12	58.9 ¹¹¹	35	4	04	38	5	06	28	62		**	**	**	
9	313	22.7		55.8	215	15.8 ¹¹⁷	-13	10.0 ¹¹¹	30	19	4	50	17	21	60		**	**	**	**	
10	328	22.7		55.2	229	46.4 ¹¹⁶		20.9 ¹⁰⁹	20	4	42	5	10	34	13	08	56	0	04	42	
11	343	22.7	+18	54.6	244	17.1 ¹¹⁷	-13	31.8 ¹⁰⁹	10 N	5	01	5	27	5	49	12	57	52	0	13	45
12	358	22.7	+18	54.0	258	47.7 ¹¹⁶	-13	42.6 ¹⁰⁸	0	5	16	5	41	6	03	12	47	49	0	22	48
13	13	22.7		53.4	273	18.3 ¹¹⁶	-13	53.4 ¹⁰⁸	10 S	29	5	55	17	37	45	30	52				
14	28	22.8		52.9	287	48.8 ¹¹⁵	-14	04.0 ¹⁰⁶	20	41	6	08	31	26	42	39	56				
15	43	22.8		52.3	302	19.4 ¹¹⁶		14.6 ¹⁰⁶	30	5	54	23	48	13	39	50	60				
16	58	22.8		51.7	316	49.9 ¹¹⁵		25.1 ¹⁰⁵	35	6	00	31	6	58	12	06	37	0	56	62	
17	73	22.8	+18	51.1	331	20.5 ¹¹⁶	-14	35.5 ¹⁰⁴	40	6	07	6	40	7	09	11	58	34	1	03	65
18	88	22.8	+18	50.5	345	51.0 ¹¹⁵	-14	45.8 ¹⁰³	45	6	14	6	50	7	22	11	49	30	1	11	69
19	103	22.8		49.9	0	21.5 ¹¹⁵	-14	56.1 ¹⁰³	50	22	7	01	37	38	26	20	74				
20	118	22.9		49.3	14	51.9 ¹¹⁴	-15	06.2 ¹⁰¹	52	25	07	44	32	25	25	75					
21	133	22.9		48.8	29	22.4 ¹¹⁵		16.3 ¹⁰¹	54	29	13	7	52	27	22	30	77				
22	148	22.9		48.2	43	52.8 ¹¹⁴		26.3 ¹⁰⁰	56	33	19	8	02	20	21	35	81				
23	163	22.9		47.6	58	23.2 ¹¹⁴		36.2 ⁹⁹	58	37	26	12		13	18	42	83				
24	178	22.9	+18	47.0	72	53.6 ¹¹⁴	-15	46.0 ⁹⁸	60 S	6	42	7	34	8	24	11	06	13	1	49	86
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 3 ^h 36 ^m 5		Mag: -4.0 PMG: 9 ^h 15 ^m				Mag: -1.6 PMG: 20 ^h 29 ^m				Mag: -2.0 PMG: 9 ^h 50 ^m				Mag: +0.2 PMG: 8 ^h 18 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	305	43.5	221	15.9	+21	26.9	51	54.5	-26	51.1	212	10.9	+23	08.5	235	08.9	+20	30.9			
1	320	46.0	236	15.3		27.1	66	56.6		51.1	227	12.8		08.5	250	11.1		30.9			
2	335	48.4	251	14.7		27.3	81	58.8		51.1	242	14.7		08.5	265	13.3		30.9			
3	350	50.9	266	14.1		27.6	97	00.9		51.1	257	16.6		08.5	280	15.6		31.0			
4	5	53.4	281	13.6		27.8	112	03.1		51.1	272	18.5		08.5	295	17.8		31.0			
5	20	55.8	296	13.0	+21	28.0	127	05.2	-26	51.1	287	20.4	+23	08.5	310	20.0	+20	31.0			
6	35	58.3	311	12.4	+21	28.2	142	07.3	-26	51.1	302	22.3	+23	08.4	325	22.2	+20	31.0			
7	51	00.8	326	11.8		28.5	157	09.5		51.1	317	24.2		08.4	340	24.4		31.1			
8	66	03.2	341	11.2		28.7	172	11.6		51.2	332	26.1		08.4	355	26.6		31.1			
9	81	05.7	356	10.6		28.9	187	13.8		51.2	347	28.0		08.4	10	28.8		31.1			
10	96	08.2	11	10.0		29.1	202	15.9		51.2	2	29.8		08.4	25	31.1		31.2			
11	111	10.6	26	09.4	+21	29.3	217	18.0	-26	51.2	17	31.7	+23	08.4	40	33.3	+20	31.2			
12	126	13.1	41	08.8	+21	29.6	232	20.2	-26	51.2	32	33.6	+23	08.4	55	35.5	+20	31.2			
13	141	15.5	56	08.3		29.8	247	22.3		51.2	47	35.5		08.4	70	37.7		31.2			
14	156	18.0	71	07.7		30.0	262	24.4		51.2	62	37.4		08.4	85	39.9		31.3			
15	171	20.5	86	07.1		30.2	277	26.6		51.2	77	39.3		08.4	100	42.1		31.3			
16	186	22.9	101	06.5		30.4	292	28.7		51.2	92	41.2		08.3	115	44.4		31.3			
17	201	25.4	116	05.9	+21	30.6	307	30.8	-26	51.3	107	43.1	+23	08.3	130	46.6	+20	31.3			
18	216	27.9	131	05.3	+21	30.8	322	32.9	-26	51.3	122	45.0	+23	08.3	145	48.8	+20	31.4			
19	231	30.3	146	04.7		31.1	337	35.1		51.3	137	46.9		08.3	160	51.0		31.4			
20	246	32.8	161	04.1		31.3	352	37.2		51.3	152	48.8		08.3	175	53.2		31.4			
21	261	35.3	176	03.5		31.5	7	39.3		51.3	167	50.6		08.3	190	55.4		31.5			
22	276	37.7	191	02.9		31.7	22	41.4		51.3	182	52.5		08.3	205	57.6		31.5			
23	291	40.2	206	02.3		31.9	37	43.5		51.3	197	54.4		08.3	220	59.9		31.5			
24	306	42.7	221	01.7	+21	32.1	52	45.6	-26	51.3	212	56.3	+23	08.3	236	02.1	+20	31.5			
Dif	—		-6		+2		+21		0		+19		0		+22						

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 5			Edad: 8 ^d 2 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 4 20 ^h : 56 ^m 1 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	178	22.9	+18 47.0	72	53.6	-15 46.0	60 N	20 38	21 40	** **	16 00 81	23 26 23		
1	193	22.9	46.4	87	24.0 ¹¹⁴	-15 55.8 ⁹⁸	58	25	19	22 54	15 47 77	39 27		
2	208	23.0	45.8	101	54.4 ¹¹⁴	-16 05.4 ⁹⁶	56	13	21 03	22 18	37 74	23 51 29		
3	223	23.0	45.2	116	24.7 ¹¹³	15.0 ⁹⁶	54	20 04	20 49	21 53	27 72	** ** *		
4	238	23.0	44.6	130	55.0 ¹¹³	24.4 ⁹⁴	52	19 55	37	34	19 69	** ** *		
5	253	23.0	+18 44.0	145	25.3 ¹¹³	-16 33.8 ⁹⁴	50	19 47	20 26	21 18	15 11 68	** ** *		
6	268	23.0	+18 43.4	159	55.6 ¹¹³	-16 43.1 ⁹³	45	19 30	20 04	20 47	14 55 65	0 02 33		
7	283	23.1	42.8	174	25.8 ¹¹²	-16 52.3 ⁹²	40	17	19 47	25	42 62	13 36		
8	298	23.1	42.3	188	56.0 ¹¹²	-17 01.3 ⁹⁰	35	19 05	33	20 07	30 60	23 38		
9	313	23.1	41.7	203	26.2 ¹¹²	10.3 ⁹⁰	30	18 55	21	19 53	21 58	31 40		
10	328	23.1	41.1	217	56.4 ¹¹²	19.3 ⁹⁰	20	38	19 02	30	14 04 55	46 43		
11	343	23.1	+18 40.5	232	26.6 ¹¹²	-17 28.1 ⁸⁸	10 N	18 24	18 46	19 12	13 49 53	0 58 47		
12	358	23.2	+18 39.9	246	56.7 ¹¹¹	-17 36.8 ⁸⁷	0	18 10	18 32	18 57	13 36 50	1 10 50		
13	13	23.2	39.3	261	26.8 ¹¹¹	45.4 ⁸⁶	10 S	17 56	19	44	22 48	22 53		
14	28	23.2	38.7	275	56.9 ¹¹¹	-17 53.9 ⁸⁵	20	42	18 05	32	13 08 45	35 55		
15	43	23.2	38.1	290	27.0 ¹¹¹	-18 02.4 ⁸⁵	30	26	17 51	20	12 52 42	50 59		
16	58	23.2	37.5	304	57.0 ¹¹⁰	10.7 ⁸³	35	16	43	14	43 39	1 58 61		
17	73	23.3	+18 36.9	319	27.0 ¹¹⁰	-18 18.9 ⁸²	40	17 06	17 35	18 07	12 32 37	2 08 64		
18	88	23.3	+18 36.3	333	57.0 ¹¹⁰	-18 27.1 ⁸²	45	16 53	17 25	18 00	12 19 35	2 20 66		
19	103	23.3	35.7	348	27.0 ¹¹⁰	35.1 ⁸⁰	50	38	13	17 53	12 04 32	34 70		
20	118	23.3	35.1	2	57.0 ¹¹⁰	43.0 ⁷⁹	52	31	08	49	11 57 30	40 72		
21	133	23.4	34.5	17	26.9 ¹⁰⁹	50.9 ⁷⁹	54	23	17 02	46	49 28	47 75		
22	148	23.4	33.9	31	56.8 ¹⁰⁹	-18 58.6 ⁷⁷	56	14	16 56	42	41 25	2 56 76		
23	163	23.4	33.3	46	26.7 ¹⁰⁹	-19 06.2 ⁷⁶	58	16 04	49	38	31 23	3 05 79		
24	178	23.4	+18 32.7	60	56.5 ¹⁰⁸	-19 13.8 ⁷⁶	60 S	15 52	16 41	17 33	11 19 20	3 15 84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 32 ^m 6		Mag: -4.0 PMG: 9 ^h 16 ^m		Mag: -1.6 PMG: 20 ^h 26 ^m		Mag: -2.0 PMG: 9 ^h 47 ^m		Mag: +0.2 PMG: 8 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	306	42.7	221 01.7	+21 32.1	52 45.6	-26 51.3	212 56.3	+23 08.3	236 02.1	+20 31.5
1	321	45.1	236 01.1	32.3	67 47.8	51.4	227 58.2	08.3	251 04.3	31.6
2	336	47.6	251 00.6	32.5	82 49.9	51.4	243 00.1	08.2	266 06.5	31.6
3	351	50.0	266 00.0	32.7	97 52.0	51.4	258 02.0	08.2	281 08.7	31.6
4	6	52.5	280 59.4	32.9	112 54.1	51.4	273 03.9	08.2	296 10.9	31.7
5	21	55.0	295 58.8	+21 33.1	127 56.2	-26 51.4	288 05.8	+23 08.2	311 13.2	+20 31.7
6	36	57.4	310 58.2	+21 33.3	142 58.3	-26 51.4	303 07.7	+23 08.2	326 15.4	+20 31.7
7	51	59.9	325 57.6	33.5	158 00.4	51.4	318 09.6	08.2	341 17.6	31.7
8	67	02.4	340 57.0	33.7	173 02.5	51.4	333 11.5	08.2	356 19.8	31.8
9	82	04.8	355 56.4	33.9	188 04.6	51.4	348 13.4	08.2	11 22.0	31.8
10	97	07.3	10 55.8	34.1	203 06.7	51.5	3 15.3	08.2	26 24.3	31.8
11	112	09.8	25 55.2	+21 34.3	218 08.8	-26 51.5	18 17.1	+23 08.1	41 26.5	+20 31.8
12	127	12.2	40 54.6	+21 34.5	233 10.9	-26 51.5	33 19.0	+23 08.1	56 28.7	+20 31.9
13	142	14.7	55 54.0	34.7	248 13.0	51.5	48 20.9	08.1	71 30.9	31.9
14	157	17.2	70 53.4	34.9	263 15.1	51.5	63 22.8	08.1	86 33.1	31.9
15	172	19.6	85 52.8	35.1	278 17.2	51.5	78 24.7	08.1	101 35.3	32.0
16	187	22.1	100 52.2	35.3	293 19.3	51.5	93 26.6	08.1	116 37.6	32.0
17	202	24.5	115 51.6	+21 35.5	308 21.4	-26 51.6	108 28.5	+23 08.1	131 39.8	+20 32.0
18	217	27.0	130 51.0	+21 35.7	323 23.5	-26 51.6	123 30.4	+23 08.1	146 42.0	+20 32.0
19	232	29.5	145 50.4	35.8	338 25.5	51.6	138 32.3	08.1	161 44.2	32.1
20	247	31.9	160 49.8	36.0	353 27.6	51.6	153 34.2	08.0	176 46.4	32.1
21	262	34.4	175 49.2	36.2	8 29.7	51.6	168 36.1	08.0	191 48.7	32.1
22	277	36.9	190 48.6	36.4	23 31.8	51.6	183 38.0	08.0	206 50.9	32.1
23	292	39.3	205 48.0	36.6	38 33.9	51.6	198 39.9	08.0	221 53.1	32.2
24	307	41.8	220 47.4	+21 36.8	53 36.0	-26 51.6	213 41.8	+23 08.0	236 55.3	+20 32.2
Dif	—		-6 +2		+21 0		+19 0		+22 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 4			Edad: 9 ^d 2 PHE { SD: 15'3 PMG: 20 ^h 38 ^m											
	hG ☉		Dec	hG ☾		Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	'	h m	h m	h m	h m	m	h m	m
0	178	23.4	+18 32.7	60	56.5	-19 13.8	60 N	** ** *	2 34	3 36	17 21	71	23 49	34	34
1	193	23.5	32.1	75	26.4 ¹⁰⁹	21.2 ⁷⁴	58	1 19	2 54	3 49	17 04	69	** ** *	**	**
2	208	23.5	31.5	89	56.2 ¹⁰⁸	28.5 ⁷³	56	1 55	3 11	4 00	16 51	66	** ** *	**	**
3	223	23.5	30.9	104	26.0 ¹⁰⁸	35.8 ⁷³	54	2 20	25	10	39	65	0 01	3	3
4	238	23.5	30.3	118	55.8 ¹⁰⁸	42.9 ⁷¹	52	40	37	19	28	64	09	33	
5	253	23.6	+18 29.7	133	25.5 ¹⁰⁷	-19 49.9 ⁷⁰	50	2 55	3 47	4 26	16 19	63	0 18	34	
6	268	23.6	+18 29.1	147	55.2 ¹⁰⁷	-19 56.8 ⁶⁹	45	3 26	4 09	4 43	16 00	60	0 35	37	
7	283	23.6	28.5	162	24.9 ¹⁰⁷	-20 03.6 ⁶⁸	40	3 48	26	4 56	15 44	58	0 49	40	
8	298	23.6	27.8	176	54.6 ¹⁰⁷	10.3 ⁶⁷	35	4 06	40	5 08	30	58	1 01	42	
9	313	23.7	27.2	191	24.3 ¹⁰⁷	16.9 ⁶⁶	30	20	4 52	18	15 19	56	11	44	
10	328	23.7	26.6	205	53.9 ¹⁰⁶	23.4 ⁶⁵	20	4 43	5 11	35	14 59	54	29	46	
11	343	23.7	+18 26.0	220	23.6 ¹⁰⁷	-20 29.7 ⁶³	10 N	5 01	5 27	5 49	14 42	52	1 45	48	
12	358	23.7	+18 25.4	234	53.2 ¹⁰⁶	-20 36.0 ⁶³	0	5 16	5 41	6 03	14 26	51	2 00	50	
13	13	23.8	24.8	249	22.8 ¹⁰⁶	42.2 ⁶²	10 S	29	5 54	16	14 10	49	15	52	
14	28	23.8	24.2	263	52.3 ¹⁰⁵	48.2 ⁶⁰	20	41	6 07	31	13 53	47	30	55	
15	43	23.8	23.6	278	21.9 ¹⁰⁶	-20 54.2 ⁶⁰	30	53	21	47	34	45	49	57	
16	58	23.9	23.0	292	51.4 ¹⁰⁵	-21 00.0 ⁵⁸	35	5 59	29	6 56	22	44	2 59	59	
17	73	23.9	+18 22.4	307	20.9 ¹⁰⁵	-21 05.7 ⁵⁷	40	6 05	6 38	7 07	13 09	43	3 12	60	
18	88	23.9	+18 21.8	321	50.4 ¹⁰⁵	-21 11.3 ⁵⁶	45	6 12	6 48	7 19	12 54	41	3 26	63	
19	103	23.9	21.1	336	19.9 ¹⁰⁵	16.8 ⁵⁵	50	20	6 59	34	36	38	44	66	
20	118	24.0	20.5	350	49.3 ¹⁰⁴	22.2 ⁵⁴	52	23	7 04	41	27	37	3 52	67	
21	133	24.0	19.9	5	18.8 ¹⁰⁵	27.5 ⁵³	54	26	10	49	17	35	4 02	68	
22	148	24.0	19.3	19	48.2 ¹⁰⁴	32.7 ⁵²	56	30	16	7 58	12 06	33	12	71	
23	163	24.1	18.7	34	17.6 ¹⁰⁴	37.7 ⁵⁰	58	34	23	8 08	11 54	31	24	74	
24	178	24.1	+18 18.1	48	47.0 ¹⁰⁴	-21 42.7 ⁵⁰	60 S	6 39	7 30	8 19	11 39	28	4 39	76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 28 ^m 6		Mag: -4.0 PMG: 9 ^h 17 ^m		Mag: -1.5 PMG: 20 ^h 23 ^m		Mag: -2.0 PMG: 9 ^h 44 ^m		Mag: +0.2 PMG: 8 ^h 11 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	307	41.8	220	47.4	+21	53	36.0	-26	213	41.8	+23	236	55.3	+20	32.2
1	322	44.3	235	46.8		68	38.0		228	43.7		251	57.5		32.2
2	337	46.7	250	46.2		83	40.1		243	45.6		266	59.7		32.2
3	352	49.2	265	45.6		98	42.2		258	47.5		282	02.0		32.3
4	7	51.7	280	45.0		113	44.3		273	49.3		297	04.2		32.3
5	22	54.1	295	44.3	+21	128	46.3	-26	288	51.2	+23	312	06.4	+20	32.3
6	37	56.6	310	43.7	+21	143	48.4	-26	303	53.1	+23	327	08.6	+20	32.4
7	52	59.0	325	43.1		158	50.5		318	55.0		342	10.8		32.4
8	68	01.5	340	42.5		173	52.5		333	56.9		357	13.1		32.4
9	83	04.0	355	41.9		188	54.6		348	58.8		12	15.3		32.4
10	98	06.4	10	41.3		203	56.7		4	00.7		27	17.5		32.5
11	113	08.9	25	40.7	+21	218	58.7	-26	19	02.6	+23	42	19.7	+20	32.5
12	128	11.4	40	40.1	+21	234	00.8	-26	34	04.5	+23	57	22.0	+20	32.5
13	143	13.8	55	39.5		249	02.8		49	06.4		72	24.2		32.5
14	158	16.3	70	38.9		264	04.9		64	08.3		87	26.4		32.6
15	173	18.8	85	38.3		279	07.0		79	10.2		102	28.6		32.6
16	188	21.2	100	37.7		294	09.0		94	12.1		117	30.8		32.6
17	203	23.7	115	37.1	+21	309	11.1	-26	109	14.0	+23	132	33.1	+20	32.6
18	218	26.1	130	36.5	+21	324	13.1	-26	124	15.9	+23	147	35.3	+20	32.7
19	233	28.6	145	35.8		339	15.2		139	17.8		162	37.5		32.7
20	248	31.1	160	35.2		354	17.2		154	19.7		177	39.7		32.7
21	263	33.5	175	34.6		9	19.3		169	21.6		192	41.9		32.8
22	278	36.0	190	34.0		24	21.3		184	23.5		207	44.2		32.8
23	293	38.5	205	33.4		39	23.3		199	25.4		222	46.4		32.8
24	308	40.9	220	32.8	+21	54	25.4	-26	214	27.3	+23	237	48.6	+20	32.8
Dif	—		-6		+2	+21		0	+19		0	+22			

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 4				Edad: 10 ^d 2 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 1 PMG: 21 ^h 29 ^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	h m	h m	
0	178	24.1	+18	18.1	48	47.0	-21	42.7	60 N	20 33	21 33	** **	18 32 58		** **	**	
1	193	24.1		17.5	63	16.4 ¹⁰⁴		47.5	58	20	21 14	22 43	18 13 57		0 06 36		
2	208	24.2		16.8	77	45.7 ¹⁰³		52.2	56	09	20 58	22 10	17 57 57		20 38		
3	223	24.2		16.2	92	15.1 ¹⁰⁴	-21	56.8	54	20 00	44	21 47	44 56		32 39		
4	238	24.2		15.6	106	44.4 ¹⁰³	-22	01.3	52	19 52	33	29	32 55		42 41		
5	253	24.2	+18	15.0	121	13.8 ¹⁰⁴	-22	05.7	50	19 44	20 23	21 14	17 22 55		0 52 42		
6	268	24.3	+18	14.4	135	43.1 ¹⁰³	-22	09.9	45	19 28	20 02	20 44	17 00 54		1 12 44		
7	283	24.3		13.8	150	12.4 ¹⁰³		14.1	40	15	19 45	22	16 42 54		29 45		
8	298	24.3		13.1	164	41.7 ¹⁰³		18.1	35	19 04	32	20 05	28 53		43 46		
9	313	24.4		12.5	179	11.0 ¹⁰³		22.0	30	18 54	20	19 51	16 15 53		1 55 47		
10	328	24.4		11.9	193	40.2 ¹⁰²		25.8	20	37	19 01	29	15 53 52		2 15 49		
11	343	24.4	+18	11.3	208	09.5 ¹⁰³	-22	29.5	10 N	18 23	18 45	19 11	15 34 52		2 33 50		
12	358	24.5	+18	10.7	222	38.7 ¹⁰²	-22	33.1	0	18 10	18 32	18 57	15 17 51		2 50 51		
13	13	24.5		10.0	237	08.0 ¹⁰³		36.5	10 S	17 57	19	44	14 59 50		3 07 52		
14	28	24.6		09.4	251	37.2 ¹⁰²		39.8	20	43	18 06	32	40 50		25 53		
15	43	24.6		08.8	266	06.5 ¹⁰³		43.1	30	27	17 52	21	19 49		46 55		
16	58	24.6		08.2	280	35.7 ¹⁰²		46.2	31	35	18	45	14 06 49		3 58 56		
17	73	24.7	+18	07.6	295	04.9 ¹⁰²	-22	49.2	40	17 07	17 36	18 09	13 52 47		4 12 57		
18	88	24.7	+18	06.9	309	34.2 ¹⁰³	-22	52.0	45	16 55	17 27	18 02	13 35 46		4 29 57		
19	103	24.7		06.3	324	03.4 ¹⁰²		54.8	50	40	16	17 55	14 45		50 59		
20	118	24.8		05.7	338	32.6 ¹⁰²		57.4	52	33	11	52	13 04 45		4 59 60		
21	133	24.8		05.1	353	01.8 ¹⁰²	-22	59.9	54	26	17 05	48	12 52 45		5 10 61		
22	148	24.8		04.4	7	31.0 ¹⁰²	-23	02.3	24	56	17	16 59	45	39 44		23 62	
23	163	24.9		03.8	22	00.2 ¹⁰²		04.6	23	58	16 08	53	41	25 42		38 63	
24	178	24.9	+18	03.2	36	29.4 ¹⁰²	-23	06.8	22	60 S	15 57	16 45	17 37	12 07 40		5 55 65	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 24 ^m 7		Mag: -4.0 PMG: 9 ^h 18 ^m		Mag: -1.5 PMG: 20 ^h 20 ^m		Mag: -2.0 PMG: 9 ^h 41 ^m		Mag: +0.2 PMG: 8 ^h 08 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	308	40.9	220	32.8	+21	40.9	54	25.4	-26	52.0	214	27.3	+23	07.7	237	48.6	+20	32.8
1	323	43.4	235	32.2		41.1	69	27.4		52.0	229	29.2		07.7	252	50.8		32.9
2	338	45.9	250	31.6		41.2	84	29.5		52.0	244	31.1		07.7	267	53.1		32.9
3	353	48.3	265	31.0		41.4	99	31.5		52.0	259	33.0		07.7	282	55.3		32.9
4	8	50.8	280	30.3		41.6	114	33.5		52.0	274	34.9		07.7	297	57.5		32.9
5	23	53.3	295	29.7	+21	41.7	129	35.6	-26	52.1	289	36.8	+23	07.7	312	59.7	+20	33.0
6	38	55.7	310	29.1	+21	41.9	144	37.6	-26	52.1	304	38.7	+23	07.6	328	01.9	+20	33.0
7	53	58.2	325	28.5		42.0	159	39.7		52.1	319	40.6		07.6	343	04.2		33.0
8	69	00.6	340	27.9		42.2	174	41.7		52.1	334	42.5		07.6	358	06.4		33.0
9	84	03.1	355	27.3		42.3	189	43.7		52.1	349	44.4		07.6	13	08.6		33.1
10	99	05.6	10	26.7		42.5	204	45.7		52.1	4	46.3		07.6	28	10.8		33.1
11	114	08.0	25	26.0	+21	42.6	219	47.8	-26	52.1	19	48.2	+23	07.6	43	13.1	+20	33.1
12	129	10.5	40	25.4	+21	42.8	234	49.8	-26	52.2	34	50.1	+23	07.6	58	15.3	+20	33.1
13	144	13.0	55	24.8		42.9	249	51.8		52.2	49	52.0		07.6	73	17.5		33.2
14	159	15.4	70	24.2		43.1	264	53.8		52.2	64	53.8		07.5	88	19.7		33.2
15	174	17.9	85	23.6		43.2	279	55.9		52.2	79	55.7		07.5	103	22.0		33.2
16	189	20.4	100	23.0		43.4	294	57.9		52.2	94	57.6		07.5	118	24.2		33.3
17	204	22.8	115	22.3	+21	43.5	309	59.9	-26	52.2	109	59.5	+23	07.5	133	26.4	+20	33.3
18	219	25.3	130	21.7	+21	43.7	325	01.9	-26	52.2	125	01.4	+23	07.5	148	28.6	+20	33.3
19	234	27.8	145	21.1		43.8	340	03.9		52.3	140	03.3		07.5	163	30.9		33.3
20	249	30.2	160	20.5		44.0	355	05.9		52.3	155	05.2		07.5	178	33.1		33.4
21	264	32.7	175	19.9		44.1	10	08.0		52.3	170	07.1		07.5	193	35.3		33.4
22	279	35.1	190	19.3		44.2	25	10.0		52.3	185	09.0		07.4	208	37.5		33.4
23	294	37.6	205	18.6		44.4	40	12.0		52.3	200	10.9		07.4	223	39.8		33.4
24	309	40.1	220	18.0	+21	44.5	55	14.0	-26	52.3	215	12.8	+23	07.4	238	42.0	+20	33.5
Dif	—		-6		+1		+20		0		+19		0		+22			

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /8			Edad: 11 ^d 2	PHE {	SD: 15 ^h 0		4 ^h : 54 ^m /9 12 ^h : 54 ^m /8 20 ^h : 54 ^m /7	PMG: 22 ^h 20 ^m		Rº: 50 ^m				
	hG ☉	Dec													
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	24.9	+18 03.2	36	29.4	-23 06.8	60 N	** *	2 40	3 41	19 30 42	0 23 47			
1	193	24.9	02.5	50	58.7 ¹⁰³	08.8	58	1 30	2 59	3 53	19 10 43	42 48			
2	208	25.0	01.9	65	27.9 ¹⁰²	10.8	56	2 03	3 15	4 04	18 54 44	0 58 48			
3	223	25.0	01.3	79	57.1 ¹⁰²	12.6	54	26	29	13	40 45	1 11 49			
4	238	25.1	+18 00.7	94	26.3 ¹⁰²	14.3	52	2 44	40	22	27 46	23 50			
5	253	25.1	+18 00.0	108	55.5 ¹⁰²	-23 15.8	50	3 00	3 51	4 29	18 17 46	1 34 49			
6	268	25.1	+17 59.4	123	24.8 ¹⁰³	-23 17.3	45	3 29	4 11	4 45	17 54 47	1 56 50			
7	283	25.2	58.8	137	54.0 ¹⁰²	18.6	40	3 51	28	4 58	36 48	2 14 50			
8	298	25.2	58.1	152	23.3 ¹⁰³	19.9	35	4 08	41	5 09	21 48	29 50			
9	313	25.3	57.5	166	52.5 ¹⁰²	21.0	30	22	4 53	19	17 08 48	2 42 50			
10	328	25.3	56.9	181	21.8 ¹⁰³	22.0	20	4 44	5 12	35	16 45 49	3 04 51			
11	343	25.3	+17 56.2	195	51.1 ¹⁰³	-23 22.8	10 N	5 01	5 27	5 50	16 26 50	3 23 51			
12	358	25.4	+17 55.6	210	20.3 ¹⁰²	-23 23.6	0	5 16	5 41	6 03	16 08 50	3 41 51			
13	13	25.4	55.0	224	49.6 ¹⁰³	24.2	10 S	28	5 54	16	15 49 51	3 59 51			
14	28	25.5	54.3	239	18.9 ¹⁰³	24.8	20	40	6 07	30	30 51	4 18 51			
15	43	25.5	53.7	253	48.2 ¹⁰³	25.2	30	51	20	45	15 08 51	41 50			
16	58	25.5	53.1	268	17.6 ¹⁰⁴	25.4	35	5 57	28	6 54	14 55 51	4 54 50			
17	73	25.6	+17 52.4	282	46.9 ¹⁰³	-23 25.6	40	6 03	6 36	7 05	14 39 53	5 09 50			
18	88	25.6	+17 51.8	297	16.3 ¹⁰⁴	-23 25.7	45	6 10	6 45	7 17	14 21 53	5 26 51			
19	103	25.7	51.2	311	45.7 ¹⁰⁴	25.6	50	17	6 56	31	13 59 53	49 50			
20	118	25.7	50.5	326	15.0 ¹⁰³	25.4	52	20	7 01	38	49 53	5 59 51			
21	133	25.8	49.9	340	44.5 ¹⁰⁵	25.1	54	24	07	46	37 53	6 11 51			
22	148	25.8	49.3	355	13.9 ¹⁰⁴	24.7	56	27	12	7 54	23 54	25 50			
23	163	25.8	48.6	9	43.3 ¹⁰⁴	24.2	58	31	19	8 04	13 07 54	6 41 50			
24	178	25.9	+17 48.0	24	12.8 ¹⁰⁵	-23 23.6	60 S	6 35	7 26	8 15	12 47 55	7 00 50			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 20 ^m 8		Mag: -4.0 PMG: 9 ^h 19 ^m			Mag: -1.5 PMG: 20 ^h 16 ^m			Mag: -2.0 PMG: 9 ^h 38 ^m			Mag: +0.2 PMG: 8 ^h 04 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	309	40.1	220	18.0	+21 44.5	55	14.0	-26 52.3	215	12.8	+23 07.4	238	42.0	+20 33.5
1	324	42.5	235	17.4	44.7	70	16.0	52.4	230	14.7	07.4	253	44.2	33.5
2	339	45.0	250	16.8	44.8	85	18.0	52.4	245	16.6	07.4	268	46.4	33.5
3	354	47.5	265	16.2	44.9	100	20.0	52.4	260	18.5	07.4	283	48.7	33.5
4	9	49.9	280	15.5	45.1	115	22.0	52.4	275	20.4	07.4	298	50.9	33.6
5	24	52.4	295	14.9	+21 45.2	130	24.0	-26 52.4	290	22.3	+23 07.4	313	53.1	+20 33.6
6	39	54.9	310	14.3	+21 45.3	145	26.0	-26 52.4	305	24.2	+23 07.3	328	55.3	+20 33.6
7	54	57.3	325	13.7	45.5	160	28.0	52.5	320	26.1	07.3	343	57.6	33.6
8	69	59.8	340	13.1	45.6	175	30.0	52.5	335	28.0	07.3	358	59.8	33.7
9	85	02.3	355	12.4	45.7	190	32.0	52.5	350	30.0	07.3	14	02.0	33.7
10	100	04.7	10	11.8	45.8	205	34.0	52.5	5	31.9	07.3	29	04.2	33.7
11	115	07.2	25	11.2	+21 46.0	220	36.0	-26 52.5	20	33.8	+23 07.3	44	06.5	+20 33.7
12	130	09.6	40	10.6	+21 46.1	235	38.0	-26 52.5	35	35.7	+23 07.3	59	08.7	+20 33.8
13	145	12.1	55	09.9	46.2	250	39.9	52.6	50	37.6	07.2	74	10.9	33.8
14	160	14.6	70	09.3	46.4	265	41.9	52.6	65	39.5	07.2	89	13.2	33.8
15	175	17.0	85	08.7	46.5	280	43.9	52.6	80	41.4	07.2	104	15.4	33.8
16	190	19.5	100	08.1	46.6	295	45.9	52.6	95	43.3	07.2	119	17.6	33.9
17	205	22.0	115	07.5	+21 46.7	310	47.9	-26 52.6	110	45.2	+23 07.2	134	19.8	+20 33.9
18	220	24.4	130	06.8	+21 46.8	325	49.9	-26 52.6	125	47.1	+23 07.2	149	22.1	+20 33.9
19	235	26.9	145	06.2	47.0	340	51.8	52.7	140	49.0	07.2	164	24.3	33.9
20	250	29.4	160	05.6	47.1	355	53.8	52.7	155	50.9	07.2	179	26.5	34.0
21	265	31.8	175	05.0	47.2	10	55.8	52.7	170	52.8	07.1	194	28.8	34.0
22	280	34.3	190	04.3	47.3	25	57.8	52.7	185	54.7	07.1	209	31.0	34.0
23	295	36.8	205	03.7	47.4	40	59.8	52.7	200	56.6	07.1	224	33.2	34.0
24	310	39.2	220	03.1	+21 47.6	56	01.7	-26 52.7	215	58.5	+23 07.1	239	35.4	+20 34.1
Dif	—		-6		+1	+20		0	+19		0	+22		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 12 ^d 2 PHE	SD: 14 ^h 9				R°: 48 ^m						
	PMG: 12 ^h 06 ^m 2				PMG: 23 ^h 10 ^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	25.9	+17 48.0	24	12.8	-23 23.6	8	60 N	20 28	21 27	23 25	20 12 28	1 10 62		
1	193	25.9	47.3	38	42.3 ¹⁰⁵	22.8	9	58	16	21 08	22 33	19 53 32	30 60		
2	208	26.0	46.7	53	11.8 ¹⁰⁵	21.9	10	56	20 05	20 53	22 03	38 33	1 46 59		
3	223	26.0	46.1	67	41.3 ¹⁰⁵	20.9	11	54	19 56	40	21 41	25 35	2 00 58		
4	238	26.1	45.4	82	10.9 ¹⁰⁶	19.8	11	52	48	29	24	13 37	13 57		
5	253	26.1	+17 44.8	96	40.4 ¹⁰⁵	-23 18.6	12	50	19 41	20 19	21 09	19 03 37	2 23 57		
6	268	26.2	+17 44.1	111	10.0 ¹⁰⁶	-23 17.3	13	45	19 25	19 59	20 41	18 41 40	2 46 55		
7	283	26.2	43.5	125	39.7 ¹⁰⁷	15.8	15	40	13	43	20	24 41	3 04 54		
8	298	26.2	42.8	140	09.3 ¹⁰⁶	14.3	15	35	19 02	30	20 03	18 09 43	19 53		
9	313	26.3	42.2	154	39.0 ¹⁰⁷	12.6	17	30	18 53	18	19 49	17 56 44	32 53		
10	328	26.3	41.6	169	08.7 ¹⁰⁷	10.8	18	20	36	19 00	28	34 46	3 55 51		
11	343	26.4	+17 40.9	183	38.4 ¹⁰⁷	-23 08.9	19	10 N	18 23	18 45	19 11	17 16 47	4 14 51		
12	358	26.4	+17 40.3	198	08.2 ¹⁰⁸	-23 06.9	20	0	18 10	18 31	18 57	16 58 49	4 32 50		
13	13	26.5	39.6	212	38.0 ¹⁰⁸	04.8	21	10 S	17 57	19	44	40 50	4 50 49		
14	28	26.5	39.0	227	07.8 ¹⁰⁸	02.6	22	20	43	18 06	33	16 21 52	5 09 48		
15	43	26.6	38.3	241	37.7 ¹⁰⁹	-23 00.2	24	30	28	17 53	22	15 59 54	31 47		
16	58	26.6	37.7	256	07.6 ¹⁰⁹	-22 57.8	24	35	19	46	16	46 55	44 46		
17	73	26.7	+17 37.0	270	37.5 ¹⁰⁹	-22 55.2	26	40	17 09	17 38	18 10	15 32 56	5 59 45		
18	88	26.7	+17 36.4	285	07.4 ¹⁰⁹	-22 52.6	26	45	16 57	17 29	18 04	15 14 57	6 17 44		
19	103	26.8	35.7	299	37.4 ¹¹⁰	49.8	28	50	43	18	17 57	14 52 60	39 42		
20	118	26.8	35.1	314	07.5 ¹¹¹	46.9	29	52	36	13	54	42 60	6 50 41		
21	133	26.9	34.4	328	37.5 ¹¹⁰	43.9	30	54	29	08	51	30 62	7 02 40		
22	148	26.9	33.8	343	07.6 ¹¹¹	40.8	31	56	21	17 02	48	17 63	15 39		
23	163	27.0	33.1	357	37.7 ¹¹¹	37.6	32	58	12	16 56	44	14 01 65	31 37		
24	178	27.0	+17 32.5	12	07.9 ¹¹²	-22 34.2	34	60 S	16 01	16 49	17 40	13 42 67	7 50 35		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 16 ^m 8		Mag: -4.0 PMG: 9 ^h 20 ^m		Mag: -1.5 PMG: 20 ^h 13 ^m		Mag: -2.0 PMG: 9 ^h 35 ^m		Mag: +0.2 PMG: 8 ^h 00 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	310	39.2	220	03.1	+21 47.6	56 01.7	-26 52.7	215 58.5	+23 07.1	239 35.4	+20 34.1
1	325	41.7	235	02.4	47.7	71 03.7	52.8	231 00.4	07.1	254 37.7	34.1
2	340	44.1	250	01.8	47.8	86 05.7	52.8	246 02.3	07.1	269 39.9	34.1
3	355	46.6	265	01.2	47.9	101 07.6	52.8	261 04.2	07.1	284 42.1	34.1
4	10	49.1	280	00.6	48.0	116 09.6	52.8	276 06.1	07.0	299 44.4	34.2
5	25	51.5	294	59.9	+21 48.1	131 11.6	-26 52.8	291 08.0	+23 07.0	314 46.6	+20 34.2
6	40	54.0	309	59.3	+21 48.2	146 13.5	-26 52.8	306 09.9	+23 07.0	329 48.8	+20 34.2
7	55	56.5	324	58.7	48.3	161 15.5	52.9	321 11.8	07.0	344 51.0	34.2
8	70	58.9	339	58.1	48.5	176 17.5	52.9	336 13.7	07.0	359 53.3	34.3
9	86	01.4	354	57.4	48.6	191 19.4	52.9	351 15.6	07.0	14 55.5	34.3
10	101	03.9	9	56.8	48.7	206 21.4	52.9	6 17.5	07.0	29 57.7	34.3
11	116	06.3	24	56.2	+21 48.8	221 23.3	-26 52.9	21 19.4	+23 06.9	45 00.0	+20 34.3
12	131	08.8	39	55.5	+21 48.9	236 25.3	-26 52.9	36 21.3	+23 06.9	60 02.2	+20 34.4
13	146	11.2	54	54.9	49.0	251 27.2	53.0	51 23.2	06.9	75 04.4	34.4
14	161	13.7	69	54.3	49.1	266 29.2	53.0	66 25.1	06.9	90 06.6	34.4
15	176	16.2	84	53.6	49.2	281 31.1	53.0	81 27.0	06.9	105 08.9	34.4
16	191	18.6	99	53.0	49.3	296 33.1	53.0	96 28.9	06.9	120 11.1	34.5
17	206	21.1	114	52.4	+21 49.4	311 35.0	-26 53.0	111 30.8	+23 06.9	135 13.3	+20 34.5
18	221	23.6	129	51.7	+21 49.5	326 37.0	-26 53.0	126 32.7	+23 06.9	150 15.6	+20 34.5
19	236	26.0	144	51.1	49.6	341 38.9	53.1	141 34.7	06.8	165 17.8	34.5
20	251	28.5	159	50.5	49.7	356 40.9	53.1	156 36.6	06.8	180 20.0	34.6
21	266	31.0	174	49.9	49.8	11 42.8	53.1	171 38.5	06.8	195 22.3	34.6
22	281	33.4	189	49.2	49.9	26 44.8	53.1	186 40.4	06.8	210 24.5	34.6
23	296	35.9	204	48.6	50.0	41 46.7	53.1	201 42.3	06.8	225 26.7	34.6
24	311	38.4	219	48.0	+21 50.0	56 48.6	-26 53.2	216 44.2	+23 06.8	240 29.0	+20 34.7
Dif	—		-6 +1		+20 0		+19 0		+22 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 2			Edad: 13 ^d 2 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2 Rº: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	27.0	+17 32.5	12	07.9	-22 34.2	60 N	0 48	2 46	3 45	20 40	19	2 12	72	
1	193	27.1	31.8	26	38.1 ¹¹²	30.8 ³⁴	58	1 40	3 05	3 57	25 22		30	69	
2	208	27.1	31.2	41	08.3 ¹¹²	27.3 ³⁵	56	2 10	20	4 08	11 25		45	67	
3	223	27.2	30.5	55	38.6 ¹¹³	23.7 ³⁶	54	32	33	17	20 00	27	2 58	65	
4	238	27.2	29.9	70	08.9 ¹¹³	19.9 ³⁸	52	2 49	44	25	19 50	29	3 10	63	
5	253	27.3	+17 29.2	84	39.3 ¹¹⁴	-22 16.1 ³⁸	50	3 04	3 54	4 32	19 40	31	3 20	61	
6	268	27.3	+17 28.6	99	09.7 ¹¹⁴	-22 12.1 ⁴⁰	45	3 32	4 14	4 47	19 21	34	3 41	59	
7	283	27.4	27.9	113	40.1 ¹¹⁴	08.1 ⁴⁰	40	3 53	30	5 00	19 05	36	3 58	57	
8	298	27.4	27.3	128	10.6 ¹¹⁵	-22 03.9 ⁴²	35	4 10	43	11	18 52	38	4 12	56	
9	313	27.5	26.6	142	41.1 ¹¹⁵	-21 59.6 ⁴³	30	23	4 54	20	40 40		25	54	
10	328	27.5	25.9	157	11.7 ¹¹⁶	55.3 ⁴³	20	4 45	5 13	36	20 43		4 46	52	
11	343	27.6	+17 25.3	171	42.3 ¹¹⁶	-21 50.8 ⁴⁵	10 N	5 02	5 28	5 50	18 03	45	5 05	49	
12	358	27.6	+17 24.6	186	13.0 ¹¹⁷	-21 46.2 ⁴⁶	0	5 16	5 41	6 03	17 47	47	5 22	48	
13	13	27.7	24.0	200	43.7 ¹¹⁷	41.6 ⁴⁶	10 S	28	5 53	15	30 50		39	46	
14	28	27.7	23.3	215	14.4 ¹¹⁷	36.8 ⁴⁸	20	39	6 06	29	17 13	52	5 57	44	
15	43	27.8	22.7	229	45.2 ¹¹⁸	32.0 ⁴⁸	30	50	19	44	16 53	54	6 18	42	
16	58	27.8	22.0	244	16.0 ¹¹⁸	27.0 ⁵⁰	35	5 56	26	6 53	41 56		30	41	
17	73	27.9	+17 21.3	258	46.9 ¹¹⁹	-21 21.9 ⁵¹	40	6 02	6 34	7 03	16 28	57	6 44	39	
18	88	28.0	+17 20.7	273	17.8 ¹¹⁹	-21 16.8 ⁵¹	45	6 08	6 43	7 14	16 11	61	7 01	36	
19	103	28.0	20.0	287	48.8 ¹²⁰	11.5 ⁵³	50	14	53	28	15 52	63	21	34	
20	118	28.1	19.4	302	19.8 ¹²⁰	06.2 ⁵³	52	17	6 58	35	42 65		31	32	
21	133	28.1	18.7	316	50.9 ¹²¹	-21 00.7 ⁵⁵	54	20	7 03	42	32 66		42	31	
22	148	28.2	18.0	331	22.0 ¹²¹	-20 55.2 ⁵⁵	56	24	09	50	20 68		7 54	29	
23	163	28.2	17.4	345	53.1 ¹²¹	49.6 ⁵⁶	58	27	15	7 59	15 06	71	8 08	27	
24	178	28.3	+17 16.7	0	24.3 ¹²²	-20 43.8 ⁵⁸	60 S	6 31	7 22	8 10	14 49	74	8 25	24	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 12 ^m 9		Mag: -4.0 PMG: 9 ^h 21 ^m			Mag: -1.4 PMG: 20 ^h 10 ^m			Mag: -2.0 PMG: 9 ^h 32 ^m			Mag: +0.2 PMG: 7 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	311	38.4	219 48.0	+21 50.0	56 48.6	-26 53.2	216 44.2	+23 06.8	240 29.0	+20 34.7				
1	326	40.8	234 47.3	50.1	71 50.6	53.2	231 46.1	06.8	255 31.2	34.7				
2	341	43.3	249 46.7	50.2	86 52.5	53.2	246 48.0	06.7	270 33.4	34.7				
3	356	45.7	264 46.1	50.3	101 54.5	53.2	261 49.9	06.7	285 35.7	34.7				
4	11	48.2	279 45.4	50.4	116 56.4	53.2	276 51.8	06.7	300 37.9	34.8				
5	26	50.7	294 44.8	+21 50.5	131 58.3	-26 53.2	291 53.7	+23 06.7	315 40.1	+20 34.8				
6	41	53.1	309 44.1	+21 50.6	147 00.2	-26 53.3	306 55.6	+23 06.7	330 42.3	+20 34.8				
7	56	55.6	324 43.5	50.7	162 02.2	53.3	321 57.5	06.7	345 44.6	34.8				
8	71	58.1	339 42.9	50.8	177 04.1	53.3	336 59.4	06.6	0 46.8	34.9				
9	87	00.5	354 42.2	50.8	192 06.0	53.3	352 01.3	06.6	15 49.0	34.9				
10	102	03.0	9 41.6	50.9	207 08.0	53.3	7 03.2	06.6	30 51.3	34.9				
11	117	05.5	24 41.0	+21 51.0	222 09.9	-26 53.4	22 05.1	+23 06.6	45 53.5	+20 34.9				
12	132	07.9	39 40.3	+21 51.1	237 11.8	-26 53.4	37 07.1	+23 06.6	60 55.7	+20 35.0				
13	147	10.4	54 39.7	51.2	252 13.7	53.4	52 09.0	06.6	75 58.0	35.0				
14	162	12.9	69 39.1	51.2	267 15.6	53.4	67 10.9	06.6	91 00.2	35.0				
15	177	15.3	84 38.4	51.3	282 17.6	53.4	82 12.8	06.5	106 02.4	35.0				
16	192	17.8	99 37.8	51.4	297 19.5	53.4	97 14.7	06.5	121 04.7	35.1				
17	207	20.2	114 37.1	+21 51.5	312 21.4	-26 53.5	112 16.6	+23 06.5	136 06.9	+20 35.1				
18	222	22.7	129 36.5	+21 51.5	327 23.3	-26 53.5	127 18.5	+23 06.5	151 09.1	+20 35.1				
19	237	25.2	144 35.9	51.6	342 25.2	53.5	142 20.4	06.5	166 11.4	35.1				
20	252	27.6	159 35.2	51.7	357 27.1	53.5	157 22.3	06.5	181 13.6	35.2				
21	267	30.1	174 34.6	51.8	12 29.0	53.5	172 24.2	06.5	196 15.9	35.2				
22	282	32.6	189 33.9	51.8	27 30.9	53.6	187 26.1	06.4	211 18.1	35.2				
23	297	35.0	204 33.3	51.9	42 32.8	53.6	202 28.0	06.4	226 20.3	35.2				
24	312	37.5	219 32.7	+21 52.0	57 34.8	-26 53.6	217 29.9	+23 06.4	241 22.6	+20 35.2				
Dif	—		-6	+1	+19	0	+19	0	+22	0				

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: 14 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 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	h m m
0	178	28.3	+17	16.7	0	24.3	-20	43.8	60 N	20 23	21 20	23 05	20 59 14	3 24 76
1	193	28.3		16.1	14	55.6 ¹²³		38.0 ⁵⁸	58	11	21 03	22 23	47 17	39 73
2	208	28.4		15.4	29	26.9 ¹²³		32.1 ⁵⁹	56	20 01	20 48	21 56	36 20	3 52 70
3	223	28.5		14.7	43	58.2 ¹²³		26.1 ⁶⁰	54	19 53		36	35	4 03 68
4	238	28.5		14.1	58	29.6 ¹²⁴		20.0 ⁶¹	52	45	25	19	19 23	13 66
5	253	28.6	+17	13.4	73	01.0 ¹²⁴	-20	13.8 ⁶²	50	19 38	20 16	21 05	20 11 25	4 21 65
6	268	28.6	+17	12.7	87	32.5 ¹²⁵	-20	07.6 ⁶²	45	19 23	19 56	20 38	19 55 28	4 40 61
7	283	28.7		12.1	102	04.1 ¹²⁶	-20	01.2 ⁶⁴	40	10	40	17	41 32	4 55 59
8	298	28.8		11.4	116	35.6 ¹²⁵	-19	54.7 ⁶⁵	35	19 00	28	20 01	30 34	5 08 56
9	313	28.8		10.7	131	07.3 ¹²⁷		48.2 ⁶⁵	30	18 51	19 17	19 47	20 36	19 54
10	328	28.9		10.1	145	39.0 ¹²⁷		41.6 ⁶⁶	20	35	18 59	26	19 03 39	38 51
11	343	28.9	+17	09.4	160	10.7 ¹²⁷	-19	34.9 ⁶⁷	10 N	18 22	18 44	19 10	18 48 42	5 54 49
12	358	29.0	+17	08.7	174	42.5 ¹²⁸	-19	28.1 ⁶⁸	0	18 10	18 31	18 56	18 34 45	6 10 46
13	13	29.0		08.1	189	14.3 ¹²⁸		21.2 ⁶⁹	10 S	17 57	19	44	20 47	25 44
14	28	29.1		07.4	203	46.2 ¹²⁹		14.2 ⁷⁰	20	44	18 07	34	18 05 50	6 41 41
15	43	29.2		06.7	218	18.1 ¹²⁹		07.2 ⁷⁰	30	29	17 54	23	17 47 54	7 00 38
16	58	29.2		06.0	232	50.1 ¹³⁰	-19	00.1 ⁷¹	35	21	47	18	37 56	11 36
17	73	29.3	+17	05.4	247	22.1 ¹³⁰	-18	52.8 ⁷³	40	17 11	17 40	18 12	17 25 59	7 23 34
18	88	29.3	+17	04.7	261	54.2 ¹³¹	-18	45.5 ⁷³	45	17 00	17 31	18 06	17 12 61	7 37 32
19	103	29.4		04.0	276	26.4 ¹³²		38.2 ⁷³	50	16 46	21	18 00	16 55 65	7 55 28
20	118	29.5		03.4	290	58.5 ¹³¹		30.7 ⁷⁵	52	39	16	17 57	47 66	8 03 27
21	133	29.5		02.7	305	30.8 ¹³³		23.2 ⁷⁵	54	32	11	54	38 69	13 24
22	148	29.6		02.0	320	03.0 ¹³²		15.6 ⁷⁶	56	24	06	51	28 71	23 22
23	163	29.7		01.3	334	35.4 ¹³⁴		07.9 ⁷⁷	58	16	17 00	47	17 73	35 19
24	178	29.7	+17	00.7	349	07.7 ¹³³	-18	00.1 ⁷⁸	60 S	16 05	16 53	17 44	16 03 77	8 49 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 09 ^m 0		Mag: -4.0 PMG: 9 ^h 22 ^m		Mag: -1.4 PMG: 20 ^h 07 ^m		Mag: -2.0 PMG: 9 ^h 29 ^m		Mag: +0.2 PMG: 7 ^h 53 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	312	37.5	219	32.7	+21	52.0	57	34.8	-26	53.6	217	29.9	+23	06.4	241	22.6	+20	35.2
1	327	40.0	234	32.0		52.0	72	36.7		53.6	232	31.9		06.4	256	24.8		35.3
2	342	42.4	249	31.4		52.1	87	38.6		53.6	247	33.8		06.4	271	27.0		35.3
3	357	44.9	264	30.7		52.2	102	40.5		53.6	262	35.7		06.4	286	29.3		35.3
4	12	47.4	279	30.1		52.2	117	42.4		53.7	277	37.6		06.4	301	31.5		35.3
5	27	49.8	294	29.5	+21	52.3	132	44.3	-26	53.7	292	39.5	+23	06.3	316	33.7	+20	35.4
6	42	52.3	309	28.8	+21	52.4	147	46.2	-26	53.7	307	41.4	+23	06.3	331	36.0	+20	35.4
7	57	54.7	324	28.2		52.4	162	48.1		53.7	322	43.3		06.3	346	38.2		35.4
8	72	57.2	339	27.5		52.5	177	49.9		53.7	337	45.2		06.3	1	40.4		35.4
9	87	59.7	354	26.9		52.6	192	51.8		53.8	352	47.1		06.3	16	42.7		35.5
10	103	02.1	9	26.3		52.6	207	53.7		53.8	7	49.0		06.3	31	44.9		35.5
11	118	04.6	24	25.6	+21	52.7	222	55.6	-26	53.8	22	50.9	+23	06.2	46	47.1	+20	35.5
12	133	07.1	39	25.0	+21	52.7	237	57.5	-26	53.8	37	52.9	+23	06.2	61	49.4	+20	35.5
13	148	09.5	54	24.3		52.8	252	59.4		53.8	52	54.8		06.2	76	51.6		35.6
14	163	12.0	69	23.7		52.8	268	01.3		53.9	67	56.7		06.2	91	53.9		35.6
15	178	14.5	84	23.0		52.9	283	03.2		53.9	82	58.6		06.2	106	56.1		35.6
16	193	16.9	99	22.4		53.0	298	05.1		53.9	98	00.5		06.2	121	58.3		35.6
17	208	19.4	114	21.8	+21	53.0	313	06.9	-26	53.9	113	02.4	+23	06.2	137	00.6	+20	35.7
18	223	21.8	129	21.1	+21	53.1	328	08.8	-26	53.9	128	04.3	+23	06.1	152	02.8	+20	35.7
19	238	24.3	144	20.5		53.1	343	10.7		54.0	143	06.2		06.1	167	05.0		35.7
20	253	26.8	159	19.8		53.2	358	12.6		54.0	158	08.1		06.1	182	07.3		35.7
21	268	29.2	174	19.2		53.2	13	14.4		54.0	173	10.1		06.1	197	09.5		35.7
22	283	31.7	189	18.5		53.3	28	16.3		54.0	188	12.0		06.1	212	11.8		35.8
23	298	34.2	204	17.9		53.3	43	18.2		54.0	203	13.9		06.1	227	14.0		35.8
24	313	36.6	219	17.2	+21	53.3	58	20.1	-26	54.0	218	15.8	+23	06.0	242	16.2	+20	35.8
Dif	—		-6		+1		+19		0		+19		0		+22			

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: 15 ^d 2 ^h PHE { SD: 14/7 PMG: 0 ^h 45 ^m R°: 44 ^m 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	29.7	+17	00.7	349	07.7	-18 00.1	60 N	1 07	2 53	3 50	21 13	10	4 40	77
1	193	29.8	+17	00.0	3	40.2 ¹³⁵	-17 52.3 ⁷⁸	58	1 50	3 10	4 01	21 04	13	4 52	74
2	208	29.8	+16	59.3	18	12.6 ¹³⁴	44.3 ⁸⁰	56	2 17	24	11	20 56	15	5 02	71
3	223	29.9		58.6	32	45.2 ¹³⁶	36.4 ⁷⁹	54	37	37	20	49 17		11 69	
4	238	30.0		58.0	47	17.7 ¹³⁵	28.3 ⁸¹	52	2 54	48	28	42 20		19 67	
5	253	30.0	+16	57.3	61	50.4 ¹³⁷	-17 20.1 ⁸²	50	3 08	3 57	4 35	20 36	22	5 26	65
6	268	30.1	+16	56.6	76	23.0 ¹³⁶	-17 11.9 ⁸²	45	3 35	4 17	4 50	20 23	26	5 41	62
7	283	30.2		55.9	90	55.7 ¹³⁷	-17 03.6 ⁸³	40	3 55	32	5 02	13 28		5 54	58
8	298	30.2		55.3	105	28.5 ¹³⁸	-16 55.3 ⁸³	35	4 12	45	12	20 04	31	6 04	56
9	313	30.3		54.6	120	01.3 ¹³⁸	46.9 ⁸⁴	30	25	4 56	21	19 56	33	13 54	
10	328	30.4		53.9	134	34.2 ¹³⁹	38.4 ⁸⁵	20	4 46	5 13	37	42 37		29 50	
11	343	30.4	+16	53.2	149	07.1 ¹³⁹	-16 29.8 ⁸⁶	10 N	5 02	5 28	5 50	19 30	40	6 43	47
12	358	30.5	+16	52.5	163	40.0 ¹³⁹	-16 21.2 ⁸⁶	0	5 16	5 41	6 03	19 19	43	6 56	44
13	13	30.6		51.9	178	13.0 ¹⁴⁰	12.4 ⁸⁷	10 S	28	5 53	15	19 07	47	7 09	41
14	28	30.6		51.2	192	46.1 ¹⁴¹	-16 03.7 ⁸⁷	20	38	6 05	28	18 55	50	22 38	
15	43	30.7		50.5	207	19.2 ¹⁴¹	-15 54.8 ⁸⁹	30	49	17	42	41 54		38 34	
16	58	30.8		49.8	221	52.3 ¹⁴¹	45.9 ⁸⁹	35	5 54	24	6 51	33 56		47 32	
17	73	30.8	+16	49.1	236	25.5 ¹⁴²	-15 37.0 ⁸⁹	40	6 00	6 32	7 00	18 24	58	7 57	29
18	88	30.9	+16	48.4	250	58.7 ¹⁴²	-15 27.9 ⁹¹	45	6 05	6 40	7 12	18 13	61	8 09	26
19	103	31.0		47.8	265	32.0 ¹⁴³	18.8 ⁹¹	50	12	50	25	18 00	65	23 23	
20	118	31.0		47.1	280	05.3 ¹⁴³	09.7 ⁹¹	52	14	6 55	32	17 53	68	30 21	
21	133	31.1		46.4	294	38.7 ¹⁴⁴	-15 00.5 ⁹²	54	17	7 00	39	47 69		37 19	
22	148	31.2		45.7	309	12.1 ¹⁴⁴	-14 51.2 ⁹³	56	20	05	46	39 72		45 18	
23	163	31.2		45.0	323	45.5 ¹⁴⁴	41.8 ⁹⁴	58	24	11	7 55	30 75		8 54	15
24	178	31.3	+16	44.3	338	19.0 ¹⁴⁵	-14 32.4 ⁹⁴	60 S	6 27	7 18	8 05	17 20	78	9 05	12

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 3 ^h 05 ^m 1		Mag: -4.0 PMG: 9 ^h 23 ^m			Mag: -1.4 PMG: 20 ^h 04 ^m			Mag: -2.0 PMG: 9 ^h 26 ^m			Mag: +0.2 PMG: 7 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	313	36.6	219	17.2	+21 53.3	58 20.1	-26 54.0	218 15.8	+23 06.0	242 16.2	+20 35.8			
1	328	39.1	234	16.6	53.4	73 21.9	54.1	233 17.7	06.0	257 18.5	35.8			
2	343	41.6	249	15.9	53.4	88 23.8	54.1	248 19.6	06.0	272 20.7	35.9			
3	358	44.0	264	15.3	53.5	103 25.7	54.1	263 21.5	06.0	287 22.9	35.9			
4	13	46.5	279	14.7	53.5	118 27.5	54.1	278 23.4	06.0	302 25.2	35.9			
5	28	49.0	294	14.0	+21 53.6	133 29.4	-26 54.1	293 25.3	+23 06.0	317 27.4	+20 35.9			
6	43	51.4	309	13.4	+21 53.6	148 31.3	-26 54.2	308 27.3	+23 06.0	332 29.7	+20 36.0			
7	58	53.9	324	12.7	53.6	163 33.1	54.2	323 29.2	05.9	347 31.9	36.0			
8	73	56.3	339	12.1	53.7	178 35.0	54.2	338 31.1	05.9	2 34.1	36.0			
9	88	58.8	354	11.4	53.7	193 36.9	54.2	353 33.0	05.9	17 36.4	36.0			
10	104	01.3	9	10.8	53.7	208 38.7	54.2	8 34.9	05.9	32 38.6	36.0			
11	119	03.7	24	10.1	+21 53.8	223 40.6	-26 54.3	23 36.8	+23 05.9	47 40.9	+20 36.1			
12	134	06.2	39	09.5	+21 53.8	238 42.4	-26 54.3	38 38.7	+23 05.9	62 43.1	+20 36.1			
13	149	08.7	54	08.8	53.8	253 44.3	54.3	53 40.6	05.8	77 45.3	36.1			
14	164	11.1	69	08.2	53.9	268 46.1	54.3	68 42.6	05.8	92 47.6	36.1			
15	179	13.6	84	07.5	53.9	283 48.0	54.3	83 44.5	05.8	107 49.8	36.2			
16	194	16.1	99	06.9	53.9	298 49.8	54.4	98 46.4	05.8	122 52.1	36.2			
17	209	18.5	114	06.2	+21 54.0	313 51.7	-26 54.4	113 48.3	+23 05.8	137 54.3	+20 36.2			
18	224	21.0	129	05.6	+21 54.0	328 53.5	-26 54.4	128 50.2	+23 05.8	152 56.5	+20 36.2			
19	239	23.5	144	04.9	54.0	343 55.4	54.4	143 52.1	05.7	167 58.8	36.3			
20	254	25.9	159	04.3	54.0	358 57.2	54.4	158 54.0	05.7	183 01.0	36.3			
21	269	28.4	174	03.6	54.1	13 59.1	54.5	173 55.9	05.7	198 03.3	36.3			
22	284	30.8	189	03.0	54.1	29 00.9	54.5	188 57.9	05.7	213 05.5	36.3			
23	299	33.3	204	02.3	54.1	44 02.8	54.5	203 59.8	05.7	228 07.7	36.3			
24	314	35.8	219	01.7	+21 54.1	59 04.6	-26 54.5	219 01.7	+23 05.7	243 10.0	+20 36.4			
Dif	—		-6		0	+19	0	+19	0	+22				

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: 16 ^d 2 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ 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							
0	178	31.3	+16	44.3	338	19.0	-14	32.4	60 N	20 18	21 14	22 50	21 23 8	5 57 78							
1	193	31.4		43.7	352	52.5 ¹⁴⁵		23.0 ⁹⁴	58	20 07	20 57	22 14	17 11	6 06 74							
2	208	31.4		43.0	7	26.1 ¹⁴⁶		13.5 ⁹⁵	56	19 57	43	21 49	11 14	13 72							
3	223	31.5		42.3	21	59.7 ¹⁴⁶	-14	03.9 ⁹⁶	54	49	31	30	06 16	20 69							
4	238	31.6		41.6	36	33.4 ¹⁴⁷	-13	54.2 ⁹⁷	52	41	21	14	21 02 17	26 67							
5	253	31.6	+16	40.9	51	07.1 ¹⁴⁷	-13	44.5 ⁹⁷	50	19 34	20 12	21 00	20 58 19	6 31 66							
6	268	31.7	+16	40.2	65	40.8 ¹⁴⁷	-13	34.8 ⁹⁷	45	19 20	19 53	20 34	20 49 22	6 43 61							
7	283	31.8		39.5	80	14.6 ¹⁴⁸		25.0 ⁹⁸	40	19 08	38	20 14	41 26	6 52 58							
8	298	31.9		38.8	94	48.4 ¹⁴⁸		15.1 ⁹⁹	35	18 58	25	19 59	35 28	7 00 56							
9	313	31.9		38.1	109	22.2 ¹⁴⁸	-13	05.2 ⁹⁹	30	49	19 15	46	29 31	07 53							
10	328	32.0		37.5	123	56.1 ¹⁴⁹	-12	55.3 ⁹⁹	20	34	18 58	25	19 35	19 50							
11	343	32.1	+16	36.8	138	30.1 ¹⁵⁰	-12	45.3 ¹⁰⁰	10 N	18 21	18 43	19 09	20 10 39	7 30 46							
12	358	32.1	+16	36.1	153	04.0 ¹⁴⁹	-12	35.2 ¹⁰¹	0	18 09	18 31	18 56	20 02 42	7 40 42							
13	13	32.2		35.4	167	38.0 ¹⁵⁰		25.1 ¹⁰¹	10 S	17 57	19	44	19 54 45	7 50 39							
14	28	32.3		34.7	182	12.1 ¹⁵¹		14.9 ¹⁰²	20	45	18 08	34	45 49	8 00 36							
15	43	32.4		34.0	196	46.1 ¹⁵⁰	-12	04.7 ¹⁰²	30	30	17 55	24	35 53	12 32							
16	58	32.4		33.3	211	20.3 ¹⁵²	-11	54.4 ¹⁰³	35	22	49	19	29 55	19 29							
17	73	32.5	+16	32.6	225	54.4 ¹⁵¹	-11	44.1 ¹⁰³	40	17 13	17 41	18 14	19 22 58	8 26 27							
18	88	32.6	+16	31.9	240	28.6 ¹⁵²	-11	33.8 ¹⁰³	45	17 02	17 33	18 08	19 14 62	8 35 24							
19	103	32.7		31.2	255	02.8 ¹⁵²		23.4 ¹⁰⁴	50	16 49	23	18 02	05 65	46 20							
20	118	32.7		30.5	269	37.0 ¹⁵²		12.9 ¹⁰⁵	52	43	19	17 59	19 01 67	51 18							
21	133	32.8		29.8	284	11.3 ¹⁵³	-11	02.4 ¹⁰⁵	54	36	14	57	18 56 69	8 56 17							
22	148	32.9		29.1	298	45.6 ¹⁵³	-10	51.9 ¹⁰⁵	56	28	09	54	51 71	9 03 14							
23	163	33.0		28.4	313	19.9 ¹⁵³		41.3 ¹⁰⁶	58	20	17 03	51	45 74	09 12							
24	178	33.0	+16	27.7	327	54.3 ¹⁵⁴	-10	30.6 ¹⁰⁷	60 S	16 10	16 57	17 47	18 38 77	9 17 9							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 3 ^h 01 ^m 1			Mag: -4.0 PMG: 9 ^h 24 ^m			Mag: -1.4 PMG: 20 ^h 01 ^m			Mag: -2.0 PMG: 9 ^h 23 ^m			Mag: +0.1 PMG: 7 ^h 46 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	314	35.8	219	01.7	+21	54.1	59	04.6	-26	54.5	219	01.7	+23	05.7	243	10.0	+20	36.4			
1	329	38.2	234	01.0		54.2	74	06.4		54.5	234	03.6		05.6	258	12.2		36.4			
2	344	40.7	249	00.4		54.2	89	08.3		54.6	249	05.5		05.6	273	14.5		36.4			
3	359	43.2	263	59.7		54.2	104	10.1		54.6	264	07.4		05.6	288	16.7		36.4			
4	14	45.6	278	59.1		54.2	119	11.9		54.6	279	09.3		05.6	303	18.9		36.5			
5	29	48.1	293	58.4	+21	54.2	134	13.8	-26	54.6	294	11.3	+23	05.6	318	21.2	+20	36.5			
6	44	50.6	308	57.8	+21	54.2	149	15.6	-26	54.6	309	13.2	+23	05.6	333	23.4	+20	36.5			
7	59	53.0	323	57.1		54.3	164	17.4		54.7	324	15.1		05.5	348	25.7		36.5			
8	74	55.5	338	56.4		54.3	179	19.3		54.7	339	17.0		05.5	3	27.9		36.6			
9	89	57.9	353	55.8		54.3	194	21.1		54.7	354	18.9		05.5	18	30.2		36.6			
10	105	00.4	8	55.1		54.3	209	22.9		54.7	9	20.8		05.5	33	32.4		36.6			
11	120	02.9	23	54.5	+21	54.3	224	24.7	-26	54.7	24	22.8	+23	05.5	48	34.6	+20	36.6			
12	135	05.3	38	53.8	+21	54.3	239	26.6	-26	54.8	39	24.7	+23	05.5	63	36.9	+20	36.6			
13	150	07.8	53	53.2		54.3	254	28.4		54.8	54	26.6		05.4	78	39.1		36.7			
14	165	10.3	68	52.5		54.3	269	30.2		54.8	69	28.5		05.4	93	41.4		36.7			
15	180	12.7	83	51.9		54.3	284	32.0		54.8	84	30.4		05.4	108	43.6		36.7			
16	195	15.2	98	51.2		54.3	299	33.8		54.8	99	32.3		05.4	123	45.9		36.7			
17	210	17.7	113	50.6	+21	54.3	314	35.7	-26	54.9	114	34.3	+23	05.4	138	48.1	+20	36.8			
18	225	20.1	128	49.9	+21	54.4	329	37.5	-26	54.9	129	36.2	+23	05.4	153	50.3	+20	36.8			
19	240	22.6	143	49.3		54.4	344	39.3		54.9	144	38.1		05.3	168	52.6		36.8			
20	255	25.1	158	48.6		54.4	359	41.1		54.9	159	40.0		05.3	183	54.8		36.8			
21	270	27.5	173	47.9		54.4	14	42.9		54.9	174	41.9		05.3	198	57.1		36.8			
22	285	30.0	188	47.3		54.4	29	44.7		55.0	189	43.8		05.3	213	59.3		36.9			
23	300	32.4	203	46.6		54.4	44	46.5		55.0	204	45.8		05.3	229	01.6		36.9			
24	315	34.9	218	46.0	+21	54.4	59	48.3	-26	55.0	219	47.7	+23	05.3	244	03.8	+20	36.9			
Dif	—			-7			0			+18			0			+19			0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 12 ^h 05 ^m 7			Edad: 17 ^d 2 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/2 PMG: 2 ^h 12 ^m R°: 42 ^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	33.0	+16	27.7	327	54.3	-10	30.6	60 N	1 22	2 59	3 55	21 31	8	7 15	77		
1	193	33.1		27.0	342	28.7 ¹⁵⁴		20.0 ¹⁰⁶	58	1 59	3 15	4 06	28 10		20	74		
2	208	33.2		26.3	357	03.1 ¹⁵⁴	-10	09.3 ¹⁰⁷	56	2 23	29	15	25 12		25	71		
3	223	33.3		25.6	11	37.6 ¹⁵⁵	-9	58.5 ¹⁰⁸	54	43	41	24	22 14		29	69		
4	238	33.3		25.0	26	12.1 ¹⁵⁵		47.7 ¹⁰⁸	52	2 58	3 51	31	19 16		33	67		
5	253	33.4	+16	24.3	40	46.6 ¹⁵⁵	-9	36.9 ¹⁰⁸	50	3 12	4 00	4 38	21 17	17	7 37	65		
6	268	33.5	+16	23.6	55	21.1 ¹⁵⁵	-9	26.0 ¹⁰⁹	45	3 38	4 19	4 52	21 11	22	7 44	61		
7	283	33.6		22.9	69	55.7 ¹⁵⁶		15.1 ¹⁰⁹	40	3 58	34	5 04	07 25		50	58		
8	298	33.6		22.2	84	30.2 ¹⁵⁵	-9	04.1 ¹¹⁰	35	4 13	46	14	03 28		7 56	55		
9	313	33.7		21.4	99	04.8 ¹⁵⁶	-8	53.1 ¹¹⁰	30	26	4 57	23	21 00	30	8 00	53		
10	328	33.8		20.7	113	39.5 ¹⁵⁷		42.1 ¹¹⁰	20	4 47	5 14	37	20 54	34	09	48		
11	343	33.9	+16	20.0	128	14.1 ¹⁵⁶	-8	31.1 ¹¹⁰	10 N	5 03	5 28	5 50	20 49	37	8 16	45		
12	358	33.9	+16	19.3	142	48.8 ¹⁵⁷	-8	20.0 ¹¹¹	0	5 16	5 41	6 02	20 44	41	8 22	42		
13	13	34.0		18.6	157	23.5 ¹⁵⁷	-8	08.8 ¹¹²	10 S	27	5 52	14	39 45		29	38		
14	28	34.1		17.9	171	58.2 ¹⁵⁷	-7	57.7 ¹¹¹	20	37	6 04	27	34 48		36	34		
15	43	34.2		17.2	186	33.0 ¹⁵⁸		46.5 ¹¹²	30	47	16	41	28 53		44	30		
16	58	34.3		16.5	201	07.7 ¹⁵⁷		35.3 ¹¹²	35	52	22	49	24 56		48	28		
17	73	34.3	+16	15.8	215	42.5 ¹⁵⁸	-7	24.0 ¹¹³	40	5 58	6 30	6 58	20 20	59	8 53	25		
18	88	34.4	+16	15.1	230	17.3 ¹⁵⁸	-7	12.7 ¹¹³	45	6 03	6 38	7 09	20 16	61	8 59	22		
19	103	34.5		14.4	244	52.1 ¹⁵⁸	-7	01.4 ¹¹³	50	09	47	22	10 66		9 06	18		
20	118	34.6		13.7	259	26.9 ¹⁵⁸	-6	50.0 ¹¹⁴	52	11	52	28	08 67		09	17		
21	133	34.7		13.0	274	01.7 ¹⁵⁸		38.6 ¹¹⁴	54	14	6 56	35	05 69		13	15		
22	148	34.7		12.3	288	36.6 ¹⁵⁹		27.2 ¹¹⁴	56	17	7 02	42	20 02	72	17	12		
23	163	34.8		11.6	303	11.5 ¹⁵⁹		15.8 ¹¹⁴	58	20	07	7 51	19 59	74	21	10		
24	178	34.9	+16	10.9	317	46.3 ¹⁵⁸	-6	04.3 ¹¹⁵	60 S	6 23	7 13	8 00	19 55	77	9 26	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 57 ^m 2		Mag: -4.0 PMG: 9 ^h 25 ^m				Mag: -1.4 PMG: 19 ^h 58 ^m				Mag: -2.0 PMG: 9 ^h 20 ^m				Mag: +0.1 PMG: 7 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	315	34.9	218	46.0	+21	54.4	59	48.3	-26	55.0	219	47.7	+23	05.3	244	03.8	+20	36.9
1	330	37.4	233	45.3		54.3	74	50.2		55.0	234	49.6		05.2	259	06.1		36.9
2	345	39.8	248	44.7		54.3	89	52.0		55.0	249	51.5		05.2	274	08.3		37.0
3	0	42.3	263	44.0		54.3	104	53.8		55.1	264	53.4		05.2	289	10.5		37.0
4	15	44.8	278	43.3		54.3	119	55.6		55.1	279	55.3		05.2	304	12.8		37.0
5	30	47.2	293	42.7	+21	54.3	134	57.4	-26	55.1	294	57.3	+23	05.2	319	15.0	+20	37.0
6	45	49.7	308	42.0	+21	54.3	149	59.2	-26	55.1	309	59.2	+23	05.2	334	17.3	+20	37.0
7	60	52.2	323	41.4		54.3	165	01.0		55.2	325	01.1		05.1	349	19.5		37.1
8	75	54.6	338	40.7		54.3	180	02.8		55.2	340	03.0		05.1	4	21.8		37.1
9	90	57.1	353	40.1		54.3	195	04.6		55.2	355	04.9		05.1	19	24.0		37.1
10	105	59.5	8	39.4		54.3	210	06.4		55.2	10	06.8		05.1	34	26.3		37.1
11	121	02.0	23	38.7	+21	54.3	225	08.1	-26	55.2	25	08.8	+23	05.1	49	28.5	+20	37.2
12	136	04.5	38	38.1	+21	54.2	240	09.9	-26	55.3	40	10.7	+23	05.1	64	30.8	+20	37.2
13	151	06.9	53	37.4		54.2	255	11.7		55.3	55	12.6		05.0	79	33.0		37.2
14	166	09.4	68	36.8		54.2	270	13.5		55.3	70	14.5		05.0	94	35.2		37.2
15	181	11.9	83	36.1		54.2	285	15.3		55.3	85	16.4		05.0	109	37.5		37.2
16	196	14.3	98	35.4		54.2	300	17.1		55.3	100	18.4		05.0	124	39.7		37.3
17	211	16.8	113	34.8	+21	54.2	315	18.9	-26	55.4	115	20.3	+23	05.0	139	42.0	+20	37.3
18	226	19.3	128	34.1	+21	54.1	330	20.7	-26	55.4	130	22.2	+23	04.9	154	44.2	+20	37.3
19	241	21.7	143	33.5		54.1	345	22.4		55.4	145	24.1		04.9	169	46.5		37.3
20	256	24.2	158	32.8		54.1	0	24.2		55.4	160	26.0		04.9	184	48.7		37.4
21	271	26.7	173	32.1		54.1	15	26.0		55.4	175	28.0		04.9	199	51.0		37.4
22	286	29.1	188	31.5		54.0	30	27.8		55.5	190	29.9		04.9	214	53.2		37.4
23	301	31.6	203	30.8		54.0	45	29.6		55.5	205	31.8		04.9	229	55.5		37.4
24	316	34.0	218	30.2	+21	54.0	60	31.3	-26	55.5	220	33.7	+23	04.8	244	57.7	+20	37.4
Dif	—		-7		0		+18		0		+19		0		+22			

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 6			Edad: 18 ^d 2 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 3 20 ^h : 54 ^h 4 SD: 14 ^h 8 PMG: 2 ^h 54 ^m R°: 41 ^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	34.9	+16	10.9	317	46.3	-6	04.3	60 N	20 12	21 07	22 37	21 39 7	8 32 77		
1	193	35.0		10.2	332	21.2 ¹⁵⁹	-5	52.8 ¹¹⁵	58	20 02	20 51	22 05	38 9	34 74		
2	208	35.1		09.5	346	56.1 ¹⁵⁹		41.3 ¹¹⁵	56	19 53	38	21 42	37 12	36 72		
3	223	35.1		08.8	1	31.1 ¹⁶⁰		29.8 ¹¹⁵	54	45	27	24	36 14	38 70		
4	238	35.2		08.0	16	06.0 ¹⁵⁹		18.2 ¹¹⁶	52	37	17	21 09	35 16	40 68		
5	253	35.3	+16	07.3	30	40.9 ¹⁵⁹	-5	06.6 ¹¹⁶	50	19 31	20 08	20 56	21 34 18	8 42 66		
6	268	35.4	+16	06.6	45	15.9 ¹⁶⁰	-4	55.0 ¹¹⁶	45	19 17	19 50	20 31	21 33 21	8 45 62		
7	283	35.5		05.9	59	50.8 ¹⁵⁹		43.4 ¹¹⁶	40	19 06	35	20 11	32 24	48 59		
8	298	35.6		05.2	74	25.8 ¹⁶⁰		31.7 ¹¹⁷	35	18 56	23	19 56	31 27	51 55		
9	313	35.6		04.5	89	00.7 ¹⁵⁹		20.0 ¹¹⁷	30	48	19 13	44	30 29	53 53		
10	328	35.7		03.8	103	35.7 ¹⁶⁰	-4	08.3 ¹¹⁷	20	33	18 56	24	28 34	8 57 49		
11	343	35.8	+16	03.1	118	10.6 ¹⁵⁹	-3	56.6 ¹¹⁷	10 N	18 21	18 43	19 08	21 26 38	9 01 44		
12	358	35.9	+16	02.4	132	45.6 ¹⁶⁰	-3	44.8 ¹¹⁸	0	18 09	18 31	18 56	21 25 42	9 04 41		
13	13	36.0		01.6	147	20.6 ¹⁶⁰		33.1 ¹¹⁷	10 S	17 58	19	45	24 45	07 38		
14	28	36.1		00.9	161	55.6 ¹⁶⁰		21.3 ¹¹⁸	20	45	18 08	35	22 49	10 34		
15	43	36.1	+16	00.2	176	30.5 ¹⁵⁹	-3	09.5 ¹¹⁸	30	32	17 56	25	21 53	14 30		
16	58	36.2	+15	59.5	191	05.5 ¹⁶⁰	-2	57.7 ¹¹⁸	35	24	50	20	20 56	16 27		
17	73	36.3	+15	58.8	205	40.5 ¹⁶⁰	-2	45.9 ¹¹⁸	40	17 15	17 43	18 15	21 19 58	9 18 25		
18	88	36.4	+15	58.1	220	15.5 ¹⁶⁰	-2	34.0 ¹¹⁹	45	17 04	17 35	18 10	21 17 62	9 21 21		
19	103	36.5		57.3	234	50.4 ¹⁵⁹		22.2 ¹¹⁸	50	16 51	26	05	16 66	24 18		
20	118	36.6		56.6	249	25.4 ¹⁶⁰	-2	10.3 ¹¹⁹	52	46	22	02	15 68	26 16		
21	133	36.7		55.9	264	00.4 ¹⁶⁰	-1	58.4 ¹¹⁹	54	39	17	18 00	14 70	28 13		
22	148	36.7		55.2	278	35.3 ¹⁵⁹		46.5 ¹¹⁹	56	32	12	17 57	14 72	29 12		
23	163	36.8		54.5	293	10.3 ¹⁶⁰		34.6 ¹¹⁹	58	24	07	54	13 75	31 10		
24	178	36.9	+15	53.8	307	45.2 ¹⁵⁹	-1	22.6 ¹²⁰	60 S	16 14	17 01	17 51	21 12 77	9 34 7		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 53 ^m 3			Mag: -4.0 PMG: 9 ^h 26 ^m			Mag: -1.3 PMG: 19 ^h 56 ^m			Mag: -2.0 PMG: 9 ^h 17 ^m			Mag: +0.1 PMG: 7 ^h 39 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec	hG ♌	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	316	34.0	218	30.2	+21	54.0	60	31.3	-26	55.5	220	33.7	+23	04.8	244	57.7
1	331	36.5	233	29.5		54.0	75	33.1		55.5	235	35.6		04.8	260	00.0
2	346	39.0	248	28.8		53.9	90	34.9		55.5	250	37.6		04.8	275	02.2
3	1	41.4	263	28.2		53.9	105	36.7		55.6	265	39.5		04.8	290	04.5
4	16	43.9	278	27.5		53.9	120	38.4		55.6	280	41.4		04.8	305	06.7
5	31	46.4	293	26.8	+21	53.8	135	40.2	-26	55.6	295	43.3	+23	04.8	320	09.0
6	46	48.8	308	26.2	+21	53.8	150	42.0	-26	55.6	310	45.2	+23	04.7	335	11.2
7	61	51.3	323	25.5		53.8	165	43.7		55.6	325	47.2		04.7	350	13.5
8	76	53.8	338	24.9		53.7	180	45.5		55.7	340	49.1		04.7	5	15.7
9	91	56.2	353	24.2		53.7	195	47.3		55.7	355	51.0		04.7	20	18.0
10	106	58.7	8	23.5		53.7	210	49.0		55.7	10	52.9		04.7	35	20.2
11	122	01.2	23	22.9	+21	53.6	225	50.8	-26	55.7	25	54.8	+23	04.6	50	22.5
12	137	03.6	38	22.2	+21	53.6	240	52.6	-26	55.8	40	56.8	+23	04.6	65	24.7
13	152	06.1	53	21.5		53.5	255	54.3		55.8	55	58.7		04.6	80	27.0
14	167	08.5	68	20.9		53.5	270	56.1		55.8	71	00.6		04.6	95	29.2
15	182	11.0	83	20.2		53.5	285	57.8		55.8	86	02.5		04.6	110	31.4
16	197	13.5	98	19.6		53.4	300	59.6		55.8	101	04.5		04.6	125	33.7
17	212	15.9	113	18.9	+21	53.4	316	01.3	-26	55.9	116	06.4	+23	04.5	140	36.0
18	227	18.4	128	18.2	+21	53.3	331	03.1	-26	55.9	131	08.3	+23	04.5	155	38.2
19	242	20.9	143	17.6		53.3	346	04.9		55.9	146	10.2		04.5	170	40.5
20	257	23.3	158	16.9		53.2	1	06.6		55.9	161	12.2		04.5	185	42.7
21	272	25.8	173	16.2		53.2	16	08.4		55.9	176	14.1		04.5	200	45.0
22	287	28.3	188	15.6		53.1	31	10.1		56.0	191	16.0		04.4	215	47.2
23	302	30.7	203	14.9		53.1	46	11.8		56.0	206	17.9		04.4	230	49.5
24	317	33.2	218	14.2	+21	53.0	61	13.6	-26	56.0	221	19.8	+23	04.4	245	51.7
Dif	—		-7		0		+18		0		+19		0		+22	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 5			Edad: 19 ^d 2 PHE { 4 ^h : 54/6 12 ^h : 54/7 20 ^h : 54/9 SD: 14/8 PMG: 3 ^h 35 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	36.9	+15	53.8	307	45.2	-1	22.6	60 N	1 35	3 05	4 00	21 46	8	9 49	78
1	193	37.0		53.0	322	20.1 ¹⁵⁹	-1	10.7 ¹¹⁹	58	2 07	20	10	47 11		48 76	
2	208	37.1		52.3	336	55.0 ¹⁵⁹	-0	58.8 ¹¹⁹	56	30	34	19	49 12		48 73	
3	223	37.2		51.6	351	30.0 ¹⁶⁰		46.8 ¹²⁰	54	2 48	45	27	50 15		48 7	
4	238	37.3		50.9	6	04.9 ¹⁵⁹		34.8 ¹²⁰	52	3 03	3 55	34	51 17		48 68	
5	253	37.4	+15	50.2	20	39.7 ¹⁵⁸	-0	22.9 ¹¹⁹	50	3 16	4 04	4 41	21 52	19	9 48	66
6	268	37.4	+15	49.4	35	14.6 ¹⁵⁹	-0	10.9 ¹²⁰	45	3 41	4 22	4 54	21 54	23	9 47	63
7	283	37.5		48.7	49	49.5 ¹⁵⁹	+0	01.1 ¹²⁰	40	4 00	36	5 06	56 26		47 59	
8	298	37.6		48.0	64	24.3 ¹⁵⁸		13.1 ¹²⁰	35	15	48	15	58 29		46 57	
9	313	37.7		47.3	78	59.2 ¹⁵⁹		25.1 ¹²⁰	30	28	4 58	24	21 59	32	46 54	
10	328	37.8		46.6	93	34.0 ¹⁵⁸		37.1 ¹²⁰	20	4 48	5 15	38	22 02	35	46 49	
11	343	37.9	+15	45.8	108	08.8 ¹⁵⁸	+0	49.1 ¹²⁰	10 N	5 03	5 29	5 51	22 04	40	9 45	46
12	358	38.0	+15	45.1	122	43.6 ¹⁵⁸	+1	01.1 ¹²⁰	0	5 16	5 41	6 02	22 07	42	9 45	42
13	13	38.1		44.4	137	18.3 ¹⁵⁷		13.2 ¹²¹	10 S	26	5 52	13	09 46		45 38	
14	28	38.2		43.7	151	53.1 ¹⁵⁸		25.2 ¹²⁰	20	36	6 03	25	11 50		44 35	
15	43	38.2		42.9	166	27.8 ¹⁵⁷		37.2 ¹²⁰	30	46	14	39	14 55		44 30	
16	58	38.3		42.2	181	02.5 ¹⁵⁷	+1	49.2 ¹²⁰	35	51	21	47	16 57		43 28	
17	73	38.4	+15	41.5	195	37.1 ¹⁵⁶	+2	01.3 ¹²¹	40	5 55	6 28	6 56	22 17	61	9 43	25
18	88	38.5	+15	40.8	210	11.8 ¹⁵⁷	+2	13.3 ¹²⁰	45	6 00	6 35	7 06	22 19	64	9 42	22
19	103	38.6		40.0	224	46.4 ¹⁵⁶		25.3 ¹²⁰	50	06	44	19	22 68		42 18	
20	118	38.7		39.3	239	21.0 ¹⁵⁶		37.3 ¹²⁰	52	08	48	24	23 70		42 16	
21	133	38.8		38.6	253	55.6 ¹⁵⁶	+2	49.4 ¹²¹	54	11	53	31	24 72		41 15	
22	148	38.9		37.8	268	30.1 ¹⁵⁵	+3	01.4 ¹²⁰	56	13	6 58	38	26 74		41 12	
23	163	39.0		37.1	283	04.6 ¹⁵⁵		13.4 ¹²⁰	58	16	7 03	46	28 76		41 10	
24	178	39.1	+15	36.4	297	39.1 ¹⁵⁵	+3	25.4 ¹²⁰	60 S	6 19	7 09	7 55	22 29	80	9 41	7

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 49 ^m 3		Mag: -4.0 PMG: 9 ^h 27 ^m			Mag: -1.3 PMG: 19 ^h 53 ^m			Mag: -2.0 PMG: 9 ^h 13 ^m			Mag: +0.1 PMG: 7 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	317	33.2	218	14.2	+21	53.0	61	13.6	-26	56.0	221	19.8	+23	04.4	245	51.7	+20	38.0
1	332	35.6	233	13.6		53.0	76	15.3		56.0	236	21.8		04.4	260	54.0		38.0
2	347	38.1	248	12.9		52.9	91	17.1		56.0	251	23.7		04.4	275	56.2		38.0
3	2	40.6	263	12.2		52.9	106	18.8		56.1	266	25.6		04.4	290	58.5		38.0
4	17	43.0	278	11.6		52.8	121	20.6		56.1	281	27.5		04.3	306	00.7		38.0
5	32	45.5	293	10.9	+21	52.8	136	22.3	-26	56.1	296	29.5	+23	04.3	321	03.0	+20	38.1
6	47	48.0	308	10.2	+21	52.7	151	24.0	-26	56.1	311	31.4	+23	04.3	336	05.2	+20	38.1
7	62	50.4	323	09.6		52.7	166	25.8		56.1	326	33.3		04.3	351	07.5		38.1
8	77	52.9	338	08.9		52.6	181	27.5		56.2	341	35.2		04.3	6	09.7		38.1
9	92	55.4	353	08.2		52.5	196	29.2		56.2	356	37.2		04.2	21	12.0		38.1
10	107	57.8	8	07.6		52.5	211	31.0		56.2	11	39.1		04.2	36	14.2		38.2
11	123	00.3	23	06.9	+21	52.4	226	32.7	-26	56.2	26	41.0	+23	04.2	51	16.5	+20	38.2
12	138	02.8	38	06.2	+21	52.4	241	34.4	-26	56.3	41	42.9	+23	04.2	66	18.7	+20	38.2
13	153	05.2	53	05.6		52.3	256	36.2		56.3	56	44.9		04.2	81	21.0		38.2
14	168	07.7	68	04.9		52.2	271	37.9		56.3	71	46.8		04.2	96	23.2		38.2
15	183	10.1	83	04.2		52.2	286	39.6		56.3	86	48.7		04.1	111	25.5		38.3
16	198	12.6	98	03.6		52.1	301	41.4		56.3	101	50.6		04.1	126	27.7		38.3
17	213	15.1	113	02.9	+21	52.0	316	43.1	-26	56.4	116	52.6	+23	04.1	141	30.0	+20	38.3
18	228	17.5	128	02.2	+21	52.0	331	44.8	-26	56.4	131	54.5	+23	04.1	156	32.3	+20	38.3
19	243	20.0	143	01.6		51.9	346	46.5		56.4	146	56.4		04.1	171	34.5		38.3
20	258	22.5	158	00.9		51.8	1	48.2		56.4	161	58.3		04.0	186	36.8		38.4
21	273	24.9	173	00.2		51.7	16	50.0		56.4	177	00.3		04.0	201	39.0		38.4
22	288	27.4	187	59.6		51.7	31	51.7		56.5	192	02.2		04.0	216	41.3		38.4
23	303	29.9	202	58.9		51.6	46	53.4		56.5	207	04.1		04.0	231	43.5		38.4
24	318	32.3	217	58.2	+21	51.5	61	55.1	-26	56.5	222	06.0	+23	04.0	246	45.8	+20	38.4
Dif	—		-7			-1	+17		0		+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 3			Edad: 20 ^d 2 PHE { 4 ^h : 55 ⁰ 12 ^h : 55 ² 20 ^h : 55 ⁴ Rº: 43 ^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	39.1	+15	36.4	297	39.1	+3	25.4	60 N	20 07	21 00	22 25	21 54	9	11 07	81		
1	193	39.2		35.7	312	13.6 ¹⁵⁵		37.4 ¹²⁰	58	19 57	20 46	21 56	21 58	12		04	78	
2	208	39.3		34.9	326	48.0 ¹⁵⁴	+3	49.4 ¹²⁰	56	48	33	35	22 01	15	11 01	75		
3	223	39.4		34.2	341	22.4 ¹⁵⁴	+4	01.4 ¹²⁰	54	41	22	18	05	17	10 59	72		
4	238	39.4		33.5	355	56.7 ¹⁵³		13.4 ¹²⁰	52	34	13	21 03	08	19	56	71		
5	253	39.5	+15	32.7	10	31.0 ¹⁵³	+4	25.4 ¹²⁰	50	19 27	20 04	20 51	22 11	21	10 54	69		
6	268	39.6	+15	32.0	25	05.3 ¹⁵³	+4	37.3 ¹¹⁹	45	19 14	19 47	20 27	22 17	25	10 50	64		
7	283	39.7		31.3	39	39.6 ¹⁵³	+4	49.3 ¹²⁰	40	19 03	33	20 08	22	28	46	61		
8	298	39.8		30.5	54	13.8 ¹⁵²	+5	01.2 ¹¹⁹	35	18 54	21	19 54	27	31	43	58		
9	313	39.9		29.8	68	47.9 ¹⁵¹		13.2 ¹²⁰	30	46	19 11	41	31	33	40	56		
10	328	40.0		29.1	83	22.0 ¹⁵¹		25.1 ¹¹⁹	20	32	18 55	22	37	38	35	51		
11	343	40.1	+15	28.3	97	56.1 ¹⁵¹	+5	37.0 ¹¹⁹	10 N	18 20	18 42	19 07	22 44	41	10 31	47		
12	358	40.2	+15	27.6	112	30.2 ¹⁵¹	+5	48.9 ¹¹⁹	0	18 09	18 30	18 55	22 49	45	10 27	44		
13	13	40.3		26.9	127	04.2 ¹⁵⁰	+6	00.8 ¹¹⁹	10 S	17 58	19	45	22 55	49	23	40		
14	28	40.4		26.1	141	38.1 ¹⁴⁹		12.7 ¹¹⁹	20	46	18 09	35	23 01	53	19	36		
15	43	40.5		25.4	156	12.0 ¹⁴⁹		24.5 ¹¹⁸	30	33	17 58	26	09	56	14	32		
16	58	40.6		24.7	170	45.9 ¹⁴⁹		36.4 ¹¹⁹	35	25	51	21	13	59	11	30		
17	73	40.7	+15	23.9	185	19.7 ¹⁴⁸	+6	48.2 ¹¹⁸	40	17 16	17 45	18 17	23 18	62	10 08	27		
18	88	40.8	+15	23.2	199	53.5 ¹⁴⁸	+7	00.0 ¹¹⁸	45	17 06	17 37	18 12	23 23	66	10 04	24		
19	103	40.9		22.4	214	27.2 ¹⁴⁷	+7	11.8 ¹¹⁸	50	16 54	29	07	30	70	10 00	19		
20	118	41.0		21.7	229	00.9 ¹⁴⁷		23.5 ¹¹⁷	52	49	25	05	33	72	9	58	18	
21	133	41.1		21.0	243	34.5 ¹⁴⁶		35.3 ¹¹⁸	54	42	20	03	36	74	56	16		
22	148	41.2		20.2	258	08.1 ¹⁴⁶		47.0 ¹¹⁷	56	36	16	18 00	40	77	53	14		
23	163	41.3		19.5	272	41.6 ¹⁴⁵	+7	58.7 ¹¹⁷	58	28	11	17 58	44	80	51	11		
24	178	41.4	+15	18.8	287	15.1 ¹⁴⁵	+8	10.4 ¹¹⁷	60 S	16 19	17 05	17 55	23 49	83	9	48	8	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 45 ^m 4		Mag: -4.0 PMG: 9 ^h 29 ^m				Mag: -1.3 PMG: 19 ^h 50 ^m				Mag: -2.0 PMG: 9 ^h 10 ^m				Mag: +0.1 PMG: 7 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	318	32.3	217	58.2	+21	51.5	61	55.1	-26	56.5	222	06.0	+23	04.0	246	45.8	+20	38.4
1	333	34.8	232	57.6		51.4	76	56.8		56.5	237	08.0		03.9	261	48.0		38.5
2	348	37.2	247	56.9		51.4	91	58.5		56.5	252	09.9		03.9	276	50.3		38.5
3	3	39.7	262	56.2		51.3	107	00.2		56.6	267	11.8		03.9	291	52.5		38.5
4	18	42.2	277	55.5		51.2	122	02.0		56.6	282	13.8		03.9	306	54.8		38.5
5	33	44.6	292	54.9	+21	51.1	137	03.7	-26	56.6	297	15.7	+23	03.9	321	57.1	+20	38.6
6	48	47.1	307	54.2	+21	51.0	152	05.4	-26	56.6	312	17.6	+23	03.8	336	59.3	+20	38.6
7	63	49.6	322	53.5		51.0	167	07.1		56.6	327	19.5		03.8	352	01.6		38.6
8	78	52.0	337	52.9		50.9	182	08.8		56.7	342	21.5		03.8	7	03.8		38.6
9	93	54.5	352	52.2		50.8	197	10.5		56.7	357	23.4		03.8	22	06.1		38.6
10	108	57.0	7	51.5		50.7	212	12.2		56.7	12	25.3		03.8	37	08.3		38.7
11	123	59.4	22	50.9	+21	50.6	227	13.9	-26	56.7	27	27.2	+23	03.8	52	10.6	+20	38.7
12	139	01.9	37	50.2	+21	50.5	242	15.6	-26	56.8	42	29.2	+23	03.7	67	12.8	+20	38.7
13	154	04.4	52	49.5		50.4	257	17.3		56.8	57	31.1		03.7	82	15.1		38.7
14	169	06.8	67	48.8		50.3	272	19.0		56.8	72	33.0		03.7	97	17.4		38.7
15	184	09.3	82	48.2		50.3	287	20.7		56.8	87	35.0		03.7	112	19.6		38.8
16	199	11.7	97	47.5		50.2	302	22.4		56.8	102	36.9		03.7	127	21.9		38.8
17	214	14.2	112	46.8	+21	50.1	317	24.1	-26	56.9	117	38.8	+23	03.6	142	24.1	+20	38.8
18	229	16.7	127	46.2	+21	50.0	332	25.8	-26	56.9	132	40.7	+23	03.6	157	26.4	+20	38.8
19	244	19.1	142	45.5		49.9	347	27.5		56.9	147	42.7		03.6	172	28.6		38.8
20	259	21.6	157	44.8		49.8	2	29.2		56.9	162	44.6		03.6	187	30.9		38.9
21	274	24.1	172	44.1		49.7	17	30.8		56.9	177	46.5		03.6	202	33.2		38.9
22	289	26.5	187	43.5		49.6	32	32.5		57.0	192	48.5		03.5	217	35.4		38.9
23	304	29.0	202	42.8		49.5	47	34.2		57.0	207	50.4		03.5	232	37.7		38.9
24	319	31.5	217	42.1	+21	49.4	62	35.9	-26	57.0	222	52.3	+23	03.5	247	39.9	+20	38.9
Dif	—		-7		-1		+17		0		+19		0		+23			

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: 21 ^d 2 PHE { SD: 15/1 PMG: 5 ^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	178	41.4	+15	18.8	287	15.1	+8	10.4	60 N	1 46	3 11	4 04	22 03	13	12 28	84
1	193	41.5		18.0	301	48.5 ¹⁴⁴		22.0 ¹¹⁶	58	2 15	26	14	10 16		22 80	
2	208	41.6		17.3	316	21.8 ¹⁴³		33.7 ¹¹⁷	56	36	38	23	16 19		16 78	
3	223	41.7		16.5	330	55.1 ¹⁴³		45.3 ¹¹⁶	54	2 53	49	31	22 21		11 75	
4	238	41.8		15.8	345	28.3 ¹⁴²	+8	56.9 ¹¹⁶	52	3 08	3 58	37	27 23		07 73	
5	253	41.9	+15	15.1	0	01.5 ¹⁴²	+9	08.4 ¹¹⁵	50	3 20	4 07	4 44	22 32	25	12 03	71
6	268	42.0	+15	14.3	14	34.6 ¹⁴¹	+9	19.9 ¹¹⁵	45	3 44	4 24	4 57	22 42	29	11 54	67
7	283	42.1		13.6	29	07.7 ¹⁴¹		31.4 ¹¹⁵	40	4 02	38	5 08	50 33		47 63	
8	298	42.2		12.8	43	40.7 ¹⁴⁰		42.9 ¹¹⁵	35	17	4 50	17	22 58	35	41 60	
9	313	42.3		12.1	58	13.6 ¹³⁹	+9	54.3 ¹¹⁴	30	29	5 00	25	23 04	37	36 57	
10	328	42.4		11.3	72	46.5 ¹³⁹	+10	05.7 ¹¹⁴	20	4 48	16	39	15 42		26 54	
11	343	42.5	+15	10.6	87	19.3 ¹³⁸	+10	17.1 ¹¹⁴	10 N	5 03	5 29	5 51	23 25	45	11 18	50
12	358	42.6	+15	09.9	101	52.0 ¹³⁷	+10	28.4 ¹¹³	0	5 15	5 40	6 02	23 34	49	11 11	46
13	13	42.7		09.1	116	24.7 ¹³⁷		39.7 ¹¹³	10 S	26	5 51	13	44 51		11 03	43
14	28	42.8		08.4	130	57.3 ¹³⁶	+10	51.0 ¹¹³	20	35	6 02	24	23 54	55	10 55	39
15	43	42.9		07.6	145	29.8 ¹³⁵	+11	02.2 ¹¹²	30	44	13	37	** ** *	**	46 35	
16	58	43.0		06.9	160	02.3 ¹³⁵		13.4 ¹¹²	35	49	19	45	** ** *	**	41 32	
17	73	43.1	+15	06.1	174	34.7 ¹³⁴	+11	24.6 ¹¹²	40	5 53	6 25	6 53	** ** *	**	10 35	30
18	88	43.2	+15	05.4	189	07.0 ¹³³	+11	35.7 ¹¹¹	45	5 58	6 33	7 03	** ** *	**	10 28	26
19	103	43.3		04.6	203	39.2 ¹³²		46.8 ¹¹¹	50	6 03	41	15	** ** *	**	19 23	
20	118	43.4		03.9	218	11.4 ¹³²	+11	57.8 ¹¹⁰	52	05	45	21	** ** *	**	16 20	
21	133	43.5		03.1	232	43.5 ¹³¹	+12	08.8 ¹¹⁰	54	07	49	27	** ** *	**	12 18	
22	148	43.6		02.4	247	15.5 ¹³⁰		19.8 ¹¹⁰	56	09	54	34	** ** *	**	07 16	
23	163	43.7		01.6	261	47.5 ¹³⁰		30.7 ¹⁰⁹	58	12	6 59	41	** ** *	**	10 02	13
24	178	43.8	+15	00.9	276	19.3 ¹²⁸	+12	41.5 ¹⁰⁸	60 S	6 15	7 04	7 50	** ** *	**	9 56	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 41 ^m 5		Mag: -4.0 PMG: 9 ^h 30 ^m		Mag: -1.3 PMG: 19 ^h 47 ^m		Mag: -2.0 PMG: 9 ^h 07 ^m		Mag: +0.1 PMG: 7 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	319	31.5	217	42.1	+21	49.4	62	35.9	-26	57.0	222	52.3	+23	03.5	247	39.9	+20	38.9
1	334	33.9	232	41.5		49.3	77	37.6		57.0	237	54.3		03.5	262	42.2		39.0
2	349	36.4	247	40.8		49.2	92	39.3		57.0	252	56.2		03.5	277	44.4		39.0
3	4	38.9	262	40.1		49.1	107	41.0		57.1	267	58.1		03.4	292	46.7		39.0
4	19	41.3	277	39.4		49.0	122	42.6		57.1	283	00.0		03.4	307	49.0		39.0
5	34	43.8	292	38.8	+21	48.9	137	44.3	-26	57.1	298	02.0	+23	03.4	322	51.2	+20	39.0
6	49	46.2	307	38.1	+21	48.8	152	46.0	-26	57.1	313	03.9	+23	03.4	337	53.5	+20	39.1
7	64	48.7	322	37.4		48.7	167	47.7		57.1	328	05.8		03.4	352	55.7		39.1
8	79	51.2	337	36.7		48.6	182	49.3		57.2	343	07.8		03.3	7	58.0		39.1
9	94	53.6	352	36.1		48.4	197	51.0		57.2	358	09.7		03.3	23	00.3		39.1
10	109	56.1	7	35.4		48.3	212	52.7		57.2	13	11.6		03.3	38	02.5		39.1
11	124	58.6	22	34.7	+21	48.2	227	54.4	-26	57.2	28	13.6	+23	03.3	53	04.8	+20	39.1
12	140	01.0	37	34.1	+21	48.1	242	56.0	-26	57.2	43	15.5	+23	03.3	68	07.0	+20	39.2
13	155	03.5	52	33.4		48.0	257	57.7		57.3	58	17.4		03.2	83	09.3		39.2
14	170	06.0	67	32.7		47.9	272	59.4		57.3	73	19.4		03.2	98	11.6		39.2
15	185	08.4	82	32.0		47.8	288	01.0		57.3	88	21.3		03.2	113	13.8		39.2
16	200	10.9	97	31.4		47.7	303	02.7		57.3	103	23.2		03.2	128	16.1		39.2
17	215	13.3	112	30.7	+21	47.5	318	04.4	-26	57.3	118	25.2	+23	03.2	143	18.3	+20	39.3
18	230	15.8	127	30.0	+21	47.4	333	06.0	-26	57.4	133	27.1	+23	03.1	158	20.6	+20	39.3
19	245	18.3	142	29.3		47.3	348	07.7		57.4	148	29.0		03.1	173	22.9		39.3
20	260	20.7	157	28.7		47.2	3	09.4		57.4	163	30.9		03.1	188	25.1		39.3
21	275	23.2	172	28.0		47.1	18	11.0		57.4	178	32.9		03.1	203	27.4		39.3
22	290	25.7	187	27.3		46.9	33	12.7		57.5	193	34.8		03.1	218	29.6		39.4
23	305	28.1	202	26.6		46.8	48	14.3		57.5	208	36.7		03.0	233	31.9		39.4
24	320	30.6	217	26.0	+21	46.7	63	16.0	-26	57.5	223	38.7	+23	03.0	248	34.2	+20	39.4
Dif	—		-7		-1		+17		0		+19		0		+23		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 0			Edad: 22 ^d 2 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'9 SD: 15'3 PMG: 5 ^h 46 ^m 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
0	178	43.8	+15 00.9	276	19.3	+12 41.5		60 N	20 01	20 54	22 14	22 16 18	13 52 86	
1	193	43.9	+15 00.1	290	51.1 ¹²⁸	+12 52.4 ¹⁰⁹		58	19 52	40	21 48	26 22	42 83	
2	208	44.0	+14 59.4	305	22.8 ¹²⁷	+13 03.1 ¹⁰⁷		56	44	28	28	35 25	34 79	
3	223	44.1		319	54.5 ¹²⁷	13.8 ¹⁰⁷		54	36	17	21 12	43 28	26 77	
4	238	44.2		334	26.0 ¹²⁵	24.5 ¹⁰⁷		52	30	08	20 58	50 30	20 75	
5	253	44.3	+14 57.1	348	57.5 ¹²⁵	+13 35.1 ¹⁰⁶		50	19 24	20 00	20 47	22 57 31	13 14 73	
6	268	44.4	+14 56.4	3	28.9 ¹²⁴	+13 45.7 ¹⁰⁶		45	19 11	19 43	20 23	23 11 35	13 01 69	
7	283	44.5		18	00.2 ¹²³	+13 56.2 ¹⁰⁵		40	19 01	30	20 05	23 38	12 50 66	
8	298	44.6		32	31.4 ¹²²	+14 06.7 ¹⁰⁵		35	18 52	19	19 51	33 40	41 63	
9	313	44.8		47	02.5 ¹²¹	17.1 ¹⁰⁴		30	44	19 09	39	41 43	33 61	
10	328	44.9		61	33.6 ¹²¹	27.4 ¹⁰³		20	31	18 54	21	23 57 46	20 57	
11	343	45.0	+14 52.6	76	04.5 ¹¹⁹	+14 37.7 ¹⁰³		10 N	18 19	18 41	19 06	** ** *	12 08 53	
12	358	45.1	+14 51.9	90	35.4 ¹¹⁹	+14 48.0 ¹⁰³		0	18 08	18 30	18 55	** ** *	11 57 50	
13	13	45.2		105	06.2 ¹¹⁸	+14 58.2 ¹⁰²		10 S	17 58	19	45	** ** *	46 47	
14	28	45.3		119	36.9 ¹¹⁷	+15 08.3 ¹⁰¹		20	47	18 09	35	** ** *	34 44	
15	43	45.4		134	07.5 ¹¹⁶	18.3 ¹⁰⁰		30	34	17 59	27	0 05 60	21 40	
16	58	45.5		148	38.0 ¹¹⁵	28.3 ¹⁰⁰		35	27	53	23	12 62	13 38	
17	73	45.6	+14 48.1	163	08.4 ¹¹⁴	+15 38.2 ⁹⁹		40	17 18	17 46	18 19	0 20 64	11 05 34	
18	88	45.7	+14 47.3	177	38.8 ¹¹⁴	+15 48.1 ⁹⁹		45	17 09	17 39	18 14	0 29 68	10 54 32	
19	103	45.8		46.6	192 09.0 ¹¹²	+15 57.9 ⁹⁸		50	16 57	31	10	40 72	42 28	
20	118	45.9		45.8	206 39.1 ¹¹¹	+16 07.6 ⁹⁷		52	52	28	08	45 74	36 26	
21	133	46.0		45.0	221 09.2 ¹¹¹	17.3 ⁹⁷		54	46	24	06	50 77	30 24	
22	148	46.2		44.3	235 39.1 ¹⁰⁹	26.9 ⁹⁶		56	39	19	03	0 57 79	23 21	
23	163	46.3		43.5	250 09.0 ¹⁰⁹	36.4 ⁹⁵		58	32	14	18 01	1 04 82	15 19	
24	178	46.4	+14 42.8	264	38.8 ¹⁰⁸	+16 45.8 ⁹⁴		60 S	16 24	17 09	17 59	1 12 85	10 07 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 37 ^m 5		Mag: -4.0 PMG: 9 ^h 31 ^m			Mag: -1.3 PMG: 19 ^h 45 ^m			Mag: -2.0 PMG: 9 ^h 04 ^m			Mag: +0.1 PMG: 7 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	320	30.6	217 26.0	+21 46.7		63 16.0	-26 57.5		223 38.7	+23 03.0		248 34.2	+20 39.4	
1	335	33.1	232 25.3	46.6		78 17.6	57.5		238 40.6	03.0		263 36.4	39.4	
2	350	35.5	247 24.6	46.4		93 19.3	57.5		253 42.5	03.0		278 38.7	39.4	
3	5 38.0	262 23.9	46.3			108 20.9	57.6		268 44.5	03.0		293 41.0	39.5	
4	20 40.5	277 23.3	46.2			123 22.6	57.6		283 46.4	02.9		308 43.2	39.5	
5	35 42.9	292 22.6	+21 46.0			138 24.3	-26 57.6		298 48.3	+23 02.9		323 45.5	+20 39.5	
6	50 45.4	307 21.9	+21 45.9			153 25.9	-26 57.6		313 50.3	+23 02.9		338 47.7	+20 39.5	
7	65 47.8	322 21.2	45.8			168 27.5	57.6		328 52.2	02.9		353 50.0	39.5	
8	80 50.3	337 20.6	45.6			183 29.2	57.7		343 54.2	02.9		8 52.3	39.6	
9	95 52.8	352 19.9	45.5			198 30.8	57.7		358 56.1	02.8		23 54.5	39.6	
10	110 55.2	7 19.2	45.4			213 32.5	57.7		13 58.0	02.8		38 56.8	39.6	
11	125 57.7	22 18.5	+21 45.2			228 34.1	-26 57.7		29 00.0	+23 02.8		53 59.1	+20 39.6	
12	141 00.2	37 17.9	+21 45.1			243 35.8	-26 57.7		44 01.9	+23 02.8		69 01.3	+20 39.6	
13	156 02.6	52 17.2	45.0			258 37.4	57.8		59 03.8	02.8		84 03.6	39.7	
14	171 05.1	67 16.5	44.8			273 39.0	57.8		74 05.8	02.7		99 05.8	39.7	
15	186 07.6	82 15.8	44.7			288 40.7	57.8		89 07.7	02.7		114 08.1	39.7	
16	201 10.0	97 15.2	44.5			303 42.3	57.8		104 09.6	02.7		129 10.4	39.7	
17	216 12.5	112 14.5	+21 44.4			318 44.0	-26 57.8		119 11.6	+23 02.7		144 12.6	+20 39.7	
18	231 15.0	127 13.8	+21 44.3			333 45.6	-26 57.9		134 13.5	+23 02.7		159 14.9	+20 39.7	
19	246 17.4	142 13.1	44.1			348 47.2	57.9		149 15.4	02.6		174 17.2	39.8	
20	261 19.9	157 12.5	44.0			3 48.9	57.9		164 17.4	02.6		189 19.4	39.8	
21	276 22.3	172 11.8	43.8			18 50.5	57.9		179 19.3	02.6		204 21.7	39.8	
22	291 24.8	187 11.1	43.7			33 52.1	57.9		194 21.2	02.6		219 24.0	39.8	
23	306 27.3	202 10.4	43.5			48 53.7	58.0		209 23.2	02.6		234 26.2	39.8	
24	321 29.7	217 09.7	+21 43.4			63 55.4	-26 58.0		224 25.1	+23 02.5		249 28.5	+20 39.9	
Dif	—	—	-7	-1		+16	0		+19	0		+23	0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 12 ^h 04 ^m 6				Edad: 24 ^d 2 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'8 PMG: 7 ^h 28 ^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	178	49.1	+14	24.4	252	02.9	+20	07.3	60 N	19 56	20 47	22 04	23 04 47		16 44 77			
1	193	49.2		23.7	266	30.1 82		14.5 72	58	47	34	21 40	21 49		27 74			
2	208	49.3		22.9	280	57.3 82		21.6 71	56	39	23	21	36 50		12 73			
3	223	49.4		22.1	295	24.3 80		28.6 69	54	32	13	21 06	23 48 52		16 00 71			
4	238	49.5		21.3	309	51.2 79		35.5 69	52	26	20 04	20 53	*** ** *		15 49 70			
5	253	49.7	+14	20.6	324	18.0 78	+20	42.3 68	50	19 20	19 56	20 42	*** ** *		15 39 70			
6	268	49.8	+14	19.8	338	44.7 77	+20	48.9 66	45	19 08	19 40	20 19	*** ** *		15 19 67			
7	283	49.9		19.0	353	11.3 76	+20	55.4 65	40	18 58	27	20 02	0 01 46		15 03 65			
8	298	50.0		18.3	7	37.8 75	+21	01.9 65	35	50	16	19 49	13 49		14 49 64			
9	313	50.1		17.5	22	04.2 74		08.1 62	30	42	19 07	37	24 50		37 63			
10	328	50.2		16.7	36	30.5 73		14.3 62	20	29	18 52	19	0 43 53		14 16 62			
11	343	50.4	+14	15.9	50	56.7 72	+21	20.4 61	10 N	18 18	18 40	19 05	1 00 54		13 58 61			
12	358	50.5	+14	15.2	65	22.8 71	+21	26.3 59	0	18 08	18 29	18 54	1 15 57		13 42 58			
13	13	50.6		14.4	79	48.7 69		32.1 58	10 S	17 58	19	44	31 58		25 57			
14	28	50.7		13.6	94	14.6 69		37.8 57	20	47	10	36	1 47 61		13 07 56			
15	43	50.8		12.8	108	40.4 68		43.4 56	30	35	18 00	28	2 07 63		12 47 54			
16	58	51.0		12.1	123	06.1 67		48.8 54	35	28	17 54	24	18 65		35 52			
17	73	51.1	+14	11.3	137	31.7 66	+21	54.1 53	40	17 20	17 48	18 20	2 31 67		12 21 51			
18	88	51.2	+14	10.5	151	57.2 65	+21	59.3 52	45	17 11	17 42	18 16	2 46 69		12 05 49			
19	103	51.3		09.7	166	22.6 64	+22	04.4 51	50	17 00	34	12	3 05 72		11 45 47			
20	118	51.4		09.0	180	47.9 63		09.3 49	52	16 55	30	10	14 74		36 45			
21	133	51.6		08.2	195	13.1 62		14.1 48	54	49	27	09	25 75		25 44			
22	148	51.7		07.4	209	38.2 61		18.7 46	56	43	23	07	36 77		14 42			
23	163	51.8		06.6	224	03.3 61		23.2 45	58	36	18	05	3 49 80		11 00 40			
24	178	51.9	+14	05.8	238	28.2 59	+22	27.6 44	60 S	16 28	17 13	18 03	4 05 83		10 44 36			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 29 ^m 7		Mag: -4.0 PMG: 9 ^h 33 ^m			Mag: -1.2 PMG: 19 ^h 40 ^m			Mag: -2.0 PMG: 8 ^h 58 ^m			Mag: +0.1 PMG: 7 ^h 17 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	322	28.9	216	53.5	+21	39.5	64	34.1	-26	58.4	225	11.6	+23	02.0	250	22.9	+20	40.3
1	337	31.3	231	52.8		39.3	79	35.7		58.5	240	13.6		02.0	265	25.2		40.3
2	352	33.8	246	52.1		39.1	94	37.3		58.5	255	15.5		02.0	280	27.4		40.3
3	7	36.3	261	51.5		39.0	109	38.9		58.5	270	17.5		02.0	295	29.7		40.4
4	22	38.7	276	50.8		38.8	124	40.5		58.5	285	19.4		01.9	310	32.0		40.4
5	37	41.2	291	50.1	+21	38.6	139	42.1	-26	58.5	300	21.3	+23	01.9	325	34.2	+20	40.4
6	52	43.7	306	49.4	+21	38.4	154	43.6	-26	58.6	315	23.3	+23	01.9	340	36.5	+20	40.4
7	67	46.1	321	48.7		38.2	169	45.2		58.6	330	25.2		01.9	355	38.8		40.4
8	82	48.6	336	48.1		38.1	184	46.8		58.6	345	27.2		01.9	10	41.1		40.4
9	97	51.1	351	47.4		37.9	199	48.4		58.6	0	29.1		01.8	25	43.3		40.5
10	112	53.5	6	46.7		37.7	214	50.0		58.6	15	31.0		01.8	40	45.6		40.5
11	127	56.0	21	46.0	+21	37.5	229	51.6	-26	58.7	30	33.0	+23	01.8	55	47.9	+20	40.5
12	142	58.4	36	45.3	+21	37.3	244	53.2	-26	58.7	45	34.9	+23	01.8	70	50.1	+20	40.5
13	158	00.9	51	44.7		37.1	259	54.8		58.7	60	36.9		01.8	85	52.4		40.5
14	173	03.4	66	44.0		36.9	274	56.3		58.7	75	38.8		01.7	100	54.7		40.6
15	188	05.8	81	43.3		36.7	289	57.9		58.7	90	40.8		01.7	115	56.9		40.6
16	203	08.3	96	42.6		36.6	304	59.5		58.7	105	42.7		01.7	130	59.2		40.6
17	218	10.8	111	41.9	+21	36.4	320	01.1	-26	58.8	120	44.6	+23	01.7	146	01.5	+20	40.6
18	233	13.2	126	41.3	+21	36.2	335	02.7	-26	58.8	135	46.6	+23	01.6	161	03.8	+20	40.6
19	248	15.7	141	40.6		36.0	350	04.2		58.8	150	48.5		01.6	176	06.0		40.6
20	263	18.2	156	39.9		35.8	5	05.8		58.8	165	50.5		01.6	191	08.3		40.7
21	278	20.6	171	39.2		35.6	20	07.4		58.8	180	52.4		01.6	206	10.6		40.7
22	293	23.1	186	38.6		35.4	35	09.0		58.9	195	54.4		01.6	221	12.9		40.7
23	308	25.6	201	37.9		35.2	50	10.5		58.9	210	56.3		01.5	236	15.1		40.7
24	323	28.0	216	37.2	+21	35.0	65	12.1	-26	58.9	225	58.2	+23	01.5	251	17.4	+20	40.7
Dif	—		-7			-2	+16			0	+19			0	+23			0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 25 ^d 2										
	PMG: 12 ^h 04 ^m 4			SD: 16 ^h 0										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m		h	m
0	178	51.9	+14	05.8		238	28.2	+22	27.6	60 N	2 06	3 23	4 14	23 51 70
1	193	52.0		05.1		252	53.0		31.8	58	30	36	23	*** ** *
2	208	52.2		04.3		267	17.8		35.9	56	2 49	47	31	*** ** *
3	223	52.3		03.5		281	42.4		39.9	54	3 04	3 57	38	*** ** *
4	238	52.4		02.7		296	07.0		43.7	52	17	4 06	44	0 00 52
5	253	52.5	+14	01.9		310	31.5	+22	47.3	50	3 28	4 13	4 50	0 09 54
6	268	52.6	+14	01.2		324	55.9	+22	50.8	45	3 50	4 30	5 02	0 30 55
7	283	52.8	+14	00.4		339	20.2		54.2	40	4 07	42	11	0 47 57
8	298	52.9	+13	59.6		353	44.4	+22	57.4	35	21	4 53	20	1 02 57
9	313	53.0		58.8		8	08.6	+23	00.5	30	32	5 02	27	14 58 40
10	328	53.1		58.0		22	32.6		03.4	20	4 50	17	40	36 59
11	343	53.3	+13	57.2		36	56.6	+23	06.2	10 N	5 04	5 29	5 51	1 54 60
12	358	53.4	+13	56.5		51	20.5	+23	08.8	25	5 15	5 40	6 01	2 12 60
13	13	53.5		55.7		65	44.3		11.3	20 S	25	49	11	29 62
14	28	53.6		54.9		80	08.1		13.6	23	33	5 59	22	2 48 63
15	43	53.8		54.1		94	31.8		15.8	22	41	6 09	34	3 10 63
16	58	53.9		53.3		108	55.4		17.8	20	35	45	14	23 64
17	73	54.0	+13	52.5		123	18.9	+23	19.6	18	40	5 48	6 20	3 38 64
18	88	54.1	+13	51.8		137	42.4	+23	21.3	17	45	5 52	6 27	3 55 65
19	103	54.3		51.0		152	05.8		22.8	15	50	56	34	4 17 66
20	118	54.4		50.2		166	29.2		24.2	14	52	5 58	38	13 28 66
21	133	54.5		49.4		180	52.4		25.4	12	54	6 00	41	19 40 67
22	148	54.6		48.6		195	15.6		26.4	10	56	01	45	25 4 53 68
23	163	54.8		47.8		209	38.8		27.3	9	58	03	50	32 5 09 68
24	178	54.9	+13	47.0		224	01.9	+23	28.0	7	60 S	6 05	6 55	7 39 5 28 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 25 ^m 7		Mag: -4.0 PMG: 9 ^h 34 ^m		Mag: -1.2 PMG: 19 ^h 37 ^m		Mag: -2.0 PMG: 8 ^h 55 ^m		Mag: +0.1 PMG: 7 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	323	28.0	216	37.2	+21	35.0	65	12.1	-26	58.9
1	338	30.5	231	36.5		34.8	80	13.7		58.9
2	353	32.9	246	35.8		34.6	95	15.2		58.9
3	8	35.4	261	35.2		34.4	110	16.8		59.0
4	23	37.9	276	34.5		34.2	125	18.4		59.0
5	38	40.3	291	33.8	+21	34.0	140	19.9	-26	59.0
6	53	42.8	306	33.1	+21	33.8	155	21.5	-26	59.0
7	68	45.3	321	32.4		33.6	170	23.1		59.0
8	83	47.7	336	31.8		33.4	185	24.6		59.0
9	98	50.2	351	31.1		33.2	200	26.2		59.1
10	113	52.7	6	30.4		32.9	215	27.7		59.1
11	128	55.1	21	29.7	+21	32.7	230	29.3	-26	59.1
12	143	57.6	36	29.0	+21	32.5	245	30.9	-26	59.1
13	159	00.0	51	28.4		32.3	260	32.4		59.1
14	174	02.5	66	27.7		32.1	275	34.0		59.2
15	189	05.0	81	27.0		31.9	290	35.5		59.2
16	204	07.4	96	26.3		31.7	305	37.1		59.2
17	219	09.9	111	25.6	+21	31.5	320	38.6	-26	59.2
18	234	12.4	126	25.0	+21	31.2	335	40.2	-26	59.2
19	249	14.8	141	24.3		31.0	350	41.7		59.2
20	264	17.3	156	23.6		30.8	5	43.3		59.3
21	279	19.8	171	22.9		30.6	20	44.8		59.3
22	294	22.2	186	22.2		30.4	35	46.4		59.3
23	309	24.7	201	21.6		30.1	50	47.9		59.3
24	324	27.2	216	20.9	+21	29.9	65	49.5	-26	59.3
Dif	—		-7 -2		+16 0		+19 0		+23 0	

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: 26 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 SD: 16'3 PMG: 9 ^h 27 ^m R°: 63 ^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 47.0	224	01.9	+23 28.0	6	60 N	19 50	20 41	21 54	** ** *	**	19 00	40
1	193	55.0	46.2	238	24.9	28.6	40	58	42	28	32	0 10	69	18 41	44
2	208	55.1	45.5	252	47.9	28.9	3	56	34	17	15	26	69	26	45
3	223	55.3	44.7	267	10.9	29.2	3	54	28	08	21 00	40	68	12	48
4	238	55.4	43.9	281	33.8	29.2	0	52	22	20 00	20 48	0 52	68	18 00	49
5	253	55.5	+13 43.1	295	56.6	+23 29.1	1	50	19 16	19 52	20 37	1 03	67	17 50	50
6	268	55.6	+13 42.3	310	19.4	+23 28.8	3	45	19 05	19 37	20 16	1 25	67	17 28	53
7	283	55.8	41.5	324	42.1	28.4	4	40	18 55	24	19 59	44	65	17 10	55
8	298	55.9	40.7	339	04.8	27.8	6	35	47	14	46	1 59	65	16 55	56
9	313	56.0	39.9	353	27.5	27.0	8	30	40	19 05	35	2 12	65	42	58
10	328	56.2	39.1	7	50.1	26.0	10	20	28	18 51	18	35	64	20	59
11	343	56.3	+13 38.3	22	12.7	+23 24.9	11	10 N	18 17	18 39	19 04	2 54	64	16 00	62
12	358	56.4	+13 37.5	36	35.3	+23 23.6	13	0	18 08	18 29	18 54	3 12	63	15 42	63
13	13	56.5	36.8	50	57.8	22.1	15	10 S	17 58	19	44	31	62	24	64
14	28	56.7	36.0	65	20.3	20.5	16	20	48	10	36	3 51	61	15 04	66
15	43	56.8	35.2	79	42.8	18.7	18	30	36	18 01	29	4 13	60	14 42	68
16	58	56.9	34.4	94	05.2	16.7	20	35	30	17 56	25	27	59	29	68
17	73	57.1	+13 33.6	108	27.7	+23 14.5	22	40	17 22	17 50	18 22	4 42	59	14 13	70
18	88	57.2	+13 32.8	122	50.1	+23 12.2	23	45	17 13	17 44	18 18	5 00	58	13 55	72
19	103	57.3	32.0	137	12.4	09.7	25	50	17 03	37	15	23	56	32	74
20	118	57.4	31.2	151	34.8	07.0	27	52	16 58	33	13	34	55	21	75
21	133	57.6	30.4	165	57.2	04.2	28	54	53	30	12	5 47	54	13 09	76
22	148	57.7	29.6	180	19.5	+23 01.2	30	56	47	26	10	6 01	53	12 55	77
23	163	57.8	28.8	194	41.8	+22 58.0	32	58	40	22	08	17	52	38	79
24	178	58.0	+13 28.0	209	04.1	+22 54.6	34	60 S	16 33	17 17	18 07	6 38	49	12 18	82
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 21 ^m 8		Mag: -4.0 PMG: 9 ^h 35 ^m			Mag: -1.2 PMG: 19 ^h 35 ^m			Mag: -2.0 PMG: 8 ^h 52 ^m			Mag: +0.1 PMG: 7 ^h 10 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	324	27.2	216 20.9	+21 29.9	65 49.5	-26 59.3	226 44.9	+23 01.0	252 12.0	+20 41.1					
1	339	29.6	231 20.2	29.7	80 51.0	59.3	241 46.9	01.0	267 14.3	41.2					
2	354	32.1	246 19.5	29.5	95 52.5	59.4	256 48.8	00.9	282 16.5	41.2					
3	9	34.5	261 18.8	29.2	110 54.1	59.4	271 50.8	00.9	297 18.8	41.2					
4	24	37.0	276 18.2	29.0	125 55.6	59.4	286 52.7	00.9	312 21.1	41.2					
5	39	39.5	291 17.5	+21 28.8	140 57.2	-26 59.4	301 54.7	+23 00.9	327 23.4	+20 41.2					
6	54	41.9	306 16.8	+21 28.5	155 58.7	-26 59.4	316 56.6	+23 00.9	342 25.6	+20 41.2					
7	69	44.4	321 16.1	28.3	171 00.2	59.4	331 58.6	00.8	357 27.9	41.3					
8	84	46.9	336 15.4	28.1	186 01.8	59.5	347 00.5	00.8	12 30.2	41.3					
9	99	49.3	351 14.8	27.9	201 03.3	59.5	2 02.5	00.8	27 32.5	41.3					
10	114	51.8	6 14.1	27.6	216 04.8	59.5	17 04.4	00.8	42 34.8	41.3					
11	129	54.3	21 13.4	+21 27.4	231 06.4	-26 59.5	32 06.4	+23 00.7	57 37.0	+20 41.3					
12	144	56.7	36 12.7	+21 27.1	246 07.9	-26 59.5	47 08.3	+23 00.7	72 39.3	+20 41.3					
13	159	59.2	51 12.0	26.9	261 09.4	59.6	62 10.3	00.7	87 41.6	41.4					
14	175	01.7	66 11.4	26.7	276 10.9	59.6	77 12.2	00.7	102 43.9	41.4					
15	190	04.1	81 10.7	26.4	291 12.5	59.6	92 14.2	00.6	117 46.1	41.4					
16	205	06.6	96 10.0	26.2	306 14.0	59.6	107 16.1	00.6	132 48.4	41.4					
17	220	09.0	111 09.3	+21 26.0	321 15.5	-26 59.6	122 18.1	+23 00.6	147 50.7	+20 41.4					
18	235	11.5	126 08.6	+21 25.7	336 17.0	-26 59.6	137 20.0	+23 00.6	162 53.0	+20 41.4					
19	250	14.0	141 08.0	25.5	351 18.6	59.7	152 22.0	00.6	177 55.3	41.5					
20	265	16.4	156 07.3	25.2	6 20.1	59.7	167 23.9	00.5	192 57.5	41.5					
21	280	18.9	171 06.6	25.0	21 21.6	59.7	182 25.9	00.5	207 59.8	41.5					
22	295	21.4	186 05.9	24.7	36 23.1	59.7	197 27.8	00.5	223 02.1	41.5					
23	310	23.8	201 05.2	24.5	51 24.6	59.7	212 29.8	00.5	238 04.4	41.5					
24	325	26.3	216 04.6	+21 24.2	66 26.2	-26 59.7	227 31.7	+23 00.4	253 06.7	+20 41.5					
Dif	—		-7	-2	+15	0	+19	0	+23	0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 0				Edad: 27 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1 R°: 62 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	58.0	+13	28.0	209	04.1	+22	54.6	60 N	2 15	3 28	4 19	1 01	91	19 40	26	
1	193	58.1		27.2	223	26.5	34	51.1	58	37	41	27	19	88	25	29	
2	208	58.2		26.4	237	48.8	33	47.4	56	2 54	3 52	35	35	84	11	33	
3	223	58.4		25.6	252	11.1	33	43.5	54	3 09	4 01	41	1 48	83	19 00	35	
4	238	58.5		24.8	266	33.4	33	39.5	52	21	09	47	2 00	80	18 49	38	
5	253	58.6	+13	24.0	280	55.7	33	+22 35.3	50	3 32	4 17	4 53	2 10	79	18 40	40	
6	268	58.8	+13	23.2	295	18.0	33	+22 30.9	45	3 53	4 32	5 04	2 32	76	18 21	44	
7	283	58.9		22.4	309	40.4	34	26.3	40	4 10	45	13	2 49	74	18 05	47	
8	298	59.0		21.6	324	02.7	33	21.6	35	23	4 55	21	3 04	72	17 51	50	
9	313	59.2		20.8	338	25.1	34	16.7	30	34	5 03	28	17	70	40	52	
10	328	59.3		20.0	352	47.4	33	11.6	20	4 51	18	41	39	67	19	56	
11	343	59.4	+13	19.2	7	09.8	34	+22 06.4	10 N	5 04	5 29	5 51	3 58	64	17 02	58	
12	358	59.6	+13	18.4	21	32.2	34	+22 01.0	0	5 15	5 39	6 01	4 15	63	16 45	62	
13	13	59.7		17.6	35	54.6	34	+21 55.4	10 S	24	49	10	33	60	28	65	
14	28	59.8		16.8	50	17.1	35	49.7	20	32	5 58	20	4 52	57	16 10	68	
15	44	00.0		16.0	64	39.5	34	43.8	30	39	6 07	32	5 13	55	15 50	71	
16	59	00.1		15.2	79	02.0	35	37.8	35	42	12	38	26	53	37	74	
17	74	00.2	+13	14.4	93	24.5	35	+21 31.5	40	5 46	6 18	6 46	5 41	51	15 23	76	
18	89	00.4	+13	13.6	107	47.1	36	+21 25.1	45	5 49	6 24	6 54	5 58	48	15 07	78	
19	104	00.5		12.8	122	09.7	36	18.6	50	53	31	7 04	6 19	45	14 46	83	
20	119	00.6		12.0	136	32.3	36	11.9	52	54	34	09	29	44	36	85	
21	134	00.8		11.2	150	54.9	36	+21 05.0	54	56	37	14	41	41	25	87	
22	149	00.9		10.4	165	17.6	37	+20 58.0	56	57	41	20	6 54	38	14 12	90	
23	164	01.1		09.6	179	40.3	37	50.8	58	5 59	45	27	7 09	35	13 57	94	
24	179	01.2	+13	08.8	194	03.1	38	+20 43.4	60 S	6 01	6 50	7 34	7 27	31	13 40	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 17 ^m 9		Mag: -4.0 PMG: 9 ^h 36 ^m		Mag: -1.1 PMG: 19 ^h 32 ^m		Mag: -2.0 PMG: 8 ^h 49 ^m		Mag: +0.1 PMG: 7 ^h 06 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	325	26.3	216	04.6	+21	24.2	66	26.2	-26	59.7
1	340	28.8	231	03.9		24.0	81	27.7		59.8
2	355	31.2	246	03.2		23.7	96	29.2		59.8
3	10	33.7	261	02.5		23.5	111	30.7		59.8
4	25	36.2	276	01.8		23.2	126	32.2		59.8
5	40	38.6	291	01.2	+21	23.0	141	33.7	-26	59.8
6	55	41.1	306	00.5	+21	22.7	156	35.2	-26	59.8
7	70	43.5	320	59.8		22.5	171	36.7		59.8
8	85	46.0	335	59.1		22.2	186	38.3		59.9
9	100	48.5	350	58.4		22.0	201	39.8		59.9
10	115	50.9	5	57.8		21.7	216	41.3		59.9
11	130	53.4	20	57.1	+21	21.4	231	42.8	-26	59.9
12	145	55.9	35	56.4	+21	21.2	246	44.3	-26	59.9
13	160	58.3	50	55.7		20.9	261	45.8	-26	59.9
14	176	00.8	65	55.0		20.6	276	47.3	-27	00.0
15	191	03.3	80	54.4		20.4	291	48.8		00.0
16	206	05.7	95	53.7		20.1	306	50.3		00.0
17	221	08.2	110	53.0	+21	19.9	321	51.8	-27	00.0
18	236	10.7	125	52.3	+21	19.6	336	53.3	-27	00.0
19	251	13.1	140	51.6		19.3	351	54.8	-27	00.0
20	266	15.6	155	51.0		19.0	6	56.3	-27	00.1
21	281	18.0	170	50.3		18.8	21	57.8		00.1
22	296	20.5	185	49.6		18.5	36	59.2		00.1
23	311	23.0	200	48.9		18.2	52	00.7		00.1
24	326	25.4	215	48.2	+21	18.0	67	02.2	-27	00.1
Dif	—		-7		-3		+15		0	

