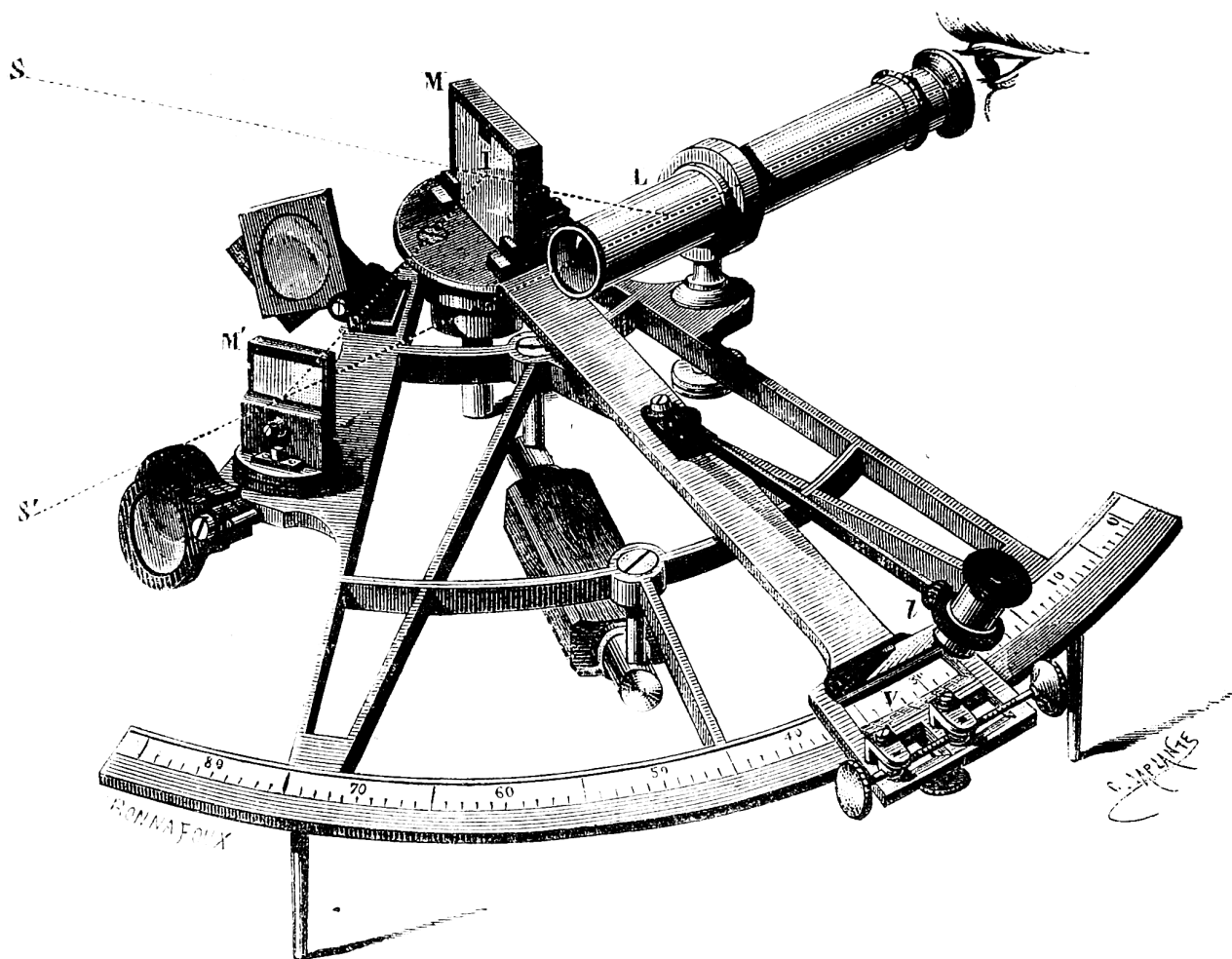




ALMANAQUE NÁUTICO PERSEIS 2014

ALMANAQUE NÁUTICO PERSEIS 2014

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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 5				Edad: 29 ^d 0 PHE { SD: 16'7 PMG: 12 ^h 04 ^m R ^c : 62 ^m 4 ^h : 61'3 12 ^h : 61'4 20 ^h : 61'4																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	10.4	-23	01.3	186	33.9	-19	05.1	29	05.1	29	05.1	60 N	7 09	8 06	9 02	8 19	40	15 54	88	
1	194	10.1		01.1	200	56.1	32	-19	02.2	30	02.2	30	58	7 02	7 54	8 45	8 06	42	16 07	85	
2	209	09.8		00.9	215	18.4	33	-18	59.2	30	59.2	30	56	6 56	44	31	7 55	44	18 83		
3	224	09.5		00.7	229	40.7	33		56.0	32	56.0	32	54	50	36	19	45	46	27 8		
4	239	09.2		00.5	244	03.1	34		52.7	33	52.7	33	52	44	28	8 08	37	47	36 79		
5	254	08.9	-23	00.3	258	25.4	33	-18	49.2	35	49.2	35	50	6 39	7 20	7 59	7 29	48	16 43	78	
6	269	08.6	-23	00.1	272	47.7	33	-18	45.6	36	45.6	36	45	6 28	7 05	7 38	7 12	51	17 00	75	
7	284	08.3	-22	59.9	287	10.1	34		41.8	38	41.8	38	40	17	6 51	22	6 58	53	13 72		
8	299	08.0		59.7	301	32.5	34		37.9	39	37.9	39	35	08	40	7 08	47	54	24 71		
9	314	07.7		59.5	315	54.9	34		33.9	40	33.9	40	30	6 00	30	6 56	36	56	34 69		
10	329	07.4		59.2	330	17.3	34		29.7	42	29.7	42	20	5 44	6 11	35	19	58	17 51	66	
11	344	07.1	-22	59.0	344	39.7	34	-18	25.3	44	25.3	44	10 N	5 28	5 54	6 17	6 03	61	18 05	64	
12	359	06.8	-22	58.8	359	02.2	35	-18	20.9	44	20.9	44	0	5 11	5 37	6 00	5 49	62	18 19	61	
13	14	06.5		58.6	13	24.7	35		16.3	46	16.3	46	10 S	4 53	5 20	5 43	35	64	32 59		
14	29	06.2		58.4	27	47.2	35		11.5	48	11.5	48	20	30	4 59	24	19	66	18 47	56	
15	44	05.9		58.2	42	09.8	36		06.6	49	06.6	49	30	4 02	35	5 02	5 02	68	19 03	54	
16	59	05.7		58.0	56	32.4	36	-18	01.6	50	01.6	50	35	3 44	20	4 50	4 52	69	13 51		
17	74	05.4	-22	57.8	70	55.0	36	-17	56.4	52	56.4	52	40	3 21	4 02	4 35	4 40	71	19 23	50	
18	89	05.1	-22	57.6	85	17.7	37	-17	51.2	52	51.2	52	45	2 51	3 40	4 17	4 26	73	19 36	47	
19	104	04.8		57.3	99	40.4	37		45.7	55	45.7	55	50	2 07	3 11	3 55	09	76	52 44		
20	119	04.5		57.1	114	03.2	38		40.2	55	40.2	55	52	1 41	2 56	45	4 01	77	19 59	42	
21	134	04.2		56.9	128	25.9	37		34.5	57	34.5	57	54	1 00	39	33	3 53	77	20 07	41	
22	149	03.9		56.7	142	48.8	39		28.7	58	28.7	58	56	** **	2 18	19	43	79	15 40		
23	164	03.6		56.5	157	11.6	38		22.7	60	22.7	60	58	** **	1 50	3 03	31	81	25 38		
24	179	03.3	-22	56.2	171	34.6	40	-17	16.6	61	16.6	61	60 S	** **	1 06	2 43	3 18	83	20 37	34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 14 ^m 9		Mag: -4.4 PMG: 13 ^h 08 ^m		Mag: +0.8 PMG: 6 ^h 03 ^m		Mag: -2.7 PMG: 0 ^h 28 ^m		Mag: +0.6 PMG: 8 ^h 31 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	100	34.3	162	09.6	-18	12.9	269	00.9	-2	36.2
1	115	36.7	177	13.3		12.5	284	02.3		36.6
2	130	39.2	192	16.9		12.0	299	03.7		37.1
3	145	41.7	207	20.6		11.6	314	05.2		37.5
4	160	44.1	222	24.2		11.2	329	06.6		37.9
5	175	46.6	237	27.9	-18	10.7	344	08.0	-2	38.3
6	190	49.0	252	31.5	-18	10.3	359	09.5	-2	38.7
7	205	51.5	267	35.2		09.8	14	10.9		39.1
8	220	54.0	282	38.9		09.4	29	12.3		39.5
9	235	56.4	297	42.5		08.9	44	13.8		39.9
10	250	58.9	312	46.2		08.5	59	15.2		40.3
11	266	01.4	327	49.9	-18	08.0	74	16.6	-2	40.7
12	281	03.8	342	53.6	-18	07.6	89	18.1	-2	41.1
13	296	06.3	357	57.3		07.2	104	19.5		41.5
14	311	08.8	13	00.9		06.7	119	20.9		41.9
15	326	11.2	28	04.6		06.3	134	22.4		42.3
16	341	13.7	43	08.3		05.8	149	23.8		42.7
17	356	16.2	58	12.0	-18	05.4	164	25.3	-2	43.1
18	11	18.6	73	15.7	-18	04.9	179	26.7	-2	43.5
19	26	21.1	88	19.4		04.5	194	28.1		43.9
20	41	23.5	103	23.2		04.1	209	29.6		44.3
21	56	26.0	118	26.9		03.6	224	31.0		44.7
22	71	28.5	133	30.6		03.2	239	32.4		45.1
23	86	30.9	148	34.3		02.8	254	33.9		45.5
24	101	33.4	163	38.0	-18	02.3	269	35.3	-2	45.9
Dif	—		+37		+4		+14		-4	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 04 ^m 0			Edad: 30 ^d 0 PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'3 R°: 59 ^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	h m
0	179	03.3	-22 56.2	171	34.6	-17 16.6	62	60 N	15 07	16 03	16 59	8 59	29	17 22
1	194	03.0	56.0	185	57.5	10.4	62	58	23	14	17 06	48	33	32
2	209	02.7	55.8	200	20.5	40	63	56	37	24	13	39	35	41
3	224	02.4	55.6	214	43.6	41	65	54	15 50	33	19	31	37	48
4	239	02.1	55.4	229	06.7	41	66	52	16 00	41	24	24	38	17 55
5	254	01.8	-22 55.1	243	29.9	42	67	50	16 10	16 48	17 29	8 17	40	18 01
6	269	01.5	-22 54.9	257	53.1	42	68	45	16 30	17 03	17 41	8 03	44	18 15
7	284	01.2	54.7	272	16.4	43	70	40	16 46	17	17 51	7 51	47	25
8	299	01.0	54.5	286	39.7	43	70	35	17 00	28	18 00	41	49	35
9	314	00.7	54.2	301	03.1	44	72	30	12	38	08	32	51	43
10	329	00.4	54.0	315	26.5	44	73	20	33	17 57	24	17	54	18 57
11	344	00.1	-22 53.8	329	50.1	46	75	10 N	17 51	18 13	18 40	7 04	57	19 09
12	358	59.8	-22 53.6	344	13.6	45	75	0	18 08	18 30	18 56	6 51	60	19 20
13	13	59.5	53.3	358	37.2	46	77	10 S	25	18 48	19 15	39	62	31
14	28	59.2	53.1	13	00.9	47	77	20	18 43	19 08	19 37	25	66	43
15	43	58.9	52.9	27	24.7	48	79	30	19 05	32	20 05	10	69	19 57
16	58	58.6	52.6	41	48.5	48	80	35	17	19 47	23	6 01	71	20 04
17	73	58.3	-22 52.4	56	12.4	49	81	40	19 32	20 05	20 46	5 51	73	20 13
18	88	58.0	-22 52.2	70	36.3	49	82	45	19 50	20 27	21 15	5 39	76	20 23
19	103	57.7	51.9	85	00.4	51	82	50	20 11	20 55	21 58	25	79	36
20	118	57.5	51.7	99	24.4	50	85	52	22	21 10	22 24	18	81	41
21	133	57.2	51.5	113	48.6	52	85	54	34	27	23 02	10	83	48
22	148	56.9	51.2	128	12.8	52	86	56	20 47	21 48	** **	5 02	85	20 55
23	163	56.6	51.0	142	37.1	53	87	58	21 03	22 15	** **	4 52	87	21 03
24	178	56.3	-22 50.8	157	01.5	54	88	60 S	21 23	22 57	** **	4 41	90	21 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 11 ^m 0		Mag: -4.3 PMG: 13 ^h 02 ^m		Mag: +0.8 PMG: 6 ^h 01 ^m		Mag: -2.7 PMG: 0 ^h 23 ^m		Mag: +0.6 PMG: 8 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	101	33.4	163	38.0	269	35.3	354	12.2	232	56.8
1	116	35.9	178	41.8	284	36.8	9	15.0	247	59.1
2	131	38.3	193	45.5	299	38.2	24	17.9	263	01.3
3	146	40.8	208	49.2	314	39.6	39	20.7	278	03.5
4	161	43.3	223	53.0	329	41.1	54	23.5	293	05.8
5	176	45.7	238	56.7	344	42.5	69	26.3	308	08.0
6	191	48.2	254	00.4	359	44.0	84	29.2	323	10.3
7	206	50.7	269	04.2	374	45.4	99	32.0	338	12.5
8	221	53.1	284	07.9	389	46.8	114	34.8	353	14.7
9	236	55.6	299	11.7	404	48.3	129	37.6	368	17.0
10	251	58.0	314	15.5	419	49.7	144	40.5	383	19.2
11	267	00.5	329	19.2	434	51.2	159	43.3	398	21.5
12	282	03.0	344	23.0	449	52.6	174	46.1	413	23.7
13	297	05.4	359	26.8	464	54.1	189	49.0	428	25.9
14	312	07.9	374	30.5	479	55.5	204	51.8	443	28.2
15	327	10.4	389	34.3	494	56.9	219	54.6	458	30.4
16	342	12.8	404	38.1	509	58.4	234	57.4	473	32.7
17	357	15.3	419	41.9	524	59.8	249	00.3	488	34.9
18	12	17.8	434	45.6	539	01.3	264	03.1	503	37.1
19	27	20.2	449	49.4	554	02.7	279	05.9	518	39.4
20	42	22.7	464	53.2	569	04.2	294	08.7	533	41.6
21	57	25.2	479	57.0	584	05.6	309	11.6	548	43.9
22	72	27.6	494	00.8	599	07.1	324	14.4	563	46.1
23	87	30.1	509	04.6	614	08.5	339	17.2	578	48.3
24	102	32.5	524	08.4	629	10.0	354	20.0	593	50.6
Dif	—		+38	+4	+14	-4	+28	0	+22	-1

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 04 ^m 5				Edad: 1 ^d 5 PHE { SD: 16:7 PMG: 14 ^h 05 ^m R ^c : 56 ^m 4 ^h : 61'2 12 ^h : 61'0 20 ^h : 60'8																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	56.3	-22	50.8	157	01.5	-14	15.1	88	58	60 N	7 09	8 05	9 01	9 28	23	18 54	91			
1	193	56.0		50.5	171	25.9	54	-14	06.3	90	58	7 02	7 54	8 45	21	25	19 01	88			
2	208	55.7		50.3	185	50.4	55	-13	57.3	91	56	6 55	44	31	14	28	07	86			
3	223	55.4		50.0	200	15.0	56		48.2	92	54	49	35	18	08	30	12	84			
4	238	55.1		49.8	214	39.6	56		39.0	92	52	44	27	8 08	9 02	32	17	81			
5	253	54.8	-22	49.6	229	04.4	58	-13	29.8	92	50	6 39	7 20	7 58	8 57	34	19 22	79			
6	268	54.6	-22	49.3	243	29.1	57	-13	20.4	94	45	6 28	7 05	7 38	8 47	37	19 31	75			
7	283	54.3		49.1	257	54.0	59		11.0	94	40	18	6 52	22	38	40	39	72			
8	298	54.0		48.8	272	19.0	60	-13	01.5	95	35	09	40	7 08	30	43	46	69			
9	313	53.7		48.6	286	44.0	60	-12	51.9	96	30	6 00	30	6 56	23	46	19 51	67			
10	328	53.4		48.3	301	09.1	61		42.2	97	20	5 44	6 12	36	11	50	20 01	63			
11	343	53.1	-22	48.1	315	34.2	61	-12	32.4	98	10 N	5 29	5 55	6 18	8 01	53	20 10	59			
12	358	52.8	-22	47.8	329	59.5	63	-12	22.6	98	0	5 12	5 38	6 01	7 51	57	20 18	56			
13	13	52.5		47.6	344	24.8	63		12.7	99	10 S	4 54	21	5 44	41	60	27	51			
14	28	52.3		47.3	358	50.2	64	-12	02.7	100	20	32	5 01	25	31	63	35	48			
15	43	52.0		47.1	13	15.7	65	-11	52.6	101	30	4 03	4 36	5 04	19	68	45	44			
16	58	51.7		46.8	27	41.2	65		42.5	101	35	3 45	22	4 51	12	70	50	42			
17	73	51.4	-22	46.6	42	06.8	66	-11	32.3	102	40	3 23	4 04	4 37	7 04	73	20 57	38			
18	88	51.1	-22	46.3	56	32.5	67	-11	22.0	103	45	2 53	3 42	4 19	6 55	76	21 04	35			
19	103	50.8		46.1	70	58.3	68		11.7	103	50	2 10	3 13	3 57	44	80	13	31			
20	118	50.5		45.8	85	24.1	68	-11	01.3	104	52	1 45	2 59	47	39	81	17	30			
21	133	50.2		45.6	99	50.1	70	-10	50.8	105	54	1 06	42	35	33	84	21	28			
22	148	50.0		45.3	114	16.1	70		40.3	105	56	** ** *	2 21	21	27	86	26	26			
23	163	49.7		45.1	128	42.2	71		29.7	106	58	** ** *	1 54	3 05	19	89	31	24			
24	178	49.4	-22	44.8	143	08.3	71	-10	19.1	106	60 S	** ** *	1 12	2 46	6 11	92	21 37	21			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 07 ^m 0		Mag: -4.3 PMG: 12 ^h 56 ^m			Mag: +0.8 PMG: 5 ^h 59 ^m			Mag: -2.7 PMG: 0 ^h 19 ^m			Mag: +0.6 PMG: 8 ^h 23 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	102	32.5	165	08.4	-17	52.0	270	10.0	-2	55.5	355	20.0	+22	37.3				
1	117	35.0	180	12.2		51.6	285	11.4		55.9	10	22.9		37.4				
2	132	37.5	195	16.0		51.1	300	12.8		56.3	25	25.7		37.4				
3	147	39.9	210	19.9		50.7	315	14.3		56.7	40	28.5		37.5				
4	162	42.4	225	23.7		50.3	330	15.7		57.1	55	31.3		37.5				
5	177	44.9	240	27.5	-17	49.9	345	17.2	-2	57.5	70	34.2	+22	37.5				
6	192	47.3	255	31.3	-17	49.5	0	18.6	-2	57.9	85	37.0	+22	37.6				
7	207	49.8	270	35.1		49.0	15	20.1		58.3	100	39.8		37.6				
8	222	52.3	285	39.0		48.6	30	21.5		58.7	115	42.7		37.7				
9	237	54.7	300	42.8		48.2	45	23.0		59.1	130	45.5		37.7				
10	252	57.2	315	46.6		47.8	60	24.4		59.5	145	48.3		37.8				
11	267	59.7	330	50.5	-17	47.4	75	25.9	-2	59.9	160	51.1	+22	37.8				
12	283	02.1	345	54.3	-17	46.9	90	27.3	-3	00.3	175	54.0	+22	37.9				
13	298	04.6	0	58.2		46.5	105	28.8		00.7	190	56.8		37.9				
14	313	07.0	16	02.0		46.1	120	30.3		01.1	205	59.6		38.0				
15	328	09.5	31	05.9		45.7	135	31.7		01.5	221	02.4		38.0				
16	343	12.0	46	09.7		45.3	150	33.2		01.9	236	05.3		38.0				
17	358	14.4	61	13.6	-17	44.9	165	34.6	-3	02.3	251	08.1	+22	38.1				
18	13	16.9	76	17.4	-17	44.4	180	36.1	-3	02.7	266	10.9	+22	38.1				
19	28	19.4	91	21.3		44.0	195	37.5		03.1	281	13.8		38.2				
20	43	21.8	106	25.2		43.6	210	39.0		03.5	296	16.6		38.2				
21	58	24.3	121	29.0		43.2	225	40.4		03.9	311	19.4		38.3				
22	73	26.8	136	32.9		42.8	240	41.9		04.3	326	22.2		38.3				
23	88	29.2	151	36.8		42.4	255	43.3		04.6	341	25.1		38.4				
24	103	31.7	166	40.6	-17	42.0	270	44.8	-3	05.0	356	27.9	+22	38.4				
Dif	—		+38			+4	+15			-4	+28			0	+22			-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'3			Edad: 2 ^d 5	PHE {	4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'1			PMG: 15 ^h 01 ^m	R°: 53 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 9										Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m	
0	178	49.4	-22 44.8	143	08.3	-10 19.1	72	60 N	15 10	16 06	17 02	9 51	19	20 25	89		
1	193	49.1	44.5	157	34.5	-10 08.4	107	58	26	17	09	46	22	29	86		
2	208	48.8	44.3	172	00.8	-9 57.6	108	56	40	26	15	42	24	33	83		
3	223	48.5	44.0	186	27.2	-9 46.8	108	54	15 52	35	21	38	26	36	81		
4	238	48.2	43.8	200	53.7	-9 36.0	108	52	16 03	43	26	34	28	38	79		
5	253	48.0	-22 43.5	215	20.2	-9 25.1	109	50	16 12	16 50	17 31	9 31	30	20 41	77		
6	268	47.7	-22 43.2	229	46.8	-9 14.1	110	45	16 32	17 05	17 42	9 24	34	20 46	73		
7	283	47.4	43.0	244	13.5	-9 03.1	110	40	16 48	18	17 52	18 37		51	69		
8	298	47.1	42.7	258	40.2	-8 52.0	111	35	17 02	30	18 01	13 40		55	66		
9	313	46.8	42.5	273	07.1	-8 40.9	111	30	17 13	40	09	09 42		20	58	64	
10	328	46.5	42.2	287	34.0	-8 29.8	111	20	17 34	17 58	25	9 01	46	21 04	59		
11	343	46.3	-22 41.9	302	00.9	-8 18.6	112	10 N	17 52	18 15	18 41	8 54	50	21 09	56		
12	358	46.0	-22 41.7	316	28.0	-8 07.4	112	0	18 09	18 31	18 57	8 48	53	21 14	52		
13	13	45.7	41.4	330	55.1	-7 56.1	113	10 S	26	18 49	19 15	41 57		18	49		
14	28	45.4	41.1	345	22.3	-7 44.8	113	20	18 44	19 08	19 37	34 61		23	45		
15	43	45.1	40.9	359	49.5	-7 33.5	113	30	19 05	32	20 05	27 65		29	40		
16	58	44.8	40.6	14	16.9	-7 22.1	114	35	19 18	19 47	23	22 68		32	38		
17	73	44.6	-22 40.3	28	44.3	-7 10.7	114	40	19 32	20 05	20 46	8 17	71	21 35	36		
18	88	44.3	-22 40.0	43	11.7	-6 59.3	114	45	19 49	20 26	21 15	8 11	74	21 39	33		
19	103	44.0	39.8	57	39.3	-6 47.8	115	50	20 11	20 54	21 57	8 04	78	44	29		
20	118	43.7	39.5	72	06.9	-6 36.4	114	52	21	21 09	22 22	8 00	80	47	26		
21	133	43.4	39.2	86	34.6	-6 24.8	116	54	33	25	22 58	7 57	82	49	25		
22	148	43.1	39.0	101	02.3	-6 13.3	115	56	20 46	21 46	** **	53 84		52	22		
23	163	42.9	38.7	115	30.1	-6 01.7	116	58	21 02	22 12	** **	48 87		55	20		
24	178	42.6	-22 38.4	129	58.0	-5 50.2	115	60 S	21 21	22 52	** **	7 43	90	21 58	18		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG		Mag: -4.2		Mag: +0.8		Mag: -2.7		Mag: +0.6									
	17 ^h 03 ^m 1		PMG: 12 ^h 50 ^m		PMG: 5 ^h 56 ^m		PMG: 0 ^h 14 ^m		PMG: 8 ^h 20 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	103	31.7	166	40.6	-17	42.0	270	44.8	-3	05.0	356	27.9	+22	38.4	234	44.4	-15	48.3
1	118	34.1	181	44.5		41.6	285	46.3		05.4	11	30.7		38.5	249	46.6		48.4
2	133	36.6	196	48.4		41.2	300	47.7		05.8	26	33.5		38.5	264	48.9		48.4
3	148	39.1	211	52.3		40.7	315	49.2		06.2	41	36.4		38.5	279	51.1		48.5
4	163	41.5	226	56.2		40.3	330	50.6		06.6	56	39.2		38.6	294	53.4		48.5
5	178	44.0	242	00.1	-17	39.9	345	52.1	-3	07.0	71	42.0	+22	38.6	309	55.6	-15	48.6