+20		0		+23	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 28 ^d 2 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 3 20 ^h : 61 ^m 4 R°: 60 ^m											
	PMG: 12 ^h 03 ^m 8			SD: 16 ^h 7 PMG: 11 ^h 32 ^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	01.2	+13 08.8	194	03.1	+20 43.4	75	60 N	19 45	20 34	21 45	2 32	101	20 06	17
1	194	01.3	08.0	208	25.9	38	35.9	58	37	22	24	47	96	19 54	21
2	209	01.5	07.2	222	48.7	38	28.3	56	30	12	21 08	2 59	93	44	25
3	224	01.6	06.3	237	11.6	39	20.4	54	23	20 03	20 54	3 11	90	35	28
4	239	01.7	05.5	251	34.5	39	12.5	52	18	19 55	43	20	88	27	30
5	254	01.9	+13 04.7	265	57.5	40	+20 04.4	50	19 13	19 48	20 32	3 29	85	19 20	32
6	269	02.0	+13 03.9	280	20.6	41	+19 56.1	45	19 02	19 33	20 12	3 48	81	19 05	36
7	284	02.1	03.1	294	43.7	41	47.7	40	18 53	21	19 56	4 03	77	18 52	40
8	299	02.3	02.3	309	06.8	41	39.1	35	45	11	43	16	74	41	44
9	314	02.4	01.5	323	30.0	42	30.4	30	38	19 03	33	27	71	32	46
10	329	02.6	+13 00.7	337	53.2	42	21.5	20	27	18 49	16	4 46	67	15	51
11	344	02.7	+12 59.9	352	16.5	43	+19 12.5	10 N	18 16	18 38	19 03	5 02	64	18 00	56
12	359	02.8	+12 59.1	6	39.9	44	+19 03.4	0	18 07	18 28	18 53	5 18	60	17 47	59
13	14	03.0	58.3	21	03.3	44	+18 54.1	10 S	17 58	19	44	33	57	33	63
14	29	03.1	57.4	35	26.8	45	44.7	20	48	11	37	5 49	54	18	67
15	44	03.3	56.6	49	50.3	45	35.1	30	37	18 02	30	6 08	49	17 01	71
16	59	03.4	55.8	64	13.9	46	25.4	35	31	17 57	27	19	47	16 51	74
17	74	03.5	+12 55.0	78	37.6	47	+18 15.6	40	17 24	17 52	18 24	6 32	43	16 39	78
18	89	03.7	+12 54.2	93	01.3	47	+18 05.6	45	17 16	17 46	18 20	6 46	40	16 25	82
19	104	03.8	53.4	107	25.1	48	+17 55.5	50	06	39	17	7 04	36	09	86
20	119	04.0	52.6	121	48.9	48	45.3	52	17 01	36	16	13	33	16 01	89
21	134	04.1	51.8	136	12.9	50	35.0	54	16 56	33	15	22	31	15 52	92
22	149	04.2	50.9	150	36.9	50	24.5	56	51	30	13	32	28	42	95
23	164	04.4	50.1	165	00.9	50	13.9	58	45	26	12	44	25	31	98
24	179	04.5	+12 49.3	179	25.1	52	+17 03.2	60 S	16 38	17 22	18 11	7 58	20	15 17	104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 13 ^m 9		Mag: -4.0 PMG: 9 ^h 37 ^m		Mag: -1.1 PMG: 19 ^h 30 ^m		Mag: -2.1 PMG: 8 ^h 46 ^m		Mag: +0.1 PMG: 7 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	326	25.4	215 48.2	+21 18.0	67 02.2	-27 00.1	228 18.6	+22 59.9	254 01.4	+20 41.9
1	341	27.9	230 47.6	17.7	82 03.7	00.1	243 20.5	59.9	269 03.7	42.0
2	356	30.4	245 46.9	17.4	97 05.2	00.1	258 22.5	59.8	284 06.0	42.0
3	11	32.8	260 46.2	17.1	112 06.7	00.2	273 24.4	59.8	299 08.3	42.0
4	26	35.3	275 45.5	16.9	127 08.2	00.2	288 26.4	59.8	314 10.6	42.0
5	41	37.8	290 44.9	+21 16.6	142 09.7	-27 00.2	303 28.4	+22 59.8	329 12.8	+20 42.0
6	56	40.2	305 44.2	+21 16.3	157 11.1	-27 00.2	318 30.3	+22 59.8	344 15.1	+20 42.0
7	71	42.7	320 43.5	16.0	172 12.6	00.2	333 32.3	59.7	359 17.4	42.0
8	86	45.1	335 42.8	15.7	187 14.1	00.2	348 34.2	59.7	14 19.7	42.1
9	101	47.6	350 42.1	15.5	202 15.6	00.2	3 36.2	59.7	29 22.0	42.1
10	116	50.1	5 41.5	15.2	217 17.1	00.3	18 38.1	59.7	44 24.3	42.1
11	131	52.5	20 40.8	+21 14.9	232 18.5	-27 00.3	33 40.1	+22 59.6	59 26.6	+20 42.1
12	146	55.0	35 40.1	+21 14.6	247 20.0	-27 00.3	48 42.0	+22 59.6	74 28.8	+20 42.1
13	161	57.5	50 39.4	14.3	262 21.5	00.3	63 44.0	59.6	89 31.1	42.1
14	176	59.9	65 38.7	14.0	277 23.0	00.3	78 46.0	59.6	104 33.4	42.2
15	192	02.4	80 38.1	13.7	292 24.4	00.3	93 47.9	59.5	119 35.7	42.2
16	207	04.9	95 37.4	13.5	307 25.9	00.3	108 49.9	59.5	134 38.0	42.2
17	222	07.3	110 36.7	+21 13.2	322 27.4	-27 00.4	123 51.8	+22 59.5	149 40.3	+20 42.2
18	237	09.8	125 36.0	+21 12.9	337 28.9	-27 00.4	138 53.8	+22 59.5	164 42.6	+20 42.2
19	252	12.3	140 35.3	12.6	352 30.3	00.4	153 55.7	59.4	179 44.8	42.2
20	267	14.7	155 34.7	12.3	7 31.8	00.4	168 57.7	59.4	194 47.1	42.3
21	282	17.2	170 34.0	12.0	22 33.3	00.4	183 59.7	59.4	209 49.4	42.3
22	297	19.6	185 33.3	11.7	37 34.7	00.4	199 01.6	59.4	224 51.7	42.3
23	312	22.1	200 32.6	11.4	52 36.2	00.4	214 03.6	59.4	239 54.0	42.3
24	327	24.6	215 32.0	+21 11.1	67 37.7	-27 00.5	229 05.5	+22 59.3	254 56.3	+20 42.3
Dif	—		-7	-3	+15	0	+20	0	+23	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 03 ^m 6			Edad: 29 ^d 2 PHE { SD: 16/7 PMG: 12 ^h 32 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	04.5	+12 49.3	179	25.1	+17 03.2	60 N	2 24	3 34	4 24	4 13	102	20 23	12		
1	194	04.7		193	49.2	51 +16 52.3	109 58	2 44	46	32	23	99	15	16		
2	209	04.8		208	13.5	53 41.3	110 56	3 00	3 56	39	32	95	09	19		
3	224	05.0		222	37.9	54 30.2	111 54	14	4 05	45	41	91	20	03	2	
4	239	05.1		237	02.3	54 19.0	112 52	26	13	50	48	89	19	57	24	
5	254	05.2	+12 45.2	251	26.7	54 +16 07.7	113 50	3 36	4 20	4 56	4 54	87	19	52	27	
6	269	05.4	+12 44.4	265	51.3	56 +15 56.3	114 45	3 56	4 35	5 06	5 09	81	19	41	32	
7	284	05.5		280	15.9	56 44.8	115 40	4 12	47	15	20	77	32	36		
8	299	05.7		294	40.6	57 33.1	117 35	25	4 56	23	30	74	25	38		
9	314	05.8		309	05.4	58 21.4	117 30	35	5 05	30	38	71	18	42		
10	329	06.0		323	30.2	58 +15 09.5	119 20	4 52	18	41	5 53	66	19	06	47	
11	344	06.1	+12 40.3	337	55.2	60 +14 57.5	120 10 N	5 04	5 29	5 51	6 06	61	18	56	51	
12	359	06.2	+12 39.5	352	20.2	60 +14 45.5	120 0	5 14	5 39	6 00	6 18	57	18	46	55	
13	14	06.4	38.7	6	45.2	60 33.3	122 10 S	23	48	09	30	53	36	60		
14	29	06.5	37.9	21	10.4	62 21.1	122 20	30	5 56	19	43	49	25	65		
15	44	06.7	37.1	35	35.6	62 +14 08.7	124 30	37	6 05	30	6 57	44	12	70		
16	59	06.8	36.2	50	00.9	63 +13 56.3	124 35	40	10	36	7 06	40	18	05	73	
17	74	07.0	+12 35.4	64	26.3	64 +13 43.7	126 40	5 43	6 15	6 43	7 15	38	17	57	77	
18	89	07.1	+12 34.6	78	51.7	64 +13 31.1	126 45	5 46	6 21	6 51	7 26	34	17	47	81	
19	104	07.3	33.8	93	17.2	65 18.4	127 50	49	27	7 01	40	28	35	87		
20	119	07.4	33.0	107	42.8	66 +13 05.6	128 52	51	30	05	46	26	30	89		
21	134	07.6	32.1	122	08.5	67 +12 52.7	129 54	52	33	10	7 53	24	24	91		
22	149	07.7	31.3	136	34.2	67 39.7	130 56	53	37	15	8 00	21	17	94		
23	164	07.8	30.5	151	00.1	69 26.7	130 58	54	40	21	09	18	09	98		
24	179	08.0	+12 29.7	165	26.0	69 +12 13.6	131 60 S	5 56	6 44	7 28	8 18	14	17	01	102	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 10 ^m 0			Mag: -4.0 PMG: 9 ^h 38 ^m			Mag: -1.1 PMG: 19 ^h 28 ^m			Mag: -2.1 PMG: 8 ^h 42 ^m			Mag: +0.1 PMG: 6 ^h 59 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	327	24.6	215	32.0	+21 11.1	67	37.7	-27 00.5	229	05.5	+22 59.3	254	56.3	+20 42.3		
1	342	27.0	230	31.3	10.8	82	39.1	00.5	244	07.5	59.3	269	58.6	42.3		
2	357	29.5	245	30.6	10.5	97	40.6	00.5	259	09.5	59.3	285	00.9	42.3		
3	12	32.0	260	29.9	10.2	112	42.0	00.5	274	11.4	59.3	300	03.1	42.4		
4	27	34.4	275	29.2	09.9	127	43.5	00.5	289	13.4	59.2	315	05.4	42.4		
5	42	36.9	290	28.6	+21 09.6	142	45.0	-27 00.5	304	15.3	+22 59.2	330	07.7	+20 42.4		
6	57	39.4	305	27.9	+21 09.3	157	46.4	-27 00.5	319	17.3	+22 59.2	345	10.0	+20 42.4		
7	72	41.8	320	27.2	09.0	172	47.9	00.6	334	19.3	59.2	0	12.3	42.4		
8	87	44.3	335	26.5	08.7	187	49.3	00.6	349	21.2	59.1	15	14.6	42.4		
9	102	46.8	350	25.8	08.4	202	50.8	00.6	4	23.2	59.1	30	16.9	42.5		
10	117	49.2	5	25.2	08.1	217	52.2	00.6	19	25.1	59.1	45	19.2	42.5		
11	132	51.7	20	24.5	+21 07.8	232	53.7	-27 00.6	34	27.1	+22 59.1	60	21.5	+20 42.5		
12	147	54.1	35	23.8	+21 07.4	247	55.1	-27 00.6	49	29.1	+22 59.0	75	23.7	+20 42.5		
13	162	56.6	50	23.1	07.1	262	56.6	00.6	64	31.0	59.0	90	26.0	42.5		
14	177	59.1	65	22.5	06.8	277	58.0	00.6	79	33.0	59.0	105	28.3	42.5		
15	193	01.5	80	21.8	06.5	292	59.5	00.7	94	34.9	59.0	120	30.6	42.5		
16	208	04.0	95	21.1	06.2	308	00.9	00.7	109	36.9	59.0	135	32.9	42.6		
17	223	06.5	110	20.4	+21 05.9	323	02.4	-27 00.7	124	38.9	+22 58.9	150	35.2	+20 42.6		
18	238	08.9	125	19.8	+21 05.6	338	03.8	-27 00.7	139	40.8	+22 58.9	165	37.5	+20 42.6		
19	253	11.4	140	19.1	05.2	353	05.3	00.7	154	42.8	58.9	180	39.8	42.6		
20	268	13.9	155	18.4	04.9	8	06.7	00.7	169	44.7	58.9	195	42.1	42.6		
21	283	16.3	170	17.7	04.6	23	08.1	00.7	184	46.7	58.8	210	44.4	42.6		
22	298	18.8	185	17.0	04.3	38	09.6	00.7	199	48.7	58.8	225	46.7	42.6		
23	313	21.2	200	16.4	04.0	53	11.0	00.8	214	50.6	58.8	240	48.9	42.7		
24	328	23.7	215	15.7	+21 03.6	68	12.5	-27 00.8	229	52.6	+22 58.8	255	51.2	+20 42.7		
Dif	—		-7	-3		+15	0		+20		0	+23		0		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8		Edad: 30 ^d 2 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 1 20 ^h : 61 ^h 0 R°: 54 ^m												
	PMG: 12 ^h 03 ^m 3	PMG: 13 ^h 28 ^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	08.0	+12 29.7		165	26.0	+12 13.6	60 N	19 39	20 28	21 36	5 55	100	20 35	10
1	194	08.1		28.8	179	51.9	69 +12 00.4	58	31	16	17	6 02	96	31	14
2	209	08.3		28.0	194	18.0	71 +11 47.1	56	25	20 07	21 01	07 93		28	16
3	224	08.4		27.2	208	44.1	71 33.8	54	19	19 58	20 48	12 91		24	19
4	239	08.6		26.4	223	10.3	72 20.3	52	13	50	37	17 87		21	22
5	254	08.7	+12 25.5		237	36.5	72 +11 06.9	50	19 09	19 44	20 28	6 21	85	20 19	23
6	269	08.9	+12 24.7		252	02.9	74 +10 53.3	45	18 58	19 30	20 08	6 30	80	20 13	28
7	284	09.0		23.9	266	29.3	74 39.7	40	50	18	19 53	37 76		08	32
8	299	09.2		23.1	280	55.8	75 26.0	35	42	09	40	44 72		03	36
9	314	09.3		22.2	295	22.3	75 +10 12.3	30	36	19 01	30	49 69		20	00
10	329	09.5		21.4	309	48.9	76 +9 58.5	20	25	18 48	14	6 59	63	19 53	44
11	344	09.6	+12 20.6		324	15.6	77 +9 44.6	10 N	18 16	18 37	19 02	7 07	59	19 47	49
12	359	09.8	+12 19.8		338	42.4	78 +9 30.7	0	18 07	18 28	18 52	7 15	55	19 41	53
13	14	09.9		18.9	353	09.3	79 16.8	10 S	17 58	19	44	23 50		36	57
14	29	10.1		18.1	7	36.2	79 +9 02.8	20	49	11	37	32 45		30	62
15	44	10.2		17.3	22	03.1	79 +8 48.7	30	38	18 03	31	41 40		22	68
16	59	10.4		16.5	36	30.2	81 34.6	35	33	17 58	28	46 37		18	71
17	74	10.5	+12 15.6		50	57.3	81 +8 20.5	40	17 26	17 54	18 25	7 53	33	19 14	74
18	89	10.7	+12 14.8		65	24.5	82 +8 06.3	45	17 18	17 48	18 23	8 00	29	19 08	79
19	104	10.8		14.0	79	51.7	82 +7 52.1	50	09	42	20	08 25		19	02
20	119	11.0		13.1	94	19.0	83 37.8	52	04	39	19	12 23		18	59
21	134	11.1		12.3	108	46.4	84 23.5	54	17 00	36	18	17 19		55	89
22	149	11.3		11.5	123	13.8	84 +7 09.2	56	16 55	33	17	21 17		51	92
23	164	11.4		10.6	137	41.4	86 +6 54.8	58	49	30	16	27 14		47	95
24	179	11.6	+12 09.8		152	08.9	85 +6 40.4	60 S	16 42	17 26	18 15	8 32	11	18 43	98
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 06 ^m 1		Mag: -4.0 PMG: 9 ^h 39 ^m			Mag: -1.1 PMG: 19 ^h 25 ^m			Mag: -2.1 PMG: 8 ^h 39 ^m			Mag: +0.1 PMG: 6 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	328	23.7	215	15.7	+21 03.6		68 12.5	-27 00.8	229	52.6	+22 58.8	255	51.2	+20 42.7	
1	343	26.2	230	15.0		03.3	83 13.9		00.8	244 54.6		58.7	270 53.5		42.7
2	358	28.6	245	14.3		03.0	98 15.3		00.8	259 56.5		58.7	285 55.8		42.7
3	13	31.1	260	13.7		02.7	113 16.8		00.8	274 58.5		58.7	300 58.1		42.7
4	28	33.6	275	13.0		02.3	128 18.2		00.8	290 00.4		58.7	316 00.4		42.7
5	43	36.0	290	12.3	+21 02.0		143 19.6	-27 00.8		305 02.4	+22 58.6	331 02.7		+20 42.7	
6	58	38.5	305	11.6	+21 01.7		158 21.1	-27 00.8		320 04.4	+22 58.6	346 05.0		+20 42.8	
7	73	41.0	320	11.0		01.4	173 22.5		00.8	335 06.3		58.6	1 07.3		42.8
8	88	43.4	335	10.3		01.0	188 23.9		00.9	350 08.3		58.6	16 09.6		42.8
9	103	45.9	350	09.6		00.7	203 25.3		00.9	5 10.3		58.5	31 11.9		42.8
10	118	48.4	5	08.9	+21 00.4		218 26.8		00.9	20 12.2		58.5	46 14.2		42.8
11	133	50.8	20	08.2	+21 00.0		233 28.2	-27 00.9		35 14.2	+22 58.5	61 16.5		+20 42.8	
12	148	53.3	35	07.6	+20 59.7		248 29.6	-27 00.9		50 16.2	+22 58.5	76 18.7		+20 42.9	
13	163	55.7	50	06.9		59.4	263 31.1		00.9	65 18.1		58.4	91 21.0		42.9
14	178	58.2	65	06.2		59.0	278 32.5		00.9	80 20.1		58.4	106 23.3		42.9
15	194	00.7	80	05.5		58.7	293 33.9		00.9	95 22.1		58.4	121 25.6		42.9
16	209	03.1	95	04.9		58.3	308 35.3		00.9	110 24.0		58.4	136 27.9		42.9
17	224	05.6	110	04.2	+20 58.0		323 36.7	-27 01.0		125 26.0	+22 58.3	151 30.2		+20 42.9	
18	239	08.1	125	03.5	+20 57.7		338 38.2	-27 01.0		140 28.0	+22 58.3	166 32.5		+20 42.9	
19	254	10.5	140	02.8		57.3	353 39.6		01.0	155 29.9		58.3	181 34.8		43.0
20	269	13.0	155	02.2		57.0	8 41.0		01.0	170 31.9		58.3	196 37.1		43.0
21	284	15.5	170	01.5		56.6	23 42.4		01.0	185 33.8		58.2	211 39.4		43.0
22	299	17.9	185	00.8		56.3	38 43.8		01.0	200 35.8		58.2	226 41.7		43.0
23	314	20.4	200	00.1		55.9	53 45.2		01.0	215 37.8		58.2	241 44.0		43.0
24	329	22.9	214	59.5	+20 55.6		68 46.6	-27 01.0		230 39.7	+22 58.2	256 46.3		+20 43.0	
Dif	—		-7 -3			+14 0			+20 0			+23 0			

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 2 ^d 9	PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 8 20 ^h : 59 ^h 5									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	R ^o : 51 ^m		
									Civil	Náutico	Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	15.3	+11	49.8	139	27.5	+0 50.0	60 N	19 33	20 21	21 27	9 12 94	20 55 9	
1	194	15.4		48.9	153	56.4 ⁹⁹	35.4 ¹⁴⁶	58	26	10	21 09	11 91	57 13	
2	209	15.6		48.1	168	25.3 ⁹⁹	20.8 ¹⁴⁶	56	20	20 01	20 55	10 88	20 59 16	
3	224	15.8		47.3	182	54.3 ¹⁰⁰	+0 06.2 ¹⁴⁶	54	14	19 53	43	10 84	21 01 18	
4	239	15.9		46.4	197	23.3 ¹⁰⁰	-0 08.4 ¹⁴⁶	52	09	46	32	09 82	03 20	
5	254	16.1	+11	45.6	211	52.4 ¹⁰¹	-0 22.9 ¹⁴⁵	50	19 05	19 39	20 23	9 09 79	21 04 23	
6	269	16.2	+11	44.7	226	21.4 ¹⁰⁰	-0 37.5 ¹⁴⁶	45	18 55	19 26	20 04	9 07 75	21 08 27	
7	284	16.4		43.9	240	50.6 ¹⁰²	-0 52.0 ¹⁴⁵	40	47	15	19 49	06 71	10 31	
8	299	16.5		43.1	255	19.7 ¹⁰¹	-1 06.5 ¹⁴⁵	35	40	19 06	38	06 67	13 34	
9	314	16.7		42.2	269	48.9 ¹⁰²	20.9 ¹⁴⁴	30	34	18 59	28	05 64	15 37	
10	329	16.9		41.4	284	18.2 ¹⁰³	35.4 ¹⁴⁵	20	24	46	13	04 59	19 42	
11	344	17.0	+11	40.5	298	47.4 ¹⁰²	-1 49.8 ¹⁴⁴	10 N	18 15	18 36	19 01	9 02 55	21 22 46	
12	359	17.2	+11	39.7	313	16.7 ¹⁰³	-2 04.2 ¹⁴⁴	0	18 06	18 27	18 52	9 01 51	21 25 51	
13	14	17.3		38.8	327	46.0 ¹⁰³	18.5 ¹⁴³	10 S	17 58	19	44	9 00 47	29 54	
14	29	17.5		38.0	342	15.4 ¹⁰⁴	32.9 ¹⁴⁴	20	49	12	38	8 59 42	32 59	
15	44	17.7		37.2	356	44.8 ¹⁰⁴	-2 47.2 ¹⁴³	30	40	04	32	58 37	36 63	
16	59	17.8		36.3	11	14.2 ¹⁰⁴	-3 01.4 ¹⁴²	35	34	18 00	29	58 33	38 67	
17	74	18.0	+11	35.5	25	43.6 ¹⁰⁴	-3 15.6 ¹⁴²	40	17 28	17 55	18 27	8 57 30	21 40 70	
18	89	18.1	+11	34.6	40	13.1 ¹⁰⁵	-3 29.8 ¹⁴²	45	17 20	17 50	18 25	8 56 27	21 43 74	
19	104	18.3		33.8	54	42.6 ¹⁰⁵	44.0 ¹⁴²	50	12	45	23	55 22	47 79	
20	119	18.5		32.9	69	12.1 ¹⁰⁵	-3 58.1 ¹⁴¹	52	08	42	22	55 20	48 81	
21	134	18.6		32.1	83	41.7 ¹⁰⁶	-4 12.2 ¹⁴¹	54	17 03	40	21	54 18	50 84	
22	149	18.8		31.2	98	11.2 ¹⁰⁵	26.2 ¹⁴⁰	56	16 58	37	20	54 15	52 86	
23	164	18.9		30.4	112	40.8 ¹⁰⁶	40.2 ¹⁴⁰	58	53	34	19	53 13	54 89	
24	179	19.1	+11	29.5	127	10.5 ¹⁰⁷	-4 54.1 ¹³⁹	60 S	16 47	17 30	18 19	8 53 9	21 57 92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 58 ^m 2		Mag: -3.9 PMG: 9 ^h 42 ^m			Mag: -1.0 PMG: 19 ^h 21 ^m			Mag: -2.1 PMG: 8 ^h 33 ^m			Mag: +0.1 PMG: 6 ^h 48 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	330	22.0	214	43.3	+20	47.0	69	20.2	-27	01.3	231	27.0	+22	57.6
1	345	24.5	229	42.6		46.6	84	21.6		01.3	246	29.0		57.6
2	0	26.9	244	42.0		46.2	99	23.0		01.3	261	30.9		57.5
3	15	29.4	259	41.3		45.8	114	24.4		01.3	276	32.9		57.5
4	30	31.8	274	40.6		45.5	129	25.8		01.3	291	34.9		57.5
5	45	34.3	289	39.9	+20	45.1	144	27.2	-27	01.3	306	36.9	+22	57.5
6	60	36.8	304	39.3	+20	44.7	159	28.6	-27	01.3	321	38.8	+22	57.4
7	75	39.2	319	38.6		44.3	174	29.9		01.3	336	40.8		57.4
8	90	41.7	334	37.9		44.0	189	31.3		01.3	351	42.8		57.4
9	105	44.2	349	37.3		43.6	204	32.7		01.3	6	44.7		57.4
10	120	46.6	4	36.6		43.2	219	34.1		01.3	21	46.7		57.3
11	135	49.1	19	35.9	+20	42.8	234	35.4	-27	01.3	36	48.7	+22	57.3
12	150	51.6	34	35.2	+20	42.4	249	36.8	-27	01.3	51	50.7	+22	57.3
13	165	54.0	49	34.6		42.1	264	38.2		01.4	66	52.6		57.3
14	180	56.5	64	33.9		41.7	279	39.6		01.4	81	54.6		57.2
15	195	58.9	79	33.2		41.3	294	40.9		01.4	96	56.6		57.2
16	211	01.4	94	32.6		40.9	309	42.3		01.4	111	58.5		57.2
17	226	03.9	109	31.9	+20	40.5	324	43.7	-27	01.4	127	00.5	+22	57.2
18	241	06.3	124	31.2	+20	40.1	339	45.1	-27	01.4	142	02.5	+22	57.1
19	256	08.8	139	30.5		39.7	354	46.4		01.4	157	04.5		57.1
20	271	11.3	154	29.9		39.3	9	47.8		01.4	172	06.4		57.1
21	286	13.7	169	29.2		38.9	24	49.2		01.4	187	08.4		57.1
22	301	16.2	184	28.5		38.5	39	50.5		01.4	202	10.4		57.0
23	316	18.7	199	27.9		38.1	54	51.9		01.4	217	12.4		57.0
24	331	21.1	214	27.2	+20	37.8	69	53.3	-27	01.4	232	14.3	+22	57.0
Dif	—		-7		-4		+14		0		+20		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 02 ^m 6				Edad: 3 ^d 9 PHE { 4 ^h : 59/2 12 ^h : 58/9 20 ^h : 58/6 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	179	19.1	+11	29.5	127	10.5	-4	54.1	60 N	2	39	3	45	4	33	10	46
1	194	19.3		28.7	141	40.1 ¹⁰⁶	-5	08.0 ¹³⁹	58	2	57	3	56	40		42	87
2	209	19.4		27.9	156	09.7 ¹⁰⁶		21.9 ¹³⁹	56	3	11	4	05	47		38	84
3	224	19.6		27.0	170	39.4 ¹⁰⁷		35.7 ¹³⁸	54		24	13		52		34	82
4	239	19.8		26.2	185	09.1 ¹⁰⁷	-5	49.5 ¹³⁸	52		34	20	4	57	31	80	23
5	254	19.9	+11	25.3	199	38.8 ¹⁰⁷	-6	03.2 ¹³⁷	50	3	43	4	27	5	01	10	28
6	269	20.1	+11	24.5	214	08.5 ¹⁰⁷	-6	16.8 ¹³⁶	45	4	02	4	40	5	11	10	22
7	284	20.2		23.6	228	38.3 ¹⁰⁸		30.4 ¹³⁶	40		17	4	51	19		17	69
8	299	20.4		22.8	243	08.0 ¹⁰⁷		44.0 ¹³⁶	35	28	5	00		26		13	66
9	314	20.6		21.9	257	37.8 ¹⁰⁸	-6	57.5 ¹³⁵	30		38	07		32		09	63
10	329	20.7		21.1	272	07.6 ¹⁰⁸	-7	10.9 ¹³⁴	20	4	53	20		42	10	03	58
11	344	20.9	+11	20.2	286	37.4 ¹⁰⁸	-7	24.3 ¹³⁴	10 N	5	05	5	30	5	51	9	57
12	359	21.1	+11	19.4	301	07.2 ¹⁰⁸	-7	37.7 ¹³⁴	0	5	14	5	38	5	59	9	52
13	14	21.2		18.5	315	37.0 ¹⁰⁸	-7	50.9 ¹³²	10 S		21	46	6	07		47	46
14	29	21.4		17.7	330	06.9 ¹⁰⁹	-8	04.1 ¹³²	20	28	5	53	16			41	42
15	44	21.5		16.8	344	36.7 ¹⁰⁸		17.3 ¹³²	30	33	6	01	25			35	37
16	59	21.7		16.0	359	06.5 ¹⁰⁸		30.4 ¹³¹	35		36	05	31			31	35
17	74	21.9	+11	15.1	13	36.4 ¹⁰⁹	-8	43.4 ¹³⁰	40	5	38	6	10	6	37	9	27
18	89	22.0	+11	14.3	28	06.3 ¹⁰⁹	-8	56.4 ¹³⁰	45	5	40	6	14	6	44	9	23
19	104	22.2		13.4	42	36.1 ¹⁰⁸	-9	09.2 ¹²⁸	50		42	20	53			17	23
20	119	22.4		12.6	57	06.0 ¹⁰⁹		22.1 ¹²⁹	52	43	22		6	57		15	21
21	134	22.5		11.7	71	35.9 ¹⁰⁹		34.8 ¹²⁷	54	44	25		7	01		12	19
22	149	22.7		10.8	86	05.8 ¹⁰⁹	-9	47.5 ¹²⁷	56	44	28		06			09	16
23	164	22.9		10.0	100	35.7 ¹⁰⁹	-10	00.2 ¹²⁷	58	45	31		11			06	13
24	179	23.0	+11	09.1	115	05.6 ¹⁰⁹	-10	12.7 ¹²⁵	60 S	5	46	6	34	7	17	9	02
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 54 ^m 3			Mag: -3.9 PMG: 9 ^h 43 ^m			Mag: -1.0 PMG: 19 ^h 19 ^m			Mag: -2.1 PMG: 8 ^h 30 ^m			Mag: +0.1 PMG: 6 ^h 45 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	331	21.1	214	27.2	+20	37.8	69	53.3	-27	01.4	232	14.3	+22	57.0	258	36.7	
1	346	23.6	229	26.5		37.4	84	54.6		01.4	247	16.3		57.0	273	39.0	
2	1	26.1	244	25.9		37.0	99	56.0		01.4	262	18.3		56.9	288	41.3	
3	16	28.5	259	25.2		36.6	114	57.3		01.4	277	20.3		56.9	303	43.6	
4	31	31.0	274	24.5		36.2	129	58.7		01.4	292	22.2		56.9	318	45.9	
5	46	33.4	289	23.8	+20	35.8	145	00.1	-27	01.4	307	24.2	+22	56.9	333	48.2	
6	61	35.9	304	23.2	+20	35.4	160	01.4	-27	01.5	322	26.2	+22	56.8	348	50.5	
7	76	38.4	319	22.5		35.0	175	02.8		01.5	337	28.2		56.8	3	52.8	
8	91	40.8	334	21.8		34.6	190	04.1		01.5	352	30.1		56.8	18	55.1	
9	106	43.3	349	21.2		34.1	205	05.5		01.5	7	32.1		56.7	33	57.4	
10	121	45.8	4	20.5		33.7	220	06.8		01.5	22	34.1		56.7	48	59.7	
11	136	48.2	19	19.8	+20	33.3	235	08.2	-27	01.5	37	36.1	+22	56.7	64	02.0	
12	151	50.7	34	19.2	+20	32.9	250	09.5	-27	01.5	52	38.1	+22	56.7	79	04.3	
13	166	53.2	49	18.5		32.5	265	10.9		01.5	67	40.0		56.6	94	06.6	
14	181	55.6	64	17.8		32.1	280	12.2		01.5	82	42.0		56.6	109	08.9	
15	196	58.1	79	17.2		31.7	295	13.6		01.5	97	44.0		56.6	124	11.2	
16	212	00.5	94	16.5		31.3	310	14.9		01.5	112	46.0		56.6	139	13.5	
17	227	03.0	109	15.8	+20	30.9	325	16.3	-27	01.5	127	47.9	+22	56.5	154	15.8	
18	242	05.5	124	15.2	+20	30.5	340	17.6	-27	01.5	142	49.9	+22	56.5	169	18.2	
19	257	07.9	139	14.5		30.0	355	19.0		01.5	157	51.9		56.5	184	20.5	
20	272	10.4	154	13.8		29.6	10	20.3		01.5	172	53.9		56.5	199	22.8	
21	287	12.9	169	13.2		29.2	25	21.7		01.5	187	55.9		56.4	214	25.1	
22	302	15.3	184	12.5		28.8	40	23.0		01.5	202	57.8		56.4	229	27.4	
23	317	17.8	199	11.8		28.4	55	24.4		01.5	217	59.8		56.4	244	29.7	
24	332	20.3	214	11.2	+20	28.0	70	25.7	-27	01.5	233	01.8	+22	56.4	259	32.0	
Dif	—		-7		-4		+14		0		+20		0		+23		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 02 ^m 3			Edad: 4 ^d 9 SD: 15'9 PMG: 16 ^h 54 ^m	PHE { 4 ^h : 58'3 12 ^h : 58'0 20 ^h : 57'7 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	179	23.0	+11 09.1	115	05.6	-10 12.7		60 N	19 27	20 14	21 18	12 17 89	21 16 15				
1	194	23.2		129	35.5 ¹⁰⁹	25.2 ¹²⁵		58	21	20 04	21 02	09 85	25 18				
2	209	23.4		144	05.3 ¹⁰⁸	37.6 ¹²⁴		56	15	19 56	20 48	12 02 82	32 21				
3	224	23.5		158	35.2 ¹⁰⁹	-10 49.9 ¹²³		54	10	48	37	11 56 79	39 24				
4	239	23.7		173	05.1 ¹⁰⁹	-11 02.2 ¹²³		52	05	41	27	51 77	45 26				
5	254	23.9	+11 04.9	187	35.0 ¹⁰⁹	-11 14.4 ¹²²		50	19 01	19 35	20 18	11 46 74	21 51 28				
6	269	24.0	+11 04.0	202	04.9 ¹⁰⁹	-11 26.5 ¹²¹		45	18 51	19 22	20 00	11 35 70	22 03 32				
7	284	24.2		216	34.8 ¹⁰⁹	38.5 ¹²⁰		40	44	12	19 46	26 67	13 35				
8	299	24.4		231	04.7 ¹⁰⁹	-11 50.5 ¹²⁰		35	37	19 04	35	19 64	22 38				
9	314	24.5		245	34.6 ¹⁰⁹	-12 02.4 ¹¹⁹		30	32	18 56	26	12 61	30 40				
10	329	24.7	+11 00.6	260	04.5 ¹⁰⁹	14.2 ¹¹⁸		20	22	44	11	11 01 57	43 44				
11	344	24.9	+10 59.7	274	34.4 ¹⁰⁹	-12 25.9 ¹¹⁷		10 N	18 13	18 35	19 00	10 51 53	22 55 47				
12	359	25.0	+10 58.9	289	04.3 ¹⁰⁹	-12 37.5 ¹¹⁶		0	18 06	18 27	18 51	10 42 50	23 05 51				
13	14	25.2		303	34.2 ¹⁰⁹	-12 49.1 ¹¹⁶		10 S	17 58	19	44	33 46	16 54				
14	29	25.4		318	04.0 ¹⁰⁸	-13 00.6 ¹¹⁵		20	50	12	38	23 43	28 57				
15	44	25.6		332	33.9 ¹⁰⁹	12.0 ¹¹⁴		30	41	05	33	12 39	42 60				
16	59	25.7		347	03.8 ¹⁰⁹	23.3 ¹¹³		35	35	18 01	31	10 06 36	50 62				
17	74	25.9	+10 54.6	1	33.6 ¹⁰⁸	-13 34.5 ¹¹²		40	17 30	17 57	18 29	9 58 34	23 58 66				
18	89	26.1	+10 53.7	16	03.5 ¹⁰⁹	-13 45.6 ¹¹¹		45	17 23	17 53	18 27	9 50 30	** ** *				
19	104	26.2		30	33.3 ¹⁰⁸	-13 56.7 ¹¹¹		50	15	48	25	40 26	** ** *				
20	119	26.4		45	03.1 ¹⁰⁸	-14 07.7 ¹¹⁰		52	11	45	25	36 24	** ** *				
21	134	26.6		59	33.0 ¹⁰⁹	18.5 ¹⁰⁸		54	07	43	24	31 21	** ** *				
22	149	26.7		74	02.8 ¹⁰⁸	29.3 ¹⁰⁸		56	17 02	40	24	25 19	** ** *				
23	164	26.9		88	32.6 ¹⁰⁸	40.0 ¹⁰⁷		58	16 57	38	23	19 16	** ** *				
24	179	27.1	+10 48.6	103	02.4 ¹⁰⁸	-14 50.6 ¹⁰⁶		60 S	16 51	17 35	18 23	9 12 13	** ** *				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 50 ^m 3		Mag: -3.9 PMG: 9 ^h 44 ^m			Mag: -1.0 PMG: 19 ^h 17 ^m			Mag: -2.1 PMG: 8 ^h 27 ^m			Mag: +0.1 PMG: 6 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	332	20.3	214	11.2	+20 28.0	70	25.7	-27 01.5	233	01.8	+22 56.4	259	32.0	+20 44.0
1	347	22.7	229	10.5	27.5	85	27.0	01.5	248	03.8	56.3	274	34.3	44.0
2	2	25.2	244	09.8	27.1	100	28.4	01.5	263	05.8	56.3	289	36.6	44.0
3	17	27.7	259	09.2	26.7	115	29.7	01.5	278	07.7	56.3	304	38.9	44.0
4	32	30.1	274	08.5	26.3	130	31.0	01.5	293	09.7	56.3	319	41.2	44.0
5	47	32.6	289	07.8	+20 25.8	145	32.4	-27 01.6	308	11.7	+22 56.2	334	43.5	+20 44.0
6	62	35.0	304	07.2	+20 25.4	160	33.7	-27 01.6	323	13.7	+22 56.2	349	45.8	+20 44.1
7	77	37.5	319	06.5	25.0	175	35.0	01.6	338	15.7	56.2	4	48.2	44.1
8	92	40.0	334	05.8	24.6	190	36.4	01.6	353	17.6	56.2	19	50.5	44.1
9	107	42.4	349	05.2	24.1	205	37.7	01.6	8	19.6	56.1	34	52.8	44.1
10	122	44.9	4	04.5	23.7	220	39.0	01.6	23	21.6	56.1	49	55.1	44.1
11	137	47.4	19	03.8	+20 23.3	235	40.4	-27 01.6	38	23.6	+22 56.1	64	57.4	+20 44.1
12	152	49.8	34	03.2	+20 22.8	250	41.7	-27 01.6	53	25.6	+22 56.1	79	59.7	+20 44.1
13	167	52.3	49	02.5	22.4	265	43.0	01.6	68	27.5	56.0	95	02.0	44.1
14	182	54.8	64	01.8	22.0	280	44.4	01.6	83	29.5	56.0	110	04.3	44.2
15	197	57.2	79	01.2	21.5	295	45.7	01.6	98	31.5	56.0	125	06.6	44.2
16	212	59.7	94	00.5	21.1	310	47.0	01.6	113	33.5	56.0	140	08.9	44.2
17	228	02.2	108	59.9	+20 20.7	325	48.3	-27 01.6	128	35.5	+22 55.9	155	11.3	+20 44.2
18	243	04.6	123	59.2	+20 20.2	340	49.7	-27 01.6	143	37.4	+22 55.9	170	13.6	+20 44.2
19	258	07.1	138	58.5	19.8	355	51.0	01.6	158	39.4	55.9	185	15.9	44.2
20	273	09.5	153	57.9	19.4	10	52.3	01.6	173	41.4	55.8	200	18.2	44.2
21	288	12.0	168	57.2	18.9	25	53.6	01.6	188	43.4	55.8	215	20.5	44.2
22	303	14.5	183	56.5	18.5	40	54.9	01.6	203	45.4	55.8	230	22.8	44.2
23	318	16.9	198	55.9	18.0	55	56.3	01.6	218	47.4	55.8	245	25.1	44.3
24	333	19.4	213	55.2	+20 17.6	70	57.6	-27 01.6	233	49.3	+22 55.7	260	27.4	+20 44.3
Dif	—		-7		-4	+13		0	+20		0	+23		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 1			Edad: 5 ^d 9	PHE { 4 ^h : 57'4 12 ^h : 57'1 20 ^h : 56'8 R°: 50 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	27.1	+10 48.6	103	02.4	-14 50.6		60 N	2 47	3 51	4 38	13 46	84	21 31	20
1	194	27.3		117	32.2 ¹⁰⁸	-15 01.2 ¹⁰⁶		58	3 03	4 01	45	34 80		43 24	
2	209	27.4		132	01.9 ¹⁰⁷	11.6 ¹⁰⁴		56	17	10	50	24 77		21 53	28
3	224	27.6		146	31.7 ¹⁰⁸	21.9 ¹⁰³		54	28	17	4 56	15 75		22 03	29
4	239	27.8		161	01.5 ¹⁰⁸	32.2 ¹⁰³		52	38	24	5 00	08 72		11 32	
5	254	27.9	+10 44.2	175	31.2 ¹⁰⁷	-15 42.3 ¹⁰¹		50	3 47	4 30	5 04	13 00	71	22 19	33
6	269	28.1	+10 43.4	190	00.9 ¹⁰⁷	-15 52.4 ¹⁰¹		45	4 05	4 43	5 14	12 45	67	22 35	36
7	284	28.3		204	30.7 ¹⁰⁸	-16 02.3 ⁹⁹		40	19	4 53	21	33 64		22 48	39
8	299	28.5		219	00.4 ¹⁰⁷	12.2 ⁹⁹		35	30	5 01	27	23 61		23 00	41
9	314	28.6		233	30.1 ¹⁰⁷	21.9 ⁹⁷		30	39	08	33	12 13	60	10 42	
10	329	28.8		247	59.8 ¹⁰⁷	31.6 ⁹⁷		20	4 54	20	43	11 58	56	27 46	
11	344	29.0	+10 39.1	262	29.4 ¹⁰⁶	-16 41.2 ⁹⁶		10 N	5 05	5 30	5 51	11 44	54	23 42	48
12	359	29.1	+10 38.2	276	59.1 ¹⁰⁷	-16 50.7 ⁹⁵		0	5 13	5 38	5 59	11 32	50	23 56	51
13	14	29.3		291	28.7 ¹⁰⁶	-17 00.0 ⁹³		10 S	20	45	6 06	19 48		*** ** *	
14	29	29.5		305	58.4 ¹⁰⁷	-17 09.3 ⁹³		20	26	52	14	11 06	44	*** ** *	
15	44	29.7		320	28.0 ¹⁰⁶	18.5 ⁹²		30	31	5 59	23	10 51	41	*** ** *	
16	59	29.8		334	57.6 ¹⁰⁶	27.6 ⁹¹		35	33	6 03	28	42 39		*** ** *	
17	74	30.0	+10 33.9	349	27.2 ¹⁰⁶	-17 36.5 ⁸⁹		40	5 35	6 07	6 34	10 32	37	*** ** *	
18	89	30.2	+10 33.0	3	56.8 ¹⁰⁶	-17 45.4 ⁸⁹		45	5 37	6 11	6 41	10 20	34	0 09	69
19	104	30.4		18	26.4 ¹⁰⁶	-17 54.2 ⁸⁸		50	38	16	49	06 30		22 73	
20	119	30.5		32	55.9 ¹⁰⁵	-18 02.8 ⁸⁶		52	39	18	52	10 00	28	28 75	
21	134	30.7		47	25.5 ¹⁰⁶	11.4 ⁸⁶		54	39	20	6 57	9 52	27	34 77	
22	149	30.9		61	55.0 ¹⁰⁵	19.9 ⁸⁵		56	40	23	7 01	44 24		42 79	
23	164	31.1		76	24.5 ¹⁰⁵	28.2 ⁸³		58	40	26	06	35 21		50 83	
24	179	31.2	+10 27.8	90	54.0 ¹⁰⁵	-18 36.5 ⁸³		60 S	5 40	6 29	7 11	9 25	18	0 59	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 1 ^h 46 ^m 4		Mag: -3.9 PMG: 9 ^h 45 ^m		Mag: -1.0 PMG: 19 ^h 14 ^m		Mag: -2.1 PMG: 8 ^h 24 ^m		Mag: +0.1 PMG: 6 ^h 37 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	333	19.4	213	55.2	+20 17.6	70 57.6	-27 01.6	233 49.3	+22 55.7	260 27.4	+20 44.3
1	348	21.9	228	54.6	17.1	85 58.9	01.6	248 51.3	55.7	275 29.7	44.3
2	3	24.3	243	53.9	16.7	101 00.2	01.6	263 53.3	55.7	290 32.1	44.3
3	18	26.8	258	53.2	16.2	116 01.5	01.6	278 55.3	55.7	305 34.4	44.3
4	33	29.3	273	52.6	15.8	131 02.8	01.6	293 57.3	55.6	320 36.7	44.3
5	48	31.7	288	51.9	+20 15.4	146 04.1	-27 01.6	308 59.3	+22 55.6	335 39.0	+20 44.3
6	63	34.2	303	51.2	+20 14.9	161 05.5	-27 01.6	324 01.2	+22 55.6	350 41.3	+20 44.3
7	78	36.6	318	50.6	14.5	176 06.8	01.6	339 03.2	55.6	5 43.6	44.4
8	93	39.1	333	49.9	14.0	191 08.1	01.6	354 05.2	55.5	20 45.9	44.4
9	108	41.6	348	49.3	13.5	206 09.4	01.6	9 07.2	55.5	35 48.2	44.4
10	123	44.0	3	48.6	13.1	221 10.7	01.6	24 09.2	55.5	50 50.6	44.4
11	138	46.5	18	47.9	+20 12.6	236 12.0	-27 01.6	39 11.2	+22 55.5	65 52.9	+20 44.4
12	153	49.0	33	47.3	+20 12.2	251 13.3	-27 01.6	54 13.2	+22 55.4	80 55.2	+20 44.4
13	168	51.4	48	46.6	11.7	266 14.6	01.6	69 15.1	55.4	95 57.5	44.4
14	183	53.9	63	46.0	11.3	281 15.9	01.6	84 17.1	55.4	110 59.8	44.4
15	198	56.4	78	45.3	10.8	296 17.2	01.6	99 19.1	55.4	126 02.1	44.4
16	213	58.8	93	44.6	10.4	311 18.5	01.6	114 21.1	55.3	141 04.4	44.5
17	229	01.3	108	44.0	+20 09.9	326 19.8	-27 01.6	129 23.1	+22 55.3	156 06.8	+20 44.5
18	244	03.8	123	43.3	+20 09.4	341 21.1	-27 01.6	144 25.1	+22 55.3	171 09.1	+20 44.5
19	259	06.2	138	42.7	09.0	356 22.4	01.6	159 27.1	55.2	186 11.4	44.5
20	274	08.7	153	42.0	08.5	11 23.7	01.6	174 29.0	55.2	201 13.7	44.5
21	289	11.1	168	41.3	08.0	26 25.0	01.6	189 31.0	55.2	216 16.0	44.5
22	304	13.6	183	40.7	07.6	41 26.3	01.6	204 33.0	55.2	231 18.3	44.5
23	319	16.1	198	40.0	07.1	56 27.6	01.6	219 35.0	55.1	246 20.7	44.5
24	334	18.5	213	39.4	+20 06.6	71 28.9	-27 01.6	234 37.0	+22 55.1	261 23.0	+20 44.6
Dif	—		-7	-5		+13	0	+20	0	+23	0

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 8			Edad: 6 ^d 9 PHE { SD: 15 ^h 4 PMG: 18 ^h 34 ^m 4 ^h : 56 ^s 5 12 ^h : 56 ^s 3 20 ^h : 56 ^s 0 R°: 51 ^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	31.2	+10	27.8	90	54.0	-18	36.5	60 N	19 21	20 08	21 10	15 10 75	21 51 30
1	194	31.4		26.9	105	23.5 ¹⁰⁵		44.6 ⁸¹	58	15	19 58	20 55	14 54 73	22 07 33
2	209	31.6		26.1	119	53.0 ¹⁰⁵		-18 52.7 ⁸¹	56	10	50	42	41 70	21 35
3	224	31.8		25.2	134	22.4 ¹⁰⁴		-19 00.6 ⁷⁹	54	05	43	31	30 68	32 37
4	239	31.9		24.3	148	51.9 ¹⁰⁵		08.4 ⁷⁸	52	19 01	37	21	20 67	43 38
5	254	32.1	+10	23.5	163	21.3 ¹⁰⁴		-19 16.1 ⁷⁷	50	18 57	19 31	20 13	14 11 65	22 52 39
6	269	32.3	+10	22.6	177	50.7 ¹⁰⁴		-19 23.7 ⁷⁶	45	18 48	19 19	19 56	13 52 63	23 11 42
7	284	32.5		21.7	192	20.1 ¹⁰⁴		31.3 ⁷⁶	40	41	09	43	37 61	27 44
8	299	32.6		20.8	206	49.5 ¹⁰⁴		38.6 ⁷³	35	35	19 01	32	24 59	41 45
9	314	32.8		20.0	221	18.9 ¹⁰⁴		45.9 ⁷³	30	29	18 54	23	13 13 57	23 52 47
10	329	33.0		19.1	235	48.3 ¹⁰⁴		-19 53.1 ⁷²	20	20	43	19 09	12 54 55	** ** *
11	344	33.2	+10	18.2	250	17.6 ¹⁰³		-20 00.2 ⁷¹	10 N	18 12	18 34	18 59	12 38 52	** ** *
12	359	33.4	+10	17.4	264	47.0 ¹⁰⁴		-20 07.1 ⁶⁹	0	18 05	18 26	18 50	12 22 51	** ** *
13	14	33.5		16.5	279	16.3 ¹⁰³		14.0 ⁶⁹	10 S	17 58	19	44	12 07 49	0 10 53
14	29	33.7		15.6	293	45.6 ¹⁰³		20.7 ⁶⁷	20	50	13	38	11 50 47	25 56
15	44	33.9		14.7	308	14.9 ¹⁰³		27.3 ⁶⁶	30	42	06	34	32 44	42 59
16	59	34.1		13.9	322	44.2 ¹⁰³		33.8 ⁶⁵	35	37	18 03	32	21 43	0 52 61
17	74	34.2	+10	13.0	337	13.5 ¹⁰³		-20 40.2 ⁶⁴	40	17 31	17 59	18 30	11 09 41	1 04 63
18	89	34.4	+10	12.1	351	42.8 ¹⁰³		-20 46.5 ⁶³	45	17 25	17 55	18 29	10 54 39	1 18 65
19	104	34.6		11.2	6	12.0 ¹⁰²		52.7 ⁶²	50	18	50	28	36 36	35 68
20	119	34.8		10.4	20	41.3 ¹⁰³		-20 58.7 ⁶⁰	52	14	48	28	28 35	43 69
21	134	35.0		09.5	35	10.5 ¹⁰²		-21 04.7 ⁶⁰	54	10	46	27	19 33	1 51 72
22	149	35.1		08.6	49	39.8 ¹⁰³		10.5 ⁵⁸	56	06	44	27	10 08 31	2 01 74
23	164	35.3		07.8	64	09.0 ¹⁰²		16.2 ⁵⁷	58	17 01	42	27	9 56 29	13 76
24	179	35.5	+10	06.9	78	38.2 ¹⁰²		-21 21.8 ⁵⁶	60 S	16 56	17 39	18 27	9 43 25	2 26 80

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 42 ^m 5		Mag: -3.9 PMG: 9 ^h 46 ^m			Mag: -1.0 PMG: 19 ^h 12 ^m			Mag: -2.1 PMG: 8 ^h 20 ^m			Mag: +0.1 PMG: 6 ^h 33 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	334	18.5	213	39.4	+20	06.6	71	28.9	-27	01.6	234	37.0	+22	55.1	261	23.0	+20	44.6
1	349	21.0	228	38.7		06.2	86	30.2		01.6	249	39.0		55.1	276	25.3		44.6
2	4	23.5	243	38.0		05.7	101	31.5		01.6	264	41.0		55.1	291	27.6		44.6
3	19	25.9	258	37.4		05.2	116	32.8		01.6	279	43.0		55.0	306	29.9		44.6
4	34	28.4	273	36.7		04.8	131	34.1		01.6	294	45.0		55.0	321	32.2		44.6
5	49	30.9	288	36.1	+20	04.3	146	35.4	-27	01.6	309	46.9	+22	55.0	336	34.5	+20	44.6
6	64	33.3	303	35.4	+20	03.8	161	36.7	-27	01.6	324	48.9	+22	55.0	351	36.9	+20	44.6
7	79	35.8	318	34.7		03.3	176	38.0		01.6	339	50.9		54.9	6	39.2		44.6
8	94	38.3	333	34.1		02.9	191	39.2		01.6	354	52.9		54.9	21	41.5		44.6
9	109	40.7	348	33.4		02.4	206	40.5		01.6	9	54.9		54.9	36	43.8		44.7
10	124	43.2	3	32.8		01.9	221	41.8		01.6	24	56.9		54.9	51	46.1		44.7
11	139	45.6	18	32.1	+20	01.4	236	43.1	-27	01.5	39	58.9	+22	54.8	66	48.5	+20	44.7
12	154	48.1	33	31.5	+20	01.0	251	44.4	-27	01.5	55	00.9	+22	54.8	81	50.8	+20	44.7
13	169	50.6	48	30.8	+20	00.5	266	45.7		01.5	70	02.9		54.8	96	53.1		44.7
14	184	53.0	63	30.2	+20	00.0	281	46.9		01.5	85	04.8		54.7	111	55.4		44.7
15	199	55.5	78	29.5	+19	59.5	296	48.2		01.5	100	06.8		54.7	126	57.7		44.7
16	214	58.0	93	28.8		59.0	311	49.5		01.5	115	08.8		54.7	142	00.0		44.7
17	230	00.4	108	28.2	+19	58.5	326	50.8	-27	01.5	130	10.8	+22	54.7	157	02.4	+20	44.7
18	245	02.9	123	27.5	+19	58.1	341	52.1	-27	01.5	145	12.8	+22	54.6	172	04.7	+20	44.8
19	260	05.4	138	26.9		57.6	356	53.3		01.5	160	14.8		54.6	187	07.0		44.8
20	275	07.8	153	26.2		57.1	11	54.6		01.5	175	16.8		54.6	202	09.3		44.8
21	290	10.3	168	25.6		56.6	26	55.9		01.5	190	18.8		54.6	217	11.6		44.8
22	305	12.7	183	24.9		56.1	41	57.2		01.5	205	20.8		54.5	232	14.0		44.8
23	320	15.2	198	24.3		55.6	56	58.4		01.5	220	22.8		54.5	247	16.3		44.8
24	335	17.7	213	23.6	+19	55.1	71	59.7	-27	01.5	235	24.8	+22	54.5	262	18.6	+20	44.8
Dif	—		-7			-5	+13		0		+20		0		+23			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15/8 PMG: 12 ^h 01 ^m 5			Edad: 7 ^d 9 PHE { SD: 15/2 PMG: 19 ^h 25 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m						
0	179	35.5	+10	06.9	78	38.2	-21	21.8	55	60 N	2	54	3	56	4	43	16 25 63	22 21 44					
1	194	35.7		06.0	93	07.4	102	27.3	55	58	3	09	4	06		49	16 07 61	40 45					
2	209	35.9		05.1	107	36.6	102	32.7	54	56		22		14		54	15 51 60	22 56 45					
3	224	36.0		04.2	122	05.8	102	38.0	53	54		33		21		4	59	38 59	23 09 47				
4	239	36.2		03.4	136	35.0	102	43.1	51	52		43		27		5	04	27 58	21 47				
5	254	36.4	+10	02.5	151	04.2	102	-21	48.1	50	50	3	51	4	33		5	07	15 16 58	23 31 48			
6	269	36.6	+10	01.6	165	33.3	101	-21	53.0	49	45	4	08	4	45		5	16	14 55 56	23 53 48			
7	284	36.8	+10	00.7	180	02.5	102	-21	57.8	48	40		21		4	55		23	38 55	** ** *			
8	299	36.9	+9	59.9	194	31.6	101	-22	02.5	47	35		32		5	03		29	23 55	** ** *			
9	314	37.1		59.0	209	00.8	102		07.1	46	30		41		10			34	14 10 54	** ** *			
10	329	37.3		58.1	223	29.9	101		11.5	44	20		4	54		21		43	13 49 53	0 13 48			
11	344	37.5	+9	57.2	237	59.1	102	-22	15.8	43	10 N		5	05		5	30		5	51	13 30 52	0 30 50	
12	359	37.7	+9	56.4	252	28.2	101	-22	20.0	42	0		5	13		5	37		5	58	13 13 51	0 47 51	
13	14	37.8		55.5	266	57.4	102		24.1	41	10 S			19		44		6	05	12 56 50	1 03 53		
14	29	38.0		54.6	281	26.5	101		28.1	40	20			25		50		13		37 50	21 54		
15	44	38.2		53.7	295	55.6	101		32.0	39	30			29		5	57		21	16 48	41 56		
16	59	38.4		52.8	310	24.8	102		35.7	37	35			31		6	00		26	12 04 47	1 53 57		
17	74	38.6	+9	52.0	324	53.9	101	-22	39.3	36	40			5	32		6	04		6	31	11 50 46	2 07 58
18	89	38.8	+9	51.1	339	23.0	101	-22	42.8	35	45			5	34		6	08		6	37	11 33 45	2 23 59
19	104	38.9		50.2	353	52.1	101		46.2	34	50			35		12			45	12 44	43 61		
20	119	39.1		49.3	8	21.3	102		49.5	33	52			35		14			48	11 03 42	2 52 63		
21	134	39.3		48.4	22	50.4	101		52.6	31	54			35		16			52	10 52 41	3 03 64		
22	149	39.5		47.6	37	19.5	101		55.7	31	56			35		18			6	56	39 40	15 66	
23	164	39.7		46.7	51	48.7	102	-22	58.6	29	58			35		20			7	01	25 38	29 67	
24	179	39.9	+9	45.8	66	17.8	101	-23	01.4	28	60 S			5	35		6	23		7	06	10 08 36	3 46 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 38 ^m 6		Mag: -3.9 PMG: 9 ^h 47 ^m		Mag: -0.9 PMG: 19 ^h 10 ^m		Mag: -2.1 PMG: 8 ^h 17 ^m		Mag: +0.1 PMG: 6 ^h 30 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	335	17.7	213	23.6	+19	55.1	71	59.7	-27	01.5	235	24.8	+22	54.5	262	18.6	+20	44.8
1	350	20.1	228	22.9		54.6	87	01.0		01.5	250	26.8		54.5	277	20.9		44.8
2	5	22.6	243	22.3		54.1	102	02.3		01.5	265	28.7		54.4	292	23.2		44.8
3	20	25.1	258	21.6		53.6	117	03.5		01.5	280	30.7		54.4	307	25.6		44.8
4	35	27.5	273	21.0		53.2	132	04.8		01.5	295	32.7		54.4	322	27.9		44.9
5	50	30.0	288	20.3	+19	52.7	147	06.1	-27	01.5	310	34.7	+22	54.3	337	30.2	+20	44.9
6	65	32.5	303	19.7	+19	52.2	162	07.3	-27	01.5	325	36.7	+22	54.3	352	32.5	+20	44.9
7	80	34.9	318	19.0		51.7	177	08.6		01.5	340	38.7		54.3	7	34.8		44.9
8	95	37.4	333	18.4		51.2	192	09.9		01.5	355	40.7		54.3	22	37.2		44.9
9	110	39.9	348	17.7		50.7	207	11.1		01.4	10	42.7		54.2	37	39.5		44.9
10	125	42.3	3	17.1		50.2	222	12.4		01.4	25	44.7		54.2	52	41.8		44.9
11	140	44.8	18	16.4	+19	49.7	237	13.7	-27	01.4	40	46.7	+22	54.2	67	44.1	+20	44.9
12	155	47.2	33	15.8	+19	49.2	252	14.9	-27	01.4	55	48.7	+22	54.2	82	46.5	+20	44.9
13	170	49.7	48	15.1		48.7	267	16.2		01.4	70	50.7		54.1	97	48.8		45.0
14	185	52.2	63	14.5		48.1	282	17.5		01.4	85	52.7		54.1	112	51.1		45.0
15	200	54.6	78	13.8		47.6	297	18.7		01.4	100	54.7		54.1	127	53.4		45.0
16	215	57.1	93	13.2		47.1	312	20.0		01.4	115	56.7		54.1	142	55.7		45.0
17	230	59.6	108	12.5	+19	46.6	327	21.2	-27	01.4	130	58.7	+22	54.0	157	58.1	+20	45.0
18	246	02.0	123	11.8	+19	46.1	342	22.5	-27	01.4	146	00.6	+22	54.0	173	00.4	+20	45.0
19	261	04.5	138	11.2		45.6	357	23.7		01.4	161	02.6		54.0	188	02.7		45.0
20	276	07.0	153	10.5		45.1	12	25.0		01.4	176	04.6		53.9	203	05.0		45.0
21	291	09.4	168	09.9		44.6	27	26.3		01.4	191	06.6		53.9	218	07.4		45.0
22	306	11.9	183	09.2		44.1	42	27.5		01.4	206	08.6		53.9	233	09.7		45.0
23	321	14.4	198	08.6		43.6	57	28.8		01.4	221	10.6		53.9	248	12.0		45.1
24	336	16.8	213	07.9	+19	43.0	72	30.0	-27	01.3	236	12.6	+22	53.8	263	14.3	+20	45.1
Dif	—		-7		-5		+13		0		+20		0		+23		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8		Edad: 8 ^d 9	PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /0 20 ^h : 54 ^h /9	SD: 15 ^h 1				Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 01 ^m 2				PMG: 20 ^h 16 ^m					R°: 51 ^m		Final del crepúsculo		Salida de Luna		Puesta de Luna		
	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	m				
0	179	39.9	+9	45.8	66	17.8	-23 01.4	60 N	19 15	20 01	21 02	17 28 46	23 05 58					
1	194	40.0		44.9	80	47.0 ¹⁰²	04.0 ²⁶	58	10	19 52	20 48	17 08 47	25 57					
2	209	40.2		44.0	95	16.1 ¹⁰¹	06.6 ²⁶	56	05	45	36	16 51 48	41 56					
3	224	40.4		43.2	109	45.3 ¹⁰²	09.0 ²⁴	54	19 00	38	25	37 48	23 56 55					
4	239	40.6		42.3	124	14.4 ¹⁰¹	11.3 ²³	52	18 56	32	16	25 48	** ** *					
5	254	40.8	+9	41.4	138	43.6 ¹⁰²	-23 13.5 ²²	50	18 52	19 26	20 08	16 14 48	** ** *					
6	269	41.0	+9	40.5	153	12.8 ¹⁰²	-23 15.6 ²¹	45	18 44	19 15	19 52	15 51 49	** ** *					
7	284	41.1		39.6	167	41.9 ¹⁰¹	17.6 ²⁰	40	38	19 06	39	33 49	0 11 49					
8	299	41.3		38.7	182	11.1 ¹⁰²	19.4 ¹⁸	35	32	18 58	29	18 49	26 49					
9	314	41.5		37.9	196	40.3 ¹⁰²	21.1 ¹⁷	30	27	52	21	15 04 50	0 39 49					
10	329	41.7		37.0	211	09.5 ¹⁰²	22.8 ¹⁷	20	19	41	19 07	14 42 50	1 01 50					
11	344	41.9	+9	36.1	225	38.7 ¹⁰²	-23 24.2 ¹⁴	10 N	18 11	18 33	18 57	14 22 51	1 20 50					
12	359	42.1	+9	35.2	240	08.0 ¹⁰³	-23 25.6 ¹⁴	0	18 04	18 25	18 50	14 04 51	1 38 51					
13	14	42.3		34.3	254	37.2 ¹⁰²	26.9 ¹³	10 S	17 58	19	44	13 46 51	1 56 51					
14	29	42.4		33.4	269	06.5 ¹⁰³	28.0 ¹¹	20	51	13	39	27 50	2 15 51					
15	44	42.6		32.5	283	35.7 ¹⁰²	29.0 ¹⁰	30	43	07	35	13 04 51	37 52					
16	59	42.8		31.7	298	05.0 ¹⁰³	29.9 ⁹	35	38	04	33	12 51 51	2 50 52					
17	74	43.0	+9	30.8	312	34.3 ¹⁰³	-23 30.7 ⁸	40	17 33	18 01	18 32	12 36 51	3 05 52					
18	89	43.2	+9	29.9	327	03.6 ¹⁰³	-23 31.3 ⁶	45	17 27	17 57	18 31	12 18 51	3 22 53					
19	104	43.4		29.0	341	32.9 ¹⁰³	31.9 ⁶	50	20	53	31	11 56 51	44 54					
20	119	43.6		28.1	356	02.3 ¹⁰⁴	32.3 ⁴	52	17	51	31	45 51	3 55 53					
21	134	43.7		27.2	10	31.6 ¹⁰³	32.6 ³	54	14	50	31	33 51	4 07 53					
22	149	43.9		26.3	25	01.0 ¹⁰⁴	32.8 ²	56	10	48	31	19 51	21 53					
23	164	44.1		25.5	39	30.4 ¹⁰⁴	32.9 ¹	58	06	46	31	11 03 51	36 55					
24	179	44.3	+9	24.6	53	59.8 ¹⁰⁴	-23 32.8 ¹	60 S	17 01	17 43	18 31	10 44 51	4 56 54					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 34 ^m 6		Mag: -3.9 PMG: 9 ^h 48 ^m			Mag: -0.9 PMG: 19 ^h 08 ^m			Mag: -2.1 PMG: 8 ^h 14 ^m			Mag: +0.1 PMG: 6 ^h 26 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	336	16.8	213	07.9	+19	43.0	72	30.0	-27	01.3	236	12.6	+22	53.8	263	14.3	+20	45.1
1	351	19.3	228	07.3		42.5	87	31.3		01.3	251	14.6		53.8	278	16.7		45.1
2	6	21.7	243	06.6		42.0	102	32.5		01.3	266	16.6		53.8	293	19.0		45.1
3	21	24.2	258	06.0		41.5	117	33.8		01.3	281	18.6		53.8	308	21.3		45.1
4	36	26.7	273	05.3		41.0	132	35.0		01.3	296	20.6		53.7	323	23.6		45.1
5	51	29.1	288	04.7	+19	40.5	147	36.3	-27	01.3	311	22.6	+22	53.7	338	26.0	+20	45.1
6	66	31.6	303	04.1	+19	39.9	162	37.5	-27	01.3	326	24.6	+22	53.7	353	28.3	+20	45.1
7	81	34.1	318	03.4		39.4	177	38.8		01.3	341	26.6		53.6	8	30.6		45.1
8	96	36.5	333	02.8		38.9	192	40.0		01.3	356	28.6		53.6	23	32.9		45.2
9	111	39.0	348	02.1		38.4	207	41.2		01.3	11	30.6		53.6	38	35.3		45.2
10	126	41.5	3	01.5		37.9	222	42.5		01.3	26	32.6		53.6	53	37.6		45.2
11	141	43.9	18	00.8	+19	37.3	237	43.7	-27	01.2	41	34.6	+22	53.5	68	39.9	+20	45.2
12	156	46.4	33	00.2	+19	36.8	252	45.0	-27	01.2	56	36.6	+22	53.5	83	42.2	+20	45.2
13	171	48.9	47	59.5		36.3	267	46.2		01.2	71	38.6		53.5	98	44.6		45.2
14	186	51.3	62	58.9		35.7	282	47.4		01.2	86	40.6		53.5	113	46.9		45.2
15	201	53.8	77	58.2		35.2	297	48.7		01.2	101	42.6		53.4	128	49.2		45.2
16	216	56.2	92	57.6		34.7	312	49.9		01.2	116	44.6		53.4	143	51.5		45.2
17	231	58.7	107	56.9	+19	34.2	327	51.2	-27	01.2	131	46.6	+22	53.4	158	53.9	+20	45.2
18	247	01.2	122	56.3	+19	33.6	342	52.4	-27	01.2	146	48.6	+22	53.3	173	56.2	+20	45.2
19	262	03.6	137	55.6		33.1	357	53.6		01.2	161	50.6		53.3	188	58.5		45.3
20	277	06.1	152	55.0		32.6	12	54.9		01.2	176	52.6		53.3	204	00.9		45.3
21	292	08.6	167	54.3		32.0	27	56.1		01.1	191	54.6		53.3	219	03.2		45.3
22	307	11.0	182	53.7		31.5	42	57.3		01.1	206	56.6		53.2	234	05.5		45.3
23	322	13.5	197	53.1		30.9	57	58.6		01.1	221	58.6		53.2	249	07.8		45.3
24	337	16.0	212	52.4	+19	30.4	72	59.8	-27	01.1	237	00.6	+22	53.2	264	10.2	+20	45.3
Dif	—		-6		-5		+12		0		+20		0		+23		0	

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: 9 ^d 9 PHE { SD: 14'9 PMG: 21 ^h 07 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m			
0	179	44.3	+9	53	59.8	-23	32.8	60 N	3 01	4 02	4 48	18 14	32	***	***			
1	194	44.5		68	29.3 ¹⁰⁵		32.7	58	15	11	53	17 55	34	***	***			
2	209	44.7		82	58.7 ¹⁰⁴		32.4	56	27	18	4 58	39	36	***	***			
3	224	44.9		97	28.2 ¹⁰⁵		32.0	54	38	25	5 03	25	38	***	***			
4	239	45.1		111	57.7 ¹⁰⁵		31.5	52	47	31	07	13	39	0 08	55			
5	254	45.2	+9	126	27.2 ¹⁰⁵	-23	30.9	50	3 55	4 36	5 10	17 02	40	0 19	54			
6	269	45.4	+9	140	56.8 ¹⁰⁶	-23	30.2	45	4 11	4 48	5 18	16 40	42	0 41	54			
7	284	45.6		155	26.3 ¹⁰⁵		29.3	40	23	4 57	25	22	44	1 00	53			
8	299	45.8		169	55.9 ¹⁰⁶		28.3	35	34	5 04	30	16 07	45	15	52			
9	314	46.0		184	25.6 ¹⁰⁷		27.3	30	42	11	35	15 54	46	28	52			
10	329	46.2		198	55.2 ¹⁰⁶		26.1	20	4 55	21	44	32	47	1 51	51			
11	344	46.4	+9	213	24.9 ¹⁰⁷	-23	24.8	10 N	5 05	5 30	5 51	15 13	48	2 10	51			
12	359	46.6	+9	227	54.6 ¹⁰⁷	-23	23.3	0	5 12	5 37	5 58	14 55	49	2 29	50			
13	14	46.8		242	24.3 ¹⁰⁷		21.8	10 S	18	43	6 04	37	50	2 47	49			
14	29	46.9		256	54.1 ¹⁰⁸		20.1	20	23	49	11	14 17	52	3 06	49			
15	44	47.1		271	23.9 ¹⁰⁸		18.4	30	27	55	19	13 55	53	29	47			
16	59	47.3		285	53.7 ¹⁰⁸		16.5	35	28	5 58	23	42	54	42	47			
17	74	47.5	+9	300	23.5 ¹⁰⁸	-23	14.5	40	5 29	6 01	6 28	13 27	55	3 57	47			
18	89	47.7	+9	314	53.4 ¹⁰⁹	-23	12.4	45	5 30	6 04	6 34	13 09	56	4 15	46			
19	104	47.9		329	23.3 ¹⁰⁹		10.2	50	31	08	41	12 47	57	38	44			
20	119	48.1		343	53.3 ¹¹⁰		07.9	52	31	10	44	36	58	4 48	44			
21	134	48.3		358	23.2 ¹⁰⁹		05.5	54	31	11	47	24	59	5 00	43			
22	149	48.5		12	53.2 ¹¹⁰		02.9	56	30	13	51	12 10	61	14	42			
23	164	48.7		27	23.3 ¹¹¹	-23	00.3	58	30	15	6 55	11 54	62	31	40			
24	179	48.8	+9	41	53.4 ¹¹¹	-22	57.5	60 S	5 30	6 18	7 00	11 35	63	5 50	39			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 30 ^m 7		Mag: -3.9 PMG: 9 ^h 49 ^m			Mag: -0.9 PMG: 19 ^h 06 ^m			Mag: -2.1 PMG: 8 ^h 11 ^m			Mag: +0.1 PMG: 6 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	337	16.0	212	52.4	+19	30.4	72	59.8	-27	01.1	237	00.6	+22	53.2	264	10.2	+20	45.3
1	352	18.4	227	51.8		29.9	88	01.0		01.1	252	02.6		53.2	279	12.5		45.3
2	7	20.9	242	51.1		29.3	103	02.3		01.1	267	04.6		53.1	294	14.8		45.3
3	22	23.3	257	50.5		28.8	118	03.5		01.1	282	06.6		53.1	309	17.2		45.3
4	37	25.8	272	49.8		28.3	133	04.7		01.1	297	08.6		53.1	324	19.5		45.3
5	52	28.3	287	49.2	+19	27.7	148	05.9	-27	01.1	312	10.6	+22	53.1	339	21.8	+20	45.4
6	67	30.7	302	48.5	+19	27.2	163	07.2	-27	01.0	327	12.6	+22	53.0	354	24.1	+20	45.4
7	82	33.2	317	47.9		26.6	178	08.4		01.0	342	14.6		53.0	9	26.5		45.4
8	97	35.7	332	47.3		26.1	193	09.6		01.0	357	16.6		53.0	24	28.8		45.4
9	112	38.1	347	46.6		25.5	208	10.8		01.0	12	18.6		52.9	39	31.1		45.4
10	127	40.6	2	46.0		25.0	223	12.1		01.0	27	20.6		52.9	54	33.5		45.4
11	142	43.1	17	45.3	+19	24.4	238	13.3	-27	01.0	42	22.6	+22	52.9	69	35.8	+20	45.4
12	157	45.5	32	44.7	+19	23.9	253	14.5	-27	01.0	57	24.6	+22	52.9	84	38.1	+20	45.4
13	172	48.0	47	44.0		23.3	268	15.7		00.9	72	26.6		52.8	99	40.5		45.4
14	187	50.5	62	43.4		22.8	283	16.9		00.9	87	28.6		52.8	114	42.8		45.4
15	202	52.9	77	42.8		22.2	298	18.2		00.9	102	30.6		52.8	129	45.1		45.5
16	217	55.4	92	42.1		21.7	313	19.4		00.9	117	32.6		52.8	144	47.4		45.5
17	232	57.8	107	41.5	+19	21.1	328	20.6	-27	00.9	132	34.7	+22	52.7	159	49.8	+20	45.5
18	248	00.3	122	40.8	+19	20.6	343	21.8	-27	00.9	147	36.7	+22	52.7	174	52.1	+20	45.5
19	263	02.8	137	40.2		20.0	358	23.0		00.9	162	38.7		52.7	189	54.4		45.5
20	278	05.2	152	39.6		19.5	13	24.2		00.9	177	40.7		52.6	204	56.8		45.5
21	293	07.7	167	38.9		18.9	28	25.5		00.8	192	42.7		52.6	219	59.1		45.5
22	308	10.2	182	38.3		18.3	43	26.7		00.8	207	44.7		52.6	235	01.4		45.5
23	323	12.6	197	37.6		17.8	58	27.9		00.8	222	46.7		52.6	250	03.8		45.5
24	338	15.1	212	37.0	+19	17.2	73	29.1	-27	00.8	237	48.7	+22	52.5	265	06.1	+20	45.5
Dif	—		-6		-5		+12		0		+20		0		+23			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 00 ^m 6		Edad: 10 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 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	h m m				
0	179	48.8	+9	03.2	41	53.4	-22 57.5	60 N	19 09	19 55	20 54	18 46 21	0 03 69					
1	194	49.0		02.3	56	23.5 ¹¹¹	54.7 ²⁸	58	04	46	41	29 24	22 66					
2	209	49.2		01.4	70	53.6 ¹¹¹	51.7 ³⁰	56	19 00	39	29	15 27	37 65					
3	224	49.4	+9	00.5	85	23.8 ¹¹²	48.6 ³¹	54	18 55	33	19	18 03 29	0 51 63					
4	239	49.6	+8	59.6	99	54.0 ¹¹²	45.4 ³²	52	52	27	11	17 52 31	1 03 61					
5	254	49.8	+8	58.7	114	24.3 ¹¹³	-22 42.1 ³³	50	18 48	19 22	20 03	17 42 33	1 13 60					
6	269	50.0	+8	57.8	128	54.6 ¹¹³	-22 38.7 ³⁴	45	18 41	19 11	19 48	17 22 35	1 35 58					
7	284	50.2		56.9	143	24.9 ¹¹³	35.2 ³⁵	40	35	19 03	36	17 06 37	1 53 56					
8	299	50.4		56.0	157	55.3 ¹¹⁴	31.6 ³⁶	35	29	18 55	26	16 52 39	2 07 55					
9	314	50.6		55.1	172	25.7 ¹¹⁴	27.9 ³⁷	30	25	49	18	40 40	20 54					
10	329	50.8		54.2	186	56.2 ¹¹⁵	24.0 ³⁹	20	17	39	19 06	19 43	2 42 52					
11	344	51.0	+8	53.3	201	26.7 ¹¹⁵	-22 20.1 ³⁹	10 N	18 10	18 31	18 56	16 01 45	3 01 50					
12	359	51.2	+8	52.4	215	57.2 ¹¹⁵	-22 16.1 ⁴⁰	0	18 04	18 25	18 49	15 44 47	3 19 48					
13	14	51.3		51.5	230	27.8 ¹¹⁶	12.0 ⁴¹	10 S	17 58	19	43	27 49	36 47					
14	29	51.5		50.6	244	58.4 ¹¹⁶	07.7 ⁴³	20	51	13	39	15 09 51	3 55 45					
15	44	51.7		49.7	259	29.1 ¹¹⁷	-22 03.4 ⁴³	30	44	08	36	14 48 54	4 16 44					
16	59	51.9		48.9	273	59.8 ¹¹⁷	-21 58.9 ⁴⁵	35	40	05	35	36 55	29 42					
17	74	52.1	+8	48.0	288	30.5 ¹¹⁷	-21 54.4 ⁴⁵	40	17 35	18 02	18 34	14 22 57	4 44 40					
18	89	52.3	+8	47.1	303	01.3 ¹¹⁸	-21 49.8 ⁴⁶	45	17 30	17 59	18 33	14 05 59	5 01 38					
19	104	52.5		46.2	317	32.1 ¹¹⁸	45.0 ⁴⁸	50	23	56	33	13 44 62	22 36					
20	119	52.7		45.3	332	03.0 ¹¹⁹	40.2 ⁴⁸	52	20	55	34	34 64	32 35					
21	134	52.9		44.4	346	33.9 ¹¹⁹	35.2 ⁵⁰	54	17	53	34	23 65	43 34					
22	149	53.1		43.5	1	04.8 ¹¹⁹	30.2 ⁵⁰	56	14	51	34	13 11 67	5 56 32					
23	164	53.3		42.6	15	35.8 ¹²⁰	25.1 ⁵¹	58	10	50	35	12 56 69	6 11 29					
24	179	53.5	+8	41.7	30	06.9 ¹²¹	-21 19.8 ⁵³	60 S	17 05	17 48	18 36	12 38 73	6 29 26					
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO							
	PMG: 1 ^h 26 ^m 8		Mag: -3.9 PMG: 9 ^h 50 ^m			Mag: -0.9 PMG: 19 ^h 05 ^m			Mag: -2.1 PMG: 8 ^h 08 ^m		Mag: +0.1 PMG: 6 ^h 19 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	338	15.1	212	37.0	+19	17.2	73	29.1	-27	00.8	237	48.7	+22	52.5	265	06.1	+20	45.5
1	353	17.6	227	36.4		16.7	88	30.3		00.8	252	50.7		52.5	280	08.4		45.5
2	8	20.0	242	35.7		16.1	103	31.5		00.8	267	52.7		52.5	295	10.8		45.6
3	23	22.5	257	35.1		15.5	118	32.7		00.7	282	54.7		52.4	310	13.1		45.6
4	38	25.0	272	34.4		15.0	133	33.9		00.7	297	56.7		52.4	325	15.4		45.6
5	53	27.4	287	33.8	+19	14.4	148	35.1	-27	00.7	312	58.7	+22	52.4	340	17.8	+20	45.6
6	68	29.9	302	33.2	+19	13.8	163	36.3	-27	00.7	328	00.7	+22	52.4	355	20.1	+20	45.6
7	83	32.3	317	32.5		13.3	178	37.6		00.7	343	02.7		52.3	10	22.4		45.6
8	98	34.8	332	31.9		12.7	193	38.8		00.7	358	04.7		52.3	25	24.8		45.6
9	113	37.3	347	31.2		12.1	208	40.0		00.7	13	06.8		52.3	40	27.1		45.6
10	128	39.7	2	30.6		11.6	223	41.2		00.6	28	08.8		52.3	55	29.4		45.6
11	143	42.2	17	30.0	+19	11.0	238	42.4	-27	00.6	43	10.8	+22	52.2	70	31.8	+20	45.6
12	158	44.7	32	29.3	+19	10.4	253	43.6	-27	00.6	58	12.8	+22	52.2	85	34.1	+20	45.6
13	173	47.1	47	28.7		09.8	268	44.8		00.6	73	14.8		52.2	100	36.4		45.7
14	188	49.6	62	28.1		09.3	283	46.0		00.6	88	16.8		52.1	115	38.8		45.7
15	203	52.1	77	27.4		08.7	298	47.2		00.6	103	18.8		52.1	130	41.1		45.7
16	218	54.5	92	26.8		08.1	313	48.4		00.5	118	20.8		52.1	145	43.5		45.7
17	233	57.0	107	26.2	+19	07.5	328	49.6	-27	00.5	133	22.8	+22	52.1	160	45.8	+20	45.7
18	248	59.5	122	25.5	+19	07.0	343	50.8	-27	00.5	148	24.8	+22	52.0	175	48.1	+20	45.7
19	264	01.9	137	24.9		06.4	358	52.0		00.5	163	26.8		52.0	190	50.5		45.7
20	279	04.4	152	24.2		05.8	13	53.1		00.5	178	28.8		52.0	205	52.8		45.7
21	294	06.8	167	23.6		05.2	28	54.3		00.4	193	30.9		52.0	220	55.1		45.7
22	309	09.3	182	23.0		04.6	43	55.5		00.4	208	32.9		51.9	235	57.5		45.7
23	324	11.8	197	22.3		04.1	58	56.7		00.4	223	34.9		51.9	250	59.8		45.7
24	339	14.2	212	21.7	+19	03.5	73	57.9	-27	00.4	238	36.9	+22	51.9	266	02.1	+20	45.7
Dif	—		-6		-6		+12		0		+20		0		+23		0	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 00 ^m 3			Edad: 11 ^d 9 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/0 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	179	53.5	+8	41.7	30	06.9	-21	19.8	53	60 N	3	08	4	07	4	52	19	07
1	194	53.7		40.8	44	38.0 ¹²¹		14.5	53	58	21	15	4	58	18	53	18	28
2	209	53.9		39.9	59	09.1 ¹²¹		09.1	54	56	33	23	5	02	42	20	42	69
3	224	54.1		39.0	73	40.3 ¹²²	-21	03.6	55	54	42	29	06	32	23	1	54	67
4	239	54.3		38.1	88	11.5 ¹²²	-20	58.0	56	52	51	35	10	23	24	2	04	65
5	254	54.5	+8	37.2	102	42.8 ¹²³	-20	52.3	57	50	3	58	4	40	5	13	18	15
6	269	54.6	+8	36.3	117	14.1 ¹²³	-20	46.5	58	45	4	14	4	50	5	21	17	57
7	284	54.8		35.4	131	45.5 ¹²⁴		40.6	59	40	26	4	59	27	43	33	2	49
8	299	55.0		34.5	146	16.9 ¹²⁴		34.6	60	35	35	5	06	32	31	35	3	02
9	314	55.2		33.6	160	48.4 ¹²⁵		28.5	61	30	43	12	36	20	37	14	54	
10	329	55.4		32.7	175	19.9 ¹²⁵		22.3	62	20	4	56	22	44	17	02	40	34
11	344	55.6	+8	31.7	189	51.4 ¹²⁵	-20	16.1	62	10 N	5	05	5	30	5	51	16	46
12	359	55.8	+8	30.8	204	23.0 ¹²⁶	-20	09.7	64	0	5	12	5	36	5	57	16	31
13	14	56.0		29.9	218	54.7 ¹²⁷	-20	03.3	64	10 S	17	42	6	03	16	49	23	44
14	29	56.2		29.0	233	26.4 ¹²⁷	-19	56.8	65	20	22	47	09	16	00	51	4	40
15	44	56.4		28.1	247	58.1 ¹²⁷		50.2	66	30	25	52	16	15	42	54	5	00
16	59	56.6		27.2	262	29.9 ¹²⁸		43.5	67	35	26	55	21	31	56	11	37	
17	74	56.8	+8	26.3	277	01.7 ¹²⁸	-19	36.7	68	40	5	26	5	58	6	25	15	19
18	89	57.0	+8	25.4	291	33.6 ¹²⁹	-19	29.8	69	45	5	27	6	01	6	30	15	04
19	104	57.2		24.5	306	05.5 ¹²⁹		22.9	69	50	27	04	37	14	46	65	5	58
20	119	57.4		23.6	320	37.5 ¹³⁰		15.8	71	52	26	05	39	38	66	6	07	27
21	134	57.6		22.7	335	09.5 ¹³⁰		08.7	72	54	26	07	43	28	69	17	25	
22	149	57.8		21.8	349	41.6 ¹³¹	-19	01.5	72	56	26	08	46	18	70	28	23	
23	164	58.0		20.9	4	13.7 ¹³¹	-18	54.2	73	58	25	10	50	14	05	74	40	21
24	179	58.2	+8	20.0	18	45.9 ¹³²	-18	46.8	74	60 S	5	24	6	12	6	54	13	51

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 22 ^m 8		Mag: -3.9 PMG: 9 ^h 51 ^m			Mag: -0.9 PMG: 19 ^h 03 ^m			Mag: -2.1 PMG: 8 ^h 04 ^m			Mag: +0.1 PMG: 6 ^h 15 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'		
0	339	14.2	212	21.7	+19	03.5	73	57.9	-27	00.4	238	36.9	+22	51.9	266		
1	354	16.7	227	21.1		02.9	88	59.1		00.4	253	38.9		51.8	281		
2	9	19.2	242	20.4		02.3	104	00.3		00.4	268	40.9		51.8	296		
3	24	21.6	257	19.8		01.7	119	01.5		00.3	283	42.9		51.8	311		
4	39	24.1	272	19.2		01.1	134	02.7		00.3	298	44.9		51.8	326		
5	54	26.6	287	18.5	+19	00.6	149	03.9	-27	00.3	313	46.9	+22	51.7	341		
6	69	29.0	302	17.9	+19	00.0	164	05.0	-27	00.3	328	49.0	+22	51.7	356		
7	84	31.5	317	17.3	+18	59.4	179	06.2		00.3	343	51.0		51.7	11		
8	99	33.9	332	16.6		58.8	194	07.4		00.2	358	53.0		51.7	26		
9	114	36.4	347	16.0		58.2	209	08.6		00.2	13	55.0		51.6	41		
10	129	38.9	2	15.4		57.6	224	09.8		00.2	28	57.0		51.6	56		
11	144	41.3	17	14.7	+18	57.0	239	11.0	-27	00.2	43	59.0	+22	51.6	71		
12	159	43.8	32	14.1	+18	56.4	254	12.2	-27	00.2	59	01.0	+22	51.5	86		
13	174	46.3	47	13.5		55.8	269	13.3		00.1	74	03.0		51.5	101		
14	189	48.7	62	12.9		55.2	284	14.5		00.1	89	05.1		51.5	116		
15	204	51.2	77	12.2		54.6	299	15.7		00.1	104	07.1		51.5	131		
16	219	53.7	92	11.6		54.0	314	16.9	-27	00.1	119	09.1		51.4	146		
17	234	56.1	107	11.0	+18	53.4	329	18.0	-27	00.0	134	11.1	+22	51.4	161		
18	249	58.6	122	10.3	+18	52.8	344	19.2	-27	00.0	149	13.1	+22	51.4	176		
19	265	01.1	137	09.7		52.2	359	20.4		00.0	164	15.1		51.3	191		
20	280	03.5	152	09.1		51.6	14	21.6		00.0	179	17.1		51.3	206		
21	295	06.0	167	08.4		51.0	29	22.8	-27	00.0	194	19.2		51.3	221		
22	310	08.4	182	07.8		50.4	44	23.9	-26	59.9	209	21.2		51.3	236		
23	325	10.9	197	07.2		49.8	59	25.1		59.9	224	23.2		51.2	251		
24	340	13.4	212	06.6	+18	49.2	74	26.3	-26	59.9	239	25.2	+22	51.2	266		
Dif	—		-6			-6	+12			0	+20			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 00 ^m 0			Edad: 12 ^d 9 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: 43 ^m SD: 14 ^h 7 PMG: 23 ^h 28 ^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	58.2	+8 20.0	18	45.9	-18 46.8	74	60 N	19 04	19 48	20 46	19 22 10	2 27 78	
1	194	58.4		33	18.1 ¹³²	39.4	74	58	18 59	40	34	11 14	40 74	
2	209	58.6		47	50.3 ¹³²	31.9	75	56	54	34	23	19 02 17	2 51 72	
3	224	58.8		62	22.6 ¹³³	24.2	77	54	51	28	14	18 55 18	3 01 69	
4	239	59.0		76	55.0 ¹³⁴	16.6	76	52	47	22	20 06	47 21	09 68	
5	254	59.2	+8 15.5	91	27.4 ¹³⁴	-18 08.8	78	50	18 44	19 18	19 58	18 41 22	3 17 65	
6	269	59.4	+8 14.6	105	59.8 ¹³⁴	-18 00.9	79	45	18 37	19 07	19 44	18 27 26	3 34 61	
7	284	59.6		120	32.3 ¹³⁵	-17 53.0	79	40	32	18 59	32	16 29	47 59	
8	299	59.8		135	04.9 ¹³⁶	45.0	80	35	27	53	23	18 06 31	3 58 57	
9	315	00.0		149	37.4 ¹³⁵	36.9	81	30	23	47	15	17 57 34	4 08 54	
10	330	00.2		164	10.1 ¹³⁷	28.8	81	20	15	38	19 04	42 38	25 51	
11	345	00.4	+8 10.0	178	42.8 ¹³⁷	-17 20.6	82	10 N	18 09	18 30	18 55	17 29 41	4 40 47	
12	0	00.6	+8 09.1	193	15.5 ¹³⁷	-17 12.3	83	0	18 03	18 24	18 48	17 17 44	4 54 44	
13	15	00.8		207	48.2 ¹³⁷	-17 03.9	84	10 S	17 58	19	43	17 05 46	5 07 42	
14	30	01.0		222	21.1 ¹³⁹	-16 55.5	84	20	52	14	39	16 51 50	22 38	
15	45	01.2		236	53.9 ¹³⁸	46.9	86	30	45	09	37	36 54	38 35	
16	60	01.4		251	26.8 ¹³⁹	38.4	85	35	41	07	36	27 56	48 33	
17	75	01.6	+8 04.6	265	59.8 ¹⁴⁰	-16 29.7	87	40	17 37	18 04	18 36	16 17 59	5 59 31	
18	90	01.8	+8 03.7	280	32.7 ¹³⁹	-16 21.0	87	45	17 32	18 02	18 36	16 05 62	6 12 27	
19	105	02.0		295	05.8 ¹⁴¹	12.2	88	50	26	17 59	36	15 51 66	27 24	
20	120	02.2		309	38.9 ¹⁴¹	-16 03.3	89	52	24	58	37	44 68	34 23	
21	135	02.4	+8 00.9	324	12.0 ¹⁴¹	-15 54.4	89	54	21	56	37	37 69	42 21	
22	150	02.6	+8 00.0	338	45.1 ¹⁴¹	45.4	90	56	17	55	38	28 72	6 51 19	
23	165	02.8	+7 59.1	353	18.4 ¹⁴³	36.4	90	58	14	54	39	19 74	7 01 16	
24	180	03.0	+7 58.2	7	51.6 ¹⁴²	-15 27.2	92	60 S	17 10	17 52	18 40	15 08 77	7 13 13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 18 ^m 9		Mag: -3.9 PMG: 9 ^h 52 ^m		Mag: -0.9 PMG: 19 ^h 01 ^m		Mag: -2.1 PMG: 8 ^h 01 ^m		Mag: +0.1 PMG: 6 ^h 11 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	340	13.4	212	06.6	+18 49.2	74 26.3	-26 59.9	239 25.2	+22 51.2	266 58.3	+20 46.0
1	355	15.8	227	05.9	48.6	89 27.4	59.9	254 27.2	51.2	282 00.6	46.0
2	10	18.3	242	05.3	48.0	104 28.6	59.8	269 29.2	51.2	297 03.0	46.0
3	25	20.8	257	04.7	47.4	119 29.8	59.8	284 31.2	51.1	312 05.3	46.0
4	40	23.2	272	04.0	46.8	134 31.0	59.8	299 33.3	51.1	327 07.7	46.0
5	55	25.7	287	03.4	+18 46.2	149 32.1	-26 59.8	314 35.3	+22 51.1	342 10.0	+20 46.0
6	70	28.2	302	02.8	+18 45.6	164 33.3	-26 59.8	329 37.3	+22 51.0	357 12.3	+20 46.0
7	85	30.6	317	02.2	44.9	179 34.5	59.7	344 39.3	51.0	12 14.7	46.0
8	100	33.1	332	01.5	44.3	194 35.6	59.7	359 41.3	51.0	27 17.0	46.0
9	115	35.6	347	00.9	43.7	209 36.8	59.7	14 43.3	51.0	42 19.4	46.0
10	130	38.0	2	00.3	43.1	224 37.9	59.7	29 45.4	50.9	57 21.7	46.0
11	145	40.5	16	59.7	+18 42.5	239 39.1	-26 59.6	44 47.4	+22 50.9	72 24.1	+20 46.0
12	160	42.9	31	59.0	+18 41.9	254 40.3	-26 59.6	59 49.4	+22 50.9	87 26.4	+20 46.0
13	175	45.4	46	58.4	41.2	269 41.4	59.6	74 51.4	50.8	102 28.7	46.1
14	190	47.9	61	57.8	40.6	284 42.6	59.6	89 53.4	50.8	117 31.1	46.1
15	205	50.3	76	57.2	40.0	299 43.8	59.5	104 55.5	50.8	132 33.4	46.1
16	220	52.8	91	56.5	39.4	314 44.9	59.5	119 57.5	50.8	147 35.8	46.1
17	235	55.3	106	55.9	+18 38.8	329 46.1	-26 59.5	134 59.5	+22 50.7	162 38.1	+20 46.1
18	250	57.7	121	55.3	+18 38.1	344 47.2	-26 59.5	150 01.5	+22 50.7	177 40.5	+20 46.1
19	266	00.2	136	54.7	37.5	359 48.4	59.4	165 03.5	50.7	192 42.8	46.1
20	281	02.7	151	54.0	36.9	14 49.6	59.4	180 05.5	50.7	207 45.1	46.1
21	296	05.1	166	53.4	36.3	29 50.7	59.4	195 07.6	50.6	222 47.5	46.1
22	311	07.6	181	52.8	35.6	44 51.9	59.4	210 09.6	50.6	237 49.8	46.1
23	326	10.0	196	52.2	35.0	59 53.0	59.3	225 11.6	50.6	252 52.2	46.1
24	341	12.5	211	51.5	+18 34.4	74 54.2	-26 59.3	240 13.6	+22 50.5	267 54.5	+20 46.1
Dif	—		-6		-6	+12	0	+20	0	+23	

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: 13 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: **m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	180	03.0	+7	58.2	7	51.6	-15	27.2	92	60 N	3	14	4	12	4	57	19	32	9	3	45	78		
1	195	03.2		57.3	22	24.9 ¹⁴³		18.0	92	58		27		20	5	02		25	11	3	54	75		
2	210	03.4		56.4	36	58.2 ¹⁴³	-15	08.8	93	56		38		27		06		19	13	4	03	72		
3	225	03.6		55.5	51	31.6 ¹⁴⁴	-14	59.5	92	54		47		33		10		13	16		10	70		
4	240	03.8		54.6	66	05.0 ¹⁴⁴		50.1	94	52		3	55	38	13			08	18		17	67		
5	255	04.0	+7	53.6	80	38.5 ¹⁴⁵	-14	40.7	94	50		4	02	4	43	5	16	19	03	20	4	22	66	
6	270	04.2	+7	52.7	95	12.0 ¹⁴⁵	-14	31.2	95	45		4	16	4	53	5	23	18	53	23	4	35	62	
7	285	04.4		51.8	109	45.5 ¹⁴⁵		21.6	96	40		28		5	01	29		45	26		46	58		
8	300	04.6		50.9	124	19.1 ¹⁴⁶		12.0	96	35		37			08	33		37	29		4	55	55	
9	315	04.8		50.0	138	52.7 ¹⁴⁶	-14	02.3	97	30		44		13	37			31	31		5	02	54	
10	330	05.0		49.1	153	26.4 ¹⁴⁷	-13	52.6	97	20		4	56		22	45		20	35		16	49		
11	345	05.2	+7	48.2	168	00.1 ¹⁴⁷	-13	42.8	98	10 N		5	05		5	29	5	51	18	10	39	5	27	46
12	0	05.4	+7	47.3	182	33.8 ¹⁴⁷	-13	32.9	99	0		5	11		5	35	5	56	18	01	42	5	38	43
13	15	05.6		46.3	197	07.6 ¹⁴⁸		23.0	99	10 S		16		41	6	02		17	51	46	5	49	40	
14	30	05.8		45.4	211	41.4 ¹⁴⁸		13.1	99	20		20		46	08			41	50		6	00	37	
15	45	06.0		44.5	226	15.2 ¹⁴⁸	-13	03.0	101	30		22		50	14			30	53		13	33		
16	60	06.2		43.6	240	49.1 ¹⁴⁹	-12	53.0	100	35		23		52	18			23	56		21	30		
17	75	06.4	+7	42.7	255	23.0 ¹⁴⁹	-12	42.9	101	40		5	23		5	55	6	22	17	16	58	6	30	27
18	90	06.6	+7	41.8	269	57.0 ¹⁵⁰	-12	32.7	102	45		5	23		5	57	6	27	17	07	62	6	39	25
19	105	06.8		40.9	284	30.9 ¹⁴⁹		22.5	102	50		23		6	00	32		16	57	65	51	21		
20	120	07.0		39.9	299	05.0 ¹⁵¹		12.2	103	52		22			01	35		52	67		6	57	19	
21	135	07.2		39.0	313	39.0 ¹⁵⁰	-12	01.9	103	54		21			02	38		46	70		7	03	17	
22	150	07.4		38.1	328	13.1 ¹⁵¹	-11	51.5	104	56		21			03	41		40	72		10	14		
23	165	07.6		37.2	342	47.2 ¹⁵¹		41.1	104	58		20			05	44		33	75		17	12		
24	180	07.8	+7	36.3	357	21.4 ¹⁵²	-11	30.6	105	60 S		5	18		6	06	6	48	16	25	78	7	26	9
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 1 ^h 15 ^m 0			Mag: -3.9 PMG: 9 ^h 53 ^m			Mag: -0.8 PMG: 18 ^h 59 ^m			Mag: -2.1 PMG: 7 ^h 58 ^m			Mag: +0.1 PMG: 6 ^h 07 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	341	12.5	211	51.5	+18	34.4	74	54.2	-26	59.3	240	13.6	+22	50.5	267	54.5	+20	46.1						
1	356	15.0	226	50.9		33.8	89	55.3		59.3	255	15.6		50.5	282	56.9		46.1						
2	11	17.4	241	50.3		33.1	104	56.5		59.2	270	17.7		50.5	297	59.2		46.2						
3	26	19.9	256	49.7		32.5	119	57.6		59.2	285	19.7		50.5	313	01.6		46.2						
4	41	22.4	271	49.1		31.9	134	58.8		59.2	300	21.7		50.4	328	03.9		46.2						
5	56	24.8	286	48.4	+18	31.2	149	59.9	-26	59.2	315	23.7	+22	50.4	343	06.3	+20	46.2						
6	71	27.3	301	47.8	+18	30.6	165	01.1	-26	59.1	330	25.8	+22	50.4	358	08.6	+20	46.2						
7	86	29.8	316	47.2		30.0	180	02.2		59.1	345	27.8		50.3	13	11.0		46.2						
8	101	32.2	331	46.6		29.3	195	03.4		59.1	0	29.8		50.3	28	13.3		46.2						
9	116	34.7	346	46.0		28.7	210	04.5		59.0	15	31.8		50.3	43	15.7		46.2						
10	131	37.2	1	45.3		28.1	225	05.7		59.0	30	33.8		50.3	58	18.0		46.2						
11	146	39.6	16	44.7	+18	27.4	240	06.8	-26	59.0	45	35.9	+22	50.2	73	20.3	+20	46.2						
12	161	42.1	31	44.1	+18	26.8	255	08.0	-26	59.0	60	37.9	+22	50.2	88	22.7	+20	46.2						
13	176	44.5	46	43.5		26.1	270	09.1		58.9	75	39.9		50.2	103	25.0		46.2						
14	191	47.0	61	42.9		25.5	285	10.2		58.9	90	41.9		50.1	118	27.4		46.2						
15	206	49.5	76	42.2		24.9	300	11.4		58.9	105	44.0		50.1	133	29.7		46.3						
16	221	51.9	91	41.6		24.2	315	12.5		58.8	120	46.0		50.1	148	32.1		46.3						
17	236	54.4	106	41.0	+18	23.6	330	13.7	-26	58.8	135	48.0	+22	50.1	163	34.4	+20	46.3						
18	251	56.9	121	40.4	+18	22.9	345	14.8	-26	58.8	150	50.0	+22	50.0	178	36.8	+20	46.3						
19	266	59.3	136	39.8		22.3	0	15.9		58.8	165	52.0		50.0	193	39.1		46.3						
20	282	01.8	151	39.1		21.6	15	17.1		58.7	180	54.1		50.0	208	41.5		46.3						
21	297	04.3	166	38.5		21.0	30	18.2		58.7	195	56.1		50.0	223	43.8		46.3						
22	312	06.7	181	37.9		20.3	45	19.4		58.7	210	58.1		49.9	238	46.2		46.3						
23	327	09.2	196	37.3		19.7	60	20.5		58.6	226	00.1		49.9	253	48.5		46.3						
24	342	11.6	211	36.7	+18	19.0	75	21.6	-26	58.6	241	02.2	+22	49.9	268	50.9	+20	46.3						
Dif	—			-6			+11			0			+20			0			+23			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 14 ^d 9	PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 11 ^h 59 ^m 3					SD: 14 ^h 7			PMG: 0 ^h 11 ^m R°: 42 ^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	180	07.8	+7 36.3	357	21.4	-11 30.6	105	60 N	18 58	19 42	20 39	19 41	7	5 03	77	
1	195	08.0		11	55.6 ¹⁵²	20.1 ¹⁰⁵		58	53	35	27	36	10	09	74	
2	210	08.2		26	29.8 ¹⁵²	-11 09.5 ¹⁰⁶		56	49	28	17	32	13	15	71	
3	225	08.4		41	04.0 ¹⁵²	-10 58.9 ¹⁰⁶		54	46	23	08	29	14	20	69	
4	240	08.7		55	38.3 ¹⁵³	48.2 ¹⁰⁷		52	43	18	20 00	26	16	24	68	
5	255	08.9	+7 31.7	70	12.6 ¹⁵³	-10 37.5 ¹⁰⁷		50	18 40	19 13	19 54	19 23	18	5 28	66	
6	270	09.1	+7 30.8	84	46.9 ¹⁵³	-10 26.8 ¹⁰⁷		45	18 34	19 04	19 40	19 16	22	5 37	62	
7	285	09.3		99	21.3 ¹⁵⁴	16.0 ¹⁰⁸		40	28	18 56	29	11	25	44	59	
8	300	09.5		113	55.7 ¹⁵⁴	-10 05.2 ¹⁰⁸		35	24	50	20	06	28	50	56	
9	315	09.7		128	30.1 ¹⁵⁴	-9 54.3 ¹⁰⁹		30	20	44	13	19 02	30	5 56	53	
10	330	09.9		143	04.5 ¹⁵⁴	43.4 ¹⁰⁹		20	14	36	19 02	18 55	34	6 05	49	
11	345	10.1	+7 26.2	157	39.0 ¹⁵⁵	-9 32.4 ¹¹⁰		10 N	18 08	18 29	18 54	18 49	38	6 13	46	
12	0	10.3	+7 25.3	172	13.5 ¹⁵⁵	-9 21.4 ¹¹⁰		0	18 03	18 23	18 48	18 43	41	6 21	42	
13	15	10.5		186	48.0 ¹⁵⁵	-9 10.4 ¹¹⁰		10 S	17 57	19	43	37	45	29	38	
14	30	10.7		201	22.5 ¹⁵⁵	-8 59.3 ¹¹¹		20	52	14	40	31	48	37	34	
15	45	10.9		215	57.1 ¹⁵⁶	48.2 ¹¹¹		30	46	10	38	23	53	46	30	
16	60	11.1		230	31.7 ¹⁵⁶	37.1 ¹¹¹		35	43	08	37	19	56	51	28	
17	75	11.3	+7 20.7	245	06.3 ¹⁵⁶	-8 25.9 ¹¹²		40	17 39	18 06	18 37	18 14	59	6 57	25	
18	90	11.5	+7 19.8	259	40.9 ¹⁵⁶	-8 14.7 ¹¹²		45	17 34	18 04	18 38	18 09	62	7 04	22	
19	105	11.7		274	15.5 ¹⁵⁶	-8 03.4 ¹¹³		50	29	02	39	18 02	66	12	19	
20	120	11.9		288	50.2 ¹⁵⁷	-7 52.1 ¹¹³		52	27	01	40	17 59	68	16	17	
21	135	12.1		303	24.9 ¹⁵⁷	40.8 ¹¹³		54	24	18 00	41	56	69	20	15	
22	150	12.3		317	59.6 ¹⁵⁷	29.4 ¹¹⁴		56	21	17 59	42	52	72	24	13	
23	165	12.6		332	34.3 ¹⁵⁷	18.1 ¹¹³		58	18	58	43	48	74	29	11	
24	180	12.8	+7 14.2	347	09.1 ¹⁵⁸	-7 06.6 ¹¹⁵		60 S	17 15	17 56	18 45	17 43	77	7 35	8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 11 ^m 0		Mag: -3.9 PMG: 9 ^h 54 ^m			Mag: -0.8 PMG: 18 ^h 57 ^m			Mag: -2.1 PMG: 7 ^h 55 ^m			Mag: +0.1 PMG: 6 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	342	11.6	211	36.7	+18 19.0	75 21.6	-26 58.6	241 02.2	+22 49.9	268 50.9	+20 46.3					
1	357	14.1	226	36.1	18.4	90 22.8	58.6	256 04.2	49.8	283 53.2	46.3					
2	12	16.6	241	35.4	17.7	105 23.9	58.5	271 06.2	49.8	298 55.6	46.3					
3	27	19.0	256	34.8	17.1	120 25.0	58.5	286 08.2	49.8	313 57.9	46.3					
4	42	21.5	271	34.2	16.4	135 26.2	58.5	301 10.3	49.8	329 00.3	46.3					
5	57	24.0	286	33.6	+18 15.8	150 27.3	-26 58.4	316 12.3	+22 49.7	344 02.6	+20 46.3					
6	72	26.4	301	33.0	+18 15.1	165 28.4	-26 58.4	331 14.3	+22 49.7	359 05.0	+20 46.4					
7	87	28.9	316	32.4	14.5	180 29.6	58.4	346 16.4	49.7	14 07.3	46.4					
8	102	31.4	331	31.8	13.8	195 30.7	58.3	1 18.4	49.6	29 09.7	46.4					
9	117	33.8	346	31.1	13.2	210 31.8	58.3	16 20.4	49.6	44 12.0	46.4					
10	132	36.3	1 30.5	12.5	225 32.9	225 32.9	58.3	31 22.4	49.6	59 14.4	46.4					
11	147	38.8	16 29.9	+18 11.8	240 34.1	-26 58.2	46 24.5	+22 49.6	46 24.5	74 16.7	+20 46.4					
12	162	41.2	31 29.3	+18 11.2	255 35.2	-26 58.2	61 26.5	+22 49.5	61 26.5	89 19.1	+20 46.4					
13	177	43.7	46 28.7	10.5	270 36.3	58.2	76 28.5	49.5	76 28.5	104 21.5	46.4					
14	192	46.1	61 28.1	09.9	285 37.4	58.1	91 30.5	49.5	91 30.5	119 23.8	46.4					
15	207	48.6	76 27.5	09.2	300 38.6	58.1	106 32.6	49.4	106 32.6	134 26.2	46.4					
16	222	51.1	91 26.8	08.5	315 39.7	58.1	121 34.6	49.4	121 34.6	149 28.5	46.4					
17	237	53.5	106 26.2	+18 07.9	330 40.8	-26 58.0	136 36.6	+22 49.4	136 36.6	164 30.9	+20 46.4					
18	252	56.0	121 25.6	+18 07.2	345 41.9	-26 58.0	151 38.7	+22 49.4	151 38.7	179 33.2	+20 46.4					
19	267	58.5	136 25.0	06.5	0 43.1	58.0	166 40.7	49.3	166 40.7	194 35.6	46.4					
20	283	00.9	151 24.4	05.9	15 44.2	57.9	181 42.7	49.3	181 42.7	209 37.9	46.5					
21	298	03.4	166 23.8	05.2	30 45.3	57.9	196 44.7	49.3	196 44.7	224 40.3	46.5					
22	313	05.9	181 23.2	04.5	45 46.4	57.9	211 46.8	49.2	211 46.8	239 42.6	46.5					
23	328	08.3	196 22.6	03.9	60 47.5	57.8	226 48.8	49.2	226 48.8	254 45.0	46.5					
24	343	10.8	211 22.0	+18 03.2	75 48.7	-26 57.8	241 50.8	+22 49.2	241 50.8	269 47.3	+20 46.5					
Dif	—		-6	-7	+11	0	+20	0	+20	0	+24					

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 0			Edad: 15 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /3 PMG: 0 ^h 53 ^m R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	12.8	+7 14.2	347	09.1	-7 06.6	60 N	3 21	4 18	5 02	19 48	7	6 20	77
1	195	13.0		1	43.8 ¹⁵⁷	-6 55.2 ¹¹⁴	58	32	25	06	46	10	23	75
2	210	13.2	12.4	16	18.6 ¹⁵⁸	43.7 ¹¹⁵	56	42	31	10	45	11	26	72
3	225	13.4	11.5	30	53.4 ¹⁵⁸	32.2 ¹¹⁵	54	51	37	13	43	14	29	70
4	240	13.6	10.6	45	28.2 ¹⁵⁸	20.7 ¹¹⁵	52	3 59	42	17	42	15	32	67
5	255	13.8	+7 09.6	60	03.0 ¹⁵⁸	-6 09.1 ¹¹⁶	50	4 05	4 46	5 19	19 41	17	6 34	66
6	270	14.0	+7 08.7	74	37.8 ¹⁵⁸	-5 57.5 ¹¹⁶	45	4 19	4 55	5 25	19 38	21	6 39	61
7	285	14.2	07.8	89	12.7 ¹⁵⁹	45.9 ¹¹⁶	40	30	5 03	30	36	24	43	58
8	300	14.4	06.9	103	47.5 ¹⁵⁸	34.3 ¹¹⁶	35	39	09	35	34	27	46	56
9	315	14.6	05.9	118	22.4 ¹⁵⁹	22.6 ¹¹⁷	30	46	14	39	32	30	49	53
10	330	14.8	05.0	132	57.3 ¹⁵⁹	-5 10.9 ¹¹⁷	20	4 57	23	45	29	34	54	49
11	345	15.0	+7 04.1	147	32.2 ¹⁵⁹	-4 59.2 ¹¹⁷	10 N	5 05	5 29	5 51	19 27	37	6 59	45
12	0	15.2	+7 03.2	162	07.1 ¹⁵⁹	-4 47.5 ¹¹⁷	0	5 11	5 35	5 56	19 24	42	7 03	41
13	15	15.5	02.3	176	42.0 ¹⁵⁹	35.7 ¹¹⁸	10 S	15	40	6 01	22	45	07	38
14	30	15.7	01.3	191	16.9 ¹⁵⁹	23.9 ¹¹⁸	20	18	44	06	19	49	11	34
15	45	15.9	+7 00.4	205	51.8 ¹⁵⁹	12.1 ¹¹⁸	30	20	48	12	16	54	16	30
16	60	16.1	+6 59.5	220	26.7 ¹⁵⁹	-4 00.3 ¹¹⁸	35	20	50	15	15	55	19	28
17	75	16.3	+6 58.6	235	01.6 ¹⁵⁹	-3 48.5 ¹¹⁸	40	5 20	5 52	6 19	19 13	58	7 22	25
18	90	16.5	+6 57.6	249	36.5 ¹⁵⁹	-3 36.6 ¹¹⁹	45	5 20	5 54	6 23	19 11	62	7 26	22
19	105	16.7	56.7	264	11.5 ¹⁶⁰	24.7 ¹¹⁹	50	18	56	28	08	66	31	17
20	120	16.9	55.8	278	46.4 ¹⁵⁹	12.8 ¹¹⁹	52	18	57	30	07	68	33	15
21	135	17.1	54.9	293	21.4 ¹⁶⁰	-3 00.9 ¹¹⁹	54	17	58	33	05	70	35	14
22	150	17.3	53.9	307	56.3 ¹⁵⁹	-2 49.0 ¹¹⁹	56	16	58	36	04	72	37	12
23	165	17.5	53.0	322	31.2 ¹⁵⁹	37.1 ¹¹⁹	58	14	5 59	39	02	75	40	9
24	180	17.7	+6 52.1	337	06.2 ¹⁶⁰	-2 25.1 ¹²⁰	60 S	5 13	6 01	6 42	19 00	78	7 43	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 07 ^m 1		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: -0.8 PMG: 18 ^h 55 ^m		Mag: -2.1 PMG: 7 ^h 52 ^m		Mag: +0.1 PMG: 6 ^h 00 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	343	10.8	211	22.0	+18 03.2	75 48.7	-26 57.8	241 50.8	+22 49.2	269 47.3	+20 46.5
1	358	13.3	226	21.3	02.5	90 49.8	57.8	256 52.9	49.2	284 49.7	46.5
2	13	15.7	241	20.7	01.8	105 50.9	57.7	271 54.9	49.1	299 52.1	46.5
3	28	18.2	256	20.1	01.2	120 52.0	57.7	286 56.9	49.1	314 54.4	46.5
4	43	20.6	271	19.5	+18 00.5	135 53.1	57.7	301 59.0	49.1	329 56.8	46.5
5	58	23.1	286	18.9	+17 59.8	150 54.2	-26 57.6	317 01.0	+22 49.1	344 59.1	+20 46.5
6	73	25.6	301	18.3	+17 59.1	165 55.3	-26 57.6	332 03.0	+22 49.0	0 01.5	+20 46.5
7	88	28.0	316	17.7	58.5	180 56.5	57.5	347 05.1	49.0	15 03.8	46.5
8	103	30.5	331	17.1	57.8	195 57.6	57.5	2 07.1	49.0	30 06.2	46.5
9	118	33.0	346	16.5	57.1	210 58.7	57.5	17 09.1	48.9	45 08.5	46.5
10	133	35.4	1	15.9	56.4	225 59.8	57.4	32 11.1	48.9	60 10.9	46.5
11	148	37.9	16	15.3	+17 55.7	241 00.9	-26 57.4	47 13.2	+22 48.9	75 13.3	+20 46.5
12	163	40.4	31	14.7	+17 55.1	256 02.0	-26 57.4	62 15.2	+22 48.9	90 15.6	+20 46.6
13	178	42.8	46	14.0	54.4	271 03.1	57.3	77 17.2	48.8	105 18.0	46.6
14	193	45.3	61	13.4	53.7	286 04.2	57.3	92 19.3	48.8	120 20.3	46.6
15	208	47.7	76	12.8	53.0	301 05.3	57.2	107 21.3	48.8	135 22.7	46.6
16	223	50.2	91	12.2	52.3	316 06.4	57.2	122 23.3	48.7	150 25.0	46.6
17	238	52.7	106	11.6	+17 51.6	331 07.5	-26 57.2	137 25.4	+22 48.7	165 27.4	+20 46.6
18	253	55.1	121	11.0	+17 50.9	346 08.6	-26 57.1	152 27.4	+22 48.7	180 29.8	+20 46.6
19	268	57.6	136	10.4	50.3	1 09.8	57.1	167 29.4	48.7	195 32.1	46.6
20	284	00.1	151	09.8	49.6	16 10.9	57.0	182 31.5	48.6	210 34.5	46.6
21	299	02.5	166	09.2	48.9	31 12.0	57.0	197 33.5	48.6	225 36.8	46.6
22	314	05.0	181	08.6	48.2	46 13.1	57.0	212 35.5	48.6	240 39.2	46.6
23	329	07.5	196	08.0	47.5	61 14.2	56.9	227 37.6	48.5	255 41.5	46.6
24	344	09.9	211	07.4	+17 46.8	76 15.3	-26 56.9	242 39.6	+22 48.5	270 43.9	+20 46.6
Dif	—		-6	-7		+11	0	+20	0	+24	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 16 ^d 9 PHE	SD: 14°8				R°: 42 ^m					
	PMG: 11 ^h 58 ^m 6													
	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	180	17.7	+6 52.1	337	06.2	-2 25.1	120	60 N	18 51	19 35	20 31	19 55	7	7 37 78
1	195	18.0	51.2	351	41.1 ¹⁵⁹	13.1 ¹²⁰		58	48	29	20	56	9	38 75
2	210	18.2	50.2	6	16.0 ¹⁵⁹	-2 01.2 ¹¹⁹		56	44	23	11	56	12	38 73
3	225	18.4	49.3	20	51.0 ¹⁶⁰	-1 49.2 ¹²⁰		54	41	17	20 02	57	14	39 70
4	240	18.6	48.4	35	25.9 ¹⁵⁹	37.1 ¹²¹		52	38	13	19 55	57	17	39 69
5	255	18.8	+6 47.4	50	00.8 ¹⁵⁹	-1 25.1 ¹²⁰		50	18 35	19 09	19 49	19 58	18	7 40 66
6	270	19.0	+6 46.5	64	35.7 ¹⁵⁹	-1 13.1 ¹²⁰		45	18 30	19 00	19 36	19 59	22	7 40 63
7	285	19.2	45.6	79	10.7 ¹⁶⁰	-1 01.1 ¹²⁰		40	25	18 53	25	20 00	25	41 59
8	300	19.4	44.7	93	45.6 ¹⁵⁹	-0 49.0 ¹²¹		35	21	47	17	01	28	42 56
9	315	19.6	43.7	108	20.5 ¹⁵⁹	37.0 ¹²⁰		30	18	42	10	02	30	42 54
10	330	19.8	42.8	122	55.3 ¹⁵⁸	24.9 ¹²¹		20	12	34	19 00	03	35	43 49
11	345	20.1	+6 41.9	137	30.2 ¹⁵⁹	-0 12.8 ¹²¹		10 N	18 07	18 28	18 52	20 04	39	7 44 45
12	0	20.3	+6 41.0	152	05.1 ¹⁵⁹	-0 00.8 ¹²⁰		0	18 02	18 23	18 47	20 06	42	7 44 42
13	15	20.5	40.0	166	40.0 ¹⁵⁹	+0 11.3 ¹²¹		10 S	17 57	18	43	07	46	45 38
14	30	20.7	39.1	181	14.8 ¹⁵⁸	23.4 ¹²¹		20	52	15	40	08	50	45 35
15	45	20.9	38.2	195	49.6 ¹⁵⁸	35.5 ¹²¹		30	47	11	39	10	54	46 30
16	60	21.1	37.2	210	24.5 ¹⁵⁹	47.6 ¹²¹		35	44	09	39	10	57	47 27
17	75	21.3	+6 36.3	224	59.3 ¹⁵⁸	+0 59.7 ¹²¹		40	17 41	18 08	18 39	20 11	60	7 47 25
18	90	21.5	+6 35.4	239	34.0 ¹⁵⁷	+1 11.8 ¹²¹		45	17 37	18 06	18 40	20 13	63	7 48 21
19	105	21.7	34.5	254	08.8 ¹⁵⁸	23.9 ¹²¹		50	32	05	42	14	67	48 18
20	120	21.9	33.5	268	43.6 ¹⁵⁸	36.0 ¹²¹		52	30	04	43	15	69	48 16
21	135	22.2	32.6	283	18.3 ¹⁵⁷	+1 48.1 ¹²¹		54	28	03	44	15	71	49 14
22	150	22.4	31.7	297	53.0 ¹⁵⁷	+2 00.2 ¹²¹		56	25	02	45	16	73	49 12
23	165	22.6	30.7	312	27.7 ¹⁵⁷	12.3 ¹²¹		58	22	02	47	17	76	49 10
24	180	22.8	+6 29.8	327	02.4 ¹⁵⁷	+2 24.4 ¹²¹		60 S	17 19	18 01	18 49	20 18	79	7 50 7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 03 ^m 2		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: -0.8 PMG: 18 ^h 54 ^m		Mag: -2.1 PMG: 7 ^h 48 ^m		Mag: +0.1 PMG: 5 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	344	09.9	211 07.4	+17 46.8	76 15.3	-26 56.9	242 39.6	+22 48.5	270 43.9	+20 46.6
1	359	12.4	226 06.8	46.1	91 16.4	56.8	257 41.7	48.5	285 46.3	46.6
2	14	14.9	241 06.2	45.4	106 17.5	56.8	272 43.7	48.5	300 48.6	46.6
3	29	17.3	256 05.6	44.7	121 18.6	56.8	287 45.7	48.4	315 51.0	46.6
4	44	19.8	271 05.0	44.0	136 19.7	56.7	302 47.8	48.4	330 53.3	46.6
5	59	22.2	286 04.4	+17 43.3	151 20.8	-26 56.7	317 49.8	+22 48.4	345 55.7	+20 46.7
6	74	24.7	301 03.8	+17 42.6	166 21.8	-26 56.6	332 51.8	+22 48.3	0 58.1	+20 46.7
7	89	27.2	316 03.2	41.9	181 22.9	56.6	347 53.9	48.3	16 00.4	46.7
8	104	29.6	331 02.6	41.2	196 24.0	56.6	2 55.9	48.3	31 02.8	46.7
9	119	32.1	346 02.0	40.5	211 25.1	56.5	17 57.9	48.3	46 05.1	46.7
10	134	34.6	1 01.4	39.8	226 26.2	56.5	33 00.0	48.2	61 07.5	46.7
11	149	37.0	16 00.8	+17 39.1	241 27.3	-26 56.4	48 02.0	+22 48.2	76 09.9	+20 46.7
12	164	39.5	31 00.2	+17 38.4	256 28.4	-26 56.4	63 04.1	+22 48.2	91 12.2	+20 46.7
13	179	42.0	45 59.6	37.7	271 29.5	56.3	78 06.1	48.1	106 14.6	46.7
14	194	44.4	60 59.0	37.0	286 30.6	56.3	93 08.1	48.1	121 17.0	46.7
15	209	46.9	75 58.4	36.3	301 31.7	56.3	108 10.2	48.1	136 19.3	46.7
16	224	49.3	90 57.8	35.6	316 32.8	56.2	123 12.2	48.1	151 21.7	46.7
17	239	51.8	105 57.2	+17 34.9	331 33.9	-26 56.2	138 14.2	+22 48.0	166 24.0	+20 46.7
18	254	54.3	120 56.6	+17 34.2	346 34.9	-26 56.1	153 16.3	+22 48.0	181 26.4	+20 46.7
19	269	56.7	135 56.0	33.5	1 36.0	56.1	168 18.3	48.0	196 28.8	46.7
20	284	59.2	150 55.4	32.8	16 37.1	56.0	183 20.4	47.9	211 31.1	46.7
21	300	01.7	165 54.8	32.1	31 38.2	56.0	198 22.4	47.9	226 33.5	46.7
22	315	04.1	180 54.2	31.3	46 39.3	56.0	213 24.4	47.9	241 35.9	46.8
23	330	06.6	195 53.6	30.6	61 40.4	55.9	228 26.5	47.9	256 38.2	46.8
24	345	09.1	210 53.0	+17 29.9	76 41.5	-26 55.9	243 28.5	+22 47.8	271 40.6	+20 46.8
Dif	—		-6	-7	+11	0	+20	0	+24	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 3			Edad: 17 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0 PMG: 2 ^h 16 ^m R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	22.8	+6	29.8	327	02.4	+2	24.4	60 N	3 27	4 23	5 07	20 02	8	8 55	80		
1	195	23.0			341	37.1 ¹⁵⁷		36.4 ¹²⁰	58	38	29	10	05	12	53	77		
2	210	23.2			356	11.7 ¹⁵⁶	+2	48.5 ¹²¹	56	47	35	14	08	14	51	74		
3	225	23.4			10	46.3 ¹⁵⁶	+3	00.6 ¹²¹	54	3 55	40	17	11	16	49	72		
4	240	23.6			25	20.9 ¹⁵⁶		12.7 ¹²¹	52	4 03	45	20	14	18	48	69		
5	255	23.8	+6	25.2	39	55.5 ¹⁵⁶	+3	24.7 ¹²⁰	50	4 09	4 49	5 22	20 16	20	8 46	68		
6	270	24.1	+6	24.2	54	30.0 ¹⁵⁵	+3	36.8 ¹²¹	45	4 22	4 58	5 28	20 21	24	8 43	63		
7	285	24.3		23.3	69	04.6 ¹⁵⁶	+3	48.9 ¹²¹	40	32	5 05	32	25	27	40	60		
8	300	24.5		22.4	83	39.0 ¹⁵⁴	+4	00.9 ¹²⁰	35	40	11	36	29	30	38	57		
9	315	24.7		21.4	98	13.5 ¹⁵⁵		12.9 ¹²⁰	30	47	15	40	32	32	36	54		
10	330	24.9		20.5	112	47.9 ¹⁵⁴		25.0 ¹²¹	20	4 57	23	45	38	36	32	50		
11	345	25.1	+6	19.6	127	22.3 ¹⁵⁴	+4	37.0 ¹²⁰	10 N	5 05	5 29	5 50	20 43	40	8 29	46		
12	0	25.3	+6	18.6	141	56.7 ¹⁵⁴	+4	49.0 ¹²⁰	0	5 10	5 34	5 55	20 48	44	8 26	43		
13	15	25.5		17.7	156	31.0 ¹⁵³	+5	01.0 ¹²⁰	10 S	14	38	6 00	53	47	23	39		
14	30	25.8		16.8	171	05.3 ¹⁵³		12.9 ¹¹⁹	20	17	42	04	20 58	51	20	35		
15	45	26.0		15.8	185	39.6 ¹⁵³		24.9 ¹²⁰	30	18	45	09	21 04	55	16	31		
16	60	26.2		14.9	200	13.9 ¹⁵³		36.8 ¹¹⁹	35	18	47	12	07	58	14	28		
17	75	26.4	+6	14.0	214	48.1 ¹⁵²	+5	48.8 ¹²⁰	40	5 17	5 49	6 16	21 11	61	8 12	25		
18	90	26.6	+6	13.0	229	22.2 ¹⁵¹	+6	00.7 ¹¹⁹	45	5 16	5 50	6 19	21 16	64	8 09	22		
19	105	26.8		12.1	243	56.4 ¹⁵²		12.6 ¹¹⁹	50	14	52	24	21	69	06	18		
20	120	27.0		11.2	258	30.5 ¹⁵¹		24.5 ¹¹⁹	52	13	52	26	24	70	04	17		
21	135	27.2		10.2	273	04.5 ¹⁵⁰		36.3 ¹¹⁸	54	12	53	28	26	73	03	14		
22	150	27.5		09.3	287	38.5 ¹⁵⁰	+6	48.2 ¹¹⁹	56	11	53	31	29	76	8 01	12		
23	165	27.7		08.4	302	12.5 ¹⁵⁰	+7	00.0 ¹¹⁸	58	09	54	33	33	78	7 59	10		
24	180	27.9	+6	07.4	316	46.4 ¹⁴⁹	+7	11.8 ¹¹⁸	60 S	5 07	5 55	6 36	21 37	81	7 57	7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 59 ^m 2		Mag: -3.9 PMG: 9 ^h 57 ^m			Mag: -0.8 PMG: 18 ^h 52 ^m			Mag: -2.1 PMG: 7 ^h 45 ^m			Mag: +0.1 PMG: 5 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	345	09.1	210	53.0	+17	29.9	76	41.5	-26	55.9	243	28.5	+22	47.8	271	40.6	+20	46.8
1	0	11.5	225	52.4		29.2	91	42.5		55.8	258	30.6		47.8	286	42.9		46.8
2	15	14.0	240	51.8		28.5	106	43.6		55.8	273	32.6		47.8	301	45.3		46.8
3	30	16.5	255	51.2		27.8	121	44.7		55.7	288	34.6		47.7	316	47.7		46.8
4	45	18.9	270	50.6		27.0	136	45.8		55.7	303	36.7		47.7	331	50.0		46.8
5	60	21.4	285	50.0	+17	26.3	151	46.9	-26	55.6	318	38.7	+22	47.7	346	52.4	+20	46.8
6	75	23.8	300	49.4	+17	25.6	166	47.9	-26	55.6	333	40.8	+22	47.7	1	54.8	+20	46.8
7	90	26.3	315	48.8		24.9	181	49.0		55.5	348	42.8		47.6	16	57.1		46.8
8	105	28.8	330	48.2		24.2	196	50.1		55.5	3	44.9		47.6	31	59.5		46.8
9	120	31.2	345	47.6		23.4	211	51.2		55.4	18	46.9		47.6	47	01.9		46.8
10	135	33.7	0	47.0		22.7	226	52.3		55.4	33	48.9		47.6	62	04.2		46.8
11	150	36.2	15	46.4	+17	22.0	241	53.3	-26	55.3	48	51.0	+22	47.5	77	06.6	+20	46.8
12	165	38.6	30	45.8	+17	21.3	256	54.4	-26	55.3	63	53.0	+22	47.5	92	09.0	+20	46.8
13	180	41.1	45	45.3		20.6	271	55.5		55.3	78	55.1		47.5	107	11.3		46.8
14	195	43.6	60	44.7		19.8	286	56.6		55.2	93	57.1		47.4	122	13.7		46.8
15	210	46.0	75	44.1		19.1	301	57.6		55.2	108	59.2		47.4	137	16.1		46.8
16	225	48.5	90	43.5		18.4	316	58.7		55.1	124	01.2		47.4	152	18.4		46.8
17	240	50.9	105	42.9	+17	17.6	331	59.8	-26	55.1	139	03.2	+22	47.4	167	20.8	+20	46.9
18	255	53.4	120	42.3	+17	16.9	347	00.8	-26	55.0	154	05.3	+22	47.3	182	23.2	+20	46.9
19	270	55.9	135	41.7		16.2	2	01.9		55.0	169	07.3		47.3	197	25.5		46.9
20	285	58.3	150	41.1		15.5	17	03.0		54.9	184	09.4		47.3	212	27.9		46.9
21	301	00.8	165	40.5		14.7	32	04.1		54.9	199	11.4		47.2	227	30.3		46.9
22	316	03.3	180	39.9		14.0	47	05.1		54.8	214	13.5		47.2	242	32.6		46.9
23	331	05.7	195	39.3		13.3	62	06.2		54.8	229	15.5		47.2	257	35.0		46.9
24	346	08.2	210	38.7	+17	12.5	77	07.3	-26	54.7	244	17.6	+22	47.2	272	37.4	+20	46.9
Dif	—		-6 -7			+11 0			+20 0			0			+24 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 0			Edad: 18 ^d 9 PHE { SD: 15°0 PMG: 2 ^h 58 ^m R°: 44 ^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	27.9	+6	07.4	316	46.4	+7 11.8	60 N	18 45	19 29	20 24	20 10 11	10 15 82	
1	195	28.1		06.5	331	20.3 ¹⁴⁹	23.6 ¹¹⁸	58	42	23	13	17 14	10 79	
2	210	28.3		05.6	345	54.2 ¹⁴⁹	35.3 ¹¹⁷	56	39	17	20 04	22 17	05 76	
3	225	28.5		04.6	0	28.0 ¹⁴⁸	47.0 ¹¹⁷	54	36	12	19 57	27 19	10 01 74	
4	240	28.7		03.7	15	01.7 ¹⁴⁷	+7 58.8 ¹¹⁸	52	33	08	50	32 21	9 57 72	
5	255	29.0	+6	02.8	29	35.4 ¹⁴⁷	+8 10.4 ¹¹⁶	50	18 31	19 04	19 44	20 36 23	9 54 69	
6	270	29.2	+6	01.8	44	09.1 ¹⁴⁷	+8 22.1 ¹¹⁷	45	18 26	18 56	19 32	20 45 27	9 46 66	
7	285	29.4	+6	00.9	58	42.7 ¹⁴⁶	33.7 ¹¹⁶	40	22	49	22	52 30	40 62	
8	300	29.6	+5	59.9	73	16.3 ¹⁴⁶	45.3 ¹¹⁶	35	18	44	14	20 59 33	35 59	
9	315	29.8		59.0	87	49.8 ¹⁴⁵	+8 56.9 ¹¹⁶	30	15	39	19 08	21 04 36	30 57	
10	330	30.0		58.1	102	23.3 ¹⁴⁵	+9 08.4 ¹¹⁵	20	10	32	18 58	14 40	22 52	
11	345	30.2	+5	57.1	116	56.7 ¹⁴⁴	+9 20.0 ¹¹⁶	10 N	18 05	18 27	18 51	21 23 43	9 15 48	
12	0	30.4	+5	56.2	131	30.1 ¹⁴⁴	+9 31.4 ¹¹⁴	0	18 01	18 22	18 46	21 32 46	9 09 44	
13	15	30.7		55.3	146	03.4 ¹⁴³	42.9 ¹¹⁵	10 S	17 57	18	43	40 50	9 02 41	
14	30	30.9		54.3	160	36.7 ¹⁴³	+9 54.3 ¹¹⁴	20	53	15	41	49 53	8 55 38	
15	45	31.1		53.4	175	09.9 ¹⁴²	+10 05.7 ¹¹⁴	30	48	12	40	21 59 58	47 34	
16	60	31.3		52.4	189	43.0 ¹⁴¹	17.0 ¹¹³	35	46	11	40	22 05 60	42 32	
17	75	31.5	+5	51.5	204	16.1 ¹⁴¹	+10 28.3 ¹¹³	40	17 43	18 10	18 41	22 12 63	8 37 29	
18	90	31.7	+5	50.6	218	49.2 ¹⁴¹	+10 39.6 ¹¹³	45	17 39	18 08	18 42	22 20 66	8 31 25	
19	105	31.9		49.6	233	22.1 ¹³⁹	+10 50.9 ¹¹³	50	35	07	45	30 70	24 21	
20	120	32.2		48.7	247	55.1 ¹⁴⁰	+11 02.1 ¹¹²	52	33	07	46	34 73	21 19	
21	135	32.4		47.8	262	27.9 ¹³⁸	13.2 ¹¹¹	54	31	07	48	39 75	17 17	
22	150	32.6		46.8	277	00.7 ¹³⁸	24.3 ¹¹¹	56	29	06	49	45 77	13 15	
23	165	32.8		45.9	291	33.5 ¹³⁸	35.4 ¹¹¹	58	27	06	51	51 80	09 12	
24	180	33.0	+5	44.9	306	06.2 ¹³⁷	+11 46.5 ¹¹¹	60 S	17 24	18 05	18 54	22 58 84	8 04 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 55 ^m 3		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: -0.7 PMG: 18 ^h 50 ^m		Mag: -2.1 PMG: 7 ^h 42 ^m		Mag: +0.1 PMG: 5 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	346	08.2	210	38.7	+17	12.5	77	07.3	-26	54.7	244	17.6	+22	47.2	272	37.4	+20	46.9
1	1	10.7	225	38.2		11.8	92	08.3		54.7	259	19.6		47.1	287	39.7		46.9
2	16	13.1	240	37.6		11.1	107	09.4		54.6	274	21.6		47.1	302	42.1		46.9
3	31	15.6	255	37.0		10.3	122	10.5		54.6	289	23.7		47.1	317	44.5		46.9
4	46	18.1	270	36.4		09.6	137	11.5		54.5	304	25.7		47.0	332	46.8		46.9
5	61	20.5	285	35.8	+17	08.8	152	12.6	-26	54.5	319	27.8	+22	47.0	347	49.2	+20	46.9
6	76	23.0	300	35.2	+17	08.1	167	13.6	-26	54.4	334	29.8	+22	47.0	2	51.6	+20	46.9
7	91	25.4	315	34.6		07.4	182	14.7		54.4	349	31.9		47.0	17	53.9		46.9
8	106	27.9	330	34.0		06.6	197	15.8		54.3	4	33.9		46.9	32	56.3		46.9
9	121	30.4	345	33.4		05.9	212	16.8		54.3	19	36.0		46.9	47	58.7		46.9
10	136	32.8	0	32.9		05.1	227	17.9		54.2	34	38.0		46.9	63	01.0		46.9
11	151	35.3	15	32.3	+17	04.4	242	18.9	-26	54.1	49	40.1	+22	46.8	78	03.4	+20	46.9
12	166	37.8	30	31.7	+17	03.6	257	20.0	-26	54.1	64	42.1	+22	46.8	93	05.8	+20	46.9
13	181	40.2	45	31.1		02.9	272	21.1		54.0	79	44.2		46.8	108	08.2		46.9
14	196	42.7	60	30.5		02.2	287	22.1		54.0	94	46.2		46.8	123	10.5		47.0
15	211	45.2	75	29.9		01.4	302	23.2		53.9	109	48.3		46.7	138	12.9		47.0
16	226	47.6	90	29.3	+17	00.7	317	24.2		53.9	124	50.3		46.7	153	15.3		47.0
17	241	50.1	105	28.8	+16	59.9	332	25.3	-26	53.8	139	52.4	+22	46.7	168	17.6	+20	47.0
18	256	52.5	120	28.2	+16	59.2	347	26.3	-26	53.8	154	54.4	+22	46.6	183	20.0	+20	47.0
19	271	55.0	135	27.6		58.4	2	27.4		53.7	169	56.5		46.6	198	22.4		47.0
20	286	57.5	150	27.0		57.7	17	28.5		53.7	184	58.5		46.6	213	24.8		47.0
21	301	59.9	165	26.4		56.9	32	29.5		53.6	200	00.6		46.6	228	27.1		47.0
22	317	02.4	180	25.8		56.2	47	30.6		53.6	215	02.6		46.5	243	29.5		47.0
23	332	04.9	195	25.3		55.4	62	31.6		53.5	230	04.7		46.5	258	31.9		47.0
24	347	07.3	210	24.7	+16	54.6	77	32.7	-26	53.4	245	06.7	+22	46.5	273	34.2	+20	47.0
Dif	—		-6	-7		+11	+1		+20	0		+24		0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 19 ^d 9	PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 1	SD: 15 ^h 1	PMG: 3 ^h 42 ^m	R°: 47 ^m								
	PMG: 11 ^h 57 ^m 6															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	33.0	+5 44.9	306	06.2	+11 46.5		60 N	3 33	4 28	5 11	20 21	16	11 37	85	
1	195	33.2		320	38.8 ¹³⁶	+11 57.5 ¹¹⁰		58		43	34	15		31 18	29 80	
2	210	33.5		335	11.3 ¹³⁵	+12 08.4 ¹⁰⁹		56	3 52	39	18	39 21		21 78		
3	225	33.7		349	43.8 ¹³⁵		19.3 ¹⁰⁹	54	4 00	44	21	46 24		15 75		
4	240	33.9		4	16.2 ¹³⁴		30.2 ¹⁰⁹	52		06	48	23		53 26	09 72	
5	255	34.1	+5 40.2	18	48.6 ¹³⁴	+12 41.0 ¹⁰⁸		50	4 12	4 52	5 25	20 59	28	11 03	71	
6	270	34.3	+5 39.3	33	20.9 ¹³³	+12 51.8 ¹⁰⁸		45	4 25	5 00	5 30	21 12	32	10 52	66	
7	285	34.5		47	53.1 ¹³²	+13 02.5 ¹⁰⁷		40		34	07	34		42 64		
8	300	34.7		62	25.3 ¹³²		13.1 ¹⁰⁶	35		42	12	38		32 37	34 61	
9	315	35.0		76	57.3 ¹³⁰		23.8 ¹⁰⁷	30		48	17	41		40 39	27 58	
10	330	35.2		91	29.4 ¹³¹		34.3 ¹⁰⁵	20	4 58	24	46	21 54	43	14 55		
11	345	35.4	+5 34.6	106	01.3 ¹²⁹	+13 44.8 ¹⁰⁵		10 N	5 05	5 29	5 50	22 06	47	10 03	51	
12	0	35.6	+5 33.7	120	33.2 ¹²⁹	+13 55.3 ¹⁰⁵		0	5 09	5 34	5 54	22 18	50	9 53	48	
13	15	35.8		135	05.0 ¹²⁸	+14 05.7 ¹⁰⁴		10 S		13	37	5 58		30 52	43 45	
14	30	36.0		149	36.7 ¹²⁷		16.1 ¹⁰⁴	20	15	40	6 02	42 56		33 41		
15	45	36.3		164	08.4 ¹²⁷		26.3 ¹⁰²	30	15	43	07	22 57	59	21 37		
16	60	36.5		178	39.9 ¹²⁵		36.6 ¹⁰³	35	15	44	10	23 05	62	14 34		
17	75	36.7	+5 29.0	193	11.4 ¹²⁵	+14 46.8 ¹⁰²		40	5 14	5 45	6 12	23 15	64	9 06	32	
18	90	36.9	+5 28.0	207	42.9 ¹²⁵	+14 56.9 ¹⁰¹		45	5 12	5 46	6 16	23 26	68	8 56	29	
19	105	37.1		222	14.2 ¹²³	+15 06.9 ¹⁰⁰		50		10	47	20		40 72	45 25	
20	120	37.3		236	45.5 ¹²³		16.9 ¹⁰⁰	52	09	48	21	47 73		40 23		
21	135	37.6		251	16.7 ¹²²		26.9 ¹⁰⁰	54	07	48	23	23 54	76	34 21		
22	150	37.8		265	47.8 ¹²¹		36.7 ⁹⁸	56	05	48	25	** ** *	**	28 19		
23	165	38.0		280	18.9 ¹²¹		46.5 ⁹⁸	58	03	49	28	** ** *	**	21 16		
24	180	38.2	+5 22.4	294	49.8 ¹¹⁹	+15 56.3 ⁹⁸		60 S	5 01	5 49	6 30	** ** *	**	8 13	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.9		Mag: -0.7		Mag: -2.2		Mag: +0.1									
	0 ^h 51 ^m 4		PMG: 9 ^h 59 ^m		PMG: 18 ^h 49 ^m		PMG: 7 ^h 39 ^m		PMG: 5 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	347	07.3	210	24.7	+16	54.6	77	32.7	-26	53.4	245	06.7	+22	46.5	273	34.2	+20	47.0
1	2	09.8	225	24.1		53.9	92	33.7		53.4	260	08.8		46.4	288	36.6		47.0
2	17	12.3	240	23.5		53.1	107	34.8		53.3	275	10.8		46.4	303	39.0		47.0
3	32	14.7	255	22.9		52.4	122	35.8		53.3	290	12.9		46.4	318	41.4		47.0
4	47	17.2	270	22.3		51.6	137	36.9		53.2	305	14.9		46.4	333	43.7		47.0
5	62	19.7	285	21.8	+16	50.9	152	37.9	-26	53.2	320	17.0	+22	46.3	348	46.1	+20	47.0
6	77	22.1	300	21.2	+16	50.1	167	39.0	-26	53.1	335	19.0	+22	46.3	3	48.5	+20	47.0
7	92	24.6	315	20.6		49.3	182	40.0		53.1	350	21.1		46.3	18	50.9		47.0
8	107	27.0	330	20.0		48.6	197	41.0		53.0	5	23.1		46.2	33	53.2		47.0
9	122	29.5	345	19.4		47.8	212	42.1		52.9	20	25.2		46.2	48	55.6		47.0
10	137	32.0	0	18.9		47.0	227	43.1		52.9	35	27.2		46.2	63	58.0		47.0
11	152	34.4	15	18.3	+16	46.3	242	44.2	-26	52.8	50	29.3	+22	46.2	79	00.4	+20	47.0
12	167	36.9	30	17.7	+16	45.5	257	45.2	-26	52.8	65	31.3	+22	46.1	94	02.7	+20	47.0
13	182	39.4	45	17.1		44.8	272	46.3		52.7	80	33.4		46.1	109	05.1		47.1
14	197	41.8	60	16.5		44.0	287	47.3		52.6	95	35.4		46.1	124	07.5		47.1
15	212	44.3	75	16.0		43.2	302	48.3		52.6	110	37.5		46.0	139	09.9		47.1
16	227	46.8	90	15.4		42.5	317	49.4		52.5	125	39.5		46.0	154	12.2		47.1
17	242	49.2	105	14.8	+16	41.7	332	50.4	-26	52.5	140	41.6	+22	46.0	169	14.6	+20	47.1
18	257	51.7	120	14.2	+16	40.9	347	51.5	-26	52.4	155	43.7	+22	46.0	184	17.0	+20	47.1
19	272	54.2	135	13.6		40.1	2	52.5		52.4	170	45.7		45.9	199	19.4		47.1
20	287	56.6	150	13.1		39.4	17	53.5		52.3	185	47.8		45.9	214	21.7		47.1
21	302	59.1	165	12.5		38.6	32	54.6		52.2	200	49.8		45.9	229	24.1		47.1
22	318	01.5	180	11.9		37.8	47	55.6		52.2	215	51.9		45.8	244	26.5		47.1
23	333	04.0	195	11.3		37.1	62	56.6		52.1	230	53.9		45.8	259	28.9		47.1
24	348	06.5	210	10.8	+16	36.3	77	57.7	-26	52.1	245	56.0	+22	45.8	274	31.2	+20	47.1
Dif	—		-6		-8		+10		+1		+21		0		+24		0	