6	193	46.5	257	04.0	-17	39.5	0	53.5	-3	07.4	86	44.8	+22	38.7	324	57.9	-15	48.6
7	208	48.9	272	07.9		39.1	15	55.0		07.8	101	47.7		38.7	340	00.1		48.7
8	223	51.4	287	11.8		38.7	30	56.5		08.2	116	50.5		38.8	355	02.4		48.7
9	238	53.9	302	15.7		38.3	45	57.9		08.6	131	53.3		38.8	10	04.6		48.8
10	253	56.3	317	19.6		37.9	60	59.4		09.0	146	56.2		38.9	25	06.8		48.8
11	268	58.8	332	23.5	-17	37.5	76	00.8	-3	09.3	161	59.0	+22	38.9	40	09.1	-15	48.9
12	284	01.3	347	27.4	-17	37.1	91	02.3	-3	09.7	177	01.8	+22	38.9	55	11.3	-15	48.9
13	299	03.7	2	31.3		36.7	106	03.8		10.1	192	04.6		39.0	70	13.6		49.0
14	314	06.2	17	35.2		36.3	121	05.2		10.5	207	07.5		39.0	85	15.8		49.0
15	329	08.6	32	39.1		35.9	136	06.7		10.9	222	10.3		39.1	100	18.1		49.1
16	344	11.1	47	43.1		35.5	151	08.1		11.3	237	13.1		39.1	115	20.3		49.1
17	359	13.6	62	47.0	-17	35.1	166	09.6	-3	11.7	252	16.0	+22	39.2	130	22.6	-15	49.2
18	14	16.0	77	50.9	-17	34.7	181	11.1	-3	12.1	267	18.8	+22	39.2	145	24.8	-15	49.2
19	29	18.5	92	54.8		34.3	196	12.5		12.5	282	21.6		39.3	160	27.1		49.3
20	44	21.0	107	58.8		33.9	211	14.0		12.9	297	24.4		39.3	175	29.3		49.3
21	59	23.4	123	02.7		33.5	226	15.5		13.2	312	27.3		39.4	190	31.5		49.4
22	74	25.9	138	06.7		33.1	241	16.9		13.6	327	30.1		39.4	205	33.8		49.4
23	89	28.4	153	10.6		32.7	256	18.4		14.0	342	32.9		39.4	220	36.0		49.5
24	104	30.8	168	14.5	-17	32.3	271	19.8	-3	14.4	357	35.7	+22	39.5	235	38.3	-15	49.5
Dif	—		+39		+4		+15		-4		+28		0		+22		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 05 ^m 4				Edad: 3 ^d 5 PHE SD: 16/3 PMG: 15 ^h 54 ^m R°: 50 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	42.6	-22	38.4	129	58.0	-5	50.2	60 N	7 08	8 04	9 00	10 10	17	21	54	85
1	193	42.3		38.1	144	25.9	89	38.6 ¹¹⁶	58	7 01	7 53	8 43	08 19		55	82	
2	208	42.0		37.9	158	53.9	90	26.9	56	6 55	43	30	06 21		56	80	
3	223	41.7		37.6	173	22.0	91	15.3 ¹¹⁶	54	49	35	18	04 24		57	77	
4	238	41.5		37.3	187	50.2	92	-5 03.6 ¹¹⁷	52	44	27	8 07	02 26		57	76	
5	253	41.2	-22	37.0	202	18.4	92	-4 52.0 ¹¹⁶	50	6 39	7 20	7 58	10 01	27	21	58	74
6	268	40.9	-22	36.7	216	46.6	92	-4 40.3 ¹¹⁷	45	6 28	7 05	7 38	9 58	31	21	59	70
7	283	40.6		36.5	231	15.0	94	28.6 ¹¹⁷	40	18	6 52	22	55 34		22	00	67
8	298	40.3		36.2	245	43.3	93	16.9 ¹¹⁷	35	09	41	7 09	53 37		01	64	
9	313	40.1		35.9	260	11.8	95	-4 05.1 ¹¹⁸	30	6 01	30	6 57	51 39		02	62	
10	328	39.8		35.6	274	40.3	95	-3 53.4 ¹¹⁷	20	5 45	6 12	36	47 44		03	58	
11	343	39.5	-22	35.3	289	08.9	96	-3 41.7 ¹¹⁷	10 N	5 30	5 56	6 18	9 44	48	22	05	53
12	358	39.2	-22	35.0	303	37.5	96	-3 29.9 ¹¹⁸	0	5 13	5 39	6 02	9 41	51	22	06	50
13	13	38.9		34.8	318	06.2	97	18.2 ¹¹⁷	10 S	4 55	22	5 45	38 55		07	47	
14	28	38.7		34.5	332	34.9	97	-3 06.4 ¹¹⁸	20	33	5 02	26	35 59		08	43	
15	43	38.4		34.2	347	03.7	98	-2 54.7 ¹¹⁷	30	4 05	4 38	5 05	32 63		09	39	
16	58	38.1		33.9	1	32.6	99	42.9 ¹¹⁸	35	3 47	23	4 53	30 65		10	36	
17	73	37.8	-22	33.6	16	01.5	99	-2 31.2 ¹¹⁷	40	3 25	4 06	4 38	9 28	68	22	11	34
18	88	37.6	-22	33.3	30	30.5	100	-2 19.4 ¹¹⁸	45	2 56	3 44	4 21	9 25	71	22	12	30
19	103	37.3		33.0	44	59.5	100	-2 07.7 ¹¹⁷	50	2 14	16	4 00	22 75		13	27	
20	118	37.0		32.7	59	28.6	101	-1 56.0 ¹¹⁷	52	1 49	3 02	3 49	20 77		13	26	
21	133	36.7		32.4	73	57.7	101	44.2 ¹¹⁸	54	1 13	2 45	38	19 79		14	23	
22	148	36.4		32.1	88	26.9	102	32.5 ¹¹⁷	56	** **	2 25	24	17 81		14	22	
23	163	36.2		31.9	102	56.1	102	20.8 ¹¹⁷	58	** **	1 58	3 09	15 84		15	19	
24	178	35.9	-22	31.6	117	25.4	103	-1 09.0 ¹¹⁸	60 S	** **	1 19	2 50	9 13	86	22	16	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 59 ^m 2		Mag: -4.3 PMG: 12 ^h 44 ^m		Mag: +0.8 PMG: 5 ^h 54 ^m		Mag: -2.7 PMG: 0 ^h 10 ^m		Mag: +0.6 PMG: 8 ^h 16 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	104	30.8	168	14.5	-17	32.3	271	19.8	-3	14.4
1	119	33.3	183	18.5		31.9	286	21.3		14.8
2	134	35.8	198	22.4		31.5	301	22.8		15.2
3	149	38.2	213	26.4		31.1	316	24.2		15.6
4	164	40.7	228	30.3		30.7	331	25.7		16.0
5	179	43.1	243	34.3	-17	30.3	346	27.2	-3	16.4
6	194	45.6	258	38.2	-17	29.9	1	28.6	-3	16.7
7	209	48.1	273	42.2		29.5	16	30.1		17.1
8	224	50.5	288	46.2		29.1	31	31.6		17.5
9	239	53.0	303	50.1		28.7	46	33.1		17.9
10	254	55.5	318	54.1		28.3	61	34.5		18.3
11	269	57.9	333	58.1	-17	28.0	76	36.0	-3	18.7
12	285	00.4	349	02.0	-17	27.6	91	37.5	-3	19.1
13	300	02.9	4	06.0		27.2	106	38.9		19.4
14	315	05.3	19	10.0		26.8	121	40.4		19.8
15	330	07.8	34	14.0		26.4	136	41.9		20.2
16	345	10.2	49	18.0		26.0	151	43.3		20.6
17	0	12.7	64	21.9	-17	25.6	166	44.8	-3	21.0
18	15	15.2	79	25.9	-17	25.2	181	46.3	-3	21.4
19	30	17.6	94	29.9		24.9	196	47.8		21.8
20	45	20.1	109	33.9		24.5	211	49.2		22.1
21	60	22.6	124	37.9		24.1	226	50.7		22.5
22	75	25.0	139	41.9		23.7	241	52.2		22.9
23	90	27.5	154	45.9		23.3	256	53.6		23.3
24	105	30.0	169	49.9	-17	22.9	271	55.1	-3	23.7
Dif	—		+40		+4		+15		-4	
							+28		0	
									+22	
									-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 05 ^m 8				Edad: 4 ^d 5 PHE { SD: 16:1 PMG: 16 ^h 44 ^m 4 ^h : 58/9 12 ^h : 58/6 20 ^h : 58/3 R°: 49 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	35.9	-22	31.6	117	25.4	-1	09.0	60 N	15 13	16 09	17 04	10 27 16		23 19 82			
1	193	35.6		31.3	131	54.7 ¹⁰³	-0	57.3 ¹¹⁷	58	29	20	11	27 19		17 80			
2	208	35.3		31.0	146	24.1 ¹⁰⁴		45.6 ¹¹⁷	56	43	29	17	27 21		16 77			
3	223	35.1		30.7	160	53.5 ¹⁰⁴		34.0 ¹¹⁶	54	15 55	38	23	28 23		14 75			
4	238	34.8		30.4	175	23.0 ¹⁰⁵		22.3 ¹¹⁷	52	16 05	45	28	28 25		13 73			
5	253	34.5	-22	30.1	189	52.5 ¹⁰⁵	-0	10.6 ¹¹⁷	50	16 14	16 52	17 33	10 28 27		23 12 71			
6	268	34.2	-22	29.8	204	22.1 ¹⁰⁶	+0	01.0 ¹¹⁶	45	16 34	17 07	17 44	10 29 30		23 09 68			
7	283	34.0		29.5	218	51.7 ¹⁰⁶		12.6 ¹¹⁶	40	16 50	20	17 54	29 34		07 65			
8	298	33.7		29.2	233	21.3 ¹⁰⁶		24.3 ¹¹⁷	35	17 03	31	18 03	30 36		05 62			
9	313	33.4		28.9	247	51.0 ¹⁰⁷		35.8 ¹¹⁵	30	15	41	11	30 38		04 59			
10	328	33.1		28.6	262	20.8 ¹⁰⁸		47.4 ¹¹⁶	20	35	17 59	26	31 42		23 01 55			
11	343	32.9	-22	28.3	276	50.6 ¹⁰⁸	+0	59.0 ¹¹⁶	10 N	17 53	18 16	18 42	10 32 45		22 58 52			
12	358	32.6	-22	28.0	291	20.4 ¹⁰⁸	+1	10.5 ¹¹⁵	0	18 10	18 32	18 58	10 32 50		22 56 49			
13	13	32.3		27.7	305	50.2 ¹⁰⁸		22.0 ¹¹⁵	10 S	26	18 49	19 16	33 53		54 45			
14	28	32.0		27.4	320	20.1 ¹⁰⁹		33.5 ¹¹⁵	20	18 44	19 09	19 38	34 56		51 42			
15	43	31.8		27.1	334	50.1 ¹¹⁰		44.9 ¹¹⁴	30	19 05	33	20 05	35 60		48 38			
16	58	31.5		26.7	349	20.1 ¹¹⁰	+1	56.4 ¹¹⁵	35	18	19 47	23	35 63		46 36			
17	73	31.2	-22	26.4	3	50.1 ¹¹⁰	+2	07.8 ¹¹⁴	40	19 32	20 04	20 45	10 36 65		22 45 33			
18	88	30.9	-22	26.1	18	20.1 ¹¹⁰	+2	19.2 ¹¹⁴	45	19 49	20 26	21 14	10 36 69		22 42 31			
19	103	30.7		25.8	32	50.2 ¹¹¹		30.5 ¹¹³	50	20 10	20 54	21 55	37 73		40 27			
20	118	30.4		25.5	47	20.3 ¹¹¹		41.9 ¹¹⁴	52	20	21 07	22 19	37 75		39 25			
21	133	30.1		25.2	61	50.5 ¹¹²	+2	53.1 ¹¹²	54	32	24	22 53	38 76		37 24			
22	148	29.9		24.9	76	20.7 ¹¹²	+3	04.4 ¹¹³	56	20 45	21 44	** **	38 79		36 21			
23	163	29.6		24.6	90	50.9 ¹¹²		15.6 ¹¹²	58	21 00	22 09	** **	39 81		34 20			
24	178	29.3	-22	24.3	105	21.2 ¹¹³	+3	26.8 ¹¹²	60 S	21 19	22 47	** **	10 39 84		22 33 16			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 55 ^m 2		Mag: -4.3 PMG: 12 ^h 37 ^m				Mag: +0.8 PMG: 5 ^h 52 ^m				Mag: -2.7 PMG: 0 ^h 05 ^m				Mag: +0.6 PMG: 8 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	105	30.0	169	49.9	-17	22.9	271	55.1	-3	23.7	358	43.6	+22	40.6	236	32.2	-15	50.7
1	120	32.4	184	53.9		22.6	286	56.6		24.1	13	46.4		40.6	251	34.5		50.8
2	135	34.9	199	57.9		22.2	301	58.1		24.4	28	49.3		40.7	266	36.7		50.8
3	150	37.4	215	01.9		21.8	316	59.5		24.8	43	52.1		40.7	281	39.0		50.9
4	165	39.8	230	05.9		21.4	332	01.0		25.2	58	54.9		40.7	296	41.2		50.9
5	180	42.3	245	09.9	-17	21.0	347	02.5	-3	25.6	73	57.7	+22	40.8	311	43.5	-15	51.0
6	195	44.7	260	13.9	-17	20.7	2	04.0	-3	26.0	89	00.6	+22	40.8	326	45.7	-15	51.0
7	210	47.2	275	17.9		20.3	17	05.4		26.4	104	03.4		40.9	341	48.0		51.1
8	225	49.7	290	21.9		19.9	32	06.9		26.7	119	06.2		40.9	356	50.2		51.1
9	240	52.1	305	26.0		19.5	47	08.4		27.1	134	09.1		41.0	11	52.5		51.2
10	255	54.6	320	30.0		19.2	62	09.9		27.5	149	11.9		41.0	26	54.7		51.2
11	270	57.1	335	34.0	-17	18.8	77	11.4	-3	27.9	164	14.7	+22	41.1	41	57.0	-15	51.3
12	285	59.5	350	38.0	-17	18.4	92	12.8	-3	28.3	179	17.5	+22	41.1	56	59.2	-15	51.3
13	301	02.0	5	42.1		18.0	107	14.3		28.6	194	20.4		41.1	72	01.5		51.4
14	316	04.5	20	46.1		17.7	122	15.8		29.0	209	23.2		41.2	87	03.7		51.4
15	331	06.9	35	50.1		17.3	137	17.3		29.4	224	26.0		41.2	102	06.0		51.5
16	346	09.4	50	54.1		16.9	152	18.8		29.8	239	28.8		41.3	117	08.2		51.5
17	1	11.9	65	58.2	-17	16.5	167	20.2	-3	30.2	254	31.7	+22	41.3	132	10.5	-15	51.6
18	16	14.3	81	02.2	-17	16.2	182	21.7	-3	30.6	269	34.5	+22	41.4	147	12.7	-15	51.6
19	31	16.8	96	06.3		15.8	197	23.2		30.9	284	37.3		41.4	162	15.0		51.7
20	46	19.2	111	10.3		15.4	212	24.7		31.3	299	40.2		41.5	177	17.2		51.7
21	61	21.7	126	14.3		15.1	227	26.2		31.7	314	43.0		41.5	192	19.5		51.8
22	76	24.2	141	18.4		14.7	242	27.6		32.1	329	45.8		41.5	207	21.7		51.8
23	91	26.6	156	22.4		14.3	257	29.1		32.4	344	48.6		41.6	222	24.0		51.9
24	106	29.1	171	26.5	-17	14.0	272	30.6	-3	32.8	359	51.5	+22	41.6	237	26.3	-15	51.9
Dif	—		+40		+4		+15		-4		+28		0		+23		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 3				Edad: 5 ^d 5 PHE { SD: 15 ^h 8 PMG: 17 ^h 33 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	29.3	-22	24.3	105	21.2	+3	26.8	60 N	7 07	8 03	8 58	10 43	17	**	**	**
1	193	29.0		24.0	119	51.4 ¹¹²		38.0 ¹¹²	58	7 00	7 52	42	46	20	**	**	**
2	208	28.8		23.6	134	21.8 ¹¹⁴	+3	49.1 ¹¹¹	56	6 54	42	28	48	22	**	**	**
3	223	28.5		23.3	148	52.1 ¹¹³	+4	00.2 ¹¹¹	54	49	34	17	51	24	**	**	**
4	238	28.2		23.0	163	22.5 ¹¹⁴		11.3 ¹¹¹	52	43	26	8 06	53	26	**	**	**
5	253	28.0	-22	22.7	177	52.9 ¹¹⁴	+4	22.3 ¹¹⁰	50	6 39	7 20	7 57	10 55	27	**	**	**
6	268	27.7	-22	22.4	192	23.3 ¹¹⁴	+4	33.3 ¹¹⁰	45	6 28	7 04	7 38	10 59	31	**	**	**
7	283	27.4		22.1	206	53.8 ¹¹⁵		44.3 ¹¹⁰	40	18	6 52	22	11 03	33	**	**	**
8	298	27.2		21.7	221	24.2 ¹¹⁴	+4	55.2 ¹⁰⁹	35	09	41	7 09	06	36	**	**	**
9	313	26.9		21.4	235	54.8 ¹¹⁶	+5	06.0 ¹⁰⁸	30	6 01	31	6 57	08	39	**	**	**
10	328	26.6		21.1	250	25.3 ¹¹⁵		16.9 ¹⁰⁹	20	5 46	6 13	37	13	42	23	56	55
11	343	26.3	-22	20.8	264	55.8 ¹¹⁵	+5	27.7 ¹⁰⁸	10 N	5 30	5 56	6 19	11 17	46	23	50	51
12	358	26.1	-22	20.5	279	26.4 ¹¹⁶	+5	38.4 ¹⁰⁷	0	5 14	5 40	6 03	11 22	48	23	45	48
13	13	25.8		20.1	293	57.0 ¹¹⁶		49.1 ¹⁰⁷	10 S	4 56	23	5 46	26	51	39	45	
14	28	25.5		19.8	308	27.6 ¹¹⁶	+5	59.8 ¹⁰⁷	20	35	5 03	28	30	55	33	42	
15	43	25.3		19.5	322	58.3 ¹¹⁷	+6	10.4 ¹⁰⁶	30	4 07	4 40	5 07	35	58	26	39	
16	58	25.0		19.2	337	28.9 ¹¹⁶		20.9 ¹⁰⁵	35	3 49	25	4 54	38	61	22	37	
17	73	24.7	-22	18.8	351	59.6 ¹¹⁷	+6	31.5 ¹⁰⁶	40	3 27	4 08	4 40	11 41	63	23	18	34
18	88	24.5	-22	18.5	6	30.3 ¹¹⁷	+6	41.9 ¹⁰⁴	45	2 59	3 47	4 23	11 45	66	23	13	31
19	103	24.2		18.2	21	01.0 ¹¹⁷	+6	52.4 ¹⁰⁵	50	2 17	19	4 02	50	69	07	28	
20	118	23.9		17.9	35	31.8 ¹¹⁸	+7	02.7 ¹⁰³	52	1 53	3 05	3 52	52	71	04	26	
21	133	23.7		17.5	50	02.5 ¹¹⁷		13.1 ¹⁰⁴	54	1 19	2 48	40	54	73	23	01	25
22	148	23.4		17.2	64	33.3 ¹¹⁸		23.4 ¹⁰³	56	** **	29	27	11 57	75	22	57	23
23	163	23.1		16.9	79	04.1 ¹¹⁸		33.6 ¹⁰²	58	** **	2 03	3 12	12 00	77	54	20	
24	178	22.9	-22	16.5	93	34.9 ¹¹⁸	+7	43.8 ¹⁰²	60 S	** **	1 26	2 53	12 03	80	22	49	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 51 ^m 3		Mag: -4.3 PMG: 12 ^h 31 ^m		Mag: +0.7 PMG: 5 ^h 49 ^m		Mag: -2.7 PMG: 0 ^h 01 ^m		Mag: +0.6 PMG: 8 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	106	29.1	171	26.5	-17	14.0	272	30.6	-3	32.8
1	121	31.6	186	30.5		13.6	287	32.1		33.2
2	136	34.0	201	34.6		13.2	302	33.6		33.6
3	151	36.5	216	38.6		12.9	317	35.1		34.0
4	166	39.0	231	42.7		12.5	332	36.5		34.3
5	181	41.4	246	46.7	-17	12.1	347	38.0	-3	34.7
6	196	43.9	261	50.8	-17	11.8	2	39.5	-3	35.1
7	211	46.3	276	54.8		11.4	17	41.0		35.5
8	226	48.8	291	58.9		11.0	32	42.5		35.9
9	241	51.3	307	03.0		10.7	47	44.0		36.2
10	256	53.7	322	07.0		10.3	62	45.5		36.6
11	271	56.2	337	11.1	-17	10.0	77	47.0	-3	37.0
12	286	58.7	352	15.1	-17	09.6	92	48.4	-3	37.4
13	302	01.1	7	19.2		09.2	107	49.9		37.7
14	317	03.6	22	23.3		08.9	122	51.4		38.1
15	332	06.1	37	27.4		08.5	137	52.9		38.5
16	347	08.5	52	31.4		08.2	152	54.4		38.9
17	2	11.0	67	35.5	-17	07.8	167	55.9	-3	39.2
18	17	13.5	82	39.6	-17	07.5	182	57.4	-3	39.6
19	32	15.9	97	43.7		07.1	197	58.9		40.0
20	47	18.4	112	47.7		06.8	213	00.4		40.4
21	62	20.8	127	51.8		06.4	228	01.9		40.7
22	77	23.3	142	55.9		06.0	243	03.3		41.1
23	92	25.8	158	00.0		05.7	258	04.8		41.5
24	107	28.2	173	04.1	-17	05.3	273	06.3	-3	41.9
Dif	—		+41		+4		+15		-4	
							-8972		0	
									+23	
									0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 7				Edad: 6 ^d 5 PHE { 4 ^h : 57 ^m 1 12 ^h : 56 ^m 8 SD: 15 ^h 6 20 ^h : 56 ^m 6 PMG: 18 ^h 21 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	22.9	-22	16.5	93	34.9	+7	43.8	60 N	15 17	16 12	17 07	11 00	20	0 41	79		
1	193	22.6		16.2	108	05.7 ¹¹⁸	+7	53.9 ¹⁰¹	58	33	22	14	06	22	37	76		
2	208	22.3		15.9	122	36.5 ¹¹⁸	+8	04.0 ¹⁰¹	56	46	32	20	10	25	33	74		
3	223	22.1		15.5	137	07.4 ¹¹⁹		14.0 ¹⁰⁰	54	15 57	40	26	15	26	29	72		
4	238	21.8		15.2	151	38.2 ¹¹⁸		24.0 ¹⁰⁰	52	16 08	48	31	19	27	26	70		
5	253	21.5	-22	14.9	166	09.1 ¹¹⁹	+8	33.9 ⁹⁹	50	16 17	16 54	17 35	11 22	29	0 23	69		
6	268	21.3	-22	14.5	180	40.0 ¹¹⁹	+8	43.7 ⁹⁸	45	16 36	17 09	17 46	11 30	32	0 17	65		
7	283	21.0		14.2	195	10.9 ¹¹⁹	+8	53.5 ⁹⁸	40	16 52	22	17 56	36	35	12	62		
8	298	20.7		13.9	209	41.8 ¹¹⁹	+9	03.3 ⁹⁸	35	17 05	33	18 04	42	37	07	60		
9	313	20.5		13.5	224	12.7 ¹¹⁹		13.0 ⁹⁷	30	17	17 43	12	47	39	0 03	58		
10	328	20.2		13.2	238	43.6 ¹¹⁹		22.6 ⁹⁶	20	37	18 00	28	11 55	42	** ** *	**		
11	343	20.0	-22	12.8	253	14.5 ¹¹⁹	+9	32.2 ⁹⁶	10 N	17 54	18 17	18 43	12 03	45	** ** *	**		
12	358	19.7	-22	12.5	267	45.5 ¹²⁰	+9	41.7 ⁹⁵	0	18 10	18 33	18 59	12 10	48	** ** *	**		
13	13	19.4		12.2	282	16.4 ¹¹⁹	+9	51.2 ⁹⁵	10 S	27	18 50	19 17	17 51		** ** *	**		
14	28	19.2		11.8	296	47.4 ¹²⁰	+10	00.6 ⁹⁴	20	18 45	19 09	19 38	25 53		** ** *	**		
15	43	18.9		11.5	311	18.3 ¹¹⁹		09.9 ⁹³	30	19 06	33	20 05	33 57		** ** *	**		
16	58	18.6		11.1	325	49.3 ¹²⁰		19.2 ⁹³	35	18	19 47	23	39 59		23 59	38		
17	73	18.4	-22	10.8	340	20.3 ¹²⁰	+10	28.4 ⁹²	40	19 32	20 04	20 44	12 44	62	23 52	36		
18	88	18.1	-22	10.4	354	51.2 ¹¹⁹	+10	37.5 ⁹¹	45	19 49	20 25	21 13	12 51	64	23 44	34		
19	103	17.9		10.1	9	22.2 ¹²⁰		46.6 ⁹¹	50	20 09	20 52	21 53	12 59	68	35	30		
20	118	17.6		09.8	23	53.2 ¹²⁰	+10	55.7 ⁹¹	52	19	21 06	22 16	13 03	69	30	29		
21	133	17.3		09.4	38	24.2 ¹²⁰	+11	04.6 ⁸⁹	54	31	22	22 48	07 71		26	27		
22	148	17.1		09.1	52	55.2 ¹²⁰		13.5 ⁸⁹	56	44	21 41	** ** *	12 72		20	26		
23	163	16.8		08.7	67	26.2 ¹²⁰		22.4 ⁸⁹	58	20 59	22 06	** ** *	17 75		14	24		
24	178	16.6	-22	08.4	81	57.2 ¹²⁰	+11	31.1 ⁸⁷	60 S	21 17	22 41	** ** *	13 23	77	23 08	21		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 47 ^m 4		Mag: -4.3 PMG: 12 ^h 24 ^m				Mag: +0.7 PMG: 5 ^h 47 ^m				Mag: -2.7 PMG: 23 ^h 52 ^m				Mag: +0.6 PMG: 8 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	28.2	173	04.1	-17	05.3	273	06.3	-3	41.9	0	59.3	+22	42.7	238	20.3	-15	53.1
1	122	30.7	188	08.1		05.0	288	07.8		42.2	16	02.1		42.7	253	22.6		53.1
2	137	33.2	203	12.2		04.6	303	09.3		42.6	31	05.0		42.8	268	24.9		53.2
3	152	35.6	218	16.3		04.3	318	10.8		43.0	46	07.8		42.8	283	27.1		53.2
4	167	38.1	233	20.4		03.9	333	12.3		43.4	61	10.6		42.9	298	29.4		53.3
5	182	40.6	248	24.5	-17	03.6	348	13.8	-3	43.7	76	13.5	+22	42.9	313	31.6	-15	53.3
6	197	43.0	263	28.6	-17	03.2	3	15.3	-3	44.1	91	16.3	+22	42.9	328	33.9	-15	53.4
7	212	45.5	278	32.7		02.9	18	16.8		44.5	106	19.1		43.0	343	36.1		53.4
8	227	48.0	293	36.8		02.6	33	18.3		44.8	121	21.9		43.0	358	38.4		53.4
9	242	50.4	308	40.9		02.2	48	19.8		45.2	136	24.8		43.1	13	40.6		53.5
10	257	52.9	323	45.0		01.9	63	21.3		45.6	151	27.6		43.1	28	42.9		53.5
11	272	55.3	338	49.1	-17	01.5	78	22.8	-3	46.0	166	30.4	+22	43.2	43	45.2	-15	53.6
12	287	57.8	353	53.1	-17	01.2	93	24.3	-3	46.3	181	33.2	+22	43.2	58	47.4	-15	53.6
13	303	00.3	8	57.2		00.8	108	25.8		46.7	196	36.1		43.3	73	49.7		53.7
14	318	02.7	24	01.3		00.5	123	27.3		47.1	211	38.9		43.3	88	51.9		53.7
15	333	05.2	39	05.4	-17	00.2	138	28.8		47.4	226	41.7		43.3	103	54.2		53.8
16	348	07.7	54	09.5	-16	59.8	153	30.3		47.8	241	44.6		43.4	118	56.4		53.8
17	3	10.1	69	13.7	-16	59.5	168	31.8	-3	48.2	256	47.4	+22	43.4	133	58.7	-15	53.9
18	18	12.6	84	17.8	-16	59.1	183	33.3	-3	48.6	271	50.2	+22	43.5	149	01.0	-15	53.9
19	33	15.1	99	21.9		58.8	198	34.8		48.9	286	53.0		43.5	164	03.2		54.0
20	48	17.5	114	26.0		58.5	213	36.3		49.3	301	55.9		43.6	179	05.5		54.0
21	63	20.0	129	30.1		58.1	228	37.8		49.7	316	58.7		43.6	194	07.7		54.1
22	78	22.4	144	34.2		57.8	243	39.3		50.0	332	01.5		43.6	209	10.0		54.1
23	93	24.9	159	38.3		57.5	258	40.8		50.4	347	04.3		43.7	224	12.2		54.2
24	108	27.4	174	42.4	-16	57.1	273	42.3	-3	50.8	2	07.2	+22	43.7	239	14.5	-15	54.2
Dif	—		+41		+3		+15		-4		+28		0		+23			

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 1			Edad: 7 ^d 5 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9 PMG: 19 ^h 09 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	16.6	-22	08.4	81	57.2	+11 31.1	60 N	7 06	8 01	8 56	11 20	24	2 00 75
1	193	16.3		08.0	96	28.2 ¹²⁰	39.8 ⁸⁷	58	6 59	7 51	40	28	26	1 53 72
2	208	16.0		07.7	110	59.2 ¹²⁰	48.5 ⁸⁷	56	53	41	27	35	27	47 70
3	223	15.8		07.3	125	30.2 ¹²⁰	+11 57.0 ⁸⁵	54	48	33	16	41	29	41 69
4	238	15.5		07.0	140	01.2 ¹²⁰	+12 05.5 ⁸⁵	52	43	26	8 05	46	31	36 67
5	253	15.3	-22	06.6	154	32.2 ¹²⁰	+12 14.0 ⁸⁵	50	6 38	7 19	7 56	11 51	32	1 32 65
6	268	15.0	-22	06.3	169	03.2 ¹²⁰	+12 22.3 ⁸³	45	6 27	7 04	7 37	12 02	35	1 22 63
7	283	14.7		05.9	183	34.2 ¹²⁰	30.6 ⁸³	40	18	6 52	22	11	37	14 60
8	298	14.5		05.5	198	05.2 ¹²⁰	38.9 ⁸³	35	09	41	7 09	19	39	07 58
9	313	14.2		05.2	212	36.2 ¹²⁰	47.0 ⁸¹	30	6 01	31	6 57	26	40	1 01 56
10	328	14.0		04.8	227	07.2 ¹²⁰	+12 55.1 ⁸¹	20	5 46	6 13	37	37	44	0 51 53
11	343	13.7	-22	04.5	241	38.2 ¹²⁰	+13 03.1 ⁸⁰	10 N	5 31	5 57	6 20	12 48	46	0 41 51
12	358	13.4	-22	04.1	256	09.2 ¹²⁰	+13 11.1 ⁸⁰	0	5 15	5 41	6 03	12 58	48	0 33 48
13	13	13.2		03.8	270	40.1 ¹¹⁹	19.0 ⁷⁹	10 S	4 57	24	5 47	13 08	50	24 46
14	28	12.9		03.4	285	11.1 ¹²⁰	26.8 ⁷⁸	20	36	5 05	29	18	53	15 43
15	43	12.7		03.0	299	42.1 ¹²⁰	34.5 ⁷⁷	30	4 09	4 41	5 08	30	56	0 05 40
16	58	12.4		02.7	314	13.1 ¹²⁰	42.1 ⁷⁶	35	3 51	27	4 56	38	57	** ** *
17	73	12.2	-22	02.3	328	44.1 ¹²⁰	+13 49.7 ⁷⁶	40	3 30	4 10	4 42	13 46	58	** ** *
18	88	11.9	-22	01.9	343	15.1 ¹²⁰	+13 57.2 ⁷⁵	45	3 01	3 49	4 25	13 55	61	** ** *
19	103	11.6		01.6	357	46.0 ¹¹⁹	+14 04.7 ⁷⁵	50	2 21	22	4 05	14 07	63	** ** *
20	118	11.4		01.2	12	17.0 ¹²⁰	12.0 ⁷³	52	1 58	3 08	3 55	12	65	23 59 33
21	133	11.1		00.9	26	48.0 ¹²⁰	19.3 ⁷³	54	1 26	2 52	43	18	66	53 32
22	148	10.9		00.5	41	18.9 ¹¹⁹	26.5 ⁷²	56	** ** *	33	31	24	69	46 30
23	163	10.6	-22	00.1	55	49.9 ¹²⁰	33.6 ⁷¹	58	** ** *	2 08	3 16	32	70	38 28
24	178	10.4	-21	59.8	70	20.8 ¹¹⁹	+14 40.7 ⁷¹	60 S	** ** *	1 33	2 58	14 40	73	23 29 26

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 16 ^h 43 ^m 4		Mag: -4.4 PMG: 12 ^h 18 ^m		Mag: +0.7 PMG: 5 ^h 45 ^m		Mag: -2.7 PMG: 23 ^h 47 ^m		Mag: +0.6 PMG: 8 ^h 02 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	108	27.4	174	42.4	-16 57.1	273	42.3	-3 50.8	239	14.5	-15 54.2	
1	123	29.8	189	46.5	56.8	288	43.8	51.1	254	16.8	54.3	
2	138	32.3	204	50.6	56.5	303	45.3	51.5	269	19.0	54.3	
3	153	34.8	219	54.7	56.1	318	46.8	51.9	284	21.3	54.3	
4	168	37.2	234	58.8	55.8	333	48.3	52.2	299	23.5	54.4	
5	183	39.7	250	03.0	-16 55.5	348	49.8	-3 52.6	314	25.8	-15 54.4	
6	198	42.2	265	07.1	-16 55.1	3 51.3	-3 53.0	92 24.1	+22 44.0	329	28.0	-15 54.5
7	213	44.6	280	11.2	54.8	18 52.8	53.4	107 26.9	44.0	344	30.3	54.5
8	228	47.1	295	15.3	54.5	33 54.3	53.7	122 29.8	44.1	359	32.6	54.6
9	243	49.6	310	19.4	54.1	48 55.8	54.1	137 32.6	44.1	14 34.8	54.6	
10	258	52.0	325	23.5	53.8	63 57.3	54.5	152 35.4	44.2	29 37.1	54.7	
11	273	54.5	340	27.7	-16 53.5	78 58.8	-3 54.8	167 38.2	+22 44.2	44 39.3	-15 54.7	
12	288	56.9	355	31.8	-16 53.2	94 00.3	-3 55.2	182 41.1	+22 44.3	59 41.6	-15 54.8	
13	303	59.4	10 35.9	52.8	109 01.8	55.6	197 43.9	44.3	74 43.9	54.8		
14	319	01.9	25 40.0	52.5	124 03.3	55.9	212 46.7	44.3	89 46.1	54.9		
15	334	04.3	40 44.1	52.2	139 04.9	56.3	227 49.6	44.4	104 48.4	54.9		
16	349	06.8	55 48.3	51.9	154 06.4	56.7	242 52.4	44.4	119 50.6	54.9		
17	4 09.3	70 52.4	-16 51.5	169 07.9	-3 57.0	257 55.2	+22 44.5	134 52.9	-15 55.0			
18	19 11.7	85 56.5	-16 51.2	184 09.4	-3 57.4	272 58.0	+22 44.5	149 55.2	-15 55.0			
19	34 14.2	101 00.6	50.9	199 10.9	57.7	288 00.9	44.6	164 57.4	55.1			
20	49 16.7	116 04.7	50.6	214 12.4	58.1	303 03.7	44.6	179 59.7	55.1			
21	64 19.1	131 08.9	50.3	229 13.9	58.5	318 06.5	44.6	195 01.9	55.2			
22	79 21.6	146 13.0	49.9	244 15.4	58.8	333 09.3	44.7	210 04.2	55.2			
23	94 24.1	161 17.1	49.6	259 16.9	59.2	348 12.2	44.7	225 06.5	55.3			
24	109 26.5	176 21.2	-16 49.3	274 18.4	-3 59.6	3 15.0	+22 44.8	240 08.7	-15 55.3			
Dif	—		+41	+3	+15	-4	+28	0	+23	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3			Edad: 8 ^d 5	PHE { 4 ^h : 55 ^h /6 12 ^h : 55 ^h /4 20 ^h : 55 ^h /2	PMG: 12 ^h 07 ^m 5			R°: 49 ^m								
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	10.4	-21	59.8	70	20.8	+14	40.7	60 N	15	21	16	15	17	10		
1	193	10.1		59.4	84	51.8 ¹²⁰		47.7	70	58	36	26	17	11	54	31	
2	208	09.9		59.0	99	22.7 ¹¹⁹	+14	54.6	69	56	15	49	35	23	12	02	
3	223	09.6		58.7	113	53.6 ¹¹⁹	+15	01.4	68	54	16	00	43	28	10	34	
4	238	09.4		58.3	128	24.6 ¹²⁰		08.1	67	52	10	50	33	17	35	43	
5	253	09.1	-21	57.9	142	55.5 ¹¹⁹	+15	14.8	67	50	16	19	16	57	17	38	
6	268	08.9	-21	57.5	157	26.4 ¹¹⁹	+15	21.4	66	45	16	38	17	11	17	48	
7	283	08.6		57.2	171	57.3 ¹¹⁹		27.9	65	40	16	54	24	17	57	48	
8	298	08.3		56.8	186	28.2 ¹¹⁹		34.3	64	35	17	07	35	18	06	41	
9	313	08.1		56.4	200	59.1 ¹¹⁹		40.7	64	30	18	17	44	14	13	06	
10	328	07.8		56.0	215	30.0 ¹¹⁹		46.9	62	20	38	18	02	29	21	45	
11	343	07.6	-21	55.7	230	00.9 ¹¹⁹	+15	53.1	62	10 N	17	55	18	18	18	44	
12	358	07.3	-21	55.3	244	31.8 ¹¹⁹	+15	59.2	61	0	18	11	18	33	18	59	
13	13	07.1		54.9	259	02.6 ¹¹⁸	+16	05.3	61	10 S	28	18	50	19	17	48	
14	28	06.8		54.5	273	33.5 ¹¹⁹		11.2	59	20	18	45	19	09	19	38	
15	43	06.6		54.2	288	04.4 ¹¹⁹		17.1	59	30	19	06	32	20	05	26	
16	58	06.3		53.8	302	35.2 ¹¹⁸		22.8	57	35	18	19	47	22	35	54	
17	73	06.1	-21	53.4	317	06.0 ¹¹⁸	+16	28.5	57	40	19	31	20	03	20	44	
18	88	05.8	-21	53.0	331	36.9 ¹¹⁹	+16	34.2	57	45	19	48	20	24	21	11	
19	103	05.6		52.6	346	07.7 ¹¹⁸		39.7	55	50	20	08	20	51	21	51	
20	118	05.3		52.3	0	38.5 ¹¹⁸		45.1	54	52	18	21	04	22	13	17	
21	133	05.1		51.9	15	09.4 ¹¹⁹		50.5	54	54	29	20	20	22	43	24	
22	148	04.8		51.5	29	40.2 ¹¹⁸	+16	55.8	53	56	42	21	39	** ** *	33	63	
23	163	04.6		51.1	44	11.0 ¹¹⁸	+17	00.9	51	58	20	56	22	02	** ** *	42	65
24	178	04.3	-21	50.7	58	41.8 ¹¹⁸	+17	06.1	52	60 S	21	14	22	35	** ** *	15	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 39 ^m 5		Mag: -4.4 PMG: 12 ^h 11 ^m		Mag: +0.7 PMG: 5 ^h 42 ^m		Mag: -2.7 PMG: 23 ^h 43 ^m		Mag: +0.6 PMG: 7 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	109	26.5	176	21.2	-16	49.3	274	18.4	-3	59.6
1	124	29.0	191	25.4		49.0	289	20.0	-3	59.9
2	139	31.4	206	29.5		48.7	304	21.5	-4	00.3
3	154	33.9	221	33.6		48.4	319	23.0		00.7
4	169	36.4	236	37.7		48.0	334	24.5		01.0
5	184	38.8	251	41.9	-16	47.7	349	26.0	-4	01.4
6	199	41.3	266	46.0	-16	47.4	4	27.5	-4	01.7
7	214	43.8	281	50.1		47.1	19	29.0		02.1
8	229	46.2	296	54.3		46.8	34	30.6		02.5
9	244	48.7	311	58.4		46.5	49	32.1		02.8
10	259	51.2	327	02.5		46.2	64	33.6		03.2
11	274	53.6	342	06.6	-16	45.9	79	35.1	-4	03.6
12	289	56.1	357	10.8	-16	45.5	94	36.6	-4	03.9
13	304	58.5	12	14.9		45.2	109	38.1		04.3
14	320	01.0	27	19.0		44.9	124	39.7		04.6
15	335	03.5	42	23.1		44.6	139	41.2		05.0
16	350	05.9	57	27.3		44.3	154	42.7		05.4
17	5	08.4	72	31.4	-16	44.0	169	44.2	-4	05.7
18	20	10.9	87	35.5	-16	43.7	184	45.7	-4	06.1
19	35	13.3	102	39.7		43.4	199	47.3		06.4
20	50	15.8	117	43.8		43.1	214	48.8		06.8
21	65	18.3	132	47.9		42.8	229	50.3		07.2
22	80	20.7	147	52.1		42.5	244	51.8		07.5
23	95	23.2	162	56.2		42.2	259	53.3		07.9
24	110	25.7	178	00.3	-16	41.9	274	54.9	-4	08.2
Dif	—		+41 +3		+15 -4		+28 0		+23 0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 9 ^d 5	PHE {	R ^o : 48 ^m									
	PMG: 12 ^h 07 ^m 9					SD: 15'0		SD: 20 ^h 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	04.3	-21	50.7	58	41.8	+17	06.1	50	60 N	7 05	7 59	8 53	12 13	37
1	193	04.1		50.3	73	12.6 ¹¹⁸		11.1	49	58	6 58	49	38	25	38
2	208	03.8		50.0	87	43.3 ¹¹⁷		16.0	49	56	52	40	25	35	39
3	223	03.6		49.6	102	14.1 ¹¹⁸		20.9	49	54	47	32	14	44	40
4	238	03.4		49.2	116	44.9 ¹¹⁸		25.6	47	52	42	25	8 04	12 52	41
5	253	03.1	-21	48.8	131	15.7 ¹¹⁸	+17	30.3	47	50	6 37	7 18	7 55	13 00	41
6	268	02.9	-21	48.4	145	46.4 ¹¹⁷	+17	34.9	46	45	6 27	7 04	7 37	13 15	43
7	283	02.6		48.0	160	17.2 ¹¹⁸		39.4	45	40	18	6 51	21	28	44
8	298	02.4		47.6	174	47.9 ¹¹⁷		43.8	44	35	09	41	7 08	39	45
9	313	02.1		47.2	189	18.7 ¹¹⁸		48.1	43	30	6 01	31	6 57	13 49	45
10	328	01.9		46.8	203	49.4 ¹¹⁷		52.4	43	20	5 47	6 14	37	14 06	46
11	343	01.6	-21	46.4	218	20.1 ¹¹⁷	+17	56.5	41	10 N	5 32	5 58	6 20	14 20	48
12	358	01.4	-21	46.1	232	50.9 ¹¹⁸	+18	00.6	41	0	5 16	5 42	6 04	14 34	48
13	13	01.1		45.7	247	21.6 ¹¹⁷		04.6	40	10 S	4 58	25	5 48	14 48	49
14	28	00.9		45.3	261	52.3 ¹¹⁷		08.5	39	20	37	5 06	30	15 02	51
15	43	00.6		44.9	276	23.0 ¹¹⁷		12.3	38	30	4 10	4 43	5 10	19	52
16	58	00.4		44.5	290	53.7 ¹¹⁷		16.0	37	35	3 53	29	4 58	29	52
17	73	00.2	-21	44.1	305	24.4 ¹¹⁷	+18	19.6	36	40	3 32	4 12	4 44	15 41	52
18	87	59.9	-21	43.7	319	55.2 ¹¹⁸	+18	23.1	35	45	3 04	3 52	4 28	15 54	54
19	102	59.7		43.3	334	25.9 ¹¹⁷		26.6	35	50	2 25	25	4 07	16 10	55
20	117	59.4		42.9	348	56.5 ¹¹⁶		29.9	33	52	2 03	3 12	3 58	18	55
21	132	59.2		42.5	3	27.2 ¹¹⁷		33.2	33	54	1 32	2 56	47	26	56
22	147	58.9		42.1	17	57.9 ¹¹⁷		36.4	32	56	0 31	37	34	36	57
23	162	58.7		41.7	32	28.6 ¹¹⁷		39.4	30	58	** **	2 13	19	47	57
24	177	58.5	-21	41.3	46	59.3 ¹¹⁷	+18	42.4	30	60 S	** **	1 41	3 02	16 59	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 35 ^m 6		Mag: -4.4 PMG: 12 ^h 05 ^m		Mag: +0.7 PMG: 5 ^h 40 ^m		Mag: -2.7 PMG: 23 ^h 38 ^m		Mag: +0.6 PMG: 7 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	110	25.7	178	00.3	-16	41.9	274	54.9	-4	08.2
1	125	28.1	193	04.4		41.6	289	56.4		08.6
2	140	30.6	208	08.6		41.3	304	57.9		09.0
3	155	33.0	223	12.7		41.0	319	59.4		09.3
4	170	35.5	238	16.8		40.7	335	00.9		09.7
5	185	38.0	253	21.0	-16	40.4	350	02.5	-4	10.0
6	200	40.4	268	25.1	-16	40.1	5	04.0	-4	10.4
7	215	42.9	283	29.2		39.8	20	05.5		10.7
8	230	45.4	298	33.3		39.5	35	07.0		11.1
9	245	47.8	313	37.5		39.2	50	08.6		11.5
10	260	50.3	328	41.6		38.9	65	10.1		11.8
11	275	52.8	343	45.7	-16	38.7	80	11.6	-4	12.2
12	290	55.2	358	49.8	-16	38.4	95	13.2	-4	12.5
13	305	57.7	13	54.0		38.1	110	14.7		12.9
14	321	00.2	28	58.1		37.8	125	16.2		13.2
15	336	02.6	44	02.2		37.5	140	17.7		13.6
16	351	05.1	59	06.3		37.2	155	19.3		14.0
17	6	07.5	74	10.5	-16	36.9	170	20.8	-4	14.3
18	21	10.0	89	14.6	-16	36.6	185	22.3	-4	14.7
19	36	12.5	104	18.7		36.3	200	23.9		15.0
20	51	14.9	119	22.8		36.1	215	25.4		15.4
21	66	17.4	134	27.0		35.8	230	26.9		15.7
22	81	19.9	149	31.1		35.5	245	28.4		16.1
23	96	22.3	164	35.2		35.2	260	30.0		16.4
24	111	24.8	179	39.3	-16	34.9	275	31.5	-4	16.8
Dif	—		+41		+3		+15		-4	
							+28		0	
									+23	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3		Edad: 10 ^d 5		PHE { 4 ^h : 54:6 12 ^h : 54:5 20 ^h : 54:4 R°: 48 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 08 ^m 3		SD: 14:9			Civil			Náutico		Hora R°				
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	177	58.5	-21 41.3		46 59.3	+18 42.4	29	60 N	15 25	16 19	17 13	12 50 45	5 28 54	5 28 54	5 28 54
1	192	58.2		40.9	61 30.0 ¹¹⁷	45.3	29	58	40	29	20	13 03 46	15 53	15 53	15 53
2	207	58.0		40.5	76 00.7 ¹¹⁷	48.1	28	56	15 53	38	25	14 47	5 03 53	5 03 53	5 03 53