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: 20 ^d 9 PHE { SD: 15°3 PMG: 4 ^h 29 ^m 4 ^h : 56/3 12 ^h : 56/6 20 ^h : 56/8 R°: 51 ^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	38.2	+5 22.4	294	49.8	+15 56.3	96	60 N	18 39	19 22	20 16	20 37 23	13 02 84	
1	195	38.4		309	20.7 ¹¹⁹	+16 05.9	96	58	36	17	20 07	20 49 27	12 49 81	
2	210	38.6		323	51.5 ¹¹⁸		96	56	34	12	19 58	21 00 30	39 78	
3	225	38.9		338	22.2 ¹¹⁷		96	54	31	07	51	10 32	30 75	
4	240	39.1		352	52.8 ¹¹⁶		94	52	29	03	45	19 34	21 74	
5	255	39.3	+5 17.6	7	23.4 ¹¹⁶	+16 43.9	94	50	18 27	19 00	19 39	21 27 36	12 14 71	
6	270	39.5	+5 16.7	21	53.9 ¹¹⁵	+16 53.2	93	45	18 22	18 52	19 27	21 44 39	11 58 68	
7	285	39.7		36	24.2 ¹¹³	+17 02.5	93	40	19	46	18	21 57 42	46 64	
8	300	39.9		50	54.5 ¹¹³		92	35	16	41	11	22 09 44	35 62	
9	315	40.2		65	24.7 ¹¹²		90	30	13	37	19 05	19 46	25 60	
10	330	40.4		79	54.9 ¹¹²		91	20	08	30	18 56	37 49	11 09 57	
11	345	40.6	+5 12.0	94	24.9 ¹¹⁰	+17 38.7	89	10 N	18 04	18 25	18 50	22 53 51	10 54 55	
12	0	40.8	+5 11.0	108	54.9 ¹¹⁰	+17 47.6	89	0	18 01	18 21	18 45	23 08 53	10 41 52	
13	15	41.0		123	24.7 ¹⁰⁸	+17 56.3	87	10 S	17 57	18	42	22 56	28 49	
14	30	41.2		137	54.5 ¹⁰⁸	+18 05.0	87	20	53	15	41	38 58	10 14 46	
15	45	41.5		152	24.2 ¹⁰⁷		86	30	49	13	41	23 56 62	9 58 42	
16	60	41.7		166	53.8 ¹⁰⁶		86	35	47	12	42	*** ** *	48 41	
17	75	41.9	+5 06.3	181	23.3 ¹⁰⁵	+18 30.6	84	40	17 44	18 11	18 43	*** ** *	9 38 38	
18	90	42.1	+5 05.4	195	52.8 ¹⁰⁵	+18 39.0	84	45	17 41	18 11	18 45	*** ** *	9 25 35	
19	105	42.3		210	22.1 ¹⁰³		82	50	38	10	48	*** ** *	10 32	
20	120	42.5		224	51.4 ¹⁰³	+18 55.4	82	52	36	10	49	*** ** *	9 03 30	
21	135	42.8		239	20.5 ¹⁰¹	+19 03.5	81	54	35	10	51	*** ** *	8 55 28	
22	150	43.0		253	49.6 ¹⁰¹		80	56	33	10	53	0 02 78	47 25	
23	165	43.2	+5 00.6	268	18.6 ¹⁰⁰		79	58	31	10	56	11 82	37 22	
24	180	43.4	+4 59.7	282	47.5 ⁹⁹	+19 27.2	78	60 S	17 28	18 10	18 58	0 22 85	8 26 18	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 47 ^m 4		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: -0.7 PMG: 18 ^h 47 ^m		Mag: -2.2 PMG: 7 ^h 35 ^m		Mag: +0.1 PMG: 5 ^h 41 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	348	06.5	210 10.8	+16 36.3	77 57.7	-26 52.1	245 56.0	+22 45.8	274 31.2	+20 47.1				
1	3	08.9	225 10.2	35.5	92 58.7	52.0	260 58.0	45.8	289 33.6	47.1				
2	18	11.4	240 09.6	34.7	107 59.8	51.9	276 00.1	45.7	304 36.0	47.1				
3	33	13.9	255 09.0	33.9	123 00.8	51.9	291 02.2	45.7	319 38.4	47.1				
4	48	16.3	270 08.5	33.2	138 01.8	51.8	306 04.2	45.7	334 40.8	47.1				
5	63	18.8	285 07.9	+16 32.4	153 02.9	-26 51.7	321 06.3	+22 45.6	349 43.1	+20 47.1				
6	78	21.3	300 07.3	+16 31.6	168 03.9	-26 51.7	336 08.3	+22 45.6	4 45.5	+20 47.1				
7	93	23.7	315 06.7	30.8	183 04.9	51.6	351 10.4	45.6	19 47.9	47.1				
8	108	26.2	330 06.2	30.0	198 05.9	51.6	6 12.4	45.6	34 50.3	47.1				
9	123	28.6	345 05.6	29.3	213 07.0	51.5	21 14.5	45.5	49 52.6	47.1				
10	138	31.1	0 05.0	28.5	228 08.0	51.4	36 16.6	45.5	64 55.0	47.1				
11	153	33.6	15 04.4	+16 27.7	243 09.0	-26 51.4	51 18.6	+22 45.5	79 57.4	+20 47.1				
12	168	36.0	30 03.9	+16 26.9	258 10.1	-26 51.3	66 20.7	+22 45.4	94 59.8	+20 47.1				
13	183	38.5	45 03.3	26.1	273 11.1	51.2	81 22.7	45.4	110 02.2	47.1				
14	198	41.0	60 02.7	25.3	288 12.1	51.2	96 24.8	45.4	125 04.5	47.1				
15	213	43.4	75 02.2	24.6	303 13.1	51.1	111 26.9	45.4	140 06.9	47.2				
16	228	45.9	90 01.6	23.8	318 14.2	51.1	126 28.9	45.3	155 09.3	47.2				
17	243	48.4	105 01.0	+16 23.0	333 15.2	-26 51.0	141 31.0	+22 45.3	170 11.7	+20 47.2				
18	258	50.8	120 00.4	+16 22.2	348 16.2	-26 50.9	156 33.0	+22 45.3	185 14.1	+20 47.2				
19	273	53.3	134 59.9	21.4	3 17.2	50.9	171 35.1	45.2	200 16.4	47.2				
20	288	55.8	149 59.3	20.6	18 18.3	50.8	186 37.2	45.2	215 18.8	47.2				
21	303	58.2	164 58.7	19.8	33 19.3	50.7	201 39.2	45.2	230 21.2	47.2				
22	319	00.7	179 58.2	19.0	48 20.3	50.7	216 41.3	45.2	245 23.6	47.2				
23	334	03.1	194 57.6	18.2	63 21.3	50.6	231 43.3	45.1	260 26.0	47.2				
24	349	05.6	209 57.0	+16 17.4	78 22.3	-26 50.5	246 45.4	+22 45.1	275 28.4	+20 47.2				
Dif	—		-6	-8	+10	+1	+21	0	+24	0				

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: 21 ^d 9 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/6 PMG: 5 ^h 20 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	43.4	+4	59.7	282	47.5	+19	27.2	60 N	3	39	4	33	5	16	21 00 37
1	195	43.6		58.7	297	16.3	98	35.0	58	48	39	19		16	41	14 10 76
2	210	43.9		57.8	311	45.0	97	42.6	56	3	57	44	22	30	43	13 57 73
3	225	44.1		56.9	326	13.6	96	50.1	54	4	04	48	24	42	44	45 7 70
4	240	44.3		55.9	340	42.1	95	+19 57.5	52	10	52	26	21	53	45	35 70
5	255	44.5	+4	55.0	355	10.6	95	+20 04.9	50	4	16	4	55	5	28	22 03 46
6	270	44.7	+4	54.0	9	38.9	93	+20 12.1	45	4	27	5	03	5	33	22 23 48
7	285	44.9		53.1	24	07.2	93	19.2	40	36	09	36		39	51	12 50 65
8	300	45.2		52.1	38	35.3	91	26.3	35	44	14	39		22	53	52 37 63
9	315	45.4		51.2	53	03.4	91	33.2	30	49	18	42		23	05	53 25 62
10	330	45.6		50.2	67	31.4	90	40.0	20	4	58	24	46	26	54	12 06 59
11	345	45.8	+4	49.3	81	59.3	89	+20 46.7	10 N	5	05	5	29	5	50	23 44 56
12	0	46.0	+4	48.3	96	27.1	88	+20 53.3	0	5	09	5	33	5	54	** ** *
13	15	46.3		47.4	110	54.8	87	+20 59.8	10 S	12		36	5	57	** ** *	
14	30	46.5		46.4	125	22.4	86	+21 06.2	20	13	39	6	01	** ** *		
15	45	46.7		45.5	139	49.9	85	12.4	30	13	41	04	** ** *			
16	60	46.9		44.5	154	17.4	85	18.6	35	12	41	07	0	07	63	
17	75	47.1	+4	43.6	168	44.7	83	+21 24.6	40	5	11	5	42	6	09	10 16 45
18	90	47.3	+4	42.6	183	12.0	83	+21 30.6	45	5	09	5	43	6	12	0
19	105	47.6		41.7	197	39.1	81	36.4	50	06	43	15	0	52	71	9 42 40
20	120	47.8		40.7	212	06.2	81	42.1	52	04	43	17	1	00	73	33 39
21	135	48.0		39.8	226	33.2	80	47.6	54	02	43	18	10	74	23	37
22	150	48.2		38.8	241	00.1	79	53.1	56	5	00	43	20	20	77	9 12 35
23	165	48.4		37.9	255	26.9	78	+21 58.4	58	4	58	43	22	33	79	8 59 32
24	180	48.7	+4	36.9	269	53.7	78	+22 03.6	60 S	4	55	5	43	6	24	1 47 83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 43 ^m 5		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: -0.7 PMG: 18 ^h 45 ^m		Mag: -2.2 PMG: 7 ^h 32 ^m		Mag: 0.0 PMG: 5 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	349	05.6	209	57.0	+16	17.4	246	45.4	+22	45.1
1	4	08.1	224	56.5		16.6	261	47.5		45.1
2	19	10.5	239	55.9		15.8	276	49.5		45.0
3	34	13.0	254	55.3		15.0	291	51.6		45.0
4	49	15.5	269	54.7		14.2	306	53.6		45.0
5	64	17.9	284	54.2	+16	13.5	321	55.7	+22	45.0
6	79	20.4	299	53.6	+16	12.7	336	57.8	+22	44.9
7	94	22.9	314	53.0		11.9	351	59.8		44.9
8	109	25.3	329	52.5		11.1	7	01.9		44.9
9	124	27.8	344	51.9		10.2	22	04.0		44.8
10	139	30.3	359	51.3		09.4	37	06.0		44.8
11	154	32.7	14	50.8	+16	08.6	52	08.1	+22	44.8
12	169	35.2	29	50.2	+16	07.8	67	10.2	+22	44.8
13	184	37.6	44	49.7		07.0	82	12.2		44.7
14	199	40.1	59	49.1		06.2	97	14.3		44.7
15	214	42.6	74	48.5		05.4	112	16.3		44.7
16	229	45.0	89	48.0		04.6	127	18.4		44.6
17	244	47.5	104	47.4	+16	03.8	142	20.5	+22	44.6
18	259	50.0	119	46.8	+16	03.0	157	22.5	+22	44.6
19	274	52.4	134	46.3		02.2	172	24.6		44.6
20	289	54.9	149	45.7		01.4	187	26.7		44.5
21	304	57.4	164	45.1	+16	00.6	202	28.7		44.5
22	319	59.8	179	44.6	+15	59.8	217	30.8		44.5
23	335	02.3	194	44.0		58.9	232	32.9		44.4
24	350	04.8	209	43.5	+15	58.1	247	34.9	+22	44.4
Dif	—		-6	-8	+10	+1	+21	0	+24	0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9		Edad: 22 ^d 9		PHE {	4 ^h : 57'9									
	PMG: 11 ^h 56 ^m 6		SD: 15'7			12 ^h : 58'2									
	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	48.7	+4 36.9		269 53.7	+22 03.6	51	60 N	18 33	19 16	20 09	21 37 58	15 45 66		
1	195	48.9		36.0	284 20.3	76 08.7	51	58	31	11	20 00	21 57 58	26 65		
2	210	49.1		35.0	298 46.9	76 13.7	50	56	28	06	19 52	22 13 58	15 10 64		
3	225	49.3		34.1	313 13.3	74 18.5	48	54	26	19 02	46	26 59	14 57 63		
4	240	49.5		33.1	327 39.7	74 23.2	47	52	24	18 58	40	38 60	45 63		
5	255	49.8	+4 32.2		342 06.0	73 +22 27.8	46	50	18 22	18 55	19 34	22 49 60	14 34 63		
6	270	50.0	+4 31.2		356 32.2	72 +22 32.3	45	45	18 19	18 48	19 23	23 11 60	14 12 62		
7	285	50.2		30.3	10 58.4	72 36.6	43	40	15	43	15	30 59	13 55 61		
8	300	50.4		29.3	25 24.4	70 40.8	42	35	13	38	08	45 59	40 61		
9	315	50.6		28.4	39 50.4	70 44.8	40	30	10	34	19 03	23 58 60	27 60		
10	330	50.9		27.4	54 16.3	69 48.8	40	20	06	28	18 54	** ** *	13 05 60		
11	345	51.1	+4 26.5		68 42.1	68 +22 52.5	37	10 N	18 03	18 24	18 48	** ** *	12 46 59		
12	0	51.3	+4 25.5		83 07.8	67 +22 56.2	37	0	18 00	18 21	18 45	0 01 57	12 28 59		
13	15	51.5		24.6	97 33.5	67 +22 59.7	35	10 S	17 57	18	42	18 59	12 10 58		
14	30	51.7		23.6	111 59.0	65 +23 03.1	34	20	54	16	41	36 60	11 51 57		
15	45	52.0		22.7	126 24.5	65 06.3	32	30	50	14	42	0 58 61	29 56		
16	60	52.2		21.7	140 50.0	65 09.4	31	35	48	14	43	1 10 62	16 56		
17	75	52.4	+4 20.8		155 15.3	63 +23 12.4	30	40	17 46	18 13	18 45	1 24 64	11 01 55		
18	90	52.6	+4 19.8		169 40.6	63 +23 15.2	28	45	17 44	18 13	18 47	1 41 65	10 44 54		
19	105	52.8		18.9	184 05.8	62 17.9	27	50	41	13	51	2 03 66	22 53		
20	120	53.1		17.9	198 30.9	61 20.4	25	52	40	13	53	13 67	12 52		
21	135	53.3		17.0	212 56.0	61 22.8	24	54	38	14	55	24 69	10 00 51		
22	150	53.5		16.0	227 21.0	60 25.1	23	56	37	14	18 57	37 70	9 47 50		
23	165	53.7		15.0	241 45.9	59 27.2	21	58	35	14	19 00	2 52 72	31 49		
24	180	53.9	+4 14.1		256 10.7	58 +23 29.1	19	60 S	17 33	18 15	19 03	3 10 74	9 13 46		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 39 ^m 6		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: -0.7 PMG: 18 ^h 44 ^m		Mag: -2.2 PMG: 7 ^h 29 ^m		Mag: 0.0 PMG: 5 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	350	04.8	209 43.5	+15 58.1	78 46.6	-26 48.9	247 34.9	+22 44.4	276 25.6	+20 47.3
1	5	07.2	224 42.9	57.3	93 47.6	48.8	262 37.0	44.4	291 28.0	47.3
2	20	09.7	239 42.3	56.5	108 48.6	48.7	277 39.1	44.4	306 30.3	47.3
3	35	12.1	254 41.8	55.7	123 49.6	48.7	292 41.1	44.3	321 32.7	47.3
4	50	14.6	269 41.2	54.9	138 50.6	48.6	307 43.2	44.3	336 35.1	47.3
5	65	17.1	284 40.7	+15 54.0	153 51.6	-26 48.5	322 45.3	+22 44.3	351 37.5	+20 47.3
6	80	19.5	299 40.1	+15 53.2	168 52.6	-26 48.4	337 47.3	+22 44.2	6 39.9	+20 47.3
7	95	22.0	314 39.5	52.4	183 53.6	48.4	352 49.4	44.2	21 42.3	47.3
8	110	24.5	329 39.0	51.6	198 54.6	48.3	7 51.5	44.2	36 44.7	47.3
9	125	26.9	344 38.4	50.8	213 55.6	48.2	22 53.6	44.2	51 47.1	47.3
10	140	29.4	359 37.9	49.9	228 56.6	48.1	37 55.6	44.1	66 49.4	47.3
11	155	31.9	14 37.3	+15 49.1	243 57.6	-26 48.1	52 57.7	+22 44.1	81 51.8	+20 47.3
12	170	34.3	29 36.7	+15 48.3	258 58.6	-26 48.0	67 59.8	+22 44.1	96 54.2	+20 47.3
13	185	36.8	44 36.2	47.5	273 59.6	47.9	83 01.8	44.0	111 56.6	47.3
14	200	39.2	59 35.6	46.7	289 00.6	47.8	98 03.9	44.0	126 59.0	47.3
15	215	41.7	74 35.1	45.8	304 01.6	47.8	113 06.0	44.0	142 01.4	47.3
16	230	44.2	89 34.5	45.0	319 02.6	47.7	128 08.0	44.0	157 03.8	47.3
17	245	46.6	104 34.0	+15 44.2	334 03.6	-26 47.6	143 10.1	+22 43.9	172 06.2	+20 47.3
18	260	49.1	119 33.4	+15 43.3	349 04.6	-26 47.5	158 12.2	+22 43.9	187 08.6	+20 47.3
19	275	51.6	134 32.8	42.5	4 05.6	47.5	173 14.3	43.9	202 11.0	47.3
20	290	54.0	149 32.3	41.7	19 06.6	47.4	188 16.3	43.8	217 13.3	47.3
21	305	56.5	164 31.7	40.9	34 07.6	47.3	203 18.4	43.8	232 15.7	47.3
22	320	59.0	179 31.2	40.0	49 08.6	47.2	218 20.5	43.8	247 18.1	47.3
23	336	01.4	194 30.6	39.2	64 09.6	47.2	233 22.5	43.8	262 20.5	47.3
24	351	03.9	209 30.1	+15 38.4	79 10.6	-26 47.1	248 24.6	+22 43.7	277 22.9	+20 47.3
Dif	—		-6	-8	+10	+1	+21	0	+24	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 2			Edad: 23 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 59'0 20 ^h : 59'3 PMG: 7 ^h 12 ^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	53.9	+4	14.1	256	10.7	+23	29.1	60 N	3	45	4	38	5	21	22	35	
1	195	54.2		13.1	270	35.5		30.9	58	3	54		43	23	22	55	81	
2	210	54.4		12.2	285	00.3		32.6	17	56	4	01		48	26	31	48	
3	225	54.6		11.2	299	24.9		34.1	15	54		08		52	28	14	5	
4	240	54.8		10.3	313	49.5		35.4	13	52		14		55	30	16	00	
5	255	55.0	+4	09.3	328	14.1	+23	36.6	12	50	4	19	4	59	5	38	73	
6	270	55.3	+4	08.4	342	38.6	+23	37.6	10	45	4	30	5	05	5	27	58	
7	285	55.5		07.4	357	03.0		38.5	9	40		38		11	38	15	37	
8	300	55.7		06.5	11	27.4		39.3	8	35		45		15	41	15	14	
9	315	55.9		05.5	25	51.7		39.9	6	30		51		19	43	14	56	
10	330	56.1		04.6	40	16.0		40.3	4	20	4	59		25	47	41	57	
11	345	56.4	+4	03.6	54	40.2	+23	40.6	3	10 N	5	04	5	29	5	0	20	
12	0	56.6	+4	02.6	69	04.3	+23	40.7	1	0	5	08	5	32	5	0	40	
13	15	56.8		01.7	83	28.5		40.6	1	10 S		10		35	56	0	58	
14	30	57.0	+4	00.7	97	52.5		40.4	2	20		11		37	5	1	17	
15	45	57.2	+3	59.8	112	16.6		40.1	3	30		10		38	6	3	09	
16	60	57.5		58.8	126	40.5		39.6	5	35		09		39	04	2	59	
17	75	57.7	+3	57.9	141	04.5	+23	38.9	7	40	5	08	5	39	6	2	12	
18	90	57.9	+3	56.9	155	28.4	+23	38.0	9	45	5	05	5	39	6	2	28	
19	105	58.1		56.0	169	52.2		37.0	10	50	5	01		39	11	2	46	
20	120	58.3		55.0	184	16.1		35.9	11	52	5	01		39	11	3	59	
21	135	58.6		54.0	198	39.9		34.6	13	54	4	59		39	12	3	09	
22	150	58.8		53.1	213	03.6		33.1	15	54		57		38	13	20	58	
23	165	59.0		52.1	227	27.3		31.4	17	56		55		38	15	33	58	
24	180	59.2	+3	51.2	241	51.0	+23	29.6	18	58	5	52		38	17	3	47	
										60 S	4	49	5	37	6	4	04	
																5	20	
																9	59	
																27	58	
																16	51	
																48	62	
																25	63	
																12	63	
																11	64	
																11	65	
																11	66	
																10	67	
																10	68	
																9	70	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 35 ^m 6			Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: -0.7 PMG: 18 ^h 42 ^m			Mag: -2.2 PMG: 7 ^h 25 ^m			Mag: 0.0 PMG: 5 ^h 30 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	351	03.9		209	30.1	+15	38.4	79	10.6	-26	47.1	248	24.6	+22	43.7			
1	6	06.4		224	29.5		37.5	94	11.5		47.0	263	26.7		43.7			
2	21	08.8		239	29.0		36.7	109	12.5		46.9	278	28.8		43.7			
3	36	11.3		254	28.4		35.9	124	13.5		46.8	293	30.8		43.7			
4	51	13.7		269	27.8		35.0	139	14.5		46.8	308	32.9		43.6			
5	66	16.2		284	27.3	+15	34.2	154	15.5	-26	46.7	323	35.0	+22	43.6			
6	81	18.7		299	26.7	+15	33.4	169	16.5	-26	46.6	338	37.1	+22	43.6			
7	96	21.1		314	26.2		32.5	184	17.5		46.5	353	39.1		43.5			
8	111	23.6		329	25.6		31.7	199	18.5		46.5	8	41.2		43.5			
9	126	26.1		344	25.1		30.8	214	19.4		46.4	23	43.3		43.5			
10	141	28.5		359	24.5		30.0	229	20.4		46.3	38	45.4		43.5			
11	156	31.0		14	24.0	+15	29.2	244	21.4	-26	46.2	53	47.4	+22	43.4			
12	171	33.5		29	23.4	+15	28.3	259	22.4	-26	46.1	68	49.5	+22	43.4			
13	186	35.9		44	22.9		27.5	274	23.4		46.1	83	51.6		43.4			
14	201	38.4		59	22.3		26.6	289	24.4		46.0	98	53.7		43.3			
15	216	40.9		74	21.8		25.8	304	25.3		45.9	113	55.7		43.3			
16	231	43.3		89	21.2		24.9	319	26.3		45.8	128	57.8		43.3			
17	246	45.8		104	20.7	+15	24.1	334	27.3	-26	45.7	143	59.9	+22	43.3			
18	261	48.2		119	20.1	+15	23.2	349	28.3	-26	45.6	159	02.0	+22	43.2			
19	276	50.7		134	19.6		22.4	4	29.3		45.6	174	04.0		43.2			
20	291	53.2		149	19.0		21.5	19	30.2		45.5	189	06.1		43.2			
21	306	55.6		164	18.5		20.7	34	31.2		45.4	204	08.2		43.1			
22	321	58.1		179	17.9		19.8	49	32.2		45.3	219	10.3		43.1			
23	337	00.6		194	17.4		19.0	64	33.2		45.2	234	12.4		43.1			
24	352	03.0		209	16.8	+15	18.1	79	34.1	-26	45.1	249	14.4	+22	43.1			
Dif	—			-6			-8	+10			+1	+21			0	+24		

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: 24 ^d 9 PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 60'1 SD: 16'2 PMG: 8 ^h 13 ^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	180	59.2	+3	51.2	241	51.0	+23	29.6	18 27	19 10	20 02	23 56 95	17 37 30					
1	195	59.4		50.2	256	14.7		27.7	25	05	19 54	** ** *	19 35					
2	210	59.7		49.3	270	38.4		25.5	23	19 01	46	** ** *	17 05 37					
3	225	59.9		48.3	285	02.0		23.3	21	18 57	40	** ** *	16 52 39					
4	241	00.1		47.3	299	25.6		20.8	20	54	34	** ** *	41 41					
5	256	00.3	+3	46.4	313	49.1	+23	18.2	18 18	18 51	19 30	** ** *	16 30 44					
6	271	00.5	+3	45.4	328	12.7	+23	15.4	18 15	18 44	19 19	0 11 70	16 09 47					
7	286	00.8		44.5	342	36.2		12.4	12	39	11	29 68	15 52 49					
8	301	01.0		43.5	356	59.7		09.3	10	35	05	44 67	38 51					
9	316	01.2		42.6	11	23.2		06.1	08	32	19 00	0 58 66	25 53					
10	331	01.4		41.6	25	46.7	+23	02.6	05	27	18 52	1 20 64	15 04 56					
11	346	01.7	+3	40.6	40	10.2	+22	59.0	18 02	18 23	18 47	1 40 62	14 45 58					
12	1	01.9	+3	39.7	54	33.7	+22	55.3	17 59	18 20	18 44	1 58 61	14 27 61					
13	16	02.1		38.7	68	57.2		51.3	57	18	42	2 16 60	14 09 63					
14	31	02.3		37.8	83	20.6		47.3	54	16	42	36 58	13 50 66					
15	46	02.5		36.8	97	44.1		43.0	51	15	43	2 58 56	28 68					
16	61	02.8		35.9	112	07.5		38.6	50	15	44	3 12 54	15 70					
17	76	03.0	+3	34.9	126	31.0	+22	34.0	17 48	18 15	18 47	3 27 53	13 00 72					
18	91	03.2	+3	33.9	140	54.4	+22	29.3	17 46	18 15	18 50	3 45 51	12 43 74					
19	106	03.4		33.0	155	17.9		24.4	44	16	54	4 08 48	20 78					
20	121	03.6		32.0	169	41.3		19.3	43	17	56	18 47	12 10 78					
21	136	03.9		31.1	184	04.8		14.1	42	17	18 58	31 45	11 58 80					
22	151	04.1		30.1	198	28.3		08.7	41	18	19 01	4 45 43	44 83					
23	166	04.3		29.1	212	51.8	+22	03.1	39	18	04	5 01 41	28 86					
24	181	04.5	+3	28.2	227	15.3	+21	57.4	17 38	18 19	19 08	5 20 38	11 09 89					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 31 ^m 7		Mag: -3.9 PMG: 10 ^h 03 ^m			Mag: -0.6 PMG: 18 ^h 41 ^m			Mag: -2.2 PMG: 7 ^h 22 ^m			Mag: 0.0 PMG: 5 ^h 26 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	352	03.0	209	16.8	+15	18.1	79	34.1	-26	45.1	249	14.4	+22	43.1	278	20.4	+20	47.4
1	7	05.5	224	16.3		17.3	94	35.1		45.1	264	16.5		43.0	293	22.7		47.4
2	22	08.0	239	15.8		16.4	109	36.1		45.0	279	18.6		43.0	308	25.1		47.4
3	37	10.4	254	15.2		15.6	124	37.1		44.9	294	20.7		43.0	323	27.5		47.4
4	52	12.9	269	14.7		14.7	139	38.0		44.8	309	22.7		42.9	338	29.9		47.4
5	67	15.4	284	14.1	+15	13.9	154	39.0	-26	44.7	324	24.8	+22	42.9	353	32.3	+20	47.4
6	82	17.8	299	13.6	+15	13.0	169	40.0	-26	44.6	339	26.9	+22	42.9	8	34.7	+20	47.4
7	97	20.3	314	13.0		12.2	184	41.0		44.6	354	29.0		42.9	23	37.1		47.4
8	112	22.7	329	12.5		11.3	199	41.9		44.5	9	31.1		42.8	38	39.5		47.4
9	127	25.2	344	11.9		10.5	214	42.9		44.4	24	33.1		42.8	53	41.9		47.4
10	142	27.7	359	11.4		09.6	229	43.9		44.3	39	35.2		42.8	68	44.3		47.4
11	157	30.1	14	10.8	+15	08.7	244	44.8	-26	44.2	54	37.3	+22	42.7	83	46.7	+20	47.4
12	172	32.6	29	10.3	+15	07.9	259	45.8	-26	44.1	69	39.4	+22	42.7	98	49.1	+20	47.4
13	187	35.1	44	09.8		07.0	274	46.8		44.0	84	41.5		42.7	113	51.5		47.4
14	202	37.5	59	09.2		06.2	289	47.7		44.0	99	43.6		42.7	128	53.9		47.4
15	217	40.0	74	08.7		05.3	304	48.7		43.9	114	45.6		42.6	143	56.3		47.4
16	232	42.5	89	08.1		04.4	319	49.7		43.8	129	47.7		42.6	158	58.7		47.4
17	247	44.9	104	07.6	+15	03.6	334	50.6	-26	43.7	144	49.8	+22	42.6	174	01.1	+20	47.4
18	262	47.4	119	07.0	+15	02.7	349	51.6	-26	43.6	159	51.9	+22	42.5	189	03.5	+20	47.4
19	277	49.8	134	06.5		01.8	4	52.6		43.5	174	54.0		42.5	204	05.9		47.4
20	292	52.3	149	06.0		01.0	19	53.5		43.4	189	56.0		42.5	219	08.3		47.4
21	307	54.8	164	05.4	+15	00.1	34	54.5		43.3	204	58.1		42.5	234	10.7		47.4
22	322	57.2	179	04.9	+14	59.2	49	55.5		43.3	220	00.2		42.4	249	13.1		47.4
23	337	59.7	194	04.3		58.4	64	56.4		43.2	235	02.3		42.4	264	15.5		47.4
24	353	02.2	209	03.8	+14	57.5	79	57.4	-26	43.1	250	04.4	+22	42.4	279	17.9	+20	47.4
Dif	—		-5	-9		+10	+1		+21	0		+24	0					0

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: 25 ^d 9 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'7 PMG: 9 ^h 13 ^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	181	04.5	+3 28.2	227	15.3	+21 57.4	58	60 N	3 50	4 43	5 25	*** ** *	18 07	20	
1	196	04.7		241	38.8	45 51.6	58	58	3 59	48	28	0 13	91	17 54	23
2	211	05.0		256	02.3	45 45.6	60	56	4 06	52	30	27	88	42	27
3	226	05.2		270	25.8	45 39.4	62	54	12	55	31	40	85	31	30
4	241	05.4		284	49.4	46 33.0	64	52	18	4 59	33	0 51	83	22	33
5	256	05.6	+3 23.4	299	13.0	46 +21 26.5	65	50	4 23	5 02	5 34	1 00	82	17 14	34
6	271	05.9	+3 22.4	313	36.6	46 +21 19.9	66	45	4 33	5 08	5 37	1 21	77	16 56	39
7	286	06.1		328	00.2	46 13.1	68	40	41	13	40	37	75	41	43
8	301	06.3		342	23.8	46 +21 06.1	70	35	47	17	42	1 51	72	29	46
9	316	06.5		356	47.5	47 +20 59.0	71	30	52	20	44	2 04	69	18	48
10	331	06.7		11	11.2	47 51.7	73	20	4 59	25	47	24	66	16 00	52
11	346	07.0	+3 17.6	25	34.9	47 +20 44.3	74	10 N	5 04	5 29	5 50	2 42	63	15 43	56
12	1	07.2	+3 16.7	39	58.6	47 +20 36.7	76	0	5 08	5 32	5 52	2 59	60	15 28	59
13	16	07.4		54	22.4	48 29.0	77	10 S	09	34	55	3 16	57	15 12	63
14	31	07.6		68	46.2	48 21.1	79	20	09	35	5 57	34	54	14 56	66
15	46	07.9		83	10.1	49 13.1	80	30	08	36	6 00	3 54	51	36	71
16	61	08.1		97	33.9	48 +20 04.9	82	35	06	36	01	4 06	48	25	73
17	76	08.3	+3 11.9	111	57.9	50 +19 56.6	83	40	5 04	5 36	6 03	4 20	46	14 12	76
18	91	08.5	+3 10.9	126	21.8	49 +19 48.1	85	45	5 01	5 35	6 04	4 36	43	13 57	79
19	106	08.7		140	45.8	50 39.5	86	50	4 57	34	07	4 56	39	38	84
20	121	09.0		155	09.8	50 30.8	87	52	55	34	07	5 05	37	28	87
21	136	09.2		169	33.9	51 21.9	89	54	52	33	09	16	34	18	89
22	151	09.4		183	58.0	51 12.8	91	56	49	33	10	28	31	13 07	92
23	166	09.6		198	22.1	51 +19 03.7	91	58	46	32	11	42	28	12 54	95
24	181	09.8	+3 05.1	212	46.3	52 +18 54.3	94	60 S	4 42	5 31	6 12	5 58	24	12 38	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 27 ^m 8		Mag: -3.9 PMG: 10 ^h 04 ^m		Mag: -0.6 PMG: 18 ^h 39 ^m		Mag: -2.2 PMG: 7 ^h 19 ^m		Mag: 0.0 PMG: 5 ^h 22 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	'	°	°	°	'					
0	353	02.2	209	03.8	+14 57.5	79 57.4	-26 43.1	250 04.4	+22 42.4	279 17.9	+20 47.4				
1	8	04.6	224	03.3	56.6	94 58.3	43.0	265 06.5	42.4	294 20.3	47.4				
2	23	07.1	239	02.7	55.8	109 59.3	42.9	280 08.6	42.3	309 22.7	47.4				
3	38	09.6	254	02.2	54.9	125 00.3	42.8	295 10.6	42.3	324 25.1	47.4				
4	53	12.0	269	01.7	54.0	140 01.2	42.7	310 12.7	42.3	339 27.5	47.4				
5	68	14.5	284	01.1	+14 53.1	155 02.2	-26 42.6	325 14.8	+22 42.2	354 29.9	+20 47.4				
6	83	17.0	299	00.6	+14 52.3	170 03.1	-26 42.5	340 16.9	+22 42.2	9 32.3	+20 47.4				
7	98	19.4	314	00.0	51.4	185 04.1	42.4	355 19.0	42.2	24 34.7	47.4				
8	113	21.9	328	59.5	50.5	200 05.1	42.3	10 21.1	42.2	39 37.1	47.4				
9	128	24.3	343	59.0	49.6	215 06.0	42.3	25 23.1	42.1	54 39.5	47.4				
10	143	26.8	358	58.4	48.8	230 07.0	42.2	40 25.2	42.1	69 41.9	47.4				
11	158	29.3	13	57.9	+14 47.9	245 07.9	-26 42.1	55 27.3	+22 42.1	84 44.3	+20 47.4				
12	173	31.7	28	57.4	+14 47.0	260 08.9	-26 42.0	70 29.4	+22 42.0	99 46.7	+20 47.4				
13	188	34.2	43	56.8	46.1	275 09.8	41.9	85 31.5	42.0	114 49.1	47.4				
14	203	36.7	58	56.3	45.2	290 10.8	41.8	100 33.6	42.0	129 51.5	47.4				
15	218	39.1	73	55.7	44.4	305 11.7	41.7	115 35.7	42.0	144 53.9	47.4				
16	233	41.6	88	55.2	43.5	320 12.7	41.6	130 37.8	41.9	159 56.3	47.4				
17	248	44.1	103	54.7	+14 42.6	335 13.6	-26 41.5	145 39.8	+22 41.9	174 58.7	+20 47.4				
18	263	46.5	118	54.1	+14 41.7	350 14.6	-26 41.4	160 41.9	+22 41.9	190 01.2	+20 47.4				
19	278	49.0	133	53.6	40.8	5 15.5	41.3	175 44.0	41.8	205 03.6	47.4				
20	293	51.5	148	53.1	40.0	20 16.5	41.2	190 46.1	41.8	220 06.0	47.4				
21	308	53.9	163	52.5	39.1	35 17.4	41.1	205 48.2	41.8	235 08.4	47.4				
22	323	56.4	178	52.0	38.2	50 18.4	41.0	220 50.3	41.8	250 10.8	47.4				
23	338	58.8	193	51.5	37.3	65 19.3	40.9	235 52.4	41.7	265 13.2	47.4				
24	354	01.3	208	50.9	+14 36.4	80 20.3	-26 40.8	250 54.5	+22 41.7	280 15.6	+20 47.4				
Dif	—		-5		-9	+10	+1	+21		0	+24		0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 26 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 55 ^m 2			SD: 16'6 PMG: 10 ^h 13 ^m R°: 58 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	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	09.8	+3 05.1	212	46.3	+18 54.3	52	60 N	18 21	19 03	19 55	1 31 102	18 27 14	14	
1	196	10.1	04.2	227	10.5	44.9	94	58	19	18 59	47	44 97	17 18	18	
2	211	10.3	03.2	241	34.8	35.3	96	56	18	55	40	1 55 94	09 21	19	
3	226	10.5	02.3	255	59.1	25.6	97	54	16	52	35	2 05 91	18 01 24	20	
4	241	10.7	01.3	270	23.5	15.7	99	52	15	49	29	14 88	17 55 26	21	
5	256	11.0	+3 00.3	284	47.9	+18 05.7	100	50	18 14	18 46	19 25	2 22 85	17 48 29	22	
6	271	11.2	+2 59.4	299	12.4	+17 55.6	101	45	18 11	18 40	19 15	2 38 81	17 35 33	23	
7	286	11.4	58.4	313	36.9	45.3	103	40	09	36	08	2 52 77	24 37	24	
8	301	11.6	57.4	328	01.5	35.0	103	35	07	32	19 02	3 03 74	15 40	25	
9	316	11.8	56.5	342	26.1	24.4	106	30	05	29	18 57	13 71	17 06 44	26	
10	331	12.1	55.5	356	50.7	13.8	106	20	03	25	50	30 66	16 52 48	27	
11	346	12.3	+2 54.6	11	15.4	+17 03.0	108	10 N	18 00	18 21	18 46	3 45 62	16 39 53	28	
12	1	12.5	+2 53.6	25	40.2	+16 52.2	108	0	17 58	18 19	18 43	3 59 58	16 27 57	29	
13	16	12.7	52.6	40	05.0	41.2	110	10 S	56	17	42	4 13 54	15 61	30	
14	31	13.0	51.7	54	29.9	30.0	112	20	55	17	42	28 50	16 02 65	31	
15	46	13.2	50.7	68	54.8	18.8	112	30	52	16	44	45 45	15 47 70	32	
16	61	13.4	49.7	83	19.8	+16 07.5	113	35	51	17	46	4 54 43	38 74	33	
17	76	13.6	+2 48.8	97	44.8	+15 56.0	115	40	17 50	18 17	18 48	5 06 39	15 28 77	34	
18	91	13.8	+2 47.8	112	09.9	+15 44.4	116	45	17 49	18 18	18 52	5 19 36	15 16 81	35	
19	106	14.1	46.8	126	35.0	32.7	117	50	47	19	57	35 31	15 02 86	36	
20	121	14.3	45.9	141	00.2	20.9	118	52	46	20	18 59	42 29	14 55 89	37	
21	136	14.5	44.9	155	25.5	+15 09.0	119	54	45	21	19 02	50 26	47 92	38	
22	151	14.7	44.0	169	50.8	+14 57.0	120	56	44	21	05	5 59 24	39 95	39	
23	166	14.9	43.0	184	16.2	44.8	122	58	43	23	09	6 10 20	29 99	40	
24	181	15.2	+2 42.0	198	41.6	+14 32.6	122	60 S	17 42	18 24	19 13	6 22 15	14 18 103	41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 23 ^m 8		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: -0.6 PMG: 18 ^h 37 ^m		Mag: -2.2 PMG: 7 ^h 15 ^m		Mag: 0.0 PMG: 5 ^h 18 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	354	01.3	208	50.9	+14 36.4	80	20.3	-26 40.8	250	54.5	+22 41.7	280	15.6	+20 47.4
1	9	03.8	223	50.4	35.5	95	21.2	40.8	265	56.6	41.7	295	18.0	47.4
2	24	06.2	238	49.9	34.6	110	22.2	40.7	280	58.7	41.7	310	20.4	47.4
3	39	08.7	253	49.3	33.7	125	23.1	40.6	296	00.7	41.6	325	22.8	47.4
4	54	11.2	268	48.8	32.9	140	24.1	40.5	311	02.8	41.6	340	25.2	47.4
5	69	13.6	283	48.3	+14 32.0	155	25.0	-26 40.4	326	04.9	+22 41.6	355	27.6	+20 47.4
6	84	16.1	298	47.8	+14 31.1	170	26.0	-26 40.3	341	07.0	+22 41.5	10	30.0	+20 47.4
7	99	18.6	313	47.2	30.2	185	26.9	40.2	356	09.1	41.5	25	32.4	47.4
8	114	21.0	328	46.7	29.3	200	27.9	40.1	11	11.2	41.5	40	34.8	47.4
9	129	23.5	343	46.2	28.4	215	28.8	40.0	26	13.3	41.5	55	37.2	47.4
10	144	26.0	358	45.6	27.5	230	29.7	39.9	41	15.4	41.4	70	39.6	47.4
11	159	28.4	13	45.1	+14 26.6	245	30.7	-26 39.8	56	17.5	+22 41.4	85	42.1	+20 47.4
12	174	30.9	28	44.6	+14 25.7	260	31.6	-26 39.7	71	19.6	+22 41.4	100	44.5	+20 47.4
13	189	33.3	43	44.1	24.8	275	32.6	39.6	86	21.7	41.3	115	46.9	47.4
14	204	35.8	58	43.5	23.9	290	33.5	39.5	101	23.8	41.3	130	49.3	47.4
15	219	38.3	73	43.0	23.0	305	34.4	39.4	116	25.9	41.3	145	51.7	47.4
16	234	40.7	88	42.5	22.1	320	35.4	39.3	131	27.9	41.3	160	54.1	47.4
17	249	43.2	103	41.9	+14 21.2	335	36.3	-26 39.2	146	30.0	+22 41.2	175	56.5	+20 47.4
18	264	45.7	118	41.4	+14 20.3	350	37.3	-26 39.1	161	32.1	+22 41.2	190	58.9	+20 47.4
19	279	48.1	133	40.9	19.4	5	38.2	39.0	176	34.2	41.2	206	01.3	47.4
20	294	50.6	148	40.4	18.5	20	39.1	38.9	191	36.3	41.1	221	03.7	47.4
21	309	53.1	163	39.8	17.6	35	40.1	38.8	206	38.4	41.1	236	06.1	47.4
22	324	55.5	178	39.3	16.7	50	41.0	38.7	221	40.5	41.1	251	08.5	47.4
23	339	58.0	193	38.8	15.8	65	41.9	38.6	236	42.6	41.1	266	11.0	47.4
24	355	00.4	208	38.3	+14 14.9	80	42.9	-26 38.5	251	44.7	+22 41.0	281	13.4	+20 47.4
Dif	—		-5	-9		+9	+1		+21		0	+24		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 54 ^m 8			Edad: 27 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'2 20 ^h : 61'2 Rº: 55 ^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	15.2	+2	42.0	198	41.6	+14	32.6	60 N	3 56	4 48	5 30	3 13	102	18 41	10		
1	196	15.4		41.1	213	07.1	65	20.3	58	4 04	52	32	21	99	35	14		
2	211	15.6		40.1	227	32.6	65	+14	07.9	56	10	56	33	29	95	30	17	
3	226	15.8		39.1	241	58.2	66	+13	55.3	54	16	4 59	35	36	91	25	20	
4	241	16.1		38.2	256	23.8	66	42.7	52	21	5 02	36	42	89	21	22		
5	256	16.3	+2	37.2	270	49.5	67	+13	30.0	50	4 26	5 05	5 37	3 47	87	18 17	24	
6	271	16.5	+2	36.2	285	15.3	68	+13	17.2	45	4 35	5 10	5 40	3 59	81	18 08	30	
7	286	16.7		35.3	299	41.1	68	+13	04.3	40	43	15	42	4 09	77	18 01	34	
8	301	16.9		34.3	314	07.0	69	+12	51.3	35	48	18	44	17	73	17 55	37	
9	316	17.2		33.3	328	32.9	69	38.2	30	4 53	21	45	24	70	50	40		
10	331	17.4		32.4	342	58.9	70	25.1	20	5 00	26	48	36	65	40	46		
11	346	17.6	+2	31.4	357	25.0	71	+12	11.8	10 N	5 04	5 29	5 50	4 47	60	17 32	50	
12	1	17.8	+2	30.5	11	51.1	71	+11	58.5	0	5 07	5 31	5 52	4 57	56	17 24	55	
13	16	18.1		29.5	26	17.2	71	45.1	10 S	08	32	53	5	07	52	16	59	
14	31	18.3		28.5	40	43.4	72	31.6	20	08	33	55	18	47	17 07	64		
15	46	18.5		27.6	55	09.7	73	18.1	30	06	33	57	30	42	16 57	70		
16	61	18.7		26.6	69	36.0	73	+11	04.4	35	04	33	58	37	39	52	73	
17	76	18.9	+2	25.6	84	02.4	74	+10	50.7	40	5 01	5 32	5 59	5 45	35	16 45	77	
18	91	19.2	+2	24.7	98	28.9	75	+10	36.9	45	4 57	5 31	6 01	5 55	31	16 37	81	
19	106	19.4		23.7	112	55.4	75	23.1	50	52	30	02	6	06	26	28	86	
20	121	19.6		22.7	127	21.9	75	+10	09.2	52	50	29	03	11	24	24	88	
21	136	19.8		21.8	141	48.5	76	+9	55.2	54	47	28	04	16	22	19	91	
22	151	20.1		20.8	156	15.2	77	41.2	56	44	27	04	23	18	14	94		
23	166	20.3		19.8	170	41.9	77	27.1	58	40	26	05	30	15	08	97		
24	181	20.5	+2	18.9	185	08.6	77	+9	12.9	60 S	4 36	5 25	6 06	6 37	12	16 01	101	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 19 ^m 9			Mag: -3.9 PMG: 10 ^h 06 ^m			Mag: -0.6 PMG: 18 ^h 36 ^m			Mag: -2.2 PMG: 7 ^h 12 ^m			Mag: 0.0 PMG: 5 ^h 14 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	355	00.4	208	38.3	+14	14.9	80	42.9	-26	38.5	251	44.7	+22	41.0	281	13.4	+20	47.4
1	10	02.9	223	37.7		14.0	95	43.8		38.4	266	46.8		41.0	296	15.8		47.4
2	25	05.4	238	37.2		13.1	110	44.7		38.3	281	48.9		41.0	311	18.2		47.4
3	40	07.8	253	36.7		12.2	125	45.7		38.2	296	51.0		41.0	326	20.6		47.4
4	55	10.3	268	36.2		11.3	140	46.6		38.1	311	53.1		40.9	341	23.0		47.4
5	70	12.8	283	35.6	+14	10.4	155	47.5	-26	38.0	326	55.2	+22	40.9	356	25.4	+20	47.4
6	85	15.2	298	35.1	+14	09.5	170	48.5	-26	37.9	341	57.3	+22	40.9	11	27.8	+20	47.4
7	100	17.7	313	34.6		08.6	185	49.4		37.8	356	59.4		40.8	26	30.2		47.4
8	115	20.2	328	34.1		07.7	200	50.3		37.7	12	01.5		40.8	41	32.7		47.4
9	130	22.6	343	33.6		06.7	215	51.3		37.5	27	03.6		40.8	56	35.1		47.4
10	145	25.1	358	33.0		05.8	230	52.2		37.4	42	05.7		40.8	71	37.5		47.4
11	160	27.6	13	32.5	+14	04.9	245	53.1	-26	37.3	57	07.8	+22	40.7	86	39.9	+20	47.4
12	175	30.0	28	32.0	+14	04.0	260	54.1	-26	37.2	72	09.9	+22	40.7	101	42.3	+20	47.4
13	190	32.5	43	31.5		03.1	275	55.0		37.1	87	12.0		40.7	116	44.7		47.4
14	205	34.9	58	30.9		02.2	290	55.9		37.0	102	14.1		40.6	131	47.1		47.4
15	220	37.4	73	30.4		01.3	305	56.8		36.9	117	16.2		40.6	146	49.5		47.4
16	235	39.9	88	29.9	+14	00.4	320	57.8		36.8	132	18.3		40.6	161	52.0		47.4
17	250	42.3	103	29.4	+13	59.4	335	58.7	-26	36.7	147	20.4	+22	40.6	176	54.4	+20	47.4
18	265	44.8	118	28.9	+13	58.5	350	59.6	-26	36.6	162	22.5	+22	40.5	191	56.8	+20	47.4
19	280	47.3	133	28.3		57.6	6	00.5		36.5	177	24.6		40.5	206	59.2		47.4
20	295	49.7	148	27.8		56.7	21	01.5		36.4	192	26.7		40.5	222	01.6		47.4
21	310	52.2	163	27.3		55.8	36	02.4		36.3	207	28.8		40.5	237	04.0		47.4
22	325	54.7	178	26.8		54.8	51	03.3		36.2	222	30.9		40.4	252	06.4		47.4
23	340	57.1	193	26.3		53.9	66	04.2		36.1	237	33.0		40.4	267	08.9		47.4
24	355	59.6	208	25.8	+13	53.0	81	05.1	-26	36.0	252	35.1	+22	40.4	282	11.3	+20	47.4
Dif	—			-5 -9			+9 +1			+21 0			+24 0					

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 28 ^d 9	PHE {	4 ^h : 61 ^m 2 12 ^h : 61 ^m 1 20 ^h : 61 ^m 0 R°: 53 ^m										
	PMG: 11 ^h 54 ^m 5						SD: 16 ^h 7			SD: 12 ^h 06 ^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	20.5	+2 18.9	185	08.6	+9 12.9	79	60 N	18 15	18 57	19 48	4 55 100	18 51 10			
1	196	20.7		199	35.5	+8 58.7	142	58	14	53	41	5 00 96	49 13			
2	211	20.9	16.9	214	02.3	44.4	143	56	12	50	35	04 93	47 15			
3	226	21.2	16.0	228	29.3	30.1	143	54	11	47	29	07 91	45 18			
4	241	21.4	15.0	242	56.2	15.7	144	52	10	44	24	11 87	43 21			
5	256	21.6	+2 14.0	257	23.2	+8 01.3	144	50	18 09	18 42	19 20	5 14 85	18 41 23			
6	271	21.8	+2 13.1	271	50.3	+7 46.9	144	45	18 07	18 37	19 11	5 20 80	18 38 27			
7	286	22.1	12.1	286	17.4	32.3	146	40	06	33	19 04	26 75	35 31			
8	301	22.3	11.1	300	44.6	17.8	145	35	04	29	18 59	30 72	32 35			
9	316	22.5	10.2	315	11.8	+7 03.2	146	30	03	27	55	34 69	30 38			
10	331	22.7	09.2	329	39.1	+6 48.5	147	20	18 01	23	49	41 63	26 43			
11	346	22.9	+2 08.2	344	06.4	+6 33.9	146	10 N	17 59	18 20	18 45	5 47 59	18 22 49			
12	1	23.2	+2 07.3	358	33.8	+6 19.1	148	0	17 58	18 18	18 42	5 53 54	18 19 53			
13	16	23.4	06.3	13	01.2	+6 04.4	147	10 S	56	17	42	5 59 49	15 58			
14	31	23.6	05.3	27	28.7	+5 49.6	148	20	55	17	43	6 05 44	11 63			
15	46	23.8	04.4	41	56.2	34.8	148	30	54	17	45	12 39	07 68			
16	61	24.1	03.4	56	23.7	20.0	148	35	53	18	47	16 36	05 71			
17	76	24.3	+2 02.4	70	51.3	+5 05.1	149	40	17 52	18 19	18 50	6 20 33	18 02 75			
18	91	24.5	+2 01.5	85	18.9	+4 50.2	149	45	17 51	18 20	18 54	6 26 28	17 58 79			
19	106	24.7	+2 00.5	99	46.6	35.3	149	50	50	22	19 00	32 23	54 85			
20	121	24.9	+1 59.5	114	14.3	20.4	149	52	49	23	03	35 21	52 87			
21	136	25.2	58.6	128	42.1	+4 05.4	150	54	49	24	06	38 18	50 90			
22	151	25.4	57.6	143	09.9	+3 50.4	150	56	48	25	09	41 16	48 92			
23	166	25.6	56.6	157	37.7	35.4	150	58	48	27	13	45 13	45 96			
24	181	25.8	+1 55.7	172	05.6	+3 20.4	150	60 S	17 47	18 28	19 18	6 49 10	17 42 100			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 16 ^m 0		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: -0.6 PMG: 18 ^h 35 ^m			Mag: -2.2 PMG: 7 ^h 09 ^m			Mag: 0.0 PMG: 5 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	355	59.6	208	25.8	+13 53.0	81	05.1	-26 36.0	252	35.1	+22 40.4	282	11.3	+20 47.4		
1	11	02.0	223	25.2	52.1	96	06.1	35.8	267	37.2	40.3	297	13.7	47.4		
2	26	04.5	238	24.7	51.2	111	07.0	35.7	282	39.3	40.3	312	16.1	47.4		
3	41	07.0	253	24.2	50.2	126	07.9	35.6	297	41.4	40.3	327	18.5	47.4		
4	56	09.4	268	23.7	49.3	141	08.8	35.5	312	43.5	40.3	342	20.9	47.4		
5	71	11.9	283	23.2	+13 48.4	156	09.7	-26 35.4	327	45.6	+22 40.2	357	23.3	+20 47.4		
6	86	14.4	298	22.7	+13 47.5	171	10.7	-26 35.3	342	47.7	+22 40.2	12	25.8	+20 47.4		
7	101	16.8	313	22.1	46.5	186	11.6	35.2	357	49.8	40.2	27	28.2	47.4		
8	116	19.3	328	21.6	45.6	201	12.5	35.1	12	51.9	40.2	42	30.6	47.4		
9	131	21.8	343	21.1	44.7	216	13.4	35.0	27	54.0	40.1	57	33.0	47.4		
10	146	24.2	358	20.6	43.8	231	14.3	34.9	42	56.1	40.1	72	35.4	47.4		
11	161	26.7	13	20.1	+13 42.8	246	15.3	-26 34.7	57	58.2	+22 40.1	87	37.8	+20 47.4		
12	176	29.2	28	19.6	+13 41.9	261	16.2	-26 34.6	73	00.3	+22 40.0	102	40.3	+20 47.4		
13	191	31.6	43	19.1	41.0	276	17.1	34.5	88	02.4	40.0	117	42.7	47.4		
14	206	34.1	58	18.5	40.0	291	18.0	34.4	103	04.5	40.0	132	45.1	47.4		
15	221	36.5	73	18.0	39.1	306	18.9	34.3	118	06.6	40.0	147	47.5	47.4		
16	236	39.0	88	17.5	38.2	321	19.8	34.2	133	08.7	39.9	162	49.9	47.4		
17	251	41.5	103	17.0	+13 37.2	336	20.7	-26 34.1	148	10.9	+22 39.9	177	52.4	+20 47.4		
18	266	43.9	118	16.5	+13 36.3	351	21.6	-26 34.0	163	13.0	+22 39.9	192	54.8	+20 47.4		
19	281	46.4	133	16.0	35.4	6	22.6	33.8	178	15.1	39.8	207	57.2	47.4		
20	296	48.9	148	15.5	34.4	21	23.5	33.7	193	17.2	39.8	222	59.6	47.4		
21	311	51.3	163	15.0	33.5	36	24.4	33.6	208	19.3	39.8	238	02.0	47.4		
22	326	53.8	178	14.5	32.6	51	25.3	33.5	223	21.4	39.8	253	04.4	47.4		
23	341	56.3	193	13.9	31.6	66	26.2	33.4	238	23.5	39.7	268	06.9	47.4		
24	356	58.7	208	13.4	+13 30.7	81	27.1	-26 33.3	253	25.6	+22 39.7	283	09.3	+20 47.4		
Dif	—		-5		-9	+9		+1	+21		0	+24		0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 54 ^m 1			Edad: 0 ^d 6 PHE { 4 ^h : 60'9 12 ^h : 60'7 20 ^h : 60'5 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	181	25.8	+1 55.7	172	05.6	+3 20.4	60 N	4 01	4 53	5 35	6 35	98	19 01	9	
1	196	26.0		186	33.5	+3 05.4	58	09	4 57	36	36	95	02 12	12	
2	211	26.3		201	01.5	+2 50.4	56	15	5 00	37	37	91	02 16	16	
3	226	26.5		215	29.5		54	20	03	38	38	88	03 18	18	
4	241	26.7		229	57.5		52	25	05	39	38	86	04 20	20	
5	256	26.9	+1 50.8	244	25.6	+2 05.3	50	4 29	5 08	5 40	6 39	83	19 04	23	
6	271	27.2	+1 49.8	258	53.7	+1 50.3	45	4 38	5 13	5 42	6 40	78	19 05	28	
7	286	27.4		273	21.8		40	45	17	44	41	74	06 32	32	
8	301	27.6		287	50.0		35	50	20	45	42	70	07 35	35	
9	316	27.8		302	18.2	+1 05.1	30	4 54	22	46	43	67	08 38	38	
10	331	28.0		316	46.4	+0 50.1	20	5 00	26	48	44	62	09 43	43	
11	346	28.3	+1 45.0	331	14.7	+0 35.1	10 N	5 04	5 29	5 50	6 46	56	19 11	47	
12	1	28.5	+1 44.0	345	43.0	+0 20.1	0	5 06	5 30	5 51	6 47	52	19 12	51	
13	16	28.7		0	11.3	+0 05.0	10 S	07	31	52	48	48	13 56	56	
14	31	28.9		14	39.6	-0 10.0	20	06	31	53	49	43	14 61	61	
15	46	29.2		29	08.0		30	03	31	55	51	37	15 67	67	
16	61	29.4		43	36.4		35	5 01	30	55	52	34	16 69	69	
17	76	29.6	+1 39.2	58	04.9	-0 54.9	40	4 58	5 29	5 56	6 53	31	19 17	73	
18	91	29.8	+1 38.2	72	33.3	-1 09.8	45	4 53	5 28	5 57	6 54	27	19 17	78	
19	106	30.0		87	01.8		50	48	26	58	55	22	19 82	82	
20	121	30.3		101	30.3		52	45	25	58	56	20	19 85	85	
21	136	30.5		115	58.8	-1 54.5	54	42	23	59	56	18	20 87	87	
22	151	30.7		130	27.4	-2 09.3	56	39	22	5 59	57	15	20 90	90	
23	166	30.9		144	56.0		58	35	21	6 00	58	12	21 93	93	
24	181	31.2	+1 32.4	159	24.6	-2 38.9	60 S	4 30	5 19	6 00	6 59	9	19 22	97	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 12 ^m 1		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: -0.6 PMG: 18 ^h 33 ^m			Mag: -2.2 PMG: 7 ^h 05 ^m			Mag: 0.0 PMG: 5 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	356	58.7	208	13.4	+13 30.7	81	27.1	-26 33.3	253	25.6	+22 39.7	283	09.3	+20 47.4
1	12	01.2	223	12.9		96	28.0	33.2	268	27.7		298	11.7	47.4
2	27	03.6	238	12.4		111	28.9	33.0	283	29.8		313	14.1	47.4
3	42	06.1	253	11.9		126	29.8	32.9	298	31.9		328	16.5	47.4
4	57	08.6	268	11.4		141	30.7	32.8	313	34.0		343	19.0	47.4
5	72	11.0	283	10.9	+13 26.0	156	31.6	-26 32.7	328	36.2	+22 39.6	358	21.4	+20 47.4
6	87	13.5	298	10.4	+13 25.1	171	32.6	-26 32.6	343	38.3	+22 39.5	13	23.8	+20 47.4
7	102	16.0	313	09.9		186	33.5	32.5	358	40.4		28	26.2	47.4
8	117	18.4	328	09.4		201	34.4	32.3	13	42.5		43	28.7	47.4
9	132	20.9	343	08.9		216	35.3	32.2	28	44.6		58	31.1	47.4
10	147	23.4	358	08.3		231	36.2	32.1	43	46.7		73	33.5	47.4
11	162	25.8	13	07.8	+13 20.3	246	37.1	-26 32.0	58	48.8	+22 39.4	88	35.9	+20 47.4
12	177	28.3	28	07.3	+13 19.4	261	38.0	-26 31.9	73	50.9	+22 39.4	103	38.3	+20 47.4
13	192	30.8	43	06.8		276	38.9	31.8	88	53.0		118	40.8	47.4
14	207	33.2	58	06.3		291	39.8	31.6	103	55.1		133	43.2	47.4
15	222	35.7	73	05.8		306	40.7	31.5	118	57.3		148	45.6	47.4
16	237	38.1	88	05.3		321	41.6	31.4	133	59.4		163	48.0	47.4
17	252	40.6	103	04.8	+13 14.7	336	42.5	-26 31.3	149	01.5	+22 39.2	178	50.5	+20 47.4
18	267	43.1	118	04.3	+13 13.7	351	43.4	-26 31.2	164	03.6	+22 39.2	193	52.9	+20 47.4
19	282	45.5	133	03.8		6	44.3	31.0	179	05.7		208	55.3	47.4
20	297	48.0	148	03.3		21	45.2	30.9	194	07.8		223	57.7	47.4
21	312	50.5	163	02.8		36	46.1	30.8	209	09.9		239	00.1	47.4
22	327	52.9	178	02.3		51	47.0	30.7	224	12.1		254	02.6	47.4
23	342	55.4	193	01.8		66	47.9	30.6	239	14.2		269	05.0	47.4
24	357	57.9	208	01.3	+13 08.0	81	48.8	-26 30.4	254	16.3	+22 39.1	284	07.4	+20 47.4
Dif	—		-5	-9		+9	+1		+21	0		+24	0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 1 ^d 6 PHE	SD: 16°4				Civil		Náutico	Hora	Rº	Hora	Rº
	PMG: 11 ^h 53 ^m 7	PMG: 13 ^h 51 ^m	Rº: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	31.2	+1 32.4	159	24.6	-2 38.9		60 N	18 09	18 51	19 41	8 13 96		19 10 11	
1	196	31.4		173	53.2	-2 53.7 ¹⁴⁸		58	08	47	35	11 92		14 14	
2	211	31.6	30.5	188	21.8	-3 08.4 ¹⁴⁷		56	07	44	29	08 89		18 16	
3	226	31.8	29.5	202	50.5	23.1 ¹⁴⁷		54	06	42	24	06 86		21 19	
4	241	32.0	28.5	217	19.1	37.8 ¹⁴⁷		52	05	39	19	04 84		24 22	
5	256	32.3	+1 27.6	231	47.8	-3 52.4 ¹⁴⁶		50	18 05	18 37	19 15	8 02 82		19 27 24	
6	271	32.5	+1 26.6	246	16.5	-4 07.0 ¹⁴⁶		45	18 03	18 33	19 07	7 58 77		19 33 28	
7	286	32.7	25.6	260	45.3	21.6 ¹⁴⁶		40	02	29	19 01	55 72		38 32	
8	301	32.9	24.6	275	14.0	36.1 ¹⁴⁵		35	01	26	18 56	52 69		42 35	
9	316	33.1	23.7	289	42.8	-4 50.5 ¹⁴⁴		30	18 00	24	52	50 66		46 38	
10	331	33.4	22.7	304	11.5	-5 05.0 ¹⁴⁵		20	17 59	21	47	46 60		52 43	
11	346	33.6	+1 21.7	318	40.3	-5 19.4 ¹⁴⁴		10 N	17 58	18 19	18 43	7 42 56		19 58 48	
12	1	33.8	+1 20.8	333	09.1	-5 33.7 ¹⁴³		0	17 57	18 18	18 42	7 39 52		20 03 52	
13	16	34.0	19.8	347	37.9	-5 48.0 ¹⁴³		10 S	56	17	42	36 47		09 56	
14	31	34.3	18.8	2	06.7	-6 02.2 ¹⁴²		20	55	17	43	32 43		15 60	
15	46	34.5	17.8	16	35.5	16.4 ¹⁴²		30	55	18	46	28 38		22 65	
16	61	34.7	16.9	31	04.4	30.5 ¹⁴¹		35	54	19	49	26 35		25 68	
17	76	34.9	+1 15.9	45	33.2	-6 44.6 ¹⁴¹		40	17 54	18 21	18 52	7 24 31		20 30 71	
18	91	35.1	+1 14.9	60	02.1	-6 58.6 ¹⁴⁰		45	17 53	18 23	18 57	7 21 27		20 35 75	
19	106	35.4	14.0	74	30.9	-7 12.6 ¹⁴⁰		50	53	25	19 03	17 23		41 80	
20	121	35.6	13.0	88	59.8	26.5 ¹³⁹		52	53	26	06	16 21		44 82	
21	136	35.8	12.0	103	28.7	40.4 ¹³⁹		54	52	28	09	14 19		47 85	
22	151	36.0	11.1	117	57.5	-7 54.2 ¹³⁸		56	52	29	13	12 16		50 88	
23	166	36.2	10.1	132	26.4	-8 07.9 ¹³⁷		58	52	31	18	10 13		54 91	
24	181	36.5	+1 09.1	146	55.3	-8 21.6 ¹³⁷		60 S	17 52	18 33	19 23	7 08 10		20 59 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 08 ^m 1		Mag: -3.9 PMG: 10 ^h 08 ^m			Mag: -0.5 PMG: 18 ^h 32 ^m			Mag: -2.2 PMG: 7 ^h 02 ^m			Mag: 0.0 PMG: 5 ^h 03 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	357	57.9	208	01.3	+13 08.0	81 48.8	-26 30.4	254 16.3	+22 39.1	284 07.4	+20 47.4				
1	13	00.3	223	00.8	07.0	96 49.7	30.3	269 18.4	39.0	299 09.8	47.4				
2	28	02.8	238	00.3	06.1	111 50.6	30.2	284 20.5	39.0	314 12.3	47.4				
3	43	05.2	252	59.8	05.1	126 51.5	30.1	299 22.6	39.0	329 14.7	47.4				
4	58	07.7	267	59.3	04.2	141 52.4	29.9	314 24.7	38.9	344 17.1	47.4				
5	73	10.2	282	58.8	+13 03.2	156 53.2	-26 29.8	329 26.9	+22 38.9	359 19.5	+20 47.4				
6	88	12.6	297	58.3	+13 02.3	171 54.1	-26 29.7	344 29.0	+22 38.9	14 22.0	+20 47.4				
7	103	15.1	312	57.8	01.3	186 55.0	29.6	359 31.1	38.9	29 24.4	47.4				
8	118	17.6	327	57.3	+13 00.3	201 55.9	29.5	14 33.2	38.8	44 26.8	47.4				
9	133	20.0	342	56.8	+12 59.4	216 56.8	29.3	29 35.3	38.8	59 29.3	47.4				
10	148	22.5	357	56.3	58.4	231 57.7	29.2	44 37.4	38.8	74 31.7	47.4				
11	163	25.0	12	55.8	+12 57.5	246 58.6	-26 29.1	59 39.6	+22 38.8	89 34.1	+20 47.4				
12	178	27.4	27	55.3	+12 56.5	261 59.5	-26 29.0	74 41.7	+22 38.7	104 36.5	+20 47.4				
13	193	29.9	42	54.8	55.5	277 00.4	28.8	89 43.8	38.7	119 39.0	47.4				
14	208	32.4	57	54.3	54.6	292 01.3	28.7	104 45.9	38.7	134 41.4	47.4				
15	223	34.8	72	53.8	53.6	307 02.2	28.6	119 48.0	38.6	149 43.8	47.4				
16	238	37.3	87	53.3	52.7	322 03.1	28.4	134 50.1	38.6	164 46.2	47.4				
17	253	39.7	102	52.8	+12 51.7	337 03.9	-26 28.3	149 52.3	+22 38.6	179 48.7	+20 47.4				
18	268	42.2	117	52.3	+12 50.7	352 04.8	-26 28.2	164 54.4	+22 38.6	194 51.1	+20 47.4				
19	283	44.7	132	51.8	49.8	7 05.7	28.1	179 56.5	38.5	209 53.5	47.4				
20	298	47.1	147	51.3	48.8	22 06.6	27.9	194 58.6	38.5	224 56.0	47.4				
21	313	49.6	162	50.8	47.8	37 07.5	27.8	210 00.7	38.5	239 58.4	47.4				
22	328	52.1	177	50.3	46.9	52 08.4	27.7	225 02.9	38.5	255 00.8	47.4				
23	343	54.5	192	49.8	45.9	67 09.3	27.6	240 05.0	38.4	270 03.2	47.4				
24	358	57.0	207	49.3	+12 44.9	82 10.1	-26 27.4	255 07.1	+22 38.4	285 05.7	+20 47.4				
Dif	—		-5		-10	+9		+1	+21		0	+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 53 ^m 4			Edad: 2 ^d 6 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 2 20 ^h : 58 ^m 8 PMG: 14 ^h 43 ^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	181	36.5	+1 09.1	146	55.3	-8 21.6	136	60 N	4 07	4 58	5 39	9 49	94	19 21	13	
1	196	36.7	08.1	161	24.2	99	35.2	58	13	5 01	40	43	89	28	17	
2	211	36.9	07.2	175	53.1	99	48.7	56	19	04	41	37	87	34	20	
3	226	37.1	06.2	190	22.0	99	02.2	54	24	07	42	32	84	40	23	
4	241	37.4	05.2	204	50.9	99	15.6	52	29	09	43	28	81	46	24	
5	256	37.6	+1 04.3	219	19.8	99	28.9	50	4 33	5 11	5 43	9 24	78	19 51	26	
6	271	37.8	+1 03.3	233	48.7	99	42.2	45	4 41	5 15	5 45	9 15	74	20 01	31	
7	286	38.0	02.3	248	17.6	99	55.4	40	47	18	46	07	71	10	34	
8	301	38.2	01.3	262	46.5	99	08.5	35	52	21	46	9 01	67	17	38	
9	316	38.5	+1 00.4	277	15.4	99	21.5	30	4 55	23	47	8 56	64	24	40	
10	331	38.7	+0 59.4	291	44.3	99	34.5	20	5 01	26	48	46	60	35	45	
11	346	38.9	+0 58.4	306	13.2	99	47.4	10 N	5 04	5 28	5 49	8 38	56	20 46	48	
12	1	39.1	+0 57.5	320	42.1	99	00.2	0	5 05	5 29	5 50	8 31	51	20 55	52	
13	16	39.3	56.5	335	11.0	99	12.9	10 S	06	30	51	23	48	21 05	55	
14	31	39.6	55.5	349	39.9	99	25.6	20	04	29	51	15	44	15	59	
15	46	39.8	54.5	4	08.8	99	38.2	30	5 00	28	52	06	39	27	63	
16	61	40.0	53.6	18	37.7	99	50.7	35	4 58	27	52	8 01	36	33	67	
17	76	40.2	+0 52.6	33	06.5	98	03.1	40	4 54	5 26	5 53	7 55	33	21 41	69	
18	91	40.4	+0 51.6	47	35.4	99	15.4	45	4 50	5 24	5 53	7 48	30	21 50	73	
19	106	40.7	50.7	62	04.3	99	27.7	50	43	21	53	40	25	22 01	78	
20	121	40.9	49.7	76	33.1	98	39.8	52	40	20	53	37	23	06	80	
21	136	41.1	48.7	91	02.0	99	51.9	54	37	18	54	33	20	12	82	
22	151	41.3	47.7	105	30.9	99	03.9	56	33	17	54	28	18	18	85	
23	166	41.6	46.8	119	59.7	98	15.8	58	29	15	54	23	15	25	88	
24	181	41.8	+0 45.8	134	28.5	98	27.6	60 S	4 23	5 13	5 54	7 18	11	22 33	92	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 04 ^m 2			Mag: -3.9 PMG: 10 ^h 09 ^m			Mag: -0.5 PMG: 18 ^h 30 ^m			Mag: -2.2 PMG: 6 ^h 59 ^m			Mag: 0.0 PMG: 4 ^h 59 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	358	57.0	207 49.3	+12 44.9	82 10.1	-26 27.4	255 07.1	+22 38.4	285 05.7	+20 47.4						
1	13	59.5	222 48.8	44.0	97 11.0	27.3	270 09.2	38.4	300 08.1	47.4						
2	29	01.9	237 48.3	43.0	112 11.9	27.2	285 11.3	38.4	315 10.5	47.4						
3	44	04.4	252 47.8	42.0	127 12.8	27.0	300 13.5	38.3	330 13.0	47.4						
4	59	06.9	267 47.3	41.0	142 13.7	26.9	315 15.6	38.3	345 15.4	47.4						
5	74	09.3	282 46.8	+12 40.1	157 14.6	-26 26.8	330 17.7	+22 38.3	0 17.8	+20 47.4						
6	89	11.8	297 46.3	+12 39.1	172 15.4	-26 26.7	345 19.8	+22 38.2	15 20.3	+20 47.4						
7	104	14.2	312 45.8	38.1	187 16.3	26.5	0 22.0	38.2	30 22.7	47.4						
8	119	16.7	327 45.4	37.1	202 17.2	26.4	15 24.1	38.2	45 25.1	47.4						
9	134	19.2	342 44.9	36.2	217 18.1	26.3	30 26.2	38.2	60 27.5	47.4						
10	149	21.6	357 44.4	35.2	232 19.0	26.1	45 28.3	38.1	75 30.0	47.4						
11	164	24.1	12 43.9	+12 34.2	247 19.8	-26 26.0	60 30.4	+22 38.1	90 32.4	+20 47.4						
12	179	26.6	27 43.4	+12 33.2	262 20.7	-26 25.9	75 32.6	+22 38.1	105 34.8	+20 47.4						
13	194	29.0	42 42.9	32.3	277 21.6	25.7	90 34.7	38.1	120 37.3	47.3						
14	209	31.5	57 42.4	31.3	292 22.5	25.6	105 36.8	38.0	135 39.7	47.3						
15	224	34.0	72 41.9	30.3	307 23.4	25.5	120 38.9	38.0	150 42.1	47.3						
16	239	36.4	87 41.4	29.3	322 24.2	25.3	135 41.1	38.0	165 44.6	47.3						
17	254	38.9	102 40.9	+12 28.4	337 25.1	-26 25.2	150 43.2	+22 37.9	180 47.0	+20 47.3						
18	269	41.3	117 40.4	+12 27.4	352 26.0	-26 25.1	165 45.3	+22 37.9	195 49.4	+20 47.3						
19	284	43.8	132 40.0	26.4	7 26.9	24.9	180 47.4	37.9	210 51.9	47.3						
20	299	46.3	147 39.5	25.4	22 27.7	24.8	195 49.6	37.9	225 54.3	47.3						
21	314	48.7	162 39.0	24.4	37 28.6	24.7	210 51.7	37.8	240 56.7	47.3						
22	329	51.2	177 38.5	23.4	52 29.5	24.5	225 53.8	37.8	255 59.2	47.3						
23	344	53.7	192 38.0	22.5	67 30.4	24.4	240 56.0	37.8	271 01.6	47.3						
24	359	56.1	207 37.5	+12 21.5	82 31.2	-26 24.3	255 58.1	+22 37.8	286 04.0	+20 47.3						
Dif	—		-5	-10	+9	+1	+21	0	+24	0						

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 53 ^m 0		Edad: 3 ^d 6 PHE { 4 ^h : 58/5 12 ^h : 58/2 20 ^h : 57/9 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	h m m	
0	181	41.8	+0	45.8	134	28.5	-13 27.6	60 N	18 03	18 44	19 35	11 23 89	19 34 18	
1	196	42.0		44.8	148	57.4	99 39.3 ¹¹⁷	58	02	41	28	12 86	45 22	
2	211	42.2		43.9	163	26.2	98 -13 50.9 ¹¹⁶	56	02	39	23	11 04 82	19 54 25	
3	226	42.4		42.9	177	55.0	98 -14 02.4 ¹¹⁵	54	01	37	18	10 56 79	20 03 27	
4	241	42.7		41.9	192	23.8	98 13.9 ¹¹⁵	52	01	34	14	49 77	10 30	
5	256	42.9	+0	40.9	206	52.6	98 -14 25.2 ¹¹³	50	18 00	18 33	19 11	10 42 76	20 17 32	
6	271	43.1	+0	40.0	221	21.4	98 -14 36.4 ¹¹²	45	18 00	18 29	19 03	10 29 71	20 32 36	
7	286	43.3		39.0	235	50.2	98 47.6 ¹¹²	40	17 59	26	18 58	18 67	44 39	
8	301	43.5		38.0	250	19.0	98 -14 58.6 ¹¹⁰	35	58	24	53	08 65	20 55 41	
9	316	43.8		37.0	264	47.8	98 -15 09.6 ¹¹⁰	30	58	22	50	10 00 63	21 04 43	
10	331	44.0		36.1	279	16.5	97 20.4 ¹⁰⁸	20	57	19	45	9 46 58	20 46	
11	346	44.2	+0	35.1	293	45.3	98 -15 31.2 ¹⁰⁸	10 N	17 57	18 18	18 42	9 34 55	21 34 49	
12	1	44.4	+0	34.1	308	14.0	97 -15 41.8 ¹⁰⁶	0	17 56	18 17	18 41	9 22 52	21 47 52	
13	16	44.6		33.2	322	42.7	97 -15 52.4 ¹⁰⁶	10 S	56	17	41	9 11 49	22 00 55	
14	31	44.9		32.2	337	11.4	97 -16 02.9 ¹⁰⁵	20	56	18	43	8 59 45	14 58	
15	46	45.1		31.2	351	40.2	98 13.2 ¹⁰³	30	56	20	47	45 41	30 62	
16	61	45.3		30.2	6	08.9	97 23.4 ¹⁰²	35	56	21	50	37 39	40 63	
17	76	45.5	+0	29.3	20	37.5	96 -16 33.6 ¹⁰²	40	17 56	18 23	18 54	8 28 37	22 50 66	
18	91	45.7	+0	28.3	35	06.2	97 -16 43.6 ¹⁰⁰	45	17 56	18 25	18 59	8 18 33	23 03 69	
19	106	46.0		27.3	49	34.9	97 -16 53.5 ⁹⁹	50	56	28	19 06	05 29	19 72	
20	121	46.2		26.3	64	03.5	96 -17 03.4 ⁹⁹	52	56	30	09	8 00 27	26 74	
21	136	46.4		25.4	78	32.2	97 13.1 ⁹⁷	54	56	31	13	7 53 25	34 77	
22	151	46.6		24.4	93	00.8	96 22.7 ⁹⁶	56	56	33	17	46 22	43 79	
23	166	46.8		23.4	107	29.5	97 32.2 ⁹⁵	58	56	35	22	38 19	23 53 83	
24	181	47.1	+0	22.5	121	58.1	96 -17 41.6 ⁹⁴	60 S	17 56	18 38	19 28	7 29 16	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 00 ^m 3		Mag: -3.9 PMG: 10 ^h 10 ^m			Mag: -0.5 PMG: 18 ^h 29 ^m			Mag: -2.2 PMG: 6 ^h 55 ^m			Mag: 0.0 PMG: 4 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	359	56.1	207	37.5	+12 21.5	82	31.2	-26 24.3	255	58.1	+22 37.8	286	04.0	+20 47.3
1	14	58.6	222	37.0		97	32.1	24.1	271	00.2	37.7	301	06.5	47.3
2	30	01.1	237	36.5		112	33.0	24.0	286	02.3	37.7	316	08.9	47.3
3	45	03.5	252	36.0		127	33.9	23.9	301	04.5	37.7	331	11.3	47.3
4	60	06.0	267	35.6		142	34.7	23.7	316	06.6	37.7	346	13.8	47.3
5	75	08.5	282	35.1	+12 16.5	157	35.6	-26 23.6	331	08.7	+22 37.6	1	16.2	+20 47.3
6	90	10.9	297	34.6	+12 15.6	172	36.5	-26 23.4	346	10.8	+22 37.6	16	18.6	+20 47.3
7	105	13.4	312	34.1		187	37.3	23.3	1	13.0	37.6	31	21.1	47.3
8	120	15.8	327	33.6		202	38.2	23.2	16	15.1	37.5	46	23.5	47.3
9	135	18.3	342	33.1		217	39.1	23.0	31	17.2	37.5	61	26.0	47.3
10	150	20.8	357	32.6		232	39.9	22.9	46	19.4	37.5	76	28.4	47.3
11	165	23.2	12	32.2	+12 10.6	247	40.8	-26 22.8	61	21.5	+22 37.5	91	30.8	+20 47.3
12	180	25.7	27	31.7	+12 09.6	262	41.7	-26 22.6	76	23.6	+22 37.4	106	33.3	+20 47.3
13	195	28.2	42	31.2		277	42.5	22.5	91	25.8	37.4	121	35.7	47.3
14	210	30.6	57	30.7		292	43.4	22.3	106	27.9	37.4	136	38.1	47.3
15	225	33.1	72	30.2		307	44.3	22.2	121	30.0	37.4	151	40.6	47.3
16	240	35.6	87	29.7		322	45.1	22.1	136	32.1	37.3	166	43.0	47.3
17	255	38.0	102	29.3	+12 04.7	337	46.0	-26 21.9	151	34.3	+22 37.3	181	45.4	+20 47.3
18	270	40.5	117	28.8	+12 03.7	352	46.9	-26 21.8	166	36.4	+22 37.3	196	47.9	+20 47.3
19	285	43.0	132	28.3		7	47.7	21.6	181	38.5	37.3	211	50.3	47.3
20	300	45.4	147	27.8		22	48.6	21.5	196	40.7	37.2	226	52.8	47.3
21	315	47.9	162	27.3	+12 00.7	37	49.5	21.4	211	42.8	37.2	241	55.2	47.3
22	330	50.3	177	26.8	+11 59.7	52	50.3	21.2	226	44.9	37.2	256	57.6	47.3
23	345	52.8	192	26.4		67	51.2	21.1	241	47.1	37.1	272	00.1	47.3
24	0	55.3	207	25.9	+11 57.7	82	52.1	-26 20.9	256	49.2	+22 37.1	287	02.5	+20 47.3
Dif	—		-5	-10		+9	+1		+21	0		+24	0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 7			Edad: 4 ^d 6	PHE { 4 ^h : 57/6 12 ^h : 57/3 20 ^h : 57/0 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	181	47.1	+0 22.5	121	58.1	-17 41.6	93	60 N	4 12	5 02	5 44	12 52	82	19 52	26	
1	196	47.3	21.5	136	26.7	-17 50.9	96	58	18	05	45	38 78		20 07	30	
2	211	47.5	20.5	150	55.3	-18 00.0	91	56	24	08	45	26 75		19 33		
3	226	47.7	19.5	165	23.9	-18 09.1	96	54	28	10	46	15 73		30 35		
4	241	47.9	18.6	179	52.5	-18 18.0	89	52	32	12	46	12 06	71	40 37		
5	256	48.2	+0 17.6	194	21.0	-18 26.9	89	50	4 36	5 14	5 46	11 58	69	20 49	38	
6	271	48.4	+0 16.6	208	49.6	-18 35.6	87	45	4 43	5 18	5 47	11 40	66	21 08	40	
7	286	48.6	15.6	223	18.1	-18 44.2	86	40	49	20	47	25 64		23 43		
8	301	48.8	14.7	237	46.7	-18 52.7	85	35	53	23	48	13 62		36 44		
9	316	49.0	13.7	252	15.2	-19 01.1	84	30	4 57	24	48	11 03	60	21 47	46	
10	331	49.3	12.7	266	43.7	-19 09.3	82	20	5 01	27	49	10 44	58	22 06	49	
11	346	49.5	+0 11.8	281	12.3	-19 17.5	82	10 N	5 04	5 28	5 49	10 29	54	22 23	51	
12	1	49.7	+0 10.8	295	40.8	-19 25.5	80	0	5 05	5 29	5 49	10 14	52	22 39	53	
13	16	49.9	09.8	310	09.3	-19 33.5	80	10 S	04	29	50	10 00	50	22 55	54	
14	31	50.1	08.8	324	37.8	-19 41.3	78	20	5 02	28	50	9 44	48	23 12	56	
15	46	50.4	07.9	339	06.2	-19 48.9	76	30	4 58	26	50	26 45		32 58		
16	61	50.6	06.9	353	34.7	-19 56.5	75	35	55	24	49	16 43		43 60		
17	76	50.8	+0 05.9	8	03.2	-20 04.0	75	40	4 51	5 22	5 49	9 05	40	23 56	62	
18	91	51.0	+0 04.9	22	31.6	-20 11.3	73	45	4 46	5 20	5 49	8 51	38	*** ** *	***	
19	106	51.2	04.0	37	00.1	-20 18.5	72	50	39	17	49	34 35		*** ** *	***	
20	121	51.5	03.0	51	28.6	-20 25.6	71	52	35	15	49	27 32		*** ** *	***	
21	136	51.7	02.0	65	57.0	-20 32.6	70	54	32	13	49	18 31		*** ** *	***	
22	151	51.9	01.0	80	25.4	-20 39.4	68	56	27	11	48	8 08	29	*** ** *	***	
23	166	52.1	+0 00.1	94	53.9	-20 46.2	68	58	23	09	48	7 57	26	*** ** *	***	
24	181	52.3	-0 00.9	109	22.3	-20 52.8	66	60 S	4 17	5 07	5 48	7 45	22	0 05	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 52 ^m 4		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: -0.5 PMG: 18 ^h 27 ^m		Mag: -2.2 PMG: 6 ^h 52 ^m		Mag: 0.0 PMG: 4 ^h 51 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	0	55.3	207	25.9	+11 57.7	82	52.1	-26 20.9	256	49.2	+22 37.1			
1	15	57.7	222	25.4	56.7	97	52.9	20.8	271	51.3	37.1			
2	31	00.2	237	24.9	55.7	112	53.8	20.6	286	53.5	37.1			
3	46	02.7	252	24.4	54.7	127	54.6	20.5	301	55.6	37.0			
4	61	05.1	267	24.0	53.7	142	55.5	20.4	316	57.7	37.0			
5	76	07.6	282	23.5	+11 52.7	157	56.4	-26 20.2	331	59.9	+22 37.0			
6	91	10.1	297	23.0	+11 51.7	172	57.2	-26 20.1	347	02.0	+22 37.0			
7	106	12.5	312	22.5	50.7	187	58.1	19.9	2	04.2	36.9			
8	121	15.0	327	22.0	49.7	202	58.9	19.8	17	06.3	36.9			
9	136	17.4	342	21.6	48.7	217	59.8	19.6	32	08.4	36.9			
10	151	19.9	357	21.1	47.7	233	00.7	19.5	47	10.6	36.9			
11	166	22.4	12	20.6	+11 46.7	248	01.5	-26 19.3	62	12.7	+22 36.8			
12	181	24.8	27	20.1	+11 45.6	263	02.4	-26 19.2	77	14.8	+22 36.8			
13	196	27.3	42	19.6	44.6	278	03.2	19.1	92	17.0	36.8			
14	211	29.8	57	19.2	43.6	293	04.1	18.9	107	19.1	36.8			
15	226	32.2	72	18.7	42.6	308	04.9	18.8	122	21.2	36.7			
16	241	34.7	87	18.2	41.6	323	05.8	18.6	137	23.4	36.7			
17	256	37.2	102	17.7	+11 40.6	338	06.7	-26 18.5	152	25.5	+22 36.7			
18	271	39.6	117	17.3	+11 39.6	353	07.5	-26 18.3	167	27.7	+22 36.6			
19	286	42.1	132	16.8	38.6	8	08.4	18.2	182	29.8	36.6			
20	301	44.6	147	16.3	37.6	23	09.2	18.0	197	31.9	36.6			
21	316	47.0	162	15.8	36.6	38	10.1	17.9	212	34.1	36.6			
22	331	49.5	177	15.4	35.6	53	10.9	17.7	227	36.2	36.5			
23	346	51.9	192	14.9	34.5	68	11.8	17.6	242	38.4	36.5			
24	1	54.4	207	14.4	+11 33.5	83	12.6	-26 17.4	257	40.5	+22 36.5			
Dif	—		-5		-10	+9		+1	+21		0	+24		0

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 3		Edad: 5 ^d 6 PHE { 4 ^h : 56'7 12 ^h : 56'4 20 ^h : 56'1 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	h m
0	181	52.3	-0	00.9	109	22.3	-20 52.8	60 N	17 57	18 38	19 28	14 14 69	20 18 39	
1	196	52.6		01.9	123	50.7 94	-20 59.3 65	58	57	36	22	13 56 67	37 41	
2	211	52.8		02.8	138	19.2 95	-21 05.6 63	56	56	33	17	41 65	20 52 42	
3	226	53.0		03.8	152	47.6 94	11.9 63	54	56	31	13	28 64	21 05 44	
4	241	53.2		04.8	167	16.0 94	18.0 61	52	56	30	09	17 63	17 44	
5	256	53.4	-0	05.8	181	44.4 94	-21 24.0 60	50	17 56	18 28	19 06	13 07 62	21 27 45	
6	271	53.6	-0	06.7	196	12.8 94	-21 29.9 59	45	17 56	18 25	18 59	12 46 60	21 48 47	
7	286	53.9		07.7	210	41.2 94	35.7 58	40	56	23	54	29 59	22 06 48	
8	301	54.1		08.7	225	09.6 94	41.3 56	35	55	21	50	15 57	20 49	
9	316	54.3		09.7	239	38.1 95	46.8 55	30	55	19	47	12 03 56	33 49	
10	331	54.5		10.6	254	06.5 94	52.2 54	20	55	17	43	11 42 54	22 55 50	
11	346	54.7	-0	11.6	268	34.9 94	-21 57.5 53	10 N	17 55	18 16	18 41	11 23 54	23 14 51	
12	1	55.0	-0	12.6	283	03.3 94	-22 02.6 51	0	17 56	18 16	18 40	11 06 53	23 32 52	
13	16	55.2		13.6	297	31.7 94	07.7 51	10 S	56	17	41	10 50 50	23 49 53	
14	31	55.4		14.5	312	00.1 94	12.6 49	20	56	18	44	32 49	** * *	
15	46	55.6		15.5	326	28.5 94	17.3 47	30	57	21	49	10 11 48	** * *	
16	61	55.8		16.5	340	57.0 95	22.0 45	35	57	22	52	9 59 47	** * *	
17	76	56.0	-0	17.5	355	25.4 94	-22 26.5 45	40	17 58	18 25	18 56	9 45 45	** * *	
18	91	56.3	-0	18.4	9	53.8 94	-22 30.9 44	45	17 58	18 28	19 02	9 29 44	0 12 63	
19	106	56.5		19.4	24	22.3 95	35.2 43	50	59	31	09	9 09 41	31 66	
20	121	56.7		20.4	38	50.7 94	39.4 40	52	17 59	33	13	8 59 41	40 68	
21	136	56.9		21.3	53	19.2 95	43.4 40	54	18 00	35	17	49 39	0 51 68	
22	151	57.1		22.3	67	47.6 94	47.3 39	56	00	37	22	37 37	1 02 71	
23	166	57.4		23.3	82	16.1 95	51.1 38	58	01	40	27	23 35	16 73	
24	181	57.6	-0	24.3	96	44.5 94	-22 54.7 36	60 S	18 01	18 43	19 33	8 07 32	1 31 77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 48 ^m 5		Mag: -3.9 PMG: 10 ^h 11 ^m		Mag: -0.5 PMG: 18 ^h 26 ^m		Mag: -2.2 PMG: 6 ^h 48 ^m		Mag: 0.0 PMG: 4 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	1	54.4	207	14.4	+11	33.5	83	12.6	-26	17.4	257	40.5	+22	36.5	288	01.1	+20	47.2
1	16	56.9	222	13.9		32.5	98	13.5		17.3	272	42.6		36.5	303	03.6		47.2
2	31	59.3	237	13.5		31.5	113	14.3		17.1	287	44.8		36.4	318	06.0		47.2
3	47	01.8	252	13.0		30.5	128	15.2		17.0	302	46.9		36.4	333	08.5		47.2
4	62	04.3	267	12.5		29.5	143	16.0		16.8	317	49.1		36.4	348	10.9		47.2
5	77	06.7	282	12.0	+11	28.5	158	16.9	-26	16.7	332	51.2	+22	36.4	3	13.3	+20	47.2
6	92	09.2	297	11.6	+11	27.4	173	17.7	-26	16.5	347	53.3	+22	36.3	18	15.8	+20	47.2
7	107	11.7	312	11.1		26.4	188	18.6		16.4	2	55.5		36.3	33	18.2		47.2
8	122	14.1	327	10.6		25.4	203	19.4		16.2	17	57.6		36.3	48	20.7		47.2
9	137	16.6	342	10.2		24.4	218	20.3		16.1	32	59.8		36.3	63	23.1		47.2
10	152	19.1	357	09.7		23.4	233	21.1		15.9	48	01.9		36.2	78	25.6		47.2
11	167	21.5	12	09.2	+11	22.3	248	22.0	-26	15.8	63	04.1	+22	36.2	93	28.0	+20	47.2
12	182	24.0	27	08.7	+11	21.3	263	22.8	-26	15.6	78	06.2	+22	36.2	108	30.5	+20	47.2
13	197	26.4	42	08.3		20.3	278	23.7		15.5	93	08.3		36.2	123	32.9		47.2
14	212	28.9	57	07.8		19.3	293	24.5		15.3	108	10.5		36.1	138	35.4		47.1
15	227	31.4	72	07.3		18.3	308	25.3		15.1	123	12.6		36.1	153	37.8		47.1
16	242	33.8	87	06.9		17.2	323	26.2		15.0	138	14.8		36.1	168	40.2		47.1
17	257	36.3	102	06.4	+11	16.2	338	27.0	-26	14.8	153	16.9	+22	36.1	183	42.7	+20	47.1
18	272	38.8	117	05.9	+11	15.2	353	27.9	-26	14.7	168	19.1	+22	36.0	198	45.1	+20	47.1
19	287	41.2	132	05.5		14.2	8	28.7		14.5	183	21.2		36.0	213	47.6		47.1
20	302	43.7	147	05.0		13.2	23	29.6		14.4	198	23.4		36.0	228	50.0		47.1
21	317	46.2	162	04.5		12.1	38	30.4		14.2	213	25.5		35.9	243	52.5		47.1
22	332	48.6	177	04.0		11.1	53	31.3		14.1	228	27.6		35.9	258	54.9		47.1
23	347	51.1	192	03.6		10.1	68	32.1		13.9	243	29.8		35.9	273	57.4		47.1
24	2	53.5	207	03.1	+11	09.0	83	32.9	-26	13.7	258	31.9	+22	35.9	288	59.8	+20	47.1
Dif	—		-5		-10		+8		+2		+21		0		+24		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15/9 PMG: 11 ^h 52 ^m 0			Edad: 6 ^d 6	PHE { 4 ^h : 55/9 12 ^h : 55/6 20 ^h : 55/4 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	181	57.6	-0	24.3	96	44.5	-22	54.7	36	60 N	4	17	5	49	15	23	52	20	57	54			
1	196	57.8		25.2	111	13.0	95	-22	58.3	36	58	23	10	49	15	03	52	21	18	53			
2	211	58.0		26.2	125	41.5	95	-23	01.7	34	56	28	12	49	14	46	53		34	54			
3	226	58.2		27.2	140	10.0	95		05.0	33	54	32	14	49		32	52	21	49	53			
4	241	58.4		28.2	154	38.5	95		08.1	31	52	36	16	49		20	52	22	01	53			
5	256	58.7	-0	29.1	169	07.1	96	-23	11.1	30	50	4	39	5	49	14	09	52	22	12	53		
6	271	58.9	-0	30.1	183	35.6	95	-23	14.1	30	45	4	46	5	49	13	46	52	22	35	53		
7	286	59.1		31.1	198	04.1	95		16.8	27	40	51	22	49		28	52	22	54	52			
8	301	59.3		32.1	212	32.7	96		19.5	27	35	55	24	49	13	12	52	23	09	52			
9	316	59.5		33.0	227	01.3	96		22.0	25	30	4	58	25	49	12	59	52		22	52		
10	331	59.7		34.0	241	29.9	96		24.4	24	20	5	02	27	49		36	52	23	45	52		
11	347	00.0	-0	35.0	255	58.5	96	-23	26.7	23	10 N	5	04	5	49	12	17	52	**	**	**		
12	2	00.2	-0	36.0	270	27.1	96	-23	28.9	22	0	5	04	5	49	11	59	51	**	**	**		
13	17	00.4		36.9	284	55.8	97		30.9	20	10 S		03	27	48		40	52	**	**	**		
14	32	00.6		37.9	299	24.4	96		32.9	20	20	5	00	26	48	11	21	51		0	08	54	
15	47	00.8		38.9	313	53.1	97		34.6	17	30	4	55	23	47	10	59	50		30	54		
16	62	01.1		39.8	328	21.8	97		36.3	17	35		52	21	47		46	50		43	55		
17	77	01.3	-0	40.8	342	50.5	97	-23	37.9	16	40	4	47	5	46	10	30	51		0	58	55	
18	92	01.5	-0	41.8	357	19.3	98	-23	39.3	14	45	4	42	5	45	10	13	49		1	15	57	
19	107	01.7		42.8	11	48.0	97		40.6	13	50		34	12	45		9	50	49		37	57	
20	122	01.9		43.7	26	16.8	98		41.8	12	52		31	10	44		40	49		48	57		
21	137	02.1		44.7	40	45.6	98		42.8	10	54		26	08	44		28	48		1	59	59	
22	152	02.4		45.7	55	14.4	98		43.8	10	56		22	06	43		9	14	48		2	13	59
23	167	02.6		46.7	69	43.3	99		44.6	8	58		16	03	43		8	58	47		29	60	
24	182	02.8	-0	47.6	84	12.1	98	-23	45.2	6	60 S	4	10	5	42	8	39	46		2	48	61	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 44 ^m 5		Mag: -3.9 PMG: 10 ^h 12 ^m			Mag: -0.5 PMG: 18 ^h 25 ^m			Mag: -2.2 PMG: 6 ^h 45 ^m			Mag: 0.0 PMG: 4 ^h 43 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	2	53.5	207	03.1	+11	09.0	83	32.9	-26	13.7	258	31.9	+22	35.9	288	59.8	+20	47.1
1	17	56.0	222	02.6		08.0	98	33.8		13.6	273	34.1		35.8	304	02.3		47.1
2	32	58.5	237	02.2		07.0	113	34.6		13.4	288	36.2		35.8	319	04.7		47.1
3	48	00.9	252	01.7		06.0	128	35.5		13.3	303	38.4		35.8	334	07.2		47.1
4	63	03.4	267	01.2		04.9	143	36.3		13.1	318	40.5		35.8	349	09.6		47.1
5	78	05.9	282	00.8	+11	03.9	158	37.1	-26	13.0	333	42.7	+22	35.7	4	12.1	+20	47.1
6	93	08.3	297	00.3	+11	02.9	173	38.0	-26	12.8	348	44.8	+22	35.7	19	14.5	+20	47.1
7	108	10.8	311	59.8		01.8	188	38.8		12.6	3	47.0		35.7	34	17.0		47.1
8	123	13.3	326	59.4	+11	00.8	203	39.7		12.5	18	49.1		35.7	49	19.4		47.1
9	138	15.7	341	58.9	+10	59.8	218	40.5		12.3	33	51.3		35.6	64	21.9		47.1
10	153	18.2	356	58.5		58.8	233	41.3		12.2	48	53.4		35.6	79	24.3		47.1
11	168	20.7	11	58.0	+10	57.7	248	42.2	-26	12.0	63	55.6	+22	35.6	94	26.8	+20	47.1
12	183	23.1	26	57.5	+10	56.7	263	43.0	-26	11.8	78	57.7	+22	35.6	109	29.2	+20	47.1
13	198	25.6	41	57.1		55.7	278	43.8		11.7	93	59.9		35.5	124	31.7		47.1
14	213	28.0	56	56.6		54.6	293	44.7		11.5	109	02.0		35.5	139	34.1		47.1
15	228	30.5	71	56.1		53.6	308	45.5		11.4	124	04.2		35.5	154	36.6		47.1
16	243	33.0	86	55.7		52.5	323	46.3		11.2	139	06.3		35.5	169	39.0		47.0
17	258	35.4	101	55.2	+10	51.5	338	47.2	-26	11.0	154	08.5	+22	35.4	184	41.5	+20	47.0
18	273	37.9	116	54.7	+10	50.5	353	48.0	-26	10.9	169	10.6	+22	35.4	199	43.9	+20	47.0
19	288	40.4	131	54.3		49.4	8	48.8		10.7	184	12.8		35.4	214	46.4		47.0
20	303	42.8	146	53.8		48.4	23	49.7		10.6	199	14.9		35.4	229	48.9		47.0
21	318	45.3	161	53.4		47.4	38	50.5		10.4	214	17.1		35.3	244	51.3		47.0
22	333	47.8	176	52.9		46.3	53	51.3		10.2	229	19.2		35.3	259	53.8		47.0
23	348	50.2	191	52.4		45.3	68	52.2		10.1	244	21.4		35.3	274	56.2		47.0
24	3	52.7	206	52.0	+10	44.2	83	53.0	-26	09.9	259	23.5	+22	35.3	289	58.7	+20	47.0
Dif	—		-5	-10			+8	+2			+22	0			+25	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 51 ^m 6			Edad: 7 ^d 6 SD: 15°1 PMG: 19 ^h 02 ^m	PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 R°: 50 ^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	182	02.8	-0 47.6	84	12.1	-23 45.2	6	60 N	17 51	18 32	19 21	16 15 36	21 51 67	
1	197	03.0	48.6	98	41.0	45.8	5	58	51	30	16	15 55 38	22 11 65	
2	212	03.2	49.6	113	10.0	46.3	5	56	51	28	12	39 39	28 62	
3	227	03.4	50.6	127	38.9	46.6	3	54	51	26	08	24 41	42 61	
4	242	03.6	51.5	142	07.9	46.8	2	52	51	25	05	12 42	22 54 60	
5	257	03.9	-0 52.5	156	36.9	46.9	1	50	17 52	18 24	19 02	15 01 43	23 05 59	
6	272	04.1	-0 53.5	171	05.9	46.8	1	45	17 52	18 21	18 55	14 38 44	23 28 57	
7	287	04.3	54.5	185	35.0	46.7	1	40	52	19	51	20 45	23 46 56	
8	302	04.5	55.4	200	04.1	46.4	3	35	53	18	47	14 04 47	** ** *	
9	317	04.7	56.4	214	33.2	46.0	4	30	53	17	45	13 51 47	** ** *	
10	332	04.9	57.4	229	02.4	45.5	5	20	54	16	41	28 48	** ** *	
11	347	05.2	-0 58.4	243	31.6	44.9	6	10 N	17 54	18 15	18 40	13 09 49	0 05 51	
12	2	05.4	-0 59.3	258	00.8	44.1	8	0	17 55	18 16	18 40	12 50 50	0 24 50	
13	17	05.6	-1 00.3	272	30.1	43.2	9	10 S	56	17	41	32 51	0 42 51	
14	32	05.8	01.3	286	59.3	42.3	9	20	57	19	44	12 12 52	1 02 50	
15	47	06.0	02.2	301	28.7	41.2	11	30	58	22	50	11 49 53	24 50	
16	62	06.2	03.2	315	58.0	39.9	13	35	17 59	24	54	36 53	38 49	
17	77	06.5	-1 04.2	330	27.4	38.6	13	40	18 00	18 27	18 58	11 21 54	1 53 49	
18	92	06.7	-1 05.2	344	56.8	37.2	14	45	18 01	18 30	19 05	11 02 55	2 12 48	
19	107	06.9	06.1	359	26.3	35.6	16	50	02	34	13	10 39 57	34 48	
20	122	07.1	07.1	13	55.8	33.9	17	52	03	36	17	29 56	45 47	
21	137	07.3	08.1	28	25.3	32.1	18	54	03	39	21	16 58	2 58 46	
22	152	07.5	09.1	42	54.9	30.2	19	56	04	41	26	10 02 58	3 12 46	
23	167	07.7	10.0	57	24.5	28.2	20	58	05	44	32	9 45 60	29 45	
24	182	08.0	-1 11.0	71	54.2	26.0	22	60 S	18 06	18 48	19 38	9 25 61	3 49 44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 40 ^m 6		Mag: -3.9 PMG: 10 ^h 13 ^m		Mag: -0.5 PMG: 18 ^h 23 ^m		Mag: -2.2 PMG: 6 ^h 41 ^m		Mag: 0.0 PMG: 4 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	3	52.7	206	52.0	+10	44.2	83	53.0	-26	09.9	259	23.5	+22	35.3	289	58.7	+20	47.0
1	18	55.2	221	51.5		43.2	98	53.8		09.7	274	25.7		35.2	305	01.1		47.0
2	33	57.6	236	51.1		42.2	113	54.7		09.6	289	27.8		35.2	320	03.6		47.0
3	49	00.1	251	50.6		41.1	128	55.5		09.4	304	30.0		35.2	335	06.0		47.0
4	64	02.5	266	50.1		40.1	143	56.3		09.2	319	32.2		35.2	350	08.5		47.0
5	79	05.0	281	49.7	+10	39.0	158	57.2	-26	09.1	334	34.3	+22	35.1	5	10.9	+20	47.0
6	94	07.5	296	49.2	+10	38.0	173	58.0	-26	08.9	349	36.5	+22	35.1	20	13.4	+20	47.0
7	109	09.9	311	48.8		36.9	188	58.8		08.7	4	38.6		35.1	35	15.8		47.0
8	124	12.4	326	48.3		35.9	203	59.6		08.6	19	40.8		35.1	50	18.3		47.0
9	139	14.9	341	47.8		34.9	219	00.5		08.4	34	42.9		35.0	65	20.8		47.0
10	154	17.3	356	47.4		33.8	234	01.3		08.2	49	45.1		35.0	80	23.2		47.0
11	169	19.8	11	46.9	+10	32.8	249	02.1	-26	08.1	64	47.2	+22	35.0	95	25.7	+20	47.0
12	184	22.3	26	46.5	+10	31.7	264	03.0	-26	07.9	79	49.4	+22	35.0	110	28.1	+20	47.0
13	199	24.7	41	46.0		30.7	279	03.8		07.7	94	51.6		34.9	125	30.6		47.0
14	214	27.2	56	45.5		29.6	294	04.6		07.6	109	53.7		34.9	140	33.0		47.0
15	229	29.7	71	45.1		28.6	309	05.4		07.4	124	55.9		34.9	155	35.5		47.0
16	244	32.1	86	44.6		27.5	324	06.3		07.2	139	58.0		34.9	170	38.0		46.9
17	259	34.6	101	44.2	+10	26.5	339	07.1	-26	07.1	155	00.2	+22	34.8	185	40.4	+20	46.9
18	274	37.0	116	43.7	+10	25.4	354	07.9	-26	06.9	170	02.3	+22	34.8	200	42.9	+20	46.9
19	289	39.5	131	43.3		24.4	9	08.7		06.7	185	04.5		34.8	215	45.3		46.9
20	304	42.0	146	42.8		23.3	24	09.6		06.6	200	06.7		34.8	230	47.8		46.9
21	319	44.4	161	42.3		22.3	39	10.4		06.4	215	08.8		34.7	245	50.2		46.9
22	334	46.9	176	41.9		21.2	54	11.2		06.2	230	11.0		34.7	260	52.7		46.9
23	349	49.4	191	41.4		20.2	69	12.0		06.0	245	13.1		34.7	275	55.2		46.9
24	4	51.8	206	41.0	+10	19.1	84	12.8	-26	05.9	260	15.3	+22	34.7	290	57.6	+20	46.9
Dif	—		-5	-10		+8	+2			+22	0			+25				

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 9 ^d 6 PHE	SD: 14'8	PMG: 20 ^h 40 ^m	4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 Rº: 45 ^m			Civil		Náutico	Hora	Rº	Hora	Rº			
	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	182	13.1	-1	34.4	59	58.7	-22 02.0	60 N	17 45	18 26	19 15	17 15 16	** ** *	** ** *				
1	197	13.3		35.4	74	29.5 ¹¹⁸	-21 57.2 48	58	45	24	10	17 00 20	** ** *	** ** *				
2	212	13.5		36.3	89	00.3 ¹¹⁸	52.3 49	56	46	23	06	16 48 22	** ** *	** ** *				
3	227	13.7		37.3	103	31.2 ¹¹⁹	47.3 50	54	46	21	03	37 24	** ** *	** ** *				
4	242	13.9		38.3	118	02.1 ¹¹⁹	42.2 51	52	47	20	19 00	27 26	** ** *	** ** *				
5	257	14.2	-1	39.2	132	33.0 ¹¹⁹	-21 37.0 52	50	17 47	18 19	18 57	16 18 28	0 04	63				
6	272	14.4	-1	40.2	147	04.0 ¹²⁰	-21 31.7 53	45	17 48	18 17	18 51	16 00 31	0 25	60				
7	287	14.6		41.2	161	35.1 ¹²¹	26.3 54	40	49	16	47	15 44 34	42	57				
8	302	14.8		42.2	176	06.2 ¹²¹	20.8 55	35	50	15	44	32 36	0 56	56				
9	317	15.0		43.1	190	37.3 ¹²¹	15.2 56	30	50	14	42	20 38	1 08	54				
10	332	15.2		44.1	205	08.5 ¹²²	09.5 57	20	52	14	39	15 01 41	29	51				
11	347	15.4	-1	45.1	219	39.8 ¹²³	-21 03.8 59	10 N	17 53	18 14	18 38	14 44 44	1 47	49				
12	2	15.6	-1	46.1	234	11.1 ¹²³	-20 57.9 57	0	17 54	18 15	18 39	14 28 46	2 04	47				
13	17	15.9		47.0	248	42.5 ¹²⁴	51.9 60	10 S	56	17	41	14 13 48	20	46				
14	32	16.1		48.0	263	13.9 ¹²⁴	45.9 60	20	57	19	45	13 56 51	38	43				
15	47	16.3		49.0	277	45.3 ¹²⁴	39.7 62	30	17 59	23	51	36 54	2 59	40				
16	62	16.5		50.0	292	16.8 ¹²⁵	33.5 62	35	18 00	26	18 55	25 56	3 11	38				
17	77	16.7	-1	50.9	306	48.4 ¹²⁶	-20 27.2 63	40	18 01	18 29	19 00	13 12 58	3 24	37				
18	92	16.9	-1	51.9	321	20.0 ¹²⁶	-20 20.8 64	45	18 03	18 32	19 07	12 56 61	3 41	34				
19	107	17.1		52.9	335	51.6 ¹²⁶	14.3 65	50	05	37	16	37 64	4 00	31				
20	122	17.3		53.8	350	23.3 ¹²⁷	07.7 66	52	06	40	20	28 66	10	29				
21	137	17.5		54.8	4	55.1 ¹²⁸	-20 01.0 67	54	07	42	25	18 67	20	28				
22	152	17.8		55.8	19	26.9 ¹²⁸	-19 54.2 68	56	08	45	30	12 06 70	32	26				
23	167	18.0		56.8	33	58.7 ¹²⁸	47.4 68	58	09	49	37	11 53 72	4 46	23				
24	182	18.2	-1	57.7	48	30.6 ¹²⁹	-19 40.4 70	60 S	18 11	18 53	19 44	11 37 76	5 02	20				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 32 ^m 7		Mag: -3.9 PMG: 10 ^h 14 ^m		Mag: -0.4 PMG: 18 ^h 21 ^m		Mag: -2.3 PMG: 6 ^h 35 ^m		Mag: 0.0 PMG: 4 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	5	51.0	206	30.1	+9	53.7	84	32.5	-26	01.7	261	07.2	+22	34.1	291	56.7	+20	46.8
1	20	53.4	221	29.7		52.6	99	33.3		01.5	276	09.4		34.0	306	59.1		46.8
2	35	55.9	236	29.2		51.6	114	34.1		01.3	291	11.6		34.0	322	01.6		46.8
3	50	58.4	251	28.8		50.5	129	34.9		01.1	306	13.7		34.0	337	04.1		46.8
4	66	00.8	266	28.4		49.4	144	35.7		00.9	321	15.9		34.0	352	06.5		46.8
5	81	03.3	281	27.9	+9	48.4	159	36.5	-26	00.8	336	18.1	+22	33.9	7	09.0	+20	46.8
6	96	05.8	296	27.5	+9	47.3	174	37.3	-26	00.6	351	20.2	+22	33.9	22	11.5	+20	46.8
7	111	08.2	311	27.0		46.2	189	38.2		00.4	6	22.4		33.9	37	13.9		46.8
8	126	10.7	326	26.6		45.2	204	39.0	-26	00.2	21	24.6		33.9	52	16.4		46.8
9	141	13.1	341	26.1		44.1	219	39.8	-26	00.0	36	26.7		33.8	67	18.9		46.7
10	156	15.6	356	25.7		43.0	234	40.6	-25	59.9	51	28.9		33.8	82	21.3		46.7
11	171	18.1	11	25.2	+9	42.0	249	41.4	-25	59.7	66	31.1	+22	33.8	97	23.8	+20	46.7
12	186	20.5	26	24.8	+9	40.9	264	42.2	-25	59.5	81	33.3	+22	33.8	112	26.3	+20	46.7
13	201	23.0	41	24.3		39.8	279	43.0		59.3	96	35.4		33.7	127	28.7		46.7
14	216	25.5	56	23.9		38.7	294	43.8		59.1	111	37.6		33.7	142	31.2		46.7
15	231	27.9	71	23.4		37.7	309	44.6		58.9	126	39.8		33.7	157	33.7		46.7
16	246	30.4	86	23.0		36.6	324	45.4		58.8	141	41.9		33.7	172	36.1		46.7
17	261	32.9	101	22.6	+9	35.5	339	46.2	-25	58.6	156	44.1	+22	33.7	187	38.6	+20	46.7
18	276	35.3	116	22.1	+9	34.4	354	47.0	-25	58.4	171	46.3	+22	33.6	202	41.1	+20	46.7
19	291	37.8	131	21.7		33.4	9	47.9		58.2	186	48.5		33.6	217	43.5		46.7
20	306	40.2	146	21.2		32.3	24	48.7		58.0	201	50.6		33.6	232	46.0		46.7
21	321	42.7	161	20.8		31.2	39	49.5		57.8	216	52.8		33.6	247	48.5		46.7
22	336	45.2	176	20.3		30.1	54	50.3		57.6	231	55.0		33.5	262	50.9		46.7
23	351	47.6	191	19.9		29.1	69	51.1		57.5	246	57.1		33.5	277	53.4		46.7
24	6	50.1	206	19.4	+9	28.0	84	51.9	-25	57.3	261	59.3	+22	33.5	292	55.9	+20	46.7
Dif	—		-4	-11		+8	+2		+22	0		+25	0					0

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: 10 ^d 6 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 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	182	18.2	-1	57.7	48	30.6	-19	40.4	70	60 N	4	28	5	17	5	58	17	31
1	197	18.4		58.7	63	02.6		33.4	70	58	32	18		58		20	14	
2	212	18.6	-1	59.7	77	34.6		26.3	71	56	36	20		57		10	17	
3	227	18.8	-2	00.7	92	06.6		19.1	72	54	40	21		56		17	01	
4	242	19.0		01.6	106	38.7		11.8	73	52	43	22		56		16	53	
5	257	19.2	-2	02.6	121	10.8	-19	04.5	73	50	4	45	5	23	5	55	16	46
6	272	19.4	-2	03.6	135	43.0	-18	57.0	75	45	4	51	5	25	5	54	16	31
7	287	19.7		04.5	150	15.3		49.5	75	40	55	26		53		18	30	
8	302	19.9		05.5	164	47.6		41.9	76	35	4	58	27	52		16	08	
9	317	20.1		06.5	179	19.9		34.2	77	30	5	00	28	52		15	58	
10	332	20.3		07.5	193	52.3		26.4	78	20	03	28		50		42	38	
11	347	20.5	-2	08.4	208	24.7	-18	18.6	78	10 N	5	03	5	28	5	49	15	28
12	2	20.7	-2	09.4	222	57.2	-18	10.7	79	0	5	03	5	27	5	47	15	14
13	17	20.9		10.4	237	29.7	-18	02.7	80	10 S	5	00	25	46		15	01	
14	32	21.1		11.3	252	02.3	-17	54.6	81	20	4	56	22	44		14	47	
15	47	21.3		12.3	266	34.9		46.5	81	30	50	18		42		30	54	
16	62	21.5		13.3	281	07.6		38.2	83	35	46	16		41		21	56	
17	77	21.7	-2	14.3	295	40.3	-17	29.9	83	40	4	41	5	12	5	39	14	10
18	92	22.0	-2	15.2	310	13.1	-17	21.6	83	45	4	34	5	08	5	38	13	57
19	107	22.2		16.2	324	45.9		13.1	85	50	25	03	36	41	66	31	26	
20	122	22.4		17.2	339	18.7	-17	04.6	85	52	21	5	01	35		34	67	
21	137	22.6		18.2	353	51.6	-16	56.0	86	54	16	4	58	34		25	70	
22	152	22.8		19.1	8	24.6		47.3	87	56	10	55	33			16	72	
23	167	23.0		20.1	22	57.5		38.6	87	58	4	04	52	31		13	05	
24	182	23.2	-2	21.1	37	30.6	-16	29.8	88	60 S	3	57	4	48	5	30	12	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 28 ^m 8		Mag: -3.9 PMG: 10 ^h 15 ^m		Mag: -0.4 PMG: 18 ^h 20 ^m		Mag: -2.3 PMG: 6 ^h 31 ^m		Mag: 0.0 PMG: 4 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	50.1	206	19.4	+9	28.0	261	59.3	+22	33.5
1	21	52.6	221	19.0		26.9	99	52.7		33.5
2	36	55.0	236	18.6		25.8	114	53.5		33.4
3	51	57.5	251	18.1		24.8	129	54.3		33.4
4	67	00.0	266	17.7		23.7	144	55.1		33.4
5	82	02.4	281	17.2	+9	22.6	159	55.9	-25	56.3
6	97	04.9	296	16.8	+9	21.5	174	56.7	-25	56.1
7	112	07.4	311	16.4		20.4	189	57.5		56.0
8	127	09.8	326	15.9		19.4	204	58.3		55.8
9	142	12.3	341	15.5		18.3	219	59.1		55.6
10	157	14.7	356	15.0		17.2	234	59.9		55.4
11	172	17.2	11	14.6	+9	16.1	250	00.7	-25	55.2
12	187	19.7	26	14.2	+9	15.0	265	01.5	-25	55.0
13	202	22.1	41	13.7		13.9	280	02.3		54.8
14	217	24.6	56	13.3		12.9	295	03.1		54.6
15	232	27.1	71	12.8		11.8	310	03.9		54.4
16	247	29.5	86	12.4		10.7	325	04.7		54.2
17	262	32.0	101	12.0	+9	09.6	340	05.5	-25	54.1
18	277	34.5	116	11.5	+9	08.5	355	06.3	-25	53.9
19	292	36.9	131	11.1		07.4	10	07.1		53.7
20	307	39.4	146	10.6		06.3	25	07.9		53.5
21	322	41.9	161	10.2		05.3	40	08.7		53.3
22	337	44.3	176	09.8		04.2	55	09.5		53.1
23	352	46.8	191	09.3		03.1	70	10.3		52.9
24	7	49.2	206	08.9	+9	02.0	85	11.1	-25	52.7
Dif	—		-4		-11		+8		+2	
									+22	
									0	
									+25	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 3			Edad: 11 ^d 6 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	
0	182	23.2	-2	21.1	37	30.6	-16 29.8	60 N	17 39	18 20	19 09	17 42	9	
1	197	23.4		22.0	52	03.6 ¹⁴⁰	20.9 ⁸⁹	58	40	19	04	34	12	
2	212	23.6		23.0	66	36.8 ¹⁴²	12.0 ⁸⁹	56	41	17	01 01	27	14	
3	227	23.8		24.0	81	09.9 ¹⁴¹	-16 03.0 ⁹⁰	54	41	16	18 58	20	16	
4	242	24.0		25.0	95	43.1 ¹⁴²	-15 53.9 ⁹¹	52	42	16	55	14	19	
5	257	24.3	-2	25.9	110	16.4 ¹⁴³	-15 44.8 ⁹¹	50	17 43	18 15	18 52	17 09	20	
6	272	24.5	-2	26.9	124	49.6 ¹⁴²	-15 35.6 ⁹²	45	17 44	18 14	18 48	16 58	23	
7	287	24.7		27.9	139	23.0 ¹⁴⁴	26.3 ⁹³	40	46	13	44	48	27	
8	302	24.9		28.8	153	56.3 ¹⁴³	16.9 ⁹⁴	35	47	12	41	40	29	
9	317	25.1		29.8	168	29.7 ¹⁴⁴	-15 07.5 ⁹⁴	30	48	12	40	33	31	
10	332	25.3		30.8	183	03.2 ¹⁴⁵	-14 58.1 ⁹⁴	20	50	12	37	20	36	
11	347	25.5	-2	31.8	197	36.7 ¹⁴⁵	-14 48.6 ⁹⁵	10 N	17 52	18 13	18 37	16 09	39	
12	2	25.7	-2	32.7	212	10.2 ¹⁴⁵	-14 39.0 ⁹⁶	0	17 54	18 14	18 38	15 59	42	
13	17	25.9		33.7	226	43.8 ¹⁴⁶	29.3 ⁹⁷	10 S	55	16	41	48	46	
14	32	26.1		34.7	241	17.4 ¹⁴⁶	19.6 ⁹⁷	20	17 58	20	45	37	50	
15	47	26.3		35.6	255	51.0 ¹⁴⁶	-14 09.8 ⁹⁸	30	18 00	24	52	24	54	
16	62	26.5		36.6	270	24.7 ¹⁴⁷	-14 00.0 ⁹⁸	35	02	27	18 57	17	56	
17	77	26.7	-2	37.6	284	58.4 ¹⁴⁷	-13 50.1 ⁹⁹	40	18 03	18 31	19 03	15 09	58	
18	92	26.9	-2	38.6	299	32.2 ¹⁴⁸	-13 40.2 ⁹⁹	45	18 06	18 35	19 10	14 59	62	
19	107	27.2		39.5	314	05.9 ¹⁴⁷	30.2 ¹⁰⁰	50	08	41	19	47	66	
20	122	27.4		40.5	328	39.8 ¹⁴⁹	20.1 ¹⁰¹	52	09	43	24	41	68	
21	137	27.6		41.5	343	13.6 ¹⁴⁸	-13 10.0 ¹⁰¹	54	10	46	29	35	70	
22	152	27.8		42.4	357	47.5 ¹⁴⁹	-12 59.8 ¹⁰²	56	12	50	35	28	72	
23	167	28.0		43.4	12	21.4 ¹⁴⁹	49.6 ¹⁰²	58	13	53	42	20	75	
24	182	28.2	-2	44.4	26	55.4 ¹⁵⁰	-12 39.3 ¹⁰³	60 S	18 15	18 58	19 49	14 11	78	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 23 ^h 24 ^m 9		Mag: -3.9 PMG: 10 ^h 16 ^m		Mag: -0.4 PMG: 18 ^h 18 ^m		Mag: -2.3 PMG: 6 ^h 28 ^m		Mag: 0.0 PMG: 4 ^h 24 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	7	49.2	206	08.9	+9	02.0	262	51.6	+22	32.9		
1	22	51.7	221	08.5	+9	00.9	277	53.8	32.9	308	57.6	
2	37	54.2	236	08.0	+8	59.8	292	55.9	32.9	324	00.1	
3	52	56.6	251	07.6		58.7	307	58.1	32.8	339	02.6	
4	67	59.1	266	07.1		57.6	323	00.3	32.8	354	05.1	
5	83	01.6	281	06.7	+8	56.5	338	02.5	+22	32.8	9	07.5
6	98	04.0	296	06.3	+8	55.5	353	04.7	+22	32.8	24	10.0
7	113	06.5	311	05.8		54.4	8	06.8	32.7	39	12.5	
8	128	09.0	326	05.4		53.3	23	09.0	32.7	54	15.0	
9	143	11.4	341	05.0		52.2	38	11.2	32.7	69	17.4	
10	158	13.9	356	04.5		51.1	53	13.4	32.7	84	19.9	
11	173	16.3	11	04.1	+8	50.0	68	15.6	+22	32.7	99	22.4
12	188	18.8	26	03.7	+8	48.9	83	17.8	+22	32.6	114	24.9
13	203	21.3	41	03.2		47.8	98	19.9	32.6	129	27.3	
14	218	23.7	56	02.8		46.7	113	22.1	32.6	144	29.8	
15	233	26.2	71	02.4		45.6	128	24.3	32.6	159	32.3	
16	248	28.7	86	01.9		44.5	143	26.5	32.5	174	34.8	
17	263	31.1	101	01.5	+8	43.4	158	28.7	+22	32.5	189	37.2
18	278	33.6	116	01.1	+8	42.3	173	30.9	+22	32.5	204	39.7
19	293	36.1	131	00.6		41.2	188	33.1	32.5	219	42.2	
20	308	38.5	146	00.2		40.1	203	35.2	32.4	234	44.7	
21	323	41.0	160	59.8		39.0	218	37.4	32.4	249	47.1	
22	338	43.5	175	59.3		37.9	233	39.6	32.4	264	49.6	
23	353	45.9	190	58.9		36.8	248	41.8	32.4	279	52.1	
24	8	48.4	205	58.5	+8	35.7	263	44.0	+22	32.4	294	54.6
Dif	—		-4	-11	+8	+2	+22	0		+25	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 0			Edad: 12 ^d 6 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	182	28.2	-2	26	55.4	-12	39.3	60 N	4 33	5 22	6 03	17 51	7	2 49	78
1	197	28.4		41	29.4 ¹⁵⁰		29.0 ¹⁰³	58	37	23	02	46	9	2 56	75
2	212	28.6		56	03.4 ¹⁵⁰		18.6 ¹⁰⁴	56	40	24	01	41	12	3 03	72
3	227	28.8		70	37.5 ¹⁵¹	-12	08.2 ¹⁰⁴	54	43	25	6 00	36	15	08	70
4	242	29.0		85	11.5 ¹⁵⁰	-11	57.7 ¹⁰⁵	52	46	26	5 59	33	16	14	68
5	257	29.2	-2	99	45.7 ¹⁵²	-11	47.1 ¹⁰⁶	50	4 49	5 26	5 58	17 29	18	3 18	66
6	272	29.4	-2	114	19.8 ¹⁵¹	-11	36.6 ¹⁰⁵	45	4 53	5 27	5 57	17 21	22	3 28	62
7	287	29.6		128	54.0 ¹⁵²		25.9 ¹⁰⁷	40	57	28	55	15	25	37	59
8	302	29.8		143	28.2 ¹⁵²		15.2 ¹⁰⁷	35	4 59	29	54	09	28	44	56
9	317	30.0		158	02.4 ¹⁵²	-11	04.5 ¹⁰⁷	30	5 01	29	53	17 04	31	3 50	54
10	332	30.2		172	36.7 ¹⁵³	-10	53.7 ¹⁰⁸	20	03	29	51	16 56	34	4 01	49
11	347	30.4	-2	187	11.0 ¹⁵³	-10	42.9 ¹⁰⁸	10 N	5 03	5 28	5 49	16 48	39	4 11	45
12	2	30.6	-2	201	45.3 ¹⁵³	-10	32.0 ¹⁰⁹	0	5 02	5 26	5 47	16 41	42	4 19	43
13	17	30.9		216	19.6 ¹⁵³		21.1 ¹⁰⁹	10 S	4 59	24	45	34	46	28	39
14	32	31.1		230	54.0 ¹⁵⁴	-10	10.2 ¹⁰⁹	20	55	20	42	27	49	37	36
15	47	31.3		245	28.4 ¹⁵⁴	-9	59.2 ¹¹⁰	30	48	16	40	18	53	48	31
16	62	31.5	-2	260	02.8 ¹⁵⁴		48.1 ¹¹¹	35	43	13	38	13	56	4 54	29
17	77	31.7	-3	274	37.2 ¹⁵⁴	-9	37.0 ¹¹¹	40	4 37	5 09	5 36	16 07	59	5 01	26
18	92	31.9	-3	289	11.7 ¹⁵⁵	-9	25.9 ¹¹¹	45	4 30	5 05	5 34	16 01	62	5 09	22
19	107	32.1		303	46.1 ¹⁵⁴		14.8 ¹¹¹	50	20	4 59	31	15	53	66	18
20	122	32.3		318	20.6 ¹⁵⁵	-9	03.5 ¹¹³	52	16	56	30	49	68	23	17
21	137	32.5		332	55.1 ¹⁵⁵	-8	52.3 ¹¹²	54	10	53	29	45	70	27	16
22	152	32.7		347	29.7 ¹⁵⁶		41.0 ¹¹³	56	4 04	50	27	40	73	33	13
23	167	32.9		2	04.2 ¹⁵⁵		29.7 ¹¹³	58	3 58	46	26	35	75	39	10
24	182	33.1	-3	16	38.8 ¹⁵⁶	-8	18.3 ¹¹⁴	60 S	3 50	4 42	5 24	15 29	78	5 45	8
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 20 ^m 9		Mag: -3.9 PMG: 10 ^h 16 ^m			Mag: -0.4 PMG: 18 ^h 17 ^m			Mag: -2.3 PMG: 6 ^h 24 ^m			Mag: -0.1 PMG: 4 ^h 20 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	8	48.4		205	58.5	+8	35.7	85	30.1	-25	47.9	263	44.0	+22	32.4
1	23	50.8		220	58.0		34.6	100	30.9		47.7	278	46.2		32.3
2	38	53.3		235	57.6		33.5	115	31.7		47.5	293	48.4		32.3
3	53	55.8		250	57.2		32.4	130	32.5		47.3	308	50.6		32.3
4	68	58.2		265	56.7		31.3	145	33.3		47.1	323	52.8		32.3
5	84	00.7		280	56.3	+8	30.2	160	34.0	-25	46.9	338	54.9	+22	32.2
6	99	03.2		295	55.9	+8	29.1	175	34.8	-25	46.7	353	57.1	+22	32.2
7	114	05.6		310	55.4		28.0	190	35.6		46.5	8	59.3		32.2
8	129	08.1		325	55.0		26.9	205	36.4		46.3	24	01.5		32.2
9	144	10.6		340	54.6		25.8	220	37.2		46.1	39	03.7		32.1
10	159	13.0		355	54.2		24.7	235	38.0		45.9	54	05.9		32.1
11	174	15.5		10	53.7	+8	23.6	250	38.8	-25	45.7	69	08.1	+22	32.1
12	189	17.9		25	53.3	+8	22.5	265	39.5	-25	45.5	84	10.3	+22	32.1
13	204	20.4		40	52.9		21.4	280	40.3		45.3	99	12.5		32.1
14	219	22.9		55	52.4		20.3	295	41.1		45.1	114	14.7		32.0
15	234	25.3		70	52.0		19.2	310	41.9		44.9	129	16.8		32.0
16	249	27.8		85	51.6		18.1	325	42.7		44.7	144	19.0		32.0
17	264	30.3		100	51.2	+8	17.0	340	43.5	-25	44.5	159	21.2	+22	32.0
18	279	32.7		115	50.7	+8	15.9	355	44.2	-25	44.2	174	23.4	+22	31.9
19	294	35.2		130	50.3		14.8	10	45.0		44.0	189	25.6		31.9
20	309	37.7		145	49.9		13.7	25	45.8		43.8	204	27.8		31.9
21	324	40.1		160	49.4		12.5	40	46.6		43.6	219	30.0		31.9
22	339	42.6		175	49.0		11.4	55	47.4		43.4	234	32.2		31.8
23	354	45.1		190	48.6		10.3	70	48.1		43.2	249	34.4		31.8
24	9	47.5		205	48.2	+8	09.2	85	48.9	-25	43.0	264	36.6	+22	31.8
Dif	—			-4		-11		+8		+2			+22		0
															+25

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 13 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4															
	PMG: 11 ^h 49 ^m 6		SD: 14'8 PMG: 23 ^h 33 ^m R°: 42 ^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	33.1	-3	07.7	16	38.8	-8 18.3	60 N	17 33	18 14	19 02	17 58	7	4 07 78				
1	197	33.3		08.6	31	13.4 ¹⁵⁶	-8 06.9 ¹¹⁴	58	34	13	18 59	55	10	11 75				
2	212	33.5		09.6	45	48.0 ¹⁵⁶	-7 55.5 ¹¹⁴	56	35	12	55	53	12	15 72				
3	227	33.7		10.6	60	22.7 ¹⁵⁷	44.0 ¹¹⁵	54	36	12	53	51	14	18 71				
4	242	33.9		11.5	74	57.3 ¹⁵⁶	32.5 ¹¹⁵	52	37	11	50	49	16	22 68				
5	257	34.1	-3	12.5	89	32.0 ¹⁵⁷	-7 21.0 ¹¹⁵	50	17 38	18 11	18 48	17 47	18	4 24 67				
6	272	34.3	-3	13.5	104	06.6 ¹⁵⁶	-7 09.4 ¹¹⁶	45	17 41	18 10	18 44	17 43	22	4 30 63				
7	287	34.5		14.5	118	41.3 ¹⁵⁷	-6 57.8 ¹¹⁶	40	42	09	41	40	25	36 58				
8	302	34.7		15.4	133	16.0 ¹⁵⁷	46.2 ¹¹⁶	35	44	09	39	37	28	40 56				
9	317	34.9		16.4	147	50.7 ¹⁵⁷	34.5 ¹¹⁷	30	46	09	37	35	30	44 53				
10	332	35.1		17.4	162	25.5 ¹⁵⁸	22.8 ¹¹⁷	20	48	10	36	30	35	50 49				
11	347	35.3	-3	18.3	177	00.2 ¹⁵⁷	-6 11.1 ¹¹⁷	10 N	17 51	18 12	18 36	17 27	38	4 56 45				
12	2	35.5	-3	19.3	191	34.9 ¹⁵⁷	-5 59.4 ¹¹⁷	0	17 53	18 14	18 38	17 23	42	5 02 41				
13	17	35.7		20.3	206	09.7 ¹⁵⁸	47.6 ¹¹⁸	10 S	55	16	41	20	45	07 38				
14	32	35.9		21.2	220	44.5 ¹⁵⁸	35.8 ¹¹⁸	20	17 58	20	46	16	49	13 34				
15	47	36.1		22.2	235	19.2 ¹⁵⁷	23.9 ¹¹⁹	30	18 01	25	53	11	54	19 30				
16	62	36.3		23.2	249	54.0 ¹⁵⁸	12.1 ¹¹⁸	35	03	29	18 58	09	56	23 27				
17	77	36.5	-3	24.1	264	28.8 ¹⁵⁸	-5 00.2 ¹¹⁹	40	18 05	18 33	19 05	17 06	59	5 27 24				
18	92	36.7	-3	25.1	279	03.6 ¹⁵⁸	-4 48.3 ¹¹⁹	45	18 08	18 38	19 13	17 03	62	5 31 22				
19	107	36.9		26.1	293	38.4 ¹⁵⁸	36.3 ¹²⁰	50	11	44	23	16 59	66	37 18				
20	122	37.1		27.0	308	13.2 ¹⁵⁸	24.4 ¹¹⁹	52	13	47	28	57	68	40 16				
21	137	37.3		28.0	322	48.0 ¹⁵⁸	12.4 ¹²⁰	54	14	50	33	55	70	43 13				
22	152	37.5		29.0	337	22.8 ¹⁵⁸	-4 00.4 ¹²⁰	56	16	54	40	53	72	46 11				
23	167	37.7		30.0	351	57.6 ¹⁵⁸	-3 48.4 ¹²⁰	58	18	18 58	47	50	75	49 10				
24	182	37.9	-3	30.9	6	32.4 ¹⁵⁸	-3 36.3 ¹²¹	60 S	18 20	19 03	19 55	16 47	79	5 53 7				
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 23 ^h 17 ^m 0		Mag: -3.9 PMG: 10 ^h 17 ^m		Mag: -0.4 PMG: 18 ^h 16 ^m		Mag: -2.3 PMG: 6 ^h 21 ^m			Mag: -0.1 PMG: 4 ^h 16 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	9	47.5	205	48.2	+8	09.2	85	48.9	-25	43.0	264	36.6	+22	31.8	295	54.1	+20	46.2
1	24	50.0	220	47.7		08.1	100	49.7		42.8	279	38.8		31.8	310	56.6		46.2
2	39	52.4	235	47.3		07.0	115	50.5		42.6	294	41.0		31.8	325	59.1		46.2
3	54	54.9	250	46.9		05.9	130	51.3		42.4	309	43.2		31.7	341	01.6		46.2
4	69	57.4	265	46.5		04.8	145	52.0		42.2	324	45.4		31.7	356	04.0		46.2
5	84	59.8	280	46.0	+8	03.7	160	52.8	-25	41.9	339	47.6	+22	31.7	11	06.5	+20	46.2
6	100	02.3	295	45.6	+8	02.5	175	53.6	-25	41.7	354	49.8	+22	31.7	26	09.0	+20	46.2
7	115	04.8	310	45.2		01.4	190	54.4		41.5	9	52.0		31.6	41	11.5		46.2
8	130	07.2	325	44.8	+8	00.3	205	55.2		41.3	24	54.2		31.6	56	14.0		46.2
9	145	09.7	340	44.3	+7	59.2	220	55.9		41.1	39	56.4		31.6	71	16.5		46.1
10	160	12.2	355	43.9		58.1	235	56.7		40.9	54	58.6		31.6	86	18.9		46.1
11	175	14.6	10	43.5	+7	57.0	250	57.5	-25	40.7	70	00.8	+22	31.6	101	21.4	+20	46.1
12	190	17.1	25	43.1	+7	55.9	265	58.3	-25	40.5	85	03.0	+22	31.5	116	23.9	+20	46.1
13	205	19.6	40	42.6		54.7	280	59.1		40.2	100	05.1		31.5	131	26.4		46.1
14	220	22.0	55	42.2		53.6	295	59.8		40.0	115	07.3		31.5	146	28.9		46.1
15	235	24.5	70	41.8		52.5	311	00.6		39.8	130	09.5		31.5	161	31.4		46.1
16	250	26.9	85	41.4		51.4	326	01.4		39.6	145	11.7		31.4	176	33.9		46.1
17	265	29.4	100	40.9	+7	50.3	341	02.2	-25	39.4	160	13.9	+22	31.4	191	36.3	+20	46.1
18	280	31.9	115	40.5	+7	49.2	356	02.9	-25	39.2	175	16.1	+22	31.4	206	38.8	+20	46.1
19	295	34.3	130	40.1		48.0	11	03.7		38.9	190	18.3		31.4	221	41.3		46.1
20	310	36.8	145	39.7		46.9	26	04.5		38.7	205	20.5		31.4	236	43.8		46.1
21	325	39.3	160	39.2		45.8	41	05.3		38.5	220	22.7		31.3	251	46.3		46.1
22	340	41.7	175	38.8		44.7	56	06.0		38.3	235	25.0		31.3	266	48.8		46.1
23	355	44.2	190	38.4		43.6	71	06.8		38.1	250	27.2		31.3	281	51.3		46.0
24	10	46.7	205	38.0	+7	42.4	86	07.6	-25	37.9	265	29.4	+22	31.3	296	53.8	+20	46.0
Dif	—		-4		-11		+8		+2		+22		0		+25		0	

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: 14 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	37.9	-3	30.9	6	32.4	-3	36.3	60 N	4	38	5	26	6	08	18	05
1	197	38.1		31.9	21	07.2 ¹⁵⁸		24.3 ¹²⁰	58	41	27		06		05	9	
2	212	38.3		32.9	35	42.1 ¹⁵⁹		12.2 ¹²¹	56	44	28		05		05	11	
3	227	38.5		33.8	50	16.9 ¹⁵⁸	-3	00.1 ¹²¹	54	47	28		04		05	13	
4	242	38.7		34.8	64	51.7 ¹⁵⁸	-2	48.0 ¹²¹	52	50	29		02		05	15	
5	257	38.9	-3	35.8	79	26.5 ¹⁵⁸	-2	35.9 ¹²¹	50	4	52	5	29	6	01	18	05
6	272	39.1	-3	36.7	94	01.3 ¹⁵⁸	-2	23.7 ¹²²	45	4	56	5	30	5	59	18	05
7	287	39.3		37.7	108	36.1 ¹⁵⁸	-2	11.6 ¹²¹	40	4	59		30	57		05	24
8	302	39.5		38.7	123	10.9 ¹⁵⁸	-1	59.4 ¹²²	35	5	01		30	55		05	27
9	317	39.7		39.6	137	45.7 ¹⁵⁸		47.2 ¹²²	30		02		30	54		05	30
10	332	39.9		40.6	152	20.5 ¹⁵⁸		35.0 ¹²²	20		04		29	51		05	34
11	347	40.1	-3	41.6	166	55.2 ¹⁵⁷	-1	22.8 ¹²²	10 N	5	03	5	28	5	49	18	05
12	2	40.3	-3	42.5	181	30.0 ¹⁵⁸	-1	10.5 ¹²³	0	5	01	5	25	5	46	18	05
13	17	40.5		43.5	196	04.8 ¹⁵⁸	-0	58.3 ¹²²	10 S	4	58		22	43		05	45
14	32	40.7		44.5	210	39.5 ¹⁵⁷		46.1 ¹²²	20		53		19	41		05	49
15	47	40.9		45.4	225	14.3 ¹⁵⁸		33.8 ¹²³	30		45		13	37		05	54
16	62	41.1		46.4	239	49.0 ¹⁵⁷		21.5 ¹²³	35		40		10	35		05	57
17	77	41.3	-3	47.4	254	23.7 ¹⁵⁷	-0	09.3 ¹²²	40	4	34	5	06	5	33	18	05
18	92	41.5	-3	48.3	268	58.4 ¹⁵⁷	+0	03.0 ¹²³	45	4	26	5	01	5	30	18	05
19	107	41.7		49.3	283	33.1 ¹⁵⁷		15.3 ¹²³	50		15	4	54	27		05	68
20	122	41.9		50.3	298	07.8 ¹⁵⁷		27.6 ¹²³	52		10		51	25		05	70
21	137	42.1		51.2	312	42.5 ¹⁵⁷		39.9 ¹²³	54	4	05		48	24		05	72
22	152	42.3		52.2	327	17.1 ¹⁵⁶	+0	52.2 ¹²³	56	3	59		44	22		05	74
23	167	42.5		53.2	341	51.8 ¹⁵⁷	+1	04.5 ¹²³	58		51		40	20		05	77
24	182	42.7	-3	54.1	356	26.4 ¹⁵⁶	+1	16.8 ¹²³	60 S	3	43	4	35	5	18	18	06
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 13 ^m 1		Mag: -3.9 PMG: 10 ^h 18 ^m			Mag: -0.3 PMG: 18 ^h 15 ^m			Mag: -2.3 PMG: 6 ^h 17 ^m			Mag: -0.1 PMG: 4 ^h 12 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'		
0	10	46.7	205	38.0	+7	42.4	86	07.6	-25	37.9	265	29.4	+22	31.3	296	53.8	
1	25	49.1	220	37.6		41.3	101	08.4		37.6	280	31.6		31.2	311	56.2	
2	40	51.6	235	37.1		40.2	116	09.1		37.4	295	33.8		31.2	326	58.7	
3	55	54.0	250	36.7		39.1	131	09.9		37.2	310	36.0		31.2	342	01.2	
4	70	56.5	265	36.3		38.0	146	10.7		37.0	325	38.2		31.2	357	03.7	
5	85	59.0	280	35.9	+7	36.8	161	11.4	-25	36.8	340	40.4	+22	31.2	12	06.2	
6	101	01.4	295	35.4	+7	35.7	176	12.2	-25	36.5	355	42.6	+22	31.1	27	08.7	
7	116	03.9	310	35.0		34.6	191	13.0		36.3	10	44.8		31.1	42	11.2	
8	131	06.4	325	34.6		33.5	206	13.8		36.1	25	47.0		31.1	57	13.7	
9	146	08.8	340	34.2		32.3	221	14.5		35.9	40	49.2		31.1	72	16.2	
10	161	11.3	355	33.8		31.2	236	15.3		35.7	55	51.4		31.1	87	18.6	
11	176	13.8	10	33.3	+7	30.1	251	16.1	-25	35.4	70	53.6	+22	31.0	102	21.1	
12	191	16.2	25	32.9	+7	29.0	266	16.8	-25	35.2	85	55.8	+22	31.0	117	23.6	
13	206	18.7	40	32.5		27.8	281	17.6		35.0	100	58.0		31.0	132	26.1	
14	221	21.2	55	32.1		26.7	296	18.4		34.8	116	00.2		31.0	147	28.6	
15	236	23.6	70	31.7		25.6	311	19.2		34.6	131	02.4		30.9	162	31.1	
16	251	26.1	85	31.2		24.5	326	19.9		34.3	146	04.6		30.9	177	33.6	
17	266	28.5	100	30.8	+7	23.3	341	20.7	-25	34.1	161	06.8	+22	30.9	192	36.1	
18	281	31.0	115	30.4	+7	22.2	356	21.5	-25	33.9	176	09.0	+22	30.9	207	38.6	
19	296	33.5	130	30.0		21.1	11	22.2		33.7	191	11.2		30.9	222	41.1	
20	311	35.9	145	29.6		20.0	26	23.0		33.4	206	13.5		30.8	237	43.5	
21	326	38.4	160	29.2		18.8	41	23.8		33.2	221	15.7		30.8	252	46.0	
22	341	40.9	175	28.7		17.7	56	24.5		33.0	236	17.9		30.8	267	48.5	
23	356	43.3	190	28.3		16.6	71	25.3		32.8	251	20.1		30.8	282	51.0	
24	11	45.8	205	27.9	+7	15.4	86	26.1	-25	32.5	266	22.3	+22	30.7	297	53.5	
Dif	—		-4 -11			+8 +2			+22 0			+25 0					

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: 15 ^d 6 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0 PMG: 0 ^h 15 ^m R°: 42 ^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	42.7	-3 54.1	356	26.4	+1 16.8	60 N	17 27	18 08	18 56	18 11 8	6 43 80		
1	197	42.9	55.1	11	01.0 ¹⁵⁶	29.1 ¹²³	58	28	07	53	14 10	42 77		
2	212	43.1	56.1	25	35.5 ¹⁵⁵	41.4 ¹²³	56	30	07	50	16 13	41 74		
3	227	43.3	57.0	40	10.1 ¹⁵⁶	+1 53.7 ¹²³	54	32	07	48	18 15	39 77		
4	242	43.5	58.0	54	44.6 ¹⁵⁵	+2 06.0 ¹²³	52	33	06	46	20 17	38 70		
5	257	43.7	-3 59.0	69	19.2 ¹⁵⁶	+2 18.3 ¹²³	50	17 34	18 06	18 44	18 22 19	6 37 68		
6	272	43.9	-3 59.9	83	53.7 ¹⁵⁵	+2 30.6 ¹²³	45	17 37	18 06	18 40	18 26 23	6 35 64		
7	287	44.1	-4 00.9	98	28.1 ¹⁵⁴	42.9 ¹²³	40	39	06	38	29 27	34 60		
8	302	44.3	01.9	113	02.6 ¹⁵⁵	+2 55.2 ¹²³	35	41	06	36	32 29	32 58		
9	317	44.5	02.8	127	37.0 ¹⁵⁴	+3 07.5 ¹²³	30	43	07	35	35 31	31 55		
10	332	44.7	03.8	142	11.4 ¹⁵⁴	19.8 ¹²³	20	46	08	34	39 36	29 50		
11	347	44.9	-4 04.8	156	45.8 ¹⁵⁴	+3 32.1 ¹²³	10 N	17 49	18 10	18 35	18 43 40	6 27 46		
12	2	45.1	-4 05.7	171	20.1 ¹⁵³	+3 44.3 ¹²²	0	17 52	18 13	18 37	18 47 43	6 25 42		
13	17	45.2	06.7	185	54.5 ¹⁵⁴	+3 56.6 ¹²³	10 S	55	16	41	50 48	23 39		
14	32	45.4	07.6	200	28.7 ¹⁵²	+4 08.8 ¹²²	20	17 59	21	46	54 52	21 35		
15	47	45.6	08.6	215	03.0 ¹⁵³	21.1 ¹²³	30	18 02	27	18 55	18 59 56	19 30		
16	62	45.8	09.6	229	37.2 ¹⁵²	33.3 ¹²²	35	05	30	19 00	19 02 58	17 28		
17	77	46.0	-4 10.5	244	11.4 ¹⁵²	+4 45.5 ¹²²	40	18 07	18 35	19 07	19 05 61	6 16 25		
18	92	46.2	-4 11.5	258	45.6 ¹⁵²	+4 57.7 ¹²²	45	18 10	18 40	19 15	19 08 65	6 14 22		
19	107	46.4	12.5	273	19.8 ¹⁵²	+5 09.9 ¹²²	50	14	47	26	13 69	12 18		
20	122	46.6	13.4	287	53.9 ¹⁵¹	22.1 ¹²²	52	16	50	32	15 70	11 16		
21	137	46.8	14.4	302	27.9 ¹⁵⁰	34.3 ¹²²	54	18	54	37	17 73	10 14		
22	152	47.0	15.4	317	02.0 ¹⁵¹	46.4 ¹²¹	56	20	18 58	44	19 76	09 12		
23	167	47.2	16.3	331	36.0 ¹⁵⁰	+5 58.6 ¹²²	58	22	19 02	19 52	22 78	08 9		
24	182	47.4	-4 17.3	346	09.9 ¹⁴⁹	+6 10.7 ¹²¹	60 S	18 25	19 08	20 01	19 25 81	6 06 7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 09 ^m 1		Mag: -3.9 PMG: 10 ^h 18 ^m			Mag: -0.3 PMG: 18 ^h 13 ^m			Mag: -2.3 PMG: 6 ^h 14 ^m			Mag: -0.1 PMG: 4 ^h 08 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'
0	11	45.8	205 27.9	+7 15.4	86 26.1	-25 32.5	266 22.3	+22 30.7	297 53.5	+20 45.9				
1	26	48.3	220 27.5	14.3	101 26.8	32.3	281 24.5	30.7	312 56.0	45.8				
2	41	50.7	235 27.1	13.2	116 27.6	32.1	296 26.7	30.7	327 58.5	45.8				
3	56	53.2	250 26.6	12.1	131 28.4	31.9	311 28.9	30.7	343 01.0	45.8				
4	71	55.6	265 26.2	10.9	146 29.1	31.6	326 31.1	30.7	358 03.5	45.8				
5	86	58.1	280 25.8	+7 09.8	161 29.9	-25 31.4	341 33.3	+22 30.6	13 06.0	+20 45.8				
6	102	00.6	295 25.4	+7 08.7	176 30.7	-25 31.2	356 35.6	+22 30.6	28 08.5	+20 45.8				
7	117	03.0	310 25.0	07.5	191 31.4	30.9	11 37.8	30.6	43 11.0	45.8				
8	132	05.5	325 24.6	06.4	206 32.2	30.7	26 40.0	30.6	58 13.5	45.8				
9	147	08.0	340 24.1	05.3	221 33.0	30.5	41 42.2	30.6	73 16.0	45.8				
10	162	10.4	355 23.7	04.1	236 33.7	30.3	56 44.4	30.5	88 18.5	45.8				
11	177	12.9	10 23.3	+7 03.0	251 34.5	-25 30.0	71 46.6	+22 30.5	103 20.9	+20 45.8				
12	192	15.4	25 22.9	+7 01.9	266 35.2	-25 29.8	86 48.8	+22 30.5	118 23.4	+20 45.8				
13	207	17.8	40 22.5	+7 00.7	281 36.0	29.6	101 51.0	30.5	133 25.9	45.8				
14	222	20.3	55 22.1	+6 59.6	296 36.8	29.3	116 53.3	30.5	148 28.4	45.7				
15	237	22.8	70 21.7	58.5	311 37.5	29.1	131 55.5	30.4	163 30.9	45.7				
16	252	25.2	85 21.2	57.3	326 38.3	28.9	146 57.7	30.4	178 33.4	45.7				
17	267	27.7	100 20.8	+6 56.2	341 39.1	-25 28.7	161 59.9	+22 30.4	193 35.9	+20 45.7				
18	282	30.1	115 20.4	+6 55.0	356 39.8	-25 28.4	177 02.1	+22 30.4	208 38.4	+20 45.7				
19	297	32.6	130 20.0	53.9	11 40.6	28.2	192 04.3	30.3	223 40.9	45.7				
20	312	35.1	145 19.6	52.8	26 41.3	28.0	207 06.5	30.3	238 43.4	45.7				
21	327	37.5	160 19.2	51.6	41 42.1	27.7	222 08.8	30.3	253 45.9	45.7				
22	342	40.0	175 18.8	50.5	56 42.9	27.5	237 11.0	30.3	268 48.4	45.7				
23	357	42.5	190 18.3	49.4	71 43.6	27.3	252 13.2	30.3	283 50.9	45.7				
24	12	44.9	205 17.9	+6 48.2	86 44.4	-25 27.0	267 15.4	+22 30.2	298 53.4	+20 45.7				
Dif	—		-4	-11	+8	+2	+22	0	+25	0				

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: 16 ^d 6 PHE { 4 ^h : 55'2 12 ^h : 55'3 20 ^h : 55'4 SD: 15'0 PMG: 0 ^h 57 ^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	m					
0	182	47.4	-4	17.3	346	09.9	+6	10.7	4	43	5	31	6	13	18	19	9	8	03	83	
1	197	47.6		18.3	0	43.9 ¹⁵⁰		22.8	46	31	11		24	13	7	59	79				
2	212	47.8		19.2	15	17.7 ¹⁴⁸		34.9	49	32	09		29	15	55	76					
3	227	48.0		20.2	29	51.6 ¹⁴⁹		46.9	51	32	07		33	18	52	73					
4	242	48.2		21.1	44	25.4 ¹⁴⁸		+6	53	32	06		37	20	48	72					
5	257	48.3	-4	22.1	58	59.2 ¹⁴⁸		+7	4	55	5	32	6	05	18	41	22	7	45	70	
6	272	48.5	-4	23.1	73	32.9 ¹⁴⁷		+7	4	58	5	32	6	02	18	49	26	7	39	66	
7	287	48.7		24.0	88	06.6 ¹⁴⁷		34.9	5	01	32	5	59	18	56	28	34	62			
8	302	48.9		25.0	102	40.2 ¹⁴⁶		46.9	02	32	57		19	01	32	30	58				
9	317	49.1		26.0	117	13.8 ¹⁴⁶		+7	03	31	55		06	34	26	56					
10	332	49.3		26.9	131	47.4 ¹⁴⁶		+8	04	30	52		15	39	19	52					
11	347	49.5	-4	27.9	146	20.9 ¹⁴⁵		+8	5	03	5	27	5	48	19	23	42	7	13	48	
12	2	49.7	-4	28.9	160	54.4 ¹⁴⁵		+8	5	01	5	25	5	45	19	30	46	7	07	45	
13	17	49.9		29.8	175	27.8 ¹⁴⁴		46.2	4	57	21	42	38	49	7	02	41				
14	32	50.1		30.8	190	01.2 ¹⁴⁴		+8	51	17	39		46	52	6	56	37				
15	47	50.3		31.7	204	34.5 ¹⁴³		+9	43	11	35		19	55	57	49	33				
16	62	50.5		32.7	219	07.8 ¹⁴³		21.4	37	07	32		20	00	60	45	31				
17	77	50.6	-4	33.7	233	41.0 ¹⁴²		+9	4	30	5	02	5	30	20	06	63	6	41	27	
18	92	50.8	-4	34.6	248	14.2 ¹⁴²		+9	4	22	4	57	5	26	20	13	66	6	36	24	
19	107	51.0		35.6	262	47.3 ¹⁴¹		+9	11	50	23		22	70	30	20					
20	122	51.2		36.6	277	20.4 ¹⁴¹		+10	4	05	47	21	25	73	27	18					
21	137	51.4		37.5	291	53.4 ¹⁴⁰		19.5	3	59	43	19	30	75	24	16					
22	152	51.6		38.5	306	26.3 ¹³⁹		31.0	53	39	17		35	77	21	14					
23	167	51.8		39.4	320	59.3 ¹⁴⁰		42.5	45	34	14		40	80	17	11					
24	182	52.0	-4	40.4	335	32.1 ¹³⁸		+10	3	36	4	29	5	12	20	46	84	6	13	8	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 05 ^m 2			Mag: -3.9 PMG: 10 ^h 19 ^m			Mag: -0.3 PMG: 18 ^h 12 ^m			Mag: -2.3 PMG: 6 ^h 10 ^m			Mag: -0.1 PMG: 4 ^h 04 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°						
0	12	44.9	205	17.9	+6	48.2	86	44.4	-25	27.0	267	15.4	+22	30.2	298	53.4	+20	45.7			
1	27	47.4	220	17.5		47.1	101	45.1		26.8	282	17.6		30.2	313	55.9		45.7			
2	42	49.9	235	17.1		45.9	116	45.9		26.6	297	19.8		30.2	328	58.4		45.6			
3	57	52.3	250	16.7		44.8	131	46.7		26.3	312	22.1		30.2	344	00.9		45.6			
4	72	54.8	265	16.3		43.7	146	47.4		26.1	327	24.3		30.2	359	03.4		45.6			
5	87	57.2	280	15.9	+6	42.5	161	48.2	-25	25.8	342	26.5	+22	30.1	14	05.9	+20	45.6			
6	102	59.7	295	15.4	+6	41.4	176	48.9	-25	25.6	357	28.7	+22	30.1	29	08.4	+20	45.6			
7	118	02.2	310	15.0		40.2	191	49.7		25.4	12	30.9		30.1	44	10.9		45.6			
8	133	04.6	325	14.6		39.1	206	50.5		25.1	27	33.1		30.1	59	13.4		45.6			
9	148	07.1	340	14.2		37.9	221	51.2		24.9	42	35.4		30.1	74	15.9		45.6			
10	163	09.6	355	13.8		36.8	236	52.0		24.7	57	37.6		30.0	89	18.4		45.6			
11	178	12.0	10	13.4	+6	35.7	251	52.7	-25	24.4	72	39.8	+22	30.0	104	20.9	+20	45.6			
12	193	14.5	25	13.0	+6	34.5	266	53.5	-25	24.2	87	42.0	+22	30.0	119	23.4	+20	45.6			
13	208	17.0	40	12.6		33.4	281	54.2		24.0	102	44.2		30.0	134	25.9		45.5			
14	223	19.4	55	12.2		32.2	296	55.0		23.7	117	46.5		30.0	149	28.4		45.5			
15	238	21.9	70	11.7		31.1	311	55.8		23.5	132	48.7		29.9	164	30.9		45.5			
16	253	24.4	85	11.3		29.9	326	56.5		23.2	147	50.9		29.9	179	33.4		45.5			
17	268	26.8	100	10.9	+6	28.8	341	57.3	-25	23.0	162	53.1	+22	29.9	194	35.9	+20	45.5			
18	283	29.3	115	10.5	+6	27.7	356	58.0	-25	22.8	177	55.4	+22	29.9	209	38.4	+20	45.5			
19	298	31.7	130	10.1		26.5	11	58.8		22.5	192	57.6		29.8	224	40.9		45.5			
20	313	34.2	145	09.7		25.4	26	59.5		22.3	207	59.8		29.8	239	43.4		45.5			
21	328	36.7	160	09.3		24.2	42	00.3		22.0	223	02.0		29.8	254	45.9		45.5			
22	343	39.1	175	08.9		23.1	57	01.0		21.8	238	04.2		29.8	269	48.4		45.5			
23	358	41.6	190	08.5		21.9	72	01.8		21.6	253	06.5		29.8	284	50.9		45.5			
24	13	44.1	205	08.1	+6	20.8	87	02.5	-25	21.3	268	08.7	+22	29.7	299	53.4	+20	45.5			
Dif	—		-4		-11		+8		+2		+22		0		+25			0			

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: 17 ^d 6 PHE { 4 ^h : 55/6 12 ^h : 55/7 20 ^h : 55/9 PMG: 1 ^h 41 ^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	182	52.0	-4	40.4	335	32.1	+10	53.9	60 N	17 21	18 02	18 50	18 28	14	9 26	84		
1	197	52.2		41.4	350	04.9 ¹³⁸	+11	05.3 ¹¹⁴	58	23	02	47	37	16	18	81		
2	212	52.4		42.3	4	37.7 ¹³⁸		16.7 ¹¹⁴	56	25	02	45	44	20	11	78		
3	227	52.5		43.3	19	10.3 ¹³⁶		28.0 ¹¹³	54	27	02	43	51	22	05	76		
4	242	52.7		44.3	33	43.0 ¹³⁷		39.2 ¹¹²	52	28	02	41	18 57	24	9 00	73		
5	257	52.9	-4	45.2	48	15.5 ¹³⁵	+11	50.5 ¹¹³	50	17 30	18 02	18 39	19 03	26	8 55	71		
6	272	53.1	-4	46.2	62	48.1 ¹³⁶	+12	01.6 ¹¹¹	45	17 33	18 02	18 36	19 15	30	8 45	66		
7	287	53.3		47.1	77	20.5 ¹³⁴		12.8 ¹¹²	40	36	03	34	24	34	36	63		
8	302	53.5		48.1	91	52.9 ¹³⁴		23.8 ¹¹⁰	35	38	04	33	33	36	28	61		
9	317	53.7		49.1	106	25.2 ¹³³		34.9 ¹¹¹	30	41	05	32	40	39	22	58		
10	332	53.9		50.0	120	57.5 ¹³³		45.9 ¹¹⁰	20	45	07	32	19 54	42	11	54		
11	347	54.1	-4	51.0	135	29.7 ¹³²	+12	56.8 ¹⁰⁹	10 N	17 48	18 09	18 34	20 05	45	8 01	50		
12	2	54.2	-4	51.9	150	01.9 ¹³²	+13	07.7 ¹⁰⁹	0	17 52	18 12	18 36	20 16	48	7 52	47		
13	17	54.4		52.9	164	33.9 ¹³⁰		18.5 ¹⁰⁸	10 S	55	16	41	27	51	43	43		
14	32	54.6		53.9	179	05.9 ¹³⁰		29.3 ¹⁰⁸	20	17 59	21	47	38	56	33	40		
15	47	54.8		54.8	193	37.9 ¹³⁰		40.0 ¹⁰⁷	30	18 04	28	18 56	20 52	59	22	36		
16	62	55.0		55.8	208	09.8 ¹²⁹	+13	50.7 ¹⁰⁷	35	06	32	19 02	21 00	61	16	33		
17	77	55.2	-4	56.7	222	41.6 ¹²⁸	+14	01.3 ¹⁰⁶	40	18 09	18 37	19 09	21 09	64	7 08	31		
18	92	55.4	-4	57.7	237	13.4 ¹²⁸	+14	11.8 ¹⁰⁵	45	18 13	18 43	19 18	21 19	68	7 00	27		
19	107	55.5		58.7	251	45.0 ¹²⁶		22.3 ¹⁰⁵	50	17	50	30	32	72	6 50	23		
20	122	55.7	-4	59.6	266	16.6 ¹²⁶		32.8 ¹⁰⁵	52	19	54	35	38	74	45	22		
21	137	55.9	-5	00.6	280	48.2 ¹²⁶		43.1 ¹⁰³	54	22	18 58	42	45	76	40	20		
22	152	56.1		01.5	295	19.7 ¹²⁵	+14	53.5 ¹⁰⁴	56	24	19 02	49	21 52	79	35	17		
23	167	56.3		02.5	309	51.1 ¹²⁴	+15	03.7 ¹⁰²	58	27	07	19 57	22 00	82	28	14		
24	182	56.5	-5	03.5	324	22.4 ¹²³	+15	13.9 ¹⁰²	60 S	18 30	19 13	20 07	22 10	86	6 21	11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 01 ^m 3		Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: -0.3 PMG: 18 ^h 11 ^m			Mag: -2.3 PMG: 6 ^h 07 ^m			Mag: -0.1 PMG: 4 ^h 00 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	13	44.1	205	08.1	+6	20.8	87	02.5	-25	21.3	268	08.7	+22	29.7	299	53.4	+20	45.5
1	28	46.5	220	07.6		19.6	102	03.3		21.1	283	10.9		29.7	314	55.9		45.4
2	43	49.0	235	07.2		18.5	117	04.1		20.8	298	13.1		29.7	329	58.4		45.4
3	58	51.5	250	06.8		17.3	132	04.8		20.6	313	15.4		29.7	345	00.9		45.4
4	73	53.9	265	06.4		16.2	147	05.6		20.3	328	17.6		29.7	0	03.4		45.4
5	88	56.4	280	06.0	+6	15.0	162	06.3	-25	20.1	343	19.8	+22	29.6	15	05.9	+20	45.4
6	103	58.8	295	05.6	+6	13.9	177	07.1	-25	19.9	358	22.0	+22	29.6	30	08.4	+20	45.4
7	119	01.3	310	05.2		12.7	192	07.8		19.6	13	24.3		29.6	45	10.9		45.4
8	134	03.8	325	04.8		11.6	207	08.6		19.4	28	26.5		29.6	60	13.4		45.4
9	149	06.2	340	04.4		10.4	222	09.3		19.1	43	28.7		29.6	75	15.9		45.4
10	164	08.7	355	04.0		09.3	237	10.1		18.9	58	30.9		29.5	90	18.4		45.4
11	179	11.2	10	03.6	+6	08.1	252	10.8	-25	18.6	73	33.2	+22	29.5	105	20.9	+20	45.4
12	194	13.6	25	03.1	+6	07.0	267	11.6	-25	18.4	88	35.4	+22	29.5	120	23.4	+20	45.3
13	209	16.1	40	02.7		05.8	282	12.3		18.1	103	37.6		29.5	135	25.9		45.3
14	224	18.6	55	02.3		04.7	297	13.1		17.9	118	39.9		29.5	150	28.4		45.3
15	239	21.0	70	01.9		03.5	312	13.8		17.6	133	42.1		29.4	165	30.9		45.3
16	254	23.5	85	01.5		02.4	327	14.6		17.4	148	44.3		29.4	180	33.5		45.3
17	269	26.0	100	01.1	+6	01.2	342	15.3	-25	17.2	163	46.5	+22	29.4	195	36.0	+20	45.3
18	284	28.4	115	00.7	+6	00.1	357	16.1	-25	16.9	178	48.8	+22	29.4	210	38.5	+20	45.3
19	299	30.9	130	00.3	+5	58.9	12	16.8		16.7	193	51.0		29.4	225	41.0		45.3
20	314	33.3	144	59.9		57.8	27	17.6		16.4	208	53.2		29.3	240	43.5		45.3
21	329	35.8	159	59.5		56.6	42	18.3		16.2	223	55.5		29.3	255	46.0		45.3
22	344	38.3	174	59.1		55.4	57	19.1		15.9	238	57.7		29.3	270	48.5		45.3
23	359	40.7	189	58.7		54.3	72	19.8		15.7	253	59.9		29.3	285	51.0		45.2
24	14	43.2	204	58.3	+5	53.1	87	20.6	-25	15.4	269	02.2	+22	29.3	300	53.5	+20	45.2
Dif	—		-4		-12		+8		+2		+22		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 48 ^m 1			Edad: 18 ^d 6 PHE { 4 ^h : 56 ^h 1 12 ^h : 56 ^h 2 20 ^h : 56 ^h 4 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	182	56.5	-5	03.5	324	22.4	+15	13.9	60 N	4	47	5	36	6	17	18	42	19
1	197	56.7		04.4	338	53.7		24.0	58		50		36		15	18	53	24
2	212	56.8		05.4	353	24.9		34.1	56		53		36		13	19	04	26
3	227	57.0		06.3	7	56.0		44.1	54		55		36		11	13	29	21
4	242	57.2		07.3	22	27.1		121	52		56		36		09	21	31	13
5	257	57.4	-5	08.3	36	58.0	+16	03.9	50	4	58	5	35	6	08	19	29	32
6	272	57.6	-5	09.2	51	28.9	+16	13.7	45	5	01	5	35	6	04	19	45	36
7	287	57.8		10.2	65	59.8		23.4	40		03		34	6	01	19	58	39
8	302	58.0		11.1	80	30.5		33.0	35		04		33	5	59	20	09	41
9	317	58.1		12.1	95	01.2		42.6	30		05		32		56	19	43	20
10	332	58.3		13.1	109	31.8	+16	52.1	20		04		30		52	36	46	9
11	347	58.5	-5	14.0	124	02.4	+17	01.5	10 N	5	03	5	27	5	48	20	50	50
12	2	58.7	-5	15.0	138	32.8	+17	10.8	0	5	00	5	24	5	45	21	04	52
13	17	58.9		15.9	153	03.2		20.1	10 S	4	55		20		41	18	55	26
14	32	59.1		16.9	167	33.5		29.3	20		49	15	37		34	57		8
15	47	59.2		17.8	182	03.7		38.4	30		40		08	32	21	51	60	7
16	62	59.4		18.8	196	33.9		47.4	35		34	5	04	30	22	01	63	49
17	77	59.6	-5	19.8	211	04.0	+17	56.4	40	4	27	4	59	5	26	22	13	64
18	92	59.8	-5	20.7	225	34.0	+18	05.3	45	4	18	4	53	5	23	22	27	67
19	108	00.0		21.7	240	03.9		14.0	50		06		45	18	44	71		13
20	123	00.2		22.6	254	33.7		22.7	52	4	00		42	16	22	52	72	07
21	138	00.3		23.6	269	03.5		31.3	54	3	54		38	14	23	01	75	7
22	153	00.5		24.5	283	33.2		39.9	56		47		33	11	11	77		6
23	168	00.7		25.5	298	02.8		48.3	58		38		28	09	22	81		42
24	183	00.9	-5	26.5	312	32.3	+18	56.6	60 S	3	29	4	22	5	06	23	36	84
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 57 ^m 3			Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: -0.3 PMG: 18 ^h 10 ^m			Mag: -2.3 PMG: 6 ^h 03 ^m			Mag: -0.1 PMG: 3 ^h 56 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	14	43.2	204	58.3	+5	53.1	87	20.6	-25	15.4	269	02.2	+22	29.3	300	53.5	+20	45.2
1	29	45.7	219	57.9		52.0	102	21.3		15.2	284	04.4		29.2	315	56.0		45.2
2	44	48.1	234	57.5		50.8	117	22.1		14.9	299	06.6		29.2	330	58.5		45.2
3	59	50.6	249	57.0		49.7	132	22.8		14.7	314	08.9		29.2	346	01.0		45.2
4	74	53.1	264	56.6		48.5	147	23.6		14.4	329	11.1		29.2	1	03.5		45.2
5	89	55.5	279	56.2	+5	47.3	162	24.3	-25	14.2	344	13.3	+22	29.2	16	06.0	+20	45.2
6	104	58.0	294	55.8	+5	46.2	177	25.0	-25	13.9	359	15.6	+22	29.1	31	08.5	+20	45.2
7	120	00.5	309	55.4		45.0	192	25.8		13.7	14	17.8		29.1	46	11.1		45.2
8	135	02.9	324	55.0		43.9	207	26.5		13.4	29	20.0		29.1	61	13.6		45.2
9	150	05.4	339	54.6		42.7	222	27.3		13.1	44	22.3		29.1	76	16.1		45.2
10	165	07.8	354	54.2		41.6	237	28.0		12.9	59	24.5		29.1	91	18.6		45.1
11	180	10.3	9	53.8	+5	40.4	252	28.8	-25	12.6	74	26.7	+22	29.1	106	21.1	+20	45.1
12	195	12.8	24	53.4	+5	39.2	267	29.5	-25	12.4	89	29.0	+22	29.0	121	23.6	+20	45.1
13	210	15.2	39	53.0		38.1	282	30.3		12.1	104	31.2		29.0	136	26.1		45.1
14	225	17.7	54	52.6		36.9	297	31.0		11.9	119	33.4		29.0	151	28.6		45.1
15	240	20.2	69	52.2		35.8	312	31.8		11.6	134	35.7		29.0	166	31.1		45.1
16	255	22.6	84	51.8		34.6	327	32.5		11.4	149	37.9		29.0	181	33.6		45.1
17	270	25.1	99	51.4	+5	33.4	342	33.2	-25	11.1	164	40.1	+22	28.9	196	36.1	+20	45.1
18	285	27.6	114	51.0	+5	32.3	357	34.0	-25	10.9	179	42.4	+22	28.9	211	38.7	+20	45.1
19	300	30.0	129	50.6		31.1	12	34.7		10.6	194	44.6		28.9	226	41.2		45.1
20	315	32.5	144	50.2		29.9	27	35.5		10.3	209	46.9		28.9	241	43.7		45.0
21	330	34.9	159	49.8		28.8	42	36.2		10.1	224	49.1		28.9	256	46.2		45.0
22	345	37.4	174	49.4		27.6	57	37.0		09.8	239	51.3		28.8	271	48.7		45.0
23	0	39.9	189	49.0		26.5	72	37.7		09.6	254	53.6		28.8	286	51.2		45.0
24	15	42.3	204	48.6	+5	25.3	87	38.4	-25	09.3	269	55.8	+22	28.8	301	53.7	+20	45.0
Dif	—			-4	-12		+7	+3			+22	0			+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 19 ^d 6 PHE	SD: 15'4				Final del crepúsculo	Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 47 ^m 8				PMG: 3 ^h 17 ^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	m	h m m	m
0	183	00.9	-5 26.5	312	32.3	+18 56.6	83	60 N	17 15	17 56	18 44	19 01 31	12 15 82		
1	198	01.1	27.4	327	01.7 ¹⁰⁴	+19 04.9	81	58	17	56	42	17 34	12 00 78		
2	213	01.2	28.4	341	31.1 ¹⁰⁴	13.0	81	56	20	57	40	30 37	11 47 75		
3	228	01.4	29.3	356	00.4 ¹⁰³	21.1	81	54	22	57	38	42 39	36 73		
4	243	01.6	30.3	10	29.6 ¹⁰²	29.1	80	52	24	57	36	19 52 41	26 71		
5	258	01.8	-5 31.2	24	58.8 ¹⁰²	+19 37.0	79	50	17 26	17 58	18 35	20 01 42	11 18 69		
6	273	02.0	-5 32.2	39	27.8 ¹⁰⁰	+19 44.7	77	45	17 29	17 59	18 33	20 21 44	10 59 66		
7	288	02.1	33.2	53	56.8 ¹⁰⁰	+19 52.4	77	40	33	18 00	31	37 46	44 64		
8	303	02.3	34.1	68	25.7 ⁹⁹	+20 00.0	76	35	36	01	30	20 50 48	31 62		
9	318	02.5	35.1	82	54.5 ⁹⁸	+20 07.5	75	30	38	02	30	21 02 49	20 60		
10	333	02.7	36.0	97	23.2 ⁹⁷	14.9	74	20	43	05	31	22 52	10 01 58		
11	348	02.9	-5 37.0	111	51.9 ⁹⁷	+20 22.2	73	10 N	17 47	18 08	18 33	21 40 53	9 44 56		
12	3	03.0	-5 37.9	126	20.4 ⁹⁵	+20 29.4	72	0	17 51	18 12	18 36	21 56 55	9 29 53		
13	18	03.2	38.9	140	48.9 ⁹⁵	36.4	70	10 S	17 55	16	41	22 13 57	9 13 52		
14	33	03.4	39.8	155	17.4 ⁹⁵	43.4	70	20	18 00	22	48	31 58	8 57 49		
15	48	03.6	40.8	169	45.7 ⁹³	50.3	69	30	05	29	18 57	22 51 61	38 46		
16	63	03.8	41.8	184	14.0 ⁹³	+20 57.0	67	35	08	34	19 04	23 04 61	27 45		
17	78	03.9	-5 42.7	198	42.2 ⁹²	+21 03.7	67	40	18 11	18 39	19 11	23 17 64	8 15 42		
18	93	04.1	-5 43.7	213	10.3 ⁹¹	+21 10.2	65	45	18 16	18 45	19 21	23 34 65	8 00 40		
19	108	04.3	44.6	227	38.3 ⁹⁰	16.7	65	50	20	54	33	23 55 67	7 42 37		
20	123	04.5	45.6	242	06.2 ⁸⁹	23.0	63	52	23	18 57	39	** ** *	34 35		
21	138	04.6	46.5	256	34.1 ⁸⁹	29.2	62	54	25	19 02	46	** ** *	24 33		
22	153	04.8	47.5	271	01.9 ⁸⁸	35.3	61	56	28	07	19 54	** ** *	14 30		
23	168	05.0	48.4	285	29.6 ⁸⁷	41.2	59	58	31	12	20 03	** ** *	7 02 27		
24	183	05.2	-5 49.4	299	57.3 ⁸⁷	+21 47.1	59	60 S	18 35	19 18	20 13	** ** *	6 48 24		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 22 ^h 53 ^m 4		Mag: -3.9 PMG: 10 ^h 21 ^m		Mag: -0.3 PMG: 18 ^h 09 ^m		Mag: -2.3 PMG: 5 ^h 59 ^m			Mag: -0.1 PMG: 3 ^h 52 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	15	42.3	204	48.6	+5	25.3	87	38.4	-25	09.3	269	55.8	+22	28.8	301	53.7	+20	45.0
1	30	44.8	219	48.2		24.1	102	39.2		09.1	284	58.0		28.8	316	56.2		45.0
2	45	47.3	234	47.8		23.0	117	39.9		08.8	300	00.3		28.8	331	58.7		45.0
3	60	49.7	249	47.3		21.8	132	40.7		08.5	315	02.5		28.7	347	01.3		45.0
4	75	52.2	264	46.9		20.6	147	41.4		08.3	330	04.8		28.7	2	03.8		45.0
5	90	54.7	279	46.5	+5	19.5	162	42.1	-25	08.0	345	07.0	+22	28.7	17	06.3	+20	45.0
6	105	57.1	294	46.1	+5	18.3	177	42.9	-25	07.8	0	09.2	+22	28.7	32	08.8	+20	44.9
7	120	59.6	309	45.7		17.1	192	43.6		07.5	15	11.5		28.7	47	11.3		44.9
8	136	02.1	324	45.3		16.0	207	44.4		07.2	30	13.7		28.7	62	13.8		44.9
9	151	04.5	339	44.9		14.8	222	45.1		07.0	45	16.0		28.6	77	16.3		44.9
10	166	07.0	354	44.5		13.6	237	45.8		06.7	60	18.2		28.6	92	18.9		44.9
11	181	09.4	9	44.1	+5	12.5	252	46.6	-25	06.5	75	20.5	+22	28.6	107	21.4	+20	44.9
12	196	11.9	24	43.7	+5	11.3	267	47.3	-25	06.2	90	22.7	+22	28.6	122	23.9	+20	44.9
13	211	14.4	39	43.3		10.1	282	48.1		05.9	105	24.9		28.6	137	26.4		44.9
14	226	16.8	54	42.9		09.0	297	48.8		05.7	120	27.2		28.5	152	28.9		44.9
15	241	19.3	69	42.5		07.8	312	49.5		05.4	135	29.4		28.5	167	31.4		44.9
16	256	21.8	84	42.1		06.6	327	50.3		05.1	150	31.7		28.5	182	33.9		44.8
17	271	24.2	99	41.7	+5	05.5	342	51.0	-25	04.9	165	33.9	+22	28.5	197	36.5	+20	44.8
18	286	26.7	114	41.3	+5	04.3	357	51.8	-25	04.6	180	36.2	+22	28.5	212	39.0	+20	44.8
19	301	29.2	129	40.9		03.1	12	52.5		04.3	195	38.4		28.4	227	41.5		44.8
20	316	31.6	144	40.5		02.0	27	53.2		04.1	210	40.6		28.4	242	44.0		44.8
21	331	34.1	159	40.1	+5	00.8	42	54.0		03.8	225	42.9		28.4	257	46.5		44.8
22	346	36.6	174	39.7	+4	59.6	57	54.7		03.6	240	45.1		28.4	272	49.0		44.8
23	1	39.0	189	39.3		58.5	72	55.4		03.3	255	47.4		28.4	287	51.5		44.8
24	16	41.5	204	38.9	+4	57.3	87	56.2	-25	03.0	270	49.6	+22	28.4	302	54.1	+20	44.8
Dif	—		-4	-12		+7	+3		+22	0		+25		0				0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 20 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6												
	PMG: 11 ^h 47 ^m 5			SD: 15'5 PMG: 4 ^h 09 ^m R°: 56 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	183	05.2	-5	299	57.3	+21	47.1	58	60 N	4	52	5	41	6	22	19
1	198	05.4		314	24.8	85		52.9	58	55		40	19	51	51	18
2	213	05.5		328	52.3	85	+21	58.5	56	56	57	40	17	20	07	52
3	228	05.7		343	19.8	85	+22	04.0	55	54	4	58	39	15	21	52
4	243	05.9		357	47.1	83		09.4	54	52	5	00	39	13	33	52
5	258	06.1	-5	12	14.4	83	+22	14.6	52	50	5	01	5	38	6	11
6	273	06.2	-5	26	41.6	82	+22	19.8	52	45	5	03	5	37	6	07
7	288	06.4		41	08.7	81		24.8	50	40	05	36	03	23	55	11
8	303	06.6		55	35.7	80		29.7	49	35	05	35	6	00	38	56
9	318	06.8		70	02.7	80		34.5	48	30	06	33	5	57	21	51
10	333	06.9		84	29.6	79		39.1	46	20	05	31	53	22	14	56
11	348	07.1	-5	98	56.5	79	+22	43.7	46	10 N	5	03	5	27	5	48
12	3	07.3	-6	113	23.3	78	+22	48.0	43	0	4	59	5	23	5	44
13	18	07.5		127	50.0	77		52.3	43	10 S	54	19	40	23	10	58
14	33	07.6		142	16.6	76	+22	56.4	41	20	47	13	35	29	59	9
15	48	07.8		156	43.2	76	+23	00.4	40	30	38	06	30	23	52	59
16	63	08.0		171	09.7	75		04.3	39	35	31	5	01	27	**	**
17	78	08.2	-6	185	36.1	74	+23	08.1	38	40	4	23	4	56	5	23
18	93	08.3	-6	200	02.5	74	+23	11.7	36	45	4	14	4	49	5	19
19	108	08.5		214	28.8	73		15.1	34	50	4	01	41	14	**	**
20	123	08.7		228	55.1	73		18.5	34	52	3	55	37	12	0	04
21	138	08.8		243	21.2	71		21.7	32	54	48	33	09	16	69	7
22	153	09.0		257	47.4	72		24.7	30	56	41	28	06	28	72	44
23	168	09.2		272	13.4	70		27.7	30	58	32	22	03	0	43	74
24	183	09.4	-6	286	39.4	70	+23	30.5	28	60 S	3	21	4	16	5	00
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 49 ^m 5		Mag: -3.9 PMG: 10 ^h 22 ^m			Mag: -0.3 PMG: 18 ^h 07 ^m			Mag: -2.3 PMG: 5 ^h 56 ^m			Mag: -0.1 PMG: 3 ^h 48 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	16	41.5	204	38.9	+4	87	56.2	-25	270	49.6	+22	28.4	302	54.1	+20	44.8
1	31	43.9	219	38.5		102	56.9		285	51.9		28.3	317	56.6		44.8
2	46	46.4	234	38.1		117	57.7		300	54.1		28.3	332	59.1		44.7
3	61	48.9	249	37.7		132	58.4		315	56.4		28.3	348	01.6		44.7
4	76	51.3	264	37.3		147	59.1		330	58.6		28.3	3	04.1		44.7
5	91	53.8	279	36.9	+4	162	59.9	-25	346	00.9	+22	28.3	18	06.6	+20	44.7
6	106	56.3	294	36.5	+4	178	00.6	-25	1	03.1	+22	28.2	33	09.2	+20	44.7
7	121	58.7	309	36.1		193	01.3		16	05.4		28.2	48	11.7		44.7
8	137	01.2	324	35.7		208	02.1		31	07.6		28.2	63	14.2		44.7
9	152	03.7	339	35.3		223	02.8		46	09.9		28.2	78	16.7		44.7
10	167	06.1	354	34.9		238	03.5		61	12.1		28.2	93	19.2		44.7
11	182	08.6	9	34.5	+4	253	04.3	-25	76	14.4	+22	28.2	108	21.8	+20	44.7
12	197	11.1	24	34.1	+4	268	05.0	-24	91	16.6	+22	28.1	123	24.3	+20	44.6
13	212	13.5	39	33.7		283	05.7		106	18.9		28.1	138	26.8		44.6
14	227	16.0	54	33.3		298	06.5		121	21.1		28.1	153	29.3		44.6
15	242	18.4	69	32.9		313	07.2		136	23.4		28.1	168	31.8		44.6
16	257	20.9	84	32.5		328	07.9		151	25.6		28.1	183	34.4		44.6
17	272	23.4	99	32.1	+4	343	08.7	-24	166	27.9	+22	28.0	198	36.9	+20	44.6
18	287	25.8	114	31.7	+4	358	09.4	-24	181	30.1	+22	28.0	213	39.4	+20	44.6
19	302	28.3	129	31.3		13	10.1		196	32.4		28.0	228	41.9		44.6
20	317	30.8	144	30.9		28	10.9		211	34.6		28.0	243	44.4		44.6
21	332	33.2	159	30.5		43	11.6		226	36.9		28.0	258	47.0		44.6
22	347	35.7	174	30.1		58	12.3		241	39.1		28.0	273	49.5		44.5
23	2	38.2	189	29.7		73	13.1		256	41.4		27.9	288	52.0		44.5
24	17	40.6	204	29.4	+4	88	13.8	-24	271	43.6	+22	27.9	303	54.5	+20	44.5
Dif	—		-4		-12	+7		+3	+23		0		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 21 ^d 6 PHE { 4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/3											
	PMG: 11 ^h 47 ^m 2			SD: 15'7 PMG: 5 ^h 05 ^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	m	h m m	m
0	183	09.4	-6 12.2	286	39.4	+23 30.5	26	60 N	17 09	17 50	18 38	20 21 71		14 46 51	
1	198	09.5		301	05.4	70 33.1	25	58	12	51	36	42 69		26 52	
2	213	09.7		315	31.3	69 35.6	24	56	14	52	35	20 59 67		14 09 53	
3	228	09.9		329	57.1	68 38.0	24	54	17	52	33	21 13 67		13 54 55	
4	243	10.1		344	22.9	68 40.2	22	52	19	53	32	25 67		42 55	
5	258	10.2	-6 17.0	358	48.6	67 +23 42.3	21	50	17 21	17 54	18 31	21 37 65		13 31 55	
6	273	10.4	-6 17.9	13	14.3	67 +23 44.2	19	45	17 26	17 55	18 29	22 00 64		13 08 56	
7	288	10.6		27	39.9	66 46.0	18	40	30	57	28	18 64		12 49 57	
8	303	10.7		42	05.5	66 47.7	17	35	33	17 58	28	34 62		34 56	
9	318	10.9		56	31.1	66 49.2	15	30	36	18 00	28	22 47 62		12 20 57	
10	333	11.1		70	56.5	64 50.6	14	20	41	03	29	23 10 61		11 57 58	
11	348	11.2	-6 22.7	85	22.0	65 +23 51.8	12	10 N	17 46	18 07	18 32	23 30 60		11 37 58	
12	3	11.4	-6 23.6	99	47.4	64 +23 52.9	11	0	17 51	18 11	18 35	23 49 59		11 19 58	
13	18	11.6		114	12.7	63 53.8	9	10 S	17 55	16	41	*** ** *		11 00 59	
14	33	11.8		128	38.0	63 54.6	8	20	18 00	22	48	*** ** *		10 40 59	
15	48	11.9		143	03.3	63 55.2	6	30	06	30	18 59	*** ** *		17 59	
16	63	12.1		157	28.5	62 55.7	5	35	10	35	19 06	0 05 59		10 03 60	
17	78	12.3	-6 28.4	171	53.7	62 +23 56.0	3	40	18 13	18 41	19 14	0 21 59		9 48 59	
18	93	12.4	-6 29.3	186	18.8	61 +23 56.2	2	45	18 18	18 48	19 24	0 39 60		9 29 60	
19	108	12.6		303	200 43.9	61 56.2	0	50	24	18 57	37	1 02 60		9 06 59	
20	123	12.8		31.2	215 09.0	61 56.1	1	52	26	19 01	43	13 60		8 55 59	
21	138	12.9		32.2	229 34.1	61 55.8	3	54	29	06	51	25 61		42 60	
22	153	13.1		33.1	243 59.1	60 55.4	4	56	32	11	19 59	40 60		28 59	
23	168	13.3		34.1	258 24.1	60 54.8	6	58	36	17	20 08	1 57 60		8 11 59	
24	183	13.4	-6 35.0	272	49.0	59 +23 54.1	7	60 S	18 40	19 23	20 19	2 17 61		7 50 60	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 45 ^m 6		Mag: -3.9 PMG: 10 ^h 22 ^m			Mag: -0.2 PMG: 18 ^h 06 ^m			Mag: -2.3 PMG: 5 ^h 52 ^m			Mag: -0.1 PMG: 3 ^h 44 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	17	40.6	204	29.4	+4 29.1	88 13.8	-24 56.5	271 43.6	+22 27.9	303 54.5	+20 44.5				
1	32	43.1	219	29.0	27.9	103 14.5	56.3	286 45.9	27.9	318 57.0	44.5				
2	47	45.5	234	28.6	26.8	118 15.3	56.0	301 48.2	27.9	333 59.6	44.5				
3	62	48.0	249	28.2	25.6	133 16.0	55.7	316 50.4	27.9	349 02.1	44.5				
4	77	50.5	264	27.8	24.4	148 16.7	55.4	331 52.7	27.9	4 04.6	44.5				
5	92	52.9	279	27.4	+4 23.2	163 17.4	-24 55.2	346 54.9	+22 27.8	19 07.1	+20 44.5				
6	107	55.4	294	27.0	+4 22.0	178 18.2	-24 54.9	1 57.2	+22 27.8	34 09.6	+20 44.5				
7	122	57.9	309	26.6	20.9	193 18.9	54.6	16 59.4	27.8	49 12.2	44.4				
8	138	00.3	324	26.2	19.7	208 19.6	54.3	32 01.7	27.8	64 14.7	44.4				
9	153	02.8	339	25.8	18.5	223 20.4	54.0	47 03.9	27.8	79 17.2	44.4				
10	168	05.3	354	25.4	17.3	238 21.1	53.8	62 06.2	27.7	94 19.7	44.4				
11	183	07.7	9	25.0	+4 16.1	253 21.8	-24 53.5	77 08.5	+22 27.7	109 22.3	+20 44.4				
12	198	10.2	24	24.6	+4 15.0	268 22.6	-24 53.2	92 10.7	+22 27.7	124 24.8	+20 44.4				
13	213	12.7	39	24.2	13.8	283 23.3	52.9	107 13.0	27.7	139 27.3	44.4				
14	228	15.1	54	23.8	12.6	298 24.0	52.7	122 15.2	27.7	154 29.8	44.4				
15	243	17.6	69	23.4	11.4	313 24.7	52.4	137 17.5	27.7	169 32.4	44.4				
16	258	20.0	84	23.0	10.2	328 25.5	52.1	152 19.8	27.6	184 34.9	44.3				
17	273	22.5	99	22.6	+4 09.1	343 26.2	-24 51.8	167 22.0	+22 27.6	199 37.4	+20 44.3				
18	288	25.0	114	22.2	+4 07.9	358 26.9	-24 51.5	182 24.3	+22 27.6	214 39.9	+20 44.3				
19	303	27.4	129	21.8	06.7	13 27.6	51.3	197 26.5	27.6	229 42.5	44.3				
20	318	29.9	144	21.4	05.5	28 28.4	51.0	212 28.8	27.6	244 45.0	44.3				
21	333	32.4	159	21.0	04.3	43 29.1	50.7	227 31.1	27.6	259 47.5	44.3				
22	348	34.8	174	20.6	03.1	58 29.8	50.4	242 33.3	27.5	274 50.0	44.3				
23	3	37.3	189	20.2	02.0	73 30.6	50.1	257 35.6	27.5	289 52.6	44.3				
24	18	39.8	204	19.8	+4 00.8	88 31.3	-24 49.8	272 37.8	+22 27.5	304 55.1	+20 44.3				
Dif	—		-4	-12		+7	+3	+23	0		+25	0			

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: 22 ^d 6 PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'9 PMG: 6 ^h 03 ^m R°: 59 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	13.4	-6	35.0	272	49.0	+23 54.1	60 N	4 57	5 45	6 27	21 32	88	15 37	34		
1	198	13.6		36.0	287	14.0	53.2	58	4 59	44	24	21 51	84	18 38			
2	213	13.8		36.9	301	38.9	59	52.2	56	5 01	44	21	22 06	82	15 02	40	
3	228	13.9		37.9	316	03.7	58	51.0	54	02	43	18	20 79		14 49	42	
4	243	14.1		38.8	330	28.6	59	49.7	52	03	42	16	32 77		37 43		
5	258	14.3	-6	39.7	344	53.4	58	+23 48.2	50	5 04	5 41	6 14	22 42	76	14 26	45	
6	273	14.4	-6	40.7	359	18.2	58	+23 46.6	45	5 06	5 40	6 09	23 04	72	14 04	48	
7	288	14.6		41.6	13	43.0	58	44.8	40	07	38	05	22 69		13 46	50	
8	303	14.8		42.6	28	07.8	58	42.8	35	07	36	6 02	36 68		30 52		
9	318	14.9		43.5	42	32.6	58	40.7	30	07	35	5 59	23 49	66	13 17	53	
10	333	15.1		44.5	56	57.3	57	38.4	20	06	31	53	** ** *	**	12 55	55	
11	348	15.3	-6	45.4	71	22.0	57	+23 36.0	10 N	5 03	5 27	5 48	** ** *	**	12 35	57	
12	3	15.4	-6	46.4	85	46.8	58	+23 33.5	0	4 59	5 23	5 44	** ** *	**	12 17	59	
13	18	15.6		47.3	100	11.5	57	30.7	10 S	53	18	39	0 08	57	11 59	60	
14	33	15.8		48.3	114	36.2	57	27.9	20	46	11	34	28 56		39 62		
15	48	15.9		49.2	129	00.9	57	24.8	31	35	5 03	28	0 51	55	16 64		
16	63	16.1		50.2	143	25.5	56	21.6	32	35	28	4 58	1 04	55	11 03	65	
17	78	16.2	-6	51.1	157	50.2	57	+23 18.3	40	4 20	4 53	5 20	1 20	53	10 47	67	
18	93	16.4	-6	52.0	172	14.9	57	+23 14.8	45	4 10	4 45	5 15	1 39	52	10 29	68	
19	108	16.6		53.0	186	39.6	57	11.2	36	50	3 56	37	2 02	50	10 05	71	
20	123	16.7		53.9	201	04.3	57	07.4	38	52	50	32	07	13	49	9 54	72
21	138	16.9		54.9	215	28.9	56	+23 03.4	40	54	43	28	04	26	48	42	73
22	153	17.1		55.8	229	53.6	57	+22 59.3	41	56	34	22	5 01	40	47	27	76
23	168	17.2		56.8	244	18.3	57	55.0	43	58	25	16	4 57	2 57	45	9 10	78
24	183	17.4	-6	57.7	258	43.0	57	+22 50.6	44	60 S	3 14	4 10	4 53	3 18	42	8 50	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 22 ^h 41 ^m 6		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: -0.2 PMG: 18 ^h 05 ^m		Mag: -2.3 PMG: 5 ^h 49 ^m		Mag: -0.1 PMG: 3 ^h 40 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	18	39.8	204	19.8	+4 00.8	88 31.3	-24 49.8	272 37.8	+22 27.5	304 55.1	+20 44.3
1	33	42.2	219	19.4	+3 59.6	103 32.0	49.6	287 40.1	27.5	319 57.6	44.3
2	48	44.7	234	19.0	58.4	118 32.7	49.3	302 42.4	27.5	335 00.1	44.2
3	63	47.2	249	18.7	57.2	133 33.5	49.0	317 44.6	27.5	350 02.7	44.2
4	78	49.6	264	18.3	56.0	148 34.2	48.7	332 46.9	27.4	5 05.2	44.2
5	93	52.1	279	17.9	+3 54.8	163 34.9	-24 48.4	347 49.2	+22 27.4	20 07.7	+20 44.2
6	108	54.5	294	17.5	+3 53.7	178 35.6	-24 48.1	2 51.4	+22 27.4	35 10.2	+20 44.2
7	123	57.0	309	17.1	52.5	193 36.4	47.9	17 53.7	27.4	50 12.8	44.2
8	138	59.5	324	16.7	51.3	208 37.1	47.6	32 56.0	27.4	65 15.3	44.2
9	154	01.9	339	16.3	50.1	223 37.8	47.3	47 58.2	27.4	80 17.8	44.2
10	169	04.4	354	15.9	48.9	238 38.5	47.0	63 00.5	27.3	95 20.4	44.2
11	184	06.9	9	15.5	+3 47.7	253 39.3	-24 46.7	78 02.7	+22 27.3	110 22.9	+20 44.1
12	199	09.3	24	15.1	+3 46.5	268 40.0	-24 46.4	93 05.0	+22 27.3	125 25.4	+20 44.1
13	214	11.8	39	14.7	45.4	283 40.7	46.1	108 07.3	27.3	140 27.9	44.1
14	229	14.3	54	14.3	44.2	298 41.4	45.9	123 09.5	27.3	155 30.5	44.1
15	244	16.7	69	13.9	43.0	313 42.1	45.6	138 11.8	27.3	170 33.0	44.1
16	259	19.2	84	13.5	41.8	328 42.9	45.3	153 14.1	27.2	185 35.5	44.1
17	274	21.7	99	13.1	+3 40.6	343 43.6	-24 45.0	168 16.3	+22 27.2	200 38.1	+20 44.1
18	289	24.1	114	12.7	+3 39.4	358 44.3	-24 44.7	183 18.6	+22 27.2	215 40.6	+20 44.1
19	304	26.6	129	12.3	38.2	13 45.0	44.4	198 20.9	27.2	230 43.1	44.0
20	319	29.0	144	11.9	37.0	28 45.8	44.1	213 23.2	27.2	245 45.6	44.0
21	334	31.5	159	11.6	35.9	43 46.5	43.8	228 25.4	27.2	260 48.2	44.0
22	349	34.0	174	11.2	34.7	58 47.2	43.5	243 27.7	27.1	275 50.7	44.0
23	4	36.4	189	10.8	33.5	73 47.9	43.3	258 30.0	27.1	290 53.2	44.0
24	19	38.9	204	10.4	+3 32.3	88 48.6	-24 43.0	273 32.2	+22 27.1	305 55.8	+20 44.0
Dif	—		-4	-12		+7	+3	+23	0	+25	0

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: 23 ^d 6 PHE { 4 ^h : 59'1 12 ^h : 59'3 20 ^h : 59'5 SD: 16'1 PMG: 7 ^h 02 ^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	h m	h m	h m	h m			
0	183	17.4	-6	57.7	258	43.0	+22	50.6	17 03	17 45	18 32	23 00 97	16 11 22					
1	198	17.6		58.6	273	07.7	57	46.0	06	46	31	15 93	15 56 26					
2	213	17.7	-6	59.6	287	32.4	57	41.3	09	47	30	28 89	42 29					
3	228	17.9	-7	00.5	301	57.1	57	36.5	12	48	28	39 86	31 32					
4	243	18.0		01.5	316	21.8	57	31.4	15	49	28	49 83	20 35					
5	258	18.2	-7	02.4	330	46.6	58	+22 26.2	17 17	17 50	18 27	23 58 81	15 11 36					
6	273	18.4	-7	03.4	345	11.3	57	+22 20.9	17 22	17 52	18 26	** ** *	14 52 40					
7	288	18.5		04.3	359	36.1	58	15.4	27	54	25	** ** *	36 43					
8	303	18.7		05.2	14	00.9	58	09.8	30	56	25	** ** *	22 46					
9	318	18.8		06.2	28	25.7	58	+22 04.0	34	17 58	25	** ** *	14 10 48					
10	333	19.0		07.1	42	50.5	58	+21 58.1	40	18 02	27	0 11 63	13 50 52					
11	348	19.2	-7	08.1	57	15.3	58	+21 52.0	17 45	18 06	18 31	0 30 61	13 32 55					
12	3	19.3	-7	09.0	71	40.2	59	+21 45.8	17 50	18 11	18 35	0 48 58	13 16 57					
13	18	19.5		10.0	86	05.0	58	39.4	17 55	16	41	1 05 56	12 59 61					
14	33	19.6		10.9	100	29.9	59	32.9	18 01	23	18 49	24 54	41 64					
15	48	19.8		11.8	114	54.9	60	26.3	07	32	19 00	46 51	20 67					
16	63	20.0		12.8	129	19.8	59	19.5	11	37	07	1 59 49	12 08 69					
17	78	20.1	-7	13.7	143	44.8	60	+21 12.5	18 16	18 43	19 16	2 13 47	11 54 72					
18	93	20.3	-7	14.7	158	09.8	60	+21 05.4	18 21	18 51	19 27	2 31 44	11 37 75					
19	108	20.4		15.6	172	34.8	60	+20 58.2	27	19 00	41	2 52 41	16 79					
20	123	20.6		16.5	186	59.8	60	50.8	30	05	48	3 02 39	11 06 81					
21	138	20.7		17.5	201	24.9	61	43.3	33	10	19 55	14 36	10 55 84					
22	153	20.9		18.4	215	50.0	61	35.6	36	15	20 04	27 34	43 86					
23	168	21.1		19.4	230	15.2	62	27.8	40	22	14	3 42 31	28 89					
24	183	21.2	-7	20.3	244	40.3	61	+20 19.8	18 45	19 29	20 26	4 00 27	10 10 94					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 37 ^m 7		Mag: -3.9 PMG: 10 ^h 24 ^m			Mag: -0.2 PMG: 18 ^h 04 ^m			Mag: -2.4 PMG: 5 ^h 45 ^m			Mag: -0.1 PMG: 3 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	19	38.9	204	10.4	+3	32.3	88	48.6	-24	43.0	273	32.2	+22	27.1	305	55.8	+20	44.0
1	34	41.4	219	10.0		31.1	103	49.4		42.7	288	34.5		27.1	320	58.3		44.0
2	49	43.8	234	09.6		29.9	118	50.1		42.4	303	36.8		27.1	336	00.8		44.0
3	64	46.3	249	09.2		28.7	133	50.8		42.1	318	39.0		27.1	351	03.4		44.0
4	79	48.8	264	08.8		27.5	148	51.5		41.8	333	41.3		27.0	6	05.9		43.9
5	94	51.2	279	08.4	+3	26.3	163	52.3	-24	41.5	348	43.6	+22	27.0	21	08.4	+20	43.9
6	109	53.7	294	08.0	+3	25.2	178	53.0	-24	41.2	3	45.9	+22	27.0	36	11.0	+20	43.9
7	124	56.1	309	07.6		24.0	193	53.7		40.9	18	48.1		27.0	51	13.5		43.9
8	139	58.6	324	07.2		22.8	208	54.4		40.6	33	50.4		27.0	66	16.0		43.9
9	155	01.1	339	06.8		21.6	223	55.1		40.3	48	52.7		27.0	81	18.5		43.9
10	170	03.5	354	06.4		20.4	238	55.9		40.0	63	54.9		26.9	96	21.1		43.9
11	185	06.0	9	06.0	+3	19.2	253	56.6	-24	39.7	78	57.2	+22	26.9	111	23.6	+20	43.9
12	200	08.5	24	05.7	+3	18.0	268	57.3	-24	39.4	93	59.5	+22	26.9	126	26.1	+20	43.9
13	215	10.9	39	05.3		16.8	283	58.0		39.1	109	01.8		26.9	141	28.7		43.8
14	230	13.4	54	04.9		15.6	298	58.7		38.9	124	04.0		26.9	156	31.2		43.8
15	245	15.9	69	04.5		14.4	313	59.4		38.6	139	06.3		26.9	171	33.7		43.8
16	260	18.3	84	04.1		13.2	329	00.2		38.3	154	08.6		26.9	186	36.3		43.8
17	275	20.8	99	03.7	+3	12.0	344	00.9	-24	38.0	169	10.9	+22	26.8	201	38.8	+20	43.8
18	290	23.3	114	03.3	+3	10.8	359	01.6	-24	37.7	184	13.1	+22	26.8	216	41.3	+20	43.8
19	305	25.7	129	02.9		09.7	14	02.3		37.4	199	15.4		26.8	231	43.9		43.8
20	320	28.2	144	02.5		08.5	29	03.0		37.1	214	17.7		26.8	246	46.4		43.8
21	335	30.6	159	02.1		07.3	44	03.8		36.8	229	20.0		26.8	261	49.0		43.7
22	350	33.1	174	01.7		06.1	59	04.5		36.5	244	22.3		26.8	276	51.5		43.7
23	5	35.6	189	01.3		04.9	74	05.2		36.2	259	24.5		26.7	291	54.0		43.7
24	20	38.0	204	00.9	+3	03.7	89	05.9	-24	35.9	274	26.8	+22	26.7	306	56.6	+20	43.7
Dif	—		-4		-12	+7		+3	+23		0		+25			0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46 ^m 5			Edad: 24 ^d 6 PHE { 4 ^h : 59'7 12 ^h : 59'9 20 ^h : 60'1 PMG: 8 ^h 00 ^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	183	21.2	-7	20.3	244	40.3	+20 19.8	60 N	5 02	5 50	6 32	*** ** *	16 33	15	
1	198	21.4		21.2	259	05.6	11.7 81	58	03	49	28	*** ** *	22	18	
2	213	21.5		22.2	273	30.8	+20 03.5 82	56	05	48	25	*** ** *	11	22	
3	228	21.7		23.1	287	56.1	+19 55.2 83	54	06	47	22	*** ** *	16 03	24	
4	243	21.8		24.1	302	21.4	46.7 85	52	06	46	19	*** ** *	15 55	27	
5	258	22.0	-7	25.0	316	46.7	+19 38.0 87	50	5 07	5 45	6 17	*** ** *	15 47	30	
6	273	22.2	-7	25.9	331	12.1	+19 29.3 87	45	5 08	5 42	6 12	0 16 77	15 32	34	
7	288	22.3		26.9	345	37.5	20.4 89	40	09	40	07	31 74	19	38	
8	303	22.5		27.8	0	03.0	11.3 91	35	09	38	03	44 71	15 08	41	
9	318	22.6		28.8	14	28.5	+19 02.2 91	30	08	36	6 00	0 55 68	14 58	44	
10	333	22.8		29.7	28	54.0	+18 52.9 93	20	06	32	5 54	1 14 64	42	48	
11	348	22.9	-7	30.6	43	19.6	+18 43.5 94	10 N	5 03	5 27	5 48	1 31 60	14 27	52	
12	3	23.1	-7	31.6	57	45.2	+18 33.9 96	0	4 58	5 22	5 43	1 46 57	14 13	56	
13	18	23.2		32.5	72	10.9	24.2 97	10 S	52	17	38	2 01 54	14 00	59	
14	33	23.4		33.4	86	36.6	14.4 98	20	44	10	32	18 50	13 45	63	
15	48	23.5		34.4	101	02.3	+18 04.5 99	30	33	5 01	25	37 45	27	69	
16	63	23.7		35.3	115	28.1	+17 54.5 100	35	25	4 56	21	2 48 43	17	72	
17	78	23.8	-7	36.2	129	53.9	+17 44.3 102	40	4 17	4 49	5 17	3 00 40	13 06	74	
18	93	24.0	-7	37.2	144	19.8	+17 34.0 103	45	4 06	4 42	5 12	3 15 37	12 52	78	
19	108	24.2		38.1	158	45.7	23.6 104	50	3 52	32	06	33 32	35	84	
20	123	24.3		39.1	173	11.7	13.1 105	52	45	28	5 03	41 30	27	86	
21	138	24.5		40.0	187	37.7	+17 02.4 107	54	37	23	4 59	3 50 28	19	88	
22	153	24.6		40.9	202	03.7	+16 51.7 107	56	28	17	56	4 01 25	12 09	91	
23	168	24.8		41.9	216	29.8	40.8 109	58	18	11	52	13 21	11 57	95	
24	183	24.9	-7	42.8	230	55.9	+16 29.8 110	60 S	3 06	4 03	4 48	4 27 17	11 44	99	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 33 ^m 8		Mag: -3.9 PMG: 10 ^h 24 ^m		Mag: -0.2 PMG: 18 ^h 03 ^m		Mag: -2.4 PMG: 5 ^h 41 ^m		Mag: -0.1 PMG: 3 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	20	38.0	204	00.9	+3	03.7	89	05.9	-24	35.9
1	35	40.5	219	00.6		02.5	104	06.6		35.6
2	50	43.0	234	00.2		01.3	119	07.3		35.3
3	65	45.4	248	59.8	+3	00.1	134	08.1		35.0
4	80	47.9	263	59.4	+2	58.9	149	08.8		34.7
5	95	50.4	278	59.0	+2	57.7	164	09.5	-24	34.4
6	110	52.8	293	58.6	+2	56.5	179	10.2	-24	34.1
7	125	55.3	308	58.2		55.3	194	10.9		33.8
8	140	57.8	323	57.8		54.1	209	11.6		33.5
9	156	00.2	338	57.4		52.9	224	12.3		33.2
10	171	02.7	353	57.0		51.7	239	13.1		32.9
11	186	05.1	8	56.6	+2	50.5	254	13.8	-24	32.6
12	201	07.6	23	56.2	+2	49.3	269	14.5	-24	32.3
13	216	10.1	38	55.9		48.1	284	15.2		32.0
14	231	12.5	53	55.5		46.9	299	15.9		31.7
15	246	15.0	68	55.1		45.7	314	16.6		31.4
16	261	17.5	83	54.7		44.5	329	17.3		31.0
17	276	19.9	98	54.3	+2	43.3	344	18.1	-24	30.7
18	291	22.4	113	53.9	+2	42.1	359	18.8	-24	30.4
19	306	24.9	128	53.5		40.9	14	19.5		30.1
20	321	27.3	143	53.1		39.7	29	20.2		29.8
21	336	29.8	158	52.7		38.5	44	20.9		29.5
22	351	32.3	173	52.3		37.3	59	21.6		29.2
23	6	34.7	188	51.9		36.2	74	22.3		28.9
24	21	37.2	203	51.6	+2	35.0	89	23.1	-24	28.6

Dif	—	-4	-12	+7	+3	+23	0	+25

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 25 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'3 20 ^h : 60'4											
	PMG: 11 ^h 46 ^m 2														
	PMG: 8 ^h 56 ^m				R°: 55 ^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	24.9	-7 42.8	230	55.9	+16 29.8	72	60 N	16 57	17 39	18 27	0 37 100	16 48 11		
1	198	25.1	43.7	245	22.1	18.7	111	58	17 01	40	26	48 95	40 15		
2	213	25.2	44.7	259	48.3	+16 07.5	112	56	04	42	25	0 57 92	33 18		
3	228	25.4	45.6	274	14.6	+15 56.2	113	54	07	43	24	1 05 89	27 21		
4	243	25.5	46.5	288	40.9	44.7	115	52	10	44	23	12 87	22 23		
5	258	25.7	-7 47.5	303	07.3	+15 33.2	115	50	17 13	17 45	18 23	1 19 84	16 17 25		
6	273	25.8	-7 48.4	317	33.7	+15 21.6	116	45	17 19	17 48	18 22	1 33 79	16 06 30		
7	288	26.0	49.3	332	00.1	+15 09.8	118	40	24	51	22	45 75	15 57 34		
8	303	26.1	50.3	346	26.6	+14 58.0	118	35	28	53	23	1 55 71	49 37		
9	318	26.3	51.2	0	53.2	46.0	120	30	31	17 56	23	2 03 69	42 40		
10	333	26.4	52.1	15	19.8	34.0	120	20	38	18 00	26	18 64	30 45		
11	348	26.6	-7 53.1	29	46.4	+14 21.8	122	10 N	17 44	18 05	18 30	2 31 59	15 19 50		
12	3	26.7	-7 54.0	44	13.1	+14 09.6	122	0	17 50	18 10	18 35	2 43 55	15 09 55		
13	18	26.9	54.9	58	39.8	+13 57.2	124	10 S	17 55	16	41	2 55 51	14 59 59		
14	33	27.0	55.9	73	06.6	44.8	124	20	18 01	24	18 50	3 08 47	48 64		
15	48	27.2	56.8	87	33.4	32.3	125	30	09	33	19 02	22 42	36 68		
16	63	27.3	57.7	102	00.2	19.7	126	35	13	39	09	31 39	29 71		
17	78	27.4	-7 58.7	116	27.1	+13 07.0	127	40	18 18	18 45	19 19	3 40 36	14 20 75		
18	93	27.6	-7 59.6	130	54.1	+12 54.2	128	45	18 23	18 54	19 30	3 52 31	14 10 80		
19	108	27.7	-8 00.5	145	21.1	41.3	129	50	30	19 04	45	4 05 27	13 59 84		
20	123	27.9	01.5	159	48.1	28.3	130	52	33	08	19 52	11 25	53 87		
21	138	28.0	02.4	174	15.2	15.3	130	54	37	14	20 00	18 22	47 89		
22	153	28.2	03.3	188	42.3	+12 02.2	131	56	40	20	09	26 19	40 93		
23	168	28.3	04.3	203	09.5	+11 49.0	132	58	45	27	20	34 16	32 96		
24	183	28.5	-8 05.2	217	36.7	+11 35.7	133	60 S	18 50	19 34	20 33	4 44 13	13 23 101		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 29 ^m 8		Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: -0.2 PMG: 18 ^h 02 ^m			Mag: -2.4 PMG: 5 ^h 38 ^m			Mag: -0.1 PMG: 3 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	21	37.2	203	51.6	+2 35.0	89	23.1	-24 28.6	275	21.6	+22 26.4	307	57.5	+20 43.4	
1	36	39.6	218	51.2	33.8	104	23.8	28.3	290	23.9	26.4	323	00.0	43.4	
2	51	42.1	233	50.8	32.6	119	24.5	28.0	305	26.1	26.3	338	02.5	43.4	
3	66	44.6	248	50.4	31.4	134	25.2	27.7	320	28.4	26.3	353	05.1	43.4	
4	81	47.0	263	50.0	30.2	149	25.9	27.4	335	30.7	26.3	8	07.6	43.4	
5	96	49.5	278	49.6	+2 29.0	164	26.6	-24 27.1	350	33.0	+22 26.3	23	10.2	+20 43.4	
6	111	52.0	293	49.2	+2 27.8	179	27.3	-24 26.7	5	35.3	+22 26.3	38	12.7	+20 43.4	
7	126	54.4	308	48.8	26.6	194	28.0	26.4	20	37.6	26.3	53	15.2	43.3	
8	141	56.9	323	48.4	25.4	209	28.7	26.1	35	39.9	26.3	68	17.8	43.3	
9	156	59.4	338	48.0	24.1	224	29.5	25.8	50	42.2	26.2	83	20.3	43.3	
10	172	01.8	353	47.7	22.9	239	30.2	25.5	65	44.5	26.2	98	22.9	43.3	
11	187	04.3	8	47.3	+2 21.7	254	30.9	-24 25.2	80	46.7	+22 26.2	113	25.4	+20 43.3	
12	202	06.7	23	46.9	+2 20.5	269	31.6	-24 24.9	95	49.0	+22 26.2	128	28.0	+20 43.3	
13	217	09.2	38	46.5	19.3	284	32.3	24.6	110	51.3	26.2	143	30.5	43.3	
14	232	11.7	53	46.1	18.1	299	33.0	24.3	125	53.6	26.2	158	33.0	43.3	
15	247	14.1	68	45.7	16.9	314	33.7	23.9	140	55.9	26.2	173	35.6	43.2	
16	262	16.6	83	45.3	15.7	329	34.4	23.6	155	58.2	26.1	188	38.1	43.2	
17	277	19.1	98	44.9	+2 14.5	344	35.1	-24 23.3	171	00.5	+22 26.1	203	40.7	+20 43.2	
18	292	21.5	113	44.5	+2 13.3	359	35.8	-24 23.0	186	02.8	+22 26.1	218	43.2	+20 43.2	
19	307	24.0	128	44.1	12.1	14	36.6	22.7	201	05.1	26.1	233	45.8	43.2	
20	322	26.5	143	43.7	10.9	29	37.3	22.4	216	07.4	26.1	248	48.3	43.2	
21	337	28.9	158	43.4	09.7	44	38.0	22.1	231	09.7	26.1	263	50.8	43.2	
22	352	31.4	173	43.0	08.5	59	38.7	21.7	246	12.0	26.1	278	53.4	43.2	
23	7	33.9	188	42.6	07.3	74	39.4	21.4	261	14.2	26.0	293	55.9	43.1	
24	22	36.3	203	42.2	+2 06.1	89	40.1	-24 21.1	276	16.5	+22 26.0	308	58.5	+20 43.1	
Dif	—		-4	-12		+7	+3		+23	0		+25	0		

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: 26 ^d 6 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'6 SD: 16'5 PMG: 9 ^h 51 ^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	183	28.5	-8	05.2	217	36.7	+11	35.7	60 N	5 07	5 55	6 37	2 17	99	16 59	9
1	198	28.6		06.1	232	03.9	82	22.3	58	08	53	33	23	96	55	12
2	213	28.8		07.1	246	31.2	83	+11 08.9	56	09	52	29	29	92	51	15
3	228	28.9		08.0	260	58.6	84	+10 55.4	54	09	50	26	34	90	48	18
4	243	29.1		08.9	275	25.9	83	41.8	52	10	49	23	39	87	45	20
5	258	29.2	-8	09.8	289	53.4	85	+10 28.1	50	5 10	5 48	6 20	2 43	84	16 42	22
6	273	29.3	-8	10.8	304	20.8	84	+10 14.4	45	5 11	5 45	6 14	2 52	79	16 36	27
7	288	29.5		11.7	318	48.3	85	+10 00.6	40	11	42	09	3 00	75	31	31
8	303	29.6		12.6	333	15.8	85	+9 46.8	35	10	40	05	06	71	26	35
9	318	29.8		13.6	347	43.4	86	32.9	30	09	37	6 01	12	68	22	38
10	333	29.9		14.5	2	11.0	86	18.9	20	07	32	5 54	22	62	15	44
11	348	30.1	-8	15.4	16	38.7	87	+9 04.8	10 N	5 03	5 27	5 48	3 30	58	16 09	49
12	3	30.2	-8	16.4	31	06.4	87	+8 50.7	0	4 58	5 22	5 43	3 38	54	16 04	52
13	18	30.3		17.3	45	34.1	87	36.6	10 S	51	16	37	46	49	15 58	57
14	33	30.5		18.2	60	01.8	87	22.4	20	42	5 08	30	3 55	44	52	62
15	48	30.6		19.1	74	29.6	88	+8 08.1	30	30	4 59	23	4 04	39	44	68
16	63	30.8		20.1	88	57.5	89	+7 53.8	35	22	53	19	10	36	40	71
17	78	30.9	-8	21.0	103	25.3	88	+7 39.4	40	4 13	4 46	5 14	4 16	32	15 35	75
18	93	31.1	-8	21.9	117	53.2	89	+7 25.0	45	4 02	4 38	5 08	4 23	29	15 30	79
19	108	31.2		22.8	132	21.2	90	+7 10.6	50	3 47	28	5 01	32	23	23	84
20	123	31.3		23.8	146	49.1	89	+6 56.1	52	40	23	4 58	36	21	20	86
21	138	31.5		24.7	161	17.1	90	41.5	54	31	18	55	40	19	16	90
22	153	31.6		25.6	175	45.2	91	26.9	56	22	11	51	45	16	13	92
23	168	31.8		26.6	190	13.2	90	+6 12.3	58	3 11	4 05	46	50	14	08	96
24	183	31.9	-8	27.5	204	41.3	91	+5 57.6	60 S	2 59	3 57	4 42	4 57	9	15 04	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 25 ^m 9		Mag: -3.9 PMG: 10 ^h 25 ^m		Mag: -0.2 PMG: 18 ^h 00 ^m		Mag: -2.4 PMG: 5 ^h 34 ^m		Mag: -0.1 PMG: 3 ^h 24 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	22	36.3	203	42.2	+2	06.1	89	40.1	-24	21.1	276	16.5	+22	26.0	308	58.5	+20	43.1
1	37	38.8	218	41.8		04.9	104	40.8		20.8	291	18.8		26.0	324	01.0		43.1
2	52	41.2	233	41.4		03.7	119	41.5		20.5	306	21.1		26.0	339	03.6		43.1
3	67	43.7	248	41.0		02.5	134	42.2		20.2	321	23.4		26.0	354	06.1		43.1
4	82	46.2	263	40.6		01.3	149	42.9		19.9	336	25.7		26.0	9	08.7		43.1
5	97	48.6	278	40.2	+2	00.1	164	43.6	-24	19.5	351	28.0	+22	26.0	24	11.2	+20	43.1
6	112	51.1	293	39.8	+1	58.9	179	44.3	-24	19.2	6	30.3	+22	25.9	39	13.8	+20	43.0
7	127	53.6	308	39.5		57.7	194	45.0		18.9	21	32.6		25.9	54	16.3		43.0
8	142	56.0	323	39.1		56.5	209	45.8		18.6	36	34.9		25.9	69	18.8		43.0
9	157	58.5	338	38.7		55.3	224	46.5		18.3	51	37.2		25.9	84	21.4		43.0
10	173	01.0	353	38.3		54.1	239	47.2		17.9	66	39.5		25.9	99	23.9		43.0
11	188	03.4	8	37.9	+1	52.9	254	47.9	-24	17.6	81	41.8	+22	25.9	114	26.5	+20	43.0
12	203	05.9	23	37.5	+1	51.7	269	48.6	-24	17.3	96	44.1	+22	25.9	129	29.0	+20	43.0
13	218	08.3	38	37.1		50.5	284	49.3		17.0	111	46.4		25.9	144	31.6		43.0
14	233	10.8	53	36.7		49.2	299	50.0		16.7	126	48.7		25.8	159	34.1		42.9
15	248	13.3	68	36.3		48.0	314	50.7		16.3	141	51.0		25.8	174	36.7		42.9
16	263	15.7	83	36.0		46.8	329	51.4		16.0	156	53.3		25.8	189	39.2		42.9
17	278	18.2	98	35.6	+1	45.6	344	52.1	-24	15.7	171	55.6	+22	25.8	204	41.8	+20	42.9
18	293	20.7	113	35.2	+1	44.4	359	52.8	-24	15.4	186	57.9	+22	25.8	219	44.3	+20	42.9
19	308	23.1	128	34.8		43.2	14	53.5		15.1	202	00.2		25.8	234	46.9		42.9
20	323	25.6	143	34.4		42.0	29	54.2		14.7	217	02.5		25.8	249	49.4		42.9
21	338	28.1	158	34.0		40.8	44	54.9		14.4	232	04.8		25.7	264	52.0		42.9
22	353	30.5	173	33.6		39.6	59	55.6		14.1	247	07.1		25.7	279	54.5		42.8
23	8	33.0	188	33.2		38.4	74	56.3		13.8	262	09.4		25.7	294	57.1		42.8
24	23	35.5	203	32.8	+1	37.2	89	57.0	-24	13.4	277	11.7	+22	25.7	309	59.6	+20	42.8

Dif	—	-4	-12	+7	+3	+23	0	+25

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0		Edad: 27 ^d 6 PHE	SD: 16'5		4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5 Rº: 52 ^m			Civil		Náutico	Hora	Rº	Hora	Rº			
	hG ☉	Dec		hG ☾	Dif				Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	183	31.9	-8	27.5	204	41.3	+5 57.6	60 N	16 51	17 33	18 21	3 56 99	17 08 8					
1	198	32.0		28.4	219	09.4	91 42.9 ¹⁴⁷	58	55	35	20	3 59 95	07 12					
2	213	32.2		29.3	233	37.6	92 28.2 ¹⁴⁷	56	16 59	37	20	4 01 92	06 15					
3	228	32.3		30.3	248	05.8	92 +5 13.4 ¹⁴⁸	54	17 03	39	19	04 88	06 17					
4	243	32.5		31.2	262	34.0	92 +4 58.6 ¹⁴⁸	52	06	40	19	06 86	05 20					
5	258	32.6	-8	32.1	277	02.2	92 +4 43.8 ¹⁴⁸	50	17 09	17 41	18 19	4 07 84	17 04 22					
6	273	32.7	-8	33.0	291	30.5	93 +4 28.9 ¹⁴⁹	45	17 15	17 45	18 19	4 11 79	17 03 27					
7	288	32.9		34.0	305	58.7	92 +4 14.0 ¹⁴⁹	40	21	48	19	15 74	02 31					
8	303	33.0		34.9	320	27.0	93 +3 59.1 ¹⁴⁹	35	25	51	20	17 71	01 34					
9	318	33.1		35.8	334	55.4	94 44.2 ¹⁴⁹	30	29	53	21	20 67	17 00 38					
10	333	33.3		36.7	349	23.7	93 29.2 ¹⁵⁰	20	36	17 59	24	24 62	16 59 43					
11	348	33.4	-8	37.7	3	52.1	94 +3 14.2 ¹⁵⁰	10 N	17 43	18 04	18 29	4 28 57	16 58 47					
12	3	33.6	-8	38.6	18	20.5	94 +2 59.3 ¹⁴⁹	0	17 49	18 10	18 34	4 32 52	16 56 52					
13	18	33.7		39.5	32	48.9	94 44.2 ¹⁵¹	10 S	17 55	17	41	35 48	55 57					
14	33	33.8		40.4	47	17.4	95 29.2 ¹⁵⁰	20	18 02	25	18 51	39 43	54 61					
15	48	34.0		41.3	61	45.8	94 +2 14.2 ¹⁵⁰	30	10	34	19 03	43 38	52 67					
16	63	34.1		42.3	76	14.3	95 +1 59.2 ¹⁵⁰	35	15	41	11	46 34	51 70					
17	78	34.2	-8	43.2	90	42.8	95 +1 44.1 ¹⁵¹	40	18 20	18 48	19 21	4 48 31	16 50 74					
18	93	34.4	-8	44.1	105	11.3	95 +1 29.0 ¹⁵¹	45	18 26	18 56	19 33	4 52 26	16 49 78					
19	108	34.5		45.0	119	39.8	95 +1 14.0 ¹⁵⁰	50	33	19 07	49	55 22	47 83					
20	123	34.6		46.0	134	08.4	96 +0 58.9 ¹⁵¹	52	37	12	19 56	57 20	46 86					
21	138	34.8		46.9	148	36.9	95 43.8 ¹⁵¹	54	40	18	20 05	4 59 18	46 88					
22	153	34.9		47.8	163	05.5	96 28.8 ¹⁵⁰	56	45	24	15	5 01 15	45 91					
23	168	35.1		48.7	177	34.1	96 +0 13.7 ¹⁵¹	58	49	32	26	04 11	44 94					
24	183	35.2	-8	49.6	192	02.7	96 -0 01.4 ¹⁵¹	60 S	18 55	19 40	20 40	5 06 9	16 43 98					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 22 ^m 0		Mag: -3.9 PMG: 10 ^h 26 ^m			Mag: -0.2 PMG: 17 ^h 59 ^m			Mag: -2.4 PMG: 5 ^h 30 ^m			Mag: -0.1 PMG: 3 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	23	35.5	203	32.8	+1	37.2	89	57.0	-24	13.4	277	11.7	+22	25.7	309	59.6	+20	42.8
1	38	37.9	218	32.4		36.0	104	57.7		13.1	292	14.0		25.7	325	02.2		42.8
2	53	40.4	233	32.1		34.8	119	58.4		12.8	307	16.3		25.7	340	04.7		42.8
3	68	42.8	248	31.7		33.6	134	59.2		12.5	322	18.6		25.7	355	07.3		42.8
4	83	45.3	263	31.3		32.4	149	59.9		12.1	337	20.9		25.7	10	09.8		42.8
5	98	47.8	278	30.9	+1	31.1	165	00.6	-24	11.8	352	23.2	+22	25.6	25	12.4	+20	42.7
6	113	50.2	293	30.5	+1	29.9	180	01.3	-24	11.5	7	25.5	+22	25.6	40	14.9	+20	42.7
7	128	52.7	308	30.1		28.7	195	02.0		11.2	22	27.8		25.6	55	17.5		42.7
8	143	55.2	323	29.7		27.5	210	02.7		10.8	37	30.1		25.6	70	20.0		42.7
9	158	57.6	338	29.3		26.3	225	03.4		10.5	52	32.4		25.6	85	22.6		42.7
10	174	00.1	353	28.9		25.1	240	04.1		10.2	67	34.7		25.6	100	25.1		42.7
11	189	02.6	8	28.6	+1	23.9	255	04.8	-24	09.9	82	37.0	+22	25.6	115	27.7	+20	42.7
12	204	05.0	23	28.2	+1	22.7	270	05.5	-24	09.5	97	39.4	+22	25.6	130	30.2	+20	42.7
13	219	07.5	38	27.8		21.5	285	06.2		09.2	112	41.7		25.5	145	32.8		42.6
14	234	09.9	53	27.4		20.3	300	06.9		08.9	127	44.0		25.5	160	35.3		42.6
15	249	12.4	68	27.0		19.1	315	07.6		08.5	142	46.3		25.5	175	37.9		42.6
16	264	14.9	83	26.6		17.8	330	08.3		08.2	157	48.6		25.5	190	40.4		42.6
17	279	17.3	98	26.2	+1	16.6	345	09.0	-24	07.9	172	50.9	+22	25.5	205	43.0	+20	42.6
18	294	19.8	113	25.8	+1	15.4	0	09.7	-24	07.5	187	53.2	+22	25.5	220	45.5	+20	42.6
19	309	22.3	128	25.4		14.2	15	10.4		07.2	202	55.5		25.5	235	48.1		42.6
20	324	24.7	143	25.0		13.0	30	11.1		06.9	217	57.8		25.5	250	50.6		42.5
21	339	27.2	158	24.7		11.8	45	11.8		06.6	233	00.1		25.4	265	53.2		42.5
22	354	29.7	173	24.3		10.6	60	12.5		06.2	248	02.4		25.4	280	55.7		42.5
23	9	32.1	188	23.9		09.4	75	13.2		05.9	263	04.7		25.4	295	58.3		42.5
24	24	34.6	203	23.5	+1	08.2	90	13.9	-24	05.6	278	07.1	+22	25.4	311	00.8	+20	42.5
Dif	—		-4		-12		+7		+3		+23		0		+26		0	

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'0 PMG: 11 ^h 45 ^m 6			Edad: 28 ^d 6	PHE { 4 ^h : 60'4 12 ^h : 60'3 20 ^h : 60'1 Rº: 52 ^m	Dec	Dif					Hora	Rº	Hora	Rº							
	hG ☉	Dec	hG ☾	Dif					Náutico	Civil												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	183	35.2	-8	49.6	192	02.7	-0	01.4	60 N	5	11	5	59	6	42	5	35	97	17	16	10	
1	198	35.3		50.6	206	31.3	96	16.4	58	12	57		37		34	94		19	12			
2	213	35.5		51.5	220	59.9	96	31.5	56	12	56		33		33	91		21	16			
3	228	35.6		52.4	235	28.5	96	-0	46.5	54	13	54	30		32	88		23	18			
4	243	35.7		53.3	249	57.2	97	-1	01.5	52	13	52	26		32	85		25	20			
5	258	35.9	-8	54.2	264	25.8	96	-1	16.6	50	5	13	5	51	6	23	5	31	83	17	26	23
6	273	36.0	-8	55.2	278	54.5	97	-1	31.6	45	5	13	5	47	6	17	5	30	78	17	30	27
7	288	36.1		56.1	293	23.2	97	-1	46.6	40	13	44	11		29	73		33	31			
8	303	36.2		57.0	307	51.8	96	-2	01.6	35	12	41	07		28	70		35	35			
9	318	36.4		57.9	322	20.5	97		16.5	30	11	38	6	02	27	67		38	38			
10	333	36.5		58.8	336	49.2	97		31.4	20	07	33	5	55	26	61		42	43			
11	348	36.6	-8	59.8	351	17.9	97	-2	46.4	10 N	5	03	5	27	5	49	5	25	56	17	45	48
12	3	36.8	-9	00.7	5	46.6	97	-3	01.3	0	4	57	5	21	5	42	5	24	52	17	48	52
13	18	36.9		01.6	20	15.3	97		16.1	10 S	50	15	36		23	47		52	56			
14	33	37.0		02.5	34	44.0	97		31.0	20	40	5	07	29	22	42		55	61			
15	48	37.2		03.4	49	12.7	97	-3	45.8	30	28	4	57	21	21	37		17	59	66		
16	63	37.3		04.4	63	41.4	97	-4	00.6	35	20	50	16		20	34		18	01	70		
17	78	37.4	-9	05.3	78	10.1	97	-4	15.3	40	4	10	4	43	5	19	31	18	04	73		
18	93	37.6	-9	06.2	92	38.8	97	-4	30.0	45	3	58	4	34	5	05	5	18	27	18	07	77
19	108	37.7		07.1	107	07.5	97		44.7	50	42	23	4	57	17	23	10	83				
20	123	37.8		08.0	121	36.2	97	-4	59.4	52	34	18	54		17	20		12	85			
21	138	37.9		08.9	136	04.9	97	-5	14.0	54	26	12	50		17	17		14	87			
22	153	38.1		09.9	150	33.6	97		28.5	56	16	4	06	46	16	15		16	90			
23	168	38.2		10.8	165	02.3	97		43.1	58	3	04	3	59	41	15	13	18	94			
24	183	38.3	-9	11.7	179	31.0	97	-5	57.5	60 S	2	51	3	50	4	36	5	15	9	18	21	97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 22 ^h 18 ^m 0		Mag: -3.9 PMG: 10 ^h 27 ^m			Mag: -0.1 PMG: 17 ^h 58 ^m			Mag: -2.4 PMG: 5 ^h 27 ^m			Mag: -0.2 PMG: 3 ^h 15 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	24	34.6	203	23.5	+1	08.2	90	13.9	-24	05.6	278	07.1	+22	25.4	311	00.8	+20	42.5				
1	39	37.1	218	23.1		07.0	105	14.6		05.2	293	09.4		25.4	326	03.4		42.5				
2	54	39.5	233	22.7		05.7	120	15.3		04.9	308	11.7		25.4	341	06.0		42.5				
3	69	42.0	248	22.3		04.5	135	16.0		04.6	323	14.0		25.4	356	08.5		42.5				
4	84	44.4	263	21.9		03.3	150	16.7		04.2	338	16.3		25.4	11	11.1		42.4				
5	99	46.9	278	21.5	+1	02.1	165	17.4	-24	03.9	353	18.6	+22	25.3	26	13.6	+20	42.4				
6	114	49.4	293	21.2	+1	00.9	180	18.1	-24	03.6	8	20.9	+22	25.3	41	16.2	+20	42.4				
7	129	51.8	308	20.8	+0	59.7	195	18.8		03.2	23	23.2		25.3	56	18.7		42.4				
8	144	54.3	323	20.4		58.5	210	19.5		02.9	38	25.6		25.3	71	21.3		42.4				
9	159	56.8	338	20.0		57.3	225	20.2		02.5	53	27.9		25.3	86	23.8		42.4				
10	174	59.2	353	19.6		56.1	240	20.9		02.2	68	30.2		25.3	101	26.4		42.4				
11	190	01.7	8	19.2	+0	54.8	255	21.6	-24	01.9	83	32.5	+22	25.3	116	29.0	+20	42.3				
12	205	04.2	23	18.8	+0	53.6	270	22.3	-24	01.5	98	34.8	+22	25.3	131	31.5	+20	42.3				
13	220	06.6	38	18.4		52.4	285	23.0		01.2	113	37.1		25.2	146	34.1		42.3				
14	235	09.1	53	18.0		51.2	300	23.7		00.9	128	39.4		25.2	161	36.6		42.3				
15	250	11.6	68	17.6		50.0	315	24.4		00.5	143	41.8		25.2	176	39.2		42.3				
16	265	14.0	83	17.3		48.8	330	25.1	-24	00.2	158	44.1		25.2	191	41.7		42.3				
17	280	16.5	98	16.9	+0	47.6	345	25.8	-23	59.9	173	46.4	+22	25.2	206	44.3	+20	42.3				
18	295	18.9	113	16.5	+0	46.4	0	26.5	-23	59.5	188	48.7	+22	25.2	221	46.9	+20	42.2				
19	310	21.4	128	16.1		45.1	15	27.2		59.2	203	51.0		25.2	236	49.4		42.2				
20	325	23.9	143	15.7		43.9	30	27.9		58.8	218	53.3		25.2	251	52.0		42.2				
21	340	26.3	158	15.3		42.7	45	28.6		58.5	233	55.7		25.2	266	54.5		42.2				
22	355	28.8	173	14.9		41.5	60	29.3		58.2	248	58.0		25.1	281	57.1		42.2				
23	10	31.3	188	14.5		40.3	75	30.0		57.8	264	00.3		25.1	296	59.6		42.2				
24	25	33.7	203	14.1	+0	39.1	90	30.7	-23	57.5	279	02.6	+22	25.1	312	02.2	+20	42.2				
Dif	—		-4		-12	+7		+3	+23		0				+26							

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: 29 ^d 6 PHE { 4 ^h : 60'0 12 ^h : 59'8 20 ^h : 59'5 Rº: 52 ^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			
0	183	38.3	-9	11.7	179	31.0	-5	57.5	60 N	16 45	17 28	18 16	7 12	97	17 26	11		
1	198	38.5		12.6	193	59.6	96	-6 12.0 ¹⁴⁵	58	50	30	15	08	93	31	15		
2	213	38.6		13.5	208	28.3	97	26.4 ¹⁴⁴	56	54	32	15	04	89	37	18		
3	228	38.7		14.4	222	57.0	97	40.7 ¹⁴³	54	16 58	34	15	7 00	87	41	21		
4	243	38.8		15.3	237	25.7	97	-6 55.0 ¹⁴³	52	17 02	36	15	6 57	84	45	23		
5	258	39.0	-9	16.3	251	54.3	96	-7 09.3 ¹⁴³	50	17 05	17 38	18 15	6 54	82	17 49	25		
6	273	39.1	-9	17.2	266	23.0	97	-7 23.4 ¹⁴¹	45	17 12	17 41	18 15	6 48	76	17 57	30		
7	288	39.2		18.1	280	51.6	96	37.6 ¹⁴²	40	18	45	16	42	73	18 04	34		
8	303	39.3		19.0	295	20.2	96	-7 51.7 ¹⁴¹	35	23	48	18	38	69	10	37		
9	318	39.5		19.9	309	48.9	97	-8 05.7 ¹⁴⁰	30	27	51	19	34	66	16	39		
10	333	39.6		20.8	324	17.5	96	19.7 ¹⁴⁰	20	35	17 57	23	27	61	25	44		
11	348	39.7	-9	21.7	338	46.1	96	-8 33.6 ¹³⁹	10 N	17 42	18 03	18 28	6 21	57	18 33	48		
12	3	39.8	-9	22.7	353	14.7	96	-8 47.4 ¹³⁸	0	17 49	18 10	18 34	6 16	52	18 40	53		
13	18	40.0		23.6	7	43.2	95	-9 01.2 ¹³⁸	10 S	17 55	17	42	10	48	48	57		
14	33	40.1		24.5	22	11.8	96	14.9 ¹³⁷	20	18 03	25	18 52	6 04	44	18 56	61		
15	48	40.2		25.4	36	40.4	96	28.6 ¹³⁷	30	11	36	19 05	5 58	39	19 05	66		
16	63	40.3		26.3	51	08.9	95	42.2 ¹³⁶	35	16	42	13	54	36	11	68		
17	78	40.5	-9	27.2	65	37.4	95	-9 55.7 ¹³⁵	40	18 22	18 50	19 23	5 50	32	19 17	72		
18	93	40.6	-9	28.1	80	05.9	95	-10 09.2 ¹³⁵	45	18 29	18 59	19 36	5 45	29	19 24	76		
19	108	40.7		29.0	94	34.4	95	22.5 ¹³³	50	37	19 11	19 53	40	23	33	81		
20	123	40.8		30.0	109	02.9	95	35.9 ¹³⁴	52	40	16	20 01	37	22	37	83		
21	138	41.0		30.9	123	31.4	95	-10 49.1 ¹³²	54	44	22	10	34	19	41	86		
22	153	41.1		31.8	137	59.9	95	-11 02.3 ¹³²	56	49	29	20	31	17	46	89		
23	168	41.2		32.7	152	28.3	94	15.3 ¹³⁰	58	18 54	37	32	28	13	52	92		
24	183	41.3	-9	33.6	166	56.7	94	-11 28.4 ¹³¹	60 S	19 00	19 46	20 47	5 24	10	19 58	96		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 22 ^h 14 ^m 1		Mag: -3.9 PMG: 10 ^h 27 ^m			Mag: -0.1 PMG: 17 ^h 57 ^m			Mag: -2.4 PMG: 5 ^h 23 ^m				Mag: -0.2 PMG: 3 ^h 11 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	25	33.7	203	14.1	+0	39.1	90	30.7	-23	57.5	279	02.6	+22	25.1	312	02.2	+20	42.2
1	40	36.2	218	13.8		37.9	105	31.4		57.1	294	04.9		25.1	327	04.8		42.1
2	55	38.7	233	13.4		36.7	120	32.1		56.8	309	07.2		25.1	342	07.3		42.1
3	70	41.1	248	13.0		35.4	135	32.8		56.5	324	09.6		25.1	357	09.9		42.1
4	85	43.6	263	12.6		34.2	150	33.4		56.1	339	11.9		25.1	12	12.4		42.1
5	100	46.0	278	12.2	+0	33.0	165	34.1	-23	55.8	354	14.2	+22	25.1	27	15.0	+20	42.1
6	115	48.5	293	11.8	+0	31.8	180	34.8	-23	55.4	9	16.5	+22	25.0	42	17.6	+20	42.1
7	130	51.0	308	11.4		30.6	195	35.5		55.1	24	18.9		25.0	57	20.1		42.1
8	145	53.4	323	11.0		29.4	210	36.2		54.7	39	21.2		25.0	72	22.7		42.0
9	160	55.9	338	10.6		28.2	225	36.9		54.4	54	23.5		25.0	87	25.2		42.0
10	175	58.4	353	10.2		26.9	240	37.6		54.0	69	25.8		25.0	102	27.8		42.0
11	191	00.8	8	09.9	+0	25.7	255	38.3	-23	53.7	84	28.1	+22	25.0	117	30.4	+20	42.0
12	206	03.3	23	09.5	+0	24.5	270	39.0	-23	53.4	99	30.5	+22	25.0	132	32.9	+20	42.0
13	221	05.8	38	09.1		23.3	285	39.7		53.0	114	32.8		25.0	147	35.5		42.0
14	236	08.2	53	08.7		22.1	300	40.4		52.7	129	35.1		25.0	162	38.0		42.0
15	251	10.7	68	08.3		20.9	315	41.1		52.3	144	37.4		24.9	177	40.6		42.0
16	266	13.2	83	07.9		19.7	330	41.8		52.0	159	39.8		24.9	192	43.2		41.9
17	281	15.6	98	07.5	+0	18.4	345	42.5	-23	51.6	174	42.1	+22	24.9	207	45.7	+20	41.9
18	296	18.1	113	07.1	+0	17.2	0	43.2	-23	51.3	189	44.4	+22	24.9	222	48.3	+20	41.9
19	311	20.5	128	06.7		16.0	15	43.9		50.9	204	46.7		24.9	237	50.8		41.9
20	326	23.0	143	06.3		14.8	30	44.6		50.6	219	49.1		24.9	252	53.4		41.9
21	341	25.5	158	06.0		13.6	45	45.3		50.2	234	51.4		24.9	267	56.0		41.9
22	356	27.9	173	05.6		12.4	60	46.0		49.9	249	53.7		24.9	282	58.5		41.9
23	11	30.4	188	05.2		11.2	75	46.7		49.5	264	56.0		24.9	298	01.1		41.8
24	26	32.9	203	04.8	+0	09.9	90	47.3	-23	49.2	279	58.4	+22	24.9	313	03.7	+20	41.8
Dif	—		-4		-12		+7		+3		+23		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 45 ^m 2			Edad: 1 ^d 2 PHE { SD: 16'2 PMG: 13 ^h 20 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	41.3	-9	33.6	166	56.7	-11	28.4	60 N	5 16	6 04	6 47	8 49	95	17 37	15
1	198	41.4		34.5	181	25.1	94	41.3	58	16	02	42	41	90	46	19
2	213	41.6		35.4	195	53.5	94	54.1	56	16	00	37	33	87	17 55	22
3	228	41.7		36.3	210	21.9	94	06.9	54	16	5 57	33	27	84	18 02	25
4	243	41.8		37.2	224	50.2	93	19.6	52	16	56	30	21	82	08	28
5	258	41.9	-9	38.1	239	18.6	94	32.2	50	5 16	5 54	6 27	8 16	79	18 14	30
6	273	42.0	-9	39.1	253	46.9	93	44.7	45	5 16	5 50	6 20	8 04	75	18 27	34
7	288	42.2		40.0	268	15.2	93	57.1	40	15	46	14	7 55	71	38	37
8	303	42.3		40.9	282	43.5	93	09.5	35	13	43	08	47	68	47	40
9	318	42.4		41.8	297	11.8	93	21.7	30	12	40	6 04	40	65	18 55	43
10	333	42.5		42.7	311	40.0	92	33.9	20	08	34	5 56	28	61	19 09	47
11	348	42.6	-9	43.6	326	08.2	92	45.9	10 N	5 03	5 27	5 49	7 18	56	19 21	51
12	3	42.8	-9	44.5	340	36.5	93	57.9	0	4 57	5 21	5 42	7 08	53	19 33	53
13	18	42.9		45.4	355	04.6	91	09.8	10 S	49	14	35	6 58	50	45	56
14	33	43.0		46.3	9	32.8	92	21.6	20	39	5 05	27	48	45	19 57	60
15	48	43.1		47.2	24	01.0	92	33.3	30	25	4 54	19	37	40	20 11	65
16	63	43.2		48.1	38	29.1	91	44.9	35	17	48	14	30	38	19	67
17	78	43.3	-9	49.0	52	57.2	91	56.4	40	4 06	4 40	5 08	6 22	36	20 29	70
18	93	43.5	-9	49.9	67	25.3	91	07.8	45	3 54	4 31	5 01	6 14	31	20 40	73
19	108	43.6		50.8	81	53.4	91	19.1	50	37	19	4 53	6 03	28	20 54	77
20	123	43.7		51.7	96	21.5	91	30.3	52	29	14	49	5 59	25	21 00	80
21	138	43.8		52.7	110	49.5	90	41.4	54	20	07	45	53	23	07	82
22	153	43.9		53.6	125	17.5	90	52.4	56	3 10	4 01	41	48	19	15	85
23	168	44.0		54.5	139	45.5	90	03.3	58	2 57	3 53	36	41	17	24	88
24	183	44.2	-9	55.4	154	13.5	90	14.1	60 S	2 43	3 44	4 30	5 34	13	21 34	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 10 ^m 2		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: -0.1 PMG: 17 ^h 56 ^m		Mag: -2.4 PMG: 5 ^h 19 ^m		Mag: -0.2 PMG: 3 ^h 07 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	26	32.9	203	04.8	+0	09.9	90	47.3	279	58.4	+22	24.9	313	03.7	+20	41.8
1	41	35.3	218	04.4		08.7	105	48.0	295	00.7		24.8	328	06.2		41.8
2	56	37.8	233	04.0		07.5	120	48.7	310	03.0		24.8	343	08.8		41.8
3	71	40.3	248	03.6		06.3	135	49.4	325	05.4		24.8	358	11.3		41.8
4	86	42.7	263	03.2		05.1	150	50.1	340	07.7		24.8	13	13.9		41.8
5	101	45.2	278	02.8	+0	03.9	165	50.8	355	10.0	+22	24.8	28	16.5	+20	41.7
6	116	47.6	293	02.4	+0	02.6	180	51.5	10	12.3	+22	24.8	43	19.0	+20	41.7
7	131	50.1	308	02.1		01.4	195	52.2	25	14.7		24.8	58	21.6		41.7
8	146	52.6	323	01.7	+0	00.2	210	52.9	40	17.0		24.8	73	24.2		41.7
9	161	55.0	338	01.3	-0	01.0	225	53.6	55	19.3		24.8	88	26.7		41.7
10	176	57.5	353	00.9		02.2	240	54.3	70	21.7		24.7	103	29.3		41.7
11	192	00.0	8	00.5	-0	03.4	255	55.0	85	24.0	+22	24.7	118	31.9	+20	41.7
12	207	02.4	23	00.1	-0	04.6	270	55.7	100	26.3	+22	24.7	133	34.4	+20	41.6
13	222	04.9	37	59.7		05.9	285	56.4	115	28.7		24.7	148	37.0		41.6
14	237	07.4	52	59.3		07.1	300	57.0	130	31.0		24.7	163	39.6		41.6
15	252	09.8	67	58.9		08.3	315	57.7	145	33.3		24.7	178	42.1		41.6
16	267	12.3	82	58.5		09.5	330	58.4	160	35.6		24.7	193	44.7		41.6
17	282	14.8	97	58.2	-0	10.7	345	59.1	175	38.0	+22	24.7	208	47.3	+20	41.6
18	297	17.2	112	57.8	-0	11.9	0	59.8	190	40.3	+22	24.7	223	49.8	+20	41.6
19	312	19.7	127	57.4		13.2	16	00.5	205	42.7		24.7	238	52.4		41.5
20	327	22.1	142	57.0		14.4	31	01.2	220	45.0		24.6	253	54.9		41.5
21	342	24.6	157	56.6		15.6	46	01.9	235	47.3		24.6	268	57.5		41.5
22	357	27.1	172	56.2		16.8	61	02.6	250	49.7		24.6	284	00.1		41.5
23	12	29.5	187	55.8		18.0	76	03.3	265	52.0		24.6	299	02.6		41.5
24	27	32.0	202	55.4	-0	19.2	91	04.0	280	54.3	+22	24.6	314	05.2	+20	41.5