3	222	57.7		40.1	90 31.3 ¹¹⁶	50.9	28	54	16 04	46	31	24 47	4 53 53	4 53 53	4 53 53
4	237	57.5		39.7	105 02.0 ¹¹⁷	53.5	26	52	13	53	36	33 47	45 52	45 52	45 52
5	252	57.3	-21 39.2		119 32.7 ¹¹⁷	+18 56.0	25	50	16 22	16 59	17 40	13 41 47	4 37 52	4 37 52	4 37 52
6	267	57.0	-21 38.8		134 03.4 ¹¹⁷	+18 58.5	25	45	16 41	17 14	17 50	13 58 47	4 20 51	4 20 51	4 20 51
7	282	56.8		38.4	148 34.0 ¹¹⁶	+19 00.8	23	40	16 56	26	17 59	14 12 48	4 06 51	4 06 51	4 06 51
8	297	56.5		38.0	163 04.7 ¹¹⁷	03.1	23	35	17 09	36	18 08	24 48	3 55 50	3 55 50	3 55 50
9	312	56.3		37.6	177 35.4 ¹¹⁷	05.3	22	30	20	17 46	15	34 48	44 51	44 51	44 51
10	327	56.1		37.2	192 06.1 ¹¹⁷	07.4	21	20	39	18 03	30	14 52 48	27 49	27 49	27 49
11	342	55.8	-21 36.8		206 36.8 ¹¹⁷	+19 09.4	20	10 N	17 56	18 19	18 45	15 08 48	3 12 49	3 12 49	3 12 49
12	357	55.6	-21 36.4		221 07.4 ¹¹⁶	+19 11.3	19	0	18 12	18 34	19 00	15 22 49	2 57 49	2 57 49	2 57 49
13	12	55.3		36.0	235 38.1 ¹¹⁷	13.1	18	10 S	28	18 51	17	37 49	43 48	43 48	43 48
14	27	55.1		35.6	250 08.8 ¹¹⁷	14.8	17	20	18 45	19 09	19 38	15 53 48	28 47	28 47	28 47
15	42	54.9		35.1	264 39.5 ¹¹⁷	16.4	16	30	19 05	32	20 05	16 11 49	10 47	10 47	10 47
16	57	54.6		34.7	279 10.2 ¹¹⁷	17.9	15	35	17	19 46	22	21 49	2 00 47	2 00 47	2 00 47
17	72	54.4	-21 34.3		293 40.9 ¹¹⁷	+19 19.4	15	40	19 31	20 03	20 43	16 33 49	1 49 45	1 49 45	1 49 45
18	87	54.1	-21 33.9		308 11.6 ¹¹⁷	+19 20.7	13	45	19 47	20 23	21 10	16 48 48	1 35 45	1 35 45	1 35 45
19	102	53.9		33.5	322 42.3 ¹¹⁷	22.0	13	50	20 07	20 49	21 48	17 05 49	18 45	18 45	18 45
20	117	53.7		33.1	337 13.0 ¹¹⁷	23.1	11	52	17	21 02	22 09	13 49	11 43	11 43	11 43
21	132	53.4		32.6	351 43.7 ¹¹⁷	24.2	11	54	27	18	22 38	22 49	1 02 43	1 02 43	1 02 43
22	147	53.2		32.2	6 14.4 ¹¹⁷	25.2	10	56	40	36	23 28	33 49	0 52 43	0 52 43	0 52 43
23	162	53.0		31.8	20 45.1 ¹¹⁷	26.1	9	58	20 54	21 59	** ** *	44 49	41 42	41 42	41 42
24	177	52.7	-21 31.4		35 15.8 ¹¹⁷	+19 26.9	8	60 S	21 11	22 29	** ** *	17 58 49	0 28 41	0 28 41	0 28 41

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO			
	PMG: 16 ^h 31 ^m 6		Mag: -4.4 PMG: 11 ^h 58 ^m		Mag: +0.6 PMG: 5 ^h 37 ^m		Mag: -2.7 PMG: 23 ^h 34 ^m			Mag: +0.6 PMG: 7 ^h 51 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	
0	111	24.8	179 39.3	-16 34.9	275 31.5	-4 16.8	5	30.5	+22 46.8	241 57.4	-15 57.5	241 57.4	-15 57.5
1	126	27.3	194 43.5	34.6	290 33.0	17.1	20	33.3	46.8	256 59.7	57.5	256 59.7	57.5
2	141	29.7	209 47.6	34.4	305 34.6	17.5	35	36.2	46.9	272 01.9	57.6	272 01.9	57.6
3	156	32.2	224 51.7	34.1	320 36.1	17.9	50	39.0	46.9	287 04.2	57.6	287 04.2	57.6
4	171	34.7	239 55.8	33.8	335 37.6	18.2	65	41.8	47.0	302 06.5	57.6	302 06.5	57.6
5	186	37.1	254 59.9	-16 33.5	350 39.2	-4 18.6	80	44.6	+22 47.0	317 08.7	-15 57.7	317 08.7	-15 57.7
6	201	39.6	270 04.1	-16 33.3	5 40.7	-4 18.9	95	47.5	+22 47.0	332 11.0	-15 57.7	332 11.0	-15 57.7
7	216	42.0	285 08.2	33.0	20 42.2	19.3	110	50.3	47.1	347 13.3	57.8	347 13.3	57.8
8	231	44.5	300 12.3	32.7	35 43.8	19.6	125	53.1	47.1	2 15.5	57.8	2 15.5	57.8
9	246	47.0	315 16.4	32.4	50 45.3	20.0	140	55.9	47.2	17 17.8	57.9	17 17.8	57.9
10	261	49.4	330 20.5	32.2	65 46.9	20.3	155	58.7	47.2	32 20.1	57.9	32 20.1	57.9
11	276	51.9	345 24.6	-16 31.9	80 48.4	-4 20.7	171	01.6	+22 47.3	47 22.3	-15 58.0	47 22.3	-15 58.0
12	291	54.4	0 28.8	-16 31.6	95 49.9	-4 21.0	186	04.4	+22 47.3	62 24.6	-15 58.0	62 24.6	-15 58.0
13	306	56.8	15 32.9	31.3	110 51.5	21.4	201	07.2	47.3	77 26.9	58.0	77 26.9	58.0
14	321	59.3	30 37.0	31.1	125 53.0	21.7	216	10.0	47.4	92 29.2	58.1	92 29.2	58.1
15	337	01.8	45 41.1	30.8	140 54.5	22.1	231	12.9	47.4	107 31.4	58.1	107 31.4	58.1
16	352	04.2	60 45.2	30.5	155 56.1	22.4	246	15.7	47.5	122 33.7	58.2	122 33.7	58.2
17	7	06.7	75 49.3	-16 30.3	170 57.6	-4 22.8	261	18.5	+22 47.5	137 36.0	-15 58.2	137 36.0	-15 58.2
18	22	09.2	90 53.4	-16 30.0	185 59.2	-4 23.1	276	21.3	+22 47.5	152 38.2	-15 58.3	152 38.2	-15 58.3
19	37	11.6	105 57.5	29.7	201 00.7	23.5	291	24.1	47.6	167 40.5	58.3	167 40.5	58.3
20	52	14.1	121 01.6	29.5	216 02.2	23.8	306	27.0	47.6	182 42.8	58.3	182 42.8	58.3
21	67	16.5	136 05.7	29.2	231 03.8	24.2	321	29.8	47.7	197 45.0	58.4	197 45.0	58.4
22	82	19.0	151 09.8	28.9	246 05.3	24.5	336	32.6	47.7	212 47.3	58.4	212 47.3	58.4
23	97	21.5	166 13.9	28.7	261 06.9	24.9	351	35.4	47.8	227 49.6	58.5	227 49.6	58.5
24	112	23.9	181 18.1	-16 28.4	276 08.4	-4 25.2	6	38.2	+22 47.8	242 51.8	-15 58.5	242 51.8	-15 58.5
Dif	—		+41	+3	+15	-4	+28			0	+23		

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 08 ^m 7			Edad: 11 ^d 5 PHE { SD: 14'8 PMG: 22 ^h 22 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	52.7	-21	35	15.8	+19 26.9	60 N	7 03	7 57	8 51	13 35	55	6 22	44	
1	192	52.5		49	46.6 ¹¹⁸	27.6	58	6 57	47	36	13 49	54	6 08	45	
2	207	52.3		64	17.3 ¹¹⁷	28.2	56	51	38	23	14 01	53	5 56	45	
3	222	52.0		78	48.1 ¹¹⁸	28.7	54	46	31	13	11 53		46	45	
4	237	51.8		93	18.8 ¹¹⁷	29.2	52	41	23	8 03	20 52		37	46	
5	252	51.6	-21	107	49.6 ¹¹⁸	+19 29.5	50	6 36	7 17	7 54	14 28	52	5 29	46	
6	267	51.3	-21	122	20.3 ¹¹⁷	+19 29.7	45	6 26	7 03	7 36	14 45	52	5 11	47	
7	282	51.1		136	51.1 ¹¹⁸	29.9	40	17	6 51	21	15 00	50	4 57	47	
8	297	50.9		151	21.9 ¹¹⁸	30.0	35	09	40	7 08	12 50		45	47	
9	312	50.6		165	52.7 ¹¹⁸	29.9	30	6 02	31	6 57	22 50		35	47	
10	327	50.4		180	23.5 ¹¹⁸	29.8	20	5 47	6 14	38	40 49		16	48	
11	342	50.2	-21	194	54.3 ¹¹⁸	+19 29.6	10 N	5 32	5 58	6 21	15 56	48	4 01	48	
12	357	49.9	-21	209	25.2 ¹¹⁹	+19 29.3	0	5 17	5 43	6 05	16 11	48	3 46	48	
13	12	49.7		223	56.0 ¹¹⁸	28.9	10 S	5 00	26	5 49	26 47		31	48	
14	27	49.5		238	26.9 ¹¹⁹	28.4	20	4 39	5 08	32	16 41	47	3 15	49	
15	42	49.2		252	57.7 ¹¹⁸	27.9	30	4 12	4 45	12	17 00	45	2 57	49	
16	57	49.0		267	28.6 ¹¹⁹	27.2	35	3 55	31	5 00	10 45		47	49	
17	72	48.8	-21	281	59.5 ¹¹⁹	+19 26.4	40	3 35	4 15	4 46	17 22	45	2 34	50	
18	87	48.5	-21	296	30.4 ¹¹⁹	+19 25.6	45	3 08	3 54	4 30	17 36	44	2 20	49	
19	102	48.3		311	01.3 ¹¹⁹	24.7	50	2 29	28	10	17 54	43	2 03	49	
20	117	48.1		325	32.2 ¹¹⁹	23.6	52	2 08	15	4 01	18 02	42	1 54	50	
21	132	47.8		340	03.2 ¹²⁰	22.5	54	1 39	3 00	3 50	11 42		45	50	
22	147	47.6		354	34.1 ¹¹⁹	21.3	56	0 49	2 42	38	22 41		35	50	
23	162	47.4		9	05.1 ¹²⁰	20.0	58	** **	2 19	23	33 41		23	50	
24	177	47.2	-21	23	36.1 ¹²⁰	+19 18.6	60 S	** **	1 48	3 06	18 47	39	1 09	51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 27 ^m 7		Mag: -4.3 PMG: 11 ^h 52 ^m		Mag: +0.6 PMG: 5 ^h 35 ^m		Mag: -2.7 PMG: 23 ^h 29 ^m		Mag: +0.6 PMG: 7 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	112	23.9	181	18.1	-16	28.4	276	08.4	-4	25.2
1	127	26.4	196	22.2		28.1	291	10.0		25.6
2	142	28.9	211	26.3		27.9	306	11.5		25.9
3	157	31.3	226	30.4		27.6	321	13.0		26.3
4	172	33.8	241	34.5		27.4	336	14.6		26.6
5	187	36.3	256	38.6	-16	27.1	351	16.1	-4	27.0
6	202	38.7	271	42.7	-16	26.8	6	17.7	-4	27.3
7	217	41.2	286	46.7		26.6	21	19.2		27.6
8	232	43.6	301	50.8		26.3	36	20.8		28.0
9	247	46.1	316	54.9		26.1	51	22.3		28.3
10	262	48.6	331	59.0		25.8	66	23.9		28.7
11	277	51.0	347	03.1	-16	25.6	81	25.4	-4	29.0
12	292	53.5	2	07.2	-16	25.3	96	27.0	-4	29.4
13	307	56.0	17	11.3		25.1	111	28.5		29.7
14	322	58.4	32	15.4		24.8	126	30.1		30.1
15	338	00.9	47	19.5		24.6	141	31.6		30.4
16	353	03.4	62	23.6		24.3	156	33.2		30.8
17	8	05.8	77	27.6	-16	24.1	171	34.7	-4	31.1
18	23	08.3	92	31.7	-16	23.8	186	36.3	-4	31.4
19	38	10.8	107	35.8		23.6	201	37.8		31.8
20	53	13.2	122	39.9		23.3	216	39.4		32.1
21	68	15.7	137	44.0		23.1	231	40.9		32.5
22	83	18.1	152	48.0		22.8	246	42.5		32.8
23	98	20.6	167	52.1		22.6	261	44.0		33.2
24	113	23.1	182	56.2	-16	22.3	276	45.6	-4	33.5
Dif	—		+41		+3		+15		-3	
									+28	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3			Edad: 12 ^d 5	PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0													
	PMG: 12 ^h 09 ^m 0					SD: 14'7			PMG: 23 ^h 10 ^m			R°: 47 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	177	47.2	-21	23	36.1	+19	18.6	60 N	15 29	16 22	17 17	14 30 62		7 06 35				
1	192	46.9		38	07.1 ¹²⁰		17.2 ¹⁴	58	44	32	23	43 60		6 53 36				
2	207	46.7		52	38.1 ¹²⁰		15.6 ¹⁶	56	15 56	41	28	14 54 59		41 38				
3	222	46.5		67	09.1 ¹²⁰		14.0 ¹⁶	54	16 07	49	33	15 04 58		31 39				
4	237	46.2		81	40.2 ¹²¹		12.2 ¹⁸	52	16	16 56	38	12 57		23 39				
5	252	46.0	-21	96	11.3 ¹²¹	+19	10.4 ¹⁸	50	16 25	17 02	17 43	15 20 56		6 15 40				
6	267	45.8	-21	110	42.4 ¹²¹	+19	08.5 ¹⁹	45	16 43	17 16	17 52	15 37 54		5 58 41				
7	282	45.6		125	13.5 ¹²¹		06.5 ²⁰	40	16 58	28	18 01	15 50 54		44 42				
8	297	45.3		139	44.6 ¹²¹		04.4 ²¹	35	17 11	38	09	16 02 52		32 43				
9	312	45.1		154	15.7 ¹²¹	+19	02.2 ²²	30	22	17 47	17	12 51		22 44				
10	327	44.9		168	46.9 ¹²²	+18	59.9 ²³	20	40	18 04	31	29 50		5 04 45				
11	342	44.7	-21	183	18.1 ¹²²	+18	57.6 ²³	10 N	17 57	18 20	18 46	16 44 49		4 49 46				
12	357	44.4	-21	197	49.3 ¹²²	+18	55.1 ²⁵	0	18 13	18 35	19 01	16 59 47		4 34 47				
13	12	44.2		212	20.5 ¹²²		52.6 ²⁶	10 S	28	18 51	18	17 13 45		19 49				
14	27	44.0		226	51.8 ¹²³		50.0 ²⁶	20	18 45	19 10	19 38	28 44		4 04 49				
15	42	43.8		241	23.0 ¹²²		47.3 ²⁷	30	19 05	32	20 04	45 43		3 46 51				
16	57	43.5		255	54.3 ¹²³		44.5 ²⁸	35	17	19 46	21	17 55 42		36 51				
17	72	43.3	-21	270	25.6 ¹²³	+18	41.7 ²⁸	40	19 30	20 02	20 41	18 07 40		3 24 52				
18	87	43.1	-21	284	57.0 ¹²⁴	+18	38.7 ³⁰	45	19 46	20 22	21 08	18 20 39		3 09 54				
19	102	42.9		299	28.3 ¹²³		35.7 ³⁰	50	20 06	20 47	21 45	37 37		2 52 55				
20	117	42.6		313	59.7 ¹²⁴		32.5 ³²	52	15	21 00	22 06	44 37		44 55				
21	132	42.4		328	31.1 ¹²⁴		29.3 ³²	54	25	15	22 33	18 53 35		35 56				
22	147	42.2		343	02.5 ¹²⁴		26.1 ³²	56	37	33	23 16	19 03 34		25 56				
23	162	42.0		357	34.0 ¹²⁵		22.7 ³⁴	58	20 51	21 54	** **	14 32		13 57				
24	177	41.8	-21	12	05.4 ¹²⁴	+18	19.2 ³⁵	60 S	21 08	22 23	** **	19 26 31		2 00 58				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG 16 ^h 23 ^m 8		Mag: -4.3 PMG: 11 ^h 45 ^m			Mag: +0.6 PMG: 5 ^h 32 ^m			Mag: -2.7 PMG: 23 ^h 25 ^m				Mag: +0.6 PMG: 7 ^h 44 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	113	23.1	182	56.2	-16	22.3	276	45.6	-4	33.5	7	45.9	+22	48.8	243	46.4	-15	59.5
1	128	25.5	198	00.3		22.1	291	47.1		33.9	22	48.7		48.8	258	48.6		59.6
2	143	28.0	213	04.3		21.9	306	48.7		34.2	37	51.5		48.9	273	50.9		59.6
3	158	30.5	228	08.4		21.6	321	50.2		34.5	52	54.4		48.9	288	53.2		59.7
4	173	32.9	243	12.5		21.4	336	51.8		34.9	67	57.2		48.9	303	55.5		59.7
5	188	35.4	258	16.5	-16	21.1	351	53.3	-4	35.2	83	00.0	+22	49.0	318	57.7	-15	59.7
6	203	37.9	273	20.6	-16	20.9	6	54.9	-4	35.6	98	02.8	+22	49.0	334	00.0	-15	59.8
7	218	40.3	288	24.7		20.7	21	56.4		35.9	113	05.6		49.1	349	02.3		59.8
8	233	42.8	303	28.7		20.4	36	58.0		36.2	128	08.4		49.1	4	04.6		59.9
9	248	45.3	318	32.8		20.2	51	59.6		36.6	143	11.3		49.1	19	06.8	-15	59.9
10	263	47.7	333	36.8		19.9	67	01.1		36.9	158	14.1		49.2	34	09.1	-16	00.0
11	278	50.2	348	40.9	-16	19.7	82	02.7	-4	37.3	173	16.9	+22	49.2	49	11.4	-16	00.0
12	293	52.6		3 45.0	-16	19.5	97	04.2	-4	37.6	188	19.7	+22	49.3	64	13.7	-16	00.0
13	308	55.1		18 49.0		19.2	112	05.8		38.0	203	22.5		49.3	79	15.9	-16	00.1
14	323	57.6		33 53.1		19.0	127	07.4		38.3	218	25.4		49.3	94	18.2		00.1
15	339	00.0		48 57.1		18.8	142	08.9		38.6	233	28.2		49.4	109	20.5		00.2
16	354	02.5		64 01.2		18.5	157	10.5		39.0	248	31.0		49.4	124	22.8		00.2
17	9	05.0	79	05.2	-16	18.3	172	12.0	-4	39.3	263	33.8	+22	49.5	139	25.0	-16	00.2
18	24	07.4	94	09.3	-16	18.1	187	13.6	-4	39.6	278	36.6	+22	49.5	154	27.3	-16	00.3
19	39	09.9	109	13.3		17.9	202	15.2		40.0	293	39.4		49.6	169	29.6		00.3
20	54	12.4	124	17.3		17.6	217	16.7		40.3	308	42.3		49.6	184	31.9		00.4
21	69	14.8	139	21.4		17.4	232	18.3		40.7	323	45.1		49.6	199	34.1		00.4
22	84	17.3	154	25.4		17.2	247	19.8		41.0	338	47.9		49.7	214	36.4		00.4
23	99	19.8	169	29.4		17.0	262	21.4		41.3	353	50.7		49.7	229	38.7		00.5
24	114	22.2	184	33.5	-16	16.7	277	23.0	-4	41.7	8	53.5	+22	49.8	244	41.0	-16	00.5
Dif	—		+41		+2		+16		-3		+28		0		+23		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 13 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 53:9										
	PMG: 12 ^h 09 ^m 4			SD: 14:7 PMG: 23 ^h 57 ^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 m		h m m	m
0	177	41.8	-21 10.4	12	05.4	+18 19.2	60 N	7 01	7 55	8 48	15 32 67		7 41 27	
1	192	41.5	09.9	26	36.9 ¹²⁵	15.7 ³⁵	58	6 55	45	34	43 65		29 29	
2	207	41.3	09.5	41	08.4 ¹²⁵	12.1 ³⁶	56	49	37	21	15 53 63		19 31	
3	222	41.1	09.0	55	40.0 ¹²⁶	08.4 ³⁷	54	44	29	11	16 02 61		10 33	
4	237	40.9	08.6	70	11.6 ¹²⁶	04.6 ³⁸	52	40	22	8 01	09 61		7 02 33	
5	252	40.6	-21 08.1	84	43.1 ¹²⁵	+18 00.7 ³⁹	50	6 35	7 16	7 53	16 16 60		6 55 34	
6	267	40.4	-21 07.7	99	14.8 ¹²⁷	+17 56.8 ³⁹	45	6 26	7 02	7 35	16 31 57		6 39 37	
7	282	40.2	07.2	113	46.4 ¹²⁶	52.8 ⁴⁰	40	17	6 50	20	44 55		26 39	
8	297	40.0	06.7	128	18.1 ¹²⁷	48.7 ⁴¹	35	09	40	7 08	16 54 53		15 40	
9	312	39.8	06.3	142	49.8 ¹²⁷	44.5 ⁴²	30	6 01	31	6 57	17 03 52		6 06 41	
10	327	39.5	05.8	157	21.5 ¹²⁷	40.2 ⁴³	20	5 47	6 14	38	19 50		5 49 43	
11	342	39.3	-21 05.4	171	53.2 ¹²⁷	+17 35.9 ⁴³	10 N	5 33	5 59	6 21	17 33 47		5 35 45	
12	357	39.1	-21 04.9	186	25.0 ¹²⁸	+17 31.4 ⁴⁵	0	5 18	5 44	6 06	17 46 45		5 21 47	
13	12	38.9	04.4	200	56.8 ¹²⁸	26.9 ⁴⁵	10 S	5 01	27	5 50	17 58 44		5 08 48	
14	27	38.7	04.0	215	28.6 ¹²⁸	22.4 ⁴⁵	20	4 40	5 09	33	18 12 42		4 53 50	
15	42	38.5	03.5	230	00.5 ¹²⁹	17.7 ⁴⁷	30	4 14	4 47	13	28 39		37 51	
16	57	38.2	03.0	244	32.4 ¹²⁹	13.0 ⁴⁷	35	3 58	33	5 02	37 38		27 53	
17	72	38.0	-21 02.6	259	04.3 ¹²⁹	+17 08.2 ⁴⁸	40	3 37	4 17	4 49	18 47 36		4 16 54	
18	87	37.8	-21 02.1	273	36.2 ¹²⁹	+17 03.3 ⁴⁹	45	3 11	3 57	4 33	18 59 35		4 03 55	
19	102	37.6	01.6	288	08.2 ¹³⁰	+16 58.3 ⁵⁰	50	2 34	31	13	19 14 32		3 47 57	
20	117	37.4	01.2	302	40.2 ¹³⁰	53.3 ⁵⁰	52	2 13	19	4 04	21 30		39 59	
21	132	37.2	00.7	317	12.2 ¹³⁰	48.2 ⁵¹	54	1 46	3 04	3 53	28 30		31 60	
22	147	36.9	-21 00.2	331	44.2 ¹³⁰	43.0 ⁵²	56	1 03	2 46	41	37 28		21 62	
23	162	36.7	-20 59.8	346	16.3 ¹³¹	37.8 ⁵²	58	** **	2 25	28	46 26		3 10 63	