Dif	—		-4	-12	+7	+4	+23	0	+26	0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°1		Edad: 2 ^d 2		PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9									
	PMG: 11 ^h 45 ^m 0		SD: 16°0			PMG: 14 ^h 14 ^m			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	
0	183	44.2	-9 55.4		154 13.5	-16 14.1	60 N	16 40	17 22	18 10	10 24 89	17 52 22		
1	198	44.3		56.3	168 41.5	90 24.7	58	45	25	10	11 85	18 05 27		
2	213	44.4		57.2	183 09.4	89 35.3	56	49	27	10	10 00 82	17 29		
3	228	44.5		58.1	197 37.3	89 45.8	54	54	30	11	9 51 79	27 32		
4	243	44.6		59.0	212 05.2	89 -16 56.1	52	16 57	32	11	43 76	36 34		
5	258	44.7	-9 59.9		226 33.1	89 -17 06.4	50	17 01	17 34	18 11	9 35 75	18 44 35		
6	273	44.8	-10 00.8		241 01.0	89 -17 16.5	45	17 08	17 38	18 12	9 19 71	19 01 39		
7	288	45.0		01.7	255 28.8	88 26.5	40	15	42	14	9 06 68	15 42		
8	303	45.1		02.6	269 56.7	89 36.4	35	20	46	15	8 55 65	27 44		
9	318	45.2		03.5	284 24.5	88 46.2	30	25	49	17	45 63	38 46		
10	333	45.3		04.4	298 52.3	88 -17 55.9	20	34	17 56	22	29 59	19 56 49		
11	348	45.4	-10 05.3		313 20.1	88 -18 05.5	10 N	17 41	18 02	18 27	8 14 57	20 12 51		
12	3	45.5	-10 06.2		327 47.8	87 -18 14.9	0	17 48	18 09	18 34	8 01 54	20 26 54		
13	18	45.6		07.1	342 15.6	88 24.3	10 S	17 56	17	42	7 48 50	41 57		
14	33	45.7		08.0	356 43.3	87 33.5	20	18 04	26	18 52	33 48	20 57 59		
15	48	45.9		08.9	11 11.0	87 42.6	30	13	37	19 06	17 45	21 16 61		
16	63	46.0		09.8	25 38.7	87 -18 51.6	35	18	44	15	7 08 42	26 64		
17	78	46.1	-10 10.7		40 06.4	87 -19 00.4	40	18 24	18 52	19 26	6 58 39	21 39 65		
18	93	46.2	-10 11.6		54 34.1	87 -19 09.2	45	18 31	19 02	19 39	6 45 37	21 53 68		
19	108	46.3		12.5	69 01.7	86 17.8	50	40	14	19 57	31 32	22 11 72		
20	123	46.4		13.4	83 29.4	87 26.3	52	44	20	20 05	24 30	20 73		
21	138	46.5		14.3	97 57.0	86 34.7	54	48	26	15	16 28	29 75		
22	153	46.6		15.2	112 24.6	86 42.9	56	53	34	26	6 07 26	40 77		
23	168	46.7		16.1	126 52.2	86 51.1	58	18 59	42	39	5 58 22	22 52 81		
24	183	46.8	-10 17.0		141 19.8	86 -19 59.1	60 S	19 05	19 52	20 54	5 47 18	23 06 85		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 22 ^h 06 ^m 2		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: -0.1 PMG: 17 ^h 55 ^m		Mag: -2.4 PMG: 5 ^h 16 ^m			Mag: -0.2 PMG: 3 ^h 03 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	27	32.0	202 55.4	-0 19.2	91 04.0	-23 40.7	280 54.3	+22 24.6	314 05.2	+20 41.5				
1	42	34.5	217 55.0	20.5	106 04.6	40.4	295 56.7	24.6	329 07.8	41.5				
2	57	36.9	232 54.6	21.7	121 05.3	40.0	310 59.0	24.6	344 10.4	41.4				
3	72	39.4	247 54.2	22.9	136 06.0	39.6	326 01.3	24.6	359 12.9	41.4				
4	87	41.9	262 53.9	24.1	151 06.7	39.3	341 03.7	24.6	14 15.5	41.4				
5	102	44.3	277 53.5	-0 25.3	166 07.4	-23 38.9	356 06.0	+22 24.6	29 18.1	+20 41.4				
6	117	46.8	292 53.1	-0 26.6	181 08.1	-23 38.6	11 08.3	+22 24.6	44 20.6	+20 41.4				
7	132	49.3	307 52.7	27.8	196 08.8	38.2	26 10.7	24.5	59 23.2	41.4				
8	147	51.7	322 52.3	29.0	211 09.5	37.8	41 13.0	24.5	74 25.8	41.4				
9	162	54.2	337 51.9	30.2	226 10.2	37.5	56 15.4	24.5	89 28.3	41.3				
10	177	56.6	352 51.5	31.4	241 10.9	37.1	71 17.7	24.5	104 30.9	41.3				
11	192	59.1	7 51.1	-0 32.6	256 11.5	-23 36.8	86 20.0	+22 24.5	119 33.5	+20 41.3				
12	208	01.6	22 50.7	-0 33.9	271 12.2	-23 36.4	101 22.4	+22 24.5	134 36.0	+20 41.3				
13	223	04.0	37 50.3	35.1	286 12.9	36.0	116 24.7	24.5	149 38.6	41.3				
14	238	06.5	52 49.9	36.3	301 13.6	35.7	131 27.1	24.5	164 41.2	41.3				
15	253	09.0	67 49.5	37.5	316 14.3	35.3	146 29.4	24.5	179 43.7	41.2				
16	268	11.4	82 49.2	38.7	331 15.0	34.9	161 31.7	24.5	194 46.3	41.2				
17	283	13.9	97 48.8	-0 39.9	346 15.7	-23 34.6	176 34.1	+22 24.4	209 48.9	+20 41.2				
18	298	16.4	112 48.4	-0 41.2	1 16.4	-23 34.2	191 36.4	+22 24.4	224 51.5	+20 41.2				
19	313	18.8	127 48.0	42.4	16 17.1	33.9	206 38.8	24.4	239 54.0	41.2				
20	328	21.3	142 47.6	43.6	31 17.7	33.5	221 41.1	24.4	254 56.6	41.2				
21	343	23.7	157 47.2	44.8	46 18.4	33.1	236 43.5	24.4	269 59.2	41.2				
22	358	26.2	172 46.8	46.0	61 19.1	32.8	251 45.8	24.4	285 01.7	41.1				
23	13	28.7	187 46.4	47.3	76 19.8	32.4	266 48.1	24.4	300 04.3	41.1				
24	28	31.1	202 46.0	-0 48.5	91 20.5	-23 32.0	281 50.5	+22 24.4	315 06.9	+20 41.1				
Dif	—		-4	-12	+7	+4	+23	0	+26					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 3 ^d 2	PHE {	4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 0									
	PMG: 11 ^h 44 ^m 8							SD: 15 ^h 7			R ^o : 54 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	46.8	-10	17.0		141	19.8	-19 59.1	5	21	6	09	6	52	11
1	198	47.0		17.9		155	47.4	-20 07.0	20	06	46		36	75	18
2	213	47.1		18.8		170	15.0	14.7	20	04	42		22	73	32
3	228	47.2		19.7		184	42.5	22.4	20	6	01	37	11	10	46
4	243	47.3		20.6		199	10.1	29.9	20	5	59	33	10	59	39
5	258	47.4	-10	21.5		213	37.6	-20 37.3	5	19	5	57	6	30	40
6	273	47.5	-10	22.4		228	05.1	-20 44.5	5	18	5	52	6	22	19
7	288	47.6		23.3		242	32.7	51.7	17	48	16		14	63	40
8	303	47.7		24.2		257	00.2	-20 58.7	15	44	10		10	00	47
9	318	47.8		25.1		271	27.7	-21 05.5	13	41	6	05	9	48	20
10	333	47.9		26.0		285	55.2	12.3	08	34	5	57	28	58	11
11	348	48.0	-10	26.9		300	22.7	-21 18.9	5	03	5	49	9	11	48
12	3	48.1	-10	27.7		314	50.2	-21 25.4	4	56	5	20	8	55	51
13	18	48.2		28.6		329	17.7	31.8	48	13	34		38	52	53
14	33	48.3		29.5		343	45.2	38.0	37	5	03	26	21	50	56
15	48	48.4		30.4		358	12.7	44.1	23	4	52	17	8	02	60
16	63	48.6		31.3		12	40.2	50.1	14	45	11		7	50	58
17	78	48.7	-10	32.2		27	07.7	-21 55.9	4	03	4	37	5	05	30
18	93	48.8	-10	33.1		41	35.1	-22 01.6	3	50	4	27	7	22	40
19	108	48.9		34.0		56	02.6	07.2	32	15	49		7	03	62
20	123	49.0		34.9		70	30.1	12.6	24	09	45		6	54	23
21	138	49.1		35.8		84	57.6	18.0	14	4	02	41	6	54	64
22	153	49.2		36.7		99	25.1	23.1	3	03	3	55	44	36	65
23	168	49.3		37.6		113	52.6	28.2	3	03	3	55	33	34	66
24	183	49.4	-10	38.5		128	20.1	-22 33.1	2	50	47	30	20	31	67
									2	35	3	37	6	05	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 02 ^m 3		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: -0.1 PMG: 17 ^h 54 ^m		Mag: -2.4 PMG: 5 ^h 12 ^m		Mag: -0.2 PMG: 2 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	31.1	202	46.0	-0	48.5	91	20.5	-23	32.0
1	43	33.6	217	45.6		49.7	106	21.2		31.7
2	58	36.1	232	45.2		50.9	121	21.9		31.3
3	73	38.5	247	44.8		52.1	136	22.6		30.9
4	88	41.0	262	44.4		53.3	151	23.2		30.6
5	103	43.5	277	44.1	-0	54.6	166	23.9	-23	30.2
6	118	45.9	292	43.7	-0	55.8	181	24.6	-23	29.8
7	133	48.4	307	43.3		57.0	196	25.3		29.5
8	148	50.9	322	42.9		58.2	211	26.0		29.1
9	163	53.3	337	42.5	-0	59.4	226	26.7		28.7
10	178	55.8	352	42.1	-1	00.7	241	27.4		28.4
11	193	58.2	7	41.7	-1	01.9	256	28.1	-23	28.0
12	209	00.7	22	41.3	-1	03.1	271	28.7	-23	27.6
13	224	03.2	37	40.9		04.3	286	29.4		27.2
14	239	05.6	52	40.5		05.5	301	30.1		26.9
15	254	08.1	67	40.1		06.7	316	30.8		26.5
16	269	10.6	82	39.7		08.0	331	31.5		26.1
17	284	13.0	97	39.3	-1	09.2	346	32.2	-23	25.8
18	299	15.5	112	38.9	-1	10.4	1	32.9	-23	25.4
19	314	18.0	127	38.6		11.6	16	33.5		25.0
20	329	20.4	142	38.2		12.8	31	34.2		24.6
21	344	22.9	157	37.8		14.1	46	34.9		24.3
22	359	25.4	172	37.4		15.3	61	35.6		23.9
23	14	27.8	187	37.0		16.5	76	36.3		23.5
24	29	30.3	202	36.6	-1	17.7	91	37.0	-23	23.2
Dif	—		-4	-12		+7	+4	+23		0

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: 4 ^d 2 PHE { SD: 15 ^h 5 PMG: 16 ^h 01 ^m										
	hG ☉		Dec	hG ☾		Dif			Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	183	49.4	-10	38.5	128	20.1	-22	33.1	60 N	16 34	17 17	18 05	13 11 61	18 48 49
1	198	49.5		39.4	142	47.6	85	37.9	58	40	20	06	12 51 60	19 08 50
2	213	49.6		40.2	157	15.1	85	42.6	56	45	23	06	35 59	25 50
3	228	49.7		41.1	171	42.6	85	47.1	54	49	25	06	21 58	39 51
4	243	49.8		42.0	186	10.2	86	51.5	52	53	28	07	12 08 59	19 52 51
5	258	49.9	-10	42.9	200	37.7	85	-22 55.7	50	16 57	17 30	18 07	11 57 58	20 03 51
6	273	50.0	-10	43.8	215	05.3	86	-22 59.8	45	17 05	17 35	18 09	11 35 57	20 26 51
7	288	50.1		44.7	229	32.8	85	-23 03.8	40	12	39	11	17 56	44 52
8	303	50.2		45.6	244	00.4	86	07.7	35	18	43	13	11 01 56	20 59 53
9	318	50.3		46.5	258	28.0	86	11.4	30	23	47	15	10 48 56	21 13 52
10	333	50.4		47.4	272	55.6	86	15.0	20	32	17 54	20	26 54	36 52
11	348	50.5	-10	48.3	287	23.2	86	-23 18.5	10 N	17 40	18 02	18 26	10 06 54	21 56 52
12	3	50.6	-10	49.1	301	50.8	86	-23 21.8	0	17 48	18 09	18 33	9 48 54	22 14 53
13	18	50.7		50.0	316	18.4	86	25.0	10 S	17 56	17	42	30 53	33 52
14	33	50.8		50.9	330	46.1	87	28.1	20	18 04	27	18 53	9 11 52	22 52 53
15	48	50.9		51.8	345	13.8	87	31.0	30	14	39	19 08	8 49 51	23 15 53
16	63	51.0		52.7	359	41.5	87	33.8	35	20	46	17	36 50	29 53
17	78	51.1	-10	53.6	14	09.2	87	-23 36.5	40	18 26	18 55	19 29	8 21 50	23 44 53
18	93	51.2	-10	54.5	28	36.9	87	-23 39.0	45	18 34	19 05	19 43	8 04 48	*** ** **
19	108	51.3		55.4	43	04.7	88	41.4	50	43	18	20 01	7 42 47	*** ** **
20	123	51.4		56.2	57	32.5	88	43.7	52	47	24	10	32 46	*** ** **
21	138	51.5		57.1	72	00.3	88	45.8	54	52	31	20	20 45	*** ** **
22	153	51.6		58.0	86	28.1	88	47.9	56	18 57	38	31	7 07 44	*** ** **
23	168	51.7		58.9	100	55.9	88	49.7	58	19 03	47	20 45	6 51 43	0 13 68
24	183	51.7	-10	59.8	115	23.8	89	-23 51.5	60 S	19 10	19 57	21 02	6 33 40	0 31 70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 58 ^m 4		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: -0.1 PMG: 17 ^h 53 ^m		Mag: -2.4 PMG: 5 ^h 08 ^m		Mag: -0.2 PMG: 2 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	29	30.3	202	36.6	-1	17.7	282	46.9	+22	24.2
1	44	32.7	217	36.2		18.9	297	49.2		24.2
2	59	35.2	232	35.8		20.2	312	51.6		24.2
3	74	37.7	247	35.4		21.4	327	53.9		24.2
4	89	40.1	262	35.0		22.6	342	56.3		24.2
5	104	42.6	277	34.6	-1	23.8	357	58.6	+22	24.1
6	119	45.1	292	34.2	-1	25.0	13	01.0	+22	24.1
7	134	47.5	307	33.8		26.2	28	03.3		24.1
8	149	50.0	322	33.4		27.5	43	05.7		24.1
9	164	52.5	337	33.0		28.7	58	08.0		24.1
10	179	54.9	352	32.6		29.9	73	10.4		24.1
11	194	57.4	7	32.2	-1	31.1	88	12.8	+22	24.1
12	209	59.9	22	31.8	-1	32.3	103	15.1	+22	24.1
13	225	02.3	37	31.5		33.6	118	17.5		24.1
14	240	04.8	52	31.1		34.8	133	19.8		24.1
15	255	07.2	67	30.7		36.0	148	22.2		24.1
16	270	09.7	82	30.3		37.2	163	24.5		24.1
17	285	12.2	97	29.9	-1	38.4	178	26.9	+22	24.1
18	300	14.6	112	29.5	-1	39.7	193	29.3	+22	24.0
19	315	17.1	127	29.1		40.9	208	31.6		24.0
20	330	19.6	142	28.7		42.1	223	34.0		24.0
21	345	22.0	157	28.3		43.3	238	36.3		24.0
22	0	24.5	172	27.9		44.5	253	38.7		24.0
23	15	27.0	187	27.5		45.7	268	41.1		24.0
24	30	29.4	202	27.1	-1	47.0	283	43.4	+22	24.0
Dif	—		-4		-12		+7		+4	
							+24		0	
									+26	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 5 ^d 2	PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 Rº: 52 ^m												
	PMG: 11 ^h 44 ^m 5																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	51.7	-10	59.8	115	23.8	-23	51.5	16	60 N	5	25	6	14	6	57	
1	198	51.8	-11	00.7	129	51.7	89	53.1	16	58	25	10	51	13	51	44	
2	213	51.9		01.6	144	19.7	90	54.6	15	56	24	07	46	34	45	20	
3	228	52.0		02.4	158	47.6	89	55.9	13	54	24	05	41	19	46	30	
4	243	52.1		03.3	173	15.6	90	57.2	13	52	23	02	37	13	07	46	
5	258	52.2	-11	04.2	187	43.6	90	-23	58.3	11	50	5	22	6	00	6	33
6	273	52.3	-11	05.1	202	11.7	91	-23	59.2	9	45	5	21	5	55	6	25
7	288	52.4		06.0	216	39.7	90	-24	00.1	9	40	19	50	18	12	13	49
8	303	52.5		06.9	231	07.9	92	00.8	7	35	17	46	12	11	57	50	21
9	318	52.6		07.7	245	36.0	91	01.4	6	30	14	42	6	07	44	50	22
10	333	52.7		08.6	260	04.2	92	01.8	4	20	09	35	5	57	20	51	28
11	348	52.8	-11	09.5	274	32.4	92	-24	02.2	4	10 N	5	03	5	28	5	49
12	3	52.9	-11	10.4	289	00.7	93	-24	02.4	2	0	4	56	5	20	5	41
13	18	53.0		11.3	303	28.9	92	02.5	1	10 S	47	12	33	23	52		25
14	33	53.1		12.1	317	57.3	94	02.4	1	20	36	5	02	25	10	03	53
15	48	53.1		13.0	332	25.6	93	02.2	2	30	21	4	50	15	9	40	53
16	63	53.2		13.9	346	54.0	94	01.9	3	35	11	43	09	26	54	***	***
17	78	53.3	-11	14.8	1	22.5	95	-24	01.5	4	40	4	00	4	34	5	02
18	93	53.4	-11	15.7	15	51.0	95	-24	01.0	5	45	3	46	4	24	4	54
19	108	53.5		16.5	30	19.5	95	-24	00.3	7	50	28	11	45	29	55	26
20	123	53.6		17.4	44	48.0	95	-23	59.5	8	52	19	4	04	41	18	55
21	138	53.7		18.3	59	16.6	96	58.6	9	54	3	09	3	58	36	8	05
22	153	53.8		19.2	73	45.3	97	57.5	11	56	2	57	50	31	7	51	55
23	168	53.9		20.1	88	14.0	97	56.4	11	58	43	41	25	34	56	21	52
24	183	54.0	-11	20.9	102	42.7	97	-23	55.1	13	60 S	2	26	3	31	4	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 54 ^m 4		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: -0.1 PMG: 17 ^h 52 ^m		Mag: -2.4 PMG: 5 ^h 04 ^m		Mag: -0.2 PMG: 2 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	29.4	202	27.1	-1	47.0	283	43.4	+22	24.0
1	45	31.9	217	26.7		48.2	298	45.8		24.0
2	60	34.4	232	26.3		49.4	313	48.1		24.0
3	75	36.8	247	25.9		50.6	328	50.5		24.0
4	90	39.3	262	25.5		51.8	343	52.9		24.0
5	105	41.7	277	25.1	-1	53.1	358	55.2	+22	24.0
6	120	44.2	292	24.7	-1	54.3	13	57.6	+22	24.0
7	135	46.7	307	24.3		55.5	29	00.0		24.0
8	150	49.1	322	23.9		56.7	44	02.3		24.0
9	165	51.6	337	23.5		57.9	59	04.7		23.9
10	180	54.1	352	23.1	-1	59.2	74	07.1		23.9
11	195	56.5	7	22.7	-2	00.4	89	09.4	+22	23.9
12	210	59.0	22	22.3	-2	01.6	104	11.8	+22	23.9
13	226	01.5	37	21.9		02.8	119	14.1		23.9
14	241	03.9	52	21.5		04.0	134	16.5		23.9
15	256	06.4	67	21.1		05.2	149	18.9		23.9
16	271	08.8	82	20.8		06.5	164	21.2		23.9
17	286	11.3	97	20.4	-2	07.7	179	23.6	+22	23.9
18	301	13.8	112	20.0	-2	08.9	194	26.0	+22	23.9
19	316	16.2	127	19.6		10.1	209	28.4		23.9
20	331	18.7	142	19.2		11.3	224	30.7		23.9
21	346	21.2	157	18.8		12.6	239	33.1		23.9
22	1	23.6	172	18.4		13.8	254	35.5		23.9
23	16	26.1	187	18.0		15.0	269	37.8		23.9
24	31	28.6	202	17.6	-2	16.2	284	40.2	+22	23.8
Dif	—		-4		-12		+7		+24	
									0	
									+26	
									0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 6 ^d 2 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 1 20 ^h : 54 ^m 9 R°: 49 ^m												
	PMG: 11 ^h 44 ^m 3		SD: 15 ^h 1 PMG: 17 ^h 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	183	54.0	-11	20.9	102	42.7	-23 55.1	16 28	17 12	18 00	14 55 27		20 41 73		
1	198	54.0		21.8	117	11.5	98 53.7	34	15	01	35 31		21 00 70		
2	213	54.1		22.7	131	40.3	98 52.1	40	18	01	19 33		16 67		
3	228	54.2		23.6	146	09.2	99 50.5	45	21	02	14 05 35		29 66		
4	243	54.3		24.4	160	38.1	99 48.7	49	24	03	13 53 37		41 64		
5	258	54.4	-11	25.3	175	07.1	100 -23 46.8	50	16 53	17 26	13 43 37		21 52 63		
6	273	54.5	-11	26.2	189	36.1	100 -23 44.8	20 45	17 02	17 32	13 20 40		22 14 60		
7	288	54.6		27.1	204	05.2	101 42.7	21 40	09	37	08	13 02 42		32 57	
8	303	54.7		27.9	218	34.3	101 40.5	22 35	15	41	11	12 47 43		46 57	
9	318	54.7		28.8	233	03.5	102 38.1	24 30	21	45	13	34 44		22 59 55	
10	333	54.8		29.7	247	32.7	102 35.6	25 20	31	17 53	19	12 11 47		23 21 53	
11	348	54.9	-11	30.6	262	02.0	103 -23 33.1	25 10 N	17 39	18 01	18 26	11 52 48		23 40 50	
12	3	55.0	-11	31.4	276	31.3	103 -23 30.3	28 0	17 48	18 09	18 33	11 33 50		23 58 48	
13	18	55.1		32.3	291	00.6	103 27.5	28 10 S	17 56	18	43	11 15 51	** ** *	** ** *	
14	33	55.2		33.2	305	30.1	105 24.6	29 20	18 05	28	18 54	10 56 52	** ** *	** ** *	
15	48	55.3		34.1	319	59.5	104 21.6	30 30	16	40	19 10	33 55		0 08 48	
16	63	55.3		34.9	334	29.1	106 18.4	32 35	22	48	19	20 55		22 46	
17	78	55.4	-11	35.8	348	58.7	106 -23 15.1	33 40	18 29	18 57	19 31	10 05 56		0 37 46	
18	93	55.5	-11	36.7	3	28.3	106 -23 11.8	33 45	18 37	19 08	19 46	9 46 59		0 56 44	
19	108	55.6		37.6	17	58.0	107 08.3	35 50	47	21	20 05	24 60		1 18 43	
20	123	55.7		38.4	32	27.7	107 04.7	36 52	51	28	14	13 62		29 42	
21	138	55.8		39.3	46	57.5	108 -23 01.0	37 54	18 56	35	25	9 01 62		42 40	
22	153	55.8		40.2	61	27.4	109 -22 57.1	39 56	19 02	43	37	8 46 65		1 56 39	
23	168	55.9		41.0	75	57.3	109 53.2	39 58	08	19 53	20 52	30 66		2 13 37	
24	183	56.0	-11	41.9	90	27.2	109 -22 49.2	40 60 S	19 15	20 03	21 10	8 10 69		2 33 35	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 50 ^m 5		Mag: -3.9 PMG: 10 ^h 31 ^m		Mag: -0.1 PMG: 17 ^h 51 ^m		Mag: -2.4 PMG: 5 ^h 01 ^m		Mag: -0.2 PMG: 2 ^h 47 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	31	28.6	202	17.6	92	09.8	284	40.2	318	12.5					
1	46	31.0	217	17.2	107	10.5	299	42.6	333	15.1					
2	61	33.5	232	16.8	122	11.1	314	44.9	348	17.7					
3	76	36.0	247	16.4	137	11.8	329	47.3	3	20.3					
4	91	38.4	262	16.0	152	12.5	344	49.7	18	22.8					
5	106	40.9	277	15.6	167	13.2	359	52.0	33	25.4					
6	121	43.3	292	15.2	182	13.9	14	54.4	48	28.0					
7	136	45.8	307	14.8	197	14.5	29	56.8	63	30.6					
8	151	48.3	322	14.4	212	15.2	44	59.2	78	33.2					
9	166	50.7	337	14.0	227	15.9	60	01.5	93	35.8					
10	181	53.2	352	13.6	242	16.6	75	03.9	108	38.4					
11	196	55.7	7	13.2	257	17.3	90	06.3	123	40.9					
12	211	58.1	22	12.8	272	17.9	105	08.7	138	43.5					
13	227	00.6	37	12.4	287	18.6	120	11.0	153	46.1					
14	242	03.1	52	12.0	302	19.3	135	13.4	168	48.7					
15	257	05.5	67	11.6	317	20.0	150	15.8	183	51.3					
16	272	08.0	82	11.2	332	20.7	165	18.2	198	53.9					
17	287	10.5	97	10.8	347	21.3	180	20.5	213	56.5					
18	302	12.9	112	10.4	2	22.0	195	22.9	228	59.1					
19	317	15.4	127	10.0	17	22.7	210	25.3	244	01.6					
20	332	17.8	142	09.6	32	23.4	225	27.7	259	04.2					
21	347	20.3	157	09.2	47	24.1	240	30.0	274	06.8					
22	2	22.8	172	08.8	62	24.7	255	32.4	289	09.4					
23	17	25.2	187	08.4	77	25.4	270	34.8	304	12.0					
24	32	27.7	202	08.0	92	26.1	285	37.2	319	14.6					
Dif	—		-4	-12	+7	+4	+24	0	+26	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 2			Edad: 7 ^d 2 SD: 14'9 PMG: 18 ^h 35 ^m	PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 R°: 46 ^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	183	56.0	-11	41.9	90	27.2	-22	49.2	60 N	5	30	6	18	7	02	15	22	18
1	198	56.1		42.8	104	57.3 ¹¹¹		45.0	58	29	15	6	56	15	06	22	22	10
2	213	56.2		43.6	119	27.3 ¹¹⁰		40.8	56	28	11	50		14	52	25	23	72
3	228	56.2		44.5	133	57.5 ¹¹²		36.4	54	27	08	45		40	27	35	69	
4	243	56.3		45.4	148	27.7 ¹¹²		32.0	52	26	06	41		30	28	45	67	
5	258	56.4	-11	46.3	162	57.9 ¹¹²	-22	27.4	50	5	25	6	03	6	36	14	20	30
6	273	56.5	-11	47.1	177	28.2 ¹¹³	-22	22.8	45	5	23	5	57	6	28	14	00	34
7	288	56.6		48.0	191	58.6 ¹¹⁴		18.0	40	21	52	20		13	44	36	29	59
8	303	56.6		48.9	206	29.0 ¹¹⁴		13.1	35	18	48	14		30	38	43	56	
9	318	56.7		49.7	220	59.5 ¹¹⁵		08.2	30	16	44	6	08	13	18	40	23	54
10	333	56.8		50.6	235	30.0 ¹¹⁵	-22	03.1	20	10	36	5	58	12	58	42	**	**
11	348	56.9	-11	51.5	250	00.6 ¹¹⁶	-21	57.9	10 N	5	03	5	28	5	49	12	40	45
12	3	57.0	-11	52.3	264	31.3 ¹¹⁷	-21	52.7	0	4	55	5	20	5	41	12	23	47
13	18	57.0		53.2	279	02.0 ¹¹⁷		47.3	10 S	46	11	32		12	06	50	0	15
14	33	57.1		54.1	293	32.7 ¹¹⁷		41.8	20	34	5	01	23	11	48	52	34	45
15	48	57.2		54.9	308	03.6 ¹¹⁹		36.3	30	19	4	48	13	28	54	0	56	42
16	63	57.3		55.8	322	34.4 ¹¹⁸		30.6	35	4	09	40	5	06	15	57	1	08
17	78	57.3	-11	56.7	337	05.4 ¹²⁰	-21	24.9	40	3	57	4	31	4	59	11	01	59
18	93	57.4	-11	57.5	351	36.4 ¹²⁰	-21	19.0	45	3	42	4	20	4	51	10	45	61
19	108	57.5		58.4	6	07.4 ¹²⁰		13.1	50	23	06	41		24	64	2	01	34
20	123	57.6	-11	59.3	20	38.6 ¹²²		07.0	52	14	4	00	37	15	65	11	32	
21	138	57.6	-12	00.1	35	09.7 ¹²¹	-21	00.9	54	3	03	3	53	32	10	03	68	22
22	153	57.7		01.0	49	41.0 ¹²³	-20	54.7	56	2	50	44	26	9	51	70	35	29
23	168	57.8		01.8	64	12.2 ¹²²		48.4	58	36	35	20		36	73	2	50	26
24	183	57.9	-12	02.7	78	43.6 ¹²⁴	-20	42.0	60 S	2	18	3	24	4	12	9	19	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 46 ^m 6		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: 0.0 PMG: 17 ^h 49 ^m		Mag: -2.4 PMG: 4 ^h 57 ^m		Mag: -0.2 PMG: 2 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	32	27.7	202	08.0	-2	45.4	92	26.1	-22	55.3
1	47	30.2	217	07.6		46.7	107	26.8		54.9
2	62	32.6	232	07.2		47.9	122	27.5		54.5
3	77	35.1	247	06.8		49.1	137	28.1		54.1
4	92	37.6	262	06.4		50.3	152	28.8		53.7
5	107	40.0	277	06.0	-2	51.5	167	29.5	-22	53.3
6	122	42.5	292	05.6	-2	52.8	182	30.2	-22	52.9
7	137	45.0	307	05.2		54.0	197	30.9		52.5
8	152	47.4	322	04.8		55.2	212	31.5		52.1
9	167	49.9	337	04.3		56.4	227	32.2		51.7
10	182	52.3	352	03.9		57.6	242	32.9		51.3
11	197	54.8	7	03.5	-2	58.8	257	33.6	-22	50.9
12	212	57.3	22	03.1	-3	00.1	272	34.3	-22	50.5
13	227	59.7	37	02.7		01.3	287	34.9		50.1
14	243	02.2	52	02.3		02.5	302	35.6		49.7
15	258	04.7	67	01.9		03.7	317	36.3		49.3
16	273	07.1	82	01.5		04.9	332	37.0		48.9
17	288	09.6	97	01.1	-3	06.1	347	37.7	-22	48.5
18	303	12.1	112	00.7	-3	07.4	2	38.3	-22	48.1
19	318	14.5	127	00.3		08.6	17	39.0		47.7
20	333	17.0	141	59.9		09.8	32	39.7		47.3
21	348	19.4	156	59.5		11.0	47	40.4		46.9
22	3	21.9	171	59.1		12.2	62	41.0		46.5
23	18	24.4	186	58.7		13.4	77	41.7		46.1
24	33	26.8	201	58.3	-3	14.6	92	42.4	-22	45.7
Dif	—		-4		-12		+7		+4	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 1			Edad: 8 ^d 2 SD: 14'8 PMG: 19 ^h 21 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 R°: 45 ^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	183	57.9	-12	02.7	78	43.6	-20	42.0	60 N	16 23	17 06	17 55	15 40	13	23 12	79
1	198	57.9		03.6	93	15.0 ¹²⁴		35.5 ⁶⁵	58	29	10	56	28	15	24	76
2	213	58.0		04.4	107	46.5 ¹²⁵		28.9 ⁶⁶	56	35	14	57	17	18	35	72
3	228	58.1		05.3	122	18.0 ¹²⁵		22.2 ⁶⁷	54	40	17	58	15 07	20	44	70
4	243	58.2		06.2	136	49.6 ¹²⁶		15.4 ⁶⁸	52	45	20	17 59	14 58	23	23 52	68
5	258	58.2	-12	07.0	151	21.2 ¹²⁶	-20	08.6 ⁶⁸	50	16 49	17 23	18 00	14 50	25	**	**
6	273	58.3	-12	07.9	165	52.9 ¹²⁷	-20	01.7 ⁶⁹	45	16 59	17 29	18 03	14 34	28	**	**
7	288	58.4		08.7	180	24.6 ¹²⁷	-19	54.6 ⁷¹	40	17 06	34	06	20	31	**	**
8	303	58.4		09.6	194	56.4 ¹²⁸		47.5 ⁷¹	35	13	39	09	14 08	34	**	**
9	318	58.5		10.5	209	28.3 ¹²⁹		40.3 ⁷²	30	19	44	12	13 58	35	**	**
10	333	58.6		11.3	224	00.2 ¹²⁹		33.1 ⁷²	20	30	17 52	18	40	39	0 14	51
11	348	58.7	-12	12.2	238	32.2 ¹³⁰	-19	25.7 ⁷⁴	10 N	17 39	18 00	18 25	13 25	42	0 30	49
12	3	58.7	-12	13.0	253	04.2 ¹³⁰	-19	18.3 ⁷⁴	0	17 47	18 09	18 33	13 10	45	0 46	46
13	18	58.8		13.9	267	36.3 ¹³¹		10.7 ⁷⁶	10 S	17 56	18	43	12 56	48	1 02	43
14	33	58.9		14.8	282	08.4 ¹³¹	-19	03.1 ⁷⁶	20	18 06	29	18 55	40	51	19	40
15	48	58.9		15.6	296	40.6 ¹³²	-18	55.4 ⁷⁷	30	17	42	19 11	22	55	38	37
16	63	59.0		16.5	311	12.9 ¹³³		47.7 ⁷⁷	35	23	50	22	12	56	1 49	35
17	78	59.1	-12	17.3	325	45.2 ¹³³	-18	39.8 ⁷⁹	40	18 31	18 59	19 34	12 00	59	2 01	34
18	93	59.2	-12	18.2	340	17.5 ¹³³	-18	31.9 ⁷⁹	45	18 39	19 11	19 49	11 46	62	2 16	31
19	108	59.2		19.0	354	49.9 ¹³⁴		23.9 ⁸⁰	50	50	25	20 09	28	66	35	27
20	123	59.3		19.9	9	22.4 ¹³⁵		15.8 ⁸¹	52	18 55	32	19	20	68	43	26
21	138	59.4		20.8	23	54.9 ¹³⁵	-18	07.7 ⁸¹	54	19 00	40	30	11	69	2 53	23
22	153	59.4		21.6	38	27.5 ¹³⁶	-17	59.5 ⁸²	56	06	48	43	11 01	72	3 04	21
23	168	59.5		22.5	53	00.1 ¹³⁶		51.1 ⁸⁴	58	13	19 58	20 59	10 49	75	16	18
24	183	59.6	-12	23.3	67	32.8 ¹³⁷	-17	42.8 ⁸³	60 S	19 20	20 09	21 18	10 35	78	3 30	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 42 ^m 6		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: 0.0 PMG: 17 ^h 48 ^m		Mag: -2.4 PMG: 4 ^h 53 ^m		Mag: -0.2 PMG: 2 ^h 38 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	33	26.8	201	58.3	-3	14.6	92	42.4	-22	45.7	286	34.4	+22	23.6	320	16.8	+20	39.2
1	48	29.3	216	57.9		15.9	107	43.1		45.3	301	36.8		23.6	335	19.4		39.2
2	63	31.8	231	57.5		17.1	122	43.8		44.8	316	39.1		23.6	350	21.9		39.1
3	78	34.2	246	57.1		18.3	137	44.4		44.4	331	41.5		23.6	5	24.5		39.1
4	93	36.7	261	56.7		19.5	152	45.1		44.0	346	43.9		23.6	20	27.1		39.1
5	108	39.2	276	56.3	-3	20.7	167	45.8	-22	43.6	1	46.3	+22	23.6	35	29.7	+20	39.1
6	123	41.6	291	55.9	-3	21.9	182	46.5	-22	43.2	16	48.7	+22	23.6	50	32.3	+20	39.1
7	138	44.1	306	55.5		23.2	197	47.1		42.8	31	51.1		23.6	65	34.9		39.1
8	153	46.6	321	55.1		24.4	212	47.8		42.4	46	53.5		23.6	80	37.5		39.0
9	168	49.0	336	54.6		25.6	227	48.5		42.0	61	55.9		23.6	95	40.1		39.0
10	183	51.5	351	54.2		26.8	242	49.2		41.6	76	58.3		23.6	110	42.7		39.0
11	198	53.9	6	53.8	-3	28.0	257	49.9	-22	41.2	92	00.7	+22	23.6	125	45.3	+20	39.0
12	213	56.4	21	53.4	-3	29.2	272	50.5	-22	40.8	107	03.0	+22	23.6	140	47.9	+20	39.0
13	228	58.9	36	53.0		30.5	287	51.2		40.3	122	05.4		23.6	155	50.5		39.0
14	244	01.3	51	52.6		31.7	302	51.9		39.9	137	07.8		23.6	170	53.1		38.9
15	259	03.8	66	52.2		32.9	317	52.6		39.5	152	10.2		23.5	185	55.7		38.9
16	274	06.3	81	51.8		34.1	332	53.2		39.1	167	12.6		23.5	200	58.3		38.9
17	289	08.7	96	51.4	-3	35.3	347	53.9	-22	38.7	182	15.0	+22	23.5	216	00.9	+20	38.9
18	304	11.2	111	51.0	-3	36.5	2	54.6	-22	38.3	197	17.4	+22	23.5	231	03.5	+20	38.9
19	319	13.7	126	50.6		37.7	17	55.3		37.9	212	19.8		23.5	246	06.0		38.8
20	334	16.1	141	50.2		39.0	32	56.0		37.5	227	22.2		23.5	261	08.6		38.8
21	349	18.6	156	49.8		40.2	47	56.6		37.0	242	24.6		23.5	276	11.2		38.8
22	4	21.1	171	49.4		41.4	62	57.3		36.6	257	27.0		23.5	291	13.8		38.8
23	19	23.5	186	48.9		42.6	77	58.0		36.2	272	29.4		23.5	306	16.4		38.8
24	34	26.0	201	48.5	-3	43.8	92	58.7	-22	35.8	287	31.8	+22	23.5	321	19.0	+20	38.8
Dif	—		-4		-12		+7		+4		+24		0		+26		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 0			Edad: 9 ^d 2 SD: 14'8 PMG: 20 ^h 06 ^m												
	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 42 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	59.6	-12 23.3	67	32.8	-17 42.8	85	60 N	5 34	6 23	7 07	15 53	9	***	***	***
1	198	59.6	24.2	82	05.5 ¹³⁷	34.3	85	58	33	19	7 00	43	12	***	***	***
2	213	59.7	25.0	96	38.3 ¹³⁸	25.8	85	56	32	15	6 54	35	14	***	***	***
3	228	59.8	25.9	111	11.1 ¹³⁸	17.2	86	54	31	12	49	27	17	***	***	***
4	243	59.8	26.7	125	44.0 ¹³⁹	-17 08.5	87	52	30	09	44	21	19	***	***	***
5	258	59.9	-12 27.6	140	16.9 ¹³⁹	-16 59.8	87	50	5 28	6 06	6 40	15 15	20	0 00	66	
6	274	00.0	-12 28.4	154	49.9 ¹⁴⁰	-16 51.0	88	45	5 26	6 00	6 30	15 02	24	0 15	62	
7	289	00.0	29.3	169	22.9 ¹⁴⁰	42.1	89	40	23	5 55	22	14 51	27	28	59	
8	304	00.1	30.1	183	55.9 ¹⁴⁰	33.2	89	35	20	50	15	42	30	39	56	
9	319	00.1	31.0	198	29.0 ¹⁴¹	24.1	91	30	17	45	6 09	33	33	0 49	54	
10	334	00.2	31.9	213	02.2 ¹⁴²	15.1	90	20	10	36	5 59	19	37	1 05	50	
11	349	00.3	-12 32.7	227	35.4 ¹⁴²	-16 05.9	92	10 N	5 03	5 28	5 49	14 07	40	1 19	47	
12	4	00.3	-12 33.6	242	08.7 ¹⁴³	-15 56.7	92	0	4 55	5 19	5 41	13 55	43	1 32	44	
13	19	00.4	34.4	256	42.0 ¹⁴³	47.4	93	10 S	45	5 10	32	44	46	45	41	
14	34	00.5	35.3	271	15.3 ¹⁴³	38.1	93	20	33	4 59	22	31	50	1 59	38	
15	49	00.5	36.1	285	48.7 ¹⁴⁴	28.6	95	30	16	46	11	17	53	2 15	34	
16	64	00.6	37.0	300	22.1 ¹⁴⁴	19.2	94	35	4 06	38	5 04	13 08	56	24	32	
17	79	00.7	-12 37.8	314	55.6 ¹⁴⁵	-15 09.6	96	40	3 54	4 28	4 57	12 59	59	2 35	29	
18	94	00.7	-12 38.7	329	29.1 ¹⁴⁵	-15 00.0	96	45	3 38	4 17	4 48	12 48	62	2 47	26	
19	109	00.8	39.5	344	02.7 ¹⁴⁶	-14 50.4	96	50	18	4 02	37	34	66	3 02	22	
20	124	00.8	40.3	358	36.3 ¹⁴⁶	40.7	97	52	3 08	3 55	33	28	67	09	20	
21	139	00.9	41.2	13	09.9 ¹⁴⁶	30.9	98	54	2 57	48	27	20	70	16	19	
22	154	01.0	42.0	27	43.6 ¹⁴⁷	21.0	99	56	44	39	21	13	72	25	16	
23	169	01.0	42.9	42	17.3 ¹⁴⁷	11.1	99	58	28	29	14	12 04	75	34	14	
24	184	01.1	-12 43.7	56	51.1 ¹⁴⁸	-14 01.2	99	60 S	2 09	3 18	4 07	11 53	79	3 45	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 38 ^m 7		Mag: -3.9 PMG: 10 ^h 33 ^m		Mag: 0.0 PMG: 17 ^h 47 ^m		Mag: -2.4 PMG: 4 ^h 49 ^m		Mag: -0.2 PMG: 2 ^h 34 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	34	26.0	201	48.5	-3	43.8	287	31.8	+22	23.5	
1	49	28.4	216	48.1	45.0	107	59.3	35.4	336	21.6	
2	64	30.9	231	47.7	46.2	123	00.0	35.0	351	24.2	
3	79	33.4	246	47.3	47.5	138	00.7	34.5	6	26.8	
4	94	35.8	261	46.9	48.7	153	01.4	34.1	21	29.4	
5	109	38.3	276	46.5	-3	49.9	168	02.1	-22	33.7	
6	124	40.8	291	46.1	-3	51.1	183	02.7	-22	33.3	
7	139	43.2	306	45.7	52.3	198	03.4	32.9	32	48.5	
8	154	45.7	321	45.3	53.5	213	04.1	32.5	47	50.9	
9	169	48.2	336	44.9	54.7	228	04.8	32.0	62	53.3	
10	184	50.6	351	44.4	55.9	243	05.4	31.6	77	55.7	
11	199	53.1	6	44.0	-3	57.2	258	06.1	-22	31.2	
12	214	55.5	21	43.6	-3	58.4	273	06.8	-22	30.8	
13	229	58.0	36	43.2	-3	59.6	288	07.5	30.4	123	02.9
14	245	00.5	51	42.8	-4	00.8	303	08.1	30.0	138	05.3
15	260	02.9	66	42.4	02.0	318	08.8	29.5	153	07.7	
16	275	05.4	81	42.0	03.2	333	09.5	29.1	168	10.2	
17	290	07.9	96	41.6	-4	04.4	348	10.2	-22	28.7	
18	305	10.3	111	41.2	-4	05.6	3	10.8	-22	28.3	
19	320	12.8	126	40.7	06.9	18	11.5	27.8	213	17.4	
20	335	15.3	141	40.3	08.1	33	12.2	27.4	228	19.8	
21	350	17.7	156	39.9	09.3	48	12.9	27.0	243	22.2	
22	5	20.2	171	39.5	10.5	63	13.6	26.6	258	24.6	
23	20	22.7	186	39.1	11.7	78	14.2	26.2	273	27.0	
24	35	25.1	201	38.7	-4	12.9	93	14.9	-22	25.7	
Dif	—		-4		-12		+7		+4		
							+24		0		
									+26		
									0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 2	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2										
	PMG: 11 ^h 43 ^m 9					SD: 14 ^h 7			PMG: 20 ^h 48 ^m		R°: 42 ^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	184	01.1	-12 43.7	56	51.1	-14 01.2		60 N	16 17	17 01	17 50	16 02	7	0 31	78
1	199	01.1	44.6	71	24.9 ¹⁴⁸	-13 51.1 ¹⁰¹		58	24	06	52	15 55	10	40	75
2	214	01.2	45.4	85	58.7 ¹⁴⁸	41.1 ¹⁰⁰		56	31	09	53	49 13		47	73
3	229	01.3	46.3	100	32.6 ¹⁴⁹	30.9 ¹⁰²		54	36	13	54	44 15		0 54	70
4	244	01.3	47.1	115	06.5 ¹⁴⁹	20.8 ¹⁰¹		52	41	16	56	40 16		1 00	68
5	259	01.4	-12 48.0	129	40.4 ¹⁴⁹	-13 10.5 ¹⁰³		50	16 46	17 19	17 57	15 35	19	1 06	66
6	274	01.4	-12 48.8	144	14.4 ¹⁵⁰	-13 00.2 ¹⁰³		45	16 56	17 26	18 00	15 26	22	1 17	62
7	289	01.5	49.7	158	48.4 ¹⁵⁰	-12 49.9 ¹⁰³		40	17 04	32	03	18 26		27	59
8	304	01.5	50.5	173	22.4 ¹⁵⁰	39.5 ¹⁰⁴		35	11	37	07	12 28		35	56
9	319	01.6	51.3	187	56.5 ¹⁵¹	29.0 ¹⁰⁵		30	17	42	10	15 06	30	43	53
10	334	01.7	52.2	202	30.6 ¹⁵¹	18.5 ¹⁰⁵		20	28	17 51	17	14 56	34	1 55	50
11	349	01.7	-12 53.0	217	04.8 ¹⁵²	-12 08.0 ¹⁰⁵		10 N	17 38	18 00	18 24	14 47	38	2 06	46
12	4	01.8	-12 53.9	231	38.9 ¹⁵¹	-11 57.3 ¹⁰⁷		0	17 47	18 08	18 33	14 38	42	2 16	43
13	19	01.8	54.7	246	13.2 ¹⁵³	46.7 ¹⁰⁶		10 S	17 57	18	44	30 45		26	39
14	34	01.9	55.6	260	47.4 ¹⁵²	36.0 ¹⁰⁷		20	18 07	30	18 56	21 49		37	35
15	49	01.9	56.4	275	21.7 ¹⁵³	25.2 ¹⁰⁸		30	18	43	19 13	10 54		49	31
16	64	02.0	57.2	289	55.9 ¹⁵²	14.4 ¹⁰⁸		35	25	18 52	24	14 04	56	2 56	29
17	79	02.0	-12 58.1	304	30.3 ¹⁵⁴	-11 03.6 ¹⁰⁸		40	18 33	19 02	19 37	13 58	58	3 04	26
18	94	02.1	-12 58.9	319	04.6 ¹⁵³	-10 52.7 ¹⁰⁹		45	18 42	19 14	19 53	13 50	62	3 13	23
19	109	02.1	-12 59.8	333	39.0 ¹⁵⁴	41.7 ¹¹⁰		50	53	29	20 13	40 66		24	20
20	124	02.2	-13 00.6	348	13.4 ¹⁵⁴	30.7 ¹¹⁰		52	18 58	36	24	35 68		29	18
21	139	02.3	01.4	2	47.8 ¹⁵⁴	19.7 ¹¹⁰		54	19 04	44	36	30 71		35	15
22	154	02.3	02.3	17	22.3 ¹⁵⁵	-10 08.6 ¹¹¹		56	10	19 53	20 50	25 73		41	13
23	169	02.4	03.1	31	56.7 ¹⁵⁴	-9 57.5 ¹¹¹		58	18	20 03	21 06	19 75		48	11
24	184	02.4	-13 04.0	46	31.2 ¹⁵⁵	-9 46.3 ¹¹²		60 S	19 26	20 16	21 27	13 12	78	3 56	8
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 34 ^m 8		Mag: -3.9 PMG: 10 ^h 34 ^m			Mag: 0.0 PMG: 17 ^h 46 ^m			Mag: -2.5 PMG: 4 ^h 45 ^m			Mag: -0.2 PMG: 2 ^h 30 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	'
0	35	25.1	201	38.7	-4 12.9	93	14.9	-22 25.7	288	29.4	+22 23.5	322	21.4	+20 38.3	
1	50	27.6	216	38.3	14.1	108	15.6	25.3	303	31.8	23.4	337	24.0	38.3	
2	65	30.0	231	37.9	15.3	123	16.3	24.9	318	34.2	23.4	352	26.6	38.3	
3	80	32.5	246	37.4	16.6	138	16.9	24.5	333	36.6	23.4	7	29.2	38.3	
4	95	35.0	261	37.0	17.8	153	17.6	24.0	348	39.0	23.4	22	31.8	38.3	
5	110	37.4	276	36.6	-4 19.0	168	18.3	-22 23.6	3	41.4	+22 23.4	37	34.4	+20 38.3	
6	125	39.9	291	36.2	-4 20.2	183	19.0	-22 23.2	18	43.8	+22 23.4	52	37.0	+20 38.2	
7	140	42.4	306	35.8	21.4	198	19.6	22.8	33	46.2	23.4	67	39.6	38.2	
8	155	44.8	321	35.4	22.6	213	20.3	22.3	48	48.6	23.4	82	42.2	38.2	
9	170	47.3	336	35.0	23.8	228	21.0	21.9	63	51.0	23.4	97	44.8	38.2	
10	185	49.8	351	34.6	25.0	243	21.7	21.5	78	53.4	23.4	112	47.4	38.2	
11	200	52.2	6	34.1	-4 26.2	258	22.3	-22 21.1	93	55.9	+22 23.4	127	50.0	+20 38.1	
12	215	54.7	21	33.7	-4 27.4	273	23.0	-22 20.6	108	58.3	+22 23.4	142	52.6	+20 38.1	
13	230	57.1	36	33.3	28.7	288	23.7	20.2	124	00.7	23.4	157	55.2	38.1	
14	245	59.6	51	32.9	29.9	303	24.4	19.8	139	03.1	23.4	172	57.8	38.1	
15	261	02.1	66	32.5	31.1	318	25.0	19.4	154	05.5	23.4	188	00.4	38.1	
16	276	04.5	81	32.1	32.3	333	25.7	18.9	169	07.9	23.4	203	03.0	38.1	
17	291	07.0	96	31.6	-4 33.5	348	26.4	-22 18.5	184	10.3	+22 23.4	218	05.6	+20 38.0	
18	306	09.5	111	31.2	-4 34.7	3	27.1	-22 18.1	199	12.7	+22 23.4	233	08.2	+20 38.0	
19	321	11.9	126	30.8	35.9	18	27.7	17.6	214	15.1	23.4	248	10.8	38.0	
20	336	14.4	141	30.4	37.1	33	28.4	17.2	229	17.5	23.4	263	13.4	38.0	
21	351	16.9	156	30.0	38.3	48	29.1	16.8	244	20.0	23.4	278	16.0	38.0	
22	6	19.3	171	29.6	39.5	63	29.8	16.3	259	22.4	23.4	293	18.6	37.9	
23	21	21.8	186	29.1	40.7	78	30.4	15.9	274	24.8	23.4	308	21.3	37.9	
24	36	24.3	201	28.7	-4 42.0	93	31.1	-22 15.5	289	27.2	+22 23.4	323	23.9	+20 37.9	
Dif	—		-4		-12	+7		+4	+24		0	+26		0	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 11 ^d 2 PHE { SD: 14'8 PMG: 21 ^h 30 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	02.4	-13 04.0	46	31.2	-9 46.3	60 N	5 39	6 28	7 12	16 09	6	1 49	79	
1	199	02.5	04.8	61	05.7 ¹⁵⁵	35.1 ¹¹²	58	37	23	7 05	05	9	1 55	75	
2	214	02.5	05.6	75	40.3 ¹⁵⁶	23.9 ¹¹²	56	36	19	6 58	16 02	11	2 00	72	
3	229	02.6	06.5	90	14.8 ¹⁵⁵	12.6 ¹¹³	54	34	16	53	15 59	13	04	71	
4	244	02.6	07.3	104	49.4 ¹⁵⁶	-9 01.3 ¹¹³	52	33	12	48	56	16	08	68	
5	259	02.7	-13 08.1	119	24.0 ¹⁵⁶	-8 49.9 ¹¹⁴	50	5 31	6 09	6 43	15 54	17	2 12	66	
6	274	02.7	-13 09.0	133	58.6 ¹⁵⁶	-8 38.5 ¹¹⁴	45	5 28	6 03	6 33	15 48	21	2 19	63	
7	289	02.8	09.8	148	33.2 ¹⁵⁶	27.0 ¹¹⁵	40	25	5 57	25	44	24	26	59	
8	304	02.8	10.7	163	07.9 ¹⁵⁷	15.6 ¹¹⁴	35	22	51	17	40	27	31	56	
9	319	02.9	11.5	177	42.5 ¹⁵⁶	-8 04.0 ¹¹⁶	30	18	46	11	36	30	36	54	
10	334	02.9	12.3	192	17.2 ¹⁵⁷	-7 52.5 ¹¹⁵	20	11	37	6 00	30	35	45	49	
11	349	03.0	-13 13.2	206	51.9 ¹⁵⁷	-7 40.9 ¹¹⁶	10 N	5 03	5 28	5 50	15 25	38	2 52	45	
12	4	03.0	-13 14.0	221	26.6 ¹⁵⁷	-7 29.3 ¹¹⁶	0	4 55	5 19	5 40	15 20	42	2 59	41	
13	19	03.1	14.8	236	01.3 ¹⁵⁷	17.6 ¹¹⁷	10 S	44	5 09	31	15	45	3 05	38	
14	34	03.1	15.7	250	36.1 ¹⁵⁸	-7 05.9 ¹¹⁷	20	31	4 58	21	10	49	12	35	
15	49	03.1	16.5	265	10.8 ¹⁵⁷	-6 54.2 ¹¹⁷	30	14	44	09	04	53	20	30	
16	64	03.2	17.3	279	45.5 ¹⁵⁷	42.4 ¹¹⁸	35	4 04	35	5 02	15 00	56	25	28	
17	79	03.2	-13 18.2	294	20.3 ¹⁵⁸	-6 30.6 ¹¹⁸	40	3 51	4 25	4 54	14 56	59	3 30	25	
18	94	03.3	-13 19.0	308	55.1 ¹⁵⁸	-6 18.8 ¹¹⁸	45	3 34	4 13	4 45	14 52	62	3 36	22	
19	109	03.3	19.8	323	29.8 ¹⁵⁷	-6 07.0 ¹¹⁸	50	14	3 58	34	46	67	44	17	
20	124	03.4	20.7	338	04.6 ¹⁵⁸	-5 55.1 ¹¹⁹	52	3 03	51	29	43	69	47	16	
21	139	03.4	21.5	352	39.4 ¹⁵⁸	43.2 ¹¹⁹	54	2 51	43	23	41	70	50	14	
22	154	03.5	22.3	7	14.2 ¹⁵⁸	31.2 ¹²⁰	56	37	34	16	38	72	54	12	
23	169	03.5	23.1	21	49.0 ¹⁵⁸	19.2 ¹²⁰	58	21	23	09	34	76	3 59	9	
24	184	03.6	-13 24.0	36	23.8 ¹⁵⁸	-5 07.3 ¹¹⁹	60 S	2 00	3 11	4 01	14 30	79	4 04	6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 30 ^m 8		Mag: -3.9 PMG: 10 ^h 34 ^m		Mag: 0.0 PMG: 17 ^h 45 ^m		Mag: -2.5 PMG: 4 ^h 41 ^m		Mag: -0.2 PMG: 2 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	36	24.3	201	28.7	-4	42.0	289	27.2	+22	23.4
1	51	26.7	216	28.3		43.2	304	29.6		23.4
2	66	29.2	231	27.9		44.4	319	32.0		23.4
3	81	31.6	246	27.5		45.6	334	34.4		23.4
4	96	34.1	261	27.1		46.8	349	36.9		23.4
5	111	36.6	276	26.6	-4	48.0	4	39.3	+22	23.4
6	126	39.0	291	26.2	-4	49.2	19	41.7	+22	23.4
7	141	41.5	306	25.8		50.4	34	44.1		23.4
8	156	44.0	321	25.4		51.6	49	46.5		23.4
9	171	46.4	336	25.0		52.8	64	48.9		23.4
10	186	48.9	351	24.6		54.0	79	51.4		23.4
11	201	51.4	6	24.1	-4	55.2	94	53.8	+22	23.4
12	216	53.8	21	23.7	-4	56.4	109	56.2	+22	23.4
13	231	56.3	36	23.3		57.7	124	58.6		23.4
14	246	58.8	51	22.9	-4	58.9	140	01.0		23.4
15	262	01.2	66	22.5	-5	00.1	155	03.4		23.4
16	277	03.7	81	22.0		01.3	170	05.9		23.4
17	292	06.1	96	21.6	-5	02.5	185	08.3	+22	23.4
18	307	08.6	111	21.2	-5	03.7	200	10.7	+22	23.4
19	322	11.1	126	20.8		04.9	215	13.1		23.4
20	337	13.5	141	20.4		06.1	230	15.5		23.4
21	352	16.0	156	19.9		07.3	245	18.0		23.4
22	7	18.5	171	19.5		08.5	260	20.4		23.4
23	22	20.9	186	19.1		09.7	275	22.8		23.4
24	37	23.4	201	18.7	-5	10.9	290	25.2	+22	23.4
Dif	—		-4	-12		+7	+4	+24		0
										+26

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 12 ^d 2 PHE { SD: 14'8 PMG: 22 ^h 12 ^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	184	03.6	-13	24.0	36	23.8	-5 07.3	60 N	16 12	16 56	17 45	16 15 6	3 08 78	
1	199	03.6		24.8	50	58.6 ¹⁵⁸	-4 55.2 ¹²¹	58	19	17 01	47	14 9	10 76	
2	214	03.6		25.6	65	33.4 ¹⁵⁸	43.2 ¹²⁰	56	26	05	49	13 11	12 74	
3	229	03.7		26.5	80	08.2 ¹⁵⁸	31.1 ¹²¹	54	32	09	51	12 14	15 70	
4	244	03.7		27.3	94	43.0 ¹⁵⁸	19.0 ¹²¹	52	37	12	52	12 15	16 69	
5	259	03.8	-13	28.1	109	17.8 ¹⁵⁸	-4 06.9 ¹²¹	50	16 42	17 16	17 54	16 11 17	3 18 67	
6	274	03.8	-13	28.9	123	52.7 ¹⁵⁹	-3 54.7 ¹²²	45	16 53	17 23	17 57	16 09 22	3 22 62	
7	289	03.9		29.8	138	27.5 ¹⁵⁸	42.6 ¹²¹	40	17 01	29	18 01	08 25	25 59	
8	304	03.9		30.6	153	02.3 ¹⁵⁸	30.4 ¹²²	35	09	35	05	07 27	27 57	
9	319	03.9		31.4	167	37.1 ¹⁵⁸	18.2 ¹²²	30	16	40	08	06 30	30 53	
10	334	04.0		32.2	182	11.9 ¹⁵⁸	-3 06.0 ¹²²	20	27	50	16	05 34	34 49	
11	349	04.0	-13	33.1	196	46.6 ¹⁵⁷	-2 53.7 ¹²³	10 N	17 37	17 59	18 24	16 03 38	3 37 45	
12	4	04.1	-13	33.9	211	21.4 ¹⁵⁸	-2 41.4 ¹²³	0	17 47	18 08	18 33	16 02 42	3 40 42	
13	19	04.1		34.7	225	56.2 ¹⁵⁸	29.2 ¹²²	10 S	17 57	19	44	16 00 46	43 38	
14	34	04.1		35.5	240	31.0 ¹⁵⁸	16.9 ¹²³	20	18 08	31	18 57	15 59 50	47 34	
15	49	04.2		36.4	255	05.7 ¹⁵⁷	-2 04.5 ¹²⁴	30	20	45	19 15	57 55	50 30	
16	64	04.2		37.2	269	40.5 ¹⁵⁸	-1 52.2 ¹²³	35	27	18 54	26	56 57	53 27	
17	79	04.3	-13	38.0	284	15.2 ¹⁵⁷	-1 39.9 ¹²³	40	18 35	19 04	19 39	15 55 60	3 55 24	
18	94	04.3	-13	38.8	298	50.0 ¹⁵⁸	-1 27.5 ¹²⁴	45	18 45	19 17	19 56	15 54 64	3 58 21	
19	109	04.3		39.7	313	24.7 ¹⁵⁷	15.1 ¹²⁴	50	18 57	33	20 18	53 67	4 01 17	
20	124	04.4		40.5	327	59.4 ¹⁵⁷	-1 02.7 ¹²⁴	52	19 02	40	29	52 70	03 15	
21	139	04.4		41.3	342	34.1 ¹⁵⁷	-0 50.3 ¹²⁴	54	08	48	41	51 72	04 14	
22	154	04.4		42.1	357	08.8 ¹⁵⁷	37.9 ¹²⁴	56	15	19 58	20 56	50 74	06 11	
23	169	04.5		43.0	11	43.4 ¹⁵⁶	25.5 ¹²⁴	58	22	20 09	21 14	50 76	08 9	
24	184	04.5	-13	43.8	26	18.1 ¹⁵⁷	-0 13.1 ¹²⁴	60 S	19 31	20 22	21 37	15 49 79	4 10 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 26 ^m 9		Mag: -3.9 PMG: 10 ^h 35 ^m		Mag: 0.0 PMG: 17 ^h 44 ^m		Mag: -2.5 PMG: 4 ^h 38 ^m		Mag: -0.2 PMG: 2 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	37	23.4	201	18.7	93	47.3	290	25.2	324	26.4
1	52	25.9	216	18.2	108	48.0	305	27.6	339	29.0
2	67	28.3	231	17.8	123	48.7	320	30.1	354	31.6
3	82	30.8	246	17.4	138	49.3	335	32.5	9	34.2
4	97	33.2	261	17.0	153	50.0	350	34.9	24	36.8
5	112	35.7	276	16.6	168	50.7	5	37.3	39	39.5
6	127	38.2	291	16.1	183	51.4	20	39.8	54	42.1
7	142	40.6	306	15.7	198	52.0	35	42.2	69	44.7
8	157	43.1	321	15.3	213	52.7	01.5	50 44.6	84	47.3
9	172	45.6	336	14.9	228	53.4	01.1	65 47.0	99	49.9
10	187	48.0	351	14.4	243	54.1	00.6	80 49.5	114	52.5
11	202	50.5	6	14.0	258	54.7	-22 00.2	95 51.9	129	55.1
12	217	53.0	21	13.6	273	55.4	-21 59.7	110 54.3	144	57.7
13	232	55.4	36	13.2	288	56.1	59.3	125 56.7	160	00.3
14	247	57.9	51	12.7	303	56.8	58.9	140 59.2	175	02.9
15	263	00.4	66	12.3	318	57.4	58.4	156 01.6	190	05.6
16	278	02.8	81	11.9	333	58.1	58.0	171 04.0	205	08.2
17	293	05.3	96	11.5	348	58.8	-21 57.5	186 06.5	220	10.8
18	308	07.7	111	11.0	3	59.5	-21 57.1	201 08.9	235	13.4
19	323	10.2	126	10.6	19	00.1	56.6	216 11.3	250	16.0
20	338	12.7	141	10.2	34	00.8	56.2	231 13.7	265	18.6
21	353	15.1	156	09.8	49	01.5	55.7	246 16.2	280	21.2
22	8	17.6	171	09.3	64	02.2	55.3	261 18.6	295	23.8
23	23	20.1	186	08.9	79	02.8	54.9	276 21.0	310	26.4
24	38	22.5	201	08.5	94	03.5	-21 54.4	291 23.5	325	29.1
Dif	—		-4		+7		+4		+24	
			-12		+4		0		+26	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 13 ^d 2	PHE	SD: 14 ^h 9	4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2	R°: 44 ^m									
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	04.5	-13	43.8	26	18.1	-0	13.1	60 N	5	43	6	32	7	17	16	21
1	199	04.6		44.6	40	52.7 ¹⁵⁶	-0	00.6 ¹²⁵	58	41		28		09	23	10	26
2	214	04.6		45.4	55	27.3 ¹⁵⁶	+0	11.8 ¹²⁴	56	39		23		03	24	13	26
3	229	04.6		46.2	70	01.9 ¹⁵⁶		24.3 ¹²⁵	54	38		19		57	26	14	25
4	244	04.7		47.1	84	36.5 ¹⁵⁶		36.8 ¹²⁵	52	36		16		51	27	16	25
5	259	04.7	-13	47.9	99	11.0 ¹⁵⁵	+0	49.2 ¹²⁴	50	5	34	6	13	6	46	16	28
6	274	04.7	-13	48.7	113	45.5 ¹⁵⁵	+1	01.7 ¹²⁵	45	5	31	6	05	6	36	16	31
7	289	04.8		49.5	128	20.0 ¹⁵⁵		14.2 ¹²⁵	40	27		5	59	27	33	25	24
8	304	04.8		50.3	142	54.5 ¹⁵⁵		26.7 ¹²⁵	35	23		53		19	34	29	24
9	319	04.8		51.1	157	29.0 ¹⁵⁵		39.2 ¹²⁵	30	19		48		12	36	31	23
10	334	04.9		52.0	172	03.4 ¹⁵⁴	+1	51.7 ¹²⁵	20	12		38	6	01	39	35	23
11	349	04.9	-13	52.8	186	37.8 ¹⁵⁴	+2	04.2 ¹²⁵	10 N	5	04	5	29	5	50	16	41
12	4	04.9	-13	53.6	201	12.2 ¹⁵⁴	+2	16.7 ¹²⁵	0	4	54	5	19	5	40	16	44
13	19	05.0		54.4	215	46.6 ¹⁵⁴		29.1 ¹²⁴	10 S	43		5	09	30	46	47	21
14	34	05.0		55.2	230	20.9 ¹⁵³		41.6 ¹²⁵	20	30		4	57	19	49	51	21
15	49	05.0		56.0	244	55.2 ¹⁵³	+2	54.1 ¹²⁵	30	12		42		07	52	55	20
16	64	05.1		56.9	259	29.5 ¹⁵³	+3	06.6 ¹²⁵	35	4	01		33	5	00	53	59
17	79	05.1	-13	57.7	274	03.7 ¹⁵²	+3	19.1 ¹²⁵	40	3	48	4	23	4	52	16	55
18	94	05.1	-13	58.5	288	37.9 ¹⁵²	+3	31.6 ¹²⁵	45	3	31	4	10	4	42	16	58
19	109	05.1	-13	59.3	303	12.1 ¹⁵²		44.1 ¹²⁵	50	3	09	3	54	30	17	00	69
20	124	05.2	-14	00.1	317	46.3 ¹⁵²	+3	56.5 ¹²⁴	52	2	58		47	25	02	71	18
21	139	05.2		00.9	332	20.4 ¹⁵¹	+4	09.0 ¹²⁵	54		46		38	18	03	73	18
22	154	05.2		01.7	346	54.4 ¹⁵⁰		21.4 ¹²⁴	56		31		29	12	04	76	17
23	169	05.3		02.5	1	28.5 ¹⁵¹		33.9 ¹²⁵	58	2	13	18	4	04	06	79	17
24	184	05.3	-14	03.4	16	02.5 ¹⁵⁰	+4	46.3 ¹²⁴	60 S	1	50		3	05	3	55	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: 0.0		Mag: -2.5		Mag: -0.2	
	21 ^h 23 ^m 0		PMG: 10 ^h 36 ^m		PMG: 17 ^h 43 ^m		PMG: 4 ^h 34 ^m		PMG: 2 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	38	22.5	201	08.5	-5	39.8	291	23.5	325	29.1
1	53	25.0	216	08.0		41.0	306	25.9	340	31.7
2	68	27.5	231	07.6		42.2	321	28.3	355	34.3
3	83	29.9	246	07.2		43.4	336	30.8	10	36.9
4	98	32.4	261	06.8		44.6	351	33.2	25	39.5
5	113	34.8	276	06.3	-5	45.8	6	35.6	40	42.1
6	128	37.3	291	05.9	-5	47.0	21	38.1	55	44.7
7	143	39.8	306	05.5		48.2	36	40.5	70	47.3
8	158	42.2	321	05.1		49.4	51	42.9	85	50.0
9	173	44.7	336	04.6		50.6	66	45.4	100	52.6
10	188	47.2	351	04.2		51.8	81	47.8	115	55.2
11	203	49.6	6	03.8	-5	53.0	96	50.2	130	57.8
12	218	52.1	21	03.3	-5	54.2	111	52.7	146	00.4
13	233	54.6	36	02.9		55.4	126	55.1	161	03.0
14	248	57.0	51	02.5		56.6	141	57.5	176	05.6
15	263	59.5	66	02.0		57.8	157	00.0	191	08.2
16	279	02.0	81	01.6	-5	59.0	172	02.4	206	10.9
17	294	04.4	96	01.2	-6	00.2	187	04.9	221	13.5
18	309	06.9	111	00.7	-6	01.4	202	07.3	236	16.1
19	324	09.3	126	00.3		02.6	217	09.7	251	18.7
20	339	11.8	140	59.9		03.8	232	12.2	266	21.3
21	354	14.3	155	59.5		05.0	247	14.6	281	23.9
22	9	16.7	170	59.0		06.2	262	17.0	296	26.6
23	24	19.2	185	58.6		07.4	277	19.5	311	29.2
24	39	21.7	200	58.2	-6	08.6	292	21.9	326	31.8
Dif	—		-4	-12	+7	+5	+24	0	+26	0

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: 14 ^d 2 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 5 20 ^h : 55 ^m 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 m	h m m	h m m	h m m	
0	184	05.3	-14	03.4	16	02.5	+4 46.3	60 N	16 07	16 52	17 41	16 28 9	5 47 83		
1	199	05.3		04.2	30	36.5 ¹⁵⁰	+4 58.7 ¹²⁴	58	15	16 57	43	33 11	43 80		
2	214	05.3		05.0	45	10.4 ¹⁴⁹	+5 11.2 ¹²⁵	56	22	17 01	45	37 14	40 77		
3	229	05.4		05.8	59	44.3 ¹⁴⁹	23.6 ¹²⁴	54	28	05	47	40 17	38 74		
4	244	05.4		06.6	74	18.1 ¹⁴⁸	35.9 ¹²³	52	33	09	49	43 19	35 73		
5	259	05.4	-14	07.4	88	51.9 ¹⁴⁸	+5 48.3 ¹²⁴	50	16 39	17 12	17 51	16 46 21	5 33 70		
6	274	05.4	-14	08.2	103	25.7 ¹⁴⁸	+6 00.7 ¹²⁴	45	16 50	17 20	17 55	16 53 24	5 29 65		
7	289	05.5		09.0	117	59.4 ¹⁴⁷	13.0 ¹²³	40	16 59	27	17 59	16 58 28	25 62		
8	304	05.5		09.8	132	33.1 ¹⁴⁷	25.3 ¹²³	35	17 07	33	18 03	17 03 31	21 59		
9	319	05.5		10.6	147	06.7 ¹⁴⁶	37.7 ¹²⁴	30	14	38	07	07 34	18 57		
10	334	05.5		11.5	161	40.3 ¹⁴⁶	+6 49.9 ¹²²	20	26	49	15	14 38	13 52		
11	349	05.6	-14	12.3	176	13.9 ¹⁴⁶	+7 02.2 ¹²³	10 N	17 37	17 58	18 23	17 21 42	5 08 48		
12	4	05.6	-14	13.1	190	47.4 ¹⁴⁵	+7 14.5 ¹²³	0	17 47	18 08	18 33	17 27 45	5 04 44		
13	19	05.6		13.9	205	20.8 ¹⁴⁴	26.7 ¹²²	10 S	17 57	19	45	33 49	5 00 40		
14	34	05.6		14.7	219	54.2 ¹⁴⁴	38.9 ¹²²	20	18 09	32	18 59	40 53	4 56 36		
15	49	05.7		15.5	234	27.6 ¹⁴⁴	+7 51.1 ¹²²	30	22	47	19 17	47 58	50 32		
16	64	05.7		16.3	249	00.9 ¹⁴³	+8 03.3 ¹²²	35	29	18 56	28	52 60	47 30		
17	79	05.7	-14	17.1	263	34.2 ¹⁴³	+8 15.4 ¹²¹	40	18 38	19 07	19 42	17 57 63	4 44 27		
18	94	05.7	-14	17.9	278	07.4 ¹⁴²	+8 27.5 ¹²¹	45	18 48	19 20	20 00	18 02 67	4 40 23		
19	109	05.8		18.7	292	40.5 ¹⁴¹	39.6 ¹²¹	50	19 00	36	22	09 72	36 19		
20	124	05.8		19.5	307	13.6 ¹⁴¹	+8 51.6 ¹²⁰	52	06	44	34	13 73	34 17		
21	139	05.8		20.3	321	46.7 ¹⁴¹	+9 03.7 ¹²¹	54	12	19 53	20 47	16 76	31 15		
22	154	05.8		21.1	336	19.7 ¹⁴⁰	15.6 ¹¹⁹	56	19	20 03	21 02	20 78	29 13		
23	169	05.8		21.9	350	52.6 ¹³⁹	27.6 ¹²⁰	58	27	15	22	25 81	26 10		
24	184	05.9	-14	22.7	5	25.5 ¹³⁹	+9 39.5 ¹¹⁹	60 S	19 36	20 28	21 47	18 30 84	4 23 7		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 19 ^m 1		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +0.1 PMG: 17 ^h 42 ^m		Mag: -2.5 PMG: 4 ^h 30 ^m		Mag: -0.2 PMG: 2 ^h 13 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	39	21.7	200	58.2	-6	08.6	292	21.9	+22	23.4					
1	54	24.1	215	57.7		09.8	307	24.4		23.4					
2	69	26.6	230	57.3		10.9	322	26.8		23.4					
3	84	29.1	245	56.9		12.1	337	29.2		23.4					
4	99	31.5	260	56.4		13.3	352	31.7		23.4					
5	114	34.0	275	56.0	-6	14.5	7	34.1	+22	23.4					
6	129	36.4	290	55.6	-6	15.7	22	36.6	+22	23.4					
7	144	38.9	305	55.1		16.9	37	39.0		23.4					
8	159	41.4	320	54.7		18.1	52	41.5		23.4					
9	174	43.8	335	54.2		19.3	67	43.9		23.4					
10	189	46.3	350	53.8		20.5	82	46.3		23.4					
11	204	48.8	5	53.4	-6	21.7	97	48.8	+22	23.4					
12	219	51.2	20	52.9	-6	22.9	112	51.2	+22	23.4					
13	234	53.7	35	52.5		24.1	127	53.7		23.5					
14	249	56.2	50	52.1		25.3	142	56.1		23.5					
15	264	58.6	65	51.6		26.5	157	58.6		23.5					
16	280	01.1	80	51.2		27.7	173	01.0		23.5					
17	295	03.6	95	50.8	-6	28.9	188	03.5	+22	23.5					
18	310	06.0	110	50.3	-6	30.1	203	05.9	+22	23.5					
19	325	08.5	125	49.9		31.2	218	08.4		23.5					
20	340	10.9	140	49.4		32.4	233	10.8		23.5					
21	355	13.4	155	49.0		33.6	248	13.2		23.5					
22	10	15.9	170	48.6		34.8	263	15.7		23.5					
23	25	18.3	185	48.1		36.0	278	18.1		23.5					
24	40	20.8	200	47.7	-6	37.2	293	20.6	+22	23.5					
Dif	—		-4		-12		+7		+24						
									0						
									+26						
									0						

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: 15 ^d 2 PHE { SD: 15'2 PMG: **h **m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	05.9	-14	22.7	5	25.5	+9	39.5	60 N	5	48	6	37	7	22	16	37	
1	199	05.9		23.5	19	58.3 ¹³⁸	+9	51.4 ¹¹⁹	58	45	32		14		44	15		
2	214	05.9		24.3	34	31.1 ¹³⁸	+10	03.3 ¹¹⁹	56	43	27		07		51	17		
3	229	05.9		25.1	49	03.8 ¹³⁷		15.1 ¹¹⁸	54	41	23		7	01	16	57		
4	244	05.9		25.9	63	36.5 ¹³⁷		26.9 ¹¹⁸	52	39	19		6	55	17	02		
5	259	06.0	-14	26.7	78	09.1 ¹³⁶	+10	38.7 ¹¹⁸	50	5	37	6	16	6	50	17	07	
6	274	06.0	-14	27.5	92	41.6 ¹³⁵	+10	50.4 ¹¹⁷	45	5	33	6	08	6	38	17	17	
7	289	06.0		28.3	107	14.1 ¹³⁵	+11	02.1 ¹¹⁷	40	29	6	01		29	26	32		
8	304	06.0		29.1	121	46.5 ¹³⁴		13.7 ¹¹⁶	35	25	5	55		21	34	35		
9	319	06.0		29.9	136	18.8 ¹³³		25.3 ¹¹⁶	30	21	49		14		41	37		
10	334	06.0		30.7	150	51.1 ¹³³		36.9 ¹¹⁶	20	13	39	6	01		17	52		
11	349	06.1	-14	31.5	165	23.3 ¹³²	+11	48.4 ¹¹⁵	10 N	5	04	5	29	5	51	18	03	
12	4	06.1	-14	32.3	179	55.5 ¹³²	+11	59.8 ¹¹⁴	0	4	54	5	19	5	40	18	12	
13	19	06.1		33.1	194	27.6 ¹³¹	+12	11.2 ¹¹⁴	10 S	43	5	08		30	22	52		
14	34	06.1		33.9	208	59.6 ¹³⁰		22.6 ¹¹⁴	20	28	4	55		18	33	55		
15	49	06.1		34.7	223	31.6 ¹³⁰		33.9 ¹¹³	30	4	10	40	5	05	45	59		
16	64	06.1		35.5	238	03.5 ¹²⁹		45.2 ¹¹³	35	3	59	31	4	58	18	52		
17	79	06.1	-14	36.3	252	35.3 ¹²⁸	+12	56.4 ¹¹²	40	3	45	4	20	4	49	19	00	
18	94	06.2	-14	37.1	267	07.1 ¹²⁸	+13	07.6 ¹¹²	45	3	27	4	07	4	39	19	09	
19	109	06.2		37.9	281	38.8 ¹²⁷		18.7 ¹¹¹	50	3	04	3	50	26	21	73		
20	124	06.2		38.7	296	10.4 ¹²⁶		29.8 ¹¹¹	52	2	53	42		21	26	75		
21	139	06.2		39.5	310	42.0 ¹²⁶		40.8 ¹¹⁰	54	40		33	14		32	77		
22	154	06.2		40.3	325	13.4 ¹²⁴	+13	51.8 ¹¹⁰	56	24		23	4	07	38	81		
23	169	06.2		41.1	339	44.9 ¹²⁵	+14	02.7 ¹⁰⁹	58	2	05	3	12	3	59	46	83	
24	184	06.2	-14	41.8	354	16.2 ¹²³	+14	13.5 ¹⁰⁸	60 S	1	40	2	58	3	50	19	54	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 15 ^m 1		Mag: -3.9 PMG: 10 ^h 37 ^m			Mag: +0.1 PMG: 17 ^h 41 ^m			Mag: -2.5 PMG: 4 ^h 26 ^m			Mag: -0.3 PMG: 2 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	40	20.8	200	47.7	-6	37.2	94	35.9	-21	32.6	293	20.6	+22	23.5	327	34.6	+20	36.1
1	55	23.3	215	47.3		38.4	109	36.6		32.1	308	23.0		23.5	342	37.2		36.1
2	70	25.7	230	46.8		39.6	124	37.2		31.6	323	25.5		23.5	357	39.8		36.1
3	85	28.2	245	46.4		40.8	139	37.9		31.2	338	27.9		23.5	12	42.5		36.0
4	100	30.7	260	45.9		42.0	154	38.6		30.7	353	30.4		23.5	27	45.1		36.0
5	115	33.1	275	45.5	-6	43.2	169	39.3	-21	30.3	8	32.8	+22	23.5	42	47.7	+20	36.0
6	130	35.6	290	45.1	-6	44.4	184	39.9	-21	29.8	23	35.3	+22	23.5	57	50.3	+20	36.0
7	145	38.1	305	44.6		45.5	199	40.6		29.3	38	37.7		23.5	72	52.9		36.0
8	160	40.5	320	44.2		46.7	214	41.3		28.9	53	40.2		23.5	87	55.6		36.0
9	175	43.0	335	43.7		47.9	229	42.0		28.4	68	42.6		23.5	102	58.2		35.9
10	190	45.4	350	43.3		49.1	244	42.6		27.9	83	45.1		23.5	118	00.8		35.9
11	205	47.9	5	42.8	-6	50.3	259	43.3	-21	27.5	98	47.6	+22	23.5	133	03.4	+20	35.9
12	220	50.4	20	42.4	-6	51.5	274	44.0	-21	27.0	113	50.0	+22	23.5	148	06.0	+20	35.9
13	235	52.8	35	42.0		52.7	289	44.7		26.5	128	52.5		23.5	163	08.7		35.9
14	250	55.3	50	41.5		53.9	304	45.3		26.1	143	54.9		23.5	178	11.3		35.8
15	265	57.8	65	41.1		55.1	319	46.0		25.6	158	57.4		23.5	193	13.9		35.8
16	281	00.2	80	40.6		56.2	334	46.7		25.1	173	59.8		23.5	208	16.5		35.8
17	296	02.7	95	40.2	-6	57.4	349	47.4	-21	24.7	189	02.3	+22	23.5	223	19.1	+20	35.8
18	311	05.2	110	39.7	-6	58.6	4	48.0	-21	24.2	204	04.7	+22	23.5	238	21.8	+20	35.8
19	326	07.6	125	39.3	-6	59.8	19	48.7		23.7	219	07.2		23.5	253	24.4		35.7
20	341	10.1	140	38.9	-7	01.0	34	49.4		23.3	234	09.6		23.5	268	27.0		35.7
21	356	12.5	155	38.4		02.2	49	50.0		22.8	249	12.1		23.5	283	29.6		35.7
22	11	15.0	170	38.0		03.4	64	50.7		22.3	264	14.6		23.5	298	32.3		35.7
23	26	17.5	185	37.5		04.5	79	51.4		21.8	279	17.0		23.6	313	34.9		35.7
24	41	19.9	200	37.1	-7	05.7	94	52.1	-21	21.4	294	19.5	+22	23.6	328	37.5	+20	35.6
Dif	—		-4		-12		+7		+5		+25		0		+26			

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: 16 ^d 2 PHE { 4 ^h : 56'3 12 ^h : 56'4 20 ^h : 56'6 SD: 15'3 PMG: 0 ^h 24 ^m Rº: 49 ^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
0	184	06.2	-14 41.8	354	16.2	+14 13.5	60 N	16 01	16 47	17 36	16 48	17	8 35	88	
1	199	06.2	42.6	8	47.5 ¹²³	24.3 ¹⁰⁸	58	10	52	39	16 59	21	25	83	
2	214	06.3	43.4	23	18.7 ¹²²	35.0 ¹⁰⁷	56	17	16 57	41	17 08	24	16	80	
3	229	06.3	44.2	37	49.8 ¹²¹	45.7 ¹⁰⁷	54	24	17 01	43	17 26		09	77	
4	244	06.3	45.0	52	20.9 ¹²¹	+14 56.3 ¹⁰⁶	52	30	06	45	25 28		8 02	75	
5	259	06.3	-14 45.8	66	51.8 ¹¹⁹	+15 06.8 ¹⁰⁵	50	16 35	17 09	17 47	17 31	31	7 55	73	
6	274	06.3	-14 46.6	81	22.8 ¹²⁰	+15 17.3 ¹⁰⁵	45	16 47	17 17	17 52	17 46	34	7 42	69	
7	289	06.3	47.4	95	53.6 ¹¹⁸	27.7 ¹⁰⁴	40	16 57	25	17 57	17 58	38	31	65	
8	304	06.3	48.2	110	24.3 ¹¹⁷	38.0 ¹⁰³	35	17 05	31	18 01	18 09	40	21	63	
9	319	06.3	49.0	124	55.0 ¹¹⁷	48.3 ¹⁰³	30	12	37	05	18 42		7 13	61	
10	334	06.3	49.7	139	25.6 ¹¹⁶	+15 58.5 ¹⁰²	20	25	48	14	34 45		6 59	56	
11	349	06.3	-14 50.5	153	56.2 ¹¹⁶	+16 08.6 ¹⁰¹	10 N	17 36	17 58	18 23	18 48	48	6 47	53	
12	4	06.3	-14 51.3	168	26.6 ¹¹⁴	+16 18.6 ¹⁰⁰	0	17 47	18 08	18 33	19 01	51	6 35	50	
13	19	06.3	52.1	182	57.0 ¹¹⁴	28.6 ¹⁰⁰	10 S	17 58	20	18 45	14 54		24	46	
14	34	06.4	52.9	197	27.3 ¹¹³	38.5 ⁹⁹	20	18 10	33	19 00	28 58		6 11	44	
15	49	06.4	53.7	211	57.5 ¹¹²	48.4 ⁹⁹	30	23	48	19	44 62		5 58	39	
16	64	06.4	54.5	226	27.7 ¹¹²	+16 58.1 ⁹⁷	35	31	18 58	30	19 54	63	50	37	
17	79	06.4	-14 55.3	240	57.7 ¹¹⁰	+17 07.8 ⁹⁷	40	18 40	19 09	19 45	20 05	66	5 40	35	
18	94	06.4	-14 56.0	255	27.7 ¹¹⁰	+17 17.4 ⁹⁶	45	18 51	19 23	20 03	20 18	69	5 30	31	
19	109	06.4	56.8	269	57.6 ¹⁰⁹	26.9 ⁹⁵	50	19 03	40	27	34 72		17	27	
20	124	06.4	57.6	284	27.5 ¹⁰⁹	36.3 ⁹⁴	52	10	48	39	41 75		11	25	
21	139	06.4	58.4	298	57.2 ¹⁰⁷	45.7 ⁹⁴	54	16	19 58	20 53	49 77		5 04	23	
22	154	06.4	-14 59.2	313	26.9 ¹⁰⁷	+17 54.9 ⁹²	56	24	20 08	21 09	20 59	79	4 57	20	
23	169	06.4	-15 00.0	327	56.5 ¹⁰⁶	+18 04.1 ⁹²	58	32	20	30	21 09	83	49	17	
24	184	06.4	-15 00.7	342	26.0 ¹⁰⁵	+18 13.2 ⁹¹	60 S	19 42	20 35	21 57	21 21	88	4 40	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 11 ^m 2		Mag: -3.9 PMG: 10 ^h 38 ^m		Mag: +0.1 PMG: 17 ^h 40 ^m		Mag: -2.5 PMG: 4 ^h 22 ^m		Mag: -0.3 PMG: 2 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	41	19.9	200	37.1	-7	05.7	94	52.1	-21	21.4
1	56	22.4	215	36.6		06.9	109	52.7		20.9
2	71	24.9	230	36.2		08.1	124	53.4		20.4
3	86	27.3	245	35.7		09.3	139	54.1		20.0
4	101	29.8	260	35.3		10.5	154	54.8		19.5
5	116	32.3	275	34.8	-7	11.7	169	55.4	-21	19.0
6	131	34.7	290	34.4	-7	12.8	184	56.1	-21	18.5
7	146	37.2	305	33.9		14.0	199	56.8		18.1
8	161	39.7	320	33.5		15.2	214	57.5		17.6
9	176	42.1	335	33.1		16.4	229	58.1		17.1
10	191	44.6	350	32.6		17.6	244	58.8		16.7
11	206	47.0	5	32.2	-7	18.8	259	59.5	-21	16.2
12	221	49.5	20	31.7	-7	19.9	275	00.2	-21	15.7
13	236	52.0	35	31.3		21.1	290	00.8		15.2
14	251	54.4	50	30.8		22.3	305	01.5		14.8
15	266	56.9	65	30.4		23.5	320	02.2		14.3
16	281	59.4	80	29.9		24.7	335	02.9		13.8
17	297	01.8	95	29.5	-7	25.8	350	03.5	-21	13.3
18	312	04.3	110	29.0	-7	27.0	5	04.2	-21	12.9
19	327	06.8	125	28.6		28.2	20	04.9		12.4
20	342	09.2	140	28.1		29.4	35	05.6		11.9
21	357	11.7	155	27.7		30.6	50	06.2		11.4
22	12	14.2	170	27.2		31.8	65	06.9		10.9
23	27	16.6	185	26.8		32.9	80	07.6		10.5
24	42	19.1	200	26.3	-7	34.1	95	08.3	-21	10.0
Dif	—		-4	-12		+7	+5	+25		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 17 ^d 2 PHE { 4 ^h : 56'8 12 ^h : 56'9 20 ^h : 57'1												
	PMG: 11 ^h 43 ^m 6			SD: 15'4 PMG: 1 ^h 13 ^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	184	06.4	-15 00.7	342	26.0	+18 13.2	90	60 N	5 52	6 42	7 27	17 05	27	10 03	84	
1	199	06.4	01.5	356	55.4 ¹⁰⁴	22.2	90	58	49	36	19	20	30	9 48	81	
2	214	06.4	02.3	11	24.8 ¹⁰⁴	31.1	89	56	47	31	11	32	33	36	78	
3	229	06.4	03.1	25	54.1 ¹⁰³	40.0	89	54	45	27	7 05	43	36	26	75	
4	244	06.4	03.9	40	23.3 ¹⁰²	48.7	87	52	42	23	6 58	17 53	37	17	73	
5	259	06.4	-15 04.6	54	52.4 ¹⁰¹	+18 57.4	87	50	5 40	6 19	6 53	18 02	39	9 08	72	
6	274	06.4	-15 05.4	69	21.5 ¹⁰¹	+19 05.9	85	45	5 36	6 10	6 41	18 20	42	8 51	68	
7	289	06.4	06.2	83	50.4 ⁹⁹	14.4	85	40	31	6 03	31	36	44	36	66	
8	304	06.4	07.0	98	19.3 ⁹⁹	22.7	83	35	27	5 57	23	18 49	46	24	63	
9	319	06.4	07.8	112	48.1 ⁹⁸	31.0	83	30	22	51	15	19 00	48	8 14	61	
10	334	06.4	08.5	127	16.8 ⁹⁷	39.2	82	20	13	40	6 02	19 51		7 55	59	
11	349	06.4	-15 09.3	141	45.5 ⁹⁷	+19 47.2	80	10 N	5 04	5 29	5 51	19 36	53	7 40	55	
12	4	06.4	-15 10.1	156	14.0 ⁹⁵	+19 55.2	80	0	4 54	5 19	5 40	19 52	55	7 25	53	
13	19	06.4	10.9	170	42.5 ⁹⁵	+20 03.1	79	10 S	42	5 07	29	20 08	57	7 10	51	
14	34	06.4	11.6	185	10.9 ⁹⁴	10.8	77	20	27	4 54	17	26	59	6 55	48	
15	49	06.4	12.4	199	39.3 ⁹⁴	18.5	77	30	4 08	38	5 04	46	61	37	45	
16	64	06.4	13.2	214	07.5 ⁹²	26.0	75	35	3 56	29	4 56	20 57	63	27	42	
17	79	06.4	-15 14.0	228	35.7 ⁹²	+20 33.5	75	40	3 42	4 17	4 47	21 11	64	6 15	40	
18	94	06.4	-15 14.7	243	03.8 ⁹¹	+20 40.8	73	45	3 24	4 04	4 36	21 27	67	6 01	38	
19	109	06.4	15.5	257	31.8 ⁹⁰	48.0	72	50	3 00	3 46	23	46	70	5 44	34	
20	124	06.4	16.3	271	59.8 ⁹⁰	+20 55.1	71	52	2 48	38	17	21 56	71	36	32	
21	139	06.4	17.1	286	27.6 ⁸⁸	+21 02.1	70	54	34	29	10	22 06	74	27	30	
22	154	06.4	17.8	300	55.4 ⁸⁸	09.0	69	56	2 17	18	4 03	18	76	17	28	
23	169	06.4	18.6	315	23.2 ⁸⁸	15.8	68	58	1 57	3 06	3 54	32	78	5 06	25	
24	184	06.4	-15 19.4	329	50.8 ⁸⁶	+21 22.5	67	60 S	1 29	2 52	3 45	22 49	82	4 53	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 07 ^m 3		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +0.1 PMG: 17 ^h 39 ^m		Mag: -2.5 PMG: 4 ^h 18 ^m		Mag: -0.3 PMG: 2 ^h 01 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	42	19.1	200	26.3	-7	34.1	295	18.6	+22	23.7
1	57	21.5	215	25.8		35.3	310	21.0		23.7
2	72	24.0	230	25.4		36.5	325	23.5		23.7
3	87	26.5	245	24.9		37.6	340	26.0		23.7
4	102	28.9	260	24.5		38.8	355	28.4		23.7
5	117	31.4	275	24.0	-7	40.0	10	30.9	+22	23.7
6	132	33.9	290	23.6	-7	41.2	25	33.4	+22	23.7
7	147	36.3	305	23.1		42.4	40	35.8		23.7
8	162	38.8	320	22.7		43.5	55	38.3		23.7
9	177	41.3	335	22.2		44.7	70	40.8		23.7
10	192	43.7	350	21.8		45.9	85	43.3		23.7
11	207	46.2	5	21.3	-7	47.1	100	45.7	+22	23.7
12	222	48.7	20	20.8	-7	48.2	115	48.2	+22	23.7
13	237	51.1	35	20.4		49.4	130	50.7		23.7
14	252	53.6	50	19.9		50.6	145	53.1		23.7
15	267	56.0	65	19.5		51.8	160	55.6		23.7
16	282	58.5	80	19.0		52.9	175	58.1		23.7
17	298	01.0	95	18.6	-7	54.1	191	00.6	+22	23.7
18	313	03.4	110	18.1	-7	55.3	206	03.0	+22	23.7
19	328	05.9	125	17.6		56.5	221	05.5		23.8
20	343	08.4	140	17.2		57.6	236	08.0		23.8
21	358	10.8	155	16.7	-7	58.8	251	10.4		23.8
22	13	13.3	170	16.3	-8	00.0	266	12.9		23.8
23	28	15.8	185	15.8	-8	01.2	281	15.4		23.8
24	43	18.2	200	15.4	-8	02.3	296	17.9	+22	23.8
Dif	—		-5		-12		+7		+25	
									0	
									+26	
									0	

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: 18 ^d 2 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6 SD: 15/6 PMG: 2 ^h 05 ^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	h m m	h m m
0	184	06.4	-15	19.4	329	50.8	+21	22.5	60 N	15 56	16 42	17 32	17 32 42	11 27 76	
1	199	06.4		20.2	344	18.4		29.0	58	16 05		48	17 50 45	11 09 73	
2	214	06.4		20.9	358	45.9		35.5	56	13	53	37	18 05 47	10 54 71	
3	229	06.3		21.7	13	13.3		41.8	54	20	16 58	40	19 48	41 69	
4	244	06.3		22.5	27	40.7		48.0	52	26	17 02	42	30 49	30 68	
5	259	06.3	-15	23.2	42	07.9	+21	54.1	50	16 32	17 06	17 45	18 41 50	10 20 67	
6	274	06.3	-15	24.0	56	35.1	+22	00.0	45	16 44	17 15	17 50	19 02 52	9 59 64	
7	289	06.3		24.8	71	02.3	+22	05.9	40	16 54	23	55	20 53	42 63	
8	304	06.3		25.5	85	29.4		11.6	35	17 03	29	17 59	35 53	27 62	
9	319	06.3		26.3	99	56.4		17.2	30	11	35	18 04	19 48 54	9 15 61	
10	334	06.3		27.1	114	23.3		22.6	20	24	47	13	20 10 55	8 54 59	
11	349	06.3	-15	27.8	128	50.2	+22	28.0	10 N	17 36	17 58	18 23	20 29 56	8 35 58	
12	4	06.3	-15	28.6	143	17.0	+22	33.2	0	17 47	18 09	18 33	20 47 57	8 18 56	
13	19	06.3		29.4	157	43.7		38.3	10 S	17 58	20	18 46	21 05 58	8 01 55	
14	34	06.2		30.1	172	10.3		43.2	20	18 11	34	19 01	25 58	7 43 53	
15	49	06.2		30.9	186	37.0		48.0	30	25	18 50	20	21 47 60	22 51	
16	64	06.2		31.7	201	03.5		52.7	35	33	19 00	33	22 00 61	7 09 50	
17	79	06.2	-15	32.4	215	30.0	+22	57.3	40	18 42	19 12	19 48	22 15 61	6 55 49	
18	94	06.2	-15	33.2	229	56.4	+23	01.7	45	18 53	19 26	20 07	22 34 61	6 39 46	
19	109	06.2		34.0	244	22.7		06.0	50	19 07	44	31	22 56 63	18 44	
20	124	06.2		34.7	258	49.0		10.2	52	13	19 52	44	23 07 64	6 08 43	
21	139	06.2		35.5	273	15.3		14.2	54	20	20 02	20 58	20 64	5 57 41	
22	154	06.2		36.3	287	41.5		18.1	56	28	13	21 16	34 65	45 39	
23	169	06.1		37.0	302	07.6		21.8	58	37	26	21 38	23 50 66	31 36	
24	184	06.1	-15	37.8	316	33.7	+23	25.5	60 S	19 47	20 41	22 09	** ** *	5 14 33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 03 ^m 3		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +0.1 PMG: 17 ^h 38 ^m		Mag: -2.5 PMG: 4 ^h 14 ^m		Mag: -0.3 PMG: 1 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	43	18.2	200	15.4	-8	02.3	95	24.5	-20	58.4
1	58	20.7	215	14.9		03.5	110	25.1		57.9
2	73	23.1	230	14.4		04.7	125	25.8		57.4
3	88	25.6	245	14.0		05.9	140	26.5		57.0
4	103	28.1	260	13.5		07.0	155	27.2		56.5
5	118	30.5	275	13.0	-8	08.2	170	27.8	-20	56.0
6	133	33.0	290	12.6	-8	09.4	185	28.5	-20	55.5
7	148	35.5	305	12.1		10.5	200	29.2		55.0
8	163	37.9	320	11.7		11.7	215	29.9		54.5
9	178	40.4	335	11.2		12.9	230	30.5		54.0
10	193	42.9	350	10.7		14.1	245	31.2		53.5
11	208	45.3	5	10.3	-8	15.2	260	31.9	-20	53.1
12	223	47.8	20	09.8	-8	16.4	275	32.6	-20	52.6
13	238	50.3	35	09.3		17.6	290	33.2		52.1
14	253	52.7	50	08.9		18.7	305	33.9		51.6
15	268	55.2	65	08.4		19.9	320	34.6		51.1
16	283	57.6	80	08.0		21.1	335	35.3		50.6
17	299	00.1	95	07.5	-8	22.2	350	35.9	-20	50.1
18	314	02.6	110	07.0	-8	23.4	5	36.6	-20	49.6
19	329	05.0	125	06.6		24.6	20	37.3		49.1
20	344	07.5	140	06.1		25.7	35	38.0		48.6
21	359	10.0	155	05.6		26.9	50	38.6		48.2
22	14	12.4	170	05.2		28.1	65	39.3		47.7
23	29	14.9	185	04.7		29.2	80	40.0		47.2
24	44	17.4	200	04.2	-8	30.4	95	40.7	-20	46.7
Dif	—		-5		-12		+7		+5	
								+25		0
										+26

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 19 ^d 2 PHE { 4 ^h : 57 ^m /7 12 ^h : 57 ^m /9 20 ^h : 58 ^m /0											
	PMG: 11 ^h 43 ^m 6			SD: 15 ^h 7 PMG: 3 ^h 01 ^m 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	h m	m
0	184	06.1	-15	37.8	316	33.7	+23	25.5	5 56	6 46	7 32	18 14	64	12 43	57
1	199	06.1		38.5	330	59.7	70	28.9	53	40	23	35	63	22	57
2	214	06.1		39.3	345	25.6	69	32.3	51	35	15	18 52	63	12 05	58
3	229	06.1		40.1	359	51.5	69	35.5	48	30	08	19 07	62	11 50	58
4	244	06.1		40.8	14	17.4	69	38.5	46	26	7 02	19 62		38	58
5	259	06.0	-15	41.6	28	43.2	68	+23	41.4	6 22	6 56	19 31	61	11 27	58
6	274	06.0	-15	42.3	43	09.0	68	+23	44.2	6 13	6 44	19 54	61	11 03	59
7	289	06.0		43.1	57	34.7	67	46.8	33	6 05	34	20 13	60	10 45	58
8	304	06.0		43.9	72	00.4	67	49.3	28	5 58	25	28	61	29	58
9	319	06.0		44.6	86	26.0	66	51.7	24	52	17	20 42	60	10 16	58
10	334	06.0		45.4	100	51.6	66	53.9	14	41	6 03	21 05	60	9 53	58
11	349	05.9	-15	46.1	115	17.1	65	+23	5 05	5 30	5 51	21 25	59	9 33	58
12	4	05.9	-15	46.9	129	42.7	66	+23	4 54	5 19	5 40	21 44	59	9 14	58
13	19	05.9		47.6	144	08.1	64	+23	41	5 07	29	22 03	58	8 56	57
14	34	05.9		48.4	158	33.6	65	+24	26	4 53	16	23	57	36	57
15	49	05.9		49.1	172	59.0	64	02.7	4 06	37	5 02	22 47	56	8 13	57
16	64	05.8		49.9	187	24.3	63	04.0	3 54	27	4 54	23 01	55	7 59	57
17	79	05.8	-15	50.7	201	49.6	63	+24	3 39	4 15	4 44	23 16	56	7 44	56
18	94	05.8	-15	51.4	216	14.9	63	+24	3 20	4 01	4 33	23 35	55	7 25	56
19	109	05.8		52.2	230	40.2	63	07.1	2 55	3 43	20	23 59	53	7 02	56
20	124	05.8		52.9	245	05.4	62	07.8	43	34	13	** ** *	**	6 51	55
21	139	05.7		53.7	259	30.7	63	08.4	28	24	4 06	** ** *	**	38	55
22	154	05.7		54.4	273	55.8	61	08.8	2 10	13	3 58	** ** *	**	24	54
23	169	05.7		55.2	288	21.0	62	09.0	1 48	3 00	49	** ** *	**	6 07	54
24	184	05.7	-15	55.9	302	46.1	61	+24	1 18	2 45	3 39	0 11	67	5 47	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 59 ^m 4		Mag: -3.9 PMG: 10 ^h 40 ^m		Mag: +0.1 PMG: 17 ^h 36 ^m		Mag: -2.5 PMG: 4 ^h 10 ^m		Mag: -0.3 PMG: 1 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	44	17.4	200	04.2	-8	30.4	95	40.7	+22	23.9
1	59	19.8	215	03.8		31.6	110	41.4		23.9
2	74	22.3	230	03.3		32.7	125	42.0		23.9
3	89	24.8	245	02.8		33.9	140	42.7		23.9
4	104	27.2	260	02.4		35.1	155	43.4		24.0
5	119	29.7	275	01.9	-8	36.2	170	44.1	+22	24.0
6	134	32.1	290	01.4	-8	37.4	185	44.7	+22	24.0
7	149	34.6	305	00.9		38.6	200	45.4		24.0
8	164	37.1	320	00.5		39.7	215	46.1		24.0
9	179	39.5	335	00.0		40.9	230	46.8		24.0
10	194	42.0	349	59.5		42.0	245	47.4		24.0
11	209	44.5	4	59.1	-8	43.2	260	48.1	+22	24.0
12	224	46.9	19	58.6	-8	44.4	275	48.8	+22	24.0
13	239	49.4	34	58.1		45.5	290	49.5		24.0
14	254	51.9	49	57.6		46.7	305	50.1		24.0
15	269	54.3	64	57.2		47.8	320	50.8		24.0
16	284	56.8	79	56.7		49.0	335	51.5		24.0
17	299	59.3	94	56.2	-8	50.2	350	52.2	+22	24.0
18	315	01.7	109	55.8	-8	51.3	5	52.8	+22	24.1
19	330	04.2	124	55.3		52.5	20	53.5		24.1
20	345	06.6	139	54.8		53.6	35	54.2		24.1
21	0	09.1	154	54.3		54.8	50	54.9		24.1
22	15	11.6	169	53.9		56.0	65	55.5		24.1
23	30	14.0	184	53.4		57.1	80	56.2		24.1
24	45	16.5	199	52.9	-8	58.3	95	56.9	+22	24.1
Dif	—		-5		-12		+7		+25	
									0	
									+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 20 ^d 2	PHE { 4 ^h : 58/2 12 ^h : 58/3 20 ^h : 58/4										
	PMG: 11 ^h 43 ^m 6					SD: 15/8			PMG: 3 ^h 58 ^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	m	h m m	m
0	184	05.7	-15 55.9	302	46.1	+24 09.2	1	60 N	15 51	16 38	17 28	19 18 82		13 40 38	
1	199	05.6	56.7	317	11.3	09.1	1	58	16 01	44	31	38 79		19 41	
2	214	05.6	57.4	331	36.4	09.0	1	56	09	49	34	19 55 76		13 03 43	
3	229	05.6	58.2	346	01.4	08.6	4	54	16	54	37	20 09 75		12 48 45	
4	244	05.6	58.9	0	26.5	08.1	5	52	23	16 59	39	21 73		36 46	
5	259	05.5	-15 59.7	14	51.6	+24 07.5	6	50	16 29	17 03	17 42	20 32 72		12 25 47	
6	274	05.5	-16 00.4	29	16.6	+24 06.7	8	45	16 41	17 12	17 47	20 55 69		12 02 49	
7	289	05.5	01.2	43	41.6	05.8	9	40	16 52	20	53	21 13 67		11 43 52	
8	304	05.5	01.9	58	06.6	04.7	11	35	17 01	28	17 58	29 65		27 53	
9	319	05.4	02.7	72	31.6	03.4	13	30	09	34	18 03	21 42 64		11 14 54	
10	334	05.4	03.4	86	56.6	02.0	14	20	23	46	12	22 05 61		10 51 55	
11	349	05.4	-16 04.1	101	21.6	+24 00.5	15	10 N	17 35	17 57	18 23	22 24 60		10 31 57	
12	4	05.4	-16 04.9	115	46.6	+23 58.8	17	0	17 47	18 09	18 34	22 43 57		10 12 58	
13	19	05.3	05.6	130	11.6	56.9	19	10 S	17 59	21	18 47	23 01 56		9 53 60	
14	34	05.3	06.4	144	36.6	54.9	20	20	18 12	35	19 02	20 54		33 61	
15	49	05.3	07.1	159	01.5	52.7	22	30	26	18 52	22	43 51		9 10 62	
16	64	05.3	07.9	173	26.5	50.4	23	35	35	19 02	35	23 56 50		8 56 63	
17	79	05.2	-16 08.6	187	51.5	+23 48.0	24	40	18 45	19 14	19 51	** ** *		8 40 64	
18	94	05.2	-16 09.4	202	16.5	+23 45.4	26	45	18 56	19 29	20 10	** ** *		8 21 66	
19	109	05.2	10.1	216	41.5	42.6	28	50	19 10	48	36	** ** *		7 58 67	
20	124	05.1	10.8	231	06.5	39.7	29	52	17	19 57	20 49	0 11 52		46 68	
21	139	05.1	11.6	245	31.5	36.6	31	54	24	20 07	21 04	24 51		33 69	
22	154	05.1	12.3	259	56.5	33.4	32	56	32	18	23	39 50		18 71	
23	169	05.0	13.1	274	21.6	30.0	34	58	42	32	21 47	0 56 49		7 01 72	
24	184	05.0	-16 13.8	288	46.6	+23 26.5	35	60 S	19 52	20 48	22 22	1 18 47		6 39 74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 55 ^m 5		Mag: -3.9 PMG: 10 ^h 41 ^m			Mag: +0.1 PMG: 17 ^h 35 ^m			Mag: -2.5 PMG: 4 ^h 06 ^m			Mag: -0.3 PMG: 1 ^h 48 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	45	16.5	199 52.9	-8 58.3		95 56.9	-20 34.7		298 17.1	+22 24.1		332 49.9	+20 33.7		
1	60	19.0	214 52.4	-8 59.4		110 57.6	34.2		313 19.6	24.1		347 52.6	33.7		
2	75	21.4	229 52.0	-9 00.6		125 58.3	33.7		328 22.1	24.1		2 55.2	33.6		
3	90	23.9	244 51.5	01.8		140 58.9	33.2		343 24.6	24.1		17 57.8	33.6		
4	105	26.4	259 51.0	02.9		155 59.6	32.7		358 27.1	24.1		33 00.5	33.6		
5	120	28.8	274 50.5	-9 04.1		171 00.3	-20 32.2		13 29.6	+22 24.1		48 03.1	+20 33.6		
6	135	31.3	289 50.0	-9 05.2		186 01.0	-20 31.7		28 32.1	+22 24.1		63 05.7	+20 33.6		
7	150	33.8	304 49.6	06.4		201 01.6	31.2		43 34.6	24.2		78 08.4	33.5		
8	165	36.2	319 49.1	07.5		216 02.3	30.7		58 37.1	24.2		93 11.0	33.5		
9	180	38.7	334 48.6	08.7		231 03.0	30.2		73 39.6	24.2		108 13.7	33.5		
10	195	41.1	349 48.1	09.8		246 03.7	29.7		88 42.1	24.2		123 16.3	33.5		
11	210	43.6	4 47.7	-9 11.0		261 04.3	-20 29.2		103 44.6	+22 24.2		138 18.9	+20 33.5		
12	225	46.1	19 47.2	-9 12.1		276 05.0	-20 28.7		118 47.1	+22 24.2		153 21.6	+20 33.4		
13	240	48.5	34 46.7	13.3		291 05.7	28.2		133 49.6	24.2		168 24.2	33.4		
14	255	51.0	49 46.2	14.5		306 06.4	27.7		148 52.1	24.2		183 26.8	33.4		
15	270	53.5	64 45.7	15.6		321 07.1	27.2		163 54.6	24.2		198 29.5	33.4		
16	285	55.9	79 45.3	16.8		336 07.7	26.7		178 57.1	24.2		213 32.1	33.3		
17	300	58.4	94 44.8	-9 17.9		351 08.4	-20 26.2		193 59.6	+22 24.2		228 34.8	+20 33.3		
18	316	00.9	109 44.3	-9 19.1		6 09.1	-20 25.7		209 02.1	+22 24.2		243 37.4	+20 33.3		
19	331	03.3	124 43.8	20.2		21 09.8	25.2		224 04.6	24.3		258 40.0	33.3		
20	346	05.8	139 43.3	21.4		36 10.4	24.7		239 07.1	24.3		273 42.7	33.3		
21	1	08.2	154 42.8	22.5		51 11.1	24.2		254 09.6	24.3		288 45.3	33.2		
22	16	10.7	169 42.4	23.7		66 11.8	23.7		269 12.1	24.3		303 47.9	33.2		
23	31	13.2	184 41.9	24.8		81 12.5	23.1		284 14.6	24.3		318 50.6	33.2		
24	46	15.6	199 41.4	-9 26.0		96 13.1	-20 22.6		299 17.1	+22 24.3		333 53.2	+20 33.2		
Dif	—		-5	-12		+7	+5		+25	0		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 21 ^d 2 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 7 20 ^h : 58 ^m 8												
	PMG: 11 ^h 43 ^m 7			SD: 15 ^h 9												
			PMG: 4 ^h 56 ^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	184	05.0	-16	13.8	288	46.6	+23	26.5	60 N	6 01	6 51	7 38	20 40	94	14 18	24
1	199	05.0		14.5	303	11.7		22.8	58	5 57	45	28	20 57	89	14 00	29
2	214	04.9		15.3	317	36.8		19.0	56	54	39	20	21 11	86	13 46	31
3	229	04.9		16.0	332	01.8		15.0	54	51	34	12	24 82		33	34
4	244	04.9		16.8	346	27.0		10.9	52	49	29	06	34 81		22	36
5	259	04.8	-16	17.5	0	52.1	+23	06.6	50	5 46	6 25	7 00	21 44	78	13 12	38
6	274	04.8	-16	18.2	15	17.2	+23	02.2	45	5 40	6 16	6 47	22 04	74	12 51	42
7	289	04.8		19.0	29	42.4	+22	57.6	40	35	07	36	20 71		35	44
8	304	04.7		19.7	44	07.6		52.9	35	30	6 00	27	34 68		20	47
9	319	04.7		20.4	58	32.8		48.0	30	25	5 54	19	22 46	66	12 08	48
10	334	04.7		21.2	72	58.1		43.0	20	15	42	6 04	23 06	62	11 46	52
11	349	04.6	-16	21.9	87	23.3	+22	37.8	10 N	5 05	5 30	5 52	23 24	59	11 28	54
12	4	04.6	-16	22.6	101	48.6	+22	32.5	0	4 54	5 19	5 40	23 40	56	11 10	57
13	19	04.6		23.4	116	14.0		27.1	10 S	41	5 06	28	23 57	53	10 53	59
14	34	04.5		24.1	130	39.3		21.5	20	25	4 52	16	** ** *		34	62
15	49	04.5		24.8	145	04.7		15.8	30	4 05	35	5 01	** ** *		10 12	65
16	64	04.4		25.6	159	30.1		09.9	35	3 52	25	4 52	** ** *		9 59	67
17	79	04.4	-16	26.3	173	55.6	+22	03.9	40	3 36	4 13	4 42	0 12	47	9 44	70
18	94	04.4	-16	27.0	188	21.1	+21	57.7	45	3 17	3 58	4 31	0 30	45	9 27	72
19	109	04.3		27.8	202	46.6		51.4	50	2 51	39	16	0 52	43	9 05	75
20	124	04.3		28.5	217	12.2		44.9	52	38	30	10	1 03	41	8 54	77
21	139	04.2		29.2	231	37.8		38.4	54	22	20	4 02	15 39		42	80
22	154	04.2		29.9	246	03.4		31.6	56	2 04	3 08	3 54	29 37		29	81
23	169	04.2		30.7	260	29.1		24.8	58	1 39	2 55	45	1 45	34	8 13	85
24	184	04.1	-16	31.4	274	54.8	+21	17.8	60 S	1 05	2 38	3 34	2 05	29	7 53	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 51 ^m 5		Mag: -3.9 PMG: 10 ^h 42 ^m		Mag: +0.1 PMG: 17 ^h 34 ^m		Mag: -2.5 PMG: 4 ^h 02 ^m		Mag: -0.3 PMG: 1 ^h 44 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	46	15.6	199	41.4	-9	26.0	299	17.1	+22	24.3
1	61	18.1	214	40.9		27.1	314	19.6		24.3
2	76	20.6	229	40.4		28.3	329	22.1		24.3
3	91	23.0	244	39.9		29.4	344	24.6		24.3
4	106	25.5	259	39.5		30.6	359	27.1		24.3
5	121	28.0	274	39.0	-9	31.7	14	29.6	+22	24.3
6	136	30.4	289	38.5	-9	32.9	29	32.1	+22	24.3
7	151	32.9	304	38.0		34.0	44	34.6		24.4
8	166	35.4	319	37.5		35.2	59	37.1		24.4
9	181	37.8	334	37.0		36.3	74	39.6		24.4
10	196	40.3	349	36.5		37.4	89	42.1		24.4
11	211	42.7	4	36.0	-9	38.6	104	44.6	+22	24.4
12	226	45.2	19	35.6	-9	39.7	119	47.1	+22	24.4
13	241	47.7	34	35.1		40.9	134	49.7		24.4
14	256	50.1	49	34.6		42.0	149	52.2		24.4
15	271	52.6	64	34.1		43.2	164	54.7		24.4
16	286	55.1	79	33.6		44.3	179	57.2		24.4
17	301	57.5	94	33.1	-9	45.5	194	59.7	+22	24.5
18	317	00.0	109	32.6	-9	46.6	210	02.2	+22	24.5
19	332	02.5	124	32.1		47.7	225	04.7		24.5
20	347	04.9	139	31.6		48.9	240	07.2		24.5
21	2	07.4	154	31.2		50.0	255	09.7		24.5
22	17	09.9	169	30.7		51.2	270	12.2		24.5
23	32	12.3	184	30.2		52.3	285	14.7		24.5
24	47	14.8	199	29.7	-9	53.5	300	17.3	+22	24.5
Dif	—		-5		-11		+7		+25	
									0	
									+26	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:1			Edad: 22 ^d 2	PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'2												
	PMG: 11 ^h 43 ^m 8																
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	184	04.1	-16	31.4	274	54.8	+21	17.8	60 N	15 46	16 33	17 24	22 14	96	14 42	15	
1	199	04.1		32.1	289	20.6	68	10.6	58	15 56	16 40	17 27	26 92		29 19		
2	214	04.0		32.9	303	46.4	68	+21	03.4	56	16 05	16 46	31	37 89	17 23		
3	229	04.0		33.6	318	12.2	68	+20	56.0	54	13	51	34	46 86	14 07	26	
4	244	04.0		34.3	332	38.1	69	48.4	52	19	16 56	17 36	22 55	83	13 58	28	
5	259	03.9	-16	35.0	347	04.0	69	+20	40.8	50	16 26	17 00	17 39	23 02	81	13 50	30
6	274	03.9	-16	35.8	1	30.0	70	+20	33.0	45	16 39	17 10	17 45	23 18	76	13 33	35
7	289	03.8		36.5	15	56.0	70	25.0	80	40	16 50	19	51	31 72		19 38	
8	304	03.8		37.2	30	22.0	70	17.0	80	35	17 00	26	17 56	42 69		13 07	41
9	319	03.7		37.9	44	48.1	71	08.8	82	30	08	33	18 01	23 52	66	12 56	44
10	334	03.7		38.7	59	14.3	72	+20	00.5	20	22	45	12	** ** *		38 48	
11	349	03.7	-16	39.4	73	40.5	72	+19	52.0	10 N	17 35	17 57	18 22	** ** *		12 22	52
12	4	03.6	-16	40.1	88	06.7	72	+19	43.4	0	17 47	18 09	18 34	** ** *		12 07	55
13	19	03.6		40.8	102	33.0	73	34.7	87	10 S	17 59	22	18 47	** ** *		11 52	58
14	34	03.5		41.5	116	59.4	74	25.9	88	20	18 13	36	19 03	0 14	50	36	62
15	49	03.5		42.3	131	25.8	74	17.0	89	30	28	18 54	24	34 46		17 66	
16	64	03.4		43.0	145	52.2	74	+19	07.9	35	37	19 04	37	46 44		11 06	69
17	79	03.4	-16	43.7	160	18.7	75	+18	58.7	40	18 47	19 17	19 53	0 59	41	10 54	71
18	94	03.3	-16	44.4	174	45.2	75	+18	49.4	45	18 59	19 32	20 14	1 15	38	10 39	75
19	109	03.3		45.1	189	11.8	76	40.0	94	50	19 14	19 51	41	35 33		20 80	
20	124	03.2		45.9	203	38.4	76	30.4	96	52	21	20 01	20 54	44 31		11 83	
21	139	03.2		46.6	218	05.1	77	20.8	96	54	28	21 10	21 10	1 54	29	10 02	84
22	154	03.1		47.3	232	31.9	78	11.0	98	56	37	24	30	2 06	26	9 50	88
23	169	03.1		48.0	246	58.7	78	+18	01.1	58	47	38	21 57	19 23	38	91	91
24	184	03.0	-16	48.7	261	25.5	78	+17	51.1	60 S	19 58	20 55	22 36	2 34	19	9 23	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +0.2		Mag: -2.5		Mag: -0.3	
	20 ^h 47 ^m 6		PMG: 10 ^h 42 ^m		PMG: 17 ^h 33 ^m		PMG: 3 ^h 58 ^m		PMG: 1 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	47	14.8	199	29.7	96	29.4	300	17.3	334	56.6
1	62	17.2	214	29.2	111	30.1	315	19.8	349	59.2
2	77	19.7	229	28.7	126	30.8	330	22.3	5	01.9
3	92	22.2	244	28.2	141	31.4	345	24.8	20	04.5
4	107	24.6	259	27.7	156	32.1	0	27.3	35	07.2
5	122	27.1	274	27.2	171	32.8	15	29.8	50	09.8
6	137	29.6	289	26.7	186	33.5	30	32.3	65	12.4
7	152	32.0	304	26.2	201	34.2	45	34.8	80	15.1
8	167	34.5	319	25.7	216	34.8	60	37.4	95	17.7
9	182	37.0	334	25.2	231	35.5	75	39.9	110	20.4
10	197	39.4	349	24.7	246	36.2	90	42.4	125	23.0
11	212	41.9	4	24.2	261	36.9	105	44.9	140	25.7
12	227	44.4	19	23.7	276	37.5	120	47.4	155	28.3
13	242	46.8	34	23.2	291	38.2	135	49.9	170	31.0
14	257	49.3	49	22.7	306	38.9	150	52.5	185	33.6
15	272	51.7	64	22.2	321	39.6	165	55.0	200	36.2
16	287	54.2	79	21.7	336	40.3	180	57.5	215	38.9
17	302	56.7	94	21.2	351	40.9	196	00.0	230	41.5
18	317	59.1	109	20.7	6	41.6	211	02.5	245	44.2
19	333	01.6	124	20.2	21	42.3	226	05.0	260	46.8
20	348	04.1	139	19.7	36	43.0	241	07.6	275	49.5
21	3	06.5	154	19.2	51	43.7	256	10.1	290	52.1
22	18	09.0	169	18.7	66	44.3	271	12.6	305	54.7
23	33	11.5	184	18.2	81	45.0	286	15.1	320	57.4
24	48	13.9	199	17.7	96	45.7	301	17.6	336	00.0
Dif	—		-5		+7		+25		+26	
							0		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 23 ^d 2	PHE { 4 ^h : 59 ^h /3 12 ^h : 59 ^h /4 20 ^h : 59 ^h /5													
	PMG: 11 ^h 43 ^m 8					SD: 16 ^h 1		R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	184	03.0	-16	48.7	261	25.5	+17	51.1	60 N	6 05	6 55	7 43	23 50	97	14 57	12		
1	199	03.0		49.5	275	52.4	79	41.0	58	6 01	49	33	23 58	93	48	15		
2	214	02.9		50.2	290	19.3	79	30.7	56	5 58	43	24	** ** *	**	40	18		
3	229	02.9		50.9	304	46.3	80	20.4	54	55	38	16	** ** *	**	33	20		
4	244	02.8		51.6	319	13.4	81	+17 09.9	52	52	33	09	** ** *	**	26	23		
5	259	02.8	-16	52.3	333	40.5	81	+16 59.4	50	5 49	6 28	7 03	** ** *	**	14 20	26		
6	274	02.7	-16	53.0	348	07.6	81	+16 48.7	45	5 43	6 18	6 49	** ** *	**	14 08	30		
7	289	02.7		53.7	2	34.8	82	37.9	40	37	10	38	** ** *	**	13 57	34		
8	304	02.6		54.5	17	02.1	83	27.1	35	32	6 02	29	** ** *	**	48	37		
9	319	02.6		55.2	31	29.4	83	16.1	30	26	5 55	20	** ** *	**	40	40		
10	334	02.5		55.9	45	56.7	83	+16 05.0	20	16	42	6 05	0 08	62	26	45		
11	349	02.5	-16	56.6	60	24.1	84	+15 53.9	10 N	5 05	5 31	5 53	0 23	57	13 14	49		
12	4	02.4	-16	57.3	74	51.6	85	+15 42.6	0	4 54	5 19	5 40	0 36	54	13 02	53		
13	19	02.3		58.0	89	19.1	85	31.2	10 S	40	5 06	28	0 50	50	12 50	57		
14	34	02.3		58.7	103	46.6	85	19.7	20	24	4 51	5 15	1 04	46	38	61		
15	49	02.2	-16	59.4	118	14.2	86	+15 08.2	30	4 03	34	4 59	20 42	23	67			
16	64	02.2	-17	00.1	132	41.9	87	+14 56.5	35	3 50	23	50	30 39	15	69			
17	79	02.1	-17	00.8	147	09.6	87	+14 44.8	40	3 34	4 10	4 40	1 40	36	12 05	73		
18	94	02.1	-17	01.5	161	37.3	87	+14 32.9	45	3 13	3 55	4 28	1 53	32	11 54	76		
19	109	02.0		02.3	176	05.1	88	21.0	50	2 46	36	13	2 08	28	40	82		
20	124	02.0		03.0	190	33.0	89	+14 09.0	52	33	26	4 06	15	26	34	83		
21	139	01.9		03.7	205	00.9	89	+13 56.9	54	2 16	16	3 59	23 23	26	87			
22	154	01.8		04.4	219	28.8	89	44.7	56	1 56	3 03	50	32 20	18	90			
23	169	01.8		05.1	233	56.8	90	32.4	58	1 30	2 49	40	42 17	11 09	93			
24	184	01.7	-17	05.8	248	24.8	90	+13 20.1	60 S	0 50	2 32	3 29	2 53	13	10 59	97		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 43 ^m 7		Mag: -3.9 PMG: 10 ^h 43 ^m				Mag: +0.2 PMG: 17 ^h 32 ^m				Mag: -2.5 PMG: 3 ^h 54 ^m				Mag: -0.3 PMG: 1 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	48	13.9	199	17.7	-10	20.7	96	45.7	-19	57.9	301	17.6	+22	24.8	336	00.0	+20	32.2
1	63	16.4	214	17.2		21.8	111	46.4		57.4	316	20.2		24.8	351	02.7		32.1
2	78	18.8	229	16.7		23.0	126	47.0		56.8	331	22.7		24.8	6	05.3		32.1
3	93	21.3	244	16.2		24.1	141	47.7		56.3	346	25.2		24.8	21	08.0		32.1
4	108	23.8	259	15.7		25.2	156	48.4		55.8	1	27.7		24.8	36	10.6		32.1
5	123	26.2	274	15.2	-10	26.4	171	49.1	-19	55.3	16	30.3	+22	24.8	51	13.3	+20	32.0
6	138	28.7	289	14.7	-10	27.5	186	49.8	-19	54.8	31	32.8	+22	24.8	66	15.9	+20	32.0
7	153	31.2	304	14.2		28.6	201	50.4		54.2	46	35.3		24.8	81	18.6		32.0
8	168	33.6	319	13.7		29.8	216	51.1		53.7	61	37.8		24.9	96	21.2		32.0
9	183	36.1	334	13.2		30.9	231	51.8		53.2	76	40.3		24.9	111	23.8		32.0
10	198	38.6	349	12.7		32.0	246	52.5		52.7	91	42.9		24.9	126	26.5		31.9
11	213	41.0	4	12.2	-10	33.1	261	53.2	-19	52.1	106	45.4	+22	24.9	141	29.1	+20	31.9
12	228	43.5	19	11.7	-10	34.3	276	53.8	-19	51.6	121	47.9	+22	24.9	156	31.8	+20	31.9
13	243	46.0	34	11.2		35.4	291	54.5		51.1	136	50.4		24.9	171	34.4		31.9
14	258	48.4	49	10.7		36.5	306	55.2		50.5	151	53.0		24.9	186	37.1		31.8
15	273	50.9	64	10.2		37.6	321	55.9		50.0	166	55.5		24.9	201	39.7		31.8
16	288	53.3	79	09.7		38.8	336	56.6		49.5	181	58.0		24.9	216	42.4		31.8
17	303	55.8	94	09.2	-10	39.9	351	57.2	-19	49.0	197	00.5	+22	25.0	231	45.0	+20	31.8
18	318	58.3	109	08.6	-10	41.0	6	57.9	-19	48.4	212	03.1	+22	25.0	246	47.7	+20	31.8
19	334	00.7	124	08.1		42.1	21	58.6		47.9	227	05.6		25.0	261	50.3		31.7
20	349	03.2	139	07.6		43.3	36	59.3		47.4	242	08.1		25.0	276	53.0		31.7
21	4	05.7	154	07.1		44.4	52	00.0		46.9	257	10.7		25.0	291	55.6		31.7
22	19	08.1	169	06.6		45.5	67	00.6		46.3	272	13.2		25.0	306	58.3		31.7
23	34	10.6	184	06.1		46.6	82	01.3		45.8	287	15.7		25.0	322	00.9		31.7
24	49	13.1	199	05.6	-10	47.7	97	02.0	-19	45.3	302	18.2	+22	25.0	337	03.6	+20	31.6
Dif	—		-5		-11		+7		+5		+25		0		+26			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 43 ^m 9				Edad: 24 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'6 20 ^h : 59'6 SD: 16'2 PMG: 7 ^h 43 ^m R°: 51 ^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	184	01.7	-17	05.8	248	24.8	+13	20.1	60 N	15 42	16 29	17 20	** ** *	** ** *	15 09	8		
1	199	01.7		06.5	262	52.9	91	+13	07.6	58	15 52	36	24	** ** *	15 03	12		
2	214	01.6		07.2	277	21.1	92	+12	55.1	56	16 01	42	27	0 06	89	15		
3	229	01.5		07.9	291	49.2	91		42.5	54	09	48	31	12	87	18		
4	244	01.5		08.6	306	17.4	92		29.8	52	16	53	34	18	84	20		
5	259	01.4	-17	09.3	320	45.7	93	+12	17.1	50	16 23	16 58	17 37	0 23	82	22		
6	274	01.4	-17	10.0	335	14.0	93	+12	04.2	45	16 37	17 08	17 43	0 34	77	27		
7	289	01.3		10.7	349	42.4	94	+11	51.3	40	48	17	49	43	73	31		
8	304	01.2		11.4	4	10.8	94		38.4	35	16 58	25	17 55	51	69	34		
9	319	01.2		12.1	18	39.2	94		25.3	30	17 07	32	18 00	0 58	66	37		
10	334	01.1		12.8	33	07.7	95	+11	12.2	20	22	45	11	1 10	61	42		
11	349	01.0	-17	13.5	47	36.2	95	+10	59.0	10 N	17 35	17 57	18 22	1 20	57	47		
12	4	01.0	-17	14.2	62	04.8	96	+10	45.8	0	17 47	18 09	18 34	1 30	52	51		
13	19	00.9		14.9	76	33.4	96		32.4	10 S	18 00	22	18 48	40	48	56		
14	34	00.9		15.6	91	02.0	96		19.1	20	14	37	19 05	1 50	43	60		
15	49	00.8		16.3	105	30.7	97	+10	05.6	30	30	18 55	26	2 02	38	65		
16	64	00.7		17.0	119	59.4	97	+9	52.1	35	39	19 06	40	09	35	69		
17	79	00.7	-17	17.7	134	28.1	97	+9	38.5	40	18 49	19 19	19 56	2 16	32	72		
18	94	00.6	-17	18.4	148	56.9	98	+9	24.9	45	19 02	19 35	20 17	2 25	28	77		
19	109	00.5		19.1	163	25.8	99	+9	11.2	50	17	19 55	20 45	36	23	81		
20	124	00.5		19.8	177	54.6	98	+8	57.5	52	24	20 05	21 00	41	21	84		
21	139	00.4		20.5	192	23.5	99		43.7	54	32	16	17	46	19	86		
22	154	00.3		21.2	206	52.4	99		29.9	56	41	29	21 38	52	16	89		
23	169	00.3		21.8	221	21.4	100		16.0	58	19 51	20 44	22 07	2 59	13	93		
24	184	00.2	-17	22.5	235	50.4	100	+8	02.0	60 S	20 03	21 02	22 55	3 06	10	96		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 39 ^m 7		Mag: -3.9 PMG: 10 ^h 44 ^m				Mag: +0.2 PMG: 17 ^h 31 ^m				Mag: -2.5 PMG: 3 ^h 50 ^m				Mag: -0.3 PMG: 1 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	49	13.1	199	05.6	-10	47.7	97	02.0	-19	45.3	302	18.2	+22	25.0	337	03.6	+20	31.6
1	64	15.5	214	05.1		48.9	112	02.7		44.7	317	20.8		25.0	352	06.2		31.6
2	79	18.0	229	04.6		50.0	127	03.4		44.2	332	23.3		25.1	7	08.8		31.6
3	94	20.5	244	04.1		51.1	142	04.0		43.7	347	25.8		25.1	22	11.5		31.6
4	109	22.9	259	03.5		52.2	157	04.7		43.1	2	28.4		25.1	37	14.1		31.5
5	124	25.4	274	03.0	-10	53.3	172	05.4	-19	42.6	17	30.9	+22	25.1	52	16.8	+20	31.5
6	139	27.8	289	02.5	-10	54.5	187	06.1	-19	42.1	32	33.4	+22	25.1	67	19.4	+20	31.5
7	154	30.3	304	02.0		55.6	202	06.8		41.5	47	36.0		25.1	82	22.1		31.5
8	169	32.8	319	01.5		56.7	217	07.4		41.0	62	38.5		25.1	97	24.7		31.5
9	184	35.2	334	01.0		57.8	232	08.1		40.5	77	41.0		25.1	112	27.4		31.4
10	199	37.7	349	00.5	-10	58.9	247	08.8		40.0	92	43.6		25.2	127	30.0		31.4
11	214	40.2	3	59.9	-11	00.1	262	09.5	-19	39.4	107	46.1	+22	25.2	142	32.7	+20	31.4
12	229	42.6	18	59.4	-11	01.2	277	10.2	-19	38.9	122	48.6	+22	25.2	157	35.3	+20	31.4
13	244	45.1	33	58.9		02.3	292	10.8		38.4	137	51.2		25.2	172	38.0		31.3
14	259	47.6	48	58.4		03.4	307	11.5		37.8	152	53.7		25.2	187	40.6		31.3
15	274	50.0	63	57.9		04.5	322	12.2		37.3	167	56.2		25.2	202	43.3		31.3
16	289	52.5	78	57.4		05.6	337	12.9		36.7	182	58.8		25.2	217	45.9		31.3
17	304	54.9	93	56.8	-11	06.7	352	13.6	-19	36.2	198	01.3	+22	25.2	232	48.6	+20	31.3
18	319	57.4	108	56.3	-11	07.9	7	14.2	-19	35.7	213	03.8	+22	25.3	247	51.2	+20	31.2
19	334	59.9	123	55.8		09.0	22	14.9		35.1	228	06.4		25.3	262	53.9		31.2
20	350	02.3	138	55.3		10.1	37	15.6		34.6	243	08.9		25.3	277	56.5		31.2
21	5	04.8	153	54.8		11.2	52	16.3		34.1	258	11.5		25.3	292	59.2		31.2
22	20	07.3	168	54.2		12.3	67	17.0		33.5	273	14.0		25.3	308	01.8		31.1
23	35	09.7	183	53.7		13.4	82	17.6		33.0	288	16.5		25.3	323	04.5		31.1
24	50	12.2	198	53.2	-11	14.5	97	18.3	-19	32.5	303	19.1	+22	25.3	338	07.1	+20	31.1
Dif	—		-5		-11		+7		+5		+25		0		+26			

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: 25 ^d 2 PHE { 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/7 R°: 51 ^m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	00.2	-17	22.5	235	50.4	+8 02.0	60 N	6 09	7 00	7 48	1 27	96	15 17	8
1	199	00.1		23.2	250	19.4 ¹⁰⁰	+7 48.1 ¹³⁹	58	05	6 53	37	31	92	15	11
2	214	00.1		23.9	264	48.5 ¹⁰¹	34.0 ¹⁴¹	56	6 01	47	28	35	89	13	14
3	229	00.0		24.6	279	17.6 ¹⁰¹	19.9 ¹⁴¹	54	5 58	41	20	39	86	11	17
4	243	59.9		25.3	293	46.7 ¹⁰¹	+7 05.8 ¹⁴¹	52	55	36	13	42	83	09	19
5	258	59.8	-17	26.0	308	15.8 ¹⁰¹	+6 51.6 ¹⁴²	50	5 52	6 31	7 06	1 45	81	15 08	21
6	273	59.8	-17	26.7	322	45.0 ¹⁰²	+6 37.4 ¹⁴²	45	5 45	6 21	6 52	1 51	76	15 05	25
7	288	59.7		27.4	337	14.2 ¹⁰²	23.2 ¹⁴²	40	39	12	40	1 56	72	15 02	29
8	303	59.6		28.1	351	43.4 ¹⁰²	+6 08.9 ¹⁴³	35	33	6 04	31	2 00	69	14 59	33
9	318	59.6		28.7	6	12.6 ¹⁰²	+5 54.6 ¹⁴³	30	28	5 57	22	04	65	57	36
10	333	59.5		29.4	20	41.9 ¹⁰³	40.2 ¹⁴⁴	20	17	43	6 07	11	60	53	41
11	348	59.4	-17	30.1	35	11.2 ¹⁰³	+5 25.8 ¹⁴⁴	10 N	5 06	5 31	5 53	2 17	55	14 50	46
12	3	59.3	-17	30.8	49	40.5 ¹⁰³	+5 11.4 ¹⁴⁴	0	4 54	5 19	5 41	2 22	51	14 46	51
13	18	59.3		31.5	64	09.8 ¹⁰³	+4 56.9 ¹⁴⁵	10 S	40	5 06	28	28	46	43	55
14	33	59.2		32.2	78	39.2 ¹⁰⁴	42.5 ¹⁴⁴	20	23	4 51	5 14	33	42	39	60
15	48	59.1		32.9	93	08.6 ¹⁰⁴	27.9 ¹⁴⁶	30	4 01	32	4 58	40	37	35	65
16	63	59.1		33.5	107	37.9 ¹⁰³	+4 13.4 ¹⁴⁵	35	3 48	21	49	44	33	33	68
17	78	59.0	-17	34.2	122	07.4 ¹⁰⁵	+3 58.8 ¹⁴⁶	40	3 31	4 08	4 38	2 48	30	14 30	72
18	93	58.9	-17	34.9	136	36.8 ¹⁰⁴	+3 44.3 ¹⁴⁵	45	3 10	3 52	4 26	2 53	26	14 27	76
19	108	58.8		35.6	151	06.2 ¹⁰⁴	29.6 ¹⁴⁷	50	2 42	32	10	2 59	21	23	81
20	123	58.8		36.3	165	35.7 ¹⁰⁵	15.0 ¹⁴⁶	52	28	22	4 03	3 02	19	21	84
21	138	58.7		37.0	180	05.2 ¹⁰⁵	+3 00.4 ¹⁴⁶	54	2 11	3 11	3 55	05	17	19	86
22	153	58.6		37.6	194	34.6 ¹⁰⁴	+2 45.7 ¹⁴⁷	56	1 49	2 59	46	08	14	17	89
23	168	58.5		38.3	209	04.1 ¹⁰⁵	31.0 ¹⁴⁷	58	1 21	44	36	12	11	15	92
24	183	58.4	-17	39.0	223	33.7 ¹⁰⁶	+2 16.3 ¹⁴⁷	60 S	0 32	2 25	3 24	3 16	8	14 12	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 35 ^m 8		Mag: -3.9 PMG: 10 ^h 45 ^m		Mag: +0.2 PMG: 17 ^h 30 ^m		Mag: -2.6 PMG: 3 ^h 46 ^m		Mag: -0.3 PMG: 1 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	50	12.2	198	53.2	-11	14.5	97	18.3	-19	32.5	303	19.1	+22	25.3	338	07.1	+20	31.1
1	65	14.7	213	52.7		15.6	112	19.0		31.9	318	21.6		25.3	353	09.8		31.1
2	80	17.1	228	52.2		16.7	127	19.7		31.4	333	24.1		25.4	8	12.4		31.1
3	95	19.6	243	51.6		17.9	142	20.4		30.8	348	26.7		25.4	23	15.1		31.0
4	110	22.1	258	51.1		19.0	157	21.0		30.3	3	29.2		25.4	38	17.7		31.0
5	125	24.5	273	50.6	-11	20.1	172	21.7	-19	29.8	18	31.8	+22	25.4	53	20.4	+20	31.0
6	140	27.0	288	50.1	-11	21.2	187	22.4	-19	29.2	33	34.3	+22	25.4	68	23.0	+20	31.0
7	155	29.4	303	49.5		22.3	202	23.1		28.7	48	36.8		25.4	83	25.7		30.9
8	170	31.9	318	49.0		23.4	217	23.8		28.2	63	39.4		25.4	98	28.3		30.9
9	185	34.4	333	48.5		24.5	232	24.5		27.6	78	41.9		25.4	113	31.0		30.9
10	200	36.8	348	48.0		25.6	247	25.1		27.1	93	44.5		25.5	128	33.6		30.9
11	215	39.3	3	47.4	-11	26.7	262	25.8	-19	26.5	108	47.0	+22	25.5	143	36.3	+20	30.9
12	230	41.8	18	46.9	-11	27.8	277	26.5	-19	26.0	123	49.6	+22	25.5	158	38.9	+20	30.8
13	245	44.2	33	46.4		28.9	292	27.2		25.5	138	52.1		25.5	173	41.6		30.8
14	260	46.7	48	45.9		30.0	307	27.9		24.9	153	54.6		25.5	188	44.3		30.8
15	275	49.2	63	45.3		31.1	322	28.5		24.4	168	57.2		25.5	203	46.9		30.8
16	290	51.6	78	44.8		32.2	337	29.2		23.8	183	59.7		25.5	218	49.6		30.7
17	305	54.1	93	44.3	-11	33.3	352	29.9	-19	23.3	199	02.3	+22	25.5	233	52.2	+20	30.7
18	320	56.6	108	43.8	-11	34.4	7	30.6	-19	22.7	214	04.8	+22	25.6	248	54.9	+20	30.7
19	335	59.0	123	43.2		35.6	22	31.3		22.2	229	07.4		25.6	263	57.5		30.7
20	351	01.5	138	42.7		36.7	37	31.9		21.7	244	09.9		25.6	279	00.2		30.7
21	6	03.9	153	42.2		37.8	52	32.6		21.1	259	12.5		25.6	294	02.8		30.6
22	21	06.4	168	41.6		38.9	67	33.3		20.6	274	15.0		25.6	309	05.5		30.6
23	36	08.9	183	41.1		40.0	82	34.0		20.0	289	17.6		25.6	324	08.1		30.6
24	51	11.3	198	40.6	-11	41.1	97	34.7	-19	19.5	304	20.1	+22	25.6	339	10.8	+20	30.6
Dif	—		-5		-11		+7		+5		+25		0		+27			

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: 26 ^d 2 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'6 SD: 16'3 PMG: 9 ^h 25 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	58.4	-17	39.0	223	33.7	+2 16.3	60 N	15 37	16 25	17 16	3 03 95	15 25 8			
1	198	58.4		39.7	238	03.2 ¹⁰⁵	+2 01.6 ¹⁴⁷	58	48	33	21	03 92	26 11			
2	213	58.3		40.4	252	32.7 ¹⁰⁵	+1 46.9 ¹⁴⁷	56	15 57	39	24	04 89	27 14			
3	228	58.2		41.0	267	02.2 ¹⁰⁵	32.2 ¹⁴⁷	54	16 06	45	28	05 86	28 16			
4	243	58.1		41.7	281	31.8 ¹⁰⁶	17.4 ¹⁴⁸	52	13	50	31	05 84	28 19			
5	258	58.1	-17	42.4	296	01.4 ¹⁰⁶	+1 02.7 ¹⁴⁷	50	16 20	16 55	17 34	3 06 81	15 29 21			
6	273	58.0	-17	43.1	310	30.9 ¹⁰⁵	+0 47.9 ¹⁴⁸	45	16 34	17 06	17 41	3 07 76	15 30 26			
7	288	57.9		43.7	325	00.5 ¹⁰⁶	33.2 ¹⁴⁷	40	46	15	48	08 72	31 30			
8	303	57.8		44.4	339	30.1 ¹⁰⁶	18.4 ¹⁴⁸	35	16 56	23	54	09 68	32 33			
9	318	57.7		45.1	353	59.6 ¹⁰⁵	+0 03.7 ¹⁴⁷	30	17 05	31	17 59	09 66	33 36			
10	333	57.7		45.8	8	29.2 ¹⁰⁶	-0 11.1 ¹⁴⁸	20	21	44	18 11	11 59	34 42			
11	348	57.6	-17	46.4	22	58.8 ¹⁰⁶	-0 25.8 ¹⁴⁷	10 N	17 35	17 57	18 22	3 12 55	15 36 46			
12	3	57.5	-17	47.1	37	28.4 ¹⁰⁶	-0 40.6 ¹⁴⁸	0	17 48	18 09	18 35	3 13 50	15 37 50			
13	18	57.4		47.8	51	58.0 ¹⁰⁶	-0 55.3 ¹⁴⁷	10 S	18 01	23	18 49	14 46	38 55			
14	33	57.3		48.5	66	27.5 ¹⁰⁵	-1 10.1 ¹⁴⁸	20	15	38	19 06	15 41	39 60			
15	48	57.2		49.1	80	57.1 ¹⁰⁶	24.8 ¹⁴⁷	30	31	18 57	28	17 36	40 66			
16	63	57.2		49.8	95	26.7 ¹⁰⁶	39.5 ¹⁴⁷	35	41	19 09	42	17 33	41 69			
17	78	57.1	-17	50.5	109	56.3 ¹⁰⁶	-1 54.3 ¹⁴⁸	40	18 52	19 22	19 59	3 18 30	15 42 72			
18	93	57.0	-17	51.1	124	25.8 ¹⁰⁵	-2 09.0 ¹⁴⁷	45	19 05	19 38	20 21	3 19 26	15 43 76			
19	108	56.9		51.8	138	55.4 ¹⁰⁶	23.6 ¹⁴⁶	50	21	19 59	20 50	20 21	44 81			
20	123	56.8		52.5	153	25.0 ¹⁰⁶	38.3 ¹⁴⁷	52	28	20 09	21 05	21 19	45 83			
21	138	56.7		53.2	167	54.5 ¹⁰⁵	-2 53.0 ¹⁴⁷	54	36	21	23	22 16	45 86			
22	153	56.7		53.8	182	24.1 ¹⁰⁶	-3 07.6 ¹⁴⁶	56	46	34	21 46	22 14	46 89			
23	168	56.6		54.5	196	53.6 ¹⁰⁵	22.2 ¹⁴⁶	58	19 56	20 50	22 17	23 11	47 92			
24	183	56.5	-17	55.2	211	23.1 ¹⁰⁵	-3 36.8 ¹⁴⁶	60 S	20 09	21 09	23 26	3 24 8	15 48 95			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 31 ^m 9		Mag: -3.9 PMG: 10 ^h 46 ^m		Mag: +0.2 PMG: 17 ^h 29 ^m		Mag: -2.6 PMG: 3 ^h 42 ^m		Mag: -0.3 PMG: 1 ^h 23 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	51	11.3	198	40.6	97	34.7	304	20.1	339	10.8						
1	66	13.8	213	40.1	112	35.4	319	22.6	354	13.4						
2	81	16.3	228	39.5	127	36.0	334	25.2	9	16.1						
3	96	18.7	243	39.0	142	36.7	349	27.7	24	18.7						
4	111	21.2	258	38.5	157	37.4	4	30.3	39	21.4						
5	126	23.7	273	37.9	172	38.1	19	32.8	54	24.0						
6	141	26.1	288	37.4	187	38.8	34	35.4	69	26.7						
7	156	28.6	303	36.9	202	39.5	49	37.9	84	29.4						
8	171	31.0	318	36.3	217	40.1	64	40.5	99	32.0						
9	186	33.5	333	35.8	232	40.8	79	43.0	114	34.7						
10	201	36.0	348	35.3	247	41.5	94	45.6	129	37.3						
11	216	38.4	3	34.7	262	42.2	109	48.1	144	40.0						
12	231	40.9	18	34.2	277	42.9	124	50.7	159	42.6						
13	246	43.4	33	33.6	292	43.5	139	53.3	174	45.3						
14	261	45.8	48	33.1	307	44.2	154	55.8	189	47.9						
15	276	48.3	63	32.6	322	44.9	169	58.4	204	50.6						
16	291	50.8	78	32.0	337	45.6	185	00.9	219	53.2						
17	306	53.2	93	31.5	352	46.3	200	03.5	234	55.9						
18	321	55.7	108	31.0	7	47.0	215	06.0	249	58.6						
19	336	58.2	123	30.4	22	47.6	230	08.6	265	01.2						
20	352	00.6	138	29.9	37	48.3	245	11.1	280	03.9						
21	7	03.1	153	29.3	52	49.0	260	13.7	295	06.5						
22	22	05.5	168	28.8	67	49.7	275	16.2	310	09.2						
23	37	08.0	183	28.3	82	50.4	290	18.8	325	11.8						
24	52	10.5	198	27.7	97	51.1	305	21.4	340	14.5						
Dif	—		-5	-11	+7	+5	+26	0	+27	0						

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: 27 ^d 2 PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/3 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	183	56.5	-17	55.2	211	23.1	-3 36.8	6 13	7 04	7 53	4 38	96	15 33	10				
1	198	56.4		55.8	225	52.7 ¹⁰⁶	-3 51.4 ¹⁴⁶	09	6 57	42	35	92	37	13				
2	213	56.3		56.5	240	22.2 ¹⁰⁵	-4 05.9 ¹⁴⁵	05	51	32	33	89	41	16				
3	228	56.2		57.2	254	51.7 ¹⁰⁵	20.4 ¹⁴⁵	6 01	45	24	31	86	44	19				
4	243	56.1		57.8	269	21.1 ¹⁰⁴	34.9 ¹⁴⁵	5 58	39	16	29	83	47	21				
5	258	56.1	-17	58.5	283	50.6 ¹⁰⁵	-4 49.4 ¹⁴⁵	5 55	6 34	7 10	4 27	81	15 50	23				
6	273	56.0	-17	59.2	298	20.1 ¹⁰⁵	-5 03.8 ¹⁴⁴	5 48	6 23	6 55	4 23	76	15 56	28				
7	288	55.9	-17	59.8	312	49.5 ¹⁰⁴	18.2 ¹⁴⁴	41	14	43	20	72	16 01	32				
8	303	55.8	-18	00.5	327	18.9 ¹⁰⁴	32.6 ¹⁴⁴	35	6 06	32	17	68	05	35				
9	318	55.7		01.1	341	48.4 ¹⁰⁵	-5 46.9 ¹⁴³	29	5 58	23	15	65	09	38				
10	333	55.6		01.8	356	17.8 ¹⁰⁴	-6 01.2 ¹⁴³	18	45	6 08	10	60	16	43				
11	348	55.5	-18	02.5	10	47.1 ¹⁰³	-6 15.5 ¹⁴³	5 06	5 32	5 54	4 07	55	16 22	47				
12	3	55.4	-18	03.1	25	16.5 ¹⁰⁴	-6 29.7 ¹⁴²	4 54	5 19	5 41	4 03	51	16 27	52				
13	18	55.3		03.8	39	45.8 ¹⁰³	43.9 ¹⁴²	39	5 05	28	4 00	47	33	56				
14	33	55.2		04.4	54	15.2 ¹⁰⁴	-6 58.0 ¹⁴¹	22	4 50	5 13	3 56	43	39	60				
15	48	55.2		05.1	68	44.5 ¹⁰³	-7 12.1 ¹⁴¹	4 00	31	4 57	53	36	46	65				
16	63	55.1		05.8	83	13.8 ¹⁰³	26.1 ¹⁴⁰	3 46	20	47	50	34	50	68				
17	78	55.0	-18	06.4	97	43.0 ¹⁰²	-7 40.1 ¹⁴⁰	3 29	4 06	4 36	3 48	30	16 54	72				
18	93	54.9	-18	07.1	112	12.3 ¹⁰³	-7 54.1 ¹⁴⁰	3 07	3 50	4 23	3 45	27	16 59	76				
19	108	54.8		07.7	126	41.5 ¹⁰²	-8 08.0 ¹³⁹	2 38	29	07	41	22	17 05	81				
20	123	54.7		08.4	141	10.7 ¹⁰²	21.8 ¹³⁸	23	19	4 00	40	20	08	83				
21	138	54.6		09.0	155	39.8 ¹⁰¹	35.6 ¹³⁸	2 05	3 07	3 52	38	18	11	86				
22	153	54.5		09.7	170	09.0 ¹⁰²	-8 49.4 ¹³⁸	1 42	2 54	42	36	15	15	89				
23	168	54.4		10.4	184	38.1 ¹⁰¹	-9 03.0 ¹³⁶	1 10	38	31	34	12	19	92				
24	183	54.3	-18	11.0	199	07.2 ¹⁰¹	-9 16.7 ¹³⁷	0 02	2 19	3 19	3 32	8	17 23	96				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 27 ^m 9		Mag: -3.9 PMG: 10 ^h 47 ^m				Mag: +0.2 PMG: 17 ^h 28 ^m				Mag: -2.6 PMG: 3 ^h 38 ^m				Mag: -0.3 PMG: 1 ^h 19 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	52	10.5	198	27.7	-12	07.3	97	51.1	-19	06.3	305	21.4	+22	26.0	340	14.5	+20	30.0
1	67	12.9	213	27.2		08.4	112	51.7		05.8	320	23.9		26.0	355	17.1		30.0
2	82	15.4	228	26.6		09.5	127	52.4		05.2	335	26.5		26.0	10	19.8		30.0
3	97	17.9	243	26.1		10.6	142	53.1		04.7	350	29.0		26.0	25	22.5		30.0
4	112	20.3	258	25.6		11.7	157	53.8		04.1	5	31.6		26.0	40	25.1		29.9
5	127	22.8	273	25.0	-12	12.7	172	54.5	-19	03.6	20	34.1	+22	26.1	55	27.8	+20	29.9
6	142	25.3	288	24.5	-12	13.8	187	55.2	-19	03.0	35	36.7	+22	26.1	70	30.4	+20	29.9
7	157	27.7	303	23.9		14.9	202	55.8		02.5	50	39.3		26.1	85	33.1		29.9
8	172	30.2	318	23.4		16.0	217	56.5		01.9	65	41.8		26.1	100	35.7		29.8
9	187	32.6	333	22.8		17.1	232	57.2		01.4	80	44.4		26.1	115	38.4		29.8
10	202	35.1	348	22.3		18.2	247	57.9		00.8	95	46.9		26.1	130	41.0		29.8
11	217	37.6	3	21.7	-12	19.2	262	58.6	-19	00.3	110	49.5	+22	26.1	145	43.7	+20	29.8
12	232	40.0	18	21.2	-12	20.3	277	59.3	-18	59.7	125	52.1	+22	26.2	160	46.4	+20	29.8
13	247	42.5	33	20.7		21.4	292	59.9		59.2	140	54.6		26.2	175	49.0		29.7
14	262	45.0	48	20.1		22.5	308	00.6		58.6	155	57.2		26.2	190	51.7		29.7
15	277	47.4	63	19.6		23.6	323	01.3		58.0	170	59.7		26.2	205	54.3		29.7
16	292	49.9	78	19.0		24.6	338	02.0		57.5	186	02.3		26.2	220	57.0		29.7
17	307	52.4	93	18.5	-12	25.7	353	02.7	-18	56.9	201	04.9	+22	26.2	235	59.6	+20	29.6
18	322	54.8	108	17.9	-12	26.8	8	03.4	-18	56.4	216	07.4	+22	26.3	251	02.3	+20	29.6
19	337	57.3	123	17.4		27.9	23	04.0		55.8	231	10.0		26.3	266	05.0		29.6
20	352	59.8	138	16.8		29.0	38	04.7		55.3	246	12.6		26.3	281	07.6		29.6
21	8	02.2	153	16.3		30.0	53	05.4		54.7	261	15.1		26.3	296	10.3		29.5
22	23	04.7	168	15.7		31.1	68	06.1		54.2	276	17.7		26.3	311	12.9		29.5
23	38	07.1	183	15.2		32.2	83	06.8		53.6	291	20.2		26.3	326	15.6		29.5
24	53	09.6	198	14.6	-12	33.3	98	07.5	-18	53.0	306	22.8	+22	26.3	341	18.2	+20	29.5
Dif	—		-5		-11		+7		+6		+26		0		+27			

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: 28 ^d 2 PHE { 4 ^h : 59:2 12 ^h : 59:0 20 ^h : 58:9 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			
0	183	54.3	-18	11.0	199	07.2	-9	16.7	60 N	15	33	16	21	17	13	6	14	96			
1	198	54.2		11.7	213	36.3 ¹⁰¹		30.2 ¹³⁵	58	44	29		17		07	92	50	17			
2	213	54.1		12.3	228	05.3 ¹⁰⁰		43.8 ¹³⁶	56	15	54	36	21	6	02	88	15	57	19		
3	228	54.0		13.0	242	34.3 ¹⁰⁰		-9 57.2 ¹³⁴	54	16	02	42	25	5	57	85	16	03	22		
4	243	53.9		13.6	257	03.3 ¹⁰⁰		-10 10.6 ¹³⁴	52	10		48	29	52	83	08	25				
5	258	53.8	-18	14.3	271	32.3 ¹⁰⁰		-10 23.9 ¹³³	50	16	17	16	53	17	32	5	48	80	16	13	27
6	273	53.7	-18	14.9	286	01.2 ⁹⁹		-10 37.2 ¹³³	45	16	32	17	04	17	39	5	39	75	16	24	31
7	288	53.6		15.6	300	30.1 ⁹⁹		-10 50.4 ¹³²	40		45	13	46	32	71		33	35			
8	303	53.5		16.2	314	59.0 ⁹⁹		-11 03.5 ¹³¹	35	16	55	22	52	25	68		40	39			
9	318	53.4		16.9	329	27.8 ⁹⁸		16.6 ¹³¹	30	17	04	30	17	59	20	65	47	41			
10	333	53.3		17.5	343	56.6 ⁹⁸		29.5 ¹²⁹	20		20	44	18	10	10	61	16	59	45		
11	348	53.2	-18	18.2	358	25.4 ⁹⁸		-11 42.5 ¹³⁰	10 N	17	35	17	57	18	22	5	02	56	17	09	49
12	3	53.1	-18	18.8	12	54.2 ⁹⁸		-11 55.3 ¹²⁸	0	17	48	18	10	18	35	4	54	52	17	19	53
13	18	53.0		19.5	27	22.9 ⁹⁷		-12 08.1 ¹²⁸	10 S	18	02	24	18	50		47	48		29	56	
14	33	52.9		20.1	41	51.6 ⁹⁷		20.7 ¹²⁶	20		16	40	19	07		39	44		39	60	
15	48	52.8		20.7	56	20.2 ⁹⁶		33.4 ¹²⁷	30		33	18	59		30	29	40		51	65	
16	63	52.7		21.4	70	48.9 ⁹⁷		45.9 ¹²⁵	35		43	19	11	19	45	24	37		17	58	68
17	78	52.6	-18	22.0	85	17.5 ⁹⁶		-12 58.3 ¹²⁴	40	18	54	19	25	20	02	4	18	33	18	06	71
18	93	52.5	-18	22.7	99	46.0 ⁹⁵		-13 10.7 ¹²⁴	45	19	07	19	41	20	24	4	12	29	18	15	75
19	108	52.4		23.3	114	14.5 ⁹⁵		23.0 ¹²³	50		24	20	03	20	55		03	25		26	80
20	123	52.3		24.0	128	43.0 ⁹⁵		35.2 ¹²²	52		32	13	21	10		4	00	22		31	82
21	138	52.2		24.6	143	11.5 ⁹⁵		47.3 ¹²¹	54		40	25	29			3	56	20		37	84
22	153	52.1		25.3	157	39.9 ⁹⁴		-13 59.4 ¹²¹	56	19	50	39	21	54		51	18		44	87	
23	168	52.0		25.9	172	08.3 ⁹⁴		-14 11.3 ¹¹⁹	58	20	01	20	56	22	29	46	14		51	90	
24	183	51.9	-18	26.5	186	36.7 ⁹⁴		-14 23.1 ¹¹⁸	60 S	20	14	21	16	** **		3	40	11	18	59	95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 20 ^h 24 ^m 0		Mag: -3.9 PMG: 10 ^h 47 ^m				Mag: +0.2 PMG: 17 ^h 27 ^m				Mag: -2.6 PMG: 3 ^h 34 ^m				Mag: -0.3 PMG: 1 ^h 15 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	53	09.6	198	14.6	-12	33.3	98	07.5	-18	53.0	306	22.8	+22	26.3	341	18.2	+20	29.5			
1	68	12.1	213	14.1		34.3	113	08.2		52.5	321	25.4		26.4	356	20.9		29.5			
2	83	14.5	228	13.5		35.4	128	08.8		51.9	336	27.9		26.4	11	23.6		29.4			
3	98	17.0	243	13.0		36.5	143	09.5		51.4	351	30.5		26.4	26	26.2		29.4			
4	113	19.5	258	12.4		37.6	158	10.2		50.8	6	33.1		26.4	41	28.9		29.4			
5	128	21.9	273	11.8	-12	38.6	173	10.9	-18	50.2	21	35.6	+22	26.4	56	31.5	+20	29.4			
6	143	24.4	288	11.3	-12	39.7	188	11.6	-18	49.7	36	38.2	+22	26.4	71	34.2	+20	29.3			
7	158	26.9	303	10.7		40.8	203	12.3		49.1	51	40.8		26.5	86	36.9		29.3			
8	173	29.3	318	10.2		41.9	218	12.9		48.6	66	43.4		26.5	101	39.5		29.3			
9	188	31.8	333	09.6		42.9	233	13.6		48.0	81	45.9		26.5	116	42.2		29.3			
10	203	34.3	348	09.1		44.0	248	14.3		47.4	96	48.5		26.5	131	44.8		29.2			
11	218	36.7	3	08.5	-12	45.1	263	15.0	-18	46.9	111	51.1	+22	26.5	146	47.5	+20	29.2			
12	233	39.2	18	08.0	-12	46.1	278	15.7	-18	46.3	126	53.6	+22	26.5	161	50.2	+20	29.2			
13	248	41.6	33	07.4		47.2	293	16.4		45.8	141	56.2		26.6	176	52.8		29.2			
14	263	44.1	48	06.8		48.3	308	17.1		45.2	156	58.8		26.6	191	55.5		29.2			
15	278	46.6	63	06.3		49.3	323	17.7		44.6	172	01.3		26.6	206	58.1		29.1			
16	293	49.0	78	05.7		50.4	338	18.4		44.1	187	03.9		26.6	222	00.8		29.1			
17	308	51.5	93	05.2	-12	51.5	353	19.1	-18	43.5	202	06.5	+22	26.6	237	03.5	+20	29.1			
18	323	54.0	108	04.6	-12	52.6	8	19.8	-18	42.9	217	09.1	+22	26.6	252	06.1	+20	29.1			
19	338	56.4	123	04.1		53.6	23	20.5		42.4	232	11.6		26.6	267	08.8		29.0			
20	353	58.9	138	03.5		54.7	38	21.2		41.8	247	14.2		26.7	282	11.4		29.0			
21	9	01.4	153	02.9		55.7	53	21.9		41.3	262	16.8		26.7	297	14.1		29.0			
22	24	03.8	168	02.4		56.8	68	22.5		40.7	277	19.3		26.7	312	16.8		29.0			
23	39	06.3	183	01.8		57.9	83	23.2		40.1	292	21.9		26.7	327	19.4		28.9			
24	54	08.7	198	01.2	-12	58.9	98	23.9	-18	39.6	307	24.5	+22	26.7	342	22.1	+20	28.9			
Dif	—		-6		-11		+7		+6		+26		0		+27						

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 29 ^d 2	PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'3	SD: 16'0	PMG: 11 ^h 59 ^m	R°: 54 ^m									
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	51.9	-18	26.5	186	36.7	-14	23.1	60 N	6 17	7 09	7 58	7 50	93	15 55	18	
1	198	51.8		27.2	201	05.0	93	34.9	58	13	7 01	47	39	89	16 07	22	
2	213	51.7		27.8	215	33.3	93	46.6	56	09	6 54	37	30	86	16	26	
3	228	51.6		28.5	230	01.6	93	58.2	54	05	48	28	22	83	25	28	
4	243	51.5		29.1	244	29.8	92	15 09.7	52	6 01	42	20	15	80	33	30	
5	258	51.4	-18	29.7	258	58.0	92	15 21.0	50	5 58	6 37	7 13	7 08	78	16 40	32	
6	273	51.3	-18	30.4	273	26.1	91	15 32.3	45	5 50	6 26	6 58	6 54	74	16 55	37	
7	288	51.2		31.0	287	54.3	92	43.5	40	43	16	45	43	70	17 08	39	
8	303	51.1		31.6	302	22.3	90	15 54.6	35	37	07	34	33	68	19	42	
9	318	51.0		32.3	316	50.4	91	16 05.6	30	31	6 00	25	25	65	28	44	
10	333	50.9		32.9	331	18.4	90	16.5	20	19	5 46	6 09	6 11	60	44	48	
11	348	50.8	-18	33.5	345	46.4	90	16 27.3	10 N	5 07	5 32	5 55	5 58	57	17 58	52	
12	3	50.6	-18	34.2	0	14.4	90	16 38.0	0	4 54	5 19	5 41	5 46	54	18 12	54	
13	18	50.5		34.8	14	42.3	89	48.6	10 S	39	5 05	27	35	50	25	57	
14	33	50.4		35.4	29	10.2	89	16 59.1	20	4 21	4 49	5 13	23	46	39	61	
15	48	50.3		36.1	43	38.0	88	17 09.5	30	3 59	30	4 56	09	42	18 56	64	
16	63	50.2		36.7	58	05.9	89	19.7	35	44	18	46	5 01	40	19 06	66	
17	78	50.1	-18	37.3	72	33.6	87	17 29.9	40	3 27	4 04	4 35	4 51	38	19 17	68	
18	93	50.0	-18	38.0	87	01.4	88	17 39.9	45	3 04	3 47	4 21	4 41	34	19 30	71	
19	108	49.9		38.6	101	29.1	87	49.9	50	2 34	26	4 05	28	29	46	75	
20	123	49.8		39.2	115	56.8	87	17 59.7	52	2 18	15	3 57	22	27	19 53	78	
21	138	49.7		39.9	130	24.5	87	18 09.4	54	1 59	3 03	48	16	25	20 01	80	
22	153	49.5		40.5	144	52.1	86	19.0	56	1 35	2 49	38	09	22	11	83	
23	168	49.4		41.1	159	19.7	86	28.5	58	0 59	33	27	4 00	19	21	87	
24	183	49.3	-18	41.7	173	47.3	86	18 37.9	60 S	** **	2 12	3 14	3 51	15	20 34	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 20 ^m 1		Mag: -3.9 PMG: 10 ^h 48 ^m		Mag: +0.2 PMG: 17 ^h 26 ^m		Mag: -2.6 PMG: 3 ^h 30 ^m		Mag: -0.3 PMG: 1 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	54	08.7	198	01.2	-12	58.9	98	23.9	-18	39.6
1	69	11.2	213	00.7	-13	00.0	113	24.6		39.0
2	84	13.7	228	00.1	-13	01.1	128	25.3		38.4
3	99	16.1	242	59.6		02.1	143	26.0		37.9
4	114	18.6	257	59.0		03.2	158	26.7		37.3
5	129	21.1	272	58.4	-13	04.2	173	27.3	-18	36.7
6	144	23.5	287	57.9	-13	05.3	188	28.0	-18	36.2
7	159	26.0	302	57.3		06.4	203	28.7		35.6
8	174	28.5	317	56.7		07.4	218	29.4		35.0
9	189	30.9	332	56.2		08.5	233	30.1		34.5
10	204	33.4	347	55.6		09.5	248	30.8		33.9
11	219	35.9	2	55.0	-13	10.6	263	31.5	-18	33.3
12	234	38.3	17	54.5	-13	11.7	278	32.1	-18	32.8
13	249	40.8	32	53.9		12.7	293	32.8		32.2
14	264	43.2	47	53.3		13.8	308	33.5		31.6
15	279	45.7	62	52.8		14.8	323	34.2		31.1
16	294	48.2	77	52.2		15.9	338	34.9		30.5
17	309	50.6	92	51.6	-13	16.9	353	35.6	-18	29.9
18	324	53.1	107	51.1	-13	18.0	8	36.3	-18	29.4
19	339	55.6	122	50.5		19.0	23	37.0		28.8
20	354	58.0	137	49.9		20.1	38	37.6		28.2
21	10	00.5	152	49.3		21.1	53	38.3		27.6
22	25	03.0	167	48.8		22.2	68	39.0		27.1
23	40	05.4	182	48.2		23.2	83	39.7		26.5
24	55	07.9	197	47.6	-13	24.3	98	40.4	-18	25.9
Dif	—		-6		-11		+7		+6	
							+26		0	
									+27	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 44 ^m 8			Edad: 30 ^d 2 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 6 R°: 55 ^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	49.3	-18	41.7	173	47.3	-18	37.9	60 N	15 28	16 18	17 10	9 23 86	16 13 27		
1	198	49.2		42.4	188	14.9		47.1	58	40	26	14	9 08 82	29 31		
2	213	49.1		43.0	202	42.4		56.3	56	50	33	19	8 56 79	42 34		
3	228	49.0		43.6	217	09.9		55.3	54	15 59	39	23	45 76	16 53 36		
4	243	48.9		44.2	231	37.3		14.2	52	16 07	45	26	35 74	17 03 38		
5	258	48.7	-18	44.9	246	04.8		23.0	50	16 15	16 50	17 30	8 26 73	17 12 40		
6	273	48.6	-18	45.5	260	32.2		31.7	45	16 30	17 02	17 38	8 08 69	17 32 42		
7	288	48.5		46.1	274	59.5		40.2	40	43	12	45	7 53 67	17 47 45		
8	303	48.4		46.7	289	26.9		48.6	35	16 54	21	51	41 64	18 01 47		
9	318	48.3		47.4	303	54.2		56.9	30	17 03	29	17 58	30 62	12 49		
10	333	48.2		48.0	318	21.5		05.1	20	20	43	18 10	7 11 60	32 51		
11	348	48.1	-18	48.6	332	48.8		13.1	10 N	17 35	17 57	18 22	6 55 57	18 50 53		
12	3	47.9	-18	49.2	347	16.1		21.1	0	17 48	18 10	18 36	6 40 54	19 06 55		
13	18	47.8		49.8	1	43.3		28.9	10 S	18 02	25	18 51	25 52	22 57		
14	33	47.7		50.5	16	10.5		36.5	20	17	18 41	19 09	6 09 50	19 40 58		
15	48	47.6		51.1	30	37.7		44.1	30	35	19 01	32	5 51 46	20 00 61		
16	63	47.5		51.7	45	04.9		51.5	35	45	13	19 47	41 44	12 62		
17	78	47.3	-18	52.3	59	32.1		58.8	40	18 56	19 27	20 05	5 29 42	20 25 64		
18	93	47.2	-18	52.9	73	59.2		05.9	45	19 10	19 45	20 28	5 15 39	20 41 67		
19	108	47.1		53.5	88	26.3		13.0	50	27	20 07	20 59	4 57 36	21 01 69		
20	123	47.0		54.2	102	53.4		19.9	52	35	18	21 16	49 34	11 70		
21	138	46.9		54.8	117	20.5		26.6	54	44	30	21 36	41 31	21 72		
22	153	46.7		55.4	131	47.6		33.3	56	19 54	20 44	22 02	31 29	34 73		
23	168	46.6		56.0	146	14.6		39.8	58	20 06	21 02	22 43	19 27	21 48 76		
24	183	46.5	-18	56.6	160	41.7		46.2	60 S	20 19	21 23	** **	4 06 23	22 04 80		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 16 ^m 1		Mag: -3.9 PMG: 10 ^h 49 ^m		Mag: +0.2 PMG: 17 ^h 25 ^m		Mag: -2.6 PMG: 3 ^h 26 ^m		Mag: -0.4 PMG: 1 ^h 06 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	55	07.9	197	47.6	98	40.4	-18	25.9	308	26.4	+22	27.1	343	25.9	+20	28.4
1	70	10.4	212	47.0		25.3		25.4	323	29.0		27.2	358	28.6		28.3
2	85	12.8	227	46.5		26.4		24.8	338	31.5		27.2	13	31.3		28.3
3	100	15.3	242	45.9		27.4		24.2	353	34.1		27.2	28	33.9		28.3
4	115	17.7	257	45.3		28.5		23.6	8	36.7		27.2	43	36.6		28.3
5	130	20.2	272	44.7	-13	29.5		23.1	23	39.3	+22	27.2	58	39.3	+20	28.3
6	145	22.7	287	44.2	-13	30.6		22.5	38	41.9	+22	27.2	73	41.9	+20	28.2
7	160	25.1	302	43.6		31.6		21.9	53	44.5		27.3	88	44.6		28.2
8	175	27.6	317	43.0		32.7		21.4	68	47.1		27.3	103	47.2		28.2
9	190	30.1	332	42.4		33.7		20.8	83	49.6		27.3	118	49.9		28.2
10	205	32.5	347	41.9		34.8		20.2	98	52.2		27.3	133	52.6		28.1
11	220	35.0	2	41.3	-13	35.8		19.6	113	54.8	+22	27.3	148	55.2	+20	28.1
12	235	37.5	17	40.7	-13	36.8		19.1	128	57.4	+22	27.4	163	57.9	+20	28.1
13	250	39.9	32	40.1		37.9		18.5	144	00.0		27.4	179	00.6		28.1
14	265	42.4	47	39.5		38.9		17.9	159	02.6		27.4	194	03.2		28.0
15	280	44.9	62	39.0		40.0		17.3	174	05.2		27.4	209	05.9		28.0
16	295	47.3	77	38.4		41.0		16.8	189	07.8		27.4	224	08.6		28.0
17	310	49.8	92	37.8	-13	42.1		16.2	204	10.3	+22	27.4	239	11.2	+20	28.0
18	325	52.2	107	37.2	-13	43.1		15.6	219	12.9	+22	27.5	254	13.9	+20	27.9
19	340	54.7	122	36.6		44.1		15.0	234	15.5		27.5	269	16.6		27.9
20	355	57.2	137	36.1		45.2		14.4	249	18.1		27.5	284	19.2		27.9
21	10	59.6	152	35.5		46.2		13.9	264	20.7		27.5	299	21.9		27.9
22	26	02.1	167	34.9		47.2		13.3	279	23.3		27.5	314	24.5		27.9
23	41	04.6	182	34.3		48.3		12.7	294	25.9		27.6	329	27.2		27.8
24	56	07.0	197	33.7	-13	49.3		12.1	309	28.5	+22	27.6	344	29.9	+20	27.8
Dif	—		-6		-10		+7		+26		0		+27			

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: 1 ^d 7 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/8 PMG: 13 ^h 48 ^m 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	183	46.5	-18	56.6	160	41.7	-21	46.2	60 N	6	21	7	13	8	03	10	49	72
1	198	46.4		57.2	175	08.7	80	52.4	58	16	7	05	7	51	30	70	17	00
2	213	46.3		57.8	189	35.7	80	58.5	61	12	6	58		41	15	67		16
3	228	46.1		58.4	204	02.8	81	04.5	54	08		51		31	10	01	66	29
4	243	46.0		59.1	218	29.8	80	10.3	52	04		46		23	9	49	65	41
5	258	45.9	-18	59.7	232	56.8	80	16.0	50	6	01	6	40	7	16	9	39	64
6	273	45.8	-19	00.3	247	23.7	79	21.6	45	5	53	6	28	7	00	9	17	62
7	288	45.6		00.9	261	50.7	80	27.0	40	45		18		6	47	9	00	61
8	303	45.5		01.5	276	17.7	80	32.3	35	39		09		36	8	45	60	18
9	318	45.4		02.1	290	44.7	80	37.5	30	32		6	01	27		32	59	19
10	333	45.3		02.7	305	11.6	79	42.5	20	20		5	47	6	10	8	11	57
11	348	45.1	-19	03.3	319	38.6	80	47.4	10 N	5	08	5	33	5	55	7	52	56
12	3	45.0	-19	03.9	334	05.6	80	52.2	0	4	54	5	20	5	41	7	34	55
13	18	44.9		04.5	348	32.5	79	56.8	10 S	39		5	05		27	7	17	53
14	33	44.8		05.1	2	59.5	80	01.3	20	4	21	4	49	5	12	6	59	52
15	48	44.6		05.7	17	26.5	80	05.7	30	3	57	29		4	55	37	51	21
16	63	44.5		06.3	31	53.5	80	09.9	42	35	42		17		45	25	49	14
17	78	44.4	-19	06.9	46	20.4	79	13.9	40	40	3	24	4	02	4	33	6	11
18	93	44.3	-19	07.5	60	47.4	80	17.9	40	45	3	01	3	45	4	19	5	54
19	108	44.1		08.2	75	14.4	80	21.7	38	50	2	30	23		4	02	33	44
20	123	44.0		08.8	89	41.4	80	25.3	36	52	2	14	3	12	3	54	23	43
21	138	43.9		09.4	104	08.4	80	28.9	36	54	1	53	2	59		45	12	42
22	153	43.7		10.0	118	35.4	80	32.3	34	56	1	27		45	35		5	00
23	168	43.6		10.6	133	02.5	81	35.5	32	58	0	46		28	23		4	46
24	183	43.5	-19	11.2	147	29.5	80	38.6	31	60 S	** **	2	06	3	10	4	29	34

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 12 ^m 2		Mag: -3.9 PMG: 10 ^h 50 ^m			Mag: +0.3 PMG: 17 ^h 23 ^m			Mag: -2.6 PMG: 3 ^h 22 ^m			Mag: -0.4 PMG: 1 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	56	07.0	197	33.7	-13	49.3	98	56.9	-18	12.1	309	28.5	+22	27.6
1	71	09.5	212	33.1		50.4	113	57.6		11.6	324	31.1		27.6
2	86	12.0	227	32.6		51.4	128	58.3		11.0	339	33.7		27.6
3	101	14.4	242	32.0		52.4	143	59.0		10.4	354	36.3		27.6
4	116	16.9	257	31.4		53.5	158	59.7		09.8	9	38.9		27.6
5	131	19.3	272	30.8	-13	54.5	174	00.3	-18	09.2	24	41.4	+22	27.7
6	146	21.8	287	30.2	-13	55.5	189	01.0	-18	08.7	39	44.0	+22	27.7
7	161	24.3	302	29.6		56.6	204	01.7		08.1	54	46.6		27.7
8	176	26.7	317	29.0		57.6	219	02.4		07.5	69	49.2		27.7
9	191	29.2	332	28.5		58.6	234	03.1		06.9	84	51.8		27.7
10	206	31.7	347	27.9	-13	59.6	249	03.8		06.3	99	54.4		27.8
11	221	34.1	2	27.3	-14	00.7	264	04.5	-18	05.8	114	57.0	+22	27.8
12	236	36.6	17	26.7	-14	01.7	279	05.2	-18	05.2	129	59.6	+22	27.8
13	251	39.1	32	26.1		02.7	294	05.9		04.6	145	02.2		27.8
14	266	41.5	47	25.5		03.8	309	06.6		04.0	160	04.8		27.8
15	281	44.0	62	24.9		04.8	324	07.2		03.4	175	07.4		27.8
16	296	46.5	77	24.3		05.8	339	07.9		02.9	190	10.0		27.9
17	311	48.9	92	23.7	-14	06.8	354	08.6	-18	02.3	205	12.6	+22	27.9
18	326	51.4	107	23.1	-14	07.9	9	09.3	-18	01.7	220	15.2	+22	27.9
19	341	53.8	122	22.5		08.9	24	10.0		01.1	235	17.8		27.9
20	356	56.3	137	21.9		09.9	39	10.7	-18	00.5	250	20.4		27.9
21	11	58.8	152	21.4		10.9	54	11.4	-17	59.9	265	23.0		28.0
22	27	01.2	167	20.8		12.0	69	12.1		59.4	280	25.6		28.0
23	42	03.7	182	20.2		13.0	84	12.8		58.8	295	28.2		28.0
24	57	06.2	197	19.6	-14	14.0	99	13.5	-17	58.2	310	30.8	+22	28.0

Dif	—	-6	-10	+7	+6	+26	0	+27

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: 2 ^d 7 PHE { SD: 15/4 PMG: 14 ^h 42 ^m 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/1 R°: 54 ^m														
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	43.5	-19	11.2	147	29.5	-23	38.6	60 N	15	24	16	14	17	07	12	01	52	17 22 59
1	198	43.4		11.7	161	56.6		41.6	58	37	23	12			11	40	52	17 44 57	
2	213	43.2		12.3	176	23.7		44.4	56	47	30	16			22	53		18 01 58	
3	228	43.1		12.9	190	50.7		47.1	54	15	56	37	20		11	07	53	16 57	
4	243	43.0		13.5	205	17.8		49.7	52	16	05	43	24		10	54	54	29 57	
5	258	42.8	-19	14.1	219	45.0	-23	52.1	50	16	12	16	48	17	28	10	43	53	18 40 57
6	273	42.7	-19	14.7	234	12.1	-23	54.4	45	16	28	17	00	17	36	10	19	54	19 04 56
7	288	42.6		15.3	248	39.3		56.6	40	42	11	44			10	01	53	23 55	
8	303	42.4		15.9	263	06.5	-23	58.6	35	16	53	20	51		9	45	54	39 55	
9	318	42.3		16.5	277	33.7	-24	00.5	30	17	03	28	17	57		31	54	19 53 54	
10	333	42.2		17.1	292	00.9		02.2	20	20	43	18	10		9	08	54	20 16 54	
11	348	42.0	-19	17.7	306	28.2	-24	03.8	10 N	17	35	17	57	18	23	8	48	54	20 36 54
12	3	41.9	-19	18.3	320	55.5	-24	05.3	0	17	49	18	11	18	36	8	29	54	20 55 53
13	18	41.8		18.9	335	22.8		06.7	10 S	18	03	25	18	52		8	10	54	21 14 52
14	33	41.6		19.5	349	50.1		07.9	20	18	18	42	19	10		7	51	53	34 52
15	48	41.5		20.1	4	17.5		08.9	30	36	19	03	34		28	53		21 58 50	
16	63	41.4		20.7	18	44.9		09.9	35	47	15	19	49		7	14	53	22 11 51	
17	78	41.2	-19	21.2	33	12.3	-24	10.7	40	18	59	19	30	20	08	6	59	53	22 27 50
18	93	41.1	-19	21.8	47	39.8	-24	11.3	45	19	13	19	48	20	32	6	40	53	22 46 49
19	108	41.0		22.4	62	07.3		11.9	50	31	20	10	21	04		17	52		23 09 48
20	123	40.8		23.0	76	34.8		12.3	52	39	22	21			6	06	52		20 48
21	138	40.7		23.6	91	02.4		12.5	54	48	34	21	42		5	54	52		33 47
22	153	40.5		24.2	105	30.0		12.7	56	19	59	20	50	22	11	39	52		23 48 46
23	168	40.4		24.8	119	57.7		12.7	58	20	11	21	08	22	59	23	51		** * *
24	183	40.3	-19	25.3	134	25.4	-24	12.5	60 S	20	25	21	30	** *		5	03	50	** * *
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 20 ^h 08 ^m 3		Mag: -3.9 PMG: 10 ^h 51 ^m				Mag: +0.3 PMG: 17 ^h 22 ^m				Mag: -2.6 PMG: 3 ^h 17 ^m				Mag: -0.4 PMG: 0 ^h 58 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	57	06.2	197	19.6	-14	14.0	99	13.5	-17	58.2	310	30.8	+22	28.0	345	33.8	+20	27.2	
1	72	08.6	212	19.0		15.0	114	14.1		57.6	325	33.4		28.0	0	36.5		27.2	
2	87	11.1	227	18.4		16.0	129	14.8		57.0	340	36.0		28.1	15	39.2		27.2	
3	102	13.6	242	17.8		17.1	144	15.5		56.4	355	38.6		28.1	30	41.8		27.2	
4	117	16.0	257	17.2		18.1	159	16.2		55.8	10	41.2		28.1	45	44.5		27.2	
5	132	18.5	272	16.6	-14	19.1	174	16.9	-17	55.3	25	43.8	+22	28.1	60	47.2	+20	27.1	
6	147	21.0	287	16.0	-14	20.1	189	17.6	-17	54.7	40	46.4	+22	28.1	75	49.8	+20	27.1	
7	162	23.4	302	15.4		21.1	204	18.3		54.1	55	49.0		28.2	90	52.5		27.1	
8	177	25.9	317	14.8		22.1	219	19.0		53.5	70	51.6		28.2	105	55.2		27.1	
9	192	28.3	332	14.2		23.2	234	19.7		52.9	85	54.2		28.2	120	57.9		27.0	
10	207	30.8	347	13.6		24.2	249	20.4		52.3	100	56.8		28.2	136	00.5		27.0	
11	222	33.3	2	13.0	-14	25.2	264	21.1	-17	51.7	115	59.4	+22	28.2	151	03.2	+20	27.0	
12	237	35.7	17	12.4	-14	26.2	279	21.7	-17	51.2	131	02.0	+22	28.3	166	05.9	+20	27.0	
13	252	38.2	32	11.8		27.2	294	22.4		50.6	146	04.6		28.3	181	08.5		26.9	
14	267	40.7	47	11.2		28.2	309	23.1		50.0	161	07.2		28.3	196	11.2		26.9	
15	282	43.1	62	10.6		29.2	324	23.8		49.4	176	09.8		28.3	211	13.9		26.9	
16	297	45.6	77	10.0		30.3	339	24.5		48.8	191	12.4		28.3	226	16.5		26.9	
17	312	48.1	92	09.4	-14	31.3	354	25.2	-17	48.2	206	15.1	+22	28.4	241	19.2	+20	26.8	
18	327	50.5	107	08.8	-14	32.3	9	25.9	-17	47.6	221	17.7	+22	28.4	256	21.9	+20	26.8	
19	342	53.0	122	08.2		33.3	24	26.6		47.0	236	20.3		28.4	271	24.5		26.8	
20	357	55.5	137	07.6		34.3	39	27.3		46.4	251	22.9		28.4	286	27.2		26.8	
21	12	57.9	152	07.0		35.3	54	28.0		45.9	266	25.5		28.4	301	29.9		26.7	
22	28	00.4	167	06.3		36.3	69	28.7		45.3	281	28.1		28.5	316	32.5		26.7	
23	43	02.8	182	05.7		37.3	84	29.4		44.7	296	30.7		28.5	331	35.2		26.7	
24	58	05.3	197	05.1	-14	38.3	99	30.0	-17	44.1	311	33.3	+22	28.5	346	37.9	+20	26.7	
Dif	—		-6		-10		+7		+6		+26		0		+27		0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 45 ^m 4			Edad: 3 ^d 7 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	183	40.3	-19	25.3	134	25.4	-24	12.5	60 N	6 25	7 18	8 08	12 53	34	18 21 71			
1	198	40.1		25.9	148	53.1		12.3	58	20	09	7 55	32 37		41 69			
2	213	40.0		26.5	163	20.9		11.9	56	15	7 02	45	15 39		18 59 66			
3	228	39.8		27.1	177	48.7		11.4	54	11	6 55	35	12 00	41	19 13 65			
4	243	39.7		27.7	192	16.5		10.7	52	07	49	27	11 48	41	26 63			
5	258	39.6	-19	28.3	206	44.5	-24	09.9	50	6 03	6 43	7 19	11 36	43	19 37 62			
6	273	39.4	-19	28.8	221	12.4	-24	09.0	45	5 55	6 31	7 03	11 13	44	20 00 60			
7	288	39.3		29.4	235	40.4		08.0	40	47	20	6 50	10 54	46	18 58			
8	303	39.1		30.0	250	08.4		06.8	35	40	11	38	39 46		34 57			
9	318	39.0		30.6	264	36.5		05.5	30	34	6 03	28	25 48		20 47 56			
10	333	38.9		31.2	279	04.7		04.1	20	21	5 48	6 11	10 02	49	21 10 54			
11	348	38.7	-19	31.7	293	32.8	-24	02.6	10 N	5 08	5 34	5 56	9 42	50	21 30 52			
12	3	38.6	-19	32.3	308	01.1	-24	00.9	0	4 54	5 20	5 42	9 23	51	21 48 50			
13	18	38.4		32.9	322	29.4	-23	59.1	10 S	39	5 05	27	9 04	53	22 06 49			
14	33	38.3		33.5	336	57.7		57.2	20	4 20	4 48	5 12	8 44	54	26 47			
15	48	38.1		34.0	351	26.1		55.2	30	3 56	28	4 54	21 55		22 48 45			
16	63	38.0		34.6	5	54.6		53.0	35	41	15	44	8 07	56	23 02 43			
17	78	37.9	-19	35.2	20	23.1	-23	50.7	40	3 22	4 01	4 31	7 52	56	23 17 42			
18	93	37.7	-19	35.8	34	51.6	-23	48.3	45	2 59	3 43	4 17	7 33	58	23 35 40			
19	108	37.6		36.3	49	20.2		45.8	50	26	20	4 00	7 09	60	23 57 38			
20	123	37.4		36.9	63	48.9		43.1	52	2 09	3 09	3 51	6 58	60	** ** *			
21	138	37.3		37.5	78	17.6		40.4	54	1 48	2 56	42	46 61		** ** *			
22	153	37.1		38.0	92	46.4		37.5	56	1 19	41	32	31 62		** ** *			
23	168	37.0		38.6	107	15.2		34.5	58	0 31	22	19	6 14	63	0 05 45			
24	183	36.8	-19	39.2	121	44.1	-23	31.4	60 S	** **	2 00	3 05	5 53	65	0 26 43			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 04 ^m 3		Mag: -3.9 PMG: 10 ^h 52 ^m		Mag: +0.3 PMG: 17 ^h 21 ^m		Mag: -2.6 PMG: 3 ^h 13 ^m		Mag: -0.4 PMG: 0 ^h 53 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	58	05.3	197	05.1	-14	38.3	99	30.0	-17	44.1	311	33.3	+22	28.5	346	37.9	+20	26.7
1	73	07.8	212	04.5		39.3	114	30.7		43.5	326	35.9		28.5	1	40.5		26.7
2	88	10.2	227	03.9		40.3	129	31.4		42.9	341	38.5		28.5	16	43.2		26.6
3	103	12.7	242	03.3		41.3	144	32.1		42.3	356	41.1		28.6	31	45.9		26.6
4	118	15.2	257	02.7		42.3	159	32.8		41.7	11	43.8		28.6	46	48.5		26.6
5	133	17.6	272	02.1	-14	43.4	174	33.5	-17	41.1	26	46.4	+22	28.6	61	51.2	+20	26.6
6	148	20.1	287	01.5	-14	44.4	189	34.2	-17	40.5	41	49.0	+22	28.6	76	53.9	+20	26.5
7	163	22.6	302	00.9		45.4	204	34.9		39.9	56	51.6		28.6	91	56.5		26.5
8	178	25.0	317	00.3		46.4	219	35.6		39.3	71	54.2		28.7	106	59.2		26.5
9	193	27.5	331	59.6		47.4	234	36.3		38.8	86	56.8		28.7	122	01.9		26.5
10	208	30.0	346	59.0		48.4	249	37.0		38.2	101	59.4		28.7	137	04.6		26.4
11	223	32.4	1	58.4	-14	49.4	264	37.7	-17	37.6	117	02.0	+22	28.7	152	07.2	+20	26.4
12	238	34.9	16	57.8	-14	50.4	279	38.4	-17	37.0	132	04.6	+22	28.7	167	09.9	+20	26.4
13	253	37.3	31	57.2		51.4	294	39.1		36.4	147	07.3		28.8	182	12.6		26.4
14	268	39.8	46	56.6		52.4	309	39.7		35.8	162	09.9		28.8	197	15.2		26.3
15	283	42.3	61	56.0		53.4	324	40.4		35.2	177	12.5		28.8	212	17.9		26.3
16	298	44.7	76	55.4		54.3	339	41.1		34.6	192	15.1		28.8	227	20.6		26.3
17	313	47.2	91	54.7	-14	55.3	354	41.8	-17	34.0	207	17.7	+22	28.8	242	23.2	+20	26.3
18	328	49.7	106	54.1	-14	56.3	9	42.5	-17	33.4	222	20.3	+22	28.9	257	25.9	+20	26.3
19	343	52.1	121	53.5		57.3	24	43.2		32.8	237	23.0		28.9	272	28.6		26.2
20	358	54.6	136	52.9		58.3	39	43.9		32.2	252	25.6		28.9	287	31.3		26.2
21	13	57.1	151	52.3	-14	59.3	54	44.6		31.6	267	28.2		28.9	302	33.9		26.2
22	28	59.5	166	51.7	-15	00.3	69	45.3		31.0	282	30.8		29.0	317	36.6		26.2
23	44	02.0	181	51.0		01.3	84	46.0		30.4	297	33.4		29.0	332	39.3		26.1
24	59	04.5	196	50.4	-15	02.3	99	46.7	-17	29.8	312	36.0	+22	29.0	347	41.9	+20	26.1
Dif	—		-6		-10		+7		+6		+26		0		+27			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2		Edad: 4 ^d 7	PHE	SD: 15:1	R ^o : 48 ^m			Civil		Náutico	Hora	R ^o	Hora	R ^o
	hG ☉	Dec							hG ☾	Dif					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	36.8	-19	39.2	121	44.1	-23	31.4	60 N	15 20	16 11	17 04	13 27 21	19 32 78	
1	198	36.7		39.8	136	13.1 ¹⁰⁰		28.1 ³³	58	33	20	09	13 09 25	19 50 74	
2	213	36.5		40.3	150	42.1 ¹⁰⁰		24.8 ³³	56	44	27	14	12 54 27	20 05 71	
3	228	36.4		40.9	165	11.2 ¹⁰¹		21.3 ³⁵	54	15 54	34	18	41 30	18 69	
4	243	36.3		41.5	179	40.4 ¹⁰²		17.7 ³⁶	52	16 02	41	22	29 32	29 67	
5	258	36.1	-19	42.0	194	09.6 ¹⁰²	-23	14.0 ³⁷	50	16 10	16 46	17 26	12 19 33	20 39 65	
6	273	36.0	-19	42.6	208	38.8 ¹⁰²	-23	10.2 ³⁸	45	16 27	16 59	17 35	11 57 37	21 00 62	
7	288	35.8		43.2	223	08.1 ¹⁰³		06.3 ³⁹	40	40	17 10	43	40 39	16 60	
8	303	35.7		43.7	237	37.5 ¹⁰⁴	-23	02.3 ⁴⁰	35	16 52	19	50	25 41	31 57	
9	318	35.5		44.3	252	07.0 ¹⁰⁵	-22	58.1 ⁴²	30	17 02	27	17 57	11 13 42	21 43 55	
10	333	35.4		44.8	266	36.5 ¹⁰⁵		53.9 ⁴²	20	19	43	18 10	10 51 45	22 04 52	
11	348	35.2	-19	45.4	281	06.1 ¹⁰⁶	-22	49.5 ⁴⁴	10 N	17 35	17 57	18 23	10 32 47	22 22 50	
12	3	35.1	-19	46.0	295	35.7 ¹⁰⁶	-22	45.1 ⁴⁴	0	17 49	18 11	18 37	10 14 49	22 38 48	
13	18	34.9		46.5	310	05.4 ¹⁰⁷		40.5 ⁴⁶	10 S	18 04	26	18 53	9 57 51	22 55 45	
14	33	34.8		47.1	324	35.2 ¹⁰⁸		35.8 ⁴⁷	20	20	18 44	19 12	38 53	23 13 43	
15	48	34.6		47.7	339	05.1 ¹⁰⁹		31.0 ⁴⁸	30	38	19 04	36	16 56	33 40	
16	63	34.4		48.2	353	35.0 ¹⁰⁹		26.1 ⁴⁹	35	18 49	17	19 52	9 03 57	45 38	
17	78	34.3	-19	48.8	8	04.9 ¹⁰⁹	-22	21.1 ⁵⁰	40	19 01	19 32	20 11	8 48 59	23 59 36	
18	93	34.1	-19	49.3	22	35.0 ¹¹¹	-22	16.0 ⁵¹	45	19 16	19 51	20 35	8 31 61	** ** *	
19	108	34.0		49.9	37	05.1 ¹¹¹		10.8 ⁵²	50	34	20 14	21 09	8 09 64	** ** *	
20	123	33.8		50.4	51	35.2 ¹¹¹		05.5 ⁵³	52	42	26	27	7 58 66	0 08 36	
21	138	33.7		51.0	66	05.5 ¹¹³	-22	00.1 ⁵⁴	54	19 52	39	21 49	47 67	20 35	
22	153	33.5		51.6	80	35.8 ¹¹³	-21	54.6 ⁵⁵	56	20 03	20 55	22 20	33 69	34 33	
23	168	33.4		52.1	95	06.2 ¹¹⁴		49.0 ⁵⁶	58	15	21 14	23 24	7 17 72	0 50 30	
24	183	33.2	-19	52.7	109	36.6 ¹¹⁴	-21	43.3 ⁵⁷	60 S	20 30	21 38	** **	6 58 75	1 09 27	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 00 ^m 4		Mag: -3.9 PMG: 10 ^h 53 ^m		Mag: +0.3 PMG: 17 ^h 20 ^m		Mag: -2.6 PMG: 3 ^h 09 ^m		Mag: -0.4 PMG: 0 ^h 49 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	59	04.5	196	50.4	-15	02.3	99	46.7	-17	29.8					
1	74	06.9	211	49.8		03.3	114	47.4		29.2					
2	89	09.4	226	49.2		04.3	129	48.1		28.6					
3	104	11.8	241	48.6		05.3	144	48.8		28.0					
4	119	14.3	256	47.9		06.2	159	49.5		27.4					
5	134	16.8	271	47.3	-15	07.2	174	50.2	-17	26.8					
6	149	19.2	286	46.7	-15	08.2	189	50.8	-17	26.2					
7	164	21.7	301	46.1		09.2	204	51.5		25.6					
8	179	24.2	316	45.5		10.2	219	52.2		25.0					
9	194	26.6	331	44.8		11.2	234	52.9		24.4					
10	209	29.1	346	44.2		12.2	249	53.6		23.8					
11	224	31.6	1	43.6	-15	13.1	264	54.3	-17	23.2					
12	239	34.0	16	43.0	-15	14.1	279	55.0	-17	22.6					
13	254	36.5	31	42.3		15.1	294	55.7		22.0					
14	269	38.9	46	41.7		16.1	309	56.4		21.4					
15	284	41.4	61	41.1		17.1	324	57.1		20.8					
16	299	43.9	76	40.5		18.1	339	57.8		20.2					
17	314	46.3	91	39.8	-15	19.0	354	58.5	-17	19.6					
18	329	48.8	106	39.2	-15	20.0	9	59.2	-17	19.0					
19	344	51.3	121	38.6		21.0	24	59.9		18.4					
20	359	53.7	136	37.9		22.0	40	00.6		17.8					
21	14	56.2	151	37.3		22.9	55	01.3		17.2					
22	29	58.7	166	36.7		23.9	70	02.0		16.6					
23	45	01.1	181	36.1		24.9	85	02.7		16.0					
24	60	03.6	196	35.4	-15	25.9	100	03.4	-17	15.4					
Dif	—		-6		-10		+7		+6						
							+26		0						
									+27						
									0						

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: 5 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5 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	183	33.2	-19	52.7	109	36.6	-21	43.3	60 N	6 29	7 22	8 13	13 48	14	20 50	80		
1	198	33.1		53.2	124	07.1 ¹¹⁵		37.5 ⁵⁸	58	23	13	8 00	34 17		21 04	76		
2	213	32.9		53.8	138	37.7 ¹¹⁶		31.6 ⁵⁹	56	19	7 05	7 49	21 21		16 73			
3	228	32.7		54.3	153	08.3 ¹¹⁶		25.6 ⁶⁰	54	14	6 58	39	11 22		27 70			
4	243	32.6		54.9	167	39.0 ¹¹⁷		19.5 ⁶¹	52	10	52	30	13 01	25	36 68			
5	258	32.4	-19	55.4	182	09.8 ¹¹⁸	-21	13.3 ⁶²	50	6 06	6 46	7 22	12 52	27	21 44	66		
6	273	32.3	-19	56.0	196	40.6 ¹¹⁸	-21	07.0 ⁶³	45	5 57	6 33	7 06	12 34	30	22 02	62		
7	288	32.1		56.5	211	11.5 ¹¹⁹	-21	00.6 ⁶⁴	40	49	22	6 52	19 33		16 59			
8	303	32.0		57.1	225	42.5 ¹²⁰	-20	54.2 ⁶⁴	35	42	13	40	12 06	35	28 57			
9	318	31.8		57.6	240	13.5 ¹²⁰		47.6 ⁶⁶	30	35	6 04	30	11 55	37	38 55			
10	333	31.6		58.2	254	44.6 ¹²¹		41.0 ⁶⁶	20	22	5 49	6 12	36 41		22 56	51		
11	348	31.5	-19	58.7	269	15.8 ¹²²	-20	34.2 ⁶⁸	10 N	5 09	5 35	5 57	11 19	44	23 12	48		
12	3	31.3	-19	59.3	283	47.0 ¹²²	-20	27.4 ⁶⁸	0	4 55	5 20	5 42	11 03	47	23 26	45		
13	18	31.2	-19	59.8	298	18.3 ¹²³		20.5 ⁶⁹	10 S	39	5 05	5 28	10 48	49	40 43			
14	33	31.0	-20	00.4	312	49.7 ¹²⁴		13.5 ⁷⁰	20	4 20	4 48	5 12	31 52		23 56	39		
15	48	30.9		00.9	327	21.1 ¹²⁴	-20	06.4 ⁷¹	30	3 55	27	4 53	12 55		*** **	***		
16	63	30.7		01.5	341	52.6 ¹²⁵	-19	59.2 ⁷²	35	40	4 14	43	10 00	57	*** **	***		
17	78	30.5	-20	02.0	356	24.1 ¹²⁵	-19	51.9 ⁷³	40	3 20	3 59	4 30	9 47	60	*** **	***		
18	93	30.4	-20	02.5	10	55.8 ¹²⁷	-19	44.6 ⁷³	45	2 56	3 41	4 15	9 32	62	0 15	33		
19	108	30.2		03.1	25	27.5 ¹²⁷		37.2 ⁷⁴	50	22	17	3 57	13 66		35 30			
20	123	30.0		03.6	39	59.2 ¹²⁷		29.7 ⁷⁵	52	2 05	3 05	49	9 04	67	44 29			
21	138	29.9		04.2	54	31.0 ¹²⁸		22.1 ⁷⁶	54	1 42	2 52	39	8 54	69	0 55	26		
22	153	29.7		04.7	69	02.9 ¹²⁹		14.4 ⁷⁷	56	1 11	36	28	42 72		1 07	24		
23	168	29.6		05.2	83	34.9 ¹³⁰	-19	06.6 ⁷⁸	58	0 07	2 17	16	29 75		20 21			
24	183	29.4	-20	05.8	98	06.9 ¹³⁰	-18	58.8 ⁷⁸	60 S	** **	1 53	3 01	8 13	79	1 36	18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 56 ^m 5		Mag: -3.9 PMG: 10 ^h 54 ^m		Mag: +0.3 PMG: 17 ^h 19 ^m		Mag: -2.6 PMG: 3 ^h 05 ^m		Mag: -0.4 PMG: 0 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	60	03.6	196	35.4	-15	25.9	100	03.4	-17	15.4
1	75	06.1	211	34.8		26.8	115	04.1		14.8
2	90	08.5	226	34.2		27.8	130	04.8		14.2
3	105	11.0	241	33.5		28.8	145	05.5		13.6
4	120	13.4	256	32.9		29.8	160	06.2		13.0
5	135	15.9	271	32.3	-15	30.7	175	06.8	-17	12.4
6	150	18.4	286	31.6	-15	31.7	190	07.5	-17	11.8
7	165	20.8	301	31.0		32.7	205	08.2		11.2
8	180	23.3	316	30.4		33.6	220	08.9		10.6
9	195	25.8	331	29.7		34.6	235	09.6		10.0
10	210	28.2	346	29.1		35.6	250	10.3		09.4
11	225	30.7	1	28.5	-15	36.6	265	11.0	-17	08.8
12	240	33.2	16	27.8	-15	37.5	280	11.7	-17	08.2
13	255	35.6	31	27.2		38.5	295	12.4		07.6
14	270	38.1	46	26.5		39.4	310	13.1		06.9
15	285	40.6	61	25.9		40.4	325	13.8		06.3
16	300	43.0	76	25.3		41.4	340	14.5		05.7
17	315	45.5	91	24.6	-15	42.3	355	15.2	-17	05.1
18	330	47.9	106	24.0	-15	43.3	10	15.9	-17	04.5
19	345	50.4	121	23.3		44.3	25	16.6		03.9
20	0	52.9	136	22.7		45.2	40	17.3		03.3
21	15	55.3	151	22.1		46.2	55	18.0		02.7
22	30	57.8	166	21.4		47.1	70	18.7		02.1
23	46	00.3	181	20.8		48.1	85	19.4		01.5
24	61	02.7	196	20.1	-15	49.1	100	20.1	-17	00.9
Dif	—		-6		-10		+7		+6	
							+26		0	
									+27	

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 : 54'4 12 ^h : 54'3 20 ^h : 54'3			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 46 ^m 2								R°: 44 ^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	183	29.4	-20 05.8	98	06.9	-18 58.8		60 N	15 17	16 08	17 01	14 02 10		22 10 79	
1	198	29.2	06.3	112	38.9 ¹³⁰	50.9 ⁷⁹		58	30	17	07	13 51 13		20 76	
2	213	29.1	06.9	127	11.1 ¹³²	42.9 ⁸⁰		56	41	25	12	42 15		29 73	
3	228	28.9	07.4	141	43.3 ¹³²	34.8 ⁸¹		54	15 51	32	16	33 18		37 70	
4	243	28.7	07.9	156	15.5 ¹³²	26.7 ⁸¹		52	16 00	39	20	26 20		44 68	
5	258	28.6	-20 08.5	170	47.8 ¹³³	-18 18.4 ⁸³		50	16 08	16 44	17 24	13 19 22		22 50 67	
6	273	28.4	-20 09.0	185	20.2 ¹³⁴	-18 10.1 ⁸³		45	16 25	16 57	17 33	13 04 26		23 04 62	
7	288	28.2	09.5	199	52.6 ¹³⁴	-18 01.8 ⁸³		40	39	17 08	42	12 52 29		15 59	
8	303	28.1	10.1	214	25.1 ¹³⁵	-17 53.3 ⁸⁵		35	16 51	18	49	41 32		25 56	
9	318	27.9	10.6	228	57.7 ¹³⁶	44.8 ⁸⁵		30	17 01	27	17 56	32 34		33 54	
10	333	27.7	11.1	243	30.3 ¹³⁶	36.2 ⁸⁶		20	19	43	18 10	17 37		23 47 50	
11	348	27.6	-20 11.7	258	03.0 ¹³⁷	-17 27.5 ⁸⁷		10 N	17 35	17 57	18 23	12 03 40		** ** *	
12	3	27.4	-20 12.2	272	35.7 ¹³⁷	-17 18.8 ⁸⁷		0	17 50	18 12	18 37	11 50 44		** ** *	
13	18	27.2	12.7	287	08.5 ¹³⁸	10.0 ⁸⁸		10 S	18 05	27	18 54	37 47		** ** *	
14	33	27.1	13.3	301	41.3 ¹³⁸	-17 01.1 ⁸⁹		20	21	18 45	19 13	23 50		** ** *	
15	48	26.9	13.8	316	14.2 ¹³⁹	-16 52.2 ⁸⁹		30	40	19 06	38	11 07 54		0 13 36	
16	63	26.7	14.3	330	47.2 ¹⁴⁰	43.2 ⁹⁰		35	18 51	19	19 54	10 57 57		23 34	
17	78	26.6	-20 14.9	345	20.2 ¹⁴⁰	-16 34.1 ⁹¹		40	19 03	19 35	20 14	10 47 59		0 35 31	
18	93	26.4	-20 15.4	359	53.3 ¹⁴¹	-16 24.9 ⁹²		45	19 18	19 53	20 39	10 34 62		0 48 28	
19	108	26.2	15.9	14	26.4 ¹⁴¹	15.7 ⁹²		50	37	20 18	21 13	19 66		1 05 24	
20	123	26.1	16.4	28	59.5 ¹⁴¹	-16 06.4 ⁹³		52	46	30	32	11 68		13 22	
21	138	25.9	17.0	43	32.8 ¹⁴³	-15 57.1 ⁹³		54	19 56	20 43	21 56	10 03 71		21 20	
22	153	25.7	17.5	58	06.0 ¹⁴²	47.7 ⁹⁴		56	20 07	21 00	22 30	9 54 73		31 18	
23	168	25.5	18.0	72	39.4 ¹⁴⁴	38.2 ⁹⁵		58	20	20	** ** *	44 76		41 16	
24	183	25.4	-20 18.5	87	12.7 ¹⁴³	-15 28.7 ⁹⁵		60 S	20 35	21 45	** ** *	9 32 79		1 54 12	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 52 ^m 6			Mag: -3.9 PMG: 10 ^h 55 ^m			Mag: +0.3 PMG: 17 ^h 18 ^m			Mag: -2.6 PMG: 3 ^h 01 ^m			Mag: -0.4 PMG: 0 ^h 41 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	61	02.7	196	20.1	-15 49.1	100	20.1	-17 00.9	314	42.1	+22 30.0	349	50.2	+20 25.0	
1	76	05.2	211	19.5	50.0	115	20.8	-17 00.3	329	44.7	30.1	4	52.8	24.9	
2	91	07.7	226	18.9	51.0	130	21.5	-16 59.6	344	47.4	30.1	19	55.5	24.9	
3	106	10.1	241	18.2	51.9	145	22.2	59.0	359	50.0	30.1	34	58.2	24.9	
4	121	12.6	256	17.6	52.9	160	22.9	58.4	14	52.6	30.1	50	00.9	24.9	
5	136	15.1	271	16.9	-15 53.8	175	23.6	-16 57.8	29	55.3	+22 30.2	65	03.5	+20 24.8	
6	151	17.5	286	16.3	-15 54.8	190	24.3	-16 57.2	44	57.9	+22 30.2	80	06.2	+20 24.8	
7	166	20.0	301	15.6	55.7	205	25.0	56.6	60	00.5	30.2	95	08.9	24.8	
8	181	22.4	316	15.0	56.7	220	25.7	56.0	75	03.2	30.2	110	11.6	24.8	
9	196	24.9	331	14.3	57.6	235	26.4	55.4	90	05.8	30.3	125	14.2	24.7	
10	211	27.4	346	13.7	58.6	250	27.1	54.8	105	08.5	30.3	140	16.9	24.7	
11	226	29.8	1	13.0	-15 59.6	265	27.8	-16 54.1	120	11.1	+22 30.3	155	19.6	+20 24.7	
12	241	32.3	16	12.4	-16 00.5	280	28.5	-16 53.5	135	13.7	+22 30.3	170	22.3	+20 24.7	
13	256	34.8	31	11.7	01.4	295	29.2	52.9	150	16.4	30.3	185	24.9	24.6	
14	271	37.2	46	11.1	02.4	310	29.9	52.3	165	19.0	30.4	200	27.6	24.6	
15	286	39.7	61	10.4	03.3	325	30.6	51.7	180	21.6	30.4	215	30.3	24.6	
16	301	42.2	76	09.8	04.3	340	31.3	51.1	195	24.3	30.4	230	33.0	24.6	
17	316	44.6	91	09.1	-16 05.2	355	32.0	-16 50.5	210	26.9	+22 30.4	245	35.6	+20 24.6	
18	331	47.1	106	08.5	-16 06.2	10	32.7	-16 49.9	225	29.6	+22 30.5	260	38.3	+20 24.5	
19	346	49.5	121	07.8	07.1	25	33.4	49.2	240	32.2	30.5	275	41.0	24.5	
20	1	52.0	136	07.2	08.1	40	34.1	48.6	255	34.9	30.5	290	43.6	24.5	
21	16	54.5	151	06.5	09.0	55	34.8	48.0	270	37.5	30.5	305	46.3	24.5	
22	31	56.9	166	05.9	10.0	70	35.5	47.4	285	40.1	30.6	320	49.0	24.4	
23	46	59.4	181	05.2	10.9	85	36.2	46.8	300	42.8	30.6	335	51.7	24.4	
24	62	01.9	196	04.6	-16 11.8	100	36.9	-16 46.2	315	45.4	+22 30.6	350	54.3	+20 24.4	
Dif	—		-6	-9		+7	+6		+26	0		+27	0		

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: 7 ^d 7 PHE { SD: 14'8 PMG: 18 ^h 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	25.4	-20	18.5	87	12.7	-15	28.7	60 N	6 32	7 26	8 17	14 12	8	23 29	78
1	198	25.2		19.1	101	46.2 ¹⁴⁵		19.1	58	27	17	8 04	14 04	11	36	75
2	213	25.0		19.6	116	19.6 ¹⁴⁴	-15	09.5	56	22	09	7 53	13 57	13	42	72
3	228	24.9		20.1	130	53.2 ¹⁴⁶	-14	59.8	54	17	7 01	42	51	15	47	70
4	243	24.7		20.6	145	26.7 ¹⁴⁵		50.0	52	13	6 55	33	46	17	52	68
5	258	24.5	-20	21.1	160	00.4 ¹⁴⁷	-14	40.2	50	6 09	6 49	7 25	13 41	19	23 57	66
6	273	24.3	-20	21.7	174	34.0 ¹⁴⁶	-14	30.3	45	6 00	6 36	7 08	13 30	23	***	***
7	288	24.2		22.2	189	07.7 ¹⁴⁷		20.3	40	5 51	25	6 54	21	26	***	***
8	303	24.0		22.7	203	41.5 ¹⁴⁸		10.3	35	44	15	42	13	29	***	***
9	318	23.8		23.2	218	15.3 ¹⁴⁸	-14	00.3	30	37	6 06	32	13 06	31	***	***
10	333	23.6		23.7	232	49.1 ¹⁴⁸	-13	50.2	20	23	5 50	6 14	12 54	35	***	***
11	348	23.5	-20	24.3	247	23.0 ¹⁴⁹	-13	40.0	10 N	5 10	5 35	5 58	12 43	39	0 00	46
12	3	23.3	-20	24.8	261	56.9 ¹⁴⁹	-13	29.8	0	4 55	5 21	5 43	12 34	42	0 11	43
13	18	23.1		25.3	276	30.9 ¹⁵⁰		19.5	10 S	39	5 05	28	24	45	23	39
14	33	22.9		25.8	291	04.9 ¹⁵⁰	-13	09.2	20	4 19	4 48	5 12	13 49		35	36
15	48	22.8		26.3	305	39.0 ¹⁵¹	-12	58.8	30	3 54	26	4 53	12 01	53	49	32
16	63	22.6		26.8	320	13.1 ¹⁵¹		48.3	35	38	4 13	42	11 54	56	0 57	30
17	78	22.4	-20	27.3	334	47.2 ¹⁵¹	-12	37.9	40	3 19	3 58	4 29	11 46	58	1 06	27
18	93	22.2	-20	27.9	349	21.4 ¹⁵²	-12	27.3	45	2 54	3 39	4 14	11 36	62	1 16	24
19	108	22.1		28.4	3	55.6 ¹⁵²		16.7	50	19	14	3 55	25	66	29	20
20	123	21.9		28.9	18	29.8 ¹⁵²	-12	06.1	52	2 00	3 03	46	19	68	35	18
21	138	21.7		29.4	33	04.1 ¹⁵³	-11	55.4	54	1 36	2 49	37	14	70	41	17
22	153	21.5		29.9	47	38.4 ¹⁵³		44.7	56	1 02	32	25	07	72	49	14
23	168	21.3		30.4	62	12.7 ¹⁵³		33.9	58	***	***	2 13	3 12		1 57	11
24	183	21.2	-20	30.9	76	47.1 ¹⁵⁴	-11	23.1	60 S	***	***	1 47	2 57		2 06	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 48 ^m 6		Mag: -3.9 PMG: 10 ^h 56 ^m		Mag: +0.3 PMG: 17 ^h 17 ^m		Mag: -2.6 PMG: 2 ^h 56 ^m		Mag: -0.4 PMG: 0 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	62	01.9	196	04.6	100	36.9	315	45.4	350	54.3
1	77	04.3	211	03.9	115	37.6	330	48.1	5	57.0
2	92	06.8	226	03.3	130	38.3	345	50.7	20	59.7
3	107	09.3	241	02.6	145	39.0	0	53.4	36	02.4
4	122	11.7	256	01.9	160	39.7	15	56.0	51	05.0
5	137	14.2	271	01.3	175	40.4	30	58.6	66	07.7
6	152	16.7	286	00.6	190	41.1	46	01.3	81	10.4
7	167	19.1	301	00.0	205	41.8	61	03.9	96	13.1
8	182	21.6	315	59.3	220	42.5	76	06.6	111	15.7
9	197	24.0	330	58.6	235	43.2	91	09.2	126	18.4
10	212	26.5	345	58.0	250	43.9	106	11.9	141	21.1
11	227	29.0	0	57.3	265	44.6	121	14.5	156	23.8
12	242	31.4	15	56.7	280	45.3	136	17.2	171	26.4
13	257	33.9	30	56.0	295	46.0	151	19.8	186	29.1
14	272	36.4	45	55.3	310	46.7	166	22.5	201	31.8
15	287	38.8	60	54.7	325	47.4	181	25.1	216	34.5
16	302	41.3	75	54.0	340	48.1	196	27.7	231	37.1
17	317	43.8	90	53.4	355	48.8	211	30.4	246	39.8
18	332	46.2	105	52.7	10	49.5	226	33.0	261	42.5
19	347	48.7	120	52.0	25	50.2	241	35.7	276	45.2
20	2	51.2	135	51.4	40	50.9	256	38.3	291	47.8
21	17	53.6	150	50.7	55	51.6	271	41.0	306	50.5
22	32	56.1	165	50.0	70	52.3	286	43.6	321	53.2
23	47	58.5	180	49.4	85	53.0	301	46.3	336	55.9
24	63	01.0	195	48.7	100	53.7	316	48.9	351	58.5
Dif	—		-7		+7		+26		+27	

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: 8 ^d 7 PHE { SD: 14'8 PMG: 19 ^h 26 ^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	21.2	-20	30.9	76	47.1	-11	23.1	60 N	15 13	16 05	16 59	14 20 6	** ** *		
1	198	21.0		31.4	91	21.5 ¹⁵⁴		12.2 ¹⁰⁹	58	27	14	17 04	15 9	** ** *		
2	213	20.8		31.9	105	56.0 ¹⁵⁵	-11	01.3 ¹⁰⁹	56	39	23	10	10 12	** ** *		
3	228	20.6		32.4	120	30.4 ¹⁵⁴	-10	50.4 ¹⁰⁹	54	49	30	14	06 14	** ** *		
4	243	20.5		32.9	135	04.9 ¹⁵⁵		39.4 ¹¹⁰	52	15 58	37	19	03 15	** ** *		
5	258	20.3	-20	33.4	149	39.5 ¹⁵⁶	-10	28.3 ¹¹¹	50	16 06	16 43	17 23	14 00 17	** ** *		
6	273	20.1	-20	34.0	164	14.0 ¹⁵⁵	-10	17.2 ¹¹¹	45	16 24	16 56	17 32	13 53 21	0 06 62		
7	288	19.9		34.5	178	48.6 ¹⁵⁶	-10	06.1 ¹¹¹	40	38	17 08	41	47 24	14 59		
8	303	19.7		35.0	193	23.2 ¹⁵⁶	-9	55.0 ¹¹¹	35	16 50	17	48	42 27	21 55		
9	318	19.5		35.5	207	57.8 ¹⁵⁶		43.7 ¹¹³	30	17 01	26	17 56	37 30	27 53		
10	333	19.4		36.0	222	32.5 ¹⁵⁷		32.5 ¹¹²	20	19	43	18 10	29 34	37 49		
11	348	19.2	-20	36.5	237	07.2 ¹⁵⁷	-9	21.2 ¹¹³	10 N	17 35	17 58	18 23	13 22 38	0 46 45		
12	3	19.0	-20	37.0	251	41.9 ¹⁵⁷	-9	09.9 ¹¹³	0	17 50	18 12	18 38	13 16 41	0 54 42		
13	18	18.8		37.5	266	16.6 ¹⁵⁷	-8	58.5 ¹¹⁴	10 S	18 06	28	18 55	09 45	1 02 38		
14	33	18.6		38.0	280	51.4 ¹⁵⁸		47.1 ¹¹⁴	20	22	18 46	19 15	13 02 49	11 34		
15	48	18.4		38.5	295	26.1 ¹⁵⁷		35.7 ¹¹⁴	30	41	19 08	40	12 54 53	21 30		
16	63	18.3		39.0	310	00.9 ¹⁵⁸		24.2 ¹¹⁵	35	18 53	21	19 56	50 55	27 27		
17	78	18.1	-20	39.5	324	35.7 ¹⁵⁸	-8	12.7 ¹¹⁵	40	19 06	19 37	20 16	12 44 59	1 33 25		
18	93	17.9	-20	39.9	339	10.6 ¹⁵⁹	-8	01.1 ¹¹⁶	45	19 21	19 56	20 42	12 38 62	1 40 22		
19	108	17.7		40.4	353	45.4 ¹⁵⁸	-7	49.5 ¹¹⁶	50	40	20 21	21 18	31 66	49 18		
20	123	17.5		40.9	8	20.3 ¹⁵⁹		37.9 ¹¹⁶	52	49	34	21 37	27 68	53 16		
21	138	17.3		41.4	22	55.1 ¹⁵⁸		26.3 ¹¹⁶	54	19 59	20 48	22 03	24 70	1 58 14		
22	153	17.1		41.9	37	30.0 ¹⁵⁹		14.6 ¹¹⁷	56	20 11	21 05	22 40	19 73	2 03 12		
23	168	17.0		42.4	52	04.9 ¹⁵⁹	-7	02.8 ¹¹⁸	58	24	25	** ** *	15 75	08 10		
24	183	16.8	-20	42.9	66	39.8 ¹⁵⁹	-6	51.1 ¹¹⁷	60 S	20 40	21 52	** ** *	12 10 78	2 14 7		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 19 ^h 44 ^m 7		Mag: -3.9 PMG: 10 ^h 57 ^m		Mag: +0.3 PMG: 17 ^h 16 ^m		Mag: -2.6 PMG: 2 ^h 52 ^m		Mag: -0.4 PMG: 0 ^h 32 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	63	01.0	195	48.7	100	53.7	316	48.9	+22	31.2	351	58.5	+20	23.8		
1	78	03.5	210	48.0	115	54.4	331	51.6		31.2	7	01.2		23.8		
2	93	05.9	225	47.4	130	55.1	346	54.2		31.2	22	03.9		23.8		
3	108	08.4	240	46.7	145	55.8	1	56.9		31.3	37	06.6		23.7		
4	123	10.9	255	46.0	160	56.5	16	59.6		31.3	52	09.3		23.7		
5	138	13.3	270	45.4	175	57.2	32	02.2	+22	31.3	67	11.9	+20	23.7		
6	153	15.8	285	44.7	190	57.9	47	04.9	+22	31.3	82	14.6	+20	23.7		
7	168	18.3	300	44.0	205	58.6	62	07.5		31.4	97	17.3		23.6		
8	183	20.7	315	43.3	220	59.3	77	10.2		31.4	112	20.0		23.6		
9	198	23.2	330	42.7	236	00.0	92	12.8		31.4	127	22.6		23.6		
10	213	25.6	345	42.0	251	00.7	107	15.5		31.4	142	25.3		23.6		
11	228	28.1	0	41.3	266	01.5	122	18.1	+22	31.5	157	28.0	+20	23.5		
12	243	30.6	15	40.7	281	02.2	137	20.8	+22	31.5	172	30.7	+20	23.5		
13	258	33.0	30	40.0	296	02.9	152	23.4		31.5	187	33.3		23.5		
14	273	35.5	45	39.3	311	03.6	167	26.1		31.5	202	36.0		23.5		
15	288	38.0	60	38.6	326	04.3	182	28.7		31.6	217	38.7		23.4		
16	303	40.4	75	38.0	341	05.0	197	31.4		31.6	232	41.4		23.4		
17	318	42.9	90	37.3	356	05.7	212	34.1	+22	31.6	247	44.0	+20	23.4		
18	333	45.4	105	36.6	11	06.4	227	36.7	+22	31.6	262	46.7	+20	23.4		
19	348	47.8	120	35.9	26	07.1	242	39.4		31.7	277	49.4		23.3		
20	3	50.3	135	35.2	52.5	41	07.8	257	42.0	31.7	292	52.1		23.3		
21	18	52.8	150	34.6	53.4	56	08.5	272	44.7	31.7	307	54.7		23.3		
22	33	55.2	165	33.9	54.3	71	09.2	287	47.3	31.7	322	57.4		23.3		
23	48	57.7	180	33.2	55.2	86	09.9	302	50.0	31.8	338	00.1		23.2		
24	64	00.1	195	32.5	56.1	101	10.6	317	52.7	+22	31.8	353	02.8	+20	23.2	
Dif	—		-7		-9		+7		+6		+27		0		0	

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: 9 ^d 7 PHE { SD: 14'8 PMG: 20 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	183	16.8	-20 42.9	66	39.8	-6 51.1	60 N	6 36	7 30	8 22	14 26	6	0 47	78
1	198	16.6	43.4	81	14.8 ¹⁶⁰	39.3 ¹¹⁸	58	30	20	8 08	24	8	51	75
2	213	16.4	43.9	95	49.7 ¹⁵⁹	27.5 ¹¹⁸	56	25	12	7 56	22	11	54	73
3	228	16.2	44.4	110	24.6 ¹⁵⁹	15.7 ¹¹⁸	54	20	7 05	46	20	13	0 57	71
4	243	16.0	44.9	124	59.6 ¹⁶⁰	-6 03.8 ¹¹⁹	52	15	6 58	37	18	15	1 00	68
5	258	15.8	-20 45.4	139	34.5 ¹⁵⁹	-5 51.9 ¹¹⁹	50	6 11	6 52	7 28	14 17	17	1 03	66
6	273	15.6	-20 45.8	154	09.5 ¹⁶⁰	-5 40.0 ¹¹⁹	45	6 02	6 38	7 11	14 14	20	1 08	62
7	288	15.5	46.3	168	44.5 ¹⁶⁰	28.0 ¹²⁰	40	5 53	27	6 56	11	24	13	58
8	303	15.3	46.8	183	19.5 ¹⁶⁰	16.0 ¹²⁰	35	46	17	44	09	27	16	56
9	318	15.1	47.3	197	54.4 ¹⁵⁹	-5 04.0 ¹²⁰	30	38	6 08	33	07	29	20	53
10	333	14.9	47.8	212	29.4 ¹⁶⁰	-4 52.0 ¹²⁰	20	24	5 51	6 15	03	34	26	48
11	348	14.7	-20 48.3	227	04.4 ¹⁶⁰	-4 39.9 ¹²¹	10 N	5 10	5 36	5 59	14 00	38	1 31	45
12	3	14.5	-20 48.8	241	39.4 ¹⁶⁰	-4 27.9 ¹²⁰	0	4 56	5 21	5 43	13 57	41	1 36	41
13	18	14.3	49.2	256	14.4 ¹⁶⁰	15.7 ¹²²	10 S	39	5 05	28	54	45	40	38
14	33	14.1	49.7	270	49.4 ¹⁶⁰	-4 03.6 ¹²¹	20	4 19	4 47	5 11	51	49	45	34
15	48	13.9	50.2	285	24.3 ¹⁵⁹	-3 51.5 ¹²¹	30	3 53	26	4 52	47	54	51	29
16	63	13.7	50.7	299	59.3 ¹⁶⁰	39.3 ¹²²	35	37	4 12	41	45	56	54	27
17	78	13.5	-20 51.2	314	34.3 ¹⁶⁰	-3 27.1 ¹²²	40	3 17	3 56	4 28	13 43	59	1 58	24
18	93	13.4	-20 51.7	329	09.3 ¹⁶⁰	-3 14.9 ¹²²	45	2 51	3 37	4 12	13 40	63	2 02	21
19	108	13.2	52.1	343	44.3 ¹⁶⁰	-3 02.6 ¹²³	50	2 16	12	3 53	37	67	07	17
20	123	13.0	52.6	358	19.2 ¹⁵⁹	-2 50.4 ¹²²	52	1 56	3 00	44	35	69	09	16
21	138	12.8	53.1	12	54.2 ¹⁶⁰	38.1 ¹²³	54	1 31	2 46	34	34	71	12	13
22	153	12.6	53.6	27	29.1 ¹⁵⁹	25.8 ¹²³	56	0 53	29	22	32	73	15	11
23	168	12.4	54.0	42	04.1 ¹⁶⁰	13.5 ¹²³	58	** **	2 08	3 09	30	76	18	8
24	183	12.2	-20 54.5	56	39.0 ¹⁵⁹	-2 01.2 ¹²³	60 S	** **	1 41	2 53	13 28	78	2 21	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 40 ^m 8		Mag: -3.9 PMG: 10 ^h 58 ^m		Mag: +0.4 PMG: 17 ^h 14 ^m		Mag: -2.6 PMG: 2 ^h 48 ^m		Mag: -0.4 PMG: 0 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	64	00.1	195	32.5	-16	56.1	317	52.7	+22	31.8
1	79	02.6	210	31.9		57.0	332	55.3		31.8
2	94	05.1	225	31.2		57.9	347	58.0		31.8
3	109	07.5	240	30.5		58.8	3	00.6		31.9
4	124	10.0	255	29.8	-16	59.7	18	03.3		31.9
5	139	12.5	270	29.1	-17	00.6	33	06.0	+22	31.9
6	154	14.9	285	28.4	-17	01.5	48	08.6	+22	31.9
7	169	17.4	300	27.8		02.4	63	11.3		32.0
8	184	19.9	315	27.1		03.3	78	13.9		32.0
9	199	22.3	330	26.4		04.2	93	16.6		32.0
10	214	24.8	345	25.7		05.1	108	19.3		32.0
11	229	27.2	0	25.0	-17	06.0	123	21.9	+22	32.1
12	244	29.7	15	24.3	-17	06.9	138	24.6	+22	32.1
13	259	32.2	30	23.7		07.8	153	27.3		32.1
14	274	34.6	45	23.0		08.7	168	29.9		32.1
15	289	37.1	60	22.3		09.6	183	32.6		32.2
16	304	39.6	75	21.6		10.5	198	35.3		32.2
17	319	42.0	90	20.9	-17	11.4	213	37.9	+22	32.2
18	334	44.5	105	20.2	-17	12.3	228	40.6	+22	32.2
19	349	47.0	120	19.5		13.2	243	43.2		32.3
20	4	49.4	135	18.8		14.0	258	45.9		32.3
21	19	51.9	150	18.1		14.9	273	48.6		32.3
22	34	54.4	165	17.5		15.8	288	51.2		32.3
23	49	56.8	180	16.8		16.7	303	53.9		32.4
24	64	59.3	195	16.1	-17	17.6	318	56.6	+22	32.4
Dif	—		-7	-9	+7	+6	+27	0	+27	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 47 ^m 3			Edad: 10 ^d 7 PHE { SD: 14:9 PMG: 20 ^h 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	183	12.2	-20	54.5	56	39.0	-2	01.2	60 N	15 10	16 02	16 56	14 32 6	2 05 79				
1	198	12.0		55.0	71	13.9 ¹⁵⁹	-1	48.9 ¹²³	58	24	12	17 02	32 9	06 76				
2	213	11.8		55.5	85	48.8 ¹⁵⁹		36.5 ¹²⁴	56	36	21	08	33 11	07 74				
3	228	11.6		55.9	100	23.7 ¹⁵⁹		24.1 ¹²⁴	54	47	28	13	33 14	08 71				
4	243	11.4		56.4	114	58.6 ¹⁵⁹	-1	11.7 ¹²⁴	52	15 56	35	17	33 16	08 70				
5	258	11.2	-20	56.9	129	33.4 ¹⁵⁸	-0	59.3 ¹²⁴	50	16 05	16 41	17 22	14 34 17	2 09 67				
6	273	11.0	-20	57.4	144	08.3 ¹⁵⁹	-0	46.9 ¹²⁴	45	16 22	16 55	17 31	14 34 22	2 10 63				
7	288	10.8		57.8	158	43.1 ¹⁵⁸		34.5 ¹²⁴	40	37	17 07	40	35 25	11 60				
8	303	10.6		58.3	173	17.9 ¹⁵⁸		22.1 ¹²⁴	35	16 49	17	48	36 27	12 57				
9	318	10.4		58.8	187	52.7 ¹⁵⁸	-0	09.6 ¹²⁵	30	17 00	26	17 55	36 30	13 54				
10	333	10.2		59.2	202	27.5 ¹⁵⁸	+0	02.8 ¹²⁴	20	19	43	18 10	37 35	14 50				
11	348	10.0	-20	59.7	217	02.2 ¹⁵⁷	+0	15.3 ¹²⁵	10 N	17 35	17 58	18 24	14 38 38	2 16 45				
12	3	09.8	-21	00.2	231	37.0 ¹⁵⁸	+0	27.8 ¹²⁵	0	17 51	18 13	18 39	14 38 43	2 17 42				
13	18	09.6		00.6	246	11.7 ¹⁵⁷		40.2 ¹²⁴	10 S	18 07	29	18 56	39 46	18 38				
14	33	09.4		01.1	260	46.4 ¹⁵⁷	+0	52.7 ¹²⁵	20	23	18 48	19 16	40 50	19 34				
15	48	09.2		01.6	275	21.0 ¹⁵⁶	+1	05.2 ¹²⁵	30	43	19 10	42	41 55	20 30				
16	63	09.0		02.0	289	55.6 ¹⁵⁶		17.7 ¹²⁵	35	18 55	23	19 59	41 58	21 27				
17	78	08.8	-21	02.5	304	30.3 ¹⁵⁷	+1	30.2 ¹²⁵	40	19 08	19 39	20 19	14 42 61	2 22 24				
18	93	08.6	-21	03.0	319	04.8 ¹⁵⁵	+1	42.7 ¹²⁵	45	19 24	19 59	20 45	14 43 64	2 23 21				
19	108	08.4		03.4	333	39.4 ¹⁵⁶	+1	55.2 ¹²⁵	50	43	20 25	21 22	44 68	24 17				
20	123	08.2		03.9	348	13.9 ¹⁵⁵	+2	07.8 ¹²⁶	52	19 52	37	21 43	44 70	25 15				
21	138	08.0		04.4	2	48.4 ¹⁵⁵		20.3 ¹²⁵	54	20 03	20 52	22 09	45 72	25 13				
22	153	07.8		04.8	17	22.9 ¹⁵⁵		32.8 ¹²⁵	56	15	21 09	22 51	45 75	26 11				
23	168	07.6		05.3	31	57.3 ¹⁵⁴		45.3 ¹²⁵	58	28	21 31	** **	46 77	26 9				
24	183	07.4	-21	05.7	46	31.7 ¹⁵⁴	+2	57.8 ¹²⁵	60 S	20 45	22 00	** **	14 46 81	2 27 6				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 19 ^h 36 ^m 8		Mag: -3.9 PMG: 10 ^h 59 ^m			Mag: +0.4 PMG: 17 ^h 13 ^m			Mag: -2.6 PMG: 2 ^h 44 ^m				Mag: -0.4 PMG: 0 ^h 23 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	64	59.3	195	16.1	-17	17.6	101	27.6	-16	01.2	318	56.6	+22	32.4	354	07.0	+20	22.6
1	80	01.7	210	15.4		18.5	116	28.3	-16	00.6	333	59.2		32.4	9	09.7		22.6
2	95	04.2	225	14.7		19.4	131	29.0	-16	00.0	349	01.9		32.4	24	12.4		22.6
3	110	06.7	240	14.0		20.2	146	29.7	-15	59.3	4	04.6		32.5	39	15.1		22.6
4	125	09.1	255	13.3		21.1	161	30.4		58.7	19	07.2		32.5	54	17.7		22.5
5	140	11.6	270	12.6	-17	22.0	176	31.1	-15	58.1	34	09.9	+22	32.5	69	20.4	+20	22.5
6	155	14.1	285	11.9	-17	22.9	191	31.8	-15	57.4	49	12.6	+22	32.5	84	23.1	+20	22.5
7	170	16.5	300	11.2		23.8	206	32.5		56.8	64	15.3		32.6	99	25.8		22.5
8	185	19.0	315	10.5		24.6	221	33.2		56.2	79	17.9		32.6	114	28.5		22.4
9	200	21.5	330	09.8		25.5	236	33.9		55.5	94	20.6		32.6	129	31.1		22.4
10	215	23.9	345	09.1		26.4	251	34.6		54.9	109	23.3		32.7	144	33.8		22.4
11	230	26.4	0	08.4	-17	27.3	266	35.3	-15	54.3	124	25.9	+22	32.7	159	36.5	+20	22.4
12	245	28.9	15	07.7	-17	28.2	281	36.1	-15	53.6	139	28.6	+22	32.7	174	39.2	+20	22.3
13	260	31.3	30	07.0		29.0	296	36.8		53.0	154	31.3		32.7	189	41.9		22.3
14	275	33.8	45	06.3		29.9	311	37.5		52.4	169	33.9		32.8	204	44.5		22.3
15	290	36.2	60	05.6		30.8	326	38.2		51.7	184	36.6		32.8	219	47.2		22.3
16	305	38.7	75	04.9		31.7	341	38.9		51.1	199	39.3		32.8	234	49.9		22.2
17	320	41.2	90	04.2	-17	32.5	356	39.6	-15	50.4	214	42.0	+22	32.8	249	52.6	+20	22.2
18	335	43.6	105	03.5	-17	33.4	11	40.3	-15	49.8	229	44.6	+22	32.9	264	55.2	+20	22.2
19	350	46.1	120	02.8		34.3	26	41.0		49.2	244	47.3		32.9	279	57.9		22.2
20	5	48.6	135	02.1		35.1	41	41.7		48.5	259	50.0		32.9	295	00.6		22.1
21	20	51.0	150	01.4		36.0	56	42.4		47.9	274	52.7		32.9	310	03.3		22.1
22	35	53.5	165	00.7		36.9	71	43.1		47.3	289	55.3		33.0	325	06.0		22.1
23	50	56.0	180	00.0		37.7	86	43.9		46.6	304	58.0		33.0	340	08.6		22.1
24	65	58.4	194	59.3	-17	38.6	101	44.6	-15	46.0	320	00.7	+22	33.0	355	11.3	+20	22.1
Dif	—		-7		-9		+7		+6		+27		0		+27		0	

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: 11 ^d 7 PHE { 4 ^h : 55:2 12 ^h : 55:4 20 ^h : 55:6 Rº: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	07.4	-21	05.7	46	31.7	+2	57.8	60 N	6	39	7	34	8	27	14	38
1	198	07.2		06.2	61	06.0 ¹⁵³	+3	10.3 ¹²⁵	58		33	24	12		41	11	
2	213	07.0		06.7	75	40.4 ¹⁵⁴		22.9 ¹²⁶	56		28	15	8	00	44	13	
3	228	06.8		07.1	90	14.7 ¹⁵³		35.4 ¹²⁵	54		23	08	7	49	47	15	
4	243	06.6		07.6	104	48.9 ¹⁵²	+3	47.9 ¹²⁵	52		18	7	01	40	49	17	
5	258	06.4	-21	08.0	119	23.1 ¹⁵²	+4	00.4 ¹²⁵	50		6	14	6	54	7	31	
6	273	06.2	-21	08.5	133	57.3 ¹⁵²	+4	12.9 ¹²⁵	45		6	04	6	40	7	13	
7	288	06.0		08.9	148	31.4 ¹⁵¹		25.4 ¹²⁵	40		5	55	29	6	58	15	
8	303	05.8		09.4	163	05.5 ¹⁵¹		37.9 ¹²⁵	35		47	18	46		03	30	
9	318	05.6		09.8	177	39.6 ¹⁵¹	+4	50.3 ¹²⁴	30		40	6	09	35	06	33	
10	333	05.4		10.3	192	13.6 ¹⁵⁰	+5	02.8 ¹²⁵	20		25	5	53	16	12	36	
11	348	05.2	-21	10.7	206	47.5 ¹⁴⁹	+5	15.3 ¹²⁵	10 N		5	11	5	37	6	00	
12	3	05.0	-21	11.2	221	21.5 ¹⁵⁰	+5	27.7 ¹²⁴	0		4	56	5	22	5	44	
13	18	04.8		11.6	235	55.3 ¹⁴⁸		40.1 ¹²⁴	10 S		39	5	06	28	25	49	
14	33	04.6		12.1	250	29.2 ¹⁴⁹	+5	52.6 ¹²⁵	20		4	19	4	47	5	11	
15	48	04.4		12.5	265	02.9 ¹⁴⁷	+6	05.0 ¹²⁴	30		3	53	25	4	52	36	
16	63	04.2		13.0	279	36.7 ¹⁴⁸		17.4 ¹²⁴	35		36	4	11	40	39	60	
17	78	04.0	-21	13.4	294	10.4 ¹⁴⁷	+6	29.8 ¹²⁴	40		3	16	3	55	4	27	
18	93	03.7	-21	13.9	308	44.0 ¹⁴⁶	+6	42.1 ¹²³	45		2	49	3	36	4	11	
19	108	03.5		14.3	323	17.6 ¹⁴⁶	+6	54.5 ¹²⁴	50		2	12	3	10	3	52	
20	123	03.3		14.8	337	51.1 ¹⁴⁵	+7	06.8 ¹²³	52		1	52	2	57	42	54	
21	138	03.1		15.2	352	24.6 ¹⁴⁵		19.2 ¹²⁴	54		1	25	43	32	15	57	
22	153	02.9		15.7	6	58.0 ¹⁴⁴		31.5 ¹²³	56		0	43	25	20	16	00	
23	168	02.7		16.1	21	31.4 ¹⁴⁴		43.7 ¹²²	58		** **	2	03	3	06	03	
24	183	02.5	-21	16.6	36	04.7 ¹⁴³	+7	56.0 ¹²³	60 S		** **	1	35	2	50	16	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 32 ^m 9		Mag: -3.9 PMG: 11 ^h 01 ^m			Mag: +0.4 PMG: 17 ^h 12 ^m			Mag: -2.6 PMG: 2 ^h 39 ^m			Mag: -0.4 PMG: 0 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	65	58.4	194	59.3	-17	38.6	101	44.6	-15	46.0	320	00.7	+22	33.0
1	81	00.9	209	58.6		39.5	116	45.3		45.3	335	03.4		33.1
2	96	03.3	224	57.9		40.3	131	46.0		44.7	350	06.0		33.1
3	111	05.8	239	57.2		41.2	146	46.7		44.1	5	08.7		33.1
4	126	08.3	254	56.5		42.1	161	47.4		43.4	20	11.4		33.1
5	141	10.7	269	55.8	-17	42.9	176	48.1	-15	42.8	35	14.1	+22	33.2
6	156	13.2	284	55.1	-17	43.8	191	48.8	-15	42.2	50	16.7	+22	33.2
7	171	15.7	299	54.4		44.6	206	49.5		41.5	65	19.4		33.2
8	186	18.1	314	53.7		45.5	221	50.2		40.9	80	22.1		33.2
9	201	20.6	329	53.0		46.4	236	51.0		40.2	95	24.8		33.3
10	216	23.1	344	52.2		47.2	251	51.7		39.6	110	27.4		33.3
11	231	25.5	359	51.5	-17	48.1	266	52.4	-15	39.0	125	30.1	+22	33.3
12	246	28.0	14	50.8	-17	48.9	281	53.1	-15	38.3	140	32.8	+22	33.3
13	261	30.5	29	50.1		49.8	296	53.8		37.7	155	35.5		33.4
14	276	32.9	44	49.4		50.6	311	54.5		37.0	170	38.2		33.4
15	291	35.4	59	48.7		51.5	326	55.2		36.4	185	40.8		33.4
16	306	37.8	74	48.0		52.4	341	55.9		35.7	200	43.5		33.5
17	321	40.3	89	47.3	-17	53.2	356	56.6	-15	35.1	215	46.2	+22	33.5
18	336	42.8	104	46.5	-17	54.1	11	57.4	-15	34.5	230	48.9	+22	33.5
19	351	45.2	119	45.8		54.9	26	58.1		33.8	245	51.6		33.5
20	6	47.7	134	45.1		55.8	41	58.8		33.2	260	54.2		33.6
21	21	50.2	149	44.4		56.6	56	59.5		32.5	275	56.9		33.6
22	36	52.6	164	43.7		57.5	72	00.2		31.9	290	59.6		33.6
23	51	55.1	179	43.0		58.3	87	00.9		31.3	306	02.3		33.6
24	66	57.6	194	42.3	-17	59.1	102	01.6	-15	30.6	321	05.0	+22	33.7
Dif	—		-7 -9			+7 +6			+27 0			+27 0		

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: 12 ^d 7 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/2 PMG: 22 ^h 16 ^m R°: 49 ^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	02.5	-21	16.6	36	04.7	+7	56.0	60 N	15 07	16 00	16 54	14 45 10		4 46 85			
1	198	02.3		17.0	50	37.9 ¹⁴²	+8	08.2 ¹²²	58	21	10	17 01	52 13		41 82			
2	213	02.1		17.4	65	11.1 ¹⁴²		20.4 ¹²²	56	34	19	06	14 57 16		37 78			
3	228	01.9		17.9	79	44.3 ¹⁴²		32.6 ¹²²	54	45	27	11	15 02 18		33 76			
4	243	01.7		18.3	94	17.3 ¹⁴⁰		44.8 ¹²²	52	15 54	34	16	06 21		29 74			
5	258	01.4	-21	18.8	108	50.4 ¹⁴¹	+8	56.9 ¹²¹	50	16 03	16 40	17 21	15 10 23		4 26 71			
6	273	01.2	-21	19.2	123	23.3 ¹³⁹	+9	09.0 ¹²¹	45	16 21	16 54	17 31	15 19 27		4 18 68			
7	288	01.0		19.6	137	56.2 ¹³⁹		21.1 ¹²¹	40	36	17 06	40	27 30		12 64			
8	303	00.8		20.1	152	29.0 ¹³⁸		33.2 ¹²¹	35	16 49	16	48	33 33		07 61			
9	318	00.6		20.5	167	01.8 ¹³⁸		45.2 ¹²⁰	30	17 00	26	17 55	39 35		4 03 58			
10	333	00.4		20.9	181	34.5 ¹³⁷	+9	57.2 ¹²⁰	20	19	43	18 10	48 41		3 55 53			
11	348	00.2	-21	21.4	196	07.1 ¹³⁶	+10	09.2 ¹²⁰	10 N	17 36	17 58	18 24	15 57 44		3 48 50			
12	3	00.0	-21	21.8	210	39.7 ¹³⁶	+10	21.1 ¹¹⁹	0	17 52	18 14	18 40	16 05 48		3 42 46			
13	17	59.7		22.2	225	12.2 ¹³⁵		33.0 ¹¹⁹	10 S	18 08	30	18 57	14 51		36 42			
14	32	59.5		22.7	239	44.6 ¹³⁴		44.9 ¹¹⁹	20	25	18 49	19 18	22 55		29 38			
15	47	59.3		23.1	254	17.0 ¹³⁴	+10	56.7 ¹¹⁸	30	45	19 12	19 44	33 59		21 34			
16	62	59.1		23.5	268	49.3 ¹³³	+11	08.5 ¹¹⁸	35	18 56	25	20 01	39 62		17 31			
17	77	58.9	-21	24.0	283	21.5 ¹³²	+11	20.2 ¹¹⁷	40	19 10	19 42	20 22	16 45 65		3 12 28			
18	92	58.7	-21	24.4	297	53.7 ¹³²	+11	31.9 ¹¹⁷	45	19 26	20 02	20 49	16 53 69		3 06 25			
19	107	58.5		24.8	312	25.8 ¹³¹		43.6 ¹¹⁷	50	46	28	21 27	17 03 73		2 59 21			
20	122	58.2		25.3	326	57.8 ¹³⁰	+11	55.2 ¹¹⁶	52	19 55	41	21 48	07 75		56 19			
21	137	58.0		25.7	341	29.7 ¹²⁹	+12	06.8 ¹¹⁶	54	20 06	20 56	22 16	12 78		52 17			
22	152	57.8		26.1	356	01.6 ¹²⁹		18.3 ¹¹⁵	56	18	21 14	23 04	18 80		49 14			
23	167	57.6		26.5	10	33.4 ¹²⁸		29.8 ¹¹⁵	58	33	21 37	** **	24 83		44 12			
24	182	57.4	-21	27.0	25	05.1 ¹²⁷	+12	41.3 ¹¹⁵	60 S	20 49	22 07	** **	17 31 87		2 40 8			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 29 ^m 0		Mag: -3.9 PMG: 11 ^h 02 ^m				Mag: +0.4 PMG: 17 ^h 11 ^m				Mag: -2.6 PMG: 2 ^h 35 ^m				Mag: -0.4 PMG: 0 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	66	57.6	194	42.3	-17	59.1	102	01.6	-15	30.6	321	05.0	+22	33.7	356	15.6	+20	21.5
1	82	00.0	209	41.5	-18	00.0	117	02.3		30.0	336	07.7		33.7	11	18.3		21.4
2	97	02.5	224	40.8	-18	00.8	132	03.1		29.3	351	10.3		33.7	26	21.0		21.4
3	112	05.0	239	40.1		01.7	147	03.8		28.7	6	13.0		33.8	41	23.7		21.4
4	127	07.4	254	39.4		02.5	162	04.5		28.0	21	15.7		33.8	56	26.3		21.4
5	142	09.9	269	38.7	-18	03.4	177	05.2	-15	27.4	36	18.4	+22	33.8	71	29.0	+20	21.3
6	157	12.3	284	37.9	-18	04.2	192	05.9	-15	26.7	51	21.1	+22	33.8	86	31.7	+20	21.3
7	172	14.8	299	37.2		05.0	207	06.6		26.1	66	23.8		33.9	101	34.4		21.3
8	187	17.3	314	36.5		05.9	222	07.3		25.5	81	26.4		33.9	116	37.0		21.3
9	202	19.7	329	35.8		06.7	237	08.0		24.8	96	29.1		33.9	131	39.7		21.2
10	217	22.2	344	35.1		07.6	252	08.8		24.2	111	31.8		33.9	146	42.4		21.2
11	232	24.7	359	34.3	-18	08.4	267	09.5	-15	23.5	126	34.5	+22	34.0	161	45.1	+20	21.2
12	247	27.1	14	33.6	-18	09.2	282	10.2	-15	22.9	141	37.2	+22	34.0	176	47.8	+20	21.2
13	262	29.6	29	32.9		10.1	297	10.9		22.2	156	39.9		34.0	191	50.4		21.1
14	277	32.1	44	32.2		10.9	312	11.6		21.6	171	42.6		34.1	206	53.1		21.1
15	292	34.5	59	31.4		11.7	327	12.3		20.9	186	45.2		34.1	221	55.8		21.1
16	307	37.0	74	30.7		12.6	342	13.0		20.3	201	47.9		34.1	236	58.5		21.1
17	322	39.4	89	30.0	-18	13.4	357	13.8	-15	19.6	216	50.6	+22	34.1	252	01.2	+20	21.1
18	337	41.9	104	29.3	-18	14.2	12	14.5	-15	19.0	231	53.3	+22	34.2	267	03.8	+20	21.0
19	352	44.4	119	28.5		15.1	27	15.2		18.3	246	56.0		34.2	282	06.5		21.0
20	7	46.8	134	27.8		15.9	42	15.9		17.7	261	58.7		34.2	297	09.2		21.0
21	22	49.3	149	27.1		16.7	57	16.6		17.0	277	01.4		34.3	312	11.9		21.0
22	37	51.8	164	26.4		17.5	72	17.3		16.4	292	04.1		34.3	327	14.6		20.9
23	52	54.2	179	25.6		18.4	87	18.0		15.8	307	06.7		34.3	342	17.2		20.9
24	67	56.7	194	24.9	-18	19.2	102	18.8	-15	15.1	322	09.4	+22	34.3	357	19.9	+20	20.9
Dif	—		-7		-8		+7		+6		+27		0		+27		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 48 ^m 3			Edad: 13 ^d 7 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 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	182	57.4	-21	27.0	25	05.1	+12	41.3	60 N	6	43	7	37	8	31	14	55
1	197	57.2		27.4	39	36.7 ¹²⁶	+12	52.7 ¹¹⁴	58	36		27	16	15	05	18	6
2	212	56.9		27.8	54	08.3 ¹²⁶	+13	04.0 ¹¹³	56	31		18	8	03	13	21	5
3	227	56.7		28.2	68	39.7 ¹²⁴		15.3 ¹¹³	54	26		10	7	52	20	24	4
4	242	56.5		28.7	83	11.1 ¹²⁴		26.6 ¹¹³	52	21	7	03	43	27	26	43	76
5	257	56.3	-21	29.1	97	42.5 ¹²⁴	+13	37.8 ¹¹²	50	6	16	6	57	7	34	15	33
6	272	56.1	-21	29.5	112	13.7 ¹²²	+13	48.9 ¹¹¹	45	6	06	6	43	7	16	15	46
7	287	55.9		29.9	126	44.9 ¹²²	+14	00.0 ¹¹¹	40	5	57	31	7	01	15	57	35
8	302	55.6		30.4	141	15.9 ¹²⁰	+14	11.0 ¹¹⁰	35	49		20	6	48	16	06	38
9	317	55.4		30.8	155	46.9 ¹²⁰		22.0 ¹¹⁰	30	41	6	11	37	14	41	5	01
10	332	55.2		31.2	170	17.8 ¹¹⁹		32.9 ¹⁰⁹	20	27	5	54	17	29	44	4	48
11	347	55.0	-21	31.6	184	48.7 ¹¹⁹	+14	43.8 ¹⁰⁹	10 N	5	12	5	38	6	01	16	41
12	2	54.8	-21	32.0	199	19.4 ¹¹⁷	+14	54.6 ¹⁰⁸	0	4	57	5	22	5	45	16	53
13	17	54.5		32.4	213	50.1 ¹¹⁷	+15	05.3 ¹⁰⁷	10 S	39		5	06	29		17	05
14	32	54.3		32.9	228	20.7 ¹¹⁶		16.0 ¹⁰⁷	20	4	19	4	47	5	11	17	58
15	47	54.1		33.3	242	51.2 ¹¹⁵		26.6 ¹⁰⁶	30	3	52	25		4	51	32	62
16	62	53.9		33.7	257	21.6 ¹¹⁴		37.1 ¹⁰⁵	35	35	4	11	40	41	64	48	35
17	77	53.7	-21	34.1	271	51.9 ¹¹³	+15	47.6 ¹⁰⁵	40	3	14	3	54	4	26	17	50
18	92	53.4	-21	34.5	286	22.1 ¹¹²	+15	58.0 ¹⁰⁴	45	2	48	3	34	4	10	18	02
19	107	53.2		34.9	300	52.3 ¹¹²	+16	08.3 ¹⁰³	50	2	09	3	08	3	50	16	75
20	122	53.0		35.3	315	22.4 ¹¹¹		18.6 ¹⁰³	52	1	48	2	55	40		22	77
21	137	52.8		35.8	329	52.3 ¹⁰⁹		28.7 ¹⁰¹	54	1	20	40	30	30	79		09
22	152	52.5		36.2	344	22.2 ¹⁰⁹		38.9 ¹⁰²	56	0	32	2	22	18	38	82	3
23	167	52.3		36.6	358	52.0 ¹⁰⁸		48.9 ¹⁰⁰	58	** **	1	59	3	03	47	86	2
24	182	52.1	-21	37.0	13	21.7 ¹⁰⁷	+16	58.9 ¹⁰⁰	60 S	** **	1	29	2	46	18	58	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 25 ^m 0		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: +0.4 PMG: 17 ^h 10 ^m		Mag: -2.6 PMG: 2 ^h 31 ^m		Mag: -0.4 PMG: 0 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	56.7	194	24.9	-18	19.2	102	18.8	-15	15.1
1	82	59.2	209	24.2		20.0	117	19.5		14.5
2	98	01.6	224	23.4		20.8	132	20.2		13.8
3	113	04.1	239	22.7		21.7	147	20.9		13.2
4	128	06.6	254	22.0		22.5	162	21.6		12.5
5	143	09.0	269	21.2	-18	23.3	177	22.3	-15	11.9
6	158	11.5	284	20.5	-18	24.1	192	23.0	-15	11.2
7	173	13.9	299	19.8		25.0	207	23.8		10.6
8	188	16.4	314	19.0		25.8	222	24.5		09.9
9	203	18.9	329	18.3		26.6	237	25.2		09.3
10	218	21.3	344	17.6		27.4	252	25.9		08.6
11	233	23.8	359	16.8	-18	28.2	267	26.6	-15	08.0
12	248	26.3	14	16.1	-18	29.0	282	27.3	-15	07.3
13	263	28.7	29	15.4		29.9	297	28.1		06.7
14	278	31.2	44	14.6		30.7	312	28.8		06.0
15	293	33.7	59	13.9		31.5	327	29.5		05.3
16	308	36.1	74	13.2		32.3	342	30.2		04.7
17	323	38.6	89	12.4	-18	33.1	357	30.9	-15	04.0
18	338	41.1	104	11.7	-18	33.9	12	31.6	-15	03.4
19	353	43.5	119	10.9		34.7	27	32.4		02.7
20	8	46.0	134	10.2		35.5	42	33.1		02.1
21	23	48.4	149	09.5		36.3	57	33.8		01.4
22	38	50.9	164	08.7		37.1	72	34.5		00.8
23	53	53.4	179	08.0		38.0	87	35.2	-15	00.1
24	68	55.8	194	07.2	-18	38.8	102	35.9	-14	59.5
Dif	—		-7		-8		+7		+7	
							+27		0	
									+27	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 7			Edad: 14 ^d 7 PHE { 4 ^h : 57:0 12 ^h : 57:2 20 ^h : 57:4 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	182	52.1	-21	37.0	13	21.7	+16	58.9	60 N	15 04	15 58	16 53	15 10 22	7 40 89
1	197	51.9		37.4	27	51.4 ¹⁰⁷	+17	08.7 ⁹⁸	58	19	16 08	16 59	23 26	27 85
2	212	51.6		37.8	42	20.9 ¹⁰⁵		18.6 ⁹⁹	56	32	17	17 05	34 30	17 81
3	227	51.4		38.2	56	50.3 ¹⁰⁴		28.3 ⁹⁷	54	43	25	10	44 32	7 07 79
4	242	51.2		38.6	71	19.7 ¹⁰⁴		37.9 ⁹⁶	52	15 53	32	15	15 53 34	6 59 76
5	257	51.0	-21	39.0	85	49.0 ¹⁰³	+17	47.5 ⁹⁶	50	16 02	16 39	17 20	16 01 36	6 51 74
6	272	50.7	-21	39.4	100	18.1 ¹⁰¹	+17	57.0 ⁹⁵	45	16 20	16 53	17 30	16 18 40	6 35 70
7	287	50.5		39.8	114	47.2 ¹⁰¹	+18	06.3 ⁹³	40	36	17 06	39	32 43	22 67
8	302	50.3		40.2	129	16.2 ¹⁰⁰		15.6 ⁹³	35	16 49	16	47	44 45	11 65
9	317	50.1		40.6	143	45.1 ⁹⁹		24.9 ⁹³	30	17 00	26	17 55	16 55 46	6 01 63
10	332	49.8		41.0	158	13.9 ⁹⁸		34.0 ⁹¹	20	19	43	18 10	17 13 50	5 45 59
11	347	49.6	-21	41.4	172	42.7 ⁹⁸	+18	43.0 ⁹⁰	10 N	17 36	17 59	18 25	17 29 52	5 30 56
12	2	49.4	-21	41.8	187	11.3 ⁹⁶	+18	52.0 ⁹⁰	0	17 52	18 15	18 41	17 44 55	5 17 53
13	17	49.2		42.2	201	39.8 ⁹⁵	+19	00.8 ⁸⁸	10 S	18 09	31	18 58	17 59 57	5 03 50
14	32	48.9		42.6	216	08.3 ⁹⁵		09.6 ⁸⁸	20	26	18 50	19 19	18 15 60	4 49 47
15	47	48.7		43.0	230	36.7 ⁹⁴		18.2 ⁸⁶	30	46	19 13	19 46	34 63	33 43
16	62	48.5		43.4	245	04.9 ⁹²		26.8 ⁸⁶	35	18 58	27	20 03	45 65	23 41
17	77	48.3	-21	43.8	259	33.1 ⁹²	+19	35.2 ⁸⁴	40	19 12	19 44	20 24	18 57 67	4 12 39
18	92	48.0	-21	44.2	274	01.2 ⁹¹	+19	43.6 ⁸⁴	45	19 28	20 05	20 52	19 12 70	4 00 35
19	107	47.8		44.6	288	29.2 ⁹⁰	+19	51.8 ⁸²	50	49	31	21 31	31 73	3 44 32
20	122	47.6		45.0	302	57.1 ⁸⁹	+20	00.0 ⁸²	52	19 59	20 44	21 53	39 75	37 30
21	137	47.3		45.4	317	24.9 ⁸⁸	+20	08.0 ⁸⁰	54	20 09	21 00	22 23	19 49 77	29 28
22	152	47.1		45.8	331	52.7 ⁸⁸		16.0 ⁸⁰	56	22	19	23 21	20 00 80	21 24
23	167	46.9		46.2	346	20.3 ⁸⁶		23.8 ⁷⁸	58	37	21 42	** **	13 83	3 11 21
24	182	46.6	-21	46.6	0	47.9 ⁸⁶	+20	31.5 ⁷⁷	60 S	20 54	22 15	** **	20 28 87	2 59 17
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 21 ^m 1		Mag: -3.9 PMG: 11 ^h 04 ^m		Mag: +0.4 PMG: 17 ^h 09 ^m		Mag: -2.7 PMG: 2 ^h 27 ^m		Mag: -0.4 PMG: 0 ^h 06 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	68	55.8	194	07.2	102	35.9	323	14.1	358	24.3				
1	83	58.3	209	06.5	117	36.7	338	16.8	13	26.9				
2	99	00.8	224	05.8	132	37.4	353	19.5	28	29.6				
3	114	03.2	239	05.0	147	38.1	8	22.2	43	32.3				
4	129	05.7	254	04.3	162	38.8	23	24.9	58	35.0				
5	144	08.2	269	03.5	177	39.5	38	27.6	73	37.7				
6	159	10.6	284	02.8	192	40.2	53	30.3	88	40.3				
7	174	13.1	299	02.0	207	41.0	68	33.0	103	43.0				
8	189	15.5	314	01.3	222	41.7	83	35.7	118	45.7				
9	204	18.0	329	00.5	237	42.4	98	38.4	133	48.4				
10	219	20.5	343	59.8	252	43.1	113	41.1	148	51.1				
11	234	22.9	358	59.0	267	43.8	128	43.8	163	53.7				
12	249	25.4	13	58.3	282	44.6	143	46.5	178	56.4				
13	264	27.9	28	57.5	297	45.3	158	49.2	193	59.1				
14	279	30.3	43	56.8	312	46.0	173	51.9	209	01.8				
15	294	32.8	58	56.0	327	46.7	188	54.6	224	04.5				
16	309	35.3	73	55.3	342	47.4	203	57.3	239	07.1				
17	324	37.7	88	54.5	357	48.1	219	00.0	254	09.8				
18	339	40.2	103	53.8	12	48.9	234	02.7	269	12.5				
19	354	42.7	118	53.0	27	49.6	249	05.4	284	15.2				
20	9	45.1	133	52.3	42	50.3	264	08.1	299	17.9				
21	24	47.6	148	51.5	57	51.0	279	10.8	314	20.6				
22	39	50.0	163	50.8	72	51.7	294	13.5	329	23.2				
23	54	52.5	178	50.0	87	52.5	309	16.2	344	25.9				
24	69	55.0	193	49.3	102	53.2	324	18.9	359	28.6				
Dif	—		-7		+7		+27		0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2			Edad: 15 ^d 7	PHE {	4 ^h : 57'6 12 ^h : 57'8 20 ^h : 58'0	R°: ***m																
	PMG: 11 ^h 49 ^m 1																						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	182	46.6	-21	0	47.9	+20	31.5	76	60 N	6	46	7	41	8	35	15	32	36	9	09	82		
1	197	46.4		15	15.4		39.1	76	58		39		30		20	15	49	40	8	52	79		
2	212	46.2		29	42.8		46.6	75	56		34		21		8	16	04	42	38	76			
3	227	46.0		44	10.1	+20	54.0	74	54		28		13		7	16	44		26	74			
4	242	45.7		58	37.3	+21	01.3	73	52		23		7	06		27	46		15	72			
5	257	45.5	-21	73	04.4	+21	08.5	72	50		6	19	6	59	7	37	16	37	47	8	05	71	
6	272	45.3	-21	87	31.4	+21	15.5	70	45		6	08	6	45	7	18	16	58	49	7	45	69	
7	287	45.0		101	58.4		22.4	69	40		5	59		33	7	03	17	15	50		29	66	
8	302	44.8		116	25.3		29.2	68	35		51		22		6	50		29	52		16	64	
9	317	44.6		130	52.1		35.9	67	30		43		6	12		38	17	41	54	7	04	63	
10	332	44.3		145	18.8		42.5	66	20		28		5	55		19	18	03	55	6	44	60	
11	347	44.1	-21	159	45.4	+21	48.9	64	10 N		5	13	5	39	6	02	18	21	57		6	26	58
12	2	43.9	-21	174	12.0	+21	55.2	63	0		4	57	5	23	5	45	18	39	58		6	10	56
13	17	43.6		188	38.4	+22	01.4	62	10 S		40		5	06		29	18	56	60		5	53	55
14	32	43.4		203	04.8		07.5	61	20		4	19	4	47	5	12	19	15	61		36	52	
15	47	43.2		217	31.1		13.4	59	30		3	52		24	4	51		37	62		16	50	
16	62	42.9		231	57.3		19.2	58	35		35		4	10		39	19	50	63		5	04	48
17	77	42.7	-21	246	23.5	+22	24.9	57	40		3	13	3	54	4	26	20	04	65		4	51	46
18	92	42.4	-21	260	49.6	+22	30.5	56	45		2	46	3	33	4	09	20	22	66		4	35	44
19	107	42.2		275	15.6		35.9	54	50		2	07	3	06	3	49		44	68		16	41	
20	122	42.0		289	41.5		41.2	53	52		1	45	2	53		39	20	54	69		4	07	39
21	137	41.7		304	07.4		46.3	51	54		1	15		37		28	21	06	70		3	57	37
22	152	41.5		318	33.2		51.3	50	56		0	17	2	19		15		20	71		45	35	
23	167	41.3		332	58.9	+22	56.2	49	58	** **	1	55	3	01		20		36	73		32	32	
24	182	41.0	-21	347	24.5	+23	00.9	47	60 S	** **	1	23	2	43		21	55	76		3	16	28	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 17 ^m 2		Mag: -3.9 PMG: 11 ^h 05 ^m			Mag: +0.4 PMG: 17 ^h 08 ^m			Mag: -2.7 PMG: 2 ^h 22 ^m			Mag: -0.4 PMG: 0 ^h 02 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	69	55.0	193	49.3	-18	57.8	102	53.2	-14	43.7	324	18.9	+22	35.7	359	28.6	+20	19.7	
1	84	57.4	208	48.5		58.6	117	53.9		43.1	339	21.6		35.7	14	31.3		19.7	
2	99	59.9	223	47.8	-18	59.4	132	54.6		42.4	354	24.3		35.8	29	34.0		19.7	
3	115	02.4	238	47.0	-19	00.1	147	55.3		41.7	9	27.0		35.8	44	36.6		19.6	
4	130	04.8	253	46.3		00.9	162	56.1		41.1	24	29.7		35.8	59	39.3		19.6	
5	145	07.3	268	45.5	-19	01.7	177	56.8	-14	40.4	39	32.4	+22	35.9	74	42.0	+20	19.6	
6	160	09.8	283	44.7	-19	02.5	192	57.5	-14	39.8	54	35.2	+22	35.9	89	44.7	+20	19.6	
7	175	12.2	298	44.0		03.3	207	58.2		39.1	69	37.9		35.9	104	47.4		19.5	
8	190	14.7	313	43.2		04.0	222	58.9		38.4	84	40.6		35.9	119	50.0		19.5	
9	205	17.2	328	42.5		04.8	237	59.7		37.8	99	43.3		36.0	134	52.7		19.5	
10	220	19.6	343	41.7		05.6	253	00.4		37.1	114	46.0		36.0	149	55.4		19.5	
11	235	22.1	358	40.9	-19	06.4	268	01.1	-14	36.5	129	48.7	+22	36.0	164	58.1	+20	19.4	
12	250	24.5	13	40.2	-19	07.1	283	01.8	-14	35.8	144	51.4	+22	36.1	180	00.8	+20	19.4	
13	265	27.0	28	39.4		07.9	298	02.6		35.1	159	54.1		36.1	195	03.4		19.4	
14	280	29.5	43	38.7		08.7	313	03.3		34.5	174	56.8		36.1	210	06.1		19.4	
15	295	31.9	58	37.9		09.4	328	04.0		33.8	189	59.5		36.2	225	08.8		19.3	
16	310	34.4	73	37.1		10.2	343	04.7		33.1	205	02.2		36.2	240	11.5		19.3	
17	325	36.9	88	36.4	-19	11.0	358	05.4	-14	32.5	220	04.9	+22	36.2	255	14.2	+20	19.3	
18	340	39.3	103	35.6	-19	11.7	13	06.2	-14	31.8	235	07.7	+22	36.2	270	16.9	+20	19.3	
19	355	41.8	118	34.8		12.5	28	06.9		31.2	250	10.4		36.3	285	19.5		19.2	
20	10	44.3	133	34.1		13.3	43	07.6		30.5	265	13.1		36.3	300	22.2		19.2	
21	25	46.7	148	33.3		14.0	58	08.3		29.8	280	15.8		36.3	315	24.9		19.2	
22	40	49.2	163	32.6		14.8	73	09.0		29.2	295	18.5		36.4	330	27.6		19.2	
23	55	51.7	178	31.8		15.6	88	09.8		28.5	310	21.2		36.4	345	30.3		19.1	
24	70	54.1	193	31.0	-19	16.3	103	10.5	-14	27.8	325	23.9	+22	36.4	0	32.9	+20	19.1	
Dif	—		-8			-8	+7		+7		+27		0		-8973				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 49 ^m 5			Edad: 16 ^d 7 PHE { SD: 15/8 PMG: 0 ^h 52 ^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	182	41.0	-21	55.8	347	24.5	+23 00.9	60 N	15 01	15 56	16 51	16 08 58	10 31 66	
1	197	40.8		56.1	1	50.1	05.5 46	58	17	16 06	16 58	29 58	10 11 65	
2	212	40.6		56.5	16	15.6	10.0 45	56	30	16	17 04	16 46 58	9 54 64	
3	227	40.3		56.9	30	41.1	14.3 43	54	41	24	09	17 00 59	40 64	
4	242	40.1		57.2	45	06.5	18.5 42	52	15 52	31	14	13 59	27 64	
5	257	39.8	-21	57.6	59	31.8	+23 22.5 40	50	16 01	16 38	17 19	17 24 59	9 16 64	
6	272	39.6	-21	58.0	73	57.1	+23 26.4 39	45	16 20	16 53	17 29	17 47 59	8 54 62	
7	287	39.4		58.4	88	22.3	30.1 37	40	35	17 05	39	18 05 60	35 62	
8	302	39.1		58.7	102	47.4	33.7 36	35	16 48	16	47	21 60	20 61	
9	317	38.9		59.1	117	12.5	37.2 35	30	17 00	26	17 55	35 59	8 07 61	
10	332	38.6		59.5	131	37.6	40.5 33	20	20	43	18 11	18 58 59	7 44 60	
11	347	38.4	-21	59.8	146	02.5	+23 43.7 32	10 N	17 37	17 59	18 26	19 18 59	7 24 60	
12	2	38.2	-22	00.2	160	27.5	+23 46.7 30	0	17 53	18 15	18 41	19 37 59	7 06 59	
13	17	37.9		00.6	174	52.3	49.5 28	10 S	18 10	32	18 59	19 56 59	6 48 58	
14	32	37.7		00.9	189	17.2	52.2 27	20	27	18 52	19 20	20 16 59	28 58	
15	47	37.4		01.3	203	42.0	54.8 26	30	18 48	19 15	19 48	39 59	6 06 56	
16	62	37.2		01.6	218	06.7	57.2 24	35	19 00	29	20 05	20 53 59	5 52 56	
17	77	37.0	-22	02.0	232	31.4	+23 59.5 23	40	19 14	19 46	20 27	21 09 59	5 37 55	
18	92	36.7	-22	02.4	246	56.0	+24 01.6 21	45	19 31	20 07	20 55	21 28 58	5 19 54	
19	107	36.5		02.7	261	20.6	03.5 19	50	19 51	34	21 35	21 52 58	4 57 52	
20	122	36.2		03.1	275	45.2	05.3 18	52	20 01	20 48	21 58	22 03 58	46 52	
21	137	36.0		03.4	290	09.8	06.9 16	54	13	21 04	22 30	16 57	34 51	
22	152	35.7		03.8	304	34.3	08.4 15	56	25	23	** **	31 57	20 50	
23	167	35.5		04.2	318	58.7	09.7 13	58	40	21 48	** **	22 49 56	4 04 46	
24	182	35.3	-22	04.5	333	23.2	+24 10.9 12	60 S	20 58	22 22	** **	23 11 55	3 44 46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 19 ^h 13 ^m 2		Mag: -3.9 PMG: 11 ^h 07 ^m		Mag: +0.4 PMG: 17 ^h 06 ^m		Mag: -2.7 PMG: 2 ^h 18 ^m		Mag: -0.4 PMG: 23 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	70	54.1	193	31.0	-19	16.3	103	10.5	-14	27.8
1	85	56.6	208	30.3		17.1	118	11.2		27.2
2	100	59.0	223	29.5		17.8	133	11.9		26.5
3	116	01.5	238	28.7		18.6	148	12.7		25.9
4	131	04.0	253	27.9		19.4	163	13.4		25.2
5	146	06.4	268	27.2	-19	20.1	178	14.1	-14	24.5
6	161	08.9	283	26.4	-19	20.9	193	14.8	-14	23.9
7	176	11.4	298	25.6		21.6	208	15.6		23.2
8	191	13.8	313	24.9		22.4	223	16.3		22.5
9	206	16.3	328	24.1		23.1	238	17.0		21.9
10	221	18.8	343	23.3		23.9	253	17.7		21.2
11	236	21.2	358	22.6	-19	24.6	268	18.4	-14	20.5
12	251	23.7	13	21.8	-19	25.4	283	19.2	-14	19.9
13	266	26.2	28	21.0		26.1	298	19.9		19.2
14	281	28.6	43	20.2		26.9	313	20.6		18.5
15	296	31.1	58	19.5		27.6	328	21.3		17.9
16	311	33.5	73	18.7		28.4	343	22.1		17.2
17	326	36.0	88	17.9	-19	29.1	358	22.8	-14	16.5
18	341	38.5	103	17.1	-19	29.9	13	23.5	-14	15.9
19	356	40.9	118	16.4		30.6	28	24.2		15.2
20	11	43.4	133	15.6		31.4	43	25.0		14.5
21	26	45.9	148	14.8		32.1	58	25.7		13.9
22	41	48.3	163	14.0		32.8	73	26.4		13.2
23	56	50.8	178	13.2		33.6	88	27.1		12.5
24	71	53.3	193	12.5	-19	34.3	103	27.9	-14	11.9
Dif	—		-8 -7		+7 +7		+27 0		+27 0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 49 ^m 8			Edad: 17 ^d 7 PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 SD: 15'9 PMG: 1 ^h 51 ^m 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	35.3	-22	04.5	333	23.2	+24	10.9	10	60 N	6 49	7 44	8 39	17 06	79	11 37	45	
1	197	35.0		04.9	347	47.6		11.9	9	58	42	34	23	27	76	11 16	47	
2	212	34.8		05.2	2	11.9		12.8	7	56	36	24	8 10	44	74	10 58	49	
3	227	34.5		05.6	16	36.3		13.5	5	54	31	16	7 59	17 59	72	44	50	
4	242	34.3		05.9	31	00.6		14.0	4	52	26	09	48	18 12	71	31	51	
5	257	34.0	-22	06.3	45	24.9	+24	14.4	2	50	6 21	7 02	7 39	18 23	70	10 20	52	
6	272	33.8	-22	06.6	59	49.2	+24	14.6	1	45	6 10	6 47	7 20	18 46	68	9 56	54	
7	287	33.5		07.0	74	13.5		14.7	1	40	6 01	34	7 05	19 05	66	37	55	
8	302	33.3		07.3	88	37.7		14.6	1	35	5 52	24	6 51	21	65	21	56	
9	317	33.1		07.7	103	01.9		14.4	2	30	44	6 14	40	34	64	9 08	56	
10	332	32.8		08.0	117	26.2		14.0	4	20	29	5 56	20	19 57	63	8 44	58	
11	347	32.6	-22	08.4	131	50.4	+24	13.4	6	10 N	5 14	5 40	6 03	20 17	61	8 24	59	
12	2	32.3	-22	08.7	146	14.6	+24	12.7	7	0	4 58	5 24	5 46	20 36	59	8 05	60	
13	17	32.1		09.1	160	38.8		11.8	9	10 S	40	5 07	30	20 55	58	7 46	60	
14	32	31.8		09.4	175	02.9		10.7	11	20	4 19	4 48	5 12	21 15	56	26	61	
15	47	31.6		09.8	189	27.1		09.5	12	30	3 51	24	4 51	38	54	7 02	62	
16	62	31.3		10.1	203	51.3		08.1	14	35	34	4 10	39	21 52	53	6 48	63	
17	77	31.1	-22	10.5	218	15.5	+24	06.6	15	40	3 12	3 53	4 25	22 08	51	6 32	64	
18	92	30.8	-22	10.8	232	39.6	+24	04.9	17	45	2 44	3 32	4 08	22 26	50	6 13	64	
19	107	30.6		11.2	247	03.8		03.1	18	50	2 04	3 05	3 48	22 50	46	5 49	65	
20	122	30.3		11.5	261	28.0	+24	01.1	20	52	1 41	2 51	38	23 01	45	38	65	
21	137	30.1		11.8	275	52.2	+23	58.9	22	54	1 09	35	26	13	44	25	66	
22	152	29.8		12.2	290	16.4		56.6	23	56	** ** *	2 16	3 14	28	42	5 10	66	
23	167	29.6		12.5	304	40.6		54.1	25	58	** ** *	1 51	2 59	23 45	39	4 52	67	
24	182	29.3	-22	12.9	319	04.9	+23	51.5	26	60 S	** ** *	1 17	2 41	** ** *	4 30	69		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 09 ^m 3		Mag: -3.9 PMG: 11 ^h 08 ^m		Mag: +0.4 PMG: 17 ^h 05 ^m		Mag: -2.7 PMG: 2 ^h 14 ^m		Mag: -0.4 PMG: 23 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	71	53.3	193	12.5	-19	34.3	103	27.9	+22	37.1
1	86	55.7	208	11.7		35.1	118	28.6		37.2
2	101	58.2	223	10.9		35.8	133	29.3		37.2
3	117	00.7	238	10.1		36.5	148	30.0		37.2
4	132	03.1	253	09.3		37.3	163	30.8		37.3
5	147	05.6	268	08.6	-19	38.0	178	31.5	+22	37.3
6	162	08.0	283	07.8	-19	38.7	193	32.2	+22	37.3
7	177	10.5	298	07.0		39.5	208	32.9		37.4
8	192	13.0	313	06.2		40.2	223	33.7		37.4
9	207	15.4	328	05.4		40.9	238	34.4		37.4
10	222	17.9	343	04.6		41.6	253	35.1		37.5
11	237	20.4	358	03.9	-19	42.4	268	35.8	+22	37.5
12	252	22.8	13	03.1	-19	43.1	283	36.6	+22	37.5
13	267	25.3	28	02.3		43.8	298	37.3		37.5
14	282	27.8	43	01.5		44.6	313	38.0		37.6
15	297	30.2	58	00.7		45.3	328	38.8		37.6
16	312	32.7	72	59.9		46.0	343	39.5		37.6
17	327	35.2	87	59.1	-19	46.7	358	40.2	+22	37.7
18	342	37.6	102	58.4	-19	47.4	13	40.9	+22	37.7
19	357	40.1	117	57.6		48.2	28	41.7		37.7
20	12	42.5	132	56.8		48.9	43	42.4		37.8
21	27	45.0	147	56.0		49.6	58	43.1		37.8
22	42	47.5	162	55.2		50.3	73	43.8		37.8
23	57	49.9	177	54.4		51.0	88	44.6		37.9
24	72	52.4	192	53.6	-19	51.8	103	45.3	+22	37.9
Dif	—		-8 -7		+7 +7		+27 0		+27 0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 50 ^m 2				Edad: 18 ^d 7 PHE { SD: 16:0 PMG: 2 ^h 50 ^m													
					R°: 59 ^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	182	29.3	-22	12.9	319	04.9	+23	51.5	60 N	14 59	15 54	16 50	18 25 92		12 22 28			
1	197	29.1		13.2	333	29.1		52	58	15 15	16 05	16 57	43 88		12 03 32			
2	212	28.8		13.5	347	53.4		53	56	29	14	17 03	18 58 85		11 47 36			
3	227	28.6		13.9	2	17.6		52	54	40	23	08	19 11 82		34 38			
4	242	28.3		14.2	16	41.9		53	52	15 50	30	13	23 79		22 40			
5	257	28.1	-22	14.5	31	06.2	+23	53	50	16 00	16 37	17 18	19 33 77		11 12 41			
6	272	27.8	-22	14.9	45	30.6	+23	54	45	16 19	16 52	17 29	19 54 74		10 50 45			
7	287	27.6		15.2	59	54.9		53	40	35	17 05	39	20 11 71		32 48			
8	302	27.3		15.5	74	19.3		54	35	16 48	16	47	26 68		17 50			
9	317	27.1		15.9	88	43.7		54	30	17 00	26	17 56	20 38 67		10 04 51			
10	332	26.8		16.2	103	08.2		55	20	20	17 44	18 11	21 00 63		9 42 54			
11	347	26.6	-22	16.5	117	32.7	+23	55	10 N	17 37	18 00	18 26	21 18 60		9 23 56			
12	2	26.3	-22	16.9	131	57.2	+23	55	0	17 54	18 16	18 42	21 35 58		9 05 58			
13	17	26.1		17.2	146	21.7	+23	55	10 S	18 11	33	19 00	21 53 54		8 46 61			
14	32	25.8		17.5	160	46.3	+22	58	20	29	18 53	22	22 11 52		27 63			
15	47	25.6		17.9	175	10.9		56	30	18 49	19 17	19 49	32 48		8 04 66			
16	62	25.3		18.2	189	35.6		57	35	19 02	31	20 07	45 45		7 51 67			
17	77	25.0	-22	18.5	204	00.3	+22	57	40	19 16	19 48	20 29	22 59 43		7 36 69			
18	92	24.8	-22	18.8	218	25.0	+22	57	45	19 33	20 10	20 57	23 16 40		7 17 71			
19	107	24.5		19.2	232	49.8		58	50	19 54	37	21 39	36 37		6 54 75			
20	122	24.3		19.5	247	14.6		58	52	20 04	20 51	22 02	46 34		43 76			
21	137	24.0		19.8	261	39.4		58	54	16	21 07	22 36	23 57 32		31 78			
22	152	23.8		20.1	276	04.4		60	56	29	27	** ** *	** ** **		6 16 81			
23	167	23.5		20.4	290	29.3		59	58	20 44	21 53	** ** *	** ** **		5 59 84			
24	182	23.3	-22	20.8	304	54.3	+22	60	60 S	21 02	22 29	** ** *	0 06 35		5 39 87			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 05 ^m 4		Mag: -3.9 PMG: 11 ^h 09 ^m				Mag: +0.5 PMG: 17 ^h 04 ^m				Mag: -2.7 PMG: 2 ^h 09 ^m				Mag: -0.4 PMG: 23 ^h 45 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	72	52.4	192	53.6	-19	51.8	103	45.3	-13	55.8	327	34.4	+22	37.9	2	41.6	+20	18.0
1	87	54.9	207	52.8		52.5	118	46.0		55.1	342	37.2		37.9	17	44.3		17.9
2	102	57.3	222	52.0		53.2	133	46.8		54.4	357	39.9		37.9	32	47.0		17.9
3	117	59.8	237	51.2		53.9	148	47.5		53.7	12	42.6		38.0	47	49.7		17.9
4	133	02.3	252	50.4		54.6	163	48.2		53.1	27	45.3		38.0	62	52.4		17.9
5	148	04.7	267	49.7	-19	55.3	178	48.9	-13	52.4	42	48.1	+22	38.0	77	55.0	+20	17.8
6	163	07.2	282	48.9	-19	56.0	193	49.7	-13	51.7	57	50.8	+22	38.1	92	57.7	+20	17.8
7	178	09.6	297	48.1		56.7	208	50.4		51.0	72	53.5		38.1	108	00.4		17.8
8	193	12.1	312	47.3		57.4	223	51.1		50.4	87	56.3		38.1	123	03.1		17.8
9	208	14.6	327	46.5		58.2	238	51.9		49.7	102	59.0		38.2	138	05.8		17.7
10	223	17.0	342	45.7		58.9	253	52.6		49.0	118	01.7		38.2	153	08.5		17.7
11	238	19.5	357	44.9	-19	59.6	268	53.3	-13	48.3	133	04.4	+22	38.2	168	11.1	+20	17.7
12	253	22.0	12	44.1	-20	00.3	283	54.0	-13	47.7	148	07.2	+22	38.3	183	13.8	+20	17.7
13	268	24.4	27	43.3		01.0	298	54.8		47.0	163	09.9		38.3	198	16.5		17.6
14	283	26.9	42	42.5		01.7	313	55.5		46.3	178	12.6		38.3	213	19.2		17.6
15	298	29.4	57	41.7		02.4	328	56.2		45.6	193	15.4		38.4	228	21.9		17.6
16	313	31.8	72	40.9		03.1	343	57.0		45.0	208	18.1		38.4	243	24.5		17.6
17	328	34.3	87	40.1	-20	03.8	358	57.7	-13	44.3	223	20.8	+22	38.4	258	27.2	+20	17.5
18	343	36.8	102	39.3	-20	04.5	13	58.4	-13	43.6	238	23.5	+22	38.4	273	29.9	+20	17.5
19	358	39.2	117	38.5		05.2	28	59.1		42.9	253	26.3		38.5	288	32.6		17.5
20	13	41.7	132	37.7		05.9	43	59.9		42.2	268	29.0		38.5	303	35.3		17.5
21	28	44.1	147	36.9		06.6	59	00.6		41.6	283	31.7		38.5	318	38.0		17.5
22	43	46.6	162	36.1		07.3	74	01.3		40.9	298	34.5		38.6	333	40.6		17.4
23	58	49.1	177	35.3		07.9	89	02.1		40.2	313	37.2		38.6	348	43.3		17.4
24	73	51.5	192	34.5	-20	08.6	104	02.8	-13	39.5	328	39.9	+22	38.6	3	46.0	+20	17.4
Dif	—		-8 -7				+7 +7				+27 0				+27 0			