24	177	36.5	-20 59.3	0	48.4 ¹³¹	+16 32.5 ⁵³	60 S	** **	1 55	3 11	19 57 24		2 58 65	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 19 ^m 8		Mag: -4.3 PMG: 11 ^h 39 ^m		Mag: +0.6 PMG: 5 ^h 30 ^m		Mag: -2.7 PMG: 23 ^h 20 ^m		Mag: +0.6 PMG: 7 ^h 40 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	114	22.2	184	33.5	-16	16.7	277	23.0	-4	41.7	8	53.5	+22	49.8	244	41.0	-16	00.5
1	129	24.7	199	37.5		16.5	292	24.5		42.0	23	56.3		49.8	259	43.2		00.6
2	144	27.1	214	41.5		16.3	307	26.1		42.4	38	59.2		49.8	274	45.5		00.6
3	159	29.6	229	45.6		16.1	322	27.7		42.7	54	02.0		49.9	289	47.8		00.7
4	174	32.1	244	49.6		15.8	337	29.2		43.0	69	04.8		49.9	304	50.1		00.7
5	189	34.5	259	53.6	-16	15.6	352	30.8	-4	43.4	84	07.6	+22	50.0	319	52.4	-16	00.7
6	204	37.0	274	57.6	-16	15.4	7	32.4	-4	43.7	99	10.4	+22	50.0	334	54.6	-16	00.8
7	219	39.5	290	01.7		15.2	22	33.9		44.0	114	13.2		50.0	349	56.9		00.8
8	234	41.9	305	05.7		15.0	37	35.5		44.4	129	16.0		50.1	4	59.2		00.9
9	249	44.4	320	09.7		14.8	52	37.1		44.7	144	18.9		50.1	20	01.5		00.9
10	264	46.9	335	13.7		14.5	67	38.6		45.0	159	21.7		50.2	35	03.7		00.9
11	279	49.3	350	17.7	-16	14.3	82	40.2	-4	45.4	174	24.5	+22	50.2	50	06.0	-16	01.0
12	294	51.8	5	21.7	-16	14.1	97	41.8	-4	45.7	189	27.3	+22	50.2	65	08.3	-16	01.0
13	309	54.2	20	25.7		13.9	112	43.3		46.0	204	30.1		50.3	80	10.6		01.1
14	324	56.7	35	29.8		13.7	127	44.9		46.4	219	32.9		50.3	95	12.9		01.1
15	339	59.2	50	33.8		13.5	142	46.5		46.7	234	35.7		50.4	110	15.1		01.1
16	355	01.6	65	37.8		13.3	157	48.1		47.0	249	38.6		50.4	125	17.4		01.2
17	10	04.1	80	41.8	-16	13.0	172	49.6	-4	47.4	264	41.4	+22	50.4	140	19.7	-16	01.2
18	25	06.6	95	45.8	-16	12.8	187	51.2	-4	47.7	279	44.2	+22	50.5	155	22.0	-16	01.3
19	40	09.0	110	49.7		12.6	202	52.8		48.0	294	47.0		50.5	170	24.2		01.3
20	55	11.5	125	53.7		12.4	217	54.4		48.4	309	49.8		50.6	185	26.5		01.3
21	70	14.0	140	57.7		12.2	232	55.9		48.7	324	52.6		50.6	200	28.8		01.4
22	85	16.4	156	01.7		12.0	247	57.5		49.0	339	55.4		50.6	215	31.1		01.4
23	100	18.9	171	05.7		11.8	262	59.1		49.4	354	58.3		50.7	230	33.4		01.5
24	115	21.4	186	09.7	-16	11.6	278	00.6	-4	49.7	10	01.1	+22	50.7	245	35.6	-16	01.5
Dif	—		+40		+2		+16		-3		+28		0		+23		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 14 ^d 5	PHE { 4 ^h : 53'9 12 ^h : 53'9 20 ^h : 54'0	PMG: 12 ^h 09 ^m 7									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	36.5	-20 59.3	0	48.4	+16 32.5		60 N	15 34	16 26	17 20	16 39 69		8 08 22	
1	192	36.3		15	20.5 ¹³¹	27.1	54	58	15 48	36	26	48 67		7 58 24	
2	207	36.1		29	52.7 ¹³²	21.6	55	56	16 00	44	31	16 56 66		50 26	
3	222	35.9		44	24.9 ¹³²	16.0	56	54	10	52	36	17 03 64		42 28	
4	237	35.7		58	57.1 ¹³²	10.4	56	52	20	16 59	41	10 62		35 29	
5	252	35.4	-20 56.9	73	29.3 ¹³²	+16 04.7	57	50	16 28	17 05	17 45	17 16 61		7 29 30	
6	267	35.2	-20 56.4	88	01.6 ¹³³	+15 59.0	57	45	16 46	17 18	17 55	17 28 58		7 16 32	
7	282	35.0		102	33.9 ¹³³	53.2	58	40	17 00	30	18 03	39 56		7 05 34	
8	297	34.8		117	06.2 ¹³³	47.3	59	35	12	40	11	47 54		6 55 37	
9	312	34.6		131	38.6 ¹³⁴	41.3	60	30	23	17 49	18	17 55 53		47 38	
10	327	34.4		146	11.0 ¹³⁴	35.3	60	20	42	18 05	32	18 09 49		32 41	
11	342	34.2	-20 54.1	160	43.4 ¹³⁴	+15 29.2	61	10 N	17 58	18 20	18 46	18 20 47		6 20 43	
12	357	34.0	-20 53.6	175	15.8 ¹³⁴	+15 23.0	62	0	18 13	18 36	19 01	18 31 45		6 08 45	
13	12	33.7		189	48.3 ¹³⁵	16.8	62	10 S	29	18 51	18	42 42		5 56 47	
14	27	33.5		204	20.8 ¹³⁵	10.5	63	20	18 46	19 10	19 38	18 54 40		43 50	
15	42	33.3		218	53.3 ¹³⁵	+15 04.1	64	30	19 05	32	20 04	19 07 37		28 52	
16	57	33.1		233	25.9 ¹³⁶	+14 57.7	64	35	16	19 45	20	15 35		20 53	
17	72	32.9	-20 51.2	247	58.5 ¹³⁶	+14 51.2	65	40	19 29	20 01	20 40	19 23 34		5 10 55	
18	87	32.7	-20 50.7	262	31.1 ¹³⁶	+14 44.6	66	45	19 45	20 20	21 06	19 34 31		4 58 58	
19	102	32.5		277	03.7 ¹³⁶	38.0	66	50	20 04	45	21 42	46 28		44 61	
20	117	32.3		291	36.4 ¹³⁷	31.3	67	52	13	20 58	22 02	51 27		38 61	
21	132	32.1		306	09.1 ¹³⁷	24.6	67	54	23	21 12	22 27	19 58 25		31 63	
22	147	31.9		320	41.8 ¹³⁷	17.8	68	56	35	29	23 06	20 05 23		23 64	
23	162	31.6		335	14.6 ¹³⁸	10.9	69	58	20 48	21 50	** ** *	12 22		13 67	
24	177	31.4	-20 47.8	349	47.3 ¹³⁷	+14 03.9	70	60 S	21 04	22 17	** ** *	20 21 20		4 03 69	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 15 ^m 9			Mag: -4.3 PMG: 11 ^h 32 ^m			Mag: +0.6 PMG: 5 ^h 27 ^m			Mag: -2.7 PMG: 23 ^h 16 ^m			Mag: +0.6 PMG: 7 ^h 36 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	115	21.4	186	09.7	-16 11.6	278	00.6	-4 49.7	10	01.1	+22 50.7	245	35.6	-16 01.5	
1	130	23.8	201	13.7	11.4	293	02.2	50.0	25	03.9	50.7	260	37.9	01.5	
2	145	26.3	216	17.7	11.2	308	03.8	50.4	40	06.7	50.8	275	40.2	01.6	
3	160	28.7	231	21.6	11.0	323	05.4	50.7	55	09.5	50.8	290	42.5	01.6	
4	175	31.2	246	25.6	10.8	338	07.0	51.0	70	12.3	50.9	305	44.8	01.7	
5	190	33.7	261	29.6	-16 10.6	353	08.5	-4 51.4	85	15.1	+22 50.9	320	47.0	-16 01.7	
6	205	36.1	276	33.5	-16 10.4	8	10.1	-4 51.7	100	18.0	+22 50.9	335	49.3	-16 01.7	
7	220	38.6	291	37.5	10.2	23	11.7	52.0	115	20.8	51.0	350	51.6	01.8	
8	235	41.1	306	41.5	10.0	38	13.3	52.4	130	23.6	51.0	5	53.9	01.8	
9	250	43.5	321	45.4	09.8	53	14.8	52.7	145	26.4	51.1	20	56.2	01.9	
10	265	46.0	336	49.4	09.6	68	16.4	53.0	160	29.2	51.1	35	58.5	01.9	
11	280	48.5	351	53.4	-16 09.4	83	18.0	-4 53.3	175	32.0	+22 51.1	51	00.7	-16 01.9	
12	295	50.9	6	57.3	-16 09.2	98	19.6	-4 53.7	190	34.8	+22 51.2	66	03.0	-16 02.0	
13	310	53.4	22	01.3	09.0	113	21.2	54.0	205	37.6	51.2	81	05.3	02.0	
14	325	55.9	37	05.2	08.8	128	22.8	54.3	220	40.5	51.3	96	07.6	02.1	
15	340	58.3	52	09.2	08.6	143	24.3	54.7	235	43.3	51.3	111	09.9	02.1	
16	356	00.8	67	13.1	08.4	158	25.9	55.0	250	46.1	51.3	126	12.1	02.1	
17	11	03.2	82	17.0	-16 08.3	173	27.5	-4 55.3	265	48.9	+22 51.4	141	14.4	-16 02.2	
18	26	05.7	97	21.0	-16 08.1	188	29.1	-4 55.6	280	51.7	+22 51.4	156	16.7	-16 02.2	
19	41	08.2	112	24.9	07.9	203	30.7	56.0	295	54.5	51.5	171	19.0	02.3	
20	56	10.6	127	28.9	07.7	218	32.3	56.3	310	57.3	51.5	186	21.3	02.3	
21	71	13.1	142	32.8	07.5	233	33.8	56.6	326	00.1	51.5	201	23.6	02.3	
22	86	15.6	157	36.7	07.3	248	35.4	57.0	341	02.9	51.6	216	25.8	02.4	
23	101	18.0	172	40.6	07.1	263	37.0	57.3	356	05.8	51.6	231	28.1	02.4	
24	116	20.5	187	44.6	-16 06.9	278	38.6	-4 57.6	11	08.6	+22 51.7	246	30.4	-16 02.4	
Dif	—			+40 +2			+16 -3			+28 0			+23 0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3			Edad: 15 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1														
	PMG: 12 ^h 10 ^m 1			SD: 14:7 PMG: 0 ^h 42 ^m R ^o : 44 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m
0	177	31.4	-20 47.8	349	47.3	+14 03.9	70	58	60 N	6 59	7 52	8 45	17 48	72	8 30	18		
1	192	31.2	47.3	4	20.1 ¹³⁸	+13 56.9	70	58		53	43	31	17 55	70	22	21		
2	207	31.0	46.8	18	53.0 ¹³⁹	49.9	70	56		48	35	19	18 02	67	16	22		
3	222	30.8	46.3	33	25.8 ¹³⁸	42.8	71	54		43	27	8 09	07 65		10	23		
4	237	30.6	45.8	47	58.7 ¹³⁹	35.6	72	52		38	21	7 59	12 64		8 04	25		
5	252	30.4	-20 45.3	62	31.6 ¹³⁹	+13 28.4	72	50		6 34	7 14	7 51	18 17	62	7 59	27		
6	267	30.2	-20 44.8	77	04.6 ¹⁴⁰	+13 21.1	73	45		6 25	7 01	7 34	18 26	60	7 48	30		
7	282	30.0	44.3	91	37.5 ¹³⁹	13.7	74	40		16	6 50	19	35 56		39	32		
8	297	29.8	43.9	106	10.5 ¹⁴⁰	+13 06.3	74	35		09	40	7 07	41 55		32	34		
9	312	29.6	43.4	120	43.5 ¹⁴⁰	+12 58.9	74	30		6 01	31	6 56	48 52		25	36		
10	327	29.4	42.9	135	16.6 ¹⁴¹	51.4	75	20		5 47	6 14	38	18 58	49	13	39		
11	342	29.2	-20 42.4	149	49.6 ¹⁴⁰	+12 43.8	76	10 N		5 33	5 59	6 22	19 07	47	7 03	41		
12	357	29.0	-20 41.9	164	22.7 ¹⁴¹	+12 36.2	76	0		5 19	5 44	6 06	19 16	43	6 53	44		
13	12	28.8	41.4	178	55.9 ¹⁴²	28.5	77	10 S		5 02	28	5 51	24 41		43	47		
14	27	28.6	40.9	193	29.0 ¹⁴¹	20.8	77	20		4 42	5 10	34	34 38		33	49		
15	42	28.4	40.4	208	02.2 ¹⁴²	13.0	78	30		16	4 49	15	44 35		20	53		
16	57	28.2	39.9	222	35.4 ¹⁴²	+12 05.1	79	35		4 00	35	5 04	50 33		13	55		
17	72	28.0	-20 39.4	237	08.6 ¹⁴²	+11 57.2	79	40		3 40	4 19	4 51	19 57	31	6 05	57		
18	87	27.8	-20 38.9	251	41.8 ¹⁴²	+11 49.3	79	45		3 14	4 00	4 35	20 05	28	5 56	59		
19	102	27.6	38.4	266	15.1 ¹⁴³	41.3	80	50		2 38	3 35	16	14 25		45	61		
20	117	27.3	37.9	280	48.4 ¹⁴³	33.3	80	52		2 18	23	4 07	18 24		39	64		
21	132	27.1	37.4	295	21.7 ¹⁴³	25.2	81	54		1 53	3 08	3 57	23 23		34	64		
22	147	26.9	36.9	309	55.0 ¹⁴³	17.0	82	56		1 15	2 51	45	28 21		27	67		
23	162	26.7	36.4	324	28.3 ¹⁴³	08.8	82	58		** **	30	32	34 19		20	68		
24	177	26.5	-20 35.9	339	01.7 ¹⁴⁴	+11 00.6	82	60 S		** **	2 03	3 16	20 41	17	5 12	70		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 12 ^m 0		Mag: -4.2 PMG: 11 ^h 26 ^m		Mag: +0.6 PMG: 5 ^h 25 ^m		Mag: -2.7 PMG: 23 ^h 11 ^m		Mag: +0.6 PMG: 7 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	116	20.5	187 44.6	-16 06.9	278 38.6	-4 57.6	11 08.6	+22 51.7	246 30.4	-16 02.4
1	131	23.0	202 48.5	06.8	293 40.2	57.9	26 11.4	51.7	261 32.7	02.5
2	146	25.4	217 52.4	06.6	308 41.8	58.3	41 14.2	51.7	276 35.0	02.5
3	161	27.9	232 56.3	06.4	323 43.4	58.6	56 17.0	51.8	291 37.2	02.6
4	176	30.4	248 00.2	06.2	338 44.9	58.9	71 19.8	51.8	306 39.5	02.6
5	191	32.8	263 04.2	-16 06.0	353 46.5	-4 59.2	86 22.6	+22 51.8	321 41.8	-16 02.6
6	206	35.3	278 08.1	-16 05.9	8 48.1	-4 59.6	101 25.4	+22 51.9	336 44.1	-16 02.7
7	221	37.7	293 12.0	05.7	23 49.7	-4 59.9	116 28.2	51.9	351 46.4	02.7
8	236	40.2	308 15.9	05.5	38 51.3	-5 00.2	131 31.0	52.0	6 48.7	02.8
9	251	42.7	323 19.8	05.3	53 52.9	00.5	146 33.9	52.0	21 51.0	02.8
10	266	45.1	338 23.7	05.1	68 54.5	00.9	161 36.7	52.0	36 53.2	02.8
11	281	47.6	353 27.6	-16 05.0	83 56.1	-5 01.2	176 39.5	+22 52.1	51 55.5	-16 02.9
12	296	50.1	8 31.4	-16 04.8	98 57.7	-5 01.5	191 42.3	+22 52.1	66 57.8	-16 02.9
13	311	52.5	23 35.3	04.6	113 59.3	01.8	206 45.1	52.2	82 00.1	03.0
14	326	55.0	38 39.2	04.5	129 00.9	02.2	221 47.9	52.2	97 02.4	03.0
15	341	57.5	53 43.1	04.3	144 02.4	02.5	236 50.7	52.2	112 04.7	03.0
16	356	59.9	68 47.0	04.1	159 04.0	02.8	251 53.5	52.3	127 06.9	03.1
17	12	02.4	83 50.9	-16 03.9	174 05.6	-5 03.1	266 56.3	+22 52.3	142 09.2	-16 03.1
18	27	04.8	98 54.7	-16 03.8	189 07.2	-5 03.4	281 59.1	+22 52.3	157 11.5	-16 03.1
19	42	07.3	113 58.6	03.6	204 08.8	03.8	297 01.9	52.4	172 13.8	03.2
20	57	09.8	129 02.5	03.4	219 10.4	04.1	312 04.7	52.4	187 16.1	03.2
21	72	12.2	144 06.3	03.3	234 12.0	04.4	327 07.6	52.5	202 18.4	03.3
22	87	14.7	159 10.2	03.1	249 13.6	04.7	342 10.4	52.5	217 20.7	03.3
23	102	17.2	174 14.1	02.9	264 15.2	05.1	357 13.2	52.5	232 22.9	03.3
24	117	19.6	189 17.9	-16 02.8	279 16.8	-5 05.4	12 16.0	+22 52.6	247 25.2	-16 03.4
Dif	—		+39	+2	+16	-3	+28	0	+23	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 10 ^m 4			Edad: 16 ^d 5 PHE { SD: 14:7 PMG: 1 ^h 26 ^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	177	26.5	-20	35.9	339	01.7	+11	00.6	60 N	15 39	16 30	17 24	19 00	72	8 48 16				
1	192	26.3		35.4	353	35.1 ¹⁴⁴	+10	52.3 ⁸³	58	15 52	40	29	05 70		43 17				
2	207	26.1		34.9	8	08.5 ¹⁴⁴		44.0 ⁸³	56	16 04	48	35	09 68		38 20				
3	222	25.9		34.4	22	42.0 ¹⁴⁵		35.6 ⁸⁴	54	14	16 55	39	12 67		33 22				
4	237	25.7		33.9	37	15.4 ¹⁴⁴		27.2 ⁸⁴	52	23	17 02	44	16 64		29 24				
5	252	25.5	-20	33.3	51	48.9 ¹⁴⁵	+10	18.7 ⁸⁵	50	16 31	17 08	17 48	19 19	63	8 26 24				
6	267	25.3	-20	32.8	66	22.4 ¹⁴⁵	+10	10.2 ⁸⁵	45	16 48	17 21	17 57	19 26	59	8 18 28				
7	282	25.2		32.3	80	55.9 ¹⁴⁵	+10	01.6 ⁸⁶	40	17 02	32	18 05	31 57		11 31				
8	297	25.0		31.8	95	29.4 ¹⁴⁵	+9	53.0 ⁸⁶	35	14	42	13	36 54		06 32				
9	312	24.8		31.3	110	03.0 ¹⁴⁶		44.4 ⁸⁶	30	25	17 51	20	40 53		8 01 34				
10	327	24.6		30.8	124	36.6 ¹⁴⁶		35.7 ⁸⁷	20	43	18 07	34	47 49		7 52 38				
11	342	24.4	-20	30.3	139	10.1 ¹⁴⁵	+9	27.0 ⁸⁷	10 N	17 59	18 21	18 47	19 54	46	7 44 41				
12	357	24.2	-20	29.8	153	43.7 ¹⁴⁶	+9	18.2 ⁸⁸	0	18 14	18 36	19 02	19 59	44	7 37 43				
13	12	24.0		29.3	168	17.4 ¹⁴⁷		09.4 ⁸⁸	10 S	29	18 52	18	20 05	41	30 46				
14	27	23.8		28.7	182	51.0 ¹⁴⁶	+9	00.6 ⁸⁸	20	18 45	19 09	19 38	12 37		22 49				
15	42	23.6		28.2	197	24.6 ¹⁴⁶	+8	51.7 ⁸⁹	30	19 04	31	20 03	19 34		13 52				
16	57	23.4		27.7	211	58.3 ¹⁴⁷		42.8 ⁸⁹	35	15	19 44	19	23 32		08 54				
17	72	23.2	-20	27.2	226	32.0 ¹⁴⁷	+8	33.8 ⁹⁰	40	19 28	20 00	20 39	20 28	29	7 02 56				
18	87	23.0	-20	26.7	241	05.7 ¹⁴⁷	+8	24.8 ⁹⁰	45	19 43	20 19	21 04	20 33	27	6 55 59				
19	102	22.8		26.2	255	39.4 ¹⁴⁷		15.8 ⁹⁰	50	20 02	43	39	39 24		46 63				
20	117	22.6		25.7	270	13.1 ¹⁴⁷	+8	06.7 ⁹¹	52	11	20 55	21 58	42 23		43 64				
21	132	22.4		25.1	284	46.9 ¹⁴⁸	+7	57.6 ⁹¹	54	21	21 09	22 22	46 20		38 66				
22	147	22.2		24.6	299	20.6 ¹⁴⁷		48.4 ⁹²	56	32	25	22 56	49 19		34 67				
23	162	22.0		24.1	313	54.4 ¹⁴⁸		39.2 ⁹²	58	20 45	21 45	** **	53 17		28 70				
24	177	21.8	-20	23.6	328	28.1 ¹⁴⁷	+7	30.0 ⁹²	60 S	21 01	22 11	** **	20 58	15	6 22 72				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 08 ^m 0		Mag: -4.3 PMG: 11 ^h 20 ^m			Mag: +0.5 PMG: 5 ^h 22 ^m			Mag: -2.7 PMG: 23 ^h 07 ^m			Mag: +0.6 PMG: 7 ^h 29 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	117	19.6	189	17.9	-16	02.8	279	16.8	-5	05.4	12	16.0	+22	52.6	247	25.2	-16	03.4	
1	132	22.1	204	21.8		02.6	294	18.4		05.7	27	18.8		52.6	262	27.5		03.4	
2	147	24.6	219	25.6		02.4	309	20.0		06.0	42	21.6		52.7	277	29.8		03.4	
3	162	27.0	234	29.5		02.3	324	21.6		06.3	57	24.4		52.7	292	32.1		03.5	
4	177	29.5	249	33.3		02.1	339	23.2		06.7	72	27.2		52.7	307	34.4		03.5	
5	192	32.0	264	37.1	-16	02.0	354	24.8	-5	07.0	87	30.0	+22	52.8	322	36.7	-16	03.6	
6	207	34.4	279	41.0	-16	01.8	9	26.4	-5	07.3	102	32.8	+22	52.8	337	39.0	-16	03.6	
7	222	36.9	294	44.8		01.6	24	28.0		07.6	117	35.6		52.8	352	41.2		03.6	
8	237	39.3	309	48.6		01.5	39	29.6		07.9	132	38.4		52.9	7	43.5		03.7	
9	252	41.8	324	52.5		01.3	54	31.2		08.3	147	41.2		52.9	22	45.8		03.7	
10	267	44.3	339	56.3		01.2	69	32.8		08.6	162	44.0		53.0	37	48.1		03.8	
11	282	46.7	355	00.1	-16	01.0	84	34.4	-5	08.9	177	46.9	+22	53.0	52	50.4	-16	03.8	
12	297	49.2	10	03.9	-16	00.9	99	36.0	-5	09.2	192	49.7	+22	53.0	67	52.7	-16	03.8	
13	312	51.7	25	07.8		00.7	114	37.6		09.5	207	52.5		53.1	82	55.0		03.9	
14	327	54.1	40	11.6		00.6	129	39.2		09.8	222	55.3		53.1	97	57.3		03.9	
15	342	56.6	55	15.4		00.4	144	40.8		10.2	237	58.1		53.2	112	59.5		03.9	
16	357	59.1	70	19.2		00.3	159	42.5		10.5	253	00.9		53.2	128	01.8		04.0	
17	13	01.5	85	23.0	-16	00.1	174	44.1	-5	10.8	268	03.7	+22	53.2	143	04.1	-16	04.0	
18	28	04.0	100	26.8	-16	00.0	189	45.7	-5	11.1	283	06.5	+22	53.3	158	06.4	-16	04.0	
19	43	06.5	115	30.6	-15	59.8	204	47.3		11.4	298	09.3		53.3	173	08.7		04.1	
20	58	08.9	130	34.4		59.7	219	48.9		11.7	313	12.1		53.3	188	11.0		04.1	
21	73	11.4	145	38.2		59.5	234	50.5		12.1	328	14.9		53.4	203	13.3		04.2	
22	88	13.8	160	41.9		59.4	249	52.1		12.4	343	17.7		53.4	218	15.6		04.2	
23	103	16.3	175	45.7		59.2	264	53.7		12.7	358	20.5		53.5	233	17.9		04.2	
24	118	18.8	190	49.5	-15	59.1	279	55.3	-5	13.0	13	23.3	+22	53.5	248	20.1	-16	04.3	
Dif	—		+38			+2	+16			-3	+28			0	+23				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 17 ^d 5 PHE { 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:6													
	PMG: 12 ^h 10 ^m 7			SD: 14:8 PMG: 2 ^h 10 ^m R°: 43 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	177	21.8	-20	328	28.1	+7	30.0	92	60 N	6 56	7 50	8 41	20 12	74	9 04	14	
1	192	21.6		343	01.9 ¹⁴⁸		20.8	92	58	51	41	28	15	71	9 00	17	
2	207	21.4		357	35.7 ¹⁴⁸		11.5	93	56	46	33	16	17	69	8 58	18	
3	222	21.2		12	09.5 ¹⁴⁸	+7	02.2	93	54	41	25	8 06	19	67	55	20	
4	237	21.1		26	43.3 ¹⁴⁸	+6	52.8	94	52	37	19	7 57	20	66	53	21	
5	252	20.9	-20	41	17.2 ¹⁴⁹	+6	43.5	93	50	6 33	7 13	7 49	20 22	64	8 50	24	
6	267	20.7	-20	55	51.0 ¹⁴⁸	+6	34.0	95	45	6 24	7 00	7 32	20 25	61	8 46	26	
7	282	20.5		70	24.8 ¹⁴⁸		24.6	94	40	16	6 49	18	28	58	42	29	
8	297	20.3		84	58.7 ¹⁴⁹		15.1	95	35	08	39	7 06	30	56	38	31	
9	312	20.1		99	32.5 ¹⁴⁸	+6	05.6	95	30	6 01	30	6 56	33	53	35	33	
10	327	19.9		114	06.4 ¹⁴⁹	+5	56.1	95	20	5 47	14	38	36	50	30	37	
11	342	19.7	-20	128	40.2 ¹⁴⁸	+5	46.6	95	10 N	5 34	6 00	6 22	20 40	46	8 25	40	
12	357	19.5	-20	143	14.1 ¹⁴⁹	+5	37.0	96	0	5 19	5 45	6 07	20 43	43	8 20	43	
13	12	19.3		157	48.0 ¹⁴⁹		27.4	96	10 S	5 03	29	5 52	46	40	16	46	
14	27	19.2		172	21.8 ¹⁴⁸		17.7	97	20	4 43	5 12	36	49	37	11	49	
15	42	19.0		186	55.7 ¹⁴⁹	+5	08.1	96	30	18	4 50	17	53	33	05	53	
16	57	18.8		201	29.6 ¹⁴⁹	+4	58.4	97	35	4 02	37	5 06	55	31	8 02	55	
17	72	18.6	-20	216	03.5 ¹⁴⁹	+4	48.7	97	40	3 43	4 22	4 53	20 57	29	7 58	58	
18	87	18.4	-20	230	37.4 ¹⁴⁹	+4	39.0	97	45	3 18	4 03	4 38	21 00	26	7 54	60	
19	102	18.2		245	11.3 ¹⁴⁹		29.2	98	50	2 43	3 39	19	03	23	49	63	
20	117	18.0		259	45.1 ¹⁴⁸		19.4	98	52	24	27	11	05	21	47	64	
21	132	17.8		274	19.0 ¹⁴⁹	+4	09.6	98	54	2 00	3 13	4 01	06	21	44	67	
22	147	17.7		288	52.9 ¹⁴⁹	+3	59.8	98	56	1 25	2 56	3 49	08	19	41	69	
23	162	17.5		303	26.8 ¹⁴⁹		50.0	98	58	** **	36	36	10	17	38	70	
24	177	17.3	-20	318	00.7 ¹⁴⁹	+3	40.1	99	60 S	** **	2 10	3 21	21 13	14	7 34	73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 04 ^m 1		Mag: -4.3 PMG: 11 ^h 14 ^m		Mag: +0.5 PMG: 5 ^h 20 ^m		Mag: -2.7 PMG: 23 ^h 02 ^m		Mag: +0.6 PMG: 7 ^h 26 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	118	18.8	190	49.5	-15	59.1	279	55.3	-5	13.0	13	23.3	+22	53.5	248	20.1	-16	04.3
1	133	21.2	205	53.3		58.9	294	56.9		13.3	28	26.1		53.5	263	22.4		04.3
2	148	23.7	220	57.1		58.8	309	58.5		13.6	43	28.9		53.6	278	24.7		04.3
3	163	26.2	236	00.8		58.7	325	00.2		13.9	58	31.7		53.6	293	27.0		04.4
4	178	28.6	251	04.6		58.5	340	01.8		14.3	73	34.5		53.6	308	29.3		04.4
5	193	31.1	266	08.4	-15	58.4	355	03.4	-5	14.6	88	37.3	+22	53.7	323	31.6	-16	04.5
6	208	33.6	281	12.1	-15	58.2	10	05.0	-5	14.9	103	40.1	+22	53.7	338	33.9	-16	04.5
7	223	36.0	296	15.9		58.1	25	06.6		15.2	118	42.9		53.8	353	36.2		04.5
8	238	38.5	311	19.6		58.0	40	08.2		15.5	133	45.7		53.8	8	38.5		04.6
9	253	40.9	326	23.4		57.8	55	09.8		15.8	148	48.6		53.8	23	40.8		04.6
10	268	43.4	341	27.1		57.7	70	11.5		16.1	163	51.4		53.9	38	43.0		04.6
11	283	45.9	356	30.9	-15	57.6	85	13.1	-5	16.5	178	54.2	+22	53.9	53	45.3	-16	04.7
12	298	48.3	11	34.6	-15	57.4	100	14.7	-5	16.8	193	57.0	+22	53.9	68	47.6	-16	04.7
13	313	50.8	26	38.3		57.3	115	16.3		17.1	208	59.8		54.0	83	49.9		04.7
14	328	53.3	41	42.1		57.2	130	17.9		17.4	224	02.6		54.0	98	52.2		04.8
15	343	55.7	56	45.8		57.0	145	19.5		17.7	239	05.4		54.1	113	54.5		04.8
16	358	58.2	71	49.5		56.9	160	21.2		18.0	254	08.2		54.1	128	56.8		04.9
17	14	00.7	86	53.2	-15	56.8	175	22.8	-5	18.3	269	11.0	+22	54.1	143	59.1	-16	04.9
18	29	03.1	101	57.0	-15	56.6	190	24.4	-5	18.6	284	13.8	+22	54.2	159	01.4	-16	04.9
19	44	05.6	117	00.7		56.5	205	26.0		18.9	299	16.6		54.2	174	03.7		05.0
20	59	08.1	132	04.4		56.4	220	27.6		19.3	314	19.4		54.2	189	06.0		05.0
21	74	10.5	147	08.1		56.3	235	29.3		19.6	329	22.2		54.3	204	08.3		05.0
22	89	13.0	162	11.8		56.1	250	30.9		19.9	344	25.0		54.3	219	10.6		05.1
23	104	15.4	177	15.5		56.0	265	32.5		20.2	359	27.8		54.4	234	12.8		05.1
24	119	17.9	192	19.2	-15	55.9	280	34.1	-5	20.5	14	30.6	+22	54.4	249	15.1	-16	05.1
Dif	—		+37		+1		+16		-3		+28		0		+23		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3		Edad: 18 ^d 5 PHE { 4 ^h : 54/7 12 ^h : 54/8 20 ^h : 55/0											
	PMG: 12 ^h 11 ^m 0		SD: 14/9 PMG: 2 ^h 53 ^m R°: 43 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	17.3	-20	10.9	318	00.7	+3 40.1	60 N	15 43	16 34	17 28	21 26 74	9 18 14	
1	192	17.1		10.4	332	34.5 ¹⁴⁸	30.2 ⁹⁹	58	15 56	43	33	26 72	17 16	
2	207	16.9		09.8	347	08.4 ¹⁴⁹	20.3 ⁹⁹	56	16 08	51	38	26 70	16 18	
3	222	16.7		09.3	1	42.3 ¹⁴⁹	10.4 ⁹⁹	54	17	16 58	42	26 68	15 20	
4	237	16.6		08.7	16	16.1 ¹⁴⁸	+3 00.5 ⁹⁹	52	26	17 05	46	26 66	14 22	
5	252	16.4	-20	08.2	30	50.0 ¹⁴⁹	+2 50.5 ¹⁰⁰	50	16 34	17 10	17 50	21 26 65	9 14 23	
6	267	16.2	-20	07.7	45	23.9 ¹⁴⁹	+2 40.6 ⁹⁹	45	16 51	17 23	17 59	21 26 61	9 12 26	
7	282	16.0		07.1	59	57.7 ¹⁴⁸	30.6 ¹⁰⁰	40	17 05	34	18 07	26 58	11 29	
8	297	15.8		06.6	74	31.5 ¹⁴⁸	20.6 ¹⁰⁰	35	16	44	15	26 56	09 32	
9	312	15.6		06.0	89	05.4 ¹⁴⁹	10.6 ¹⁰⁰	30	27	17 52	21	26 54	08 34	
10	327	15.5		05.5	103	39.2 ¹⁴⁸	+2 00.5 ¹⁰¹	20	17 44	18 08	35	26 50	07 37	
11	342	15.3	-20	05.0	118	13.0 ¹⁴⁸	+1 50.5 ¹⁰⁰	10 N	18 00	18 22	18 48	21 26 47	9 05 40	
12	357	15.1	-20	04.4	132	46.8 ¹⁴⁸	+1 40.5 ¹⁰⁰	0	18 15	18 37	19 02	21 26 44	9 03 44	
13	12	14.9		03.9	147	20.6 ¹⁴⁸	30.4 ¹⁰¹	10 S	29	18 52	18	26 41	02 46	
14	27	14.7		03.3	161	54.3 ¹⁴⁷	20.3 ¹⁰¹	20	18 45	19 09	19 37	26 38	9 00 50	
15	42	14.5		02.8	176	28.1 ¹⁴⁸	10.2 ¹⁰¹	30	19 04	30	20 02	26 34	8 58 54	
16	57	14.4		02.2	191	01.9 ¹⁴⁸	+1 00.1 ¹⁰¹	35	15	43	18	26 32	57 56	
17	72	14.2	-20	01.7	205	35.6 ¹⁴⁷	+0 50.0 ¹⁰¹	40	19 27	19 58	20 37	21 26 30	8 56 58	
18	87	14.0	-20	01.1	220	09.3 ¹⁴⁷	+0 39.9 ¹⁰¹	45	19 42	20 17	21 01	21 26 27	8 54 61	
19	102	13.8	-20	00.6	234	43.0 ¹⁴⁷	29.8 ¹⁰¹	50	20 00	40	35	26 24	52 65	
20	117	13.6	-20	00.0	249	16.7 ¹⁴⁷	19.6 ¹⁰²	52	09	20 52	21 53	26 23	51 66	
21	132	13.5	-19	59.5	263	50.4 ¹⁴⁷	+0 09.5 ¹⁰¹	54	18	21 06	22 16	27 20	51 67	
22	147	13.3		58.9	278	24.0 ¹⁴⁶	-0 00.7 ¹⁰²	56	29	21	22 48	27 18	50 69	
23	162	13.1		58.4	292	57.7 ¹⁴⁷	10.8 ¹⁰¹	58	42	21 41	** **	27 16	48 72	
24	177	12.9	-19	57.8	307	31.3 ¹⁴⁶	-0 21.0 ¹⁰²	60 S	20 57	22 05	** **	21 27 14	8 47 74	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 00 ^m 2		Mag: -4.4 PMG: 11 ^h 08 ^m		Mag: +0.5 PMG: 5 ^h 17 ^m		Mag: -2.7 PMG: 22 ^h 58 ^m		Mag: +0.6 PMG: 7 ^h 22 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	119	17.9	192	19.2	280	34.1	14	30.6	249	15.1				
1	134	20.4	207	22.9	295	35.7	29	33.4	264	17.4				
2	149	22.8	222	26.6	310	37.4	44	36.2	279	19.7				
3	164	25.3	237	30.2	325	39.0	59	39.0	294	22.0				
4	179	27.8	252	33.9	340	40.6	74	41.8	309	24.3				
5	194	30.2	267	37.6	355	42.2	89	44.6	324	26.6				
6	209	32.7	282	41.3	10	43.9	104	47.4	339	28.9				
7	224	35.2	297	45.0	25	45.5	119	50.2	354	31.2				
8	239	37.6	312	48.6	54	47.1	134	53.0	9	33.5				
9	254	40.1	327	52.3	55	48.7	149	55.8	24	35.8				
10	269	42.6	342	55.9	70	50.4	164	58.6	39	38.1				
11	284	45.0	357	59.6	85	52.0	180	01.4	54	40.4				
12	299	47.5	13	03.2	100	53.6	195	04.2	69	42.7				
13	314	49.9	28	06.9	115	55.3	210	07.0	84	45.0				
14	329	52.4	43	10.5	130	56.9	225	09.8	99	47.3				
15	344	54.9	58	14.2	145	58.5	240	12.6	114	49.6				
16	359	57.3	73	17.8	161	00.1	255	15.4	129	51.8				
17	14	59.8	88	21.4	176	01.8	270	18.2	144	54.1				
18	30	02.3	103	25.1	191	03.4	285	21.0	159	56.4				
19	45	04.7	118	28.7	206	05.0	300	23.8	174	58.7				
20	60	07.2	133	32.3	221	06.7	315	26.6	190	01.0				
21	75	09.7	148	35.9	236	08.3	330	29.4	205	03.3				
22	90	12.1	163	39.6	251	09.9	345	32.1	220	05.6				
23	105	14.6	178	43.2	266	11.6	0	34.9	235	07.9				
24	120	17.0	193	46.8	281	13.2	15	37.7	250	10.2				
Dif	—	+36	+1		+16	-3	+28	0	+23					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 11 ^m 3			Edad: 19 ^d 5 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 SD: 15'0 PMG: 3 ^h 36 ^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	m	
0	177	12.9	-19	57.8	307	31.3	-0	21.0	60 N	6 54	7 47	8 37	22 40	77	9 32	15		
1	192	12.8		57.3	322	04.9 ¹⁴⁶		31.1 ¹⁰¹	58	49	38	25	38	74	33	18		
2	207	12.6		56.7	336	38.5 ¹⁴⁶		41.3 ¹⁰²	56	44	30	14	36	71	34	20		
3	222	12.4		56.2	351	12.0 ¹⁴⁵	-0	51.5 ¹⁰²	54	39	23	8 04	34	70	35	2		
4	237	12.2		55.6	5	45.5 ¹⁴⁵	-1	01.7 ¹⁰²	52	35	17	7 55	32	68	36	23		
5	252	12.0	-19	55.1	20	19.1 ¹⁴⁶	-1	11.8 ¹⁰¹	50	6 31	7 11	7 47	22 31	66	9 37	24		
6	267	11.9	-19	54.5	34	52.5 ¹⁴⁴	-1	22.0 ¹⁰²	45	6 23	6 58	7 31	22 27	63	9 38	28		
7	282	11.7		54.0	49	26.0 ¹⁴⁵		32.2 ¹⁰²	40	15	48	17	24	60	40	30		
8	297	11.5		53.4	63	59.4 ¹⁴⁴		42.4 ¹⁰²	35	07	38	7 05	22	57	41	32		
9	312	11.3		52.8	78	32.9 ¹⁴⁵	-1	52.6 ¹⁰²	30	6 01	30	6 55	20	55	42	35		
10	327	11.2		52.3	93	06.2 ¹⁴³	-2	02.8 ¹⁰²	20	5 47	14	38	16	52	44	38		
11	342	11.0	-19	51.7	107	39.6 ¹⁴⁴	-2	12.9 ¹⁰¹	10 N	5 34	6 00	6 22	22 13	48	9 45	42		
12	357	10.8	-19	51.2	122	12.9 ¹⁴³	-2	23.1 ¹⁰²	0	5 20	5 46	6 08	22 10	45	9 47	44		
13	12	10.7		50.6	136	46.2 ¹⁴³		33.3 ¹⁰²	10 S	5 04	30	5 53	07	42	48	48		
14	27	10.5		50.0	151	19.5 ¹⁴³		43.5 ¹⁰²	20	4 45	5 13	37	04	39	50	51		
15	42	10.3		49.5	165	52.7 ¹⁴²	-2	53.6 ¹⁰¹	30	20	4 52	19	22 00	36	52	54		
16	57	10.1		48.9	180	25.9 ¹⁴²	-3	03.8 ¹⁰²	35	4 05	40	5 08	21	58	53	56		
17	72	10.0	-19	48.4	194	59.1 ¹⁴²	-3	13.9 ¹⁰¹	40	3 46	4 24	4 56	21	56	31	9 54	59	
18	87	09.8	-19	47.8	209	32.3 ¹⁴²	-3	24.1 ¹⁰²	45	3 21	4 06	4 41	21	53	29	9 55	62	
19	102	09.6		47.2	224	05.4 ¹⁴¹		34.2 ¹⁰¹	50	2 47	3 42	23	50	25	57	65		
20	117	09.4		46.7	238	38.5 ¹⁴¹		44.4 ¹⁰²	52	29	31	14	49	23	57	67		
21	132	09.3		46.1	253	11.5 ¹⁴⁰	-3	54.5 ¹⁰¹	54	2 07	17	4 04	47	22	58	69		
22	147	09.1		45.5	267	44.5 ¹⁴⁰	-4	04.6 ¹⁰¹	56	1 35	3 01	3 54	45	21	9 59	71		
23	162	08.9		45.0	282	17.5 ¹⁴⁰		14.7 ¹⁰¹	58	** **	2 42	41	43	19	10 00	73		
24	177	08.8	-19	44.4	296	50.4 ¹³⁹	-4	24.8 ¹⁰¹	60 S	** **	2 18	3 26	21	41	16	10 01	75	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 56 ^m 2			Mag: -4.4 PMG: 11 ^h 02 ^m			Mag: +0.5 PMG: 5 ^h 15 ^m			Mag: -2.7 PMG: 22 ^h 53 ^m			Mag: +0.6 PMG: 7 ^h 18 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	120	17.0	193	46.8	-15	53.2	281	13.2	-5	27.8	15	37.7	+22	55.3	250	10.2	-16	06.0
1	135	19.5	208	50.4		53.1	296	14.8		28.1	30	40.5		55.3	265	12.5		06.0
2	150	22.0	223	54.0		52.9	311	16.5		28.4	45	43.3		55.3	280	14.8		06.1
3	165	24.4	238	57.6		52.8	326	18.1		28.7	60	46.1		55.4	295	17.1		06.1
4	180	26.9	254	01.2		52.7	341	19.8		29.0	75	48.9		55.4	310	19.4		06.1
5	195	29.4	269	04.7	-15	52.6	356	21.4	-5	29.3	90	51.7	+22	55.4	325	21.7	-16	06.2
6	210	31.8	284	08.3	-15	52.5	11	23.0	-5	29.6	105	54.5	+22	55.5	340	24.0	-16	06.2
7	225	34.3	299	11.9		52.4	26	24.7		29.9	120	57.3		55.5	355	26.3		06.2
8	240	36.8	314	15.5		52.3	41	26.3		30.2	136	00.1		55.6	10	28.6		06.3
9	255	39.2	329	19.0		52.3	56	28.0		30.5	151	02.9		55.6	25	30.9		06.3
10	270	41.7	344	22.6		52.2	71	29.6		30.8	166	05.7		55.6	40	33.2		06.3
11	285	44.2	359	26.2	-15	52.1	86	31.2	-5	31.1	181	08.5	+22	55.7	55	35.5	-16	06.4
12	300	46.6	14	29.7	-15	52.0	101	32.9	-5	31.4	196	11.3	+22	55.7	70	37.8	-16	06.4
13	315	49.1	29	33.3		51.9	116	34.5		31.7	211	14.1		55.7	85	40.1		06.4
14	330	51.5	44	36.8		51.8	131	36.2		32.0	226	16.9		55.8	100	42.4		06.5
15	345	54.0	59	40.4		51.7	146	37.8		32.3	241	19.7		55.8	115	44.7		06.5
16	0	56.5	74	43.9		51.6	161	39.4		32.6	256	22.5		55.8	130	47.0		06.6
17	15	58.9	89	47.5	-15	51.5	176	41.1	-5	32.9	271	25.3	+22	55.9	145	49.3	-16	06.6
18	31	01.4	104	51.0	-15	51.4	191	42.7	-5	33.2	286	28.1	+22	55.9	160	51.6	-16	06.6
19	46	03.9	119	54.5		51.3	206	44.4		33.5	301	30.9		56.0	175	53.9		06.7
20	61	06.3	134	58.1		51.2	221	46.0		33.8	316	33.6		56.0	190	56.2		06.7
21	76	08.8	150	01.6		51.2	236	47.7		34.1	331	36.4		56.0	205	58.5		06.7
22	91	11.3	165	05.1		51.1	251	49.3		34.4	346	39.2		56.1	221	00.8		06.8
23	106	13.7	180	08.6		51.0	266	51.0		34.7	1	42.0		56.1	236	03.1		06.8
24	121	16.2	195	12.1	-15	50.9	281	52.6	-5	35.0	16	44.8	+22	56.1	251	05.4	-16	06.8
Dif	—		+36		+1		+16		-3		+28		0		+23			

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: 20 ^d 5 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:1 SD: 15:1 PMG: 4 ^h 21 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	08.8	-19 44.4	296	50.4	-4 24.8		60 N	15 48	16 39	17 31	23 57 78	9 47 17		
1	192	08.6	43.8	311	23.3 ¹³⁹	34.9 ¹⁰¹		58	16 01	47	37	52 75	51 19		
2	207	08.4	43.3	325	56.2 ¹³⁹	45.0 ¹⁰¹		56	12	16 55	41	47 74	54 21		
3	222	08.3	42.7	340	29.0 ¹³⁸	-4 55.0 ¹⁰⁰		54	21	17 02	45	44 71	56 23		
4	237	08.1	42.1	355	01.7 ¹³⁷	-5 05.1 ¹⁰¹		52	30	08	49	40 70	9 59 25		
5	252	07.9	-19 41.6	9	34.5 ¹³⁸	-5 15.1 ¹⁰⁰		50	16 37	17 13	17 53	23 37 68	10 01 26		
6	267	07.8	-19 41.0	24	07.2 ¹³⁷	-5 25.1 ¹⁰⁰		45	16 54	17 26	18 02	23 30 65	10 06 30		
7	282	07.6	40.4	38	39.8 ¹³⁶	35.1 ¹⁰⁰		40	17 07	36	09	24 62	10 32		
8	297	07.4	39.8	53	12.4 ¹³⁶	45.1 ¹⁰⁰		35	18	46	16	19 60	13 35		
9	312	07.2	39.3	67	45.0 ¹³⁶	-5 55.1 ¹⁰⁰		30	28	17 54	23	15 58	17 36		