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: 19 ^d 7 PHE { 4 ^h : 59:1 12 ^h : 59:2 20 ^h : 59:2 SD: 16:1 PMG: 3 ^h 49 ^m R°: 57 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	182	23.3	-22	20.8	304	54.3	+22	01.8	60 N	6 52	7 47	8 43	19 57	96	12 50	17				
1	197	23.0		21.1	319	19.4	+21	55.4	58	45	36	27	20 11	92	35	22				
2	212	22.7		21.4	333	44.5		48.8	56	39	27	13	23 88		23	25				
3	227	22.5		21.7	348	09.6		42.1	54	33	19	8 01	33 85		12	28				
4	242	22.2		22.0	2	34.9		35.2	52	28	11	7 51	42 83		12	02	30			
5	257	22.0	-22	22.4	17	00.1	+21	28.2	50	6 23	7 04	7 42	20 50	81	11 53	33				
6	272	21.7	-22	22.7	31	25.4	+21	21.1	45	6 12	6 49	7 22	21 08	76	11 35	36				
7	287	21.5		23.0	45	50.8		13.8	40	6 02	36	7 06	22 72		20	40				
8	302	21.2		23.3	60	16.2	+21	06.4	35	5 54	25	6 53	34 69		11 07	43				
9	317	20.9		23.6	74	41.7	+20	58.9	30	46	6 15	41	21 45	66	10 55	46				
10	332	20.7		23.9	89	07.3		51.2	20	30	5 57	21	22 03	61	36	49				
11	347	20.4	-22	24.2	103	32.9	+20	43.4	10 N	5 15	5 41	6 04	22 18	58	10 19	53				
12	2	20.2	-22	24.6	117	58.5	+20	35.5	0	4 59	5 25	5 47	22 33	54	10 03	56				
13	17	19.9		24.9	132	24.3		27.4	10 S	40	5 07	30	22 47	51	9 47	59				
14	32	19.6		25.2	146	50.0		19.2	20	4 19	4 48	5 12	23 03	47	30	62				
15	47	19.4		25.5	161	15.9		10.9	30	3 51	24	4 51	20 43		9 10	66				
16	62	19.1		25.8	175	41.8	+20	02.5	35	34	4 10	39	30 41		8 58	69				
17	77	18.9	-22	26.1	190	07.8	+19	53.9	40	3 12	3 52	4 25	23 42	37	8 45	71				
18	92	18.6	-22	26.4	204	33.8	+19	45.2	45	2 43	3 31	4 08	23 56	33	8 28	76				
19	107	18.3		26.7	218	59.9		36.4	50	2 02	3 03	3 47	** ** *	**	8 09	79				
20	122	18.1		27.0	233	26.1		27.4	52	1 38	2 50	36	** ** *	**	7 59	82				
21	137	17.8		27.3	247	52.3		18.4	54	1 04	33	25	** ** *	**	49	84				
22	152	17.6		27.6	262	18.6	+19	09.2	56	** ** *	2 13	3 12	0 09	30	37	87				
23	167	17.3		27.9	276	44.9	+18	59.9	58	** ** *	1 48	2 57	24 26		23	90				
24	182	17.0	-22	28.2	291	11.4	+18	50.5	60 S	** ** *	1 11	2 38	0 41	21	7 06	96				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 19 ^h 01 ^m 4			Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +0.5 PMG: 17 ^h 03 ^m			Mag: -2.7 PMG: 2 ^h 05 ^m			Mag: -0.4 PMG: 23 ^h 41 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	73	51.5	192	34.5	-20	08.6	104	02.8	-13	39.5	328	39.9	+22	38.6	3	46.0	+20	17.4		
1	88	54.0	207	33.7		09.3	119	03.5		38.9	343	42.7		38.7	18	48.7		17.4		
2	103	56.5	222	32.9		10.0	134	04.3		38.2	358	45.4		38.7	33	51.4		17.3		
3	118	58.9	237	32.1		10.7	149	05.0		37.5	13	48.1		38.7	48	54.0		17.3		
4	134	01.4	252	31.3		11.4	164	05.7		36.8	28	50.9		38.8	63	56.7		17.3		
5	149	03.9	267	30.4	-20	12.1	179	06.4	-13	36.1	43	53.6	+22	38.8	78	59.4	+20	17.3		
6	164	06.3	282	29.6	-20	12.8	194	07.2	-13	35.5	58	56.3	+22	38.8	94	02.1	+20	17.2		
7	179	08.8	297	28.8		13.5	209	07.9		34.8	73	59.1		38.9	109	04.8		17.2		
8	194	11.3	312	28.0		14.1	224	08.6		34.1	89	01.8		38.9	124	07.4		17.2		
9	209	13.7	327	27.2		14.8	239	09.4		33.4	104	04.5		38.9	139	10.1		17.2		
10	224	16.2	342	26.4		15.5	254	10.1		32.7	119	07.3		39.0	154	12.8		17.1		
11	239	18.6	357	25.6	-20	16.2	269	10.8	-13	32.1	134	10.0	+22	39.0	169	15.5	+20	17.1		
12	254	21.1	12	24.8	-20	16.9	284	11.6	-13	31.4	149	12.8	+22	39.0	184	18.2	+20	17.1		
13	269	23.6	27	24.0		17.5	299	12.3		30.7	164	15.5		39.0	199	20.9		17.1		
14	284	26.0	42	23.2		18.2	314	13.0		30.0	179	18.2		39.1	214	23.5		17.0		
15	299	28.5	57	22.4		18.9	329	13.8		29.3	194	21.0		39.1	229	26.2		17.0		
16	314	31.0	72	21.6		19.6	344	14.5		28.7	209	23.7		39.1	244	28.9		17.0		
17	329	33.4	87	20.7	-20	20.3	359	15.2	-13	28.0	224	26.4	+22	39.2	259	31.6	+20	17.0		
18	344	35.9	102	19.9	-20	20.9	14	16.0	-13	27.3	239	29.2	+22	39.2	274	34.3	+20	16.9		
19	359	38.4	117	19.1		21.6	29	16.7		26.6	254	31.9		39.2	289	36.9		16.9		
20	14	40.8	132	18.3		22.3	44	17.4		25.9	269	34.6		39.3	304	39.6		16.9		
21	29	43.3	147	17.5		22.9	59	18.1		25.3	284	37.4		39.3	319	42.3		16.9		
22	44	45.8	162	16.7		23.6	74	18.9		24.6	299	40.1		39.3	334	45.0		16.8		
23	59	48.2	177	15.9		24.3	89	19.6		23.9	314	42.9		39.4	349	47.7		16.8		
24	74	50.7	192	15.0	-20	25.0	104	20.3	-13	23.2	329	45.6	+22	39.4	4	50.3	+20	16.8		
Dif	—			-8 -7			+7 +7			+27 0			+27 0							

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: 20 ^d 7 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 4 ^h 46 ^m R°: 54 ^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	17.0	-22 28.2	291	11.4	+18 50.5	75	60 N	14 57	15 53	16 49	21 33 96	13 07 12	
1	197	16.8		305	37.9	40.9	96	58	15 14	16 04	16 56	43 91	12 57 15	
2	212	16.5		320	04.4	31.3	96	56	27	14	17 02	51 88	48 18	
3	227	16.3		334	31.0	21.5	98	54	39	22	08	21 58 86	40 21	
4	242	16.0		348	57.7	11.6	99	52	50	30	13	22 05 83	32 24	
5	257	15.7	-22 29.7	3	24.5	+18 01.6	100	50	15 59	16 37	17 18	22 11 80	12 26 26	
6	272	15.5	-22 30.0	17	51.3	+17 51.6	100	45	16 19	16 52	17 29	22 24 75	12 11 31	
7	287	15.2		32	18.2	41.3	103	40	35	17 05	39	34 72	12 00 34	
8	302	14.9		46	45.1	31.0	103	35	16 48	16	48	43 68	11 50 37	
9	317	14.7		61	12.1	20.6	104	30	17 00	26	17 56	22 51 65	41 40	
10	332	14.4		75	39.2	+17 10.1	105	20	20	17 44	18 11	23 04 61	25 45	
11	347	14.1	-22 31.5	90	06.4	+16 59.5	106	10 N	17 38	18 01	18 27	23 16 56	11 12 49	
12	2	13.9	-22 31.8	104	33.6	+16 48.8	107	0	17 55	18 17	18 43	23 27 52	10 59 53	
13	17	13.6		119	00.9	37.9	109	10 S	18 12	35	19 01	38 48	46 57	
14	32	13.3		133	28.2	27.0	109	20	30	18 54	23	23 50 43	32 61	
15	47	13.1		147	55.7	16.0	110	30	18 51	19 18	19 51	** ** *	16 66	
16	62	12.8		162	23.2	+16 04.9	111	35	19 03	33	20 09	** ** *	10 07 69	
17	77	12.6	-22 33.3	176	50.7	+15 53.7	112	40	19 18	19 50	20 31	** ** *	9 56 72	
18	92	12.3	-22 33.6	191	18.3	+15 42.4	113	45	19 35	20 12	21 00	** ** *	9 44 76	
19	107	12.0		33.9	205 46.0	31.0	114	50	19 56	40	21 42	0 13 28	28 81	
20	122	11.8		34.1	220 13.7	19.5	115	52	20 07	20 54	22 07	20 27	21 83	
21	137	11.5		34.4	234 41.6	+15 07.9	116	54	18	21 11	22 43	29 24	13 86	
22	152	11.2		34.7	249 09.4	+14 56.3	116	56	32	31	** ** *	39 21	9 04 89	
23	167	11.0		35.0	263 37.4	44.5	118	58	20 47	21 57	** ** *	0 50 18	8 53 93	
24	182	10.7	-22 35.3	278	05.4	+14 32.7	118	60 S	21 06	22 36	** ** *	1 02 14	8 42 96	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 18 ^h 57 ^m 5		Mag: -3.9 PMG: 11 ^h 12 ^m			Mag: +0.5 PMG: 17 ^h 02 ^m			Mag: -2.7 PMG: 2 ^h 01 ^m			Mag: -0.4 PMG: 23 ^h 36 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	50.7	192 15.0	-20 25.0	104 20.3	-13 23.2	329 45.6	+22 39.4	4	50.3	+20 16.8			
1	89	53.1	207 14.2	25.6	119 21.1	22.5	344 48.3	39.4	19	53.0	16.8			
2	104	55.6	222 13.4	26.3	134 21.8	21.8	359 51.1	39.5	34	55.7	16.8			
3	119	58.1	237 12.6	27.0	149 22.5	21.2	14 53.8	39.5	49	58.4	16.7			
4	135	00.5	252 11.8	27.6	164 23.3	20.5	29 56.6	39.5	65	01.1	16.7			
5	150	03.0	267 11.0	-20 28.3	179 24.0	-13 19.8	44 59.3	+22 39.6	80	03.7	+20 16.7			
6	165	05.5	282 10.1	-20 28.9	194 24.7	-13 19.1	60 02.0	+22 39.6	95	06.4	+20 16.7			
7	180	07.9	297 09.3	29.6	209 25.5	18.4	75 04.8	39.6	110	09.1	16.6			
8	195	10.4	312 08.5	30.3	224 26.2	17.8	90 07.5	39.7	125	11.8	16.6			
9	210	12.9	327 07.7	30.9	239 26.9	17.1	105 10.3	39.7	140	14.5	16.6			
10	225	15.3	342 06.9	31.6	254 27.7	16.4	120 13.0	39.7	155	17.2	16.6			
11	240	17.8	357 06.0	-20 32.2	269 28.4	-13 15.7	135 15.8	+22 39.8	170	19.8	+20 16.5			
12	255	20.3	12 05.2	-20 32.9	284 29.1	-13 15.0	150 18.5	+22 39.8	185	22.5	+20 16.5			
13	270	22.7	27 04.4	33.5	299 29.9	14.3	165 21.2	39.8	200	25.2	16.5			
14	285	25.2	42 03.6	34.2	314 30.6	13.6	180 24.0	39.8	215	27.9	16.5			
15	300	27.6	57 02.8	34.9	329 31.3	13.0	195 26.7	39.9	230	30.6	16.4			
16	315	30.1	72 01.9	35.5	344 32.1	12.3	210 29.5	39.9	245	33.2	16.4			
17	330	32.6	87 01.1	-20 36.2	359 32.8	-13 11.6	225 32.2	+22 39.9	260	35.9	+20 16.4			
18	345	35.0	102 00.3	-20 36.8	14 33.6	-13 10.9	240 35.0	+22 40.0	275	38.6	+20 16.4			
19	0	37.5	116 59.5	37.5	29 34.3	10.2	255 37.7	40.0	290	41.3	16.3			
20	15	40.0	131 58.6	38.1	44 35.0	09.5	270 40.4	40.0	305	44.0	16.3			
21	30	42.4	146 57.8	38.8	59 35.8	08.8	285 43.2	40.1	320	46.6	16.3			
22	45	44.9	161 57.0	39.4	74 36.5	08.2	300 45.9	40.1	335	49.3	16.3			
23	60	47.4	176 56.2	40.0	89 37.2	07.5	315 48.7	40.1	350	52.0	16.3			
24	75	49.8	191 55.3	-20 40.7	104 38.0	-13 06.8	330 51.4	+22 40.2	5	54.7	+20 16.2			
Dif	—		-8		-7	+7	+7	+27	0		+27			

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: 21 ^d 7 PHE { SD: 16'1 PMG: 5 ^h 40 ^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	10.7	-22	35.3	278	05.4	+14	32.7	60 N	6 54	7 50	8 46	23 09	94	13 19	9	
1	197	10.4		35.6	292	33.4	90	20.8	58	47	39	30	14	91	12	13	
2	212	10.1		35.9	307	01.6	92	+14	08.8	56	41	30	16	19	88	06	16
3	227	09.9		36.1	321	29.8	92	+13	56.7	54	35	21	8 04	24	84	13 01	18
4	242	09.6		36.4	335	58.0	92	44.6	52	30	13	7 54	28	82	12 56	21	
5	257	09.3	-22	36.7	350	26.3	93	+13	32.3	50	6 25	7 06	7 44	23 31	80	12 52	22
6	272	09.1	-22	37.0	4	54.7	94	+13	20.0	45	6 14	6 51	7 24	23 39	75	12 42	27
7	287	08.8		37.3	19	23.1	94	+13	07.6	40	6 04	38	7 08	46	70	34	31
8	302	08.5		37.5	33	51.6	95	+12	55.2	35	5 55	27	6 55	51	67	27	34
9	317	08.3		37.8	48	20.2	96	42.6	30	30	47	6 17	43	23 56	64	21	37
10	332	08.0		38.1	62	48.8	96	30.0	20	31	5 59	22	** ** *	**	**	10	43
11	347	07.7	-22	38.4	77	17.4	96	+12	17.4	10 N	5 16	5 42	6 05	** ** *	**	12 01	47
12	2	07.5	-22	38.6	91	46.2	98	+12	04.6	0	4 59	5 25	5 48	** ** *	**	11 52	51
13	17	07.2		38.9	106	14.9	97	+11	51.8	10 S	41	5 08	31	** ** *	**	43	55
14	32	06.9		39.2	120	43.8	99	38.9	20	4 19	4 48	5 13	** ** *	**	**	33	60
15	47	06.6		39.5	135	12.7	99	26.0	30	3 51	24	4 51	0 03	38	22	65	
16	62	06.4		39.7	149	41.6	99	+11	13.0	35	33	4 10	39	11	35	16	67
17	77	06.1	-22	40.0	164	10.6	100	+11	00.0	40	3 11	3 52	4 25	0 19	33	11 08	71
18	92	05.8	-22	40.3	178	39.6	100	+10	46.8	45	2 42	3 31	4 07	0 29	29	11 00	75
19	107	05.6		40.5	193	08.7	101	33.7	50	2 00	3 02	3 46	3 46	41	24	10 49	80
20	122	05.3		40.8	207	37.9	102	20.4	52	1 35	2 48	36	47	22	44	83	
21	137	05.0		41.1	222	07.1	102	+10	07.1	54	1 00	32	24	0 53	20	39	85
22	152	04.7		41.4	236	36.3	102	+9	53.8	56	** ** *	2 11	3 11	1 00	17	33	88
23	167	04.5		41.6	251	05.6	103	40.4	58	** ** *	1 45	2 55	08	13	26	91	
24	182	04.2	-22	41.9	265	35.0	104	+9	26.9	60 S	** ** *	1 06	2 36	1 16	10	10 18	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 53 ^m 6		Mag: -3.9 PMG: 11 ^h 13 ^m		Mag: +0.5 PMG: 17 ^h 01 ^m		Mag: -2.7 PMG: 1 ^h 56 ^m		Mag: -0.4 PMG: 23 ^h 32 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	75	49.8	191	55.3	-20	40.7	104	38.0	-13	06.8	330	51.4	+22	40.2	5	54.7	+20	16.2
1	90	52.3	206	54.5		41.3	119	38.7		06.1	345	54.2		40.2	20	57.4		16.2
2	105	54.7	221	53.7		42.0	134	39.4		05.4	0	56.9		40.2	36	00.0		16.2
3	120	57.2	236	52.9		42.6	149	40.2		04.7	15	59.7		40.3	51	02.7		16.2
4	135	59.7	251	52.0		43.3	164	40.9		04.0	31	02.4		40.3	66	05.4		16.1
5	151	02.1	266	51.2	-20	43.9	179	41.6	-13	03.4	46	05.2	+22	40.3	81	08.1	+20	16.1
6	166	04.6	281	50.4	-20	44.5	194	42.4	-13	02.7	61	07.9	+22	40.4	96	10.8	+20	16.1
7	181	07.1	296	49.5		45.2	209	43.1		02.0	76	10.7		40.4	111	13.5		16.1
8	196	09.5	311	48.7		45.8	224	43.8		01.3	91	13.4		40.4	126	16.1		16.0
9	211	12.0	326	47.9		46.4	239	44.6	-13	00.6	106	16.1		40.5	141	18.8		16.0
10	226	14.5	341	47.0		47.1	254	45.3	-12	59.9	121	18.9		40.5	156	21.5		16.0
11	241	16.9	356	46.2	-20	47.7	269	46.1	-12	59.2	136	21.6	+22	40.5	171	24.2	+20	16.0
12	256	19.4	11	45.4	-20	48.3	284	46.8	-12	58.5	151	24.4	+22	40.6	186	26.9	+20	15.9
13	271	21.9	26	44.5		49.0	299	47.5		57.8	166	27.1		40.6	201	29.5		15.9
14	286	24.3	41	43.7		49.6	314	48.3		57.2	181	29.9		40.6	216	32.2		15.9
15	301	26.8	56	42.9		50.2	329	49.0		56.5	196	32.6		40.7	231	34.9		15.9
16	316	29.2	71	42.0		50.8	344	49.7		55.8	211	35.4		40.7	246	37.6		15.8
17	331	31.7	86	41.2	-20	51.5	359	50.5	-12	55.1	226	38.1	+22	40.7	261	40.3	+20	15.8
18	346	34.2	101	40.4	-20	52.1	14	51.2	-12	54.4	241	40.9	+22	40.8	276	42.9	+20	15.8
19	1	36.6	116	39.5		52.7	29	51.9		53.7	256	43.6		40.8	291	45.6		15.8
20	16	39.1	131	38.7		53.3	44	52.7		53.0	271	46.4		40.8	306	48.3		15.7
21	31	41.6	146	37.9		54.0	59	53.4		52.3	286	49.1		40.9	321	51.0		15.7
22	46	44.0	161	37.0		54.6	74	54.2		51.6	301	51.9		40.9	336	53.7		15.7
23	61	46.5	176	36.2		55.2	89	54.9		50.9	316	54.6		40.9	351	56.3		15.7
24	76	49.0	191	35.3	-20	55.8	104	55.6	-12	50.3	331	57.4	+22	41.0	6	59.0	+20	15.7
Dif	—		-8		-6		+7		+7		+27		0		+27		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 51 ^m 9				Edad: 22 ^d 7 PHE { SD: 16 ^h 1 PMG: 6 ^h 31 ^m R°: 49 ^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	h m m	h m m	
0	182	04.2	-22	41.9	265	35.0	+9	26.9	60 N	14 56	15 52	16 48	** ** *	** ** *	** ** *	13 28	8		
1	197	03.9		42.1	280	04.4 ¹⁰⁴	+9	13.4 ¹³⁵	58	15 12	16 03	16 55	** ** *	** ** *	** ** *	25	11		
2	212	03.7		42.4	294	33.8 ¹⁰⁴	+8	59.9 ¹³⁵	56	26	13	17 01	** ** *	** ** *	** ** *	22	13		
3	227	03.4		42.7	309	03.3 ¹⁰⁵		46.3 ¹³⁶	54	38	21	07	** ** *	** ** *	** ** *	19	16		
4	242	03.1		42.9	323	32.8 ¹⁰⁵		32.7 ¹³⁶	52	49	29	13	** ** *	** ** *	** ** *	17	18		
5	257	02.8	-22	43.2	338	02.4 ¹⁰⁶	+8	19.0 ¹³⁷	50	15 58	16 36	17 18	** ** *	** ** *	** ** *	13 14	21		
6	272	02.6	-22	43.5	352	32.0 ¹⁰⁶	+8	05.2 ¹³⁸	45	16 18	16 52	17 29	** ** *	** ** *	** ** *	13 09	25		
7	287	02.3		43.7	7	01.6 ¹⁰⁶	+7	51.5 ¹³⁷	40	35	17 05	39	** ** *	** ** *	** ** *	05	29		
8	302	02.0		44.0	21	31.3 ¹⁰⁷		37.7 ¹³⁸	35	16 48	16	48	** ** *	** ** *	** ** *	13 01	33		
9	317	01.7		44.2	36	01.1 ¹⁰⁸		23.8 ¹³⁹	30	17 00	26	17 56	** ** *	** ** *	** ** *	12 58	35		
10	332	01.5		44.5	50	30.8 ¹⁰⁷	+7	09.9 ¹³⁹	20	21	17 45	18 12	0 05	58		53	40		
11	347	01.2	-22	44.8	65	00.6 ¹⁰⁸	+6	56.0 ¹³⁹	10 N	17 39	18 01	18 28	0 12	54		12 48	45		
12	2	00.9	-22	45.0	79	30.5 ¹⁰⁹	+6	42.0 ¹⁴⁰	0	17 56	18 18	18 44	0 19	50		12 43	49		
13	17	00.6		45.3	94	00.4 ¹⁰⁹		28.0 ¹⁴⁰	10 S	18 13	36	19 03	26	45		38	54		
14	32	00.4		45.5	108	30.3 ¹⁰⁹	+6	14.0 ¹⁴⁰	20	31	18 56	25	33	41		33	58		
15	47	00.1		45.8	123	00.2 ¹⁰⁹	+5	59.9 ¹⁴¹	30	18 53	19 20	19 53	41	36		27	63		
16	61	59.8		46.0	137	30.2 ¹¹⁰		45.8 ¹⁴¹	35	19 05	35	20 11	46	33		23	67		
17	76	59.5	-22	46.3	152	00.2 ¹¹⁰	+5	31.7 ¹⁴¹	40	19 20	19 52	20 33	0 52	29		12 19	71		
18	91	59.2	-22	46.5	166	30.3 ¹¹¹	+5	17.6 ¹⁴¹	45	19 37	20 14	21 03	0 58	26		12 15	74		
19	106	59.0		46.8	181	00.3 ¹¹⁰	+5	03.4 ¹⁴²	50	19 59	43	21 46	1 05	22		09	80		
20	121	58.7		47.0	195	30.4 ¹¹¹	+4	49.2 ¹⁴²	52	20 09	20 57	22 11	09	19		07	81		
21	136	58.4		47.3	210	00.6 ¹¹²		35.0 ¹⁴²	54	21	21 14	22 49	13	16		04	84		
22	151	58.1		47.5	224	30.7 ¹¹¹		20.8 ¹⁴²	56	35	21 35	** ** *	17	14		12 01	87		
23	166	57.9		47.8	239	00.9 ¹¹²	+4	06.5 ¹⁴³	58	20 50	22 02	** ** *	21	12		11 57	90		
24	181	57.6	-22	48.0	253	31.1 ¹¹²	+3	52.2 ¹⁴³	60 S	21 10	22 43	** ** *	1 26	9		11 53	94		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 18 ^h 49 ^m 6		Mag: -3.9 PMG: 11 ^h 14 ^m				Mag: +0.5 PMG: 16 ^h 59 ^m				Mag: -2.7 PMG: 1 ^h 52 ^m				Mag: -0.4 PMG: 23 ^h 28 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	76	49.0	191	35.3	-20	55.8	104	55.6	-12	50.3	331	57.4	+22	41.0	6	59.0	+20	15.7	
1	91	51.4	206	34.5		56.4	119	56.4		49.6	347	00.1		41.0	22	01.7		15.6	
2	106	53.9	221	33.7		57.1	134	57.1		48.9	2	02.9		41.0	37	04.4		15.6	
3	121	56.4	236	32.8		57.7	149	57.8		48.2	17	05.7		41.1	52	07.1		15.6	
4	136	58.8	251	32.0		58.3	164	58.6		47.5	32	08.4		41.1	67	09.7		15.6	
5	152	01.3	266	31.2	-20	58.9	179	59.3	-12	46.8	47	11.2	+22	41.1	82	12.4	+20	15.5	
6	167	03.7	281	30.3	-20	59.5	195	00.1	-12	46.1	62	13.9	+22	41.2	97	15.1	+20	15.5	
7	182	06.2	296	29.5	-21	00.1	210	00.8		45.4	77	16.7		41.2	112	17.8		15.5	
8	197	08.7	311	28.6		00.7	225	01.5		44.7	92	19.4		41.2	127	20.5		15.5	
9	212	11.1	326	27.8		01.3	240	02.3		44.0	107	22.2		41.3	142	23.1		15.4	
10	227	13.6	341	26.9		02.0	255	03.0		43.3	122	24.9		41.3	157	25.8		15.4	
11	242	16.1	356	26.1	-21	02.6	270	03.8	-12	42.6	137	27.7	+22	41.3	172	28.5	+20	15.4	
12	257	18.5	11	25.3	-21	03.2	285	04.5	-12	42.0	152	30.4	+22	41.4	187	31.2	+20	15.4	
13	272	21.0	26	24.4		03.8	300	05.2		41.3	167	33.2		41.4	202	33.9		15.3	
14	287	23.5	41	23.6		04.4	315	06.0		40.6	182	35.9		41.4	217	36.5		15.3	
15	302	25.9	56	22.7		05.0	330	06.7		39.9	197	38.7		41.5	232	39.2		15.3	
16	317	28.4	71	21.9		05.6	345	07.4		39.2	212	41.5		41.5	247	41.9		15.3	
17	332	30.8	86	21.0	-21	06.2	0	08.2	-12	38.5	227	44.2	+22	41.5	262	44.6	+20	15.2	
18	347	33.3	101	20.2	-21	06.8	15	08.9	-12	37.8	242	47.0	+22	41.6	277	47.3	+20	15.2	
19	2	35.8	116	19.3		07.4	30	09.7		37.1	257	49.7		41.6	292	49.9		15.2	
20	17	38.2	131	18.5		08.0	45	10.4		36.4	272	52.5		41.6	307	52.6		15.2	
21	32	40.7	146	17.6		08.6	60	11.1		35.7	287	55.2		41.7	322	55.3		15.2	
22	47	43.2	161	16.8		09.2	75	11.9		35.0	302	58.0		41.7	337	58.0		15.1	
23	62	45.6	176	15.9		09.8	90	12.6		34.3	318	00.8		41.7	353	00.7		15.1	
24	77	48.1	191	15.1	-21	10.4	105	13.4	-12	33.6	333	03.5	+22	41.7	8	03.3	+20	15.1	
Dif	—		-8		-6		+7		+7		+28		0		+27		0		

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: 23 ^d 7 PHE { SD: 16:1 PMG: 7 ^h 20 ^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	181	57.6	-22 48.0	253	31.1	+3 52.2		60 N	6 57	7 53	8 49	0 43	93	13 36	7	
1	196	57.3	48.3	268	01.3 ¹¹²	37.9 ¹⁴³		58	50	42	33	45	89	36	10	
2	211	57.0	48.5	282	31.6 ¹¹³	23.6 ¹⁴³		56	43	32	19	47	86	35	14	
3	226	56.8	48.8	297	01.9 ¹¹³	+3 09.3 ¹⁴³		54	37	23	8 07	48	84	35	16	
4	241	56.5	49.0	311	32.2 ¹¹³	+2 54.9 ¹⁴⁴		52	32	15	7 56	50	81	35	18	
5	256	56.2	-22 49.3	326	02.5 ¹¹³	+2 40.6 ¹⁴³		50	6 27	7 08	7 46	0 51	79	13 35	20	
6	271	55.9	-22 49.5	340	32.8 ¹¹³	+2 26.2 ¹⁴⁴		45	6 16	6 53	7 26	0 54	74	13 34	25	
7	286	55.6	49.7	355	03.2 ¹¹⁴	+2 11.8 ¹⁴⁴		40	6 06	40	7 10	56	70	34	29	
8	301	55.4	50.0	9	33.5 ¹¹³	+1 57.4 ¹⁴⁴		35	5 57	28	6 56	0 58	67	34	32	
9	316	55.1	50.2	24	03.9 ¹¹⁴	43.0 ¹⁴⁴		30	48	18	44	1 00	63	33	35	
10	331	54.8	50.5	38	34.3 ¹¹⁴	28.6 ¹⁴⁴		20	32	6 00	24	03	58	33	40	
11	346	54.5	-22 50.7	53	04.7 ¹¹⁴	+1 14.2 ¹⁴⁴		10 N	5 17	5 43	6 06	1 06	53	13 33	44	
12	1	54.2	-22 50.9	67	35.1 ¹¹⁴	+0 59.8 ¹⁴⁴		0	5 00	5 26	5 49	1 09	49	13 32	49	
13	16	54.0	51.2	82	05.6 ¹¹⁵	45.4 ¹⁴⁴		10 S	4 42	5 09	32	11	45	32	53	
14	31	53.7	51.4	96	36.0 ¹¹⁴	31.0 ¹⁴⁴		20	4 20	4 49	5 13	14	40	31	58	
15	46	53.4	51.7	111	06.5 ¹¹⁵	16.6 ¹⁴⁴		30	3 51	24	4 52	17	35	30	64	
16	61	53.1	51.9	125	36.9 ¹¹⁴	+0 02.2 ¹⁴⁴		35	33	4 10	39	19	32	30	66	
17	76	52.8	-22 52.1	140	07.4 ¹¹⁵	-0 12.2 ¹⁴⁴		40	3 11	3 52	4 24	1 21	29	13 30	69	
18	91	52.5	-22 52.4	154	37.9 ¹¹⁵	-0 26.6 ¹⁴⁴		45	2 41	3 30	4 07	1 24	24	13 29	74	
19	106	52.3	52.6	169	08.3 ¹¹⁴	41.0 ¹⁴⁴		50	1 58	3 02	3 45	27	20	29	78	
20	121	52.0	52.8	183	38.8 ¹¹⁵	-0 55.4 ¹⁴⁴		52	1 33	2 47	35	28	18	28	81	
21	136	51.7	53.1	198	09.3 ¹¹⁵	-1 09.8 ¹⁴⁴		54	0 55	30	23	29	16	28	83	
22	151	51.4	53.3	212	39.8 ¹¹⁵	24.2 ¹⁴⁴		56	** ** *	2 09	3 09	31	13	28	86	
23	166	51.1	53.5	227	10.3 ¹¹⁵	38.6 ¹⁴⁴		58	** ** *	1 42	2 54	33	10	27	90	
24	181	50.9	-22 53.7	241	40.8 ¹¹⁵	-1 52.9 ¹⁴³		60 S	** ** *	1 01	2 34	1 35	7	13 27	93	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 45 ^m 7		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +0.5 PMG: 16 ^h 58 ^m			Mag: -2.7 PMG: 1 ^h 47 ^m			Mag: -0.4 PMG: 23 ^h 24 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	77	48.1	191	15.1	-21	10.4	105	13.4	-12	33.6	333	03.5	+22	41.7	8	03.3	+20	15.1
1	92	50.6	206	14.2		11.0	120	14.1		32.9	348	06.3		41.8	23	06.0		15.1
2	107	53.0	221	13.4		11.5	135	14.8		32.2	3	09.0		41.8	38	08.7		15.0
3	122	55.5	236	12.5		12.1	150	15.6		31.5	18	11.8		41.8	53	11.4		15.0
4	137	58.0	251	11.7		12.7	165	16.3		30.8	33	14.6		41.9	68	14.1		15.0
5	153	00.4	266	10.8	-21	13.3	180	17.1	-12	30.1	48	17.3	+22	41.9	83	16.7	+20	15.0
6	168	02.9	281	10.0	-21	13.9	195	17.8	-12	29.4	63	20.1	+22	41.9	98	19.4	+20	14.9
7	183	05.3	296	09.1		14.5	210	18.5		28.8	78	22.8		42.0	113	22.1		14.9
8	198	07.8	311	08.3		15.1	225	19.3		28.1	93	25.6		42.0	128	24.8		14.9
9	213	10.3	326	07.4		15.7	240	20.0		27.4	108	28.3		42.0	143	27.5		14.9
10	228	12.7	341	06.6		16.2	255	20.8		26.7	123	31.1		42.1	158	30.1		14.8
11	243	15.2	356	05.7	-21	16.8	270	21.5	-12	26.0	138	33.9	+22	42.1	173	32.8	+20	14.8
12	258	17.7	11	04.9	-21	17.4	285	22.2	-12	25.3	153	36.6	+22	42.1	188	35.5	+20	14.8
13	273	20.1	26	04.0		18.0	300	23.0		24.6	168	39.4		42.2	203	38.2		14.8
14	288	22.6	41	03.2		18.6	315	23.7		23.9	183	42.2		42.2	218	40.9		14.8
15	303	25.1	56	02.3		19.1	330	24.5		23.2	198	44.9		42.2	233	43.5		14.7
16	318	27.5	71	01.4		19.7	345	25.2		22.5	213	47.7		42.3	248	46.2		14.7
17	333	30.0	86	00.6	-21	20.3	0	26.0	-12	21.8	228	50.4	+22	42.3	263	48.9	+20	14.7
18	348	32.4	100	59.7	-21	20.9	15	26.7	-12	21.1	243	53.2	+22	42.4	278	51.6	+20	14.7
19	3	34.9	115	58.9		21.4	30	27.4		20.4	258	56.0		42.4	293	54.2		14.6
20	18	37.4	130	58.0		22.0	45	28.2		19.7	273	58.7		42.4	308	56.9		14.6
21	33	39.8	145	57.1		22.6	60	28.9		19.0	289	01.5		42.5	323	59.6		14.6
22	48	42.3	160	56.3		23.1	75	29.7		18.3	304	04.3		42.5	339	02.3		14.6
23	63	44.8	175	55.4		23.7	90	30.4		17.6	319	07.0		42.5	354	05.0		14.5
24	78	47.2	190	54.6	-21	24.3	105	31.2	-12	16.9	334	09.8	+22	42.6	9	07.6	+20	14.5
Dif	—		-9		-6		+7		+7		+28		0		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2			Edad: 24 ^d 7 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7											
	PMG: 11 ^h 52 ^m 8				SD: 16°0				PMG: 8 ^h 09 ^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	m	h m m	m
0	181	50.9	-22 53.7	241	40.8	-1 52.9		60 N	14 55	15 51	16 47	2 16 92		13 43 9	
1	196	50.6		256	11.3 ¹¹⁵	-2 07.2 ¹⁴³		58	15 11	16 02	16 55	14 90		46 12	
2	211	50.3	54.2	270	41.8 ¹¹⁵	21.6 ¹⁴⁴		56	26	12	17 01	13 86		49 14	
3	226	50.0	54.4	285	12.2 ¹¹⁴	35.9 ¹⁴³		54	38	21	07	12 83		51 17	
4	241	49.7	54.7	299	42.7 ¹¹⁵	-2 50.2 ¹⁴³		52	49	29	13	11 81		53 19	
5	256	49.4	-22 54.9	314	13.2 ¹¹⁵	-3 04.4 ¹⁴²		50	15 58	16 36	17 18	2 10 79		13 55 21	
6	271	49.2	-22 55.1	328	43.7 ¹¹⁵	-3 18.7 ¹⁴³		45	16 18	16 52	17 29	2 08 74		13 59 26	
7	286	48.9	55.3	343	14.1 ¹¹⁴	32.9 ¹⁴²		40	35	17 05	39	06 70		14 03 29	
8	301	48.6	55.5	357	44.6 ¹¹⁵	-3 47.1 ¹⁴²		35	16 49	17	48	05 66		06 33	
9	316	48.3	55.8	12	15.0 ¹¹⁴	-4 01.3 ¹⁴²		30	17 01	27	17 57	03 64		08 36	
10	331	48.0	56.0	26	45.5 ¹¹⁵	15.5 ¹⁴²		20	21	17 45	18 13	2 01 58		13 41	
11	346	47.7	-22 56.2	41	15.9 ¹¹⁴	-4 29.6 ¹⁴¹		10 N	17 39	18 02	18 29	1 59 54		14 17 45	
12	1	47.4	-22 56.4	55	46.3 ¹¹⁴	-4 43.7 ¹⁴¹		0	17 57	18 19	18 45	1 58 49		14 21 49	
13	16	47.2	56.6	70	16.7 ¹¹⁴	-4 57.8 ¹⁴¹		10 S	18 14	37	19 04	56 45		25 53	
14	31	46.9	56.9	84	47.1 ¹¹⁴	-5 11.8 ¹⁴⁰		20	32	18 57	26	54 41		29 58	
15	46	46.6	57.1	99	17.5 ¹¹⁴	25.9 ¹⁴¹		30	18 54	19 21	19 54	52 35		34 63	
16	61	46.3	57.3	113	47.9 ¹¹⁴	39.8 ¹³⁹		35	19 07	36	20 13	51 32		36 67	
17	76	46.0	-22 57.5	128	18.2 ¹¹³	-5 53.8 ¹⁴⁰		40	19 21	19 54	20 35	1 50 29		14 39 70	
18	91	45.7	-22 57.7	142	48.5 ¹¹³	-6 07.7 ¹³⁹		45	19 39	20 16	21 05	1 48 26		14 43 74	
19	106	45.4	57.9	157	18.8 ¹¹³	21.6 ¹³⁹		50	20 01	20 45	21 49	47 20		47 79	
20	121	45.2	58.2	171	49.1 ¹¹³	35.4 ¹³⁸		52	11	21 00	22 15	46 18		49 81	
21	136	44.9	58.4	186	19.4 ¹¹³	-6 49.2 ¹³⁸		54	23	17	22 55	45 16		51 84	
22	151	44.6	58.6	200	49.7 ¹¹³	-7 03.0 ¹³⁸		56	37	21 38	** **	44 14		54 86	
23	166	44.3	58.8	215	19.9 ¹¹²	16.7 ¹³⁷		58	20 53	22 06	** **	43 11		14 57 89	
24	181	44.0	-22 59.0	229	50.1 ¹¹²	-7 30.4 ¹³⁷		60 S	21 13	22 49	** **	1 42 8		15 00 92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 18 ^h 41 ^m 8		Mag: -3.9 PMG: 11 ^h 17 ^m			Mag: +0.5 PMG: 16 ^h 57 ^m			Mag: -2.7 PMG: 1 ^h 43 ^m			Mag: -0.4 PMG: 23 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	78	47.2	190 54.6	-21 24.3		105 31.2	-12 16.9		334 09.8	+22 42.6		9 07.6	+20 14.5		
1	93	49.7	205 53.7	24.9		120 31.9	16.2		349 12.5	42.6		24 10.3	14.5		
2	108	52.2	220 52.8	25.4		135 32.6	15.5		4 15.3	42.6		39 13.0	14.5		
3	123	54.6	235 52.0	26.0		150 33.4	14.8		19 18.1	42.7		54 15.7	14.4		
4	138	57.1	250 51.1	26.5		165 34.1	14.1		34 20.8	42.7		69 18.4	14.4		
5	153	59.6	265 50.3	-21 27.1		180 34.9	-12 13.4		49 23.6	+22 42.7		84 21.0	+20 14.4		
6	169	02.0	280 49.4	-21 27.7		195 35.6	-12 12.7		64 26.4	+22 42.8		99 23.7	+20 14.4		
7	184	04.5	295 48.5	28.2		210 36.3	12.0		79 29.1	42.8		114 26.4	14.4		
8	199	06.9	310 47.7	28.8		225 37.1	11.3		94 31.9	42.8		129 29.1	14.3		
9	214	09.4	325 46.8	29.3		240 37.8	10.6		109 34.7	42.9		144 31.8	14.3		
10	229	11.9	340 45.9	29.9		255 38.6	09.9		124 37.4	42.9		159 34.4	14.3		
11	244	14.3	355 45.1	-21 30.5		270 39.3	-12 09.2		139 40.2	+22 42.9		174 37.1	+20 14.3		
12	259	16.8	10 44.2	-21 31.0		285 40.1	-12 08.5		154 43.0	+22 43.0		189 39.8	+20 14.2		
13	274	19.3	25 43.3	31.6		300 40.8	07.8		169 45.7	43.0		204 42.5	14.2		
14	289	21.7	40 42.5	32.1		315 41.6	07.1		184 48.5	43.0		219 45.1	14.2		
15	304	24.2	55 41.6	32.7		330 42.3	06.4		199 51.3	43.1		234 47.8	14.2		
16	319	26.7	70 40.7	33.2		345 43.0	05.7		214 54.0	43.1		249 50.5	14.1		
17	334	29.1	85 39.9	-21 33.8		0 43.8	-12 05.0		229 56.8	+22 43.1		264 53.2	+20 14.1		
18	349	31.6	100 39.0	-21 34.3		15 44.5	-12 04.3		244 59.6	+22 43.2		279 55.9	+20 14.1		
19	4	34.1	115 38.1	34.9		30 45.3	03.6		260 02.3	43.2		294 58.5	14.1		
20	19	36.5	130 37.3	35.4		45 46.0	02.9		275 05.1	43.2		310 01.2	14.0		
21	34	39.0	145 36.4	36.0		60 46.8	02.2		290 07.9	43.3		325 03.9	14.0		
22	49	41.4	160 35.5	36.5		75 47.5	01.5		305 10.6	43.3		340 06.6	14.0		
23	64	43.9	175 34.7	37.0		90 48.2	00.8		320 13.4	43.3		355 09.3	14.0		
24	79	46.4	190 33.8	-21 37.6		105 49.0	-12 00.1		335 16.2	+22 43.4		10 11.9	+20 14.0		
Dif	—		-9	-6		+7	+7		+28	0		+27	0		

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: 25 ^d 7 PHE { 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'4 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	181	44.0	-22	59.0	229	50.1	-7	30.4	60 N	6	59	7	55	8	52	3	48
1	196	43.7		59.2	244	20.3	112	44.0	58	52		44	35	44	89	13	58
2	211	43.4		59.4	258	50.5	112	-7	57.6	56	45	34	21	39	86	14	03
3	226	43.2		59.6	273	20.6	111	-8	11.2	54	39	25	8	09	35	84	08
4	241	42.9	-22	59.8	287	50.7	111	24.7	52	34	17	7	58	32	80	12	22
5	256	42.6	-23	00.0	302	20.8	111	-8	38.1	50	6	29	7	48	3	29	78
6	271	42.3	-23	00.2	316	50.9	111	-8	51.5	45	6	17	6	54	3	22	73
7	286	42.0		00.4	331	20.9	110	-9	04.9	40	6	07	41	7	12	16	70
8	301	41.7		00.7	345	50.9	110	18.1	35	5	58	30	6	58	11	66	39
9	316	41.4		00.9	0	20.9	110	31.4	30	50	19	46	3	07	63	44	38
10	331	41.1		01.1	14	50.9	110	44.6	20	33	6	01	25	2	59	59	14
11	346	40.8	-23	01.3	29	20.8	109	-9	57.7	10 N	5	18	5	44	2	53	54
12	1	40.6	-23	01.5	43	50.7	109	-10	10.8	0	5	01	5	27	2	47	50
13	16	40.3		01.7	58	20.5	108	23.8	10 S	4	42	5	09	32	41	46	18
14	31	40.0		01.9	72	50.4	109	36.7	20	4	20	4	49	5	14	35	41
15	46	39.7		02.1	87	20.2	108	-10	49.6	30	3	52	25	4	52	27	37
16	61	39.4		02.3	101	49.9	107	-11	02.4	35	33	4	10	39	23	34	43
17	76	39.1	-23	02.4	116	19.7	108	-11	15.2	40	3	11	3	52	2	19	31
18	91	38.8	-23	02.6	130	49.3	106	-11	27.9	45	2	41	3	30	4	07	27
19	106	38.5		02.8	145	19.0	107	40.5	50	1	57	3	01	3	45	07	23
20	121	38.2		03.0	159	48.6	106	-11	53.1	52	1	31	2	46	34	04	21
21	136	37.9		03.2	174	18.2	106	-12	05.6	54	0	51	29	22	2	01	18
22	151	37.7		03.4	188	47.8	106	18.0	56	** ** *	2	08	3	09	1	58	15
23	166	37.4		03.6	203	17.3	105	30.4	58	** ** *	1	40	2	53	54	13	26
24	181	37.1	-23	03.8	217	46.8	105	-12	42.6	60 S	** ** *	0	57	2	33	1	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 37 ^m 8		Mag: -3.9 PMG: 11 ^h 18 ^m		Mag: +0.5 PMG: 16 ^h 56 ^m		Mag: -2.7 PMG: 1 ^h 39 ^m		Mag: -0.4 PMG: 23 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	79	46.4	190	33.8	-21	37.6	335	16.2	+22	43.4
1	94	48.8	205	32.9		38.1	350	19.0		43.4
2	109	51.3	220	32.1		38.7	5	21.7		43.4
3	124	53.8	235	31.2		39.2	20	24.5		43.5
4	139	56.2	250	30.3		39.7	35	27.3		43.5
5	154	58.7	265	29.4	-21	40.3	50	30.0	+22	43.5
6	170	01.2	280	28.6	-21	40.8	65	32.8	+22	43.6
7	185	03.6	295	27.7		41.3	80	35.6		43.6
8	200	06.1	310	26.8		41.9	95	38.3		43.6
9	215	08.5	325	25.9		42.4	110	41.1		43.7
10	230	11.0	340	25.1		42.9	125	43.9		43.7
11	245	13.5	355	24.2	-21	43.5	140	46.7	+22	43.7
12	260	15.9	10	23.3	-21	44.0	155	49.4	+22	43.8
13	275	18.4	25	22.4		44.5	170	52.2		43.8
14	290	20.9	40	21.6		45.0	185	55.0		43.8
15	305	23.3	55	20.7		45.6	200	57.8		43.9
16	320	25.8	70	19.8		46.1	216	00.5		43.9
17	335	28.3	85	18.9	-21	46.6	1	01.7	+22	43.9
18	350	30.7	100	18.0	-21	47.1	16	02.4	+22	44.0
19	5	33.2	115	17.2		47.7	31	03.2		44.0
20	20	35.7	130	16.3		48.2	46	03.9		44.0
21	35	38.1	145	15.4		48.7	61	04.7		44.1
22	50	40.6	160	14.5		49.2	76	05.4		44.1
23	65	43.0	175	13.7		49.7	91	06.1		44.1
24	80	45.5	190	12.8	-21	50.2	106	06.9	+22	44.2
Dif	—		-9		-5		+7		+28	
									0	
									+27	
									0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 53 ^m 8				Edad: 26 ^d 7 PHE { SD: 15 ^h 9 PMG: 9 ^h 49 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	181	37.1	-23	03.8	217	46.8	-12	42.6	60 N	14 54	15 51	16 47	5 22 93		14 02 15			
1	196	36.8		04.0	232	16.2 ¹⁰⁴	-12	54.8 ¹²²	58	15 11	16 02	16 54	13 89		12 18			
2	211	36.5		04.2	246	45.6 ¹⁰⁴	-13	07.0 ¹²²	56	25	12	17 01	5 05 86		20 22			
3	226	36.2		04.4	261	15.0 ¹⁰⁴		19.0 ¹²⁰	54	37	21	07	4 59 82		28 24			
4	241	35.9		04.6	275	44.3 ¹⁰³		31.0 ¹²⁰	52	48	29	13	52 80		34 27			
5	256	35.6	-23	04.7	290	13.6 ¹⁰³	-13	42.9 ¹¹⁹	50	15 58	16 36	17 18	4 47 78		14 41 28			
6	271	35.3	-23	04.9	304	42.9 ¹⁰³	-13	54.7 ¹¹⁸	45	16 18	16 52	17 29	4 35 73		14 54 33			
7	286	35.0		05.1	319	12.1 ¹⁰²	-14	06.5 ¹¹⁸	40	35	17 05	39	26 69		15 05 36			
8	301	34.7		05.3	333	41.2 ¹⁰¹		18.1 ¹¹⁶	35	16 49	17	49	17 66		14 40			
9	316	34.4		05.5	348	10.4 ¹⁰²		29.7 ¹¹⁶	30	17 01	27	17 57	4 10 64		22 42			
10	331	34.2		05.7	2	39.5 ¹⁰¹		41.2 ¹¹⁵	20	22	17 46	18 13	3 58 59		37 46			
11	346	33.9	-23	05.8	17	08.5 ¹⁰⁰	-14	52.6 ¹¹⁴	10 N	17 40	18 03	18 29	3 47 55		15 49 50			
12	1	33.6	-23	06.0	31	37.5 ¹⁰⁰	-15	03.9 ¹¹³	0	17 58	18 20	18 46	3 37 52		16 01 53			
13	16	33.3		06.2	46	06.5 ¹⁰⁰		15.1 ¹¹²	10 S	18 15	38	19 05	27 48		13 56			
14	31	33.0		06.4	60	35.4 ⁹⁹		26.3 ¹¹²	20	34	18 58	27	16 45		26 59			
15	46	32.7		06.6	75	04.3 ⁹⁹		37.3 ¹¹⁰	30	18 55	19 23	19 56	3 04 40		40 64			
16	61	32.4		06.7	89	33.1 ⁹⁸		48.3 ¹¹⁰	35	19 08	38	20 14	2 57 38		49 66			
17	76	32.1	-23	06.9	104	01.9 ⁹⁸	-15	59.2 ¹⁰⁹	40	19 23	19 56	20 37	2 50 34		16 59 68			
18	91	31.8	-23	07.1	118	30.7 ⁹⁸	-16	09.9 ¹⁰⁷	45	19 41	20 18	21 07	2 41 30		17 10 72			
19	106	31.5		07.3	132	59.4 ⁹⁷		20.6 ¹⁰⁷	50	20 03	20 47	21 52	30 26		24 76			
20	121	31.2		07.5	147	28.1 ⁹⁷		31.2 ¹⁰⁶	52	14	21 02	22 18	25 24		31 78			
21	136	30.9		07.6	161	56.7 ⁹⁶		41.7 ¹⁰⁵	54	26	19	23 00	19 22		38 81			
22	151	30.6		07.8	176	25.3 ⁹⁶	-16	52.1 ¹⁰⁴	56	40	21 41	** **	13 20		46 84			
23	166	30.3		08.0	190	53.9 ⁹⁶	-17	02.3 ¹⁰²	58	20 56	22 10	** **	2 07 16		17 55 87			
24	181	30.0	-23	08.1	205	22.4 ⁹⁵	-17	12.5 ¹⁰²	60 S	21 16	22 55	** **	1 59 12		18 06 91			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 33 ^m 9		Mag: -3.9 PMG: 11 ^h 20 ^m				Mag: +0.5 PMG: 16 ^h 55 ^m				Mag: -2.7 PMG: 1 ^h 34 ^m				Mag: -0.4 PMG: 23 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	80	45.5	190	12.8	-21	50.2	106	06.9	-11	43.1	336	22.7	+22	44.2	11	16.2	+20	13.4
1	95	48.0	205	11.9		50.8	121	07.6		42.4	351	25.5		44.2	26	18.9		13.4
2	110	50.4	220	11.0		51.3	136	08.4		41.7	6	28.3		44.2	41	21.6		13.3
3	125	52.9	235	10.1		51.8	151	09.1		41.0	21	31.0		44.3	56	24.2		13.3
4	140	55.4	250	09.2		52.3	166	09.9		40.3	36	33.8		44.3	71	26.9		13.3
5	155	57.8	265	08.4	-21	52.8	181	10.6	-11	39.6	51	36.6	+22	44.3	86	29.6	+20	13.3
6	171	00.3	280	07.5	-21	53.3	196	11.4	-11	38.9	66	39.4	+22	44.4	101	32.3	+20	13.3
7	186	02.8	295	06.6		53.8	211	12.1		38.2	81	42.1		44.4	116	34.9		13.2
8	201	05.2	310	05.7		54.3	226	12.9		37.5	96	44.9		44.4	131	37.6		13.2
9	216	07.7	325	04.8		54.8	241	13.6		36.8	111	47.7		44.5	146	40.3		13.2
10	231	10.2	340	03.9		55.3	256	14.4		36.1	126	50.5		44.5	161	43.0		13.2
11	246	12.6	355	03.1	-21	55.8	271	15.1	-11	35.4	141	53.3	+22	44.6	176	45.6	+20	13.1
12	261	15.1	10	02.2	-21	56.3	286	15.9	-11	34.6	156	56.0	+22	44.6	191	48.3	+20	13.1
13	276	17.5	25	01.3		56.8	301	16.6		33.9	171	58.8		44.6	206	51.0		13.1
14	291	20.0	40	00.4		57.3	316	17.4		33.2	187	01.6		44.7	221	53.7		13.1
15	306	22.5	54	59.5		57.8	331	18.1		32.5	202	04.4		44.7	236	56.3		13.0
16	321	24.9	69	58.6		58.3	346	18.9		31.8	217	07.1		44.7	251	59.0		13.0
17	336	27.4	84	57.7	-21	58.8	1	19.6	-11	31.1	232	09.9	+22	44.8	267	01.7	+20	13.0
18	351	29.9	99	56.8	-21	59.3	16	20.4	-11	30.4	247	12.7	+22	44.8	282	04.4	+20	13.0
19	6	32.3	114	56.0	-21	59.8	31	21.1		29.7	262	15.5		44.8	297	07.1		13.0
20	21	34.8	129	55.1	-22	00.3	46	21.8		29.0	277	18.3		44.9	312	09.7		12.9
21	36	37.3	144	54.2		00.8	61	22.6		28.3	292	21.0		44.9	327	12.4		12.9
22	51	39.7	159	53.3		01.3	76	23.3		27.6	307	23.8		44.9	342	15.1		12.9
23	66	42.2	174	52.4		01.8	91	24.1		26.8	322	26.6		45.0	357	17.8		12.9
24	81	44.7	189	51.5	-22	02.3	106	24.8	-11	26.1	337	29.4	+22	45.0	12	20.4	+20	12.8
Dif	—		-9		-5		+7		+7		+28		0		+27		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 54 ^m 2			Edad: 27 ^d 7 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'5 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	181	30.0	-23	08.1	205	22.4	-17	12.5	60 N	7 01	7 58	8 55	6 55	89	14 17	22
1	196	29.7		08.3	219	50.8	94	22.6	58	6 54	46	38	42	85	30	26
2	211	29.4		08.5	234	19.3	95	32.6	56	47	36	23	31	81	42	29
3	226	29.2		08.7	248	47.7	94	42.5	54	41	27	11	21	79	14	52
4	241	28.9		08.8	263	16.0	93	-17 52.3	52	36	19	8 00	12	77	15	01
5	256	28.6	-23	09.0	277	44.3	93	-18 01.9	50	6 30	7 12	7 50	6 05	74	15	09
6	271	28.3	-23	09.2	292	12.6	93	-18 11.5	45	6 19	6 56	7 30	5 48	71	15	27
7	286	28.0		09.3	306	40.8	92	21.0	40	6 09	43	7 13	35	67	41	42
8	301	27.7		09.5	321	09.0	92	30.3	35	5 59	31	6 59	23	65	15	54
9	316	27.4		09.7	335	37.1	91	39.6	30	51	21	47	5 14	62	16	04
10	331	27.1		09.8	350	05.2	91	48.7	20	35	6 02	26	4 57	59	23	49
11	346	26.8	-23	10.0	4	33.3	91	-18 57.7	10 N	5 19	5 45	6 08	4 42	56	16	39
12	1	26.5	-23	10.1	19	01.3	90	-19 06.6	0	5 02	5 28	5 50	4 29	53	16	54
13	16	26.2		10.3	33	29.3	90	15.4	10 S	4 43	5 10	33	15	50	17	09
14	31	25.9		10.5	47	57.2	89	24.1	20	4 21	4 50	5 14	4 01	47	25	59
15	46	25.6		10.6	62	25.2	90	32.7	30	3 52	25	4 53	3 44	44	44	62
16	61	25.3		10.8	76	53.0	88	41.1	35	34	4 10	40	35	41	17	55
17	76	25.0	-23	10.9	91	20.9	89	-19 49.5	40	3 11	3 52	4 25	3 24	39	18	07
18	91	24.7	-23	11.1	105	48.7	88	-19 57.7	45	2 41	3 30	4 07	3 11	36	18	22
19	106	24.4		11.3	120	16.4	87	-20 05.8	50	1 56	3 01	3 45	2 56	32	40	72
20	121	24.1		11.4	134	44.2	88	13.8	52	1 30	2 46	34	49	30	49	74
21	136	23.8		11.6	149	11.9	87	21.7	54	0 48	28	22	41	28	18	59
22	151	23.5		11.7	163	39.5	86	29.4	56	** **	2 07	3 08	33	25	19	10
23	166	23.2		11.9	178	07.2	87	37.0	58	** **	1 38	2 52	23	22	22	81
24	181	22.9	-23	12.0	192	34.8	86	-20 44.5	60 S	** **	0 53	2 32	2 11	18	19	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 30 ^m 0		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: +0.6 PMG: 16 ^h 53 ^m		Mag: -2.7 PMG: 1 ^h 30 ^m		Mag: -0.4 PMG: 23 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	81	44.7	189	51.5	-22	02.3	106	24.8	-11	26.1	337	29.4	+22	45.0	12	20.4	+20	12.8
1	96	47.1	204	50.6		02.8	121	25.6		25.4	352	32.2		45.0	27	23.1		12.8
2	111	49.6	219	49.7		03.2	136	26.3		24.7	7	34.9		45.1	42	25.8		12.8
3	126	52.0	234	48.8		03.7	151	27.1		24.0	22	37.7		45.1	57	28.5		12.8
4	141	54.5	249	47.9		04.2	166	27.8		23.3	37	40.5		45.1	72	31.1		12.7
5	156	57.0	264	47.1	-22	04.7	181	28.6	-11	22.6	52	43.3	+22	45.2	87	33.8	+20	12.7
6	171	59.4	279	46.2	-22	05.2	196	29.3	-11	21.9	67	46.1	+22	45.2	102	36.5	+20	12.7
7	187	01.9	294	45.3		05.6	211	30.1		21.2	82	48.8		45.2	117	39.2		12.7
8	202	04.4	309	44.4		06.1	226	30.8		20.4	97	51.6		45.3	132	41.8		12.7
9	217	06.8	324	43.5		06.6	241	31.6		19.7	112	54.4		45.3	147	44.5		12.6
10	232	09.3	339	42.6		07.1	256	32.3		19.0	127	57.2		45.3	162	47.2		12.6
11	247	11.8	354	41.7	-22	07.6	271	33.1	-11	18.3	143	00.0	+22	45.4	177	49.9	+20	12.6
12	262	14.2	9	40.8	-22	08.0	286	33.8	-11	17.6	158	02.8	+22	45.4	192	52.5	+20	12.6
13	277	16.7	24	39.9		08.5	301	34.6		16.9	173	05.5		45.4	207	55.2		12.5
14	292	19.1	39	39.0		09.0	316	35.3		16.2	188	08.3		45.5	222	57.9		12.5
15	307	21.6	54	38.1		09.4	331	36.1		15.5	203	11.1		45.5	238	00.6		12.5
16	322	24.1	69	37.2		09.9	346	36.8		14.7	218	13.9		45.5	253	03.2		12.5
17	337	26.5	84	36.3	-22	10.4	1	37.6	-11	14.0	233	16.7	+22	45.6	268	05.9	+20	12.5
18	352	29.0	99	35.4	-22	10.9	16	38.3	-11	13.3	248	19.5	+22	45.6	283	08.6	+20	12.4
19	7	31.5	114	34.5		11.3	31	39.1		12.6	263	22.2		45.7	298	11.3		12.4
20	22	33.9	129	33.6		11.8	46	39.8		11.9	278	25.0		45.7	313	13.9		12.4
21	37	36.4	144	32.7		12.2	61	40.6		11.2	293	27.8		45.7	328	16.6		12.4
22	52	38.9	159	31.8		12.7	76	41.4		10.5	308	30.6		45.8	343	19.3		12.3
23	67	41.3	174	30.9		13.2	91	42.1		09.7	323	33.4		45.8	358	22.0		12.3
24	82	43.8	189	30.0	-22	13.6	106	42.9	-11	09.0	338	36.2	+22	45.8	13	24.6	+20	12.3
Dif	—		-9		-5		+8		+7		+28		0		+27			

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: 28 ^d 7 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 PMG: 11 ^h 35 ^m 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	181	22.9	-23	12.0	192	34.8	-20	44.5	60 N	14 53	15 50	16 47	8 24 79	14 39 34		
1	196	22.6		12.2	207	02.3	85	51.9	58	15 10	16 02	16 54	8 07 75	14 56 38		
2	211	22.3		12.3	221	29.9	86	-20 59.2	73	25	12	17 01	7 52 73	15 11 40		
3	226	22.0		12.5	235	57.4	85	-21 06.3	71	37	21	07	40 71	24 41		
4	241	21.7		12.6	250	24.9	85	13.3	70	48	29	13	29 69	35 43		
5	256	21.4	-23	12.8	264	52.3	84	-21 20.2	69	50	15 58	16 37	17 18	7 19 68	15 45 44	
6	271	21.1	-23	12.9	279	19.7	84	-21 26.9	67	45	16 19	16 52	17 30	6 59 65	16 06 46	
7	286	20.8		13.1	293	47.1	84	33.6	67	40	35	17 06	40	42 64	23 48	
8	301	20.5		13.2	308	14.5	84	40.1	65	35	16 49	18	49	28 62	38 49	
9	316	20.2		13.4	322	41.9	84	46.4	63	30	17 02	28	17 58	6 16 61	16 50 51	
10	331	19.9		13.5	337	09.2	83	52.7	63	20	23	17 47	18 14	5 56 58	17 12 52	
11	346	19.6	-23	13.7	351	36.5	83	-21 58.8	61	10 N	17 41	18 04	18 30	5 38 57	17 30 54	
12	1	19.3	-23	13.8	6	03.8	83	-22 04.8	60	0	17 58	18 21	18 47	5 22 54	17 48 55	
13	16	19.0		13.9	20	31.0	82	10.6	58	10 S	18 16	39	19 06	5 05 53	18 05 56	
14	31	18.7		14.1	34	58.3	83	16.4	58	20	35	18 59	28	4 48 51	24 57	
15	46	18.4		14.2	49	25.5	82	22.0	56	30	18 57	19 24	19 57	28 48	46 59	
16	61	18.1		14.4	63	52.7	82	27.4	54	35	19 10	39	20 16	16 47	18 58 60	
17	76	17.8	-23	14.5	78	19.9	82	-22 32.7	53	40	19 24	19 57	20 39	4 03 45	19 13 61	
18	91	17.5	-23	14.6	92	47.0	81	-22 37.9	52	45	19 42	20 20	21 09	3 47 43	19 31 62	
19	106	17.2		14.8	107	14.2	82	43.0	51	50	20 05	20 49	21 54	28 40	19 52 64	
20	121	16.9		14.9	121	41.3	81	47.9	49	52	15	21 04	22 21	19 38	20 03 64	
21	136	16.6		15.1	136	08.4	81	52.7	48	54	28	22	23 05	3 09 36	14 66	
22	151	16.3		15.2	150	35.5	81	-22 57.4	47	56	42	21 44	** **	2 58 34	28 67	
23	166	16.0		15.3	165	02.6	81	-23 01.9	45	58	20 58	22 13	** **	45 31	20 43 69	
24	181	15.7	-23	15.5	179	29.7	81	-23 06.3	44	60 S	21 18	23 00	** **	2 29 28	21 02 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 26 ^m 1		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +0.6 PMG: 16 ^h 52 ^m		Mag: -2.7 PMG: 1 ^h 25 ^m		Mag: -0.4 PMG: 23 ^h 02 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	82	43.8	189	30.0	-22	13.6	106	42.9	-11	09.0						
1	97	46.3	204	29.1		14.1	121	43.6		08.3						
2	112	48.7	219	28.2		14.5	136	44.4		07.6						
3	127	51.2	234	27.3		15.0	151	45.1		06.9						
4	142	53.6	249	26.4		15.5	166	45.9		06.2						
5	157	56.1	264	25.5	-22	15.9	181	46.6	-11	05.5						
6	172	58.6	279	24.6	-22	16.4	196	47.4	-11	04.7						
7	188	01.0	294	23.7		16.8	211	48.1		04.0						
8	203	03.5	309	22.8		17.3	226	48.9		03.3						
9	218	06.0	324	21.9		17.7	241	49.6		02.6						
10	233	08.4	339	21.0		18.2	256	50.4		01.9						
11	248	10.9	354	20.1	-22	18.6	271	51.1	-11	01.2						
12	263	13.4	9	19.2	-22	19.1	286	51.9	-11	00.4						
13	278	15.8	24	18.3		19.5	301	52.6	-10	59.7						
14	293	18.3	39	17.4		20.0	316	53.4		59.0						
15	308	20.8	54	16.5		20.4	331	54.1		58.3						
16	323	23.2	69	15.6		20.8	346	54.9		57.6						
17	338	25.7	84	14.7	-22	21.3	1	55.6	-10	56.9						
18	353	28.1	99	13.8	-22	21.7	16	56.4	-10	56.1						
19	8	30.6	114	12.9		22.2	31	57.1		55.4						
20	23	33.1	129	11.9		22.6	46	57.9		54.7						
21	38	35.5	144	11.0		23.0	61	58.7		54.0						
22	53	38.0	159	10.1		23.5	76	59.4		53.3						
23	68	40.5	174	09.2		23.9	92	00.2		52.6						
24	83	42.9	189	08.3	-22	24.3	107	00.9	-10	51.8						
Dif	—		-9		-4		+8		+7							
							+28		0							
									+27							
									0							

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 55 ^m 2			Edad: 0 ^d 1 PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'3 R°: 55 ^m											
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	15.7	-23	15.5	179	29.7	-23	06.3	60 N	7 03	8 00	8 57	9 43	62	15 13
1	196	15.4		15.6	193	56.8	81	10.6	58	6 56	7 48	40	22	61	34 51
2	211	15.1		15.7	208	23.9	81	14.7	56		49	38	25	9 05	60 15 51
3	226	14.8		15.8	222	51.0	81	18.7	54		43	29	13	8 51	59 16 05
4	241	14.5		16.0	237	18.0	80	22.5	52		37	21	8 02	38	59 18 53
5	256	14.2	-23	16.1	251	45.1	81	-23	50	6 32	7 14	7 52	8 27	59	16 29 53
6	271	13.9	-23	16.2	266	12.2	81	-23	45	6 20	6 58	7 31	8 04	58	16 52 54
7	286	13.6		16.4	280	39.2	80	33.3	40		10	44	15	7 46	57 17 11
8	301	13.3		16.5	295	06.3	81	36.6	35	6 01	32	7 01	30	57	27 54
9	316	13.0		16.6	309	33.4	81	39.8	30	5 52	22	6 48	7 17	56	17 41 53
10	331	12.7		16.7	324	00.4	80	42.8	20		36	6 03	27	6 54	56 18 04
11	346	12.4	-23	16.9	338	27.5	81	-23	10 N	5 20	5 46	6 09	6 35	55	18 24 54
12	1	12.1	-23	17.0	352	54.6	81	-23	0	5 03	5 29	5 51	6 16	55	18 43 54
13	16	11.8		17.1	7	21.7	81	51.1	10 S	4 44	5 11	34	5 58	54	19 01 54
14	31	11.5		17.2	21	48.7	80	53.6	20	4 21	4 51	5 15	39	53	21 54
15	46	11.2		17.4	36	15.8	81	55.9	30	3 52	26	4 53	16	52	45 53
16	61	10.9		17.5	50	43.0	82	-23	35		34	4 11	40	5 03	52 19 58
17	76	10.6	-23	17.6	65	10.1	81	-24	40	3 11	3 53	4 25	4 48	51	20 14 54
18	91	10.3	-23	17.7	79	37.2	81	-24	45	2 41	3 30	4 07	4 30	50	20 33 53
19	106	10.0		17.8	94	04.4	82	03.9	50	1 56	3 01	3 45	4 08	49	20 56 53
20	121	09.7		18.0	108	31.5	81	05.6	52	1 29	2 46	34	3 57	48	21 07 53
21	136	09.4		18.1	122	58.7	82	07.1	54	0 45	28	22	45	47	20 53
22	151	09.1		18.2	137	25.9	82	08.5	56	** **	2 06	3 08	32	46	35 52
23	166	08.8		18.3	151	53.1	82	09.8	58	** **	1 37	2 51	3 16	44	21 52 52
24	181	08.5	-23	18.4	166	20.4	83	-24	60 S	** **	0 49	2 31	2 57	42	22 13 52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 22 ^m 1		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: +0.6 PMG: 16 ^h 51 ^m		Mag: -2.7 PMG: 1 ^h 21 ^m		Mag: -0.4 PMG: 22 ^h 58 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	83	42.9	189	08.3	-22	24.3	339	43.1	+22	46.7
1	98	45.4	204	07.4		24.8	354	45.9		46.7
2	113	47.9	219	06.5		25.2	9	48.6		46.7
3	128	50.3	234	05.6		25.6	24	51.4		46.8
4	143	52.8	249	04.7		26.1	39	54.2		46.8
5	158	55.3	264	03.8	-22	26.5	54	57.0	+22	46.8
6	173	57.7	279	02.9	-22	26.9	69	59.8	+22	46.9
7	189	00.2	294	01.9		27.3	85	02.6		46.9
8	204	02.6	309	01.0		27.8	100	05.4		46.9
9	219	05.1	324	00.1		28.2	115	08.2		47.0
10	234	07.6	338	59.2		28.6	130	11.0		47.0
11	249	10.0	353	58.3	-22	29.0	145	13.8	+22	47.0
12	264	12.5	8	57.4	-22	29.4	160	16.6	+22	47.1
13	279	15.0	23	56.5		29.9	175	19.4		47.1
14	294	17.4	38	55.6		30.3	190	22.1		47.1
15	309	19.9	53	54.6		30.7	205	24.9		47.2
16	324	22.4	68	53.7		31.1	220	27.7		47.2
17	339	24.8	83	52.8	-22	31.5	235	30.5	+22	47.2
18	354	27.3	98	51.9	-22	31.9	250	33.3	+22	47.3
19	9	29.8	113	51.0		32.3	265	36.1		47.3
20	24	32.2	128	50.1		32.7	280	38.9		47.4
21	39	34.7	143	49.2		33.2	295	41.7		47.4
22	54	37.1	158	48.2		33.6	310	44.5		47.4
23	69	39.6	173	47.3		34.0	325	47.3		47.5
24	84	42.1	188	46.4	-22	34.4	340	50.1	+22	47.5
Dif	—		-9		-4		+8		+28	
									0	
									+27	
									0	

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: 1 ^d 1 PHE { 4 ^h : 56/1 12 ^h : 56/0 20 ^h : 55/8 SD: 15/3 PMG: 13 ^h 24 ^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	h m m	h m m		
0	181	08.5	-23	18.4	166	20.4	-24	10.9	60 N	14 53	15 51	16 47	10 45 41	16 04 67				
1	196	08.2		18.5	180	47.6 82		11.9 10	58	15 10	16 02	16 55	23 44	25 65				
2	211	07.9		18.6	195	14.9 83		12.7 8	56	25	12	17 01	10 05 46	43 63				
3	226	07.6		18.8	209	42.2 83		13.5 8	54	38	21	08	9 50 47	16 58 62				
4	241	07.2		18.9	224	09.6 84		14.0 5	52	49	30	13	37 47	17 11 61				
5	256	06.9	-23	19.0	238	36.9 83	-24	14.5 5	50	15 59	16 37	17 19	9 26 48	17 22 61				
6	271	06.6	-23	19.1	253	04.3 84	-24	14.8 3	45	16 19	16 53	17 30	9 02 49	17 46 59				
7	286	06.3		19.2	267	31.8 85		15.0 2	40	36	17 06	41	8 43 50	18 05 57				
8	301	06.0		19.3	281	59.2 84		15.0 0	35	16 50	18	50	27 51	21 56				
9	316	05.7		19.4	296	26.7 85		14.9 1	30	17 02	29	17 59	8 13 51	34 56				
10	331	05.4		19.5	310	54.2 85		14.7 2	20	24	17 48	18 15	7 50 52	18 58 54				
11	346	05.1	-23	19.6	325	21.8 86	-24	14.4 3	10 N	17 42	18 05	18 31	7 30 52	19 18 53				
12	1	04.8	-23	19.7	339	49.4 86	-24	13.9 5	0	17 59	18 22	18 48	7 11 53	19 37 52				
13	16	04.5		19.8	354	17.0 86		13.2 7	10 S	18 17	18 40	19 07	6 52 54	19 55 51				
14	31	04.2		19.9	8	44.7 87		12.5 7	20	36	19 00	30	32 54	20 15 50				
15	46	03.9		20.0	23	12.4 87		11.6 9	30	18 58	25	19 59	6 08 55	38 49				
16	61	03.6		20.1	37	40.1 87		10.6 10	35	19 11	41	20 17	5 55 55	20 52 47				
17	76	03.3	-23	20.2	52	07.9 88	-24	09.5 11	40	19 26	19 59	20 40	5 39 56	21 08 46				
18	91	03.0	-23	20.3	66	35.7 88	-24	08.2 13	45	19 44	20 21	21 11	5 20 56	21 26 45				
19	106	02.7		20.4	81	03.6 89		06.8 14	50	20 06	20 51	21 56	4 57 56	21 49 43				
20	121	02.4		20.5	95	31.5 89		05.3 15	52	17	21 06	22 24	45 57	22 00 42				
21	136	02.1		20.6	109	59.5 90		03.6 17	54	29	24	23 09	32 58	13 40				
22	151	01.8		20.7	124	27.5 90	-24	01.8 18	56	20 44	21 46	** **	18 58	27 39				
23	166	01.5		20.8	138	55.5 90	-23	59.9 19	58	21 00	22 15	** **	4 00 59	22 44 37				
24	181	01.1	-23	20.9	153	23.6 91	-23	57.9 20	60 S	21 21	23 05	** **	3 39 60	23 05 34				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 18 ^m 2		Mag: -3.9 PMG: 11 ^h 26 ^m				Mag: +0.6 PMG: 16 ^h 50 ^m				Mag: -2.7 PMG: 1 ^h 16 ^m				Mag: -0.4 PMG: 22 ^h 54 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	84	42.1	188	46.4	-22	34.4	107	19.0	-10	34.6	340	50.1	+22	47.5	15	33.0		
1	99	44.5	203	45.5		34.8	122	19.8		33.9	355	52.9		47.5	30	35.6		
2	114	47.0	218	44.6		35.2	137	20.5		33.1	10	55.7		47.6	45	38.3		
3	129	49.5	233	43.7		35.6	152	21.3		32.4	25	58.5		47.6	60	41.0		
4	144	51.9	248	42.7		36.0	167	22.1		31.7	41	01.3		47.6	75	43.7		
5	159	54.4	263	41.8	-22	36.4	182	22.8	-10	31.0	56	04.1	+22	47.7	90	46.3		
6	174	56.9	278	40.9	-22	36.8	197	23.6	-10	30.2	71	06.8	+22	47.7	105	49.0		
7	189	59.3	293	40.0		37.2	212	24.3		29.5	86	09.6		47.7	120	51.7		
8	205	01.8	308	39.1		37.6	227	25.1		28.8	101	12.4		47.8	135	54.3		
9	220	04.3	323	38.1		38.0	242	25.8		28.1	116	15.2		47.8	150	57.0		
10	235	06.7	338	37.2		38.4	257	26.6		27.4	131	18.0		47.8	165	59.7		
11	250	09.2	353	36.3	-22	38.7	272	27.4	-10	26.6	146	20.8	+22	47.9	181	02.4		
12	265	11.6	8	35.4	-22	39.1	287	28.1	-10	25.9	161	23.6	+22	47.9	196	05.0		
13	280	14.1	23	34.5		39.5	302	28.9		25.2	176	26.4		47.9	211	07.7		
14	295	16.6	38	33.5		39.9	317	29.6		24.5	191	29.2		48.0	226	10.4		
15	310	19.0	53	32.6		40.3	332	30.4		23.7	206	32.0		48.0	241	13.0		
16	325	21.5	68	31.7		40.7	347	31.1		23.0	221	34.8		48.1	256	15.7		
17	340	24.0	83	30.8	-22	41.1	2	31.9	-10	22.3	236	37.6	+22	48.1	271	18.4		
18	355	26.4	98	29.9	-22	41.5	17	32.7	-10	21.6	251	40.4	+22	48.1	286	21.1		
19	10	28.9	113	28.9		41.8	32	33.4		20.8	266	43.2		48.2	301	23.7		
20	25	31.4	128	28.0		42.2	47	34.2		20.1	281	46.0		48.2	316	26.4		
21	40	33.8	143	27.1		42.6	62	34.9		19.4	296	48.8		48.2	331	29.1		
22	55	36.3	158	26.2		43.0	77	35.7		18.7	311	51.6		48.3	346	31.7		
23	70	38.8	173	25.2		43.3	92	36.4		18.0	326	54.4		48.3	1	34.4		
24	85	41.2	188	24.3	-22	43.7	107	37.2	-10	17.2	341	57.2	+22	48.3	16	37.1		
Dif	—		-9		-4		+8		+7		+28		0		+27			

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: 2 ^d 1 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 PMG: 14 ^h 16 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m	m	
0	181	01.1	-23	20.9	153	23.6	-23	57.9	22	58	60 N	7 05	8 02	8 59	11 26	27	17 11	77		
1	196	00.8		21.0	167	51.8	92	55.7	22	58	58	6 57	7 50	42	11 07	30	30	74		
2	211	00.5		21.1	182	20.0	92	53.4	23	56	56	51	40	27	10 51	32	17 46	71		
3	226	00.2		21.2	196	48.2	92	51.0	24	54	54	44	31	14	37	34	18 00	68		
4	240	59.9		21.3	211	16.6	94	48.5	25	52	52	39	22	8 03	24	37	12	67		
5	255	59.6	-23	21.4	225	44.9	93	-23	45.8	27	50	6 33	7 15	7 53	10 14	37	18 23	65		
6	270	59.3	-23	21.5	240	13.3	94	-23	43.1	27	45	6 22	6 59	7 33	9 51	40	18 45	62		
7	285	59.0		21.5	254	41.8	95	40.2	29	40	40	11	45	16	33	42	19 02	60		
8	300	58.7		21.6	269	10.3	95	37.1	31	35	35	6 02	34	7 02	18	44	17	58		
9	315	58.4		21.7	283	38.9	96	34.0	31	30	30	5 53	23	6 50	9 04	46	30	56		
10	330	58.1		21.8	298	07.5	96	30.7	33	20	20	37	6 04	28	8 42	47	19 52	54		
11	345	57.8	-23	21.9	312	36.2	97	-23	27.4	33	10 N	5 21	5 47	6 10	8 22	49	20 11	52		
12	0	57.5	-23	22.0	327	05.0	98	-23	23.9	35	0	5 04	5 30	5 52	8 04	51	20 29	49		
13	15	57.2		22.1	341	33.8	98	20.2	37	10 S	10 S	4 45	5 12	35	7 46	52	20 46	48		
14	30	56.9		22.1	356	02.7	99	16.5	37	20	20	4 22	4 51	5 16	26	54	21 05	45		
15	45	56.5		22.2	10	31.6	99	12.7	38	30	30	3 53	26	4 54	7 03	56	27	42		
16	60	56.2		22.3	25	00.6	100	08.7	40	35	35	35	4 11	41	6 50	57	39	41		
17	75	55.9	-23	22.4	39	29.7	101	-23	04.6	41	40	3 11	3 53	4 26	6 35	58	21 54	39		
18	90	55.6	-23	22.5	53	58.8	101	-23	00.4	42	45	2 41	3 31	4 08	6 16	61	22 11	36		
19	105	55.3		22.6	68	28.0	102	-22	56.1	43	50	1 56	3 01	3 45	5 53	63	32	33		
20	120	55.0		22.6	82	57.2	102	51.7	44	52	52	1 28	2 46	35	42	65	42	32		
21	135	54.7		22.7	97	26.6	104	47.2	45	54	54	0 42	28	22	30	66	22 53	30		
22	150	54.4		22.8	111	55.9	103	42.6	46	56	56	** ** *	2 06	3 08	5 16	67	23 06	28		
23	165	54.1		22.9	126	25.4	105	37.8	48	58	58	** ** *	1 36	2 51	4 59	70	21	25		
24	180	53.8	-23	22.9	140	54.9	105	-22	33.0	48	60 S	** ** *	0 47	2 31	4 39	72	23 39	21		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 18 ^h 14 ^m 3		Mag: -3.9 PMG: 11 ^h 27 ^m				Mag: +0.6 PMG: 16 ^h 49 ^m				Mag: -2.7 PMG: 1 ^h 12 ^m				Mag: -0.4 PMG: 22 ^h 49 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	41.2	188	24.3	-22	43.7	107	37.2	-10	17.2	341	57.2	+22	48.3	16	37.1	+20	10.7		
1	100	43.7	203	23.4		44.1	122	38.0		16.5	357	00.0		48.4	31	39.8		10.7		
2	115	46.1	218	22.5		44.5	137	38.7		15.8	12	02.8		48.4	46	42.4		10.6		
3	130	48.6	233	21.5		44.8	152	39.5		15.1	27	05.6		48.4	61	45.1		10.6		
4	145	51.1	248	20.6		45.2	167	40.2		14.3	42	08.4		48.5	76	47.8		10.6		
5	160	53.5	263	19.7	-22	45.6	182	41.0	-10	13.6	57	11.2	+22	48.5	91	50.4	+20	10.6		
6	175	56.0	278	18.8	-22	46.0	197	41.8	-10	12.9	72	14.0	+22	48.5	106	53.1	+20	10.6		
7	190	58.5	293	17.8		46.3	212	42.5		12.2	87	16.8		48.6	121	55.8		10.5		
8	206	00.9	308	16.9		46.7	227	43.3		11.4	102	19.6		48.6	136	58.4		10.5		
9	221	03.4	323	16.0		47.1	242	44.0		10.7	117	22.4		48.6	152	01.1		10.5		
10	236	05.9	338	15.0		47.4	257	44.8		10.0	132	25.2		48.7	167	03.8		10.5		
11	251	08.3	353	14.1	-22	47.8	272	45.5	-10	09.2	147	28.0	+22	48.7	182	06.5	+20	10.4		
12	266	10.8	8	13.2	-22	48.1	287	46.3	-10	08.5	162	30.8	+22	48.8	197	09.1	+20	10.4		
13	281	13.2	23	12.3		48.5	302	47.1		07.8	177	33.6		48.8	212	11.8		10.4		
14	296	15.7	38	11.3		48.9	317	47.8		07.1	192	36.4		48.8	227	14.5		10.4		
15	311	18.2	53	10.4		49.2	332	48.6		06.3	207	39.2		48.9	242	17.1		10.4		
16	326	20.6	68	09.5		49.6	347	49.3		05.6	222	42.0		48.9	257	19.8		10.3		
17	341	23.1	83	08.5	-22	49.9	2	50.1	-10	04.9	237	44.8	+22	48.9	272	22.5	+20	10.3		
18	356	25.6	98	07.6	-22	50.3	17	50.9	-10	04.2	252	47.6	+22	49.0	287	25.1	+20	10.3		
19	11	28.0	113	06.7		50.6	32	51.6		03.4	267	50.4		49.0	302	27.8		10.3		
20	26	30.5	128	05.8		51.0	47	52.4		02.7	282	53.2		49.0	317	30.5		10.2		
21	41	33.0	143	04.8		51.4	62	53.1		02.0	297	56.0		49.1	332	33.1		10.2		
22	56	35.4	158	03.9		51.7	77	53.9		01.3	312	58.8		49.1	347	35.8		10.2		
23	71	37.9	173	03.0		52.0	92	54.7	-10	00.5	328	01.6		49.1	2	38.5		10.2		
24	86	40.4	188	02.0	-22	52.4	107	55.4	-9	59.8	343	04.4	+22	49.2	17	41.2	+20	10.2		
Dif	—		-9		-4		+8		+7		+28		0		+27					

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 56 ^m 7				Edad: 3 ^d 1 PHE { 4 ^h : 55:1 12 ^h : 54:9 20 ^h : 54:8 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	h m m	h m m		
0	180	53.8	-23	22.9	140	54.9	-22	33.0	60 N	14 53	15 51	16 48	11 53 17	18 28 80				
1	195	53.5		23.0	155	24.5 ¹⁰⁶		28.0 ⁵⁰	58	15 11	16 03	16 55	37 20	44 76				
2	210	53.2		23.1	169	54.1 ¹⁰⁶		23.0 ⁵⁰	56	25	13	17 02	23 24	18 57 73				
3	225	52.9		23.2	184	23.8 ¹⁰⁷		17.8 ⁵²	54	38	22	08	11 26	19 08 71				
4	240	52.5		23.2	198	53.6 ¹⁰⁸		12.5 ⁵³	52	49	30	14	11 01 27	19 68				
5	255	52.2	-23	23.3	213	23.4 ¹⁰⁸	-22	07.1 ⁵⁴	50	15 59	16 38	17 19	10 51 30	19 28 66				
6	270	51.9	-23	23.4	227	53.4 ¹¹⁰	-22	01.7 ⁵⁴	45	16 20	16 54	17 31	10 31 33	19 47 63				
7	285	51.6		23.4	242	23.3 ¹⁰⁹	-21	56.1 ⁵⁶	40	37	17 07	41	15 36	20 02 60				
8	300	51.3		23.5	256	53.4 ¹¹¹		50.4 ⁵⁷	35	16 51	19	51	10 02 37	15 58				
9	315	51.0		23.6	271	23.5 ¹¹¹		44.6 ⁵⁸	30	17 03	30	17 59	9 50 39	26 56				
10	330	50.7		23.6	285	53.7 ¹¹²		38.7 ⁵⁹	20	24	17 48	18 16	29 43	20 46 52				
11	345	50.4	-23	23.7	300	23.9 ¹¹²	-21	32.7 ⁶⁰	10 N	17 43	18 06	18 32	9 11 46	21 03 49				
12	0	50.1	-23	23.8	314	54.3 ¹¹⁴	-21	26.6 ⁶¹	0	18 00	18 23	18 49	8 55 48	21 18 47				
13	15	49.8		23.8	329	24.7 ¹¹⁴		20.4 ⁶²	10 S	18	18 41	19 08	38 50	34 43				
14	30	49.5		23.9	343	55.1 ¹¹⁴		14.2 ⁶²	20	37	19 02	19 31	8 20 53	21 50 41				
15	45	49.2		24.0	358	25.7 ¹¹⁶		07.8 ⁶⁴	30	18 59	26	20 00	7 59 56	22 09 38				
16	60	48.8		24.0	12	56.3 ¹¹⁶	-21	01.3 ⁶⁵	35	19 12	19 42	19	47 58	20 36				
17	75	48.5	-23	24.1	27	26.9 ¹¹⁶	-20	54.8 ⁶⁵	40	19 27	20 00	20 42	7 33 60	22 33 33				
18	90	48.2	-23	24.1	41	57.7 ¹¹⁸	-20	48.1 ⁶⁷	45	19 45	20 23	21 12	7 17 62	22 47 31				
19	105	47.9		24.2	56	28.5 ¹¹⁸		41.4 ⁶⁷	50	20 08	20 52	21 58	6 56 66	23 05 27				
20	120	47.6		24.3	70	59.4 ¹¹⁹		34.5 ⁶⁹	52	19	21 07	22 26	47 67	14 25				
21	135	47.3		24.3	85	30.3 ¹¹⁹		27.6 ⁶⁹	54	31	25	23 12	36 69	23 23				
22	150	47.0		24.4	100	01.4 ¹²¹		20.6 ⁷⁰	56	20 45	21 48	** **	23 72	34 20				
23	165	46.7		24.4	114	32.4 ¹²⁰		13.5 ⁷¹	58	21 02	22 18	** **	6 09 75	23 46 18				
24	180	46.4	-23	24.5	129	03.6 ¹²²	-20	06.3 ⁷²	60 S	21 22	23 08	** **	5 51 79	** ** *				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 10 ^m 3		Mag: -3.9 PMG: 11 ^h 29 ^m				Mag: +0.6 PMG: 16 ^h 47 ^m				Mag: -2.7 PMG: 1 ^h 07 ^m				Mag: -0.4 PMG: 22 ^h 45 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	86	40.4	188	02.0	-22	52.4	107	55.4	-9	59.8	343	04.4	+22	49.2	17	41.2	+20	10.2
1	101	42.8	203	01.1		52.7	122	56.2		59.1	358	07.2		49.2	32	43.8		10.1
2	116	45.3	218	00.2		53.1	137	56.9		58.3	13	10.0		49.2	47	46.5		10.1
3	131	47.7	232	59.2		53.4	152	57.7		57.6	28	12.8		49.3	62	49.2		10.1
4	146	50.2	247	58.3		53.8	167	58.5		56.9	43	15.6		49.3	77	51.8		10.1
5	161	52.7	262	57.4	-22	54.1	182	59.2	-9	56.2	58	18.4	+22	49.3	92	54.5	+20	10.1
6	176	55.1	277	56.4	-22	54.5	198	00.0	-9	55.4	73	21.2	+22	49.4	107	57.2	+20	10.0
7	191	57.6	292	55.5		54.8	213	00.7		54.7	88	24.0		49.4	122	59.8		10.0
8	207	00.1	307	54.6		55.1	228	01.5		54.0	103	26.8		49.5	138	02.5		10.0
9	222	02.5	322	53.6		55.5	243	02.3		53.2	118	29.6		49.5	153	05.2		10.0
10	237	05.0	337	52.7		55.8	258	03.0		52.5	133	32.4		49.5	168	07.8		09.9
11	252	07.5	352	51.8	-22	56.1	273	03.8	-9	51.8	148	35.3	+22	49.6	183	10.5	+20	09.9
12	267	09.9	7	50.8	-22	56.5	288	04.6	-9	51.1	163	38.1	+22	49.6	198	13.2	+20	09.9
13	282	12.4	22	49.9		56.8	303	05.3		50.3	178	40.9		49.6	213	15.8		09.9
14	297	14.9	37	49.0		57.1	318	06.1		49.6	193	43.7		49.7	228	18.5		09.9
15	312	17.3	52	48.0		57.5	333	06.8		48.9	208	46.5		49.7	243	21.2		09.8
16	327	19.8	67	47.1		57.8	348	07.6		48.1	223	49.3		49.7	258	23.8		09.8
17	342	22.2	82	46.1	-22	58.1	3	08.4	-9	47.4	238	52.1	+22	49.8	273	26.5	+20	09.8
18	357	24.7	97	45.2	-22	58.4	18	09.1	-9	46.7	253	54.9	+22	49.8	288	29.2	+20	09.8
19	12	27.2	112	44.3		58.8	33	09.9		46.0	268	57.7		49.8	303	31.8		09.8
20	27	29.6	127	43.3		59.1	48	10.7		45.2	284	00.5		49.9	318	34.5		09.7
21	42	32.1	142	42.4		59.4	63	11.4		44.5	299	03.3		49.9	333	37.2		09.7
22	57	34.6	157	41.5	-22	59.7	78	12.2		43.8	314	06.1		49.9	348	39.8		09.7
23	72	37.0	172	40.5	-23	00.1	93	12.9		43.0	329	08.9		50.0	3	42.5		09.7
24	87	39.5	187	39.6	-23	00.4	108	13.7	-9	42.3	344	11.7	+22	50.0	18	45.2	+20	09.6
Dif	—		-9		-3		+8		+7		+28		0		+27			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 2			Edad: 4 ^d 1 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 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	180	46.4	-23	24.5	129	03.6	-20	06.3	60 N	7 06	8 03	9 01	12 10	11	19 48	80
1	195	46.1		24.5	143	34.8 ¹²²	-19	59.0 ⁷³	58	6 59	7 51	8 43	11 57	15	20 00	76
2	210	45.8		24.6	158	06.1 ¹²³		51.6 ⁷⁴	56	52	41	29	47	17	10	73
3	225	45.4		24.7	172	37.5 ¹²⁴		44.1 ⁷⁵	54	46	32	16	37	20	19	7
4	240	45.1		24.7	187	08.9 ¹²⁴		36.6 ⁷⁵	52	40	24	8 05	28	22	27	69
5	255	44.8	-23	24.8	201	40.5 ¹²⁶	-19	29.0 ⁷⁶	50	6 35	7 16	7 55	11 21	24	20 34	67
6	270	44.5	-23	24.8	216	12.0 ¹²⁵	-19	21.3 ⁷⁷	45	6 23	7 00	7 34	11 04	28	20 50	62
7	285	44.2		24.9	230	43.7 ¹²⁷		13.5 ⁷⁸	40	13	6 47	17	10 51	31	21 02	60
8	300	43.9		24.9	245	15.4 ¹²⁷	-19	05.6 ⁷⁹	35	6 03	35	7 03	39	34	13	56
9	315	43.6		25.0	259	47.2 ¹²⁸	-18	57.7 ⁷⁹	30	5 54	24	6 51	29	36	22	54
10	330	43.3		25.0	274	19.0 ¹²⁸		49.7 ⁸⁰	20	38	6 05	29	10 12	39	38	50
11	345	43.0	-23	25.0	288	50.9 ¹²⁹	-18	41.5 ⁸²	10 N	5 22	5 48	6 11	9 57	42	21 52	47
12	0	42.7	-23	25.1	303	22.9 ¹³⁰	-18	33.4 ⁸¹	0	5 05	5 31	5 53	9 43	45	22 05	44
13	15	42.4		25.1	317	55.0 ¹³¹		25.1 ⁸³	10 S	4 46	5 13	36	28	48	17	41
14	30	42.0		25.2	332	27.1 ¹³¹		16.8 ⁸³	20	4 23	4 52	5 17	9 13	51	31	37
15	45	41.7		25.2	346	59.3 ¹³²	-18	08.4 ⁸⁴	30	3 54	27	4 55	8 55	55	47	33
16	60	41.4		25.3	1	31.5 ¹³²	-17	59.9 ⁸⁵	35	35	4 12	42	45	57	22 56	31
17	75	41.1	-23	25.3	16	03.8 ¹³³	-17	51.3 ⁸⁶	40	3 12	3 54	4 27	8 33	60	23 06	28
18	90	40.8	-23	25.4	30	36.2 ¹³⁴	-17	42.7 ⁸⁶	45	2 41	3 31	4 09	8 19	63	23 18	25
19	105	40.5		25.4	45	08.6 ¹³⁴		34.0 ⁸⁷	50	1 56	3 01	3 46	8 02	67	32	22
20	120	40.2		25.4	59	41.1 ¹³⁵		25.2 ⁸⁸	52	1 28	2 46	35	7 54	69	39	20
21	135	39.9		25.5	74	13.7 ¹³⁶		16.4 ⁸⁸	54	0 41	28	23	45	71	46	18
22	150	39.6		25.5	88	46.3 ¹³⁶	-17	07.5 ⁸⁹	56	** **	2 06	3 09	35	73	23 54	16
23	165	39.3		25.5	103	19.0 ¹³⁷	-16	58.5 ⁹⁰	58	** **	1 36	2 52	24	76	** **	**
24	180	38.9	-23	25.6	117	51.8 ¹³⁸	-16	49.4 ⁹¹	60 S	** **	0 45	2 31	7 10	80	0 00	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 06 ^m 4		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: +0.6 PMG: 16 ^h 46 ^m		Mag: -2.7 PMG: 1 ^h 03 ^m		Mag: -0.4 PMG: 22 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	87	39.5	187	39.6	-23	00.4	108	13.7	-9	42.3	344	11.7	+22	50.0	18	45.2	+20	09.6
1	102	42.0	202	38.6		00.7	123	14.5		41.6	359	14.5		50.1	33	47.8		09.6
2	117	44.4	217	37.7		01.0	138	15.2		40.8	14	17.3		50.1	48	50.5		09.6
3	132	46.9	232	36.8		01.3	153	16.0		40.1	29	20.1		50.1	63	53.2		09.6
4	147	49.4	247	35.8		01.6	168	16.8		39.4	44	22.9		50.2	78	55.8		09.6
5	162	51.8	262	34.9	-23	01.9	183	17.5	-9	38.7	59	25.8	+22	50.2	93	58.5	+20	09.5
6	177	54.3	277	33.9	-23	02.3	198	18.3	-9	37.9	74	28.6	+22	50.2	109	01.2	+20	09.5
7	192	56.7	292	33.0		02.6	213	19.0		37.2	89	31.4		50.3	124	03.8		09.5
8	207	59.2	307	32.1		02.9	228	19.8		36.5	104	34.2		50.3	139	06.5		09.5
9	223	01.7	322	31.1		03.2	243	20.6		35.7	119	37.0		50.3	154	09.2		09.5
10	238	04.1	337	30.2		03.5	258	21.3		35.0	134	39.8		50.4	169	11.8		09.4
11	253	06.6	352	29.2	-23	03.8	273	22.1	-9	34.3	149	42.6	+22	50.4	184	14.5	+20	09.4
12	268	09.1	7	28.3	-23	04.1	288	22.9	-9	33.5	164	45.4	+22	50.4	199	17.2	+20	09.4
13	283	11.5	22	27.4		04.4	303	23.6		32.8	179	48.2		50.5	214	19.8		09.4
14	298	14.0	37	26.4		04.7	318	24.4		32.1	194	51.0		50.5	229	22.5		09.4
15	313	16.5	52	25.5		05.0	333	25.1		31.3	209	53.8		50.5	244	25.2		09.3
16	328	18.9	67	24.5		05.3	348	25.9		30.6	224	56.6		50.6	259	27.8		09.3
17	343	21.4	82	23.6	-23	05.6	3	26.7	-9	29.9	239	59.4	+22	50.6	274	30.5	+20	09.3
18	358	23.8	97	22.6	-23	05.9	18	27.4	-9	29.1	255	02.3	+22	50.7	289	33.2	+20	09.3
19	13	26.3	112	21.7		06.2	33	28.2		28.4	270	05.1		50.7	304	35.8		09.2
20	28	28.8	127	20.8		06.5	48	29.0		27.7	285	07.9		50.7	319	38.5		09.2
21	43	31.2	142	19.8		06.8	63	29.7		26.9	300	10.7		50.8	334	41.2		09.2
22	58	33.7	157	18.9		07.1	78	30.5		26.2	315	13.5		50.8	349	43.8		09.2
23	73	36.2	172	17.9		07.4	93	31.3		25.5	330	16.3		50.8	4	46.5		09.2
24	88	38.6	187	17.0	-23	07.7	108	32.0	-9	24.7	345	19.1	+22	50.9	19	49.2	+20	09.1
Dif	—		-9		-3		+8		+7		+28		0		+27			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°3		Edad: 5 ^d 1	PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/2	SD: 14°8				R°: 43 ^m									
	PMG: 11 ^h 57 ^m 7																	
	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	38.9	-23	25.6	117	51.8	-16	49.4	60 N	14 54	15 52	16 49	12 21	8	21 08	78		
1	195	38.6		25.6	132	24.6 ¹³⁸		40.3 ⁹¹	58	15 11	16 03	16 56	12 11		16 75			
2	210	38.3		25.6	146	57.4 ¹³⁸		31.1 ⁹²	56	26	14	17 03	12 04	14	23 73			
3	225	38.0		25.7	161	30.4 ¹⁴⁰		21.9 ⁹²	54	39	23	09	11 57	16	30 70			
4	240	37.7		25.7	176	03.4 ¹⁴⁰		12.6 ⁹³	52	15 50	31	15	50	19	36 68			
5	255	37.4	-23	25.7	190	36.4 ¹⁴⁰	-16	03.2 ⁹⁴	50	16 00	16 38	17 20	11 45	20	21 41	66		
6	270	37.1	-23	25.8	205	09.5 ¹⁴¹	-15	53.8 ⁹⁴	45	16 21	16 55	17 32	11 32	24	21 52	62		
7	285	36.8		25.8	219	42.7 ¹⁴²		44.3 ⁹⁵	40	38	17 08	42	22 27		22 02	58		
8	300	36.5		25.8	234	15.9 ¹⁴²		34.7 ⁹⁶	35	16 52	20	17 52	13 29		09 56			
9	315	36.2		25.9	248	49.2 ¹⁴³		25.1 ⁹⁶	30	17 04	30	18 00	11 05	32	16 54			
10	330	35.8		25.9	263	22.6 ¹⁴⁴		15.4 ⁹⁷	20	25	17 49	17	10 51	36	28 49			
11	345	35.5	-23	25.9	277	56.0 ¹⁴⁴	-15	05.7 ⁹⁷	10 N	17 44	18 07	18 33	10 39	40	22 39	45		
12	0	35.2	-23	25.9	292	29.4 ¹⁴⁴	-14	55.9 ⁹⁸	0	18 01	18 24	18 50	10 28	43	22 49	42		
13	15	34.9		26.0	307	02.9 ¹⁴⁵		46.0 ⁹⁹	10 S	19	18 42	19 09	16 46		22 58	39		
14	30	34.6		26.0	321	36.5 ¹⁴⁶		36.1 ⁹⁹	20	18 38	19 03	19 32	10 04	50	23 08	35		
15	45	34.3		26.0	336	10.1 ¹⁴⁶		26.2 ⁹⁹	30	19 00	28	20 01	9 50	54	20 31			
16	60	34.0		26.0	350	43.7 ¹⁴⁶		16.1 ¹⁰¹	35	13	19 43	20	42	56	27 28			
17	75	33.7	-23	26.1	5	17.5 ¹⁴⁸	-14	06.1 ¹⁰⁰	40	19 28	20 01	20 43	9 33	59	23 34	26		
18	90	33.4	-23	26.1	19	51.2 ¹⁴⁷	-13	55.9 ¹⁰²	45	19 46	20 24	21 14	9 22	62	23 43	23		
19	105	33.0		26.1	34	25.0 ¹⁴⁸		45.7 ¹⁰²	50	20 09	20 54	21 59	09	66	54	18		
20	120	32.7		26.1	48	58.9 ¹⁴⁹		35.5 ¹⁰²	52	20	21 09	22 27	9 03	68	23 59	16		
21	135	32.4		26.1	63	32.8 ¹⁴⁹		25.2 ¹⁰³	54	32	27	23 15	8 56	70	** ** *	**		
22	150	32.1		26.2	78	06.8 ¹⁵⁰		14.9 ¹⁰³	56	20 46	21 49	** ** *	48	73	** ** *	**		
23	165	31.8		26.2	92	40.8 ¹⁵⁰	-13	04.5 ¹⁰⁴	58	21 03	22 19	** ** *	40	75	0 04	12		
24	180	31.5	-23	26.2	107	14.8 ¹⁵⁰	-12	54.1 ¹⁰⁴	60 S	21 24	23 10	** ** *	8 30	79	0 14	10		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 02 ^m 5		Mag: -3.9 PMG: 11 ^h 32 ^m			Mag: +0.6 PMG: 16 ^h 45 ^m			Mag: -2.7 PMG: 0 ^h 59 ^m			Mag: -0.4 PMG: 22 ^h 37 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	'	°	°	'	°	'	'	°	'	'		
0	88	38.6	187	17.0	-23	07.7	108	32.0	-9	24.7	345	19.1	+22	50.9	19	49.2	+20	09.1
1	103	41.1	202	16.0		07.9	123	32.8		24.0	0	21.9		50.9	34	51.8		09.1
2	118	43.6	217	15.1		08.2	138	33.6		23.3	15	24.7		50.9	49	54.5		09.1
3	133	46.0	232	14.1		08.5	153	34.3		22.5	30	27.5		51.0	64	57.2		09.1
4	148	48.5	247	13.2		08.8	168	35.1		21.8	45	30.4		51.0	79	59.8		09.1
5	163	51.0	262	12.3	-23	09.1	183	35.9	-9	21.1	60	33.2	+22	51.0	95	02.5	+20	09.0
6	178	53.4	277	11.3	-23	09.4	198	36.6	-9	20.3	75	36.0	+22	51.1	110	05.1	+20	09.0
7	193	55.9	292	10.4		09.6	213	37.4		19.6	90	38.8		51.1	125	07.8		09.0
8	208	58.3	307	09.4		09.9	228	38.2		18.9	105	41.6		51.1	140	10.5		09.0
9	224	00.8	322	08.5		10.2	243	38.9		18.1	120	44.4		51.2	155	13.1		09.0
10	239	03.3	337	07.5		10.5	258	39.7		17.4	135	47.2		51.2	170	15.8		08.9
11	254	05.7	352	06.6	-23	10.8	273	40.4	-9	16.7	150	50.0	+22	51.2	185	18.5	+20	08.9
12	269	08.2	7	05.6	-23	11.0	288	41.2	-9	15.9	165	52.8	+22	51.3	200	21.1	+20	08.9
13	284	10.7	22	04.7		11.3	303	42.0		15.2	180	55.7		51.3	215	23.8		08.9
14	299	13.1	37	03.7		11.6	318	42.7		14.5	195	58.5		51.4	230	26.5		08.8
15	314	15.6	52	02.8		11.8	333	43.5		13.7	211	01.3		51.4	245	29.1		08.8
16	329	18.1	67	01.8		12.1	348	44.3		13.0	226	04.1		51.4	260	31.8		08.8
17	344	20.5	82	00.9	-23	12.4	3	45.0	-9	12.3	241	06.9	+22	51.5	275	34.4	+20	08.8
18	359	23.0	96	59.9	-23	12.6	18	45.8	-9	11.5	256	09.7	+22	51.5	290	37.1	+20	08.8
19	14	25.5	111	59.0		12.9	33	46.6		10.8	271	12.5		51.5	305	39.8		08.7
20	29	27.9	126	58.0		13.2	48	47.3		10.0	286	15.3		51.6	320	42.4		08.7
21	44	30.4	141	57.1		13.4	63	48.1		09.3	301	18.2		51.6	335	45.1		08.7
22	59	32.8	156	56.1		13.7	78	48.9		08.6	316	21.0		51.6	350	47.8		08.7
23	74	35.3	171	55.2		14.0	93	49.6		07.8	331	23.8		51.7	5	50.4		08.7
24	89	37.8	186	54.2	-23	14.2	108	50.4	-9	07.1	346	26.6	+22	51.7	20	53.1	+20	08.6
Dif	—		-9		-3		+8		+7		+28		0		+27		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 6 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 41 ^m											
	PMG: 11 ^h 58 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m		h	m	m
0	180	31.5	-23	26.2	107	14.8	-12	54.1	60 N	7 07	8 04	9 02	12 29	7	22 26 78
1	195	31.2		26.2	121	48.9 ¹⁵¹		43.6 ¹⁰⁵	58	7 00	7 52	8 44	23 10		31 75
2	210	30.9		26.2	136	23.1 ¹⁵²		33.0 ¹⁰⁶	56	6 53	42	30	18 12		36 72
3	225	30.6		26.2	150	57.2 ¹⁵¹		22.5 ¹⁰⁵	54	47	33	17	13 14		40 69
4	240	30.2		26.3	165	31.5 ¹⁵³		11.8 ¹⁰⁷	52	41	25	8 06	09 15		44 67
5	255	29.9	-23	26.3	180	05.7 ¹⁵²	-12	01.1 ¹⁰⁷	50	6 36	7 17	7 56	12 05	17	22 47 66
6	270	29.6	-23	26.3	194	40.1 ¹⁵⁴	-11	50.4 ¹⁰⁷	45	6 24	7 01	7 35	11 56	21	22 54 62
7	285	29.3		26.3	209	14.4 ¹⁵³		39.7 ¹⁰⁷	40	14	6 48	18	49 24		23 00 58
8	300	29.0		26.3	223	48.8 ¹⁵⁴		28.8 ¹⁰⁹	35	6 04	36	7 04	42 28		05 55
9	315	28.7		26.3	238	23.2 ¹⁵⁴		18.0 ¹⁰⁸	30	5 55	25	6 52	37 30		10 52
10	330	28.4		26.3	252	57.7 ¹⁵⁵	-11	07.1 ¹⁰⁹	20	39	6 06	30	27 34		17 49
11	345	28.1	-23	26.3	267	32.2 ¹⁵⁵	-10	56.2 ¹⁰⁹	10 N	5 23	5 49	6 12	11 19	37	23 24 45
12	0	27.8	-23	26.3	282	06.7 ¹⁵⁵	-10	45.2 ¹¹⁰	0	5 06	5 32	5 54	11 11	41	23 31 40
13	15	27.5		26.3	296	41.3 ¹⁵⁶		34.2 ¹¹⁰	10 S	4 47	5 14	37	11 02	45	37 37
14	30	27.1		26.3	311	15.9 ¹⁵⁶		23.1 ¹¹¹	20	4 24	4 53	5 18	10 54	48	43 34
15	45	26.8		26.3	325	50.6 ¹⁵⁷		12.0 ¹¹¹	30	3 55	28	4 56	44 53		51 29
16	60	26.5		26.3	340	25.3 ¹⁵⁷	-10	00.8 ¹¹²	35	36	4 13	43	38 56		23 55 27
17	75	26.2	-23	26.3	355	00.0 ¹⁵⁷	-9	49.7 ¹¹¹	40	3 13	3 55	4 28	10 32	58	*** ** *
18	90	25.9	-23	26.3	9	34.7 ¹⁵⁷	-9	38.5 ¹¹²	45	2 42	3 32	4 09	10 24	62	*** ** *
19	105	25.6		26.3	24	09.5 ¹⁵⁸		27.2 ¹¹³	50	1 56	3 02	3 47	15 66		*** ** *
20	120	25.3		26.3	38	44.3 ¹⁵⁸		15.9 ¹¹³	52	1 28	2 47	36	11 68		*** ** *
21	135	25.0		26.3	53	19.1 ¹⁵⁸	-9	04.6 ¹¹³	54	0 41	29	24	06 70		0 04 15
22	150	24.7		26.3	67	54.0 ¹⁵⁹	-8	53.2 ¹¹⁴	56	*** **	2 07	3 09	10 01	72	10 13
23	165	24.3		26.3	82	28.9 ¹⁵⁹		41.8 ¹¹⁴	58	*** **	1 37	2 53	9 55	75	16 11
24	180	24.0	-23	26.3	97	03.8 ¹⁵⁹	-8	30.4 ¹¹⁴	60 S	*** **	0 45	2 32	9 49	77	0 24 7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 58 ^m 5		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: +0.6 PMG: 16 ^h 44 ^m		Mag: -2.7 PMG: 0 ^h 54 ^m		Mag: -0.3 PMG: 22 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	89	37.8	186	54.2	-23	14.2	108	50.4	-9	07.1
1	104	40.2	201	53.3		14.5	123	51.2		06.4
2	119	42.7	216	52.3		14.7	138	51.9		05.6
3	134	45.2	231	51.4		15.0	153	52.7		04.9
4	149	47.6	246	50.4		15.3	168	53.5		04.2
5	164	50.1	261	49.5	-23	15.5	183	54.2	-9	03.4
6	179	52.6	276	48.5	-23	15.8	198	55.0	-9	02.7
7	194	55.0	291	47.6		16.0	213	55.8		01.9
8	209	57.5	306	46.6		16.3	228	56.6		01.2
9	225	00.0	321	45.7		16.5	243	57.3	-9	00.5
10	240	02.4	336	44.7		16.8	258	58.1	-8	59.7
11	255	04.9	351	43.8	-23	17.0	273	58.9	-8	59.0
12	270	07.3	6	42.8	-23	17.2	288	59.6	-8	58.3
13	285	09.8	21	41.9		17.5	304	00.4		57.5
14	300	12.3	36	40.9		17.7	319	01.2		56.8
15	315	14.7	51	40.0		18.0	334	01.9		56.0
16	330	17.2	66	39.0		18.2	349	02.7		55.3
17	345	19.7	81	38.1	-23	18.4	4	03.5	-8	54.6
18	0	22.1	96	37.1	-23	18.7	19	04.2	-8	53.8
19	15	24.6	111	36.1		18.9	34	05.0		53.1
20	30	27.1	126	35.2		19.2	49	05.8		52.4
21	45	29.5	141	34.2		19.4	64	06.5		51.6
22	60	32.0	156	33.3		19.6	79	07.3		50.9
23	75	34.4	171	32.3		19.9	94	08.1		50.1
24	90	36.9	186	31.4	-23	20.1	109	08.8	-8	49.4
Dif	—		-10		-2		+8		+7	
							+28		0	
									+27	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 58 ^m 6				Edad: 7 ^d 1 SD: 14:8 PMG: 18 ^h 02 ^m	PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3 Rº: 40 ^m												
	hG ☉	Dec	hG ☾	Dif				Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	24.0	-23	26.3	97	03.8	-8	30.4	60 N	14 55	15 53	16 49	12 36	6	23 44	77		
1	195	23.7		26.3	111	38.7 ¹⁵⁹		18.9 ¹¹⁵	58	15 12	16 04	16 57	33	8	46	75		
2	210	23.4		26.3	126	13.7 ¹⁶⁰	-8	07.4 ¹¹⁵	56	27	15	17 04	30	10	48	72		
3	225	23.1		26.3	140	48.7 ¹⁶⁰	-7	55.9 ¹¹⁵	54	40	24	10	27	13	49	70		
4	240	22.8		26.3	155	23.7 ¹⁶⁰		44.3 ¹¹⁶	52	15 51	32	16	24	15	51	68		
5	255	22.5	-23	26.3	169	58.7 ¹⁶⁰	-7	32.8 ¹¹⁵	50	16 01	16 39	17 21	12 22	17	23 53	66		
6	270	22.2	-23	26.3	184	33.7 ¹⁶⁰	-7	21.1 ¹¹⁷	45	16 22	16 56	17 33	12 17	21	23 56	62		
7	285	21.9		26.3	199	08.8 ¹⁶¹	-7	09.5 ¹¹⁶	40	38	17 09	43	13	24	23 58	59		
8	300	21.5		26.3	213	43.9 ¹⁶¹	-6	57.8 ¹¹⁷	35	16 53	21	17 53	10	26	**	**	**	
9	315	21.2		26.3	228	19.0 ¹⁶¹		46.1 ¹¹⁷	30	17 05	31	18 01	07	29	**	**	**	
10	330	20.9		26.3	242	54.1 ¹⁶¹		34.4 ¹¹⁷	20	26	17 50	18	12 01	34	**	**	**	
11	345	20.6	-23	26.3	257	29.2 ¹⁶¹	-6	22.6 ¹¹⁸	10 N	17 45	18 08	18 34	11 56	38	**	**	**	
12	0	20.3	-23	26.2	272	04.4 ¹⁶²	-6	10.8 ¹¹⁸	0	18 02	18 25	18 51	11 52	41	**	**	**	
13	15	20.0		26.2	286	39.6 ¹⁶²	-5	59.0 ¹¹⁸	10 S	20	18 43	19 10	47	45	**	**	**	
14	30	19.7		26.2	301	14.7 ¹⁶¹		47.2 ¹¹⁸	20	18 39	19 04	19 33	42	49	**	**	**	
15	45	19.4		26.2	315	49.9 ¹⁶²		35.3 ¹¹⁹	30	19 01	29	20 02	37	53	**	**	**	
16	60	19.1		26.2	330	25.1 ¹⁶²		23.4 ¹¹⁹	35	14	19 44	21	34	55	**	**	**	
17	75	18.7	-23	26.2	345	00.3 ¹⁶²	-5	11.5 ¹¹⁹	40	19 29	20 02	20 44	11 30	58	0	00	24	
18	90	18.4	-23	26.1	359	35.5 ¹⁶²	-4	59.5 ¹²⁰	45	19 47	20 25	21 15	11 26	62	0	06	21	
19	105	18.1		26.1	14	10.8 ¹⁶³		47.6 ¹¹⁹	50	20 10	20 55	22 00	21	66	12	17		
20	120	17.8		26.1	28	46.0 ¹⁶²		35.6 ¹²⁰	52	21	21 10	22 28	19	67	15	16		
21	135	17.5		26.1	43	21.2 ¹⁶²		23.6 ¹²⁰	54	33	28	23 15	16	70	19	13		
22	150	17.2		26.1	57	56.5 ¹⁶³	-4	11.6 ¹²⁰	56	20 47	21 50	**	13	72	23	11		
23	165	16.9		26.0	72	31.7 ¹⁶²	-3	59.5 ¹²¹	58	21 04	22 20	**	10	75	27	8		
24	180	16.6	-23	26.0	87	07.0 ¹⁶³	-3	47.5 ¹²⁰	60 S	21 25	23 11	**	11 06	78	0	31	6	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 54 ^m 6		Mag: -3.9 PMG: 11 ^h 35 ^m				Mag: +0.7 PMG: 16 ^h 43 ^m				Mag: -2.7 PMG: 0 ^h 50 ^m				Mag: -0.3 PMG: 22 ^h 28 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	36.9	186	31.4	-23	20.1	109	08.8	-8	49.4	347	34.1	+22	52.6	21	57.0	+20	08.2
1	105	39.4	201	30.4		20.3	124	09.6		48.7	2	37.0		52.6	36	59.6		08.1
2	120	41.8	216	29.5		20.5	139	10.4		47.9	17	39.8		52.6	52	02.3		08.1
3	135	44.3	231	28.5		20.8	154	11.2		47.2	32	42.6		52.7	67	05.0		08.1
4	150	46.8	246	27.5		21.0	169	11.9		46.4	47	45.4		52.7	82	07.6		08.1
5	165	49.2	261	26.6	-23	21.2	184	12.7	-8	45.7	62	48.2	+22	52.7	97	10.3	+20	08.1
6	180	51.7	276	25.6	-23	21.4	199	13.5	-8	45.0	77	51.0	+22	52.8	112	12.9	+20	08.0
7	195	54.2	291	24.7		21.7	214	14.2		44.2	92	53.9		52.8	127	15.6		08.0
8	210	56.6	306	23.7		21.9	229	15.0		43.5	107	56.7		52.8	142	18.3		08.0
9	225	59.1	321	22.8		22.1	244	15.8		42.8	122	59.5		52.9	157	20.9		08.0
10	241	01.6	336	21.8		22.3	259	16.5		42.0	138	02.3		52.9	172	23.6		08.0
11	256	04.0	351	20.9	-23	22.5	274	17.3	-8	41.3	153	05.1	+22	52.9	187	26.2	+20	07.9
12	271	06.5	6	19.9	-23	22.7	289	18.1	-8	40.5	168	07.9	+22	53.0	202	28.9	+20	07.9
13	286	08.9	21	18.9		23.0	304	18.9		39.8	183	10.8		53.0	217	31.6		07.9
14	301	11.4	36	18.0		23.2	319	19.6		39.1	198	13.6		53.0	232	34.2		07.9
15	316	13.9	51	17.0		23.4	334	20.4		38.3	213	16.4		53.1	247	36.9		07.8
16	331	16.3	66	16.1		23.6	349	21.2		37.6	228	19.2		53.1	262	39.5		07.8
17	346	18.8	81	15.1	-23	23.8	4	21.9	-8	36.8	243	22.0	+22	53.1	277	42.2	+20	07.8
18	1	21.3	96	14.1	-23	24.0	19	22.7	-8	36.1	258	24.8	+22	53.2	292	44.8	+20	07.8
19	16	23.7	111	13.2		24.2	34	23.5		35.3	273	27.7		53.2	307	47.5		07.8
20	31	26.2	126	12.2		24.4	49	24.3		34.6	288	30.5		53.3	322	50.2		07.7
21	46	28.7	141	11.3		24.6	64	25.0		33.9	303	33.3		53.3	337	52.8		07.7
22	61	31.1	156	10.3		24.8	79	25.8		33.1	318	36.1		53.3	352	55.5		07.7
23	76	33.6	171	09.4		25.0	94	26.6		32.4	333	38.9		53.4	7	58.1		07.7
24	91	36.0	186	08.4	-23	25.2	109	27.3	-8	31.6	348	41.8	+22	53.4	23	00.8	+20	07.7
Dif	—		-10		-2		+8		+7		+28		0		+27		0	