10	327	07.1	38.7	82	17.5 ¹³⁵	-6 05.0 ⁹⁹		20	17 46	18 09	36	08 54	22 40		
11	342	06.9	-19 38.1	96	50.0 ¹³⁵	-6 14.9 ⁹⁹		10 N	18 01	18 23	18 49	23 01 51	10 27 43		
12	357	06.7	-19 37.5	111	22.4 ¹³⁴	-6 24.9 ¹⁰⁰		0	18 15	18 37	19 03	22 55 48	10 31 47		
13	12	06.6	37.0	125	54.8 ¹³⁴	34.8 ⁹⁹		10 S	30	18 52	18	49 45	36 49		
14	27	06.4	36.4	140	27.1 ¹³³	44.6 ⁹⁸		20	18 45	19 09	19 37	43 42	41 52		
15	42	06.3	35.8	154	59.4 ¹³³	-6 54.5 ⁹⁹		30	19 03	29	20 01	36 38	46 56		
16	57	06.1	35.2	169	31.6 ¹³²	-7 04.3 ⁹⁸		35	14	42	16	32 36	49 59		
17	72	05.9	-19 34.7	184	03.8 ¹³²	-7 14.1 ⁹⁸		40	19 26	19 57	20 35	22 27 34	10 53 61		
18	87	05.8	-19 34.1	198	35.9 ¹³¹	-7 23.9 ⁹⁸		45	19 40	20 15	20 59	22 22 31	10 57 64		
19	102	05.6	33.5	213	08.0 ¹³¹	33.6 ⁹⁷		50	19 58	38	21 32	15 29	11 02 67		
20	117	05.4	32.9	227	40.0 ¹³⁰	43.4 ⁹⁸		52	20 06	20 49	21 49	12 27	04 69		
21	132	05.3	32.3	242	11.9 ¹²⁹	-7 53.1 ⁹⁷		54	16	21 02	22 10	09 25	07 70		
22	147	05.1	31.8	256	43.9 ¹³⁰	-8 02.8 ⁹⁷		56	26	17	22 39	06 23	10 72		
23	162	04.9	31.2	271	15.7 ¹²⁸	12.4 ⁹⁶		58	38	36	23 30	22 02 21	13 74		
24	177	04.8	-19 30.6	285	47.5 ¹²⁸	-8 22.0 ⁹⁶		60 S	20 52	21 59	** **	21 57 19	11 16 77		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 52 ^m 3		Mag: -4.5 PMG: 10 ^h 57 ^m			Mag: +0.5 PMG: 5 ^h 12 ^m			Mag: -2.7 PMG: 22 ^h 49 ^m			Mag: +0.6 PMG: 7 ^h 15 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	121	16.2	195	12.1	-15 50.9	281	52.6	-5 35.0	16 44.8	+22 56.1	251	05.4	-16 06.8		
1	136	18.6	210	15.6	50.8	296	54.3	35.3	31 47.6	56.2	266	07.7	06.9		
2	151	21.1	225	19.1	50.7	311	55.9	35.6	46 50.4	56.2	281	10.0	06.9		
3	166	23.6	240	22.6	50.6	326	57.6	35.9	61 53.2	56.2	296	12.3	06.9		
4	181	26.0	255	26.1	50.6	341	59.2	36.2	76 56.0	56.3	311	14.6	07.0		
5	196	28.5	270	29.6	-15 50.5	357	00.9	-5 36.5	91 58.8	+22 56.3	326	16.9	-16 07.0		
6	211	31.0	285	33.1	-15 50.4	12	02.5	-5 36.8	107 01.6	+22 56.3	341	19.2	-16 07.0		
7	226	33.4	300	36.6	50.3	27	04.2	37.1	122 04.4	56.4	356	21.5	07.1		
8	241	35.9	315	40.1	50.2	42	05.8	37.4	137 07.2	56.4	11	23.8	07.1		
9	256	38.4	330	43.6	50.2	57	07.5	37.7	152 09.9	56.5	26	26.1	07.1		
10	271	40.8	345	47.0	50.1	72	09.1	38.0	167 12.7	56.5	41	28.4	07.2		
11	286	43.3	0	50.5	-15 50.0	87	10.8	-5 38.3	182 15.5	+22 56.5	56	30.7	-16 07.2		
12	301	45.8	15	53.9	-15 49.9	102	12.4	-5 38.6	197 18.3	+22 56.6	71	33.0	-16 07.2		
13	316	48.2	30	57.4	49.9	117	14.1	38.9	212 21.1	56.6	86	35.3	07.3		
14	331	50.7	46	00.9	49.8	132	15.7	39.2	227 23.9	56.6	101	37.6	07.3		
15	346	53.1	61	04.3	49.7	147	17.4	39.5	242 26.7	56.7	116	39.9	07.3		
16	1	55.6	76	07.8	49.6	162	19.1	39.7	257 29.5	56.7	131	42.2	07.4		
17	16	58.1	91	11.2	-15 49.6	177	20.7	-5 40.0	272 32.3	+22 56.7	146	44.5	-16 07.4		
18	32	00.5	106	14.6	-15 49.5	192	22.4	-5 40.3	287 35.1	+22 56.8	161	46.8	-16 07.4		
19	47	03.0	121	18.1	49.4	207	24.0	40.6	302 37.8	56.8	176	49.1	07.5		
20	62	05.5	136	21.5	49.4	222	25.7	40.9	317 40.6	56.8	191	51.4	07.5		
21	77	07.9	151	24.9	49.3	237	27.3	41.2	332 43.4	56.9	206	53.7	07.5		
22	92	10.4	166	28.3	49.2	252	29.0	41.5	347 46.2	56.9	221	56.0	07.6		
23	107	12.9	181	31.8	49.2	267	30.7	41.8	2 49.0	56.9	236	58.3	07.6		
24	122	15.3	196	35.2	-15 49.1	282	32.3	-5 42.1	17 51.8	+22 57.0	252	00.6	-16 07.6		
Dif	—		+35		+1	+17		-3	+28		0		+23		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 8			Edad: 21 ^d 5 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'9 SD: 15'3 PMG: 5 ^h 06 ^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	04.8	-19	30.6	285	47.5	-8	22.0	60 N	6 51	7 43	8 34	** ** *		10 04	21		
1	192	04.6		30.0	300	19.2 ¹²⁷		31.6 ⁹⁶	58	46	35	21	** ** *		10 23			
2	207	04.5		29.4	314	50.9 ¹²⁷		41.2 ⁹⁶	56	41	28	11	** ** *		15 25			
3	222	04.3		28.8	329	22.6 ¹²⁷	-8	50.7 ⁹⁵	54	37	21	8 01	** ** *		19 28			
4	237	04.1		28.3	343	54.1 ¹²⁵	-9	00.2 ⁹⁵	52	33	15	7 53	** ** *		24 28			
5	252	04.0	-19	27.7	358	25.6 ¹²⁵	-9	09.7 ⁹⁵	50	6 30	7 09	7 45	** ** *		10 27	31		
6	267	03.8	-19	27.1	12	57.1 ¹²⁵	-9	19.1 ⁹⁴	45	6 21	6 57	7 29	** ** *		10 36	33		
7	282	03.7		26.5	27	28.5 ¹²⁴		28.5 ⁹⁴	40	14	47	16	** ** *		42 36			
8	297	03.5		25.9	41	59.8 ¹²³		37.8 ⁹³	35	07	37	7 05	** ** *		48 39			
9	312	03.3		25.3	56	31.0 ¹²²		47.2 ⁹⁴	30	6 00	29	6 55	** ** *		10 53	41		
10	327	03.2		24.7	71	02.2 ¹²²	-9	56.4 ⁹²	20	5 47	14	37	** ** *		11 02	44		
11	342	03.0	-19	24.1	85	33.4 ¹²²	-10	05.7 ⁹³	10 N	5 35	6 00	6 22	23 52 54		11 10	47		
12	357	02.9	-19	23.6	100	04.4 ¹²⁰	-10	14.9 ⁹²	0	5 21	5 46	6 08	23 43 51		11 18	49		
13	12	02.7		23.0	114	35.4 ¹²⁰		24.1 ⁹²	10 S	5 05	31	5 54	34 49		25 52			
14	27	02.5		22.4	129	06.4 ¹²⁰		33.2 ⁹¹	20	4 47	5 15	38	25 46		33 55			
15	42	02.4		21.8	143	37.2 ¹¹⁸		42.3 ⁹¹	30	23	4 54	20	14 43		42 59			
16	57	02.2		21.2	158	08.0 ¹¹⁸	-10	51.3 ⁹⁰	35	4 07	42	5 10	08 41		48 60			
17	72	02.1	-19	20.6	172	38.8 ¹¹⁸	-11	00.3 ⁹⁰	40	3 49	4 27	4 58	23 01 39		11 54	62		
18	87	01.9	-19	20.0	187	09.4 ¹¹⁶	-11	09.3 ⁹⁰	45	3 25	4 09	4 44	22 53 36		12 01	65		
19	102	01.8		19.4	201	40.0 ¹¹⁶		18.2 ⁸⁹	50	2 52	3 46	26	44 33		09 69			
20	117	01.6		18.8	216	10.6 ¹¹⁶		27.0 ⁸⁸	52	35	35	18	39 32		13 70			
21	132	01.5		18.2	230	41.0 ¹¹⁴		35.9 ⁸⁹	54	2 13	22	4 08	34 30		17 72			
22	147	01.3		17.6	245	11.4 ¹¹⁴		44.6 ⁸⁷	56	1 44	3 07	3 58	29 28		22 74			
23	162	01.1		17.0	259	41.7 ¹¹³	-11	53.3 ⁸⁷	58	0 54	2 48	46	23 26		27 76			
24	177	01.0	-19	16.4	274	11.9 ¹¹²	-12	02.0 ⁸⁷	60 S	** ** *	2 25	3 32	22 16 24		12 33	79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 48 ^m 4		Mag: -4.5 PMG: 10 ^h 51 ^m			Mag: +0.4 PMG: 5 ^h 09 ^m			Mag: -2.7 PMG: 22 ^h 44 ^m			Mag: +0.6 PMG: 7 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	122	15.3	196	35.2	-15	49.1	282	32.3	-5	42.1	17	51.8	+22	57.0	252	00.6	-16	07.6
1	137	17.8	211	38.6		49.0	297	34.0		42.4	32	54.6		57.0	267	02.9		07.7
2	152	20.3	226	42.0		49.0	312	35.7		42.7	47	57.4		57.0	282	05.2		07.7
3	167	22.7	241	45.4		48.9	327	37.3		42.9	63	00.2		57.1	297	07.5		07.7
4	182	25.2	256	48.8		48.8	342	39.0		43.2	78	02.9		57.1	312	09.8		07.8
5	197	27.6	271	52.2	-15	48.8	357	40.6	-5	43.5	93	05.7	+22	57.2	327	12.1	-16	07.8
6	212	30.1	286	55.5	-15	48.7	12	42.3	-5	43.8	108	08.5	+22	57.2	342	14.4	-16	07.8
7	227	32.6	301	58.9		48.7	27	44.0		44.1	123	11.3		57.2	357	16.7		07.9
8	242	35.0	317	02.3		48.6	42	45.6		44.4	138	14.1		57.3	12	19.1		07.9
9	257	37.5	332	05.7		48.5	57	47.3		44.7	153	16.9		57.3	27	21.4		07.9
10	272	40.0	347	09.0		48.5	72	49.0		45.0	168	19.7		57.3	42	23.7		08.0
11	287	42.4	2	12.4	-15	48.4	87	50.6	-5	45.3	183	22.4	+22	57.4	57	26.0	-16	08.0
12	302	44.9	17	15.8	-15	48.4	102	52.3	-5	45.5	198	25.2	+22	57.4	72	28.3	-16	08.0
13	317	47.4	32	19.1		48.3	117	54.0		45.8	213	28.0		57.4	87	30.6		08.0
14	332	49.8	47	22.5		48.3	132	55.6		46.1	228	30.8		57.5	102	32.9		08.1
15	347	52.3	62	25.8		48.2	147	57.3		46.4	243	33.6		57.5	117	35.2		08.1
16	2	54.7	77	29.2		48.2	162	59.0		46.7	258	36.4		57.5	132	37.5		08.1
17	17	57.2	92	32.5	-15	48.1	178	00.7	-5	47.0	273	39.2	+22	57.6	147	39.8	-16	08.2
18	32	59.7	107	35.8	-15	48.0	193	02.3	-5	47.3	288	41.9	+22	57.6	162	42.1	-16	08.2
19	48	02.1	122	39.2		48.0	208	04.0		47.6	303	44.7		57.6	177	44.4		08.2
20	63	04.6	137	42.5		47.9	223	05.7		47.8	318	47.5		57.7	192	46.7		08.3
21	78	07.1	152	45.8		47.9	238	07.3		48.1	333	50.3		57.7	207	49.0		08.3
22	93	09.5	167	49.1		47.8	253	09.0		48.4	348	53.1		57.7	222	51.3		08.3
23	108	12.0	182	52.4		47.8	268	10.7		48.7	3	55.9		57.8	237	53.6		08.4
24	123	14.5	197	55.8	-15	47.8	283	12.4	-5	49.0	18	58.7	+22	57.8	252	55.9	-16	08.4
Dif	—		+34		+1		+17		-3		+28		0		+23		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 12 ^m 1			Edad: 22 ^d 5 PHE { 4 ^h : 57:2 12 ^h : 57:5 20 ^h : 57:8 SD: 15:5 PMG: 5 ^h 55 ^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	h m	h m	h m	h m		
0	177	01.0	-19	16.4	274	11.9	-12	02.0	60 N	15 53	16 43	17 35	1 15	79	10 25	27		
1	192	00.8		15.8	288	42.1 ¹¹²		10.6 ⁸⁶	58	16 05		51	40	07	77	33	29	
2	207	00.7		15.2	303	12.2 ¹¹¹		19.2 ⁸⁶	56	16	16 59	45	1 01	74	40	31		
3	222	00.5		14.6	317	42.2 ¹¹⁰		27.7 ⁸⁵	54	25	17 05	49	0 55	72	47	33		
4	237	00.4		14.0	332	12.1 ¹⁰⁹		36.1 ⁸⁴	52	33		11	52	50	70	52	35	
5	252	00.2	-19	13.4	346	42.0 ¹⁰⁹	-12	44.5 ⁸⁴	50	16 41	17 16	17 56	0 45	69	10 58	36		
6	267	00.1	-19	12.8	1	11.8 ¹⁰⁸	-12	52.9 ⁸⁴	45	16 56	17 28	18 04	0 35	66	11 09	39		
7	281	59.9		12.2	15	41.5 ¹⁰⁷	-13	01.2 ⁸³	40	17 09		39	11	26	64	18	42	
8	296	59.8		11.6	30	11.1 ¹⁰⁶		09.4 ⁸²	35	20	47	18	19	61	27	43		
9	311	59.6		11.0	44	40.7 ¹⁰⁶		17.6 ⁸²	30	30	17 56	25	13	59	34	45		
10	326	59.5		10.4	59	10.2 ¹⁰⁵		25.7 ⁸¹	20	17 47	18 10	37	0 02	56	46	48		
11	341	59.3	-19	09.8	73	39.6 ¹⁰⁴	-13	33.7 ⁸⁰	10 N	18 02	18 24	18 50	** ** *	**	11 57	50		
12	356	59.2	-19	09.2	88	08.9 ¹⁰³	-13	41.7 ⁸⁰	0	18 16	18 38	19 03	** ** *	**	12 07	53		
13	11	59.0		08.6	102	38.1 ¹⁰²		49.6 ⁷⁹	10 S	30	18 52	18	** ** *	**	17	55		
14	26	58.9		08.0	117	07.3 ¹⁰²	-13	57.5 ⁷⁹	20	18 45	19 09	19 37	** ** *	**	28	58		
15	41	58.7		07.4	131	36.4 ¹⁰¹	-14	05.3 ⁷⁸	30	19 02		29	20 00	23	57	48		
16	56	58.6		06.8	146	05.4 ¹⁰⁰		13.0 ⁷⁷	35	13	41	15	49	46	48	62		
17	71	58.4	-19	06.2	160	34.3 ⁹⁹	-14	20.6 ⁷⁶	40	19 24	19 55	20 33	23	40	44	12	56	64
18	86	58.3	-19	05.6	175	03.1 ⁹⁸	-14	28.2 ⁷⁶	45	19 38	20 13	20 56	23	29	43	13	06	66
19	101	58.1		05.0	189	31.9 ⁹⁸		35.7 ⁷⁵	50	19 56		35	21	28	17	40	18	69
20	116	58.0		04.4	204	00.5 ⁹⁶		43.2 ⁷⁵	52	20 04		46	21	44	11	38	23	71
21	131	57.8		03.7	218	29.1 ⁹⁶		50.5 ⁷³	54	13	20 58	22 05	23	04	38	29	72	
22	146	57.7		03.1	232	57.6 ⁹⁵	-14	57.8 ⁷³	56	23	21 13	22 32	22	57	36	36	74	
23	161	57.5		02.5	247	26.1 ⁹⁵	-15	05.1 ⁷³	58	35		31	23	13	49	34	43	76
24	176	57.4	-19	01.9	261	54.4 ⁹³	-15	12.2 ⁷¹	60 S	20 48	21 52	** ** *	22	40	31	13	52	78
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 44 ^m 5			Mag: -4.6 PMG: 10 ^h 46 ^m			Mag: +0.4 PMG: 5 ^h 07 ^m			Mag: -2.7 PMG: 22 ^h 40 ^m			Mag: +0.6 PMG: 7 ^h 07 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	123	14.5	197	55.8	-15	47.8	283	12.4	-5	49.0	18	58.7	+22	57.8	252	55.9	-16	08.4
1	138	16.9	212	59.1		47.7	298	14.0		49.3	34	01.4		57.8	267	58.3		08.4
2	153	19.4	228	02.4		47.7	313	15.7		49.5	49	04.2		57.9	283	00.6		08.5
3	168	21.9	243	05.7		47.6	328	17.4		49.8	64	07.0		57.9	298	02.9		08.5
4	183	24.3	258	08.9		47.6	343	19.1		50.1	79	09.8		57.9	313	05.2		08.5
5	198	26.8	273	12.2	-15	47.5	358	20.7	-5	50.4	94	12.6	+22	58.0	328	07.5	-16	08.6
6	213	29.2	288	15.5	-15	47.5	13	22.4	-5	50.7	109	15.4	+22	58.0	343	09.8	-16	08.6
7	228	31.7	303	18.8		47.4	28	24.1		51.0	124	18.1		58.0	358	12.1		08.6
8	243	34.2	318	22.1		47.4	43	25.8		51.2	139	20.9		58.1	13	14.4		08.7
9	258	36.6	333	25.3		47.4	58	27.5		51.5	154	23.7		58.1	28	16.7		08.7
10	273	39.1	348	28.6		47.3	73	29.1		51.8	169	26.5		58.1	43	19.0		08.7
11	288	41.6	3	31.9	-15	47.3	88	30.8	-5	52.1	184	29.3	+22	58.2	58	21.3	-16	08.7
12	303	44.0	18	35.1	-15	47.2	103	32.5	-5	52.4	199	32.0	+22	58.2	73	23.6	-16	08.8
13	318	46.5	33	38.4		47.2	118	34.2		52.6	214	34.8		58.2	88	26.0		08.8
14	333	49.0	48	41.6		47.2	133	35.9		52.9	229	37.6		58.3	103	28.3		08.8
15	348	51.4	63	44.9		47.1	148	37.6		53.2	244	40.4		58.3	118	30.6		08.9
16	3	53.9	78	48.1		47.1	163	39.2		53.5	259	43.2		58.3	133	32.9		08.9
17	18	56.4	93	51.3	-15	47.1	178	40.9	-5	53.8	274	45.9	+22	58.4	148	35.2	-16	08.9
18	33	58.8	108	54.6	-15	47.0	193	42.6	-5	54.1	289	48.7	+22	58.4	163	37.5	-16	09.0
19	49	01.3	123	57.8		47.0	208	44.3		54.3	304	51.5		58.4	178	39.8		09.0
20	64	03.7	139	01.0		47.0	223	46.0		54.6	319	54.3		58.5	193	42.1		09.0
21	79	06.2	154	04.2		46.9	238	47.7		54.9	334	57.1		58.5	208	44.4		09.1
22	94	08.7	169	07.4		46.9	253	49.4		55.2	349	59.8		58.5	223	46.7		09.1
23	109	11.1	184	10.6		46.9	268	51.0		55.4	5	02.6		58.6	238	49.0		09.1
24	124	13.6	199	13.8	-15	46.8	283	52.7	-5	55.7	20	05.4	+22	58.6	253	51.4	-16	09.2
Dif	—		+33		0		+17		-3		+28		0		+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 3			Edad: 23 ^d 5 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'7 SD: 15'8 PMG: 6 ^h 47 ^m 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	57.4	-19	01.9	261	54.4	-15	12.2	60 N	6 48	7 40	8 30	2 34	77	10 52	36
1	191	57.2		01.3	276	22.7	93	19.3	58	43	32	18	24	75	11 02	39
2	206	57.1		00.7	290	50.8	91	26.3	56	39	25	8 07	15	73	11 40	
3	221	56.9	-19	00.1	305	18.9	91	33.2	54	35	18	7 58	07	72	20	4
4	236	56.8	-18	59.5	319	46.9	90	40.0	52	31	13	50	2 00	71	27	43
5	251	56.7	-18	58.8	334	14.9	90	-15 46.8	50	6 28	7 07	7 43	1 54	69	11 34	44
6	266	56.5	-18	58.2	348	42.7	88	-15 53.5	45	6 20	6 55	7 27	1 41	66	11 48	46
7	281	56.4		57.6	3	10.5	88	-16 00.1	40	13	45	14	30	64	12 00	48
8	296	56.2		57.0	17	38.1	86	06.6	35	06	37	7 03	20	63	10	49
9	311	56.1		56.4	32	05.7	86	13.0	30	6 00	28	6 54	1 12	61	19	50
10	326	55.9		55.8	46	33.2	85	19.3	20	5 47	14	37	0 58	59	34	53
11	341	55.8	-18	55.1	61	00.6	84	-16 25.6	10 N	5 35	6 00	6 23	0 46	56	12 47	55
12	356	55.7	-18	54.5	75	28.0	84	-16 31.7	0	5 21	5 47	6 09	0 34	55	13 00	56
13	11	55.5		53.9	89	55.2	82	37.8	10 S	5 06	32	5 55	23	52	12	58
14	26	55.4		53.3	104	22.4	82	43.8	20	4 48	5 16	40	0 11	50	26	59
15	41	55.2		52.7	118	49.4	80	49.7	30	25	4 56	22	** ** *	**	41	62
16	56	55.1		52.0	133	16.4	80	-16 55.4	35	4 10	44	12	** ** *	**	13 50	63
17	71	54.9	-18	51.4	147	43.3	79	-17 01.1	40	3 52	4 30	5 00	** ** *	**	14 00	64
18	86	54.8	-18	50.8	162	10.2	79	-17 06.8	45	3 28	4 12	4 46	** ** *	**	14 12	66
19	101	54.7		50.2	176	36.9	77	12.3	50	2 57	3 50	29	23 57	49	27	67
20	116	54.5		49.5	191	03.6	77	17.7	52	40	39	21	49	49	34	68
21	131	54.4		48.9	205	30.1	75	23.0	54	2 20	26	12	42	47	41	70
22	146	54.3		48.3	219	56.6	75	28.2	56	1 53	3 12	4 02	33	46	50	71
23	161	54.1		47.7	234	23.0	74	33.3	58	1 12	2 54	3 50	23	44	14 59	73
24	176	54.0	-18	47.0	248	49.4	74	-17 38.3	60 S	** ** *	2 33	3 37	23 11	43	15 10	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 40 ^m 5		Mag: -4.6 PMG: 10 ^h 41 ^m		Mag: +0.4 PMG: 5 ^h 04 ^m		Mag: -2.7 PMG: 22 ^h 35 ^m		Mag: +0.6 PMG: 7 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	124	13.6	199	13.8	-15	46.8	283	52.7	-5	55.7	20	05.4	+22	58.6	253	51.4	-16	09.2