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: 8 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'7 R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	16.6	-23	26.0	87	07.0	-3	47.5	60 N	7 08	8 05	9 03	12 42	6	***	***
1	195	16.3		26.0	101	42.2 ¹⁶²		35.4 ¹²¹	58	7 01	7 53	8 45	41 8		***	***
2	210	15.9		26.0	116	17.5 ¹⁶³		23.3 ¹²¹	56	6 54	43	31	40 11		***	***
3	225	15.6		25.9	130	52.7 ¹⁶²		-3 11.2 ¹²¹	54	48	34	18	40 13		***	***
4	240	15.3		25.9	145	28.0 ¹⁶³		-2 59.0 ¹²²	52	42	26	8 07	39 15		***	***
5	255	15.0	-23	25.9	160	03.2 ¹⁶²		-2 46.9 ¹²¹	50	6 37	7 18	7 57	12 39	17	***	***
6	270	14.7	-23	25.9	174	38.4 ¹⁶²		-2 34.7 ¹²²	45	6 25	7 02	7 36	12 38	20	***	***
7	285	14.4		25.8	189	13.7 ¹⁶³		22.5 ¹²²	40	15	6 49	19	37 24		***	***
8	300	14.1		25.8	203	48.9 ¹⁶²		-2 10.3 ¹²²	35	6 05	37	7 05	36 27		0 00	56
9	315	13.8		25.8	218	24.1 ¹⁶²		-1 58.1 ¹²²	30	5 56	26	6 53	36 29		02	53
10	330	13.5		25.7	232	59.4 ¹⁶³		45.9 ¹²²	20	40	6 07	31	35 33		06	48
11	345	13.1	-23	25.7	247	34.6 ¹⁶²		-1 33.6 ¹²³	10 N	5 24	5 50	6 13	12 34	37	0 09	44
12	0	12.8	-23	25.7	262	09.8 ¹⁶²		-1 21.4 ¹²²	0	5 07	5 33	5 55	12 33	41	0 11	41
13	15	12.5		25.6	276	45.0 ¹⁶²		-1 09.1 ¹²³	10 S	4 48	5 15	5 38	32 45		14	37
14	30	12.2		25.6	291	20.1 ¹⁶¹		-0 56.8 ¹²³	20	4 25	4 54	5 19	31 49		17	33
15	45	11.9		25.6	305	55.3 ¹⁶²		44.5 ¹²³	30	3 56	29	4 57	30 53		20	29
16	60	11.6		25.5	320	30.5 ¹⁶²		32.2 ¹²³	35	37	4 14	44	29 56		22	27
17	75	11.3	-23	25.5	335	05.6 ¹⁶¹		-0 19.9 ¹²³	40	3 14	3 56	4 29	12 28	59	0 24	24
18	90	11.0	-23	25.5	349	40.7 ¹⁶¹		-0 07.6 ¹²³	45	2 43	3 33	4 11	12 28	62	0 27	20
19	105	10.7		25.4	4	15.8 ¹⁶¹		+0 04.7 ¹²³	50	1 58	3 03	3 48	27 66		29	17
20	120	10.3		25.4	18	50.9 ¹⁶¹		17.0 ¹²³	52	1 30	2 48	37	26 69		31	14
21	135	10.0		25.3	33	26.0 ¹⁶¹		29.4 ¹²⁴	54	0 42	30	25	26 70		32	13
22	150	09.7		25.3	48	01.0 ¹⁶⁰		41.7 ¹²³	56	***	2 08	3 10	25 73		34	10
23	165	09.4		25.3	62	36.1 ¹⁶¹		+0 54.1 ¹²⁴	58	***	1 38	2 54	25 75		35	9
24	180	09.1	-23	25.2	77	11.1 ¹⁶⁰		+1 06.4 ¹²³	60 S	***	0 46	2 33	12 24	78	0 37	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 50 ^m 7		Mag: -3.9 PMG: 11 ^h 36 ^m		Mag: +0.7 PMG: 16 ^h 41 ^m		Mag: -2.7 PMG: 0 ^h 45 ^m		Mag: -0.3 PMG: 22 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	91	36.0	186	08.4	-23	25.2	109	27.3	-8	31.6	348	41.8	+22	53.4	23	00.8	+20	07.7
1	106	38.5	201	07.4		25.4	124	28.1		30.9	3	44.6		53.4	38	03.5		07.7
2	121	41.0	216	06.5		25.6	139	28.9		30.2	18	47.4		53.5	53	06.1		07.6
3	136	43.4	231	05.5		25.8	154	29.7		29.4	33	50.2		53.5	68	08.8		07.6
4	151	45.9	246	04.6		26.0	169	30.4		28.7	48	53.0		53.5	83	11.4		07.6
5	166	48.4	261	03.6	-23	26.2	184	31.2	-8	27.9	63	55.8	+22	53.6	98	14.1	+20	07.6
6	181	50.8	276	02.6	-23	26.4	199	32.0	-8	27.2	78	58.7	+22	53.6	113	16.7	+20	07.6
7	196	53.3	291	01.7		26.6	214	32.7		26.5	94	01.5		53.6	128	19.4		07.5
8	211	55.8	306	00.7		26.8	229	33.5		25.7	109	04.3		53.7	143	22.1		07.5
9	226	58.2	320	59.7		27.0	244	34.3		25.0	124	07.1		53.7	158	24.7		07.5
10	242	00.7	335	58.8		27.2	259	35.1		24.2	139	09.9		53.7	173	27.4		07.5
11	257	03.2	350	57.8	-23	27.3	274	35.8	-8	23.5	154	12.8	+22	53.8	188	30.0	+20	07.5
12	272	05.6	5	56.9	-23	27.5	289	36.6	-8	22.7	169	15.6	+22	53.8	203	32.7	+20	07.4
13	287	08.1	20	55.9		27.7	304	37.4		22.0	184	18.4		53.8	218	35.3		07.4
14	302	10.5	35	54.9		27.9	319	38.1		21.3	199	21.2		53.9	233	38.0		07.4
15	317	13.0	50	54.0		28.1	334	38.9		20.5	214	24.0		53.9	248	40.7		07.4
16	332	15.5	65	53.0		28.3	349	39.7		19.8	229	26.9		54.0	263	43.3		07.4
17	347	17.9	80	52.1	-23	28.4	4	40.5	-8	19.0	244	29.7	+22	54.0	278	46.0	+20	07.3
18	2	20.4	95	51.1	-23	28.6	19	41.2	-8	18.3	259	32.5	+22	54.0	293	48.6	+20	07.3
19	17	22.9	110	50.1		28.8	34	42.0		17.5	274	35.3		54.1	308	51.3		07.3
20	32	25.3	125	49.2		29.0	49	42.8		16.8	289	38.1		54.1	323	53.9		07.3
21	47	27.8	140	48.2		29.1	64	43.6		16.1	304	41.0		54.1	338	56.6		07.3
22	62	30.3	155	47.2		29.3	79	44.3		15.3	319	43.8		54.2	353	59.3		07.2
23	77	32.7	170	46.3		29.5	94	45.1		14.6	334	46.6		54.2	9	01.9		07.2
24	92	35.2	185	45.3	-23	29.7	109	45.9	-8	13.8	349	49.4	+22	54.2	24	04.6	+20	07.2
Dif	—		-10		-2		+8		+7		+28		0		+27			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3				Edad: 9 ^d 1 PHE { 4 ^h : 54:8 12 ^h : 55:0 20 ^h : 55:1	SD: 14:9		R°: 43 ^m										
	PMG: 11 ^h 59 ^m 6					PMG: 19 ^h 24 ^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	09.1	-23	25.2	77	11.1	+1	06.4	60 N	14 56	15 54	16 51	12 48 6		1 01 80			
1	195	08.8		25.2	91	46.1 ¹⁶⁰		18.8 ¹²⁴	58	15 14	16 06	16 58	49 10		01 76			
2	210	08.5		25.1	106	21.0 ¹⁵⁹		31.1 ¹²³	56	28	16	17 05	51 12		1 00 74			
3	225	08.2		25.1	120	56.0 ¹⁶⁰		43.5 ¹²⁴	54	41	25	11	53 14		0 59 72			
4	240	07.9		25.0	135	30.9 ¹⁵⁹	+1	55.9 ¹²⁴	52	15 52	33	17	54 16		59 69			
5	255	07.6	-23	25.0	150	05.8 ¹⁵⁹	+2	08.2 ¹²³	50	16 02	16 41	17 22	12 56 18		0 59 67			
6	270	07.2	-23	24.9	164	40.6 ¹⁵⁸	+2	20.6 ¹²⁴	45	16 23	16 57	17 34	12 58 22		0 58 63			
7	285	06.9		24.9	179	15.5 ¹⁵⁹		33.0 ¹²⁴	40	40	17 10	44	13 01 25		57 59			
8	300	06.6		24.8	193	50.2 ¹⁵⁷		45.4 ¹²⁴	35	16 54	22	17 54	03 28		56 57			
9	315	06.3		24.8	208	25.0 ¹⁵⁸	+2	57.7 ¹²³	30	17 06	33	18 02	05 31		55 54			
10	330	06.0		24.7	222	59.7 ¹⁵⁷	+3	10.1 ¹²⁴	20	27	17 51	19	08 35		54 50			
11	345	05.7	-23	24.7	237	34.4 ¹⁵⁷	+3	22.5 ¹²⁴	10 N	17 46	18 09	18 35	13 11 39		0 53 46			
12	0	05.4	-23	24.6	252	09.1 ¹⁵⁷	+3	34.8 ¹²³	0	18 03	18 26	18 52	13 14 43		0 52 42			
13	15	05.1		24.6	266	43.7 ¹⁵⁶		47.2 ¹²⁴	10 S	21	18 44	19 11	17 46		51 39			
14	30	04.8		24.5	281	18.3 ¹⁵⁶	+3	59.5 ¹²³	20	18 40	19 05	19 34	20 50		50 35			
15	45	04.5		24.5	295	52.9 ¹⁵⁶	+4	11.9 ¹²⁴	30	19 02	29	20 03	23 55		49 30			
16	60	04.1		24.4	310	27.4 ¹⁵⁵		24.2 ¹²³	35	15	19 45	22	25 58		49 27			
17	75	03.8	-23	24.4	325	01.9 ¹⁵⁵	+4	36.6 ¹²⁴	40	19 30	20 03	20 45	13 27 61		0 48 24			
18	90	03.5	-23	24.3	339	36.3 ¹⁵⁴	+4	48.9 ¹²³	45	19 48	20 26	21 15	13 30 64		0 47 21			
19	105	03.2		24.3	354	10.7 ¹⁵⁴	+5	01.2 ¹²³	50	20 11	20 55	22 01	33 69		46 17			
20	120	02.9		24.2	8	45.1 ¹⁵⁴		13.5 ¹²³	52	22	21 10	22 29	35 70		45 16			
21	135	02.6		24.1	23	19.4 ¹⁵³		25.8 ¹²³	54	34	28	23 15	36 73		45 13			
22	150	02.3		24.1	37	53.6 ¹⁵²		38.1 ¹²³	56	20 48	21 51	** **	38 75		44 11			
23	165	02.0		24.0	52	27.9 ¹⁵³	+5	50.4 ¹²³	58	21 05	22 20	** **	40 78		44 8			
24	180	01.7	-23	23.9	67	02.0 ¹⁵¹	+6	02.7 ¹²³	60 S	21 25	23 11	** **	13 42 81		0 43 6			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 46 ^m 7		Mag: -3.9 PMG: 11 ^h 38 ^m				Mag: +0.7 PMG: 16 ^h 40 ^m				Mag: -2.7 PMG: 0 ^h 41 ^m				Mag: -0.3 PMG: 22 ^h 20 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	35.2	185	45.3	-23	29.7	109	45.9	-8	13.8	349	49.4	+22	54.2	24	04.6	+20	07.2
1	107	37.7	200	44.4		29.8	124	46.7		13.1	4	52.3		54.3	39	07.2		07.2
2	122	40.1	215	43.4		30.0	139	47.4		12.3	19	55.1		54.3	54	09.9		07.2
3	137	42.6	230	42.4		30.2	154	48.2		11.6	34	57.9		54.3	69	12.5		07.1
4	152	45.0	245	41.5		30.3	169	49.0		10.9	50	00.7		54.4	84	15.2		07.1
5	167	47.5	260	40.5	-23	30.5	184	49.7	-8	10.1	65	03.5	+22	54.4	99	17.8	+20	07.1
6	182	50.0	275	39.5	-23	30.6	199	50.5	-8	09.4	80	06.4	+22	54.4	114	20.5	+20	07.1
7	197	52.4	290	38.6		30.8	214	51.3		08.6	95	09.2		54.5	129	23.2		07.1
8	212	54.9	305	37.6		31.0	229	52.1		07.9	110	12.0		54.5	144	25.8		07.0
9	227	57.4	320	36.6		31.1	244	52.8		07.1	125	14.8		54.5	159	28.5		07.0
10	242	59.8	335	35.7		31.3	259	53.6		06.4	140	17.6		54.6	174	31.1		07.0
11	258	02.3	350	34.7	-23	31.4	274	54.4	-8	05.6	155	20.5	+22	54.6	189	33.8	+20	07.0
12	273	04.8	5	33.7	-23	31.6	289	55.2	-8	04.9	170	23.3	+22	54.6	204	36.4	+20	07.0
13	288	07.2	20	32.8		31.8	304	55.9		04.2	185	26.1		54.7	219	39.1		06.9
14	303	09.7	35	31.8		31.9	319	56.7		03.4	200	28.9		54.7	234	41.7		06.9
15	318	12.1	50	30.9		32.1	334	57.5		02.7	215	31.8		54.8	249	44.4		06.9
16	333	14.6	65	29.9		32.2	349	58.3		01.9	230	34.6		54.8	264	47.0		06.9
17	348	17.1	80	28.9	-23	32.4	4	59.0	-8	01.2	245	37.4	+22	54.8	279	49.7	+20	06.9
18	3	19.5	95	28.0	-23	32.5	19	59.8	-8	00.4	260	40.2	+22	54.9	294	52.4	+20	06.8
19	18	22.0	110	27.0		32.6	35	00.6	-7	59.7	275	43.0		54.9	309	55.0		06.8
20	33	24.5	125	26.0		32.8	50	01.4		58.9	290	45.9		54.9	324	57.7		06.8
21	48	26.9	140	25.1		32.9	65	02.1		58.2	305	48.7		55.0	340	00.3		06.8
22	63	29.4	155	24.1		33.1	80	02.9		57.4	320	51.5		55.0	355	03.0		06.8
23	78	31.9	170	23.1		33.2	95	03.7		56.7	335	54.3		55.0	10	05.6		06.8
24	93	34.3	185	22.2	-23	33.4	110	04.5	-7	56.0	350	57.2	+22	55.1	25	08.3	+20	06.7
Dif	—		-10		-2		+8		+7		+28		0		+27			

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: 10 ^d 1 PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/8 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	180	01.7	-23	23.9	67	02.0	+6	02.7	60 N	7	09	8	06	9	03	12	54	
1	195	01.4		23.9	81	36.1 ¹⁵¹		14.9 ¹²²	58	7	01	7	54	8	46	12	59	
2	210	01.0		23.8	96	10.2 ¹⁵¹		27.2 ¹²³	56	6	55		44	31		13	03	
3	225	00.7		23.8	110	44.2 ¹⁵⁰		39.4 ¹²²	54		49		35	19		07	16	
4	240	00.4		23.7	125	18.2 ¹⁵⁰	+6	51.6 ¹²²	52		43		27	8	08	10	19	
5	255	00.1	-23	23.6	139	52.1 ¹⁴⁹	+7	03.8 ¹²²	50	6	38	7	19	7	58	13	14	
6	269	59.8	-23	23.6	154	26.0 ¹⁴⁹	+7	16.0 ¹²²	45	6	26	7	03	7	37	13	20	
7	284	59.5		23.5	168	59.8 ¹⁴⁸		28.1 ¹²¹	40		15		6	50	20	26	28	
8	299	59.2		23.4	183	33.6 ¹⁴⁸		40.3 ¹²²	35	6	06		38	7	06	31	31	
9	314	58.9		23.4	198	07.3 ¹⁴⁷	+7	52.4 ¹²¹	30	5	57		27	6	54	36	33	
10	329	58.6		23.3	212	40.9 ¹⁴⁶	+8	04.5 ¹²¹	20		41		6	08	32	43	38	
11	344	58.3	-23	23.2	227	14.5 ¹⁴⁶	+8	16.6 ¹²¹	10 N	5	25		5	51	6	14	50	
12	359	57.9	-23	23.1	241	48.0 ¹⁴⁵	+8	28.6 ¹²⁰	0	5	08		5	34	5	56	57	
13	14	57.6		23.1	256	21.5 ¹⁴⁵		40.7 ¹²¹	10 S	4	49		5	16	39	14	03	
14	29	57.3		23.0	270	54.9 ¹⁴⁴	+8	52.7 ¹²⁰	20	4	26		4	55	5	20	53	
15	44	57.0		22.9	285	28.2 ¹⁴³	+9	04.7 ¹²⁰	30	3	57		30	4	58	18	58	
16	59	56.7		22.8	300	01.5 ¹⁴³		16.6 ¹¹⁹	35		38		4	15	45	23	60	
17	74	56.4	-23	22.8	314	34.7 ¹⁴²	+9	28.6 ¹²⁰	40	3	15		3	57	4	30	28	
18	89	56.1	-23	22.7	329	07.8 ¹⁴¹	+9	40.5 ¹¹⁹	45	2	45		3	34	4	12	34	
19	104	55.8		22.6	343	40.9 ¹⁴¹	+9	52.4 ¹¹⁹	50	1	59		3	05	3	49	42	
20	119	55.5		22.5	358	13.9 ¹⁴⁰	+10	04.2 ¹¹⁸	52	1	31		2	49	38	45	74	
21	134	55.2		22.5	12	46.9 ¹⁴⁰		16.0 ¹¹⁸	54	0	45		31	26	49	76	0	
22	149	54.9		22.4	27	19.7 ¹³⁸		27.8 ¹¹⁸	56	** ** *	2	09		3	12	53	79	
23	164	54.5		22.3	41	52.5 ¹³⁸		39.6 ¹¹⁸	58	** ** *	1	39		2	55	14	58	
24	179	54.2	-23	22.2	56	25.3 ¹³⁸	+10	51.3 ¹¹⁷	60 S	** ** *	0	49		2	35	15	03	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 42 ^m 8		Mag: -3.9 PMG: 11 ^h 39 ^m				Mag: +0.7 PMG: 16 ^h 39 ^m				Mag: -2.7 PMG: 0 ^h 36 ^m				Mag: -0.3 PMG: 22 ^h 16 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	34.3	185	22.2	-23	33.4	110	04.5	-7	56.0	350	57.2	+22	55.1	25	08.3	+20	06.7
1	108	36.8	200	21.2		33.5	125	05.2		55.2	6	00.0		55.1	40	10.9		06.7
2	123	39.3	215	20.2		33.6	140	06.0		54.5	21	02.8		55.1	55	13.6		06.7
3	138	41.7	230	19.3		33.8	155	06.8		53.7	36	05.6		55.2	70	16.2		06.7
4	153	44.2	245	18.3		33.9	170	07.6		53.0	51	08.5		55.2	85	18.9		06.7
5	168	46.6	260	17.3	-23	34.0	185	08.4	-7	52.2	66	11.3	+22	55.2	100	21.5	+20	06.6
6	183	49.1	275	16.4	-23	34.2	200	09.1	-7	51.5	81	14.1	+22	55.3	115	24.2	+20	06.6
7	198	51.6	290	15.4		34.3	215	09.9		50.7	96	16.9		55.3	130	26.8		06.6
8	213	54.0	305	14.4		34.4	230	10.7		50.0	111	19.7		55.3	145	29.5		06.6
9	228	56.5	320	13.5		34.6	245	11.5		49.2	126	22.6		55.4	160	32.2		06.6
10	243	59.0	335	12.5		34.7	260	12.2		48.5	141	25.4		55.4	175	34.8		06.5
11	259	01.4	350	11.5	-23	34.8	275	13.0	-7	47.7	156	28.2	+22	55.4	190	37.5	+20	06.5
12	274	03.9	5	10.6	-23	34.9	290	13.8	-7	47.0	171	31.0	+22	55.5	205	40.1	+20	06.5
13	289	06.4	20	09.6		35.1	305	14.6		46.2	186	33.9		55.5	220	42.8		06.5
14	304	08.8	35	08.6		35.2	320	15.3		45.5	201	36.7		55.6	235	45.4		06.5
15	319	11.3	50	07.6		35.3	335	16.1		44.8	216	39.5		55.6	250	48.1		06.5
16	334	13.8	65	06.7		35.4	350	16.9		44.0	231	42.3		55.6	265	50.7		06.4
17	349	16.2	80	05.7	-23	35.5	5	17.7	-7	43.3	246	45.2	+22	55.7	280	53.4	+20	06.4
18	4	18.7	95	04.7	-23	35.7	20	18.5	-7	42.5	261	48.0	+22	55.7	295	56.0	+20	06.4
19	19	21.1	110	03.8		35.8	35	19.2		41.8	276	50.8		55.7	310	58.7		06.4
20	34	23.6	125	02.8		35.9	50	20.0		41.0	291	53.6		55.8	326	01.3		06.4
21	49	26.1	140	01.8		36.0	65	20.8		40.3	306	56.5		55.8	341	04.0		06.3
22	64	28.5	155	00.9		36.1	80	21.6		39.5	321	59.3		55.8	356	06.6		06.3
23	79	31.0	169	59.9		36.2	95	22.3		38.8	337	02.1		55.9	11	09.3		06.3
24	94	33.5	184	58.9	-23	36.3	110	23.1	-7	38.0	352	04.9	+22	55.9	26	11.9	+20	06.3
Dif	—		-10		-1		+8		+7		+28		0		+27			

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3			Edad: 11 ^d 1 PHE	$\left\{ \begin{array}{l} 4^h: 56/0 \\ 12^h: 56/2 \\ 20^h: 56/5 \end{array} \right.$			Civil			Náutico		Hora		R°		
	PMG: 12 ^h 00 ^m 6							R°: 50 ^m									
	hG ☉	Dec		hG ☾	Dif		Dec	Dif									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	54.2	-23	22.2	56	25.3	+10	51.3	60 N	14	58	15	55	16	52	13 02 12	
1	194	53.9		22.1	70	57.9 ¹³⁶	+11	03.0 ¹¹⁷	58	15	15	16	07	17	00	10 16	
2	209	53.6		22.0	85	30.5 ¹³⁶		14.6 ¹¹⁶	56	30		17		06		17 18	
3	224	53.3		22.0	100	03.0 ¹³⁵		26.2 ¹¹⁶	54	42		26		13		23 21	
4	239	53.0		21.9	114	35.4 ¹³⁴		37.8 ¹¹⁶	52	15	54	34		18		29 23	
5	254	52.7	-23	21.8	129	07.8 ¹³⁴	+11	49.4 ¹¹⁶	50	16	03	16	42	17	23	13 34 25	
6	269	52.4	-23	21.7	143	40.1 ¹³³	+12	00.9 ¹¹⁵	45	16	24	16	58	17	35	13 45 29	
7	284	52.1		21.6	158	12.3 ¹³²		12.3 ¹¹⁴	40	41		17	11	45		13 54 33	
8	299	51.8		21.5	172	44.4 ¹³¹		23.7 ¹¹⁴	35	16	55	23		17	55	14 02 36	
9	314	51.5		21.4	187	16.4 ¹³⁰		35.1 ¹¹⁴	30	17	07	34		18	04	09 38	
10	329	51.2		21.3	201	48.4 ¹³⁰		46.4 ¹¹³	20	28		17	53	20		21 42	
11	344	50.8	-23	21.3	216	20.3 ¹²⁹	+12	57.7 ¹¹³	10 N	17	47	18	10	18	36	14 32 46	
12	359	50.5	-23	21.2	230	52.0 ¹²⁷	+13	09.0 ¹¹³	0	18	04	18	27	18	53	14 42 49	
13	14	50.2		21.1	245	23.8 ¹²⁸		20.2 ¹¹²	10 S	22		18	45	19	12	14 52 53	
14	29	49.9		21.0	259	55.4 ¹²⁶		31.3 ¹¹¹	20	18	41	19	05	19	35	15 03 56	
15	44	49.6		20.9	274	26.9 ¹²⁵		42.4 ¹¹¹	30	19	03		30	20	04	16 60	
16	59	49.3		20.8	288	58.4 ¹²⁵	+13	53.4 ¹¹⁰	35	16		19	45		22	23 63	
17	74	49.0	-23	20.7	303	29.7 ¹²³	+14	04.4 ¹¹⁰	40	19	31	20	04	20	45	15 31 66	
18	89	48.7	-23	20.6	318	01.0 ¹²³	+14	15.4 ¹¹⁰	45	19	49	20	26	21	16	15 41 70	
19	104	48.4		20.5	332	32.2 ¹²²		26.2 ¹⁰⁸	50	20	11	20	56	22	01	53 74	
20	119	48.1		20.4	347	03.3 ¹²¹		37.1 ¹⁰⁹	52	22		21	11	22	29	15 59 76	
21	134	47.8		20.3	1	34.3 ¹²⁰		47.8 ¹⁰⁷	54	34		29		23	14	16 05 78	
22	149	47.5		20.2	16	05.3 ¹²⁰	+14	58.5 ¹⁰⁷	56	20	48	21	51	** **		12 81	
23	164	47.2		20.1	30	36.1 ¹¹⁸	+15	09.2 ¹⁰⁷	58	21	05	22	20	** **		19 85	
24	179	46.9	-23	20.0	45	06.8 ¹¹⁷	+15	19.8 ¹⁰⁶	60 S	21	25	23	09	** **		16 28 89	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 38 ^m 9		Mag: -3.9 PMG: 11 ^h 41 ^m			Mag: +0.7 PMG: 16 ^h 38 ^m			Mag: -2.7 PMG: 0 ^h 32 ^m			Mag: -0.3 PMG: 22 ^h 11 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	94	33.5	184	58.9	-23	36.3	110	23.1	-7	38.0	352	04.9	+22	55.9			
1	109	35.9	199	58.0		36.4	125	23.9		37.3	7	07.8		55.9			
2	124	38.4	214	57.0		36.5	140	24.7		36.5	22	10.6		56.0			
3	139	40.9	229	56.0		36.7	155	25.5		35.8	37	13.4		56.0			
4	154	43.3	244	55.1		36.8	170	26.2		35.0	52	16.2		56.0			
5	169	45.8	259	54.1	-23	36.9	185	27.0	-7	34.3	67	19.1	+22	56.1			
6	184	48.2	274	53.1	-23	37.0	200	27.8	-7	33.5	82	21.9	+22	56.1			
7	199	50.7	289	52.1		37.1	215	28.6		32.8	97	24.7		56.1			
8	214	53.2	304	51.2		37.2	230	29.3		32.0	112	27.5		56.2			
9	229	55.6	319	50.2		37.3	245	30.1		31.3	127	30.4		56.2			
10	244	58.1	334	49.2		37.4	260	30.9		30.5	142	33.2		56.2			
11	260	00.6	349	48.3	-23	37.4	275	31.7	-7	29.8	157	36.0	+22	56.3			
12	275	03.0	4	47.3	-23	37.5	290	32.5	-7	29.0	172	38.8	+22	56.3			
13	290	05.5	19	46.3		37.6	305	33.2		28.3	187	41.7		56.3			
14	305	08.0	34	45.4		37.7	320	34.0		27.5	202	44.5		56.4			
15	320	10.4	49	44.4		37.8	335	34.8		26.8	217	47.3		56.4			
16	335	12.9	64	43.4		37.9	350	35.6		26.0	232	50.1		56.5			
17	350	15.4	79	42.4	-23	38.0	5	36.4	-7	25.3	247	53.0	+22	56.5			
18	5	17.8	94	41.5	-23	38.1	20	37.1	-7	24.5	262	55.8	+22	56.5			
19	20	20.3	109	40.5		38.2	35	37.9		23.8	277	58.6		56.6			
20	35	22.7	124	39.5		38.3	50	38.7		23.0	293	01.4		56.6			
21	50	25.2	139	38.6		38.3	65	39.5		22.3	308	04.3		56.6			
22	65	27.7	154	37.6		38.4	80	40.3		21.6	323	07.1		56.7			
23	80	30.1	169	36.6		38.5	95	41.0		20.8	338	09.9		56.7			
24	95	32.6	184	35.7	-23	38.6	110	41.8	-7	20.1	353	12.8	+22	56.7			
Dif	—		-10			-1		+8		+7		+28		0		+26	

0

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: 12 ^d 1 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'3 Rº: 54 ^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	179	46.9	-23	20.0	45	06.8	+15	19.8	60 N	7 09	8 06	9 04	13 14	18	5 10	89		
1	194	46.5		19.9	59	37.5 ¹¹⁷		30.3 ¹⁰⁵	58	7 02	7 54	8 46	26 21		4 59	85		
2	209	46.2		19.8	74	08.0 ¹¹⁵		40.8 ¹⁰⁵	56	6 55	44	32	35 25		50	82		
3	224	45.9		19.7	88	38.5 ¹¹⁵	+15	51.2 ¹⁰⁴	54	49	35	19	44 28		42	79		
4	239	45.6		19.6	103	08.8 ¹¹³	+16	01.5 ¹⁰³	52	43	27	8 08	52 30		35	76		
5	254	45.3	-23	19.5	117	39.1 ¹¹³	+16	11.8 ¹⁰³	50	6 38	7 20	7 58	13 59	32	4 28	74		
6	269	45.0	-23	19.4	132	09.3 ¹¹²	+16	22.0 ¹⁰²	45	6 26	7 04	7 38	14 14	36	4 14	70		
7	284	44.7		19.3	146	39.4 ¹¹¹		32.1 ¹⁰¹	40	16	6 50	21	27 39		4 03	66		
8	299	44.4		19.2	161	09.3 ¹⁰⁹		42.2 ¹⁰¹	35	6 07	39	7 07	38 41		3 53	64		
9	314	44.1		19.0	175	39.2 ¹⁰⁹	+16	52.2 ¹⁰⁰	30	5 58	28	6 54	14 47	44	44	62		
10	329	43.8		18.9	190	09.0 ¹⁰⁸	+17	02.1 ⁹⁹	20	42	6 09	33	15 03	48	30	57		
11	344	43.5	-23	18.8	204	38.7 ¹⁰⁷	+17	11.9 ⁹⁸	10 N	5 26	5 52	6 15	15 18	50	3 17	54		
12	359	43.2	-23	18.7	219	08.3 ¹⁰⁶	+17	21.7 ⁹⁸	0	5 09	5 35	5 57	15 31	53	3 05	51		
13	14	42.9		18.6	233	37.8 ¹⁰⁵		31.4 ⁹⁷	10 S	4 50	5 17	40	45 56		2 53	48		
14	29	42.6		18.5	248	07.1 ¹⁰³		41.0 ⁹⁶	20	4 27	4 56	5 21	15 59	60	41	44		
15	44	42.3		18.4	262	36.4 ¹⁰³	+17	50.5 ⁹⁵	30	3 58	32	4 59	16 16	63	26	41		
16	59	41.9		18.3	277	05.6 ¹⁰²	+18	00.0 ⁹⁵	35	40	4 16	46	26 65		18	38		
17	74	41.6	-23	18.2	291	34.7 ¹⁰¹	+18	09.3 ⁹³	40	3 17	3 58	4 31	16 37	68	2 08	36		
18	89	41.3	-23	18.0	306	03.7 ¹⁰⁰	+18	18.6 ⁹³	45	2 46	3 36	4 13	16 51	70	1 57	32		
19	104	41.0		17.9	320	32.6 ⁹⁹		27.8 ⁹²	50	2 01	3 06	3 51	17 07	75	44	28		
20	119	40.7		17.8	335	01.3 ⁹⁷		36.9 ⁹¹	52	1 33	2 51	40	15 76		38	26		
21	134	40.4		17.7	349	30.0 ⁹⁷		45.9 ⁹⁰	54	0 48	33	28	23 79		31	24		
22	149	40.1		17.6	3	58.6 ⁹⁶	+18	54.8 ⁸⁹	56	** **	2 11	3 13	33 82		24	20		
23	164	39.8		17.4	18	27.1 ⁹⁵	+19	03.7 ⁸⁹	58	** **	1 42	2 57	44 85		15	18		
24	179	39.5	-23	17.3	32	55.5 ⁹⁴	+19	12.4 ⁸⁷	60 S	** **	0 53	2 36	17 57	90	1 06	13		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 34 ^m 9			Mag: -3.9 PMG: 11 ^h 42 ^m			Mag: +0.7 PMG: 16 ^h 36 ^m			Mag: -2.7 PMG: 0 ^h 27 ^m			Mag: -0.3 PMG: 22 ^h 07 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	95	32.6	184	35.7	-23	38.6	110	41.8	-7	20.1	353	12.8	+22	56.7	27	15.5	+20	05.8
1	110	35.1	199	34.7		38.7	125	42.6		19.3	8	15.6		56.8	42	18.2		05.8
2	125	37.5	214	33.7		38.7	140	43.4		18.6	23	18.4		56.8	57	20.8		05.8
3	140	40.0	229	32.7		38.8	155	44.2		17.8	38	21.2		56.8	72	23.5		05.8
4	155	42.5	244	31.8		38.9	170	44.9		17.0	53	24.1		56.9	87	26.1		05.8
5	170	44.9	259	30.8	-23	38.9	185	45.7	-7	16.3	68	26.9	+22	56.9	102	28.8	+20	05.7
6	185	47.4	274	29.8	-23	39.0	200	46.5	-7	15.5	83	29.7	+22	56.9	117	31.4	+20	05.7
7	200	49.9	289	28.9		39.1	215	47.3		14.8	98	32.5		57.0	132	34.0		05.7
8	215	52.3	304	27.9		39.2	230	48.1		14.0	113	35.4		57.0	147	36.7		05.7
9	230	54.8	319	26.9		39.2	245	48.8		13.3	128	38.2		57.0	162	39.3		05.7
10	245	57.2	334	25.9		39.3	260	49.6		12.5	143	41.0		57.1	177	42.0		05.7
11	260	59.7	349	25.0	-23	39.4	275	50.4	-7	11.8	158	43.9	+22	57.1	192	44.6	+20	05.6
12	276	02.2	4	24.0	-23	39.4	290	51.2	-7	11.0	173	46.7	+22	57.1	207	47.3	+20	05.6
13	291	04.6	19	23.0		39.5	305	52.0		10.3	188	49.5		57.2	222	49.9		05.6
14	306	07.1	34	22.1		39.5	320	52.7		09.5	203	52.3		57.2	237	52.6		05.6
15	321	09.6	49	21.1		39.6	335	53.5		08.8	218	55.2		57.2	252	55.2		05.6
16	336	12.0	64	20.1		39.7	350	54.3		08.0	233	58.0		57.3	267	57.9		05.6
17	351	14.5	79	19.1	-23	39.7	5	55.1	-7	07.3	249	00.8	+22	57.3	283	00.5	+20	05.5
18	6	17.0	94	18.2	-23	39.8	20	55.9	-7	06.5	264	03.6	+22	57.3	298	03.2	+20	05.5
19	21	19.4	109	17.2		39.8	35	56.6		05.8	279	06.5		57.4	313	05.8		05.5
20	36	21.9	124	16.2		39.9	50	57.4		05.0	294	09.3		57.4	328	08.4		05.5
21	51	24.4	139	15.3		39.9	65	58.2		04.3	309	12.1		57.4	343	11.1		05.5
22	66	26.8	154	14.3		40.0	80	59.0		03.5	324	15.0		57.5	358	13.7		05.4
23	81	29.3	169	13.3		40.0	95	59.8		02.8	339	17.8		57.5	13	16.4		05.4
24	96	31.7	184	12.3	-23	40.1	111	00.6	-7	02.0	354	20.6	+22	57.5	28	19.0	+20	05.4
Dif	—			-10			+8			+28			0			+26		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 01 ^m 6				Edad: 13 ^d 1 PHE { 4 ^h : 57:6 12 ^h : 57:8 20 ^h : 58:1 PMG: 22 ^h 38 ^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	h m m	h m m
0	179	39.5	-23	17.3	32	55.5	+19	12.4	60 N	15 00	15 57	16 54	13 32 30	6 39 87		
1	194	39.2		17.2	47	23.7	92	21.0	58	17	16 09	17 01	13 47 34	24 83		
2	209	38.9		17.1	61	51.9	92	29.6	56	32	19	08	14 00 37	12 80		
3	224	38.6		17.0	76	20.0	91	38.0	54	44	28	14	12 38	6 01 77		
4	239	38.3		16.8	90	47.9	89	46.4	52	15 55	36	20	22 40	5 51 75		
5	254	38.0	-23	16.7	105	15.8	89	+19 54.6	50	16 05	16 43	17 25	14 31 42	5 42 74		
6	269	37.7	-23	16.6	119	43.5	87	+20 02.8	45	16 26	16 59	17 37	14 50 45	5 24 70		
7	284	37.4		16.5	134	11.2	87	10.8	40	42	17 13	47	15 06 47	5 09 68		
8	299	37.1		16.3	148	38.7	85	18.8	35	16 56	24	17 56	19 49	4 57 65		
9	314	36.8		16.2	163	06.2	85	26.6	30	17 09	35	18 05	31 50	46 63		
10	329	36.5		16.1	177	33.6	84	34.3	20	30	17 54	21	15 51 53	27 61		
11	344	36.1	-23	15.9	192	00.8	82	+20 41.9	10 N	17 48	18 11	18 37	16 08 56	4 11 58		
12	359	35.8	-23	15.8	206	27.9	81	+20 49.5	0	18 05	18 28	18 54	16 24 58	3 56 55		
13	14	35.5		15.7	220	55.0	81	+20 56.8	10 S	23	18 46	19 13	41 59	41 53		
14	29	35.2		15.5	235	21.9	79	+21 04.1	20	18 42	19 06	19 35	16 59 61	25 50		
15	44	34.9		15.4	249	48.8	79	11.3	30	19 04	31	20 04	17 19 64	3 07 47		
16	59	34.6		15.3	264	15.5	77	18.3	35	16	19 46	23	31 65	2 56 45		
17	74	34.3	-23	15.1	278	42.2	77	+21 25.3	40	19 31	20 04	20 46	17 45 67	2 44 43		
18	89	34.0	-23	15.0	293	08.7	75	+21 32.1	45	19 49	20 27	21 16	18 01 70	2 29 40		
19	104	33.7		14.9	307	35.2	75	38.8	50	20 12	20 56	22 01	22 72	12 36		
20	119	33.4		14.7	322	01.6	74	45.3	52	22	21 11	22 28	31 74	2 04 34		
21	134	33.1		14.6	336	27.8	72	51.8	54	34	29	23 11	42 76	1 55 32		
22	149	32.8		14.5	350	54.0	72	+21 58.1	56	20 49	21 50	** **	18 55 77	44 30		
23	164	32.5		14.3	5	20.1	71	+22 04.3	58	21 05	22 19	** **	19 09 80	33 26		
24	179	32.2	-23	14.2	19	46.0	69	+22 10.4	60 S	21 25	23 07	** **	19 27 83	1 19 23		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 17 ^h 31 ^m 0		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: +0.7 PMG: 16 ^h 35 ^m		Mag: -2.7 PMG: 0 ^h 23 ^m		Mag: -0.3 PMG: 22 ^h 03 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	96	31.7	184	12.3	-23	40.1	111	00.6	-7	02.0						
1	111	34.2	199	11.4		40.1	126	01.3		01.3						
2	126	36.7	214	10.4		40.2	141	02.1	-7	00.5						
3	141	39.1	229	09.4		40.2	156	02.9	-6	59.8						
4	156	41.6	244	08.5		40.3	171	03.7		59.0						
5	171	44.1	259	07.5	-23	40.3	186	04.5	-6	58.3						
6	186	46.5	274	06.5	-23	40.3	201	05.3	-6	57.5						
7	201	49.0	289	05.5		40.4	216	06.0		56.8						
8	216	51.5	304	04.6		40.4	231	06.8		56.0						
9	231	53.9	319	03.6		40.5	246	07.6		55.3						
10	246	56.4	334	02.6		40.5	261	08.4		54.5						
11	261	58.9	349	01.6	-23	40.5	276	09.2	-6	53.8						
12	277	01.3	4	00.7	-23	40.6	291	09.9	-6	53.0						
13	292	03.8	18	59.7		40.6	306	10.7		52.2						
14	307	06.2	33	58.7		40.6	321	11.5		51.5						
15	322	08.7	48	57.8		40.7	336	12.3		50.7						
16	337	11.2	63	56.8		40.7	351	13.1		50.0						
17	352	13.6	78	55.8	-23	40.7	6	13.9	-6	49.2						
18	7	16.1	93	54.8	-23	40.7	21	14.6	-6	48.5						
19	22	18.6	108	53.9		40.8	36	15.4		47.7						
20	37	21.0	123	52.9		40.8	51	16.2		47.0						
21	52	23.5	138	51.9		40.8	66	17.0		46.2						
22	67	26.0	153	50.9		40.8	81	17.8		45.5						
23	82	28.4	168	50.0		40.8	96	18.6		44.7						
24	97	30.9	183	49.0	-23	40.9	111	19.4	-6	44.0						
Dif	—		-10		0		+8		+8							

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 14 ^d 1	PHE {	4 ^h : 58'3	12 ^h : 58'6	20 ^h : 58'8		R°: 61 ^m							
	PMG: 12 ^h 02 ^m 1										SD: 15'9		PMG: 23 ^h 36 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	32.2	-23	14.2	19	46.0	+22	10.4	60 N	7 10	8 06	9 03	14 02	48	8 06	76	
1	194	31.9		14.0	34	11.9	69	16.3	59	58	7 02	7 55	8 46	21 50	7 47	74	
2	209	31.6		13.9	48	37.7	68	22.1	58	56	6 56	45	32	37 52	32	71	
3	224	31.3		13.8	63	03.4	67	27.8	57	54	49	36	19	14 50	53	18 7	
4	239	31.0		13.6	77	29.0	66	33.3	55	52	44	27	8 08	15 02	54	7 06 70	
5	254	30.7	-23	13.5	91	54.5	65	+22	38.8	55	6 39	7 20	7 58	15 13	55	6 56 69	
6	269	30.4	-23	13.3	106	20.0	65	+22	44.0	52	6 27	7 04	7 38	15 35	56	6 34 67	
7	284	30.1		13.2	120	45.3	63	49.2	50	40	17	6 51	21	15 53	57	17 65	
8	299	29.8		13.0	135	10.6	63	54.2	50	35	6 08	39	7 07	16 08	58	6 02 65	
9	314	29.5		12.9	149	35.7	61	+22	59.0	48	5 59	29	6 55	21 59		5 49 64	
10	329	29.2		12.7	164	00.8	61	+23	03.7	47	43	6 10	34	16 44	59	28 62	
11	344	28.9	-23	12.6	178	25.8	60	+23	08.3	46	10 N	5 27	5 53	6 16	17 04	59	5 09 60
12	359	28.6	-23	12.4	192	50.8	60	+23	12.7	44	0	5 10	5 36	5 58	17 22	60	4 51 59
13	14	28.3		12.3	207	15.6	58	17.0	43	10 S	4 51	5 18	41	17 40	61	34 58	
14	29	28.0		12.1	221	40.4	58	21.2	42	20	28	4 58	22	18 00	62	4 15 56	
15	44	27.7		12.0	236	05.1	57	25.2	40	30	4 00	33	5 00	23 62	3 54	54	
16	59	27.4		11.8	250	29.7	56	29.0	38	35	3 41	18	4 47	36 63	41	53	
17	74	27.1	-23	11.7	264	54.2	55	+23	32.7	37	40	3 18	4 00	4 32	18 52	63	3 27 51
18	89	26.8	-23	11.5	279	18.7	55	+23	36.3	36	45	2 48	3 37	4 15	19 11	63	3 09 51
19	104	26.5		11.4	293	43.1	54	39.7	34	50	2 03	3 08	3 52	34 64	2 48	48	
20	119	26.2		11.2	308	07.4	53	42.9	32	52	1 36	2 53	42	45 65	38	47	
21	134	25.8		11.0	322	31.7	53	46.0	31	54	0 52	35	29	19 58	65	27 45	
22	149	25.5		10.9	336	55.9	52	48.9	29	56	** ** *	2 13	3 15	20 12	66	2 14 43	
23	164	25.2		10.7	351	20.0	51	51.7	28	58	** ** *	1 44	2 59	29 66	1 59	41	
24	179	24.9	-23	10.6	5	44.1	51	+23	54.4	27	60 S	** ** *	0 57	2 39	20 50	67	1 42 37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 27 ^m 1		Mag: -3.9 PMG: 11 ^h 45 ^m		Mag: +0.7 PMG: 16 ^h 34 ^m		Mag: -2.7 PMG: 0 ^h 18 ^m		Mag: -0.3 PMG: 21 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	97	30.9	183	49.0	-23	40.9	111	19.4	-6	44.0
1	112	33.3	198	48.0		40.9	126	20.1		43.2
2	127	35.8	213	47.1		40.9	141	20.9		42.5
3	142	38.3	228	46.1		40.9	156	21.7		41.7
4	157	40.7	243	45.1		40.9	171	22.5		40.9
5	172	43.2	258	44.1	-23	40.9	186	23.3	-6	40.2
6	187	45.7	273	43.2	-23	40.9	201	24.1	-6	39.4
7	202	48.1	288	42.2		41.0	216	24.8		38.7
8	217	50.6	303	41.2		41.0	231	25.6		37.9
9	232	53.1	318	40.3		41.0	246	26.4		37.2
10	247	55.5	333	39.3		41.0	261	27.2		36.4
11	262	58.0	348	38.3	-23	41.0	276	28.0	-6	35.7
12	278	00.5	3	37.3	-23	41.0	291	28.8	-6	34.9
13	293	02.9	18	36.4		41.0	306	29.6		34.2
14	308	05.4	33	35.4		41.0	321	30.3		33.4
15	323	07.8	48	34.4		41.0	336	31.1		32.7
16	338	10.3	63	33.4		41.0	351	31.9		31.9
17	353	12.8	78	32.5	-23	41.0	6	32.7	-6	31.1
18	8	15.2	93	31.5	-23	41.0	21	33.5	-6	30.4
19	23	17.7	108	30.5		41.0	36	34.3		29.6
20	38	20.2	123	29.6		41.0	51	35.0		28.9
21	53	22.6	138	28.6		40.9	66	35.8		28.1
22	68	25.1	153	27.6		40.9	81	36.6		27.4
23	83	27.6	168	26.6		40.9	96	37.4		26.6
24	98	30.0	183	25.7	-23	40.9	111	38.2	-6	25.9
Dif	—		-10		0		+8		+8	
									+28	
									0	

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: 15 ^d 1 PHE { 4 ^h : 59/0 12 ^h : 59/2 20 ^h : 59/4 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	h m m	h m m				
0	179	24.9	-23	10.6	5	44.1	+23	54.4	60 N	15 02	15 59	16 56	14 50 73	9 22 55					
1	194	24.6		10.4	20	08.1		56.8	58	19	16 11	17 03	15 11 71	9 01 56					
2	209	24.3		10.2	34	32.1	+23	59.1	56	34	21	10	29 70	8 43 58					
3	224	24.0		10.1	48	55.9	+24	01.3	54	46	30	16	43 70	29 58					
4	239	23.7		09.9	63	19.8		03.3	52	15 57	38	21	15 56 69	16 58					
5	254	23.4	-23	09.8	77	43.6	+24	05.1	50	16 07	16 45	17 26	16 08 67	8 05 58					
6	269	23.1	-23	09.6	92	07.3	+24	06.8	45	16 27	17 01	17 38	16 31 67	7 41 60					
7	284	22.8		09.4	106	31.0		08.3	40	44	14	48	16 50 66	22 60					
8	299	22.5		09.3	120	54.6		09.7	35	16 58	26	17 57	17 06 65	7 07 60					
9	314	22.2		09.1	135	18.2		10.8	30	17 10	36	18 06	20 64	6 53 60					
10	329	21.9		08.9	149	41.8		11.9	20	31	17 55	22	17 43 63	30 60					
11	344	21.6	-23	08.8	164	05.3	+24	12.7	10 N	17 49	18 12	18 38	18 03 63	6 09 61					
12	359	21.3	-23	08.6	178	28.7	+24	13.4	0	18 06	18 29	18 55	18 22 62	5 50 62					
13	14	21.0		08.4	192	52.2		14.0	10 S	24	18 47	19 14	18 41 61	32 61					
14	29	20.7		08.2	207	15.6		14.3	20	18 42	19 07	19 36	19 02 59	5 11 62					
15	44	20.4		08.1	221	38.9		14.5	30	19 04	32	20 05	25 58	4 48 61					
16	59	20.1		07.9	236	02.3		14.5	35	17	19 47	23	39 57	34 62					
17	74	19.8	-23	07.7	250	25.6	+24	14.4	40	19 32	20 04	20 46	19 55 56	4 18 62					
18	89	19.5	-23	07.6	264	48.8	+24	14.1	45	19 50	20 27	21 16	20 14 55	4 00 61					
19	104	19.2		07.4	279	12.1		13.6	50	20 12	20 56	22 00	38 53	3 36 61					
20	119	19.0		07.2	293	35.3		13.0	52	22	21 11	22 27	20 50 52	25 61					
21	134	18.7		07.0	307	58.6		12.2	54	34	28	23 08	21 03 50	3 12 61					
22	149	18.4		06.9	322	21.7		11.2	56	20 48	21 50	** **	18 49	2 57 61					
23	164	18.1		06.7	336	44.9		10.1	58	21 05	22 18	** **	35 47	40 60					
24	179	17.8	-23	06.5	351	08.1	+24	08.8	60 S	21 25	23 03	** **	21 57 44	2 19 60					
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 17 ^h 23 ^m 1		Mag: -4.0 PMG: 11 ^h 47 ^m			Mag: +0.7 PMG: 16 ^h 33 ^m			Mag: -2.7 PMG: 0 ^h 14 ^m				Mag: -0.3 PMG: 21 ^h 54 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	98	30.0	183	25.7	-23	40.9	111	38.2	-6	25.9	356	36.4	+22	59.2	30	25.9	+20	04.6	
1	113	32.5	198	24.7		40.9	126	39.0		25.1	11	39.2		59.2	45	28.5		04.6	
2	128	35.0	213	23.7		40.9	141	39.8		24.3	26	42.0		59.2	60	31.1		04.5	
3	143	37.4	228	22.7		40.9	156	40.6		23.6	41	44.9		59.3	75	33.8		04.5	
4	158	39.9	243	21.8		40.8	171	41.3		22.8	56	47.7		59.3	90	36.4		04.5	
5	173	42.3	258	20.8	-23	40.8	186	42.1	-6	22.1	71	50.5	+22	59.3	105	39.1	+20	04.5	
6	188	44.8	273	19.8	-23	40.8	201	42.9	-6	21.3	86	53.4	+22	59.4	120	41.7	+20	04.5	
7	203	47.3	288	18.9		40.8	216	43.7		20.6	101	56.2		59.4	135	44.3		04.5	
8	218	49.7	303	17.9		40.8	231	44.5		19.8	116	59.0		59.4	150	47.0		04.4	
9	233	52.2	318	16.9		40.7	246	45.3		19.1	132	01.9		59.5	165	49.6		04.4	
10	248	54.7	333	15.9		40.7	261	46.1		18.3	147	04.7		59.5	180	52.2		04.4	
11	263	57.1	348	15.0	-23	40.7	276	46.8	-6	17.5	162	07.5	+22	59.5	195	54.9	+20	04.4	
12	278	59.6		3 14.0	-23	40.7	291	47.6	-6	16.8	177	10.3	+22	59.6	210	57.5	+20	04.4	
13	294	02.1	18	13.0		40.6	306	48.4		16.0	192	13.2		59.6	226	00.2		04.4	
14	309	04.5	33	12.0		40.6	321	49.2		15.3	207	16.0		59.6	241	02.8		04.3	
15	324	07.0	48	11.1		40.6	336	50.0		14.5	222	18.8		59.7	256	05.4		04.3	
16	339	09.5	63	10.1		40.5	351	50.8		13.8	237	21.7		59.7	271	08.1		04.3	
17	354	11.9	78	09.1	-23	40.5	6	51.6	-6	13.0	252	24.5	+22	59.7	286	10.7	+20	04.3	
18	9	14.4	93	08.2	-23	40.5	21	52.4	-6	12.3	267	27.3	+22	59.8	301	13.3	+20	04.3	
19	24	16.8	108	07.2		40.4	36	53.1		11.5	282	30.2		59.8	316	16.0		04.3	
20	39	19.3	123	06.2		40.4	51	53.9		10.7	297	33.0		59.8	331	18.6		04.2	
21	54	21.8	138	05.2		40.3	66	54.7		10.0	312	35.8		59.9	346	21.3		04.2	
22	69	24.2	153	04.3		40.3	81	55.5		09.2	327	38.6		59.9	1	23.9		04.2	
23	84	26.7	168	03.3		40.3	96	56.3		08.5	342	41.5	+22	59.9	16	26.5		04.2	
24	99	29.2	183	02.3	-23	40.2	111	57.1	-6	07.7	357	44.3	+23	00.0	31	29.2	+20	04.2	
Dif	—		-10			0	+8			+8	+28		0		+26			0	

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: 16 ^d 1 PHE { 4 ^h : 59/5 12 ^h : 59/7 20 ^h : 59/8 SD: 16/2 PMG: 0 ^h 37 ^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	h m	h m	h m	h m
0	179	17.8	-23	06.5	351	08.1	+24	08.8	15	60 N	7 09	8 06	9 03	16 03	91	10 17	35
1	194	17.5		06.3	5	31.3		07.3	15	58	7 02	7 55	8 46	22	87	9 57	39
2	209	17.2		06.1	19	54.4		05.6	17	56	6 56	45	31	39	83	41	42
3	224	16.9		06.0	34	17.5		03.8	18	54	50	36	19	16 53	81	27	44
4	239	16.6		05.8	48	40.7		+24	01.8	20	52	44	28	8 08	17 05	79	14 46
5	254	16.3	-23	05.6	63	03.8		+23	59.7	21	50	6 39	7 20	7 59	17 15	78	9 03 48
6	269	16.0	-23	05.4	77	26.9		+23	57.3	24	45	6 27	7 05	7 38	17 38	74	8 41 50
7	284	15.7		05.2	91	50.1			54.8	25	40	17	6 51	22	17 56	72	22 52
8	299	15.4		05.0	106	13.2			52.2	26	35	08	40	7 08	18 11	70	8 07 53
9	314	15.1		04.8	120	36.4			49.3	29	30	6 00	29	6 56	24	68	7 53 55
10	329	14.8		04.7	134	59.5			46.3	30	20	5 43	6 11	35	18 46	65	30 58
11	344	14.5	-23	04.5	149	22.7		+23	43.2	31	10 N	5 27	5 54	6 16	19 06	62	7 10 60
12	359	14.2	-23	04.3	163	45.9		+23	39.9	33	0	5 11	5 37	5 59	19 24	60	6 52 61
13	14	13.9		04.1	178	09.1			36.4	35	10 S	4 52	5 19	42	19 42	58	33 63
14	29	13.6		03.9	192	32.3			32.7	37	20	30	4 59	23	20 01	55	6 13 64
15	44	13.3		03.7	206	55.5			28.9	38	30	4 01	34	5 02	23	52	5 49 67
16	59	13.0		03.5	221	18.8			24.9	40	35	3 43	19	4 49	36	51	36 68
17	74	12.7	-23	03.3	235	42.1		+23	20.7	42	40	3 20	4 01	4 34	20 51	48	5 20 69
18	89	12.4	-23	03.1	250	05.4		+23	16.4	43	45	2 50	3 39	4 16	21 09	45	5 01 71
19	104	12.1		02.9	264	28.7			11.9	45	50	2 06	3 10	3 54	31	41	4 37 74
20	119	11.8		02.7	278	52.1			07.2	47	52	1 39	2 55	43	42	39	26 75
21	134	11.5		02.6	293	15.5		+23	02.4	48	54	0 57	38	31	21 53	38	4 13 76
22	149	11.2		02.4	307	38.9		+22	57.4	50	56	** **	2 16	18	22 07	34	3 58 78
23	164	10.9		02.2	322	02.3			52.3	51	58	** **	1 48	3 01	22	32	40 81
24	179	10.6	-23	02.0	336	25.8		+22	47.0	53	60 S	** **	1 03	2 41	22 41	27	3 19 83

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 19 ^m 2		Mag: -4.0 PMG: 11 ^h 49 ^m			Mag: +0.7 PMG: 16 ^h 31 ^m			Mag: -2.7 PMG: 0 ^h 09 ^m			Mag: -0.3 PMG: 21 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	99	29.2	183	02.3	-23	40.2	111	57.1	-6	07.7	357	44.3	+23	00.0	31	29.2	+20	04.2
1	114	31.6	198	01.4		40.2	126	57.9		07.0	12	47.1		00.0	46	31.8		04.2
2	129	34.1	213	00.4		40.1	141	58.7		06.2	27	50.0	+23	00.0	61	34.4		04.2
3	144	36.6	227	59.4		40.1	156	59.4		05.4	42	52.8	+23	00.1	76	37.1		04.1
4	159	39.0	242	58.4		40.0	172	00.2		04.7	57	55.6		00.1	91	39.7		04.1
5	174	41.5	257	57.5	-23	40.0	187	01.0	-6	03.9	72	58.5	+23	00.1	106	42.3	+20	04.1
6	189	44.0	272	56.5	-23	39.9	202	01.8	-6	03.2	88	01.3	+23	00.2	121	45.0	+20	04.1
7	204	46.4	287	55.5		39.9	217	02.6		02.4	103	04.1		00.2	136	47.6		04.1
8	219	48.9	302	54.6		39.8	232	03.4		01.7	118	06.9		00.2	151	50.3		04.1
9	234	51.3	317	53.6		39.8	247	04.2		00.9	133	09.8		00.3	166	52.9		04.0
10	249	53.8	332	52.6		39.7	262	05.0	-6	00.1	148	12.6		00.3	181	55.5		04.0
11	264	56.3	347	51.6	-23	39.7	277	05.8	-5	59.4	163	15.4	+23	00.3	196	58.2	+20	04.0
12	279	58.7	2	50.7	-23	39.6	292	06.5	-5	58.6	178	18.3	+23	00.4	212	00.8	+20	04.0
13	295	01.2	17	49.7		39.5	307	07.3		57.9	193	21.1		00.4	227	03.4		04.0
14	310	03.7	32	48.7		39.5	322	08.1		57.1	208	23.9		00.4	242	06.1		04.0
15	325	06.1	47	47.8		39.4	337	08.9		56.4	223	26.8		00.5	257	08.7		03.9
16	340	08.6	62	46.8		39.4	352	09.7		55.6	238	29.6		00.5	272	11.3		03.9
17	355	11.1	77	45.8	-23	39.3	7	10.5	-5	54.8	253	32.4	+23	00.5	287	14.0	+20	03.9
18	10	13.5	92	44.8	-23	39.2	22	11.3	-5	54.1	268	35.3	+23	00.6	302	16.6	+20	03.9
19	25	16.0	107	43.9		39.2	37	12.1		53.3	283	38.1		00.6	317	19.2		03.9
20	40	18.5	122	42.9		39.1	52	12.9		52.6	298	40.9		00.6	332	21.9		03.9
21	55	20.9	137	41.9		39.0	67	13.6		51.8	313	43.7		00.7	347	24.5		03.8
22	70	23.4	152	41.0		38.9	82	14.4		51.1	328	46.6		00.7	2	27.1		03.8
23	85	25.8	167	40.0		38.9	97	15.2		50.3	343	49.4		00.7	17	29.8		03.8
24	100	28.3	182	39.0	-23	38.8	112	16.0	-5	49.5	358	52.2	+23	00.8	32	32.4	+20	03.8
Dif	—		-10 +1			+8 +8			+28 0			+26 0						

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: 17 ^d 1 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 60'0 SD: 16'3 PMG: 1 ^h 38 ^m R°: 60 ^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	10.6	-23 02.0	336	25.8	+22 47.0	54	60 N	15 05	16 02	16 58	17 34 98	10 52 22	
1	194	10.3	01.8	350	49.4	46	41.6	58	22	13	17 05	17 49 94	36 26	26
2	209	10.0	01.6	5	13.0	46	35.9	56	36	23	12	18 02 91	23 29	
3	224	09.8	01.4	19	36.6	46	30.2	54	48	32	18	14 87	11 32	
4	239	09.5	01.2	34	00.2	46	24.2	52	15 59	40	23	24 85	10 00 35	
5	254	09.2	-23 01.0	48	23.9	47	+22 18.1	50	16 09	16 47	17 28	18 33 83	9 51 36	
6	269	08.9	-23 00.8	62	47.7	48	+22 11.9	45	16 29	17 03	17 40	18 52 78	9 31 40	
7	284	08.6	00.6	77	11.5	48	+22 05.5	40	45	16	50	19 08 74	14 44	
8	299	08.3	00.3	91	35.4	49	+21 59.0	35	16 59	27	17 59	21 71	9 00 47	
9	314	08.0	-23 00.1	105	59.3	49	52.3	30	17 11	38	18 07	32 69	8 48 49	
10	329	07.7	-22 59.9	120	23.2	49	45.4	20	32	17 56	23	19 51 65	28 52	
11	344	07.4	-22 59.7	134	47.2	50	+21 38.4	10 N	17 50	18 13	18 39	20 08 61	8 10 56	
12	359	07.1	-22 59.5	149	11.3	51	+21 31.3	0	18 07	18 30	18 56	20 24 57	7 53 59	
13	14	06.8	59.3	163	35.4	51	24.0	10 S	24	18 47	19 14	40 53	36 61	
14	29	06.5	59.1	177	59.6	52	16.5	20	18 43	19 08	19 37	20 56 50	7 17 65	
15	44	06.2	58.9	192	23.9	53	08.9	30	19 05	32	20 05	21 15 46	6 56 69	
16	59	05.9	58.7	206	48.2	53	+21 01.2	35	17	19 47	23	27 43	44 70	
17	74	05.6	-22 58.5	221	12.5	53	+20 53.3	40	19 32	20 05	20 46	21 39 41	6 29 74	
18	89	05.3	-22 58.3	235	37.0	55	+20 45.3	45	19 50	20 27	21 16	21 54 37	6 12 77	
19	104	05.1	58.0	250	01.5	55	37.2	50	20 12	20 56	21 59	22 12 33	5 51 81	
20	119	04.8	57.8	264	26.0	55	28.9	52	22	21 10	22 25	21 30	41 83	
21	134	04.5	57.6	278	50.6	56	20.4	54	34	27	23 05	31 27	29 85	
22	149	04.2	57.4	293	15.3	57	11.9	56	20 48	21 49	** **	41 25	16 88	
23	164	03.9	57.2	307	40.1	58	+20 03.2	58	21 04	22 16	** **	22 54 21	5 01 92	
24	179	03.6	-22 57.0	322	04.9	58	+19 54.3	60 S	21 23	22 59	** **	23 08 17	4 42 97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 15 ^m 3		Mag: -4.0 PMG: 11 ^h 50 ^m			Mag: +0.8 PMG: 16 ^h 30 ^m			Mag: -2.7 PMG: 0 ^h 05 ^m			Mag: -0.3 PMG: 21 ^h 46 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	100	28.3	182	39.0	-23 38.8	112	16.0	-5 49.5	358	52.2	+23 00.8	32	32.4	+20 03.8
1	115	30.8	197	38.1	38.7	127	16.8	48.8	13	55.1	00.8	47	35.0	03.8
2	130	33.2	212	37.1	38.6	142	17.6	48.0	28	57.9	00.8	62	37.7	03.8
3	145	35.7	227	36.1	38.6	157	18.4	47.3	44	00.7	00.9	77	40.3	03.8
4	160	38.2	242	35.1	38.5	172	19.2	46.5	59	03.6	00.9	92	42.9	03.7
5	175	40.6	257	34.2	-23 38.4	187	20.0	-5 45.7	74	06.4	+23 00.9	107	45.6	+20 03.7
6	190	43.1	272	33.2	-23 38.3	202	20.8	-5 45.0	89	09.2	+23 01.0	122	48.2	+20 03.7
7	205	45.6	287	32.2	38.2	217	21.5	44.2	104	12.0	01.0	137	50.8	03.7
8	220	48.0	302	31.3	38.2	232	22.3	43.5	119	14.9	01.0	152	53.5	03.7
9	235	50.5	317	30.3	38.1	247	23.1	42.7	134	17.7	01.1	167	56.1	03.7
10	250	53.0	332	29.3	38.0	262	23.9	42.0	149	20.5	01.1	182	58.7	03.6
11	265	55.4	347	28.4	-23 37.9	277	24.7	-5 41.2	164	23.4	+23 01.1	198	01.4	+20 03.6
12	280	57.9	2 27.4	-23 37.8	292	25.5	-5 40.4	179	26.2	+23 01.2	213	04.0	+20 03.6	
13	296	00.3	17 26.4	37.7	307	26.3	39.7	194	29.0	01.2	228	06.6	03.6	
14	311	02.8	32 25.4	37.6	322	27.1	38.9	209	31.9	01.2	243	09.2	03.6	
15	326	05.3	47 24.5	37.5	337	27.9	38.2	224	34.7	01.3	258	11.9	03.6	
16	341	07.7	62 23.5	37.4	352	28.7	37.4	239	37.5	01.3	273	14.5	03.6	
17	356	10.2	77 22.5	-23 37.3	7	29.4	-5 36.6	254	40.3	+23 01.3	288	17.1	+20 03.5	
18	11	12.7	92 21.6	-23 37.2	22	30.2	-5 35.9	269	43.2	+23 01.4	303	19.8	+20 03.5	
19	26	15.1	107 20.6	37.1	37	31.0	35.1	284	46.0	01.4	318	22.4	03.5	
20	41	17.6	122 19.6	37.0	52	31.8	34.4	299	48.8	01.4	333	25.0	03.5	
21	56	20.1	137 18.7	36.9	67	32.6	33.6	314	51.7	01.5	348	27.7	03.5	
22	71	22.5	152 17.7	36.8	82	33.4	32.8	329	54.5	01.5	3	30.3	03.5	
23	86	25.0	167 16.7	36.7	97	34.2	32.1	344	57.3	01.5	18	32.9	03.4	
24	101	27.4	182 15.8	-23 36.6	112	35.0	-5 31.3	0	00.2	+23 01.6	33	35.6	+20 03.4	
Dif	—		-10 +1			+8 +8			-8972 0			+26 0		

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	53.7	53.8	53.9	53.8	53.6	53.4	53.1	52.9	52.8	52.7	52.8	52.9
2 - β Cas	<i>Caph</i>	2.3	357	41.9	42.1	42.2	42.1	41.8	41.5	41.1	40.8	40.6	40.6	40.7	40.9
3 - γ Peg	<i>Algenib</i>	2.8	356	41.0	41.1	41.1	41.0	40.9	40.7	40.4	40.2	40.1	40.1	40.1	40.2
4 - α Phe	<i>Ankaa</i>	2.4	353	25.4	25.5	25.5	25.5	25.3	25.0	24.8	24.5	24.3	24.3	24.3	24.5
5 - α Cas	<i>Schedar</i>	2.2	349	51.8	52.0	52.2	52.1	51.9	51.6	51.2	50.9	50.7	50.6	50.7	50.8
6 - β Cet	<i>Diphda</i>	2.0	349	5.7	5.8	5.8	5.8	5.6	5.4	5.2	5.0	4.8	4.8	4.8	4.8
7 - γ Cas	<i>Navi</i>	1.6	345	48.7	49.0	49.1	49.1	48.9	48.5	48.2	47.8	47.5	47.4	47.5	47.7
8 - β And	<i>Mirach</i>	2.1	342	33.4	33.5	33.6	33.6	33.5	33.2	33.0	32.7	32.5	32.4	32.4	32.5
9 - α Eri	<i>Achernar</i>	0.5	335	33.9	34.2	34.3	34.4	34.3	34.0	33.7	33.3	33.0	32.9	32.9	33.1
10 - γ And	<i>Almak</i>	2.3	328	60.7	60.9	61.0	61.1	61.0	60.7	60.5	60.2	59.9	59.8	59.7	59.7
12 - α Ari	<i>Hamal</i>	2.0	328	11.7	11.8	11.9	11.9	11.9	11.7	11.4	11.2	11.0	10.8	10.8	10.8
11 - α UMi	<i>Polaris</i>	2.0	321	40.8	54.0	64.3	70.1	68.7	60.8	48.9	35.1	22.9	15.0	12.3	16.3
13 - θ Eri	<i>Acamar</i>	3.3	315	25.5	25.7	25.9	26.0	25.9	25.8	25.6	25.3	25.0	24.9	24.8	24.8
14 - α Cet	<i>Menkar</i>	2.5	314	25.1	25.2	25.3	25.4	25.3	25.2	25.0	24.8	24.5	24.4	24.3	24.3
15 - β Per	<i>Algol</i>	2.1	312	56.5	56.7	56.8	56.9	56.9	56.7	56.5	56.2	55.9	55.7	55.6	55.5
16 - α Per	<i>Mirfak</i>	1.8	308	54.1	54.3	54.5	54.6	54.6	54.4	54.1	53.8	53.4	53.2	53.0	53.0
17 - η Tau	<i>Alcyone</i>	2.9	303	6.9	7.0	7.1	7.2	7.2	7.1	6.9	6.6	6.4	6.2	6.0	6.0
18 - γ Eri	<i>Zaurak</i>	3.0	300	28.8	29.0	29.1	29.2	29.2	29.1	28.9	28.7	28.5	28.3	28.2	28.1
19 - α Tau	<i>Aldebaran</i>	0.9	290	60.3	60.4	60.5	60.6	60.7	60.6	60.4	60.2	59.9	59.7	59.6	59.5
20 - β Ori	<i>Rigel</i>	0.1	281	21.1	21.2	21.3	21.5	21.5	21.5	21.3	21.2	20.9	20.7	20.5	20.4
21 - α Aur	<i>Capella</i>	0.1	280	48.4	48.5	48.7	48.9	49.0	48.9	48.7	48.4	48.1	47.8	47.6	47.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	42.2	42.2	42.3	42.5	42.5	42.5	42.4	42.2	41.9	41.7	41.5	41.4
23 - β Tau	<i>Elnath</i>	1.7	278	24.6	24.7	24.8	24.9	25.0	25.0	24.8	24.6	24.3	24.1	23.9	23.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	59.0	59.1	59.2	59.4	59.4	59.4	59.3	59.1	58.9	58.6	58.5	58.3
25 - ε Ori	<i>Alnilam</i>	1.7	275	55.9	56.0	56.1	56.3	56.3	56.3	56.2	56.0	55.8	55.6	55.4	55.2
26 - ζ Ori	<i>Alnitak</i>	1.9	274	47.8	47.8	47.9	48.1	48.1	48.1	48.0	47.8	47.6	47.4	47.2	47.1
27 - κ Ori	<i>Saiph</i>	2.1	273	2.8	2.9	3.0	3.1	3.2	3.2	3.1	2.9	2.7	2.5	2.3	2.2
28 - α Ori	<i>Betelgeuse</i>	0.4	271	11.5	11.6	11.7	11.8	11.9	11.9	11.8	11.6	11.3	11.1	10.9	10.8
29 - β Aur	<i>Menkalinan</i>	1.9	270	5.8	5.9	6.1	6.2	6.3	6.3	6.2	5.9	5.6	5.3	5.0	4.8
30 - β CMa	<i>Mirzam</i>	2.0	264	18.7	18.7	18.9	19.0	19.1	19.1	19.0	18.9	18.7	18.5	18.2	18.1
31 - α Car	<i>Canopus</i>	-0.7	263	59.9	60.1	60.3	60.6	60.8	60.9	60.8	60.7	60.4	60.1	59.8	59.6
32 - γ Gem	<i>Alhena</i>	1.9	260	33.3	33.4	33.5	33.6	33.7	33.7	33.6	33.4	33.2	33.0	32.8	32.6
33 - α CMa	<i>Sirius</i>	-1.5	258	42.0	42.0	42.1	42.3	42.4	42.4	42.3	42.2	42.0	41.8	41.5	41.4
34 - ε CMa	<i>Adhara</i>	1.5	255	19.8	19.8	20.0	20.1	20.3	20.3	20.3	20.1	19.9	19.7	19.5	19.3
35 - δ CMa	<i>Wezen</i>	1.9	252	53.3	53.3	53.5	53.6	53.7	53.8	53.8	53.6	53.4	53.2	53.0	52.8
36 - η CMa	<i>Aludra</i>	2.5	248	57.7	57.8	57.9	58.0	58.2	58.3	58.2	58.1	57.9	57.7	57.5	57.3
37 - α Gem	<i>Castor</i>	2.0	246	19.9	19.9	20.0	20.1	20.2	20.3	20.2	20.1	19.9	19.6	19.4	19.1
38 - α CMi	<i>Procyon</i>	0.4	245	9.6	9.6	9.6	9.8	9.9	9.9	9.9	9.7	9.6	9.4	9.1	8.9
39 - β Gem	<i>Pollux</i>	1.1	243	39.2	39.2	39.3	39.4	39.5	39.6	39.5	39.4	39.2	39.0	38.7	38.5
40 - ζ Pup	<i>Naos</i>	2.3	239	5.4	5.4	5.5	5.7	5.9	6.0	6.0	5.9	5.8	5.5	5.3	5.0
41 - γ Vel	<i>Regor</i>	1.8	237	36.1	36.2	36.3	36.5	36.7	36.9	36.9	36.9	36.7	36.4	36.1	35.9
42 - ε Car	<i>Avior</i>	1.9	234	21.4	21.4	21.6	21.9	22.2	22.4	22.5	22.5	22.3	22.0	21.6	21.3
43 - δ Velorum		2.0	228	48.5	48.5	48.7	48.9	49.1	49.4	49.5	49.4	49.3	49.0	48.7	48.4
44 - ζ Hydrae		3.1	226	8.2	8.1	8.2	8.3	8.4	8.4	8.4	8.4	8.3	8.1	7.8	7.6
45 - λ Vel	<i>Suhail</i>	2.2	222	59.2	59.1	59.2	59.4	59.6	59.7	59.8	59.8	59.7	59.4	59.2	58.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.9	40.9	41.1	41.5	41.9	42.4	42.6	42.7	42.5	42.2	41.7	41.2
47 - ι Car	<i>Aspidiske</i>	2.3	220	42.7	42.6	42.8	43.0	43.3	43.5	43.7	43.7	43.6	43.4	43.0	42.6
48 - α Lyn	<i>Elvashak</i>	3.1	219	43.2	43.1	43.1	43.2	43.3	43.4	43.4	43.4	43.2	43.0	42.8	42.5
49 - α Hyd	<i>Alphard</i>	2.0	218	5.3	5.3	5.3	5.4	5.5	5.6	5.6	5.6	5.5	5.3	5.1	4.8
50 - α Leo	<i>Regulus</i>	1.4	207	53.6	53.4	53.4	53.5	53.6	53.7	53.7	53.7	53.6	53.5	53.3	53.0

ESTRELLAS, 2001
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	5.8	5.7	5.6	5.6	5.6	5.6	5.7	5.8	6.0	6.1	6.1	6.1
2 - β Cas	<i>Caph</i>	2.3	+59	9.5	9.4	9.2	9.1	9.1	9.1	9.1	9.3	9.5	9.6	9.8	9.8
3 - γ Peg	<i>Algenib</i>	2.8	+15	11.3	11.2	11.2	11.2	11.2	11.3	11.4	11.5	11.6	11.6	11.7	11.7
4 - α Phe	<i>Ankaa</i>	2.4	-42	18.4	18.3	18.2	18.1	17.9	17.8	17.7	17.7	17.8	17.9	18.0	18.1
5 - α Cas	<i>Schedar</i>	2.2	+56	32.7	32.6	32.5	32.4	32.3	32.3	32.4	32.5	32.7	32.8	33.0	33.1
6 - β Cet	<i>Diphda</i>	2.0	-17	59.1	59.1	59.1	59.0	58.9	58.8	58.7	58.6	58.6	58.6	58.7	58.8
7 - γ Cas	<i>Navi</i>	1.6	+60	43.5	43.4	43.3	43.2	43.1	43.1	43.1	43.2	43.4	43.6	43.7	43.8
8 - β And	<i>Mirach</i>	2.1	+35	37.6	37.5	37.5	37.4	37.4	37.4	37.5	37.6	37.7	37.8	37.9	37.9
9 - α Eri	<i>Achernar</i>	0.5	-57	14.3	14.3	14.2	14.0	13.8	13.6	13.5	13.5	13.6	13.7	13.9	14.0
10 - γ And	<i>Almak</i>	2.3	+42	20.2	20.1	20.1	20.0	19.9	19.9	19.9	20.0	20.1	20.3	20.4	20.4
12 - α Ari	<i>Hamal</i>	2.0	+23	28.0	28.0	27.9	27.9	27.9	27.9	28.0	28.1	28.2	28.2	28.3	28.3
11 - α UMi	<i>Polaris</i>	2.0	+89	16.3	16.4	16.3	16.1	16.0	15.9	15.8	15.9	16.0	16.1	16.3	16.5
13 - θ Eri	<i>Acamar</i>	3.3	-40	18.4	18.4	18.4	18.2	18.1	17.9	17.8	17.7	17.7	17.8	17.9	18.0
14 - α Cet	<i>Menkar</i>	2.5	+4	5.5	5.5	5.5	5.5	5.5	5.6	5.7	5.8	5.8	5.8	5.8	5.8
15 - β Per	<i>Algol</i>	2.1	+40	57.6	57.6	57.6	57.5	57.5	57.4	57.4	57.5	57.6	57.7	57.8	57.9
16 - α Per	<i>Mirfak</i>	1.8	+49	52.0	52.0	52.0	51.9	51.8	51.7	51.7	51.8	51.8	51.9	52.1	52.2
17 - η Tau	<i>Alcyone</i>	2.9	+24	6.5	6.5	6.4	6.4	6.4	6.4	6.4	6.5	6.6	6.6	6.7	6.7
18 - γ Eri	<i>Zaurak</i>	3.0	-13	30.5	30.6	30.6	30.5	30.4	30.3	30.2	30.1	30.1	30.1	30.2	30.3
19 - α Tau	<i>Aldebaran</i>	0.9	+16	30.6	30.6	30.6	30.6	30.6	30.6	30.7	30.7	30.8	30.8	30.8	30.8
20 - β Ori	<i>Rigel</i>	0.1	-8	12.2	12.2	12.2	12.2	12.2	12.1	12.0	11.9	11.8	11.8	11.9	12.0
21 - α Aur	<i>Capella</i>	0.1	+45	60.0	60.0	60.0	60.0	59.9	59.9	59.8	59.8	59.8	59.9	59.9	60.0
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	20.9	20.9	20.9	20.9	20.9	21.0	21.1	21.1	21.2	21.2	21.1	21.1
23 - β Tau	<i>Elnath</i>	1.7	+28	36.5	36.5	36.5	36.5	36.5	36.5	36.4	36.5	36.5	36.5	36.5	36.5
24 - δ Ori	<i>Mintaka</i>	2.2	-0	18.0	18.1	18.1	18.1	18.0	17.9	17.9	17.8	17.8	17.8	17.8	17.9
25 - ε Ori	<i>Alnilam</i>	1.7	-1	12.2	12.2	12.3	12.2	12.2	12.1	12.0	12.0	11.9	11.9	12.0	12.0
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.6	56.7	56.7	56.7	56.6	56.6	56.5	56.4	56.4	56.4	56.4	56.5
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.3	40.4	40.4	40.4	40.3	40.2	40.1	40.0	40.0	40.0	40.0	40.1
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.5	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.9	56.9	57.0	56.9	56.9	56.8	56.8	56.7	56.7	56.7	56.8	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.6	57.6	57.6	57.5	57.3	57.2	57.2	57.2	57.3	57.4
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.1	42.1	42.1	42.0	41.9	41.7	41.6	41.5	41.5	41.6	41.7
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.8	23.8	23.8	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.2	43.2	43.3	43.3	43.2	43.1	43.0	42.9	42.9	42.9	43.0	43.1
34 - ε CMa	<i>Adhara</i>	1.5	-28	58.5	58.6	58.7	58.7	58.6	58.5	58.4	58.3	58.2	58.2	58.3	58.4
35 - δ CMa	<i>Wezen</i>	1.9	-26	23.8	23.9	23.9	24.0	23.9	23.8	23.7	23.6	23.5	23.5	23.5	23.7
36 - η CMa	<i>Aludra</i>	2.5	-29	18.4	18.5	18.6	18.6	18.5	18.4	18.3	18.2	18.1	18.1	18.2	18.3
37 - α Gem	<i>Castor</i>	2.0	+31	53.1	53.2	53.2	53.2	53.2	53.2	53.2	53.1	53.1	53.1	53.0	53.0
38 - α CMi	<i>Procyon</i>	0.4	+5	13.3	13.2	13.2	13.2	13.3	13.3	13.3	13.4	13.4	13.4	13.3	13.2
39 - β Gem	<i>Pollux</i>	1.1	+28	1.4	1.4	1.4	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3
40 - ζ Pup	<i>Naos</i>	2.3	-40	0.4	0.5	0.6	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.2	0.3
41 - γ Vel	<i>Regor</i>	1.8	-47	20.4	20.5	20.6	20.7	20.7	20.6	20.4	20.3	20.2	20.1	20.2	20.3
42 - ε Car	<i>Avior</i>	1.9	-59	30.7	30.9	31.0	31.1	31.1	31.0	30.9	30.7	30.6	30.5	30.6	30.7
43 - δ Velorum		2.0	-54	42.7	42.9	43.0	43.1	43.1	43.0	42.9	42.7	42.6	42.5	42.5	42.7
44 - ζ Hydrae		3.1	+5	56.5	56.4	56.4	56.4	56.4	56.5	56.5	56.5	56.5	56.5	56.4	56.3
45 - λ Vel	<i>Suhail</i>	2.2	-43	26.1	26.3	26.4	26.5	26.5	26.4	26.3	26.2	26.1	26.0	26.0	26.1
46 - β Car	<i>Miaplacidus</i>	1.7	-69	43.1	43.3	43.5	43.6	43.6	43.6	43.5	43.3	43.2	43.1	43.1	43.2
47 - ι Car	<i>Aspidiske</i>	2.3	-59	16.6	16.8	17.0	17.1	17.1	17.1	16.9	16.8	16.6	16.6	16.6	16.7
48 - α Lyn	<i>Elvashak</i>	3.1	+34	23.2	23.2	23.3	23.4	23.4	23.4	23.4	23.3	23.2	23.1	23.0	23.0
49 - α Hyd	<i>Alphard</i>	2.0	-8	39.8	39.9	39.9	39.9	39.9	39.9	39.8	39.8	39.7	39.7	39.8	39.9
50 - α Leo	<i>Regulus</i>	1.4	+11	57.7	57.7	57.7	57.7	57.7	57.7	57.8	57.8	57.7	57.7	57.6	57.5

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	17.6	17.4	17.4	17.5	17.6	17.8	18.0	18.1	18.0	17.9	17.6	17.3
52 - ν	Hydrae	3.1	197	34.8	34.7	34.7	34.7	34.8	34.9	34.9	35.0	34.9	34.8	34.6	34.4
53 - β	UMa Merak	2.4	194	31.4	31.1	31.1	31.1	31.3	31.5	31.7	31.7	31.7	31.5	31.2	30.8
54 - α	UMa Dubhe	1.8	194	3.1	2.8	2.7	2.8	3.0	3.2	3.4	3.5	3.5	3.3	3.0	2.5
55 - β	Leo Denebola	2.1	182	43.4	43.2	43.1	43.1	43.2	43.3	43.3	43.4	43.4	43.3	43.1	42.9
56 - γ	Crv Gienah	2.6	176	2.2	2.0	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.1	2.0	1.7
57 - α	Cru Acrux	1.4	173	20.1	19.8	19.6	19.5	19.7	19.9	20.2	20.4	20.6	20.5	20.3	19.8
58 - γ	Cru Gacrux	1.6	172	11.7	11.4	11.2	11.1	11.2	11.4	11.6	11.8	11.9	11.9	11.7	11.3
59 - γ	Cen Muhlifain	2.2	169	36.5	36.2	36.0	36.0	36.0	36.1	36.3	36.5	36.6	36.5	36.4	36.1
60 - β	Cru Mimosa	1.3	168	3.3	3.0	2.8	2.7	2.8	3.0	3.2	3.4	3.6	3.6	3.3	3.0
61 - ε	UMa Alioth	1.8	166	29.0	28.7	28.5	28.4	28.5	28.7	28.9	29.1	29.2	29.2	29.0	28.7
62 - α^2	CVn Cor Caroli	2.9	165	59.0	58.8	58.6	58.6	58.6	58.7	58.8	58.9	59.0	59.0	58.9	58.6
63 - ε	Vir Vindemiatrix	2.8	164	26.8	26.5	26.4	26.3	26.3	26.4	26.5	26.6	26.6	26.6	26.5	26.3
64 - ζ	UMa Mizar	2.3	159	0.7	0.4	0.1	0.0	0.1	0.2	0.4	0.6	0.8	0.8	0.7	0.4
65 - α	Vir Spica	1.0	158	41.5	41.3	41.1	41.0	41.0	41.1	41.1	41.2	41.3	41.3	41.2	41.0
66 - η	UMa Alkaid	1.9	153	6.5	6.2	6.0	5.9	5.9	6.0	6.1	6.3	6.5	6.5	6.5	6.2
67 - β	Cen Hadar	0.6	149	1.9	1.5	1.2	1.0	0.9	1.0	1.2	1.5	1.7	1.8	1.7	1.4
68 - θ	Cen Menkent	2.1	148	19.2	18.9	18.7	18.5	18.5	18.5	18.6	18.7	18.9	18.9	18.8	18.6
69 - α	Boo Arcturus	0.0	146	4.7	4.4	4.2	4.1	4.1	4.1	4.2	4.3	4.4	4.4	4.4	4.2
70 - α^1	Cen Rigil Kentaurus	0.0	140	5.4	5.0	4.7	4.4	4.4	4.4	4.6	4.9	5.1	5.3	5.2	4.9
71 - α^2	Lib Zubenelgenubi	2.8	137	16.3	16.1	15.9	15.7	15.6	15.6	15.7	15.8	15.9	16.0	15.9	15.8
72 - β	UMi Kochab	2.1	137	20.0	19.3	18.7	18.4	18.3	18.6	19.1	19.6	20.2	20.5	20.7	20.4
73 - β	Lib Zubeneschamali	2.6	130	44.5	44.2	44.0	43.8	43.7	43.7	43.8	43.9	44.0	44.0	44.0	43.9
74 - α	CrB Alphecca	2.2	126	19.4	19.2	19.0	18.8	18.7	18.7	18.7	18.8	19.0	19.1	19.1	19.0
75 - α	Ser Unukalhai	2.7	123	55.6	55.4	55.2	55.0	54.9	54.9	54.9	55.0	55.1	55.2	55.2	55.1
76 - α	Sco Antares	0.9	112	38.5	38.2	38.0	37.8	37.6	37.5	37.5	37.6	37.7	37.8	37.9	37.8
77 - α	TrA Atria	1.9	107	49.6	49.0	48.5	47.9	47.5	47.3	47.4	47.6	48.0	48.4	48.5	48.4
78 - ε	Scorpii	2.3	107	27.1	26.9	26.6	26.4	26.2	26.1	26.1	26.1	26.3	26.4	26.5	26.4
79 - η	Oph Sabik	2.4	102	24.0	23.8	23.5	23.3	23.1	23.0	23.0	23.1	23.2	23.3	23.4	23.3
80 - α	Her Rasalgethi	3.1	101	20.1	19.9	19.7	19.4	19.3	19.2	19.2	19.2	19.4	19.5	19.6	19.5
81 - λ	Sco Shaula	1.6	96	35.5	35.2	35.0	34.7	34.5	34.3	34.3	34.3	34.5	34.6	34.7	34.7
82 - α	Oph Rasalhague	2.1	96	15.8	15.6	15.4	15.2	15.0	14.9	14.8	14.9	15.0	15.2	15.2	15.2
83 - θ	Sco Sargas	1.9	95	39.8	39.6	39.3	39.0	38.7	38.6	38.5	38.6	38.7	38.9	39.0	39.0
84 - γ	Dra Eltanin	2.2	90	51.2	50.9	50.7	50.4	50.1	50.0	50.0	50.1	50.4	50.6	50.8	50.9
85 - ε	Sgr Kaus Australis	1.9	83	57.1	56.9	56.6	56.4	56.1	55.9	55.8	55.9	56.0	56.1	56.2	56.2
86 - α	Lyr Vega	0.0	80	46.0	45.8	45.6	45.3	45.1	44.9	44.9	44.9	45.1	45.3	45.5	45.5
87 - σ	Sgr Nunki	2.0	76	10.7	10.5	10.3	10.1	9.8	9.6	9.5	9.5	9.6	9.8	9.9	9.9
88 - α	Aql Altair	0.8	62	18.1	17.9	17.8	17.6	17.3	17.1	17.0	17.0	17.1	17.2	17.3	17.4
89 - γ	Cyg Sadr	2.2	54	26.6	26.5	26.4	26.1	25.9	25.6	25.5	25.5	25.6	25.7	25.9	26.0
90 - α	Pav Peacock	1.9	53	35.1	34.9	34.7	34.3	33.9	33.6	33.3	33.2	33.3	33.5	33.7	33.9
91 - α	Cyg Deneb	1.3	49	38.6	38.5	38.4	38.1	37.9	37.6	37.4	37.4	37.5	37.7	37.9	38.0
92 - α	Cep Alderamin	2.4	40	21.6	21.7	21.5	21.2	20.8	20.5	20.2	20.1	20.3	20.5	20.9	21.2
93 - ε	Peg Enif	0.7	33	57.0	56.9	56.9	56.7	56.5	56.2	56.0	55.9	55.9	56.0	56.1	56.2
94 - δ	Cap Deneb Algedi	2.9	33	14.1	14.1	14.0	13.8	13.6	13.3	13.1	13.0	13.0	13.0	13.1	13.2
95 - α	Gru Al Na'ir	1.7	27	56.2	56.2	56.1	55.9	55.6	55.3	55.0	54.8	54.8	54.9	55.0	55.2
96 - β	Gruis	2.1	19	19.7	19.7	19.7	19.5	19.2	18.9	18.6	18.4	18.3	18.4	18.5	18.7
97 - α	PsA Fomalhaut	1.2	15	34.9	34.9	34.9	34.7	34.5	34.3	34.0	33.8	33.7	33.8	33.9	34.0
98 - β	Peg Scheat	2.4	14	3.1	3.1	3.1	3.0	2.8	2.5	2.3	2.1	2.0	2.1	2.2	2.3
99 - α	Peg Markab	2.5	13	48.2	48.3	48.3	48.1	47.9	47.7	47.5	47.3	47.2	47.3	47.3	47.4

ESTRELLAS, 2001
Posiciones aparentes

379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	25.3	25.5	25.6	25.8	25.8	25.8	25.8	25.6	25.5	25.4	25.4	25.5
52 - ν	Hydrae	3.1	-16	11.8	12.0	12.0	12.1	12.1	12.1	12.0	12.0	11.9	11.9	11.9	12.0
53 - β	UMa Merak	2.4	+56	22.4	22.5	22.6	22.7	22.8	22.8	22.8	22.7	22.5	22.4	22.2	22.1
54 - α	UMa Dubhe	1.8	+61	44.5	44.6	44.7	44.9	45.0	45.0	44.9	44.8	44.6	44.5	44.3	44.2
55 - β	Leo Denebola	2.1	+14	33.9	33.9	33.9	33.9	34.0	34.0	34.0	34.0	34.0	33.9	33.8	33.7
56 - γ	Crv Gienah	2.6	-17	32.7	32.8	32.9	33.0	33.0	33.0	33.0	32.9	32.9	32.8	32.9	32.9
57 - α	Cru Acrux	1.4	-63	5.9	6.1	6.2	6.4	6.5	6.6	6.6	6.5	6.4	6.3	6.2	6.2
58 - γ	Cru Gacrux	1.6	-57	6.8	6.9	7.1	7.3	7.4	7.4	7.4	7.4	7.2	7.1	7.0	7.0
59 - γ	Cen Muhlifain	2.2	-48	57.6	57.7	57.9	58.0	58.1	58.2	58.2	58.1	58.0	57.9	57.9	57.9
60 - β	Cru Mimosa	1.3	-59	41.3	41.4	41.6	41.8	41.9	42.0	42.0	41.9	41.8	41.7	41.6	41.6
61 - ϵ	UMa Alioth	1.8	+55	57.1	57.1	57.1	57.3	57.4	57.5	57.5	57.4	57.3	57.1	57.0	56.8
62 - α^2	CVn Cor Caroli	2.9	+38	18.6	18.6	18.7	18.8	18.9	18.9	19.0	18.9	18.8	18.7	18.5	18.4
63 - ϵ	Vir Vindemiatrix	2.8	+10	57.2	57.1	57.1	57.1	57.2	57.2	57.3	57.3	57.3	57.2	57.1	57.0
64 - ζ	UMa Mizar	2.3	+54	55.0	55.0	55.1	55.2	55.3	55.4	55.5	55.4	55.3	55.1	54.9	54.8
65 - α	Vir Spica	1.0	-11	9.9	10.0	10.0	10.1	10.1	10.1	10.1	10.0	10.0	10.0	10.0	10.1
66 - η	UMa Alkaid	1.9	+49	18.3	18.3	18.3	18.4	18.6	18.7	18.7	18.7	18.6	18.5	18.3	18.1
67 - β	Cen Hadar	0.6	-60	22.3	22.4	22.5	22.7	22.8	22.9	23.0	23.0	22.9	22.8	22.6	22.6
68 - θ	Cen Menkent	2.1	-36	22.2	22.3	22.4	22.5	22.6	22.7	22.7	22.7	22.6	22.5	22.5	22.5
69 - α	Boo Arcturus	0.0	+19	10.6	10.5	10.5	10.5	10.6	10.7	10.7	10.7	10.7	10.6	10.5	10.4
70 - α^1	Cen Rigil Kentaurus	0.0	-60	50.0	50.1	50.2	50.3	50.5	50.6	50.7	50.7	50.6	50.5	50.4	50.3
71 - α^2	Lib Zubenelgenubi	2.8	-16	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
72 - β	UMi Kochab	2.1	+74	8.9	8.8	8.9	9.0	9.1	9.3	9.4	9.4	9.3	9.1	8.9	8.7
73 - β	Lib Zubeneshamali	2.6	-9	23.1	23.2	23.2	23.3	23.3	23.2	23.2	23.2	23.2	23.2	23.2	23.3
74 - α	CrB Alphecca	2.2	+26	42.6	42.5	42.5	42.5	42.6	42.7	42.8	42.9	42.8	42.8	42.6	42.5
75 - α	Ser Unukalhai	2.7	+6	25.3	25.3	25.2	25.2	25.3	25.4	25.4	25.4	25.4	25.4	25.3	25.2
76 - α	Sco Antares	0.9	-26	25.9	26.0	26.0	26.0	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1
77 - α	TrA Atria	1.9	-69	1.5	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.0	2.0	1.9	1.8
78 - ϵ	Scorpii	2.3	-34	17.6	17.6	17.6	17.6	17.7	17.7	17.8	17.8	17.8	17.8	17.7	17.7
79 - η	Oph Sabik	2.4	-15	43.5	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.5	43.6	43.6	43.6
80 - α	Her Rasalgethi	3.1	+14	23.3	23.2	23.2	23.2	23.3	23.4	23.5	23.5	23.5	23.5	23.4	23.3
81 - λ	Sco Shaula	1.6	-37	6.2	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.3	6.3
82 - α	Oph Rasalhague	2.1	+12	33.5	33.4	33.4	33.4	33.5	33.6	33.7	33.7	33.7	33.7	33.7	33.6
83 - θ	Sco Sargas	1.9	-42	59.8	59.8	59.8	59.8	59.8	59.9	60.0	60.0	60.0	60.0	60.0	59.9
84 - γ	Dra Eltanin	2.2	+51	29.2	29.1	29.0	29.1	29.2	29.3	29.5	29.6	29.7	29.6	29.5	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.1
86 - α	Lyr Vega	0.0	+38	47.0	46.9	46.8	46.8	46.9	47.0	47.2	47.3	47.4	47.4	47.3	47.2
87 - σ	Sgr Nunki	2.0	-26	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
88 - α	Aql Altair	0.8	+8	52.2	52.1	52.1	52.1	52.2	52.3	52.4	52.4	52.5	52.5	52.5	52.4
89 - γ	Cyg Sadr	2.2	+40	15.6	15.4	15.3	15.3	15.4	15.5	15.6	15.8	15.9	16.0	16.0	15.9
90 - α	Pav Peacock	1.9	-56	44.0	43.9	43.8	43.7	43.7	43.7	43.8	43.9	44.0	44.0	44.0	44.0
91 - α	Cyg Deneb	1.3	+45	17.0	16.9	16.8	16.7	16.8	16.9	17.1	17.2	17.4	17.4	17.4	17.4
92 - α	Cep Alderamin	2.4	+62	35.5	35.3	35.2	35.1	35.1	35.2	35.3	35.5	35.7	35.8	35.8	35.8
93 - ϵ	Peg Enif	0.7	+9	52.7	52.6	52.6	52.6	52.7	52.8	52.9	53.0	53.0	53.1	53.1	53.0
94 - δ	Cap Deneb Algedi	2.9	-16	7.5	7.5	7.5	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.3
95 - α	Gru Al Na'ir	1.7	-46	57.6	57.5	57.4	57.3	57.2	57.1	57.1	57.2	57.3	57.3	57.4	57.4
96 - β	Gruis	2.1	-46	53.1	53.0	52.8	52.7	52.6	52.5	52.5	52.5	52.6	52.7	52.8	52.8
97 - α	PsA Fomalhaut	1.2	-29	37.3	37.2	37.1	37.0	36.9	36.8	36.8	36.8	36.8	36.9	36.9	37.0
98 - β	Peg Scheat	2.4	+28	5.3	5.2	5.1	5.1	5.1	5.2	5.3	5.4	5.6	5.6	5.7	5.7
99 - α	Peg Markab	2.5	+15	12.6	12.5	12.5	12.4	12.5	12.6	12.7	12.8	12.9	12.9	13.0	12.9

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 21	17 19	15 29	13 27	11 29	9 27	7 30
13 - θ Eridani	<i>Acamar</i>	3.3	20 12	18 10	16 20	14 18	12 20	10 18	8 20
16 - α Persei	<i>Mirfak</i>	1.8	20 38	18 36	16 46	14 44	12 46	10 44	8 46
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 34	10 36
21 - α Aurigae	<i>Capella</i>	0.1	22 30	20 28	18 38	16 36	14 38	12 36	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 44	11 46
33 - α Canis Majoris	<i>Sirius</i>	-1.5	0 02	21 57	20 06	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 56	22 51	21 00	18 59	17 01	14 59	13 01
39 - β Geminorum	<i>Pollux</i>	1.1	1 02	22 57	21 06	19 05	17 07	15 05	13 07
42 - ϵ Carinae	<i>Avior</i>	1.9	1 39	23 34	21 44	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 44	0 42	22 48	20 47	18 49	16 47	14 49
50 - α Leonis	<i>Regulus</i>	1.4	3 25	1 23	23 29	21 27	19 29	17 27	15 29
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	4 20	2 18	0 28	22 22	20 25	18 23	16 25
55 - β Leonis	<i>Denebola</i>	2.1	5 05	3 04	1 13	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 45	17 47
58 - γ Crucis	<i>Gacrux</i>	1.6	5 47	3 46	1 55	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 08	20 06	18 08
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	6 10	4 08	2 18	0 16	22 14	20 13	18 15
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	6 40	4 38	2 48	0 46	22 44	20 42	18 44
65 - α Virginis	<i>Spica</i>	1.0	6 41	4 39	2 49	0 47	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 55	5 54	4 04	2 02	0 04	21 58	20 00
72 - β Ursae Minoris	<i>Kochab</i>	2.1	8 06	6 05	4 15	2 13	0 15	22 09	20 11
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	8 50	6 49	4 58	2 57	0 59	22 53	20 55
76 - α Scorpii	<i>Antares</i>	0.9	9 45	7 43	5 53	3 51	1 53	23 47	21 49
77 - α Trianguli Aust.	<i>Atria</i>	1.9	10 04	8 02	6 12	4 10	2 13	0 11	22 09
81 - λ Scorpii	<i>Shaula</i>	1.6	10 49	8 47	6 57	4 55	2 57	0 55	22 54
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	10 50	8 48	6 58	4 56	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 39	9 38	7 47	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 10	10 09	8 18	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 47	1 49
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 07
95 - α Gruis	<i>Al Na'ir</i>	1.7	15 23	13 21	11 31	9 29	7 31	5 29	3 31
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	16 12	14 10	12 20	10 18	8 20	6 18	4 21
99 - α Pegasi	<i>Markab</i>	2.5	16 19	14 17	12 27	10 25	8 27	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 27	23 25	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 26	21 24	19 26	
6 - β Ceti	<i>Diphda</i>	2.0	4 04	2 02	0 05	21 59	20 01	
9 - α Eridani	<i>Achernar</i>	0.5	4 58	2 56	0 58	22 53	20 55	Día Corr.
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	1 h m
16 - α Persei	<i>Mirfak</i>	1.8	6 45	4 43	2 45	0 43	22 41	2 0 00
19 - α Tauri	<i>Aldebaran</i>	0.9	7 56	5 54	3 56	1 54	23 52	3 0 04
20 - β Orionis	<i>Rigel</i>	0.1	8 35	6 33	4 35	2 33	0 35	4 0 08
21 - α Aurigae	<i>Capella</i>	0.1	8 37	6 35	4 37	2 35	0 37	5 0 12
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 45	6 43	4 45	2 43	0 45	6 0 16
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 15	7 13	5 15	3 13	1 15	7 0 20
31 - α Carinae	<i>Canopus</i>	-0.7	9 44	7 42	5 44	3 42	1 44	8 0 24
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 05	8 03	6 05	4 03	2 05	9 0 28
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 18	8 16	6 18	4 17	2 19	10 0 31
38 - α Canis Minoris	<i>Procyon</i>	0.4	10 59	8 57	6 59	4 57	2 59	11 0 35
39 - β Geminorum	<i>Pollux</i>	1.1	11 05	9 03	7 05	5 03	3 05	12 0 39
42 - ϵ Carinae	<i>Avior</i>	1.9	11 42	9 40	7 42	5 40	3 42	13 0 43
45 - λ Velorum	<i>Suhail</i>	2.2	12 27	10 25	8 27	6 26	4 28	14 0 47
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 32	10 31	8 33	6 31	4 33	15 0 51
49 - α Hydrae	<i>Alphard</i>	2.0	12 47	10 45	8 47	6 45	4 47	16 0 55
50 - α Leonis	<i>Regulus</i>	1.4	13 28	11 26	9 28	7 26	5 28	17 0 59
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 23	12 21	10 23	8 21	6 23	18 1 03
55 - β Leonis	<i>Denebola</i>	2.1	15 08	13 06	11 08	9 06	7 08	19 1 07
57 - α Crucis	<i>Acrux</i>	1.4	15 45	13 43	11 46	9 44	7 46	20 1 11
58 - γ Crucis	<i>Gacrux</i>	1.6	15 50	13 48	11 50	9 48	7 50	21 1 15
60 - β Crucis	<i>Mimosa</i>	1.3	16 06	14 05	12 07	10 05	8 07	22 1 19
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 13	14 11	12 13	10 11	8 13	23 1 23
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 43	14 41	12 43	10 41	8 43	24 1 27
65 - α Virginis	<i>Spica</i>	1.0	16 44	14 42	12 44	10 42	8 44	25 1 30
68 - θ Centauri	<i>Menkent</i>	2.1	17 25	15 23	13 25	11 23	9 26	26 1 34
69 - α Bootis	<i>Arcturus</i>	0.0	17 34	15 32	13 34	11 32	9 34	27 1 38
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	17 58	15 56	13 58	11 56	9 58	28 1 42
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 09	16 07	14 09	12 07	10 09	29 1 46
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 53	16 51	14 53	12 51	10 53	30 1 50
76 - α Scorpii	<i>Antares</i>	0.9	19 48	17 46	15 48	13 46	11 48	31 1 54
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 07	18 05	16 07	14 05	12 07	31 1 58
81 - λ Scorpii	<i>Shaula</i>	1.6	20 52	18 50	16 52	14 50	12 52	Si el resultado es negativo sumar 23 ^h 56 ^m .
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 53	18 51	16 53	14 51	12 53	
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 13	17 15	15 13	13 15	
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 42	19 40	17 42	15 40	13 42	2ª CORRECCIÓN
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 11	18 13	16 11	14 13	Se aplicará para tener la hora civil del paso por otro meridiano.
88 - α Aquilae	<i>Altair</i>	0.8	23 08	21 07	19 09	17 07	15 09	
90 - α Pavonis	<i>Peacock</i>	1.9	23 43	21 41	19 43	17 41	15 43	
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 05	23 00	21 02	19 00	17 02	
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 29	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	Long. Corr.
99 - α Pegasi	<i>Markab</i>	2.5	2 26	0 24	22 22	20 20	18 22	
								o m
								180 W -2
								138 W -1
								46 W 0
								46 E +1
								136 E +2
								180 E

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2001

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	-34.4	26 00	-42.8	52 00	-42.6	78 00	-33.7	104 00	-18.0	130 00	+1.3	156 00	+20.4
0 30	-34.6	26 30	-42.9	52 30	-42.5	78 30	-33.5	104 30	-17.7	130 30	+1.7	156 30	+20.7
1 00	-34.9	27 00	-43.0	53 00	-42.4	79 00	-33.2	105 00	-17.3	131 00	+2.1	157 00	+21.0
1 30	-35.1	27 30	-43.1	53 30	-42.3	79 30	-33.0	105 30	-17.0	131 30	+2.4	157 30	+21.4
2 00	-35.3	28 00	-43.1	54 00	-42.2	80 00	-32.7	106 00	-16.6	132 00	+2.8	158 00	+21.7
2 30	-35.5	28 30	-43.2	54 30	-42.1	80 30	-32.5	106 30	-16.3	132 30	+3.2	158 30	+22.0
3 00	-35.8	29 00	-43.3	55 00	-42.0	81 00	-32.2	107 00	-15.9	133 00	+3.6	159 00	+22.4
3 30	-36.0	29 30	-43.3	55 30	-41.9	81 30	-32.0	107 30	-15.6	133 30	+4.0	159 30	+22.7
4 00	-36.2	30 00	-43.4	56 00	-41.8	82 00	-31.7	108 00	-15.2	134 00	+4.3	160 00	+23.0
4 30	-36.4	30 30	-43.4	56 30	-41.6	82 30	-31.4	108 30	-14.9	134 30	+4.7	160 30	+23.4
5 00	-36.6	31 00	-43.5	57 00	-41.5	83 00	-31.2	109 00	-14.5	135 00	+5.1	161 00	+23.7
5 30	-36.8	31 30	-43.5	57 30	-41.4	83 30	-30.9	109 30	-14.1	135 30	+5.5	161 30	+24.0
6 00	-37.0	32 00	-43.6	58 00	-41.3	84 00	-30.6	110 00	-13.8	136 00	+5.9	162 00	+24.3
6 30	-37.3	32 30	-43.6	58 30	-41.1	84 30	-30.3	110 30	-13.4	136 30	+6.2	162 30	+24.6
7 00	-37.5	33 00	-43.6	59 00	-41.0	85 00	-30.1	111 00	-13.0	137 00	+6.6	163 00	+24.9
7 30	-37.6	33 30	-43.7	59 30	-40.9	85 30	-29.8	111 30	-12.7	137 30	+7.0	163 30	+25.3
8 00	-37.8	34 00	-43.7	60 00	-40.7	86 00	-29.5	112 00	-12.3	138 00	+7.4	164 00	+25.6
8 30	-38.0	34 30	-43.7	60 30	-40.6	86 30	-29.2	112 30	-11.9	138 30	+7.8	164 30	+25.9
9 00	-38.2	35 00	-43.8	61 00	-40.4	87 00	-28.9	113 00	-11.6	139 00	+8.1	165 00	+26.2
9 30	-38.4	35 30	-43.8	61 30	-40.3	87 30	-28.7	113 30	-11.2	139 30	+8.5	165 30	+26.5
10 00	-38.6	36 00	-43.8	62 00	-40.1	88 00	-28.4	114 00	-10.8	140 00	+8.9	166 00	+26.8
10 30	-38.8	36 30	-43.8	62 30	-40.0	88 30	-28.1	114 30	-10.5	140 30	+9.3	166 30	+27.1
11 00	-38.9	37 00	-43.8	63 00	-39.8	89 00	-27.8	115 00	-10.1	141 00	+9.6	167 00	+27.4
11 30	-39.1	37 30	-43.8	63 30	-39.7	89 30	-27.5	115 30	-9.7	141 30	+10.0	167 30	+27.7
12 00	-39.3	38 00	-43.8	64 00	-39.5	90 00	-27.2	116 00	-9.3	142 00	+10.4	168 00	+28.0
12 30	-39.5	38 30	-43.8	64 30	-39.3	90 30	-26.9	116 30	-9.0	142 30	+10.7	168 30	+28.3
13 00	-39.6	39 00	-43.8	65 00	-39.2	91 00	-26.6	117 00	-8.6	143 00	+11.1	169 00	+28.6
13 30	-39.8	39 30	-43.8	65 30	-39.0	91 30	-26.3	117 30	-8.2	143 30	+11.5	169 30	+28.9
14 00	-39.9	40 00	-43.8	66 00	-38.8	92 00	-26.0	118 00	-7.8	144 00	+11.9	170 00	+29.2
14 30	-40.1	40 30	-43.8	66 30	-38.6	92 30	-25.6	118 30	-7.5	144 30	+12.2	170 30	+29.4
15 00	-40.3	41 00	-43.8	67 00	-38.5	93 00	-25.3	119 00	-7.1	145 00	+12.6	171 00	+29.7
15 30	-40.4	41 30	-43.8	67 30	-38.3	93 30	-25.0	119 30	-6.7	145 30	+13.0	171 30	+30.0
16 00	-40.6	42 00	-43.7	68 00	-38.1	94 00	-24.7	120 00	-6.3	146 00	+13.3	172 00	+30.3
16 30	-40.7	42 30	-43.7	68 30	-37.9	94 30	-24.4	120 30	-6.0	146 30	+13.7	172 30	+30.6
17 00	-40.8	43 00	-43.7	69 00	-37.7	95 00	-24.1	121 00	-5.6	147 00	+14.0	173 00	+30.8
17 30	-41.0	43 30	-43.7	69 30	-37.5	95 30	-23.8	121 30	-5.2	147 30	+14.4	173 30	+31.1
18 00	-41.1	44 00	-43.6	70 00	-37.3	96 00	-23.4	122 00	-4.8	148 00	+14.8	174 00	+31.4
18 30	-41.2	44 30	-43.6	70 30	-37.1	96 30	-23.1	122 30	-4.4	148 30	+15.1	174 30	+31.6
19 00	-41.4	45 00	-43.5	71 00	-36.9	97 00	-22.8	123 00	-4.1	149 00	+15.5	175 00	+31.9
19 30	-41.5	45 30	-43.5	71 30	-36.7	97 30	-22.5	123 30	-3.7	149 30	+15.8	175 30	+32.2
20 00	-41.6	46 00	-43.4	72 00	-36.5	98 00	-22.1	124 00	-3.3	150 00	+16.2	176 00	+32.4
20 30	-41.7	46 30	-43.4	72 30	-36.3	98 30	-21.8	124 30	-2.9	150 30	+16.6	176 30	+32.7
21 00	-41.9	47 00	-43.3	73 00	-36.0	99 00	-21.5	125 00	-2.5	151 00	+16.9	177 00	+32.9
21 30	-42.0	47 30	-43.3	73 30	-35.8	99 30	-21.1	125 30	-2.2	151 30	+17.3	177 30	+33.2
22 00	-42.1	48 00	-43.2	74 00	-35.6	100 00	-20.8	126 00	-1.8	152 00	+17.6	178 00	+33.4
22 30	-42.2	48 30	-43.1	74 30	-35.4	100 30	-20.5	126 30	-1.4	152 30	+18.0	178 30	+33.7
23 00	-42.3	49 00	-43.1	75 00	-35.2	101 00	-20.1	127 00	-1.0	153 00	+18.3	179 00	+33.9
23 30	-42.4	49 30	-43.0	75 30	-34.9	101 30	-19.8	127 30	-0.6	153 30	+18.7	179 30	+34.2
24 00	-42.5	50 00	-42.9	76 00	-34.7	102 00	-19.4	128 00	-0.2	154 00	+19.0	180 00	+34.4
24 30	-42.6	50 30	-42.8	76 30	-34.5	102 30	-19.1	128 30	+0.1	154 30	+19.3	180 30	+34.6
25 00	-42.7	51 00	-42.8	77 00	-34.2	103 00	-18.7	129 00	+0.5	155 00	+19.7	181 00	+34.9
25 30	-42.7	51 30	-42.7	77 30	-34.0	103 30	-18.4	129 30	+0.9	155 30	+20.0	181 30	+35.1
26 00	-42.8	52 00	-42.6	78 00	-33.7	104 00	-18.0	130 00	+1.3	156 00	+20.4	182 00	+35.3

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2001

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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	+35.3	208 00	+43.1	234 00	+42.2	260 00	+32.7	286 00	+16.6	312 00	-2.8	338 00	-21.7
182 30	+35.5	208 30	+43.2	234 30	+42.1	260 30	+32.5	286 30	+16.3	312 30	-3.2	338 30	-22.0
183 00	+35.8	209 00	+43.3	235 00	+42.0	261 00	+32.2	287 00	+15.9	313 00	-3.6	339 00	-22.4
183 30	+36.0	209 30	+43.3	235 30	+41.9	261 30	+32.0	287 30	+15.6	313 30	-4.0	339 30	-22.7
184 00	+36.2	210 00	+43.4	236 00	+41.8	262 00	+31.7	288 00	+15.2	314 00	-4.3	340 00	-23.0
184 30	+36.4	210 30	+43.4	236 30	+41.6	262 30	+31.4	288 30	+14.9	314 30	-4.7	340 30	-23.4
185 00	+36.6	211 00	+43.5	237 00	+41.5	263 00	+31.2	289 00	+14.5	315 00	-5.1	341 00	-23.7
185 30	+36.8	211 30	+43.5	237 30	+41.4	263 30	+30.9	289 30	+14.1	315 30	-5.5	341 30	-24.0
186 00	+37.0	212 00	+43.6	238 00	+41.3	264 00	+30.6	290 00	+13.8	316 00	-5.9	342 00	-24.3
186 30	+37.3	212 30	+43.6	238 30	+41.1	264 30	+30.3	290 30	+13.4	316 30	-6.2	342 30	-24.6
187 00	+37.5	213 00	+43.6	239 00	+41.0	265 00	+30.1	291 00	+13.0	317 00	-6.6	343 00	-24.9
187 30	+37.6	213 30	+43.7	239 30	+40.9	265 30	+29.8	291 30	+12.7	317 30	-7.0	343 30	-25.3
188 00	+37.8	214 00	+43.7	240 00	+40.7	266 00	+29.5	292 00	+12.3	318 00	-7.4	344 00	-25.6
188 30	+38.0	214 30	+43.7	240 30	+40.6	266 30	+29.2	292 30	+11.9	318 30	-7.8	344 30	-25.9
189 00	+38.2	215 00	+43.8	241 00	+40.4	267 00	+28.9	293 00	+11.6	319 00	-8.1	345 00	-26.2
189 30	+38.4	215 30	+43.8	241 30	+40.3	267 30	+28.7	293 30	+11.2	319 30	-8.5	345 30	-26.5
190 00	+38.6	216 00	+43.8	242 00	+40.1	268 00	+28.4	294 00	+10.8	320 00	-8.9	346 00	-26.8
190 30	+38.8	216 30	+43.8	242 30	+40.0	268 30	+28.1	294 30	+10.5	320 30	-9.3	346 30	-27.1
191 00	+38.9	217 00	+43.8	243 00	+39.8	269 00	+27.8	295 00	+10.1	321 00	-9.6	347 00	-27.4
191 30	+39.1	217 30	+43.8	243 30	+39.7	269 30	+27.5	295 30	+9.7	321 30	-10.0	347 30	-27.7
192 00	+39.3	218 00	+43.8	244 00	+39.5	270 00	+27.2	296 00	+9.3	322 00	-10.4	348 00	-28.0
192 30	+39.5	218 30	+43.8	244 30	+39.3	270 30	+26.9	296 30	+9.0	322 30	-10.7	348 30	-28.3
193 00	+39.6	219 00	+43.8	245 00	+39.2	271 00	+26.6	297 00	+8.6	323 00	-11.1	349 00	-28.6
193 30	+39.8	219 30	+43.8	245 30	+39.0	271 30	+26.3	297 30	+8.2	323 30	-11.5	349 30	-28.9
194 00	+39.9	220 00	+43.8	246 00	+38.8	272 00	+26.0	298 00	+7.8	324 00	-11.9	350 00	-29.2
194 30	+40.1	220 30	+43.8	246 30	+38.6	272 30	+25.6	298 30	+7.5	324 30	-12.2	350 30	-29.4
195 00	+40.3	221 00	+43.8	247 00	+38.5	273 00	+25.3	299 00	+7.1	325 00	-12.6	351 00	-29.7
195 30	+40.4	221 30	+43.8	247 30	+38.3	273 30	+25.0	299 30	+6.7	325 30	-13.0	351 30	-30.0
196 00	+40.6	222 00	+43.7	248 00	+38.1	274 00	+24.7	300 00	+6.3	326 00	-13.3	352 00	-30.3
196 30	+40.7	222 30	+43.7	248 30	+37.9	274 30	+24.4	300 30	+6.0	326 30	-13.7	352 30	-30.6
197 00	+40.8	223 00	+43.7	249 00	+37.7	275 00	+24.1	301 00	+5.6	327 00	-14.0	353 00	-30.8
197 30	+41.0	223 30	+43.7	249 30	+37.5	275 30	+23.8	301 30	+5.2	327 30	-14.4	353 30	-31.1
198 00	+41.1	224 00	+43.6	250 00	+37.3	276 00	+23.4	302 00	+4.8	328 00	-14.8	354 00	-31.4
198 30	+41.2	224 30	+43.6	250 30	+37.1	276 30	+23.1	302 30	+4.4	328 30	-15.1	354 30	-31.6
199 00	+41.4	225 00	+43.5	251 00	+36.9	277 00	+22.8	303 00	+4.1	329 00	-15.5	355 00	-31.9
199 30	+41.5	225 30	+43.5	251 30	+36.7	277 30	+22.5	303 30	+3.7	329 30	-15.8	355 30	-32.2
200 00	+41.6	226 00	+43.4	252 00	+36.5	278 00	+22.1	304 00	+3.3	330 00	-16.2	356 00	-32.4
200 30	+41.7	226 30	+43.4	252 30	+36.3	278 30	+21.8	304 30	+2.9	330 30	-16.6	356 30	-32.7
201 00	+41.9	227 00	+43.3	253 00	+36.0	279 00	+21.5	305 00	+2.5	331 00	-16.9	357 00	-32.9
201 30	+42.0	227 30	+43.3	253 30	+35.8	279 30	+21.1	305 30	+2.2	331 30	-17.3	357 30	-33.2
202 00	+42.1	228 00	+43.2	254 00	+35.6	280 00	+20.8	306 00	+1.8	332 00	-17.6	358 00	-33.4
202 30	+42.2	228 30	+43.1	254 30	+35.4	280 30	+20.5	306 30	+1.4	332 30	-18.0	358 30	-33.7
203 00	+42.3	229 00	+43.1	255 00	+35.2	281 00	+20.1	307 00	+1.0	333 00	-18.3	359 00	-33.9
203 30	+42.4	229 30	+43.0	255 30	+34.9	281 30	+19.8	307 30	+0.6	333 30	-18.7	359 30	-34.2
204 00	+42.5	230 00	+42.9	256 00	+34.7	282 00	+19.4	308 00	+0.2	334 00	-19.0	360 00	-34.4
204 30	+42.6	230 30	+42.8	256 30	+34.5	282 30	+19.1	308 30	-0.1	334 30	-19.3		
205 00	+42.7	231 00	+42.8	257 00	+34.2	283 00	+18.7	309 00	-0.5	335 00	-19.7		
205 30	+42.7	231 30	+42.7	257 30	+34.0	283 30	+18.4	309 30	-0.9	335 30	-20.0		
206 00	+42.8	232 00	+42.6	258 00	+33.7	284 00	+18.0	310 00	-1.3	336 00	-20.4		
206 30	+42.9	232 30	+42.5	258 30	+33.5	284 30	+17.7	310 30	-1.7	336 30	-20.7		
207 00	+43.0	233 00	+42.4	259 00	+33.2	285 00	+17.3	311 00	-2.1	337 00	-21.0		
207 30	+43.1	233 30	+42.3	259 30	+33.0	285 30	+17.0	311 30	-2.4	337 30	-21.4		
208 00	+43.1	234 00	+42.2	260 00	+32.7	286 00	+16.6	312 00	-2.8	338 00	-21.7		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2001

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	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	0.0	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	0.1	0.1	0.1
80	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
100	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
120	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
140	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	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	0.0	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	0.1	0.1	0.1
260	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3
280	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
300	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
320	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	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 $\cap$	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	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.2	+0.2	0.0	-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	0.0	+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	0.0
120	-0.1	+0.1	+0.3	+0.3	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.3	-0.3	-0.2
140	-0.1	0.0	+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	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.2	-0.2	0.0	+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	0.0	-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	0.0
300	+0.1	-0.1	-0.3	-0.3	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.3	+0.3	+0.2
320	+0.1	0.0	-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	+0.6	+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	+0.5	+0.6	+0.7	+0.8	10
20	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	40
50	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	50
60	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	-0.7	60
70	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	-0.9	70
80	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	-1.2	80
90	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	90
100	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	100
110	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	110
120	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	-1.7	120
130	-0.7	-0.8	-0.8	-0.8	-0.8	-0.9	-1.0	-1.0	-1.1	-1.3	-1.5	-1.7	130
140	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	140
150	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.3	-1.6	150
160	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	160
170	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	210
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	220
230	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	230
240	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	+0.9	250
260	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+1.0	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	270
280	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	280
290	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	290
300	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.4	+1.7	300
310	+0.7	+0.8	+0.8	+0.8	+0.8	+0.9	+1.0	+1.0	+1.1	+1.3	+1.5	+1.7	310
320	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.4	+1.7	320
330	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	330
340	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	340
350	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+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, 2001**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)									
Depresión del horizonte				Semidiámetro, refracción y paralaje									
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Altura apte. ○ Corrección	Correc. adicional (2001)	
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 54	13 44	27 12	Ene 22					+0'2
1.9	-2.5	13.6	-6.6	6 27	9 05	14 06	28 32	Feb 26					+0'1
2.0	-2.6	14.0	-6.7	6 33	9 15	14 29	29 59	Mar 22					0'0
2.2	-2.7	14.4	-6.8	6 40	9 26	14 53	31 34	Abr 13					-0'1
2.3	-2.8	14.8	-6.9	6 46	9 37	15 18	33 19	May 7					-0'2
2.5	-2.9	15.3	-7.0	6 53	9 47	15 45	35 16	Jun 12					-0'3
2.7	-3.0	15.7	-7.1	7 00	10 00	16 13	37 25	Jul 27					-0'2
2.9	-3.1	16.2	-7.2	7 06	10 12	16 43	39 49	Sep 1					-0'1
3.1	-3.2	16.6	-7.3	7 14	10 25	17 14	42 30	Sep 25					0'0
3.3	-3.3	17.1	-7.4	7 21	10 38	17 47	45 30	Oct 17					+0'1
3.5	-3.4	17.6	-7.5	7 28	10 52	18 23	48 53	Nov 9					+0'2
3.7	-3.5	18.0	-7.6	7 36	11 06	19 01	52 43	Dic 15					+0'3
3.9	-3.6	18.5	-7.7	7 44	11 21	19 41	57 01	Dic 31					
4.2	-3.7	19.0	-7.8	7 52	11 36	20 24	61 51						
4.4	-3.8	19.5	-7.9	8 00	11 52	21 10	67 16						
4.7	-3.9	20.0	-8.0	8 08	12 09	21 59	73 14						
4.9	-4.0	20.5	-8.1	8 17	12 26	22 53	79 42						
5.2	-4.1	21.0	-8.2	8 26	12 44	23 50	86 30						
5.4	-4.2	21.5	-8.3	8 35	13 03	24 52	90 00						
5.7	-4.3	22.1	-8.4	8 45	13 23	25 59							
6.0	-4.4	22.6	-8.5										
6.2	-4.5	23.1	-8.6										
6.5	-4.6	23.7	-8.7										
6.8	-4.7	24.2	-8.8										
7.1	-4.8	24.8	-8.9										
7.4	-4.9	25.4	-9.0										
7.7	-5.0	25.9	-9.1										
8.0	-5.1	26.5	-9.2										
8.4	-5.2	27.1	-9.3										
8.7	-5.3	27.7	-9.4										
9.0	-5.4	28.3	-9.5										
9.4	-5.5	28.9	-9.6										
9.7	-5.6	29.5	-9.7										
10.1	-5.7	30.1	-9.8										
10.4	-5.8	30.7	-9.9										
10.8	-5.9	31.3	-10.0										
11.2	-6.0	32.0	-10.1										
11.6	-6.1	32.6	-10.2										
11.9	-6.2	33.3	-10.3										
12.3	-6.3	33.9	-10.4										
12.7		34.6											

TABLA C = PLANETAS Y ESTRELLAS									
Refracción					Paralaje (2001)				
Altura apte.	Corrección	Altura apte.	Corrección		Fechas	Venus para cualquier altura	Marte Altura aparente		
○ /	/	○ /	/				< 30°	> 30° < 60°	> 60°
6 30	-7.8	14 00	-3.8		Ene 1	+0'2	+0'1	+0'1	0'0
6 40	-7.6	15 00	-3.6		Feb 7	+0'3	+0'1	+0'1	0'0
6 50	-7.5	16 00	-3.3		Mar 1	+0'4	+0'1	+0'1	0'0
7 00	-7.3	17 00	-3.1		Mar 20	+0'5	+0'1	+0'1	0'0
7 15	-7.1	18 00	-3.0		Mar 21	+0'5	+0'1	+0'1	+0'1
7 30	-6.9	19 00	-2.8		Mar 30	+0'5	+0'2	+0'1	+0'1
7 45	-6.7	20 00	-2.6		Abr 8	+0'4	+0'2	+0'1	+0'1
8 00	-6.5	21 00	-2.5		Abr 26	+0'3	+0'2	+0'2	+0'1
8 15	-6.3	22 00	-2.4		May 17	+0'2	+0'3	+0'2	+0'1
8 30	-6.2	24 00	-2.2		Jul 1	+0'1	+0'3	+0'2	+0'1
8 45	-6.0	26 00	-2.0		Ago 1	+0'1	+0'2	+0'2	+0'1
9 00	-5.9	28 00	-1.8		Ago 29	+0'1	+0'2	+0'1	+0'1
9 20	-5.7	32 00	-1.6		Oct 8	+0'1	+0'1	+0'1	+0'1
9 40	-5.5	36 00	-1.3		Oct 21	+0'1	+0'1	+0'1	0'0
10 00	-5.3	40 00	-1.2		Dic 31				
10 30	-5.1	45 00	-1.0						
11 00	-4.8	50 00	-0.8						
11 30	-4.6	60 00	-0.6						
12 00	-4.5	70 00	-0.4						
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.