1	139	16.1	214	17.0		46.8	298	54.4		56.0	35	08.2		58.6	268	53.7		09.2
2	154	18.5	229	20.2		46.8	313	56.1		56.3	50	11.0		58.7	283	56.0		09.2
3	169	21.0	244	23.4		46.8	328	57.8		56.6	65	13.7		58.7	298	58.3		09.2
4	184	23.5	259	26.6		46.7	343	59.5		56.8	80	16.5		58.7	314	00.6		09.3
5	199	25.9	274	29.8	-15	46.7	359	01.2	-5	57.1	95	19.3	+22	58.8	329	02.9	-16	09.3
6	214	28.4	289	33.0	-15	46.7	14	02.9	-5	57.4	110	22.1	+22	58.8	344	05.2	-16	09.3
7	229	30.8	304	36.1		46.7	29	04.6		57.7	125	24.9		58.8	359	07.5		09.4
8	244	33.3	319	39.3		46.6	44	06.3		57.9	140	27.6		58.9	14	09.8		09.4
9	259	35.8	334	42.5		46.6	59	08.0		58.2	155	30.4		58.9	29	12.2		09.4
10	274	38.2	349	45.6		46.6	74	09.7		58.5	170	33.2		58.9	44	14.5		09.5
11	289	40.7	4	48.8	-15	46.6	89	11.4	-5	58.8	185	36.0	+22	59.0	59	16.8	-16	09.5
12	304	43.2	19	51.9	-15	46.5	104	13.0	-5	59.0	200	38.7	+22	59.0	74	19.1	-16	09.5
13	319	45.6	34	55.1		46.5	119	14.7		59.3	215	41.5		59.0	89	21.4		09.5
14	334	48.1	49	58.2		46.5	134	16.4		59.6	230	44.3		59.1	104	23.7		09.6
15	349	50.6	65	01.3		46.5	149	18.1	-5	59.9	245	47.1		59.1	119	26.0		09.6
16	4	53.0	80	04.5		46.5	164	19.8	-6	00.1	260	49.8		59.1	134	28.3		09.6
17	19	55.5	95	07.6	-15	46.4	179	21.5	-6	00.4	275	52.6	+22	59.2	149	30.7	-16	09.7
18	34	58.0	110	10.7	-15	46.4	194	23.2	-6	00.7	290	55.4	+22	59.2	164	33.0	-16	09.7
19	50	00.4	125	13.8		46.4	209	24.9		01.0	305	58.2		59.2	179	35.3		09.7
20	65	02.9	140	17.0		46.4	224	26.6		01.2	321	00.9		59.3	194	37.6		09.8
21	80	05.3	155	20.1		46.4	239	28.3		01.5	336	03.7		59.3	209	39.9		09.8
22	95	07.8	170	23.2		46.4	254	30.0		01.8	351	06.5		59.3	224	42.2		09.8
23	110	10.3	185	26.3		46.4	269	31.7		02.0	6	09.3		59.4	239	44.5		09.8
24	125	12.7	200	29.4	-15	46.3	284	33.4	-6	02.3	21	12.0	+22	59.4	254	46.9	-16	09.9
Dif	—		+31		0		+17		-3		+28		0		+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 24 ^d 5 PHE { 4 ^h : 59:0 12 ^h : 59:3 20 ^h : 59:6											
	PMG: 12 ^h 12 ^m 5			SD: 16:0 PMG: 7 ^h 42 ^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	
0	176	54.0	-18 47.0	248	49.4	-17 38.3	72	60 N	15 58	16 48	17 39	3 51 72		11 28 50	
1	191	53.8	46.4	263	15.6	43.2	49	58	16 10	16 55	17 44	39 70		41 51	
2	206	53.7	45.8	277	41.8	48.0	48	56	20	17 02	17 48	28 69		11 51 52	
3	221	53.6	45.2	292	07.9	52.7	47	54	29	09	18 52	19 68		12 01 53	
4	236	53.4	44.5	306	33.9	57.3	46	52	37	14	19 56	11 67		10 53	
5	251	53.3	-18 43.9	320	59.8	01.8	45	50	16 44	17 19	17 59	3 03 66		12 18 53	
6	266	53.2	-18 43.3	335	25.6	06.1	43	45	16 59	17 31	18 07	2 47 65		12 34 55	
7	281	53.0	42.6	349	51.4	10.4	43	40	17 12	41	18 14	34 64		48 55	
8	296	52.9	42.0	4	17.1	14.6	42	35	22	49	19 20	23 63		12 59 57	
9	311	52.7	41.4	18	42.7	18.6	40	30	32	17 57	19 26	2 13 62		13 09 57	
10	326	52.6	40.7	33	08.2	22.5	39	20	17 48	18 11	18 38	1 57 60		27 57	
11	341	52.5	-18 40.1	47	33.7	26.3	38	10 N	18 03	18 25	18 50	1 42 59		13 42 58	
12	356	52.3	-18 39.5	61	59.0	30.0	37	0	18 16	18 38	19 03	1 29 58		13 56 59	
13	11	52.2	38.8	76	24.3	33.6	36	10 S	30	18 52	19 18	15 57		14 10 60	
14	26	52.1	38.2	90	49.6	37.1	35	20	18 44	19 08	19 36	1 01 55		25 61	
15	41	51.9	37.6	105	14.7	40.5	34	30	19 01	19 28	19 59	0 45 54		43 61	
16	56	51.8	36.9	119	39.8	43.7	32	35	11	39	20 13	35 53		14 53 61	
17	71	51.7	-18 36.3	134	04.8	46.8	31	40	19 23	19 53	20 31	0 24 52		15 04 63	
18	86	51.5	-18 35.7	148	29.7	49.8	30	45	19 36	20 10	20 54	0 12 50		15 18 63	
19	101	51.4	35.0	162	54.6	52.7	29	50	19 53	20 32	21 24	*** ** *		34 64	
20	116	51.3	34.4	177	19.4	55.4	27	52	20 01	20 43	21 40	*** ** *		42 64	
21	131	51.2	33.7	191	44.1	58.0	26	54	10	20 55	21 59	*** ** *		15 51 64	
22	146	51.0	33.1	206	08.8	00.5	25	56	19	21 09	22 24	*** ** *		16 01 65	
23	161	50.9	32.5	220	33.4	02.9	24	58	31	21 25	23 00	*** ** *		12 65	
24	176	50.8	-18 31.8	234	57.9	05.2	23	60 S	20 44	21 46	23 00	23 54 58		16 25 66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 36 ^m 6		Mag: -4.6 PMG: 10 ^h 36 ^m		Mag: +0.4 PMG: 5 ^h 01 ^m		Mag: -2.7 PMG: 22 ^h 31 ^m		Mag: +0.5 PMG: 7 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	125	12.7	200 29.4	-15 46.3	284 33.4	-6 02.3	21 12.0	+22 59.4	254 46.9	-16 09.9
1	140	15.2	215 32.4	46.3	299 35.2	02.6	36 14.8	59.4	269 49.2	09.9
2	155	17.7	230 35.5	46.3	314 36.9	02.9	51 17.6	59.5	284 51.5	09.9
3	170	20.1	245 38.6	46.3	329 38.6	03.1	66 20.4	59.5	299 53.8	10.0
4	185	22.6	260 41.7	46.3	344 40.3	03.4	81 23.1	59.5	314 56.1	10.0
5	200	25.1	275 44.8	-15 46.3	359 42.0	-6 03.7	96 25.9	+22 59.6	329 58.4	-16 10.0
6	215	27.5	290 47.8	-15 46.3	14 43.7	-6 03.9	111 28.7	+22 59.6	345 00.7	-16 10.1
7	230	30.0	305 50.9	46.3	29 45.4	04.2	126 31.5	59.6	0 03.1	10.1
8	245	32.5	320 54.0	46.3	44 47.1	04.5	141 34.2	59.7	15 05.4	10.1
9	260	34.9	335 57.0	46.3	59 48.8	04.7	156 37.0	59.7	30 07.7	10.1
10	275	37.4	351 00.1	46.3	74 50.5	05.0	171 39.8	59.7	45 10.0	10.2
11	290	39.8	6 03.1	-15 46.2	89 52.2	-6 05.3	186 42.5	+22 59.8	60 12.3	-16 10.2
12	305	42.3	21 06.1	-15 46.2	104 53.9	-6 05.6	201 45.3	+22 59.8	75 14.6	-16 10.2
13	320	44.8	36 09.2	46.2	119 55.6	05.8	216 48.1	59.8	90 17.0	10.3
14	335	47.2	51 12.2	46.2	134 57.4	06.1	231 50.9	59.9	105 19.3	10.3
15	350	49.7	66 15.2	46.2	149 59.1	06.4	246 53.6	59.9	120 21.6	10.3
16	5	52.2	81 18.3	46.2	165 00.8	06.6	261 56.4	+22 59.9	135 23.9	10.3
17	20	54.6	96 21.3	-15 46.2	180 02.5	-6 06.9	276 59.2	+23 00.0	150 26.2	-16 10.4
18	35	57.1	111 24.3	-15 46.2	195 04.2	-6 07.2	292 01.9	+23 00.0	165 28.5	-16 10.4
19	50	59.6	126 27.3	46.2	210 05.9	07.4	307 04.7	+23 00.0	180 30.9	10.4
20	66	02.0	141 30.3	46.2	225 07.6	07.7	322 07.5	+23 00.1	195 33.2	10.5
21	81	04.5	156 33.3	46.2	240 09.4	08.0	337 10.2	00.1	210 35.5	10.5
22	96	07.0	171 36.3	46.2	255 11.1	08.2	352 13.0	00.1	225 37.8	10.5
23	111	09.4	186 39.3	46.2	270 12.8	08.5	7 15.8	00.2	240 40.1	10.6
24	126	11.9	201 42.3	-15 46.2	285 14.5	-6 08.7	22 18.6	+23 00.2	255 42.4	-16 10.6
Dif	—		+30	0	+17	-3	+28	0	+23	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 7			Edad: 25 ^d 5 PHE { SD: 16'3 PMG: 8 ^h 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	50.8	-18	31.8	234	57.9	-19	05.2	21	60 N	6 45	7 36	8 25	5 03	60	12 18 66
1	191	50.6		31.2	249	22.4 55		07.3 20	21	58	40	29	14	4 49	60	32 65
2	206	50.5		30.5	263	46.8 54		09.3 20	20	56	36	22	8 04	37	61	43 66
3	221	50.4		29.9	278	11.1 53		11.2 19	19	54	33	16	7 55	27	60	12 54 66
4	236	50.2		29.3	292	35.4 53		12.9 17	17	52	29	10	48	18	60	13 03 65
5	251	50.1	-18	28.6	306	59.6 52	-19	14.5 16	16	50	6 26	7 05	7 40	4 09	61	13 11 65
6	266	50.0	-18	28.0	321	23.8 52	-19	16.0 15	15	45	6 18	6 54	7 25	3 52	61	13 29 64
7	281	49.9		27.3	335	47.8 50		17.3 13	13	40	11	44	13	38	60	43 64
8	296	49.7		26.7	350	11.9 51		18.6 13	13	35	6 05	35	7 02	26	60	13 56 63
9	311	49.6		26.0	4	35.9 50		19.6 10	10	30	5 59	28	6 53	3 15	61	14 06 63
10	326	49.5		25.4	18	59.8 49		20.6 10	10	20	47	14	37	2 57	61	24 63
11	341	49.4	-18	24.7	33	23.7 49	-19	21.4 8	8	10 N	5 35	6 01	6 23	2 41	61	14 40 62
12	356	49.2	-18	24.1	47	47.5 48	-19	22.1 7	7	0	5 22	5 47	6 09	2 27	60	14 55 61
13	11	49.1		23.4	62	11.3 48		22.6 5	5	10 S	5 07	33	5 56	2 12	60	15 10 61
14	26	49.0		22.8	76	35.0 47		23.1 5	5	20	4 50	5 17	41	1 56	61	26 60
15	41	48.9		22.1	90	58.7 47		23.3 2	2	30	27	4 58	24	39	60	44 59
16	56	48.7		21.5	105	22.3 46		23.5 2	2	35	4 12	46	14	28	60	15 54 59
17	71	48.6	-18	20.8	119	45.9 46	-19	23.5 0	0	40	3 55	4 32	5 03	1 16	60	16 07 58
18	86	48.5	-18	20.2	134	09.5 46	-19	23.3 2	2	45	3 32	4 15	4 49	1 02	60	16 21 58
19	101	48.4		19.5	148	33.0 45		23.1 2	2	50	3 02	3 54	33	0 45	60	38 57
20	116	48.2		18.9	162	56.5 45		22.7 4	4	52	2 46	43	25	38	59	46 57
21	131	48.1		18.2	177	19.9 44		22.1 6	6	54	27	31	16	29	59	16 55 56
22	146	48.0		17.6	191	43.3 44		21.4 7	7	56	2 02	17	4 06	19	59	17 06 55
23	161	47.9		16.9	206	06.6 43		20.6 8	8	58	1 26	3 01	3 55	0 07	59	17 55
24	176	47.7	-18	16.3	220	30.0 44	-19	19.6 10	10	60 S	** **	2 40	3 42	** **	**	17 31 53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 32 ^m 7		Mag: -4.7 PMG: 10 ^h 31 ^m		Mag: +0.3 PMG: 4 ^h 58 ^m		Mag: -2.7 PMG: 22 ^h 27 ^m		Mag: +0.5 PMG: 6 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	126	11.9	201	42.3	-15	46.2	285	14.5	-6	08.7
1	141	14.3	216	45.3		46.2	300	16.2		09.0
2	156	16.8	231	48.2		46.3	315	17.9		09.3
3	171	19.3	246	51.2		46.3	330	19.7		09.5
4	186	21.7	261	54.2		46.3	345	21.4		09.8
5	201	24.2	276	57.1	-15	46.3	0	23.1	-6	10.1
6	216	26.7	292	00.1	-15	46.3	15	24.8	-6	10.3
7	231	29.1	307	03.1		46.3	30	26.6		10.6
8	246	31.6	322	06.0		46.3	45	28.3		10.9
9	261	34.1	337	08.9		46.3	60	30.0		11.1
10	276	36.5	352	11.9		46.3	75	31.7		11.4
11	291	39.0	7	14.8	-15	46.3	90	33.4	-6	11.6
12	306	41.5	22	17.8	-15	46.3	105	35.2	-6	11.9
13	321	43.9	37	20.7		46.3	120	36.9		12.2
14	336	46.4	52	23.6		46.4	135	38.6		12.4
15	351	48.8	67	26.5		46.4	150	40.4		12.7
16	6	51.3	82	29.4		46.4	165	42.1		12.9
17	21	53.8	97	32.3	-15	46.4	180	43.8	-6	13.2
18	36	56.2	112	35.2	-15	46.4	195	45.5	-6	13.5
19	51	58.7	127	38.1		46.4	210	47.3		13.7
20	67	01.2	142	41.0		46.4	225	49.0		14.0
21	82	03.6	157	43.9		46.5	240	50.7		14.2
22	97	06.1	172	46.8		46.5	255	52.5		14.5
23	112	08.6	187	49.7		46.5	270	54.2		14.8
24	127	11.0	202	52.6	-15	46.5	285	55.9	-6	15.0
Dif	—		+29		0		+17		-3	
							+28		0	
									+23	
									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 9			Edad: 26 ^d 5 PHE { 4 ^h : 60:6 12 ^h : 60:8 20 ^h : 61:0 SD: 16:5 PMG: 9 ^h 42 ^m R°: 61 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	176	47.7	-18	16.3	220	30.0	-19	19.6	60 N	16 03	16 52	17 44	6 03 47	13 24 81				
1	191	47.6		15.6	234	53.3	43	18.5	58	15	16 59	48	5 49 49	37 79				
2	206	47.5		15.0	249	16.5	42	17.3	56	24	17 06	52	38 50	49 77				
3	221	47.4		14.3	263	39.7	42	15.9	54	33	12	55	27 51	13 59 76				
4	236	47.3		13.6	278	03.0	43	14.3	52	40	18	17 59	18 52	14 08 74				
5	251	47.1	-18	13.0	292	26.1	41	-19	50	16 47	17 23	18 02	5 10 53	14 16 73				
6	266	47.0	-18	12.3	306	49.3	42	-19	45	17 02	17 34	18 09	4 53 54	14 33 71				
7	281	46.9		11.7	321	12.4	41	08.9	40	14	43	16	38 56	47 70				
8	296	46.8		11.0	335	35.5	41	06.8	35	24	51	22	26 57	14 59 68				
9	311	46.7		10.4	349	58.6	41	04.6	30	34	17 59	28	4 16 58	15 09 67				
10	326	46.5		09.7	4	21.7	41	-19	20	17 49	18 13	39	3 58 59	27 65				
11	341	46.4	-18	09.0	18	44.7	40	-18	10 N	18 03	18 25	18 51	3 42 60	15 42 63				
12	356	46.3	-18	08.4	33	07.8	41	-18	0	18 16	18 38	19 03	3 27 62	15 56 62				
13	11	46.2		07.7	47	30.8	40	54.2	10 S	30	18 52	18	3 12 63	16 11 60				
14	26	46.1		07.0	61	53.8	40	51.3	20	18 44	19 07	35	2 57 64	26 58				
15	41	46.0		06.4	76	16.8	40	48.2	30	19 01	26	19 58	39 65	43 56				
16	56	45.8		05.7	90	39.8	40	45.0	35	10	38	20 12	28 66	16 53 55				
17	71	45.7	-18	05.1	105	02.8	40	-18	40	19 21	19 52	20 29	2 16 67	17 05 53				
18	86	45.6	-18	04.4	119	25.8	40	-18	45	19 34	20 08	20 51	2 02 68	17 19 51				
19	101	45.5		03.7	133	48.8	40	34.5	50	50	29	21 20	1 45 69	35 49				
20	116	45.4		03.1	148	11.8	40	30.7	52	19 58	39	35	37 70	43 47				
21	131	45.3		02.4	162	34.8	40	26.8	54	20 06	20 51	21 53	28 71	17 51 47				
22	146	45.2		01.7	176	57.7	39	22.7	56	16	21 04	22 16	18 71	18 01 45				
23	161	45.0		01.1	191	20.7	40	18.5	58	27	20	22 49	1 06 73	12 43				
24	176	44.9	-18	00.4	205	43.7	40	-18	60 S	20 39	21 39	** **	0 52 74	18 24 41				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 28 ^m 7			Mag: -4.7 PMG: 10 ^h 27 ^m			Mag: +0.3 PMG: 4 ^h 56 ^m			Mag: -2.7 PMG: 22 ^h 22 ^m			Mag: +0.5 PMG: 6 ^h 52 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	127	11.0	202	52.6	-15	46.5	285	55.9	-6	15.0	23	24.9	+23	00.9	256	38.1	-16	11.3
1	142	13.5	217	55.4		46.5	300	57.7		15.3	38	27.7		01.0	271	40.4		11.3
2	157	15.9	232	58.3		46.6	315	59.4		15.5	53	30.5		01.0	286	42.8		11.3
3	172	18.4	248	01.2		46.6	331	01.1		15.8	68	33.2		01.0	301	45.1		11.3
4	187	20.9	263	04.0		46.6	346	02.9		16.1	83	36.0		01.1	316	47.4		11.4
5	202	23.3	278	06.9	-15	46.6	1	04.6	-6	16.3	98	38.7	+23	01.1	331	49.7	-16	11.4
6	217	25.8	293	09.7	-15	46.6	16	06.3	-6	16.6	113	41.5	+23	01.1	346	52.1	-16	11.4
7	232	28.3	308	12.6		46.7	31	08.1		16.8	128	44.3		01.2	1	54.4		11.4
8	247	30.7	323	15.4		46.7	46	09.8		17.1	143	47.0		01.2	16	56.7		11.5
9	262	33.2	338	18.3		46.7	61	11.6		17.3	158	49.8		01.2	31	59.0		11.5
10	277	35.7	353	21.1		46.7	76	13.3		17.6	173	52.6		01.3	47	01.4		11.5
11	292	38.1	8	23.9	-15	46.8	91	15.0	-6	17.8	188	55.3	+23	01.3	62	03.7	-16	11.6
12	307	40.6	23	26.7	-15	46.8	106	16.8	-6	18.1	203	58.1	+23	01.3	77	06.0	-16	11.6
13	322	43.1	38	29.6		46.8	121	18.5		18.4	219	00.8		01.3	92	08.3		11.6
14	337	45.5	53	32.4		46.8	136	20.3		18.6	234	03.6		01.4	107	10.6		11.6
15	352	48.0	68	35.2		46.9	151	22.0		18.9	249	06.4		01.4	122	13.0		11.7
16	7	50.4	83	38.0		46.9	166	23.7		19.1	264	09.1		01.4	137	15.3		11.7
17	22	52.9	98	40.8	-15	46.9	181	25.5	-6	19.4	279	11.9	+23	01.5	152	17.6	-16	11.7
18	37	55.4	113	43.6	-15	47.0	196	27.2	-6	19.6	294	14.6	+23	01.5	167	19.9	-16	11.7
19	52	57.8	128	46.4		47.0	211	29.0		19.9	309	17.4		01.5	182	22.3		11.8
20	68	00.3	143	49.2		47.0	226	30.7		20.1	324	20.2		01.6	197	24.6		11.8
21	83	02.8	158	51.9		47.1	241	32.5		20.4	339	22.9		01.6	212	26.9		11.8
22	98	05.2	173	54.7		47.1	256	34.2		20.6	354	25.7		01.6	227	29.2		11.9
23	113	07.7	188	57.5		47.1	271	36.0		20.9	9	28.4		01.6	242	31.6		11.9
24	128	10.2	204	00.3	-15	47.2	286	37.7	-6	21.1	24	31.2	+23	01.7	257	33.9	-16	11.9
Dif	—			+28			+17			-3			+28			+23		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			Edad: 27 ^d 5 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 3 20 ^h : 61 ^m 4											
	PMG: 12 ^h 13 ^m 1			SD: 16 ^h 6											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	44.9	-18 00.4	205	43.7	-18 14.2	45	60 N	6 41	7 33	8 21	6 50	35	14 45	89
1	191	44.8	-17 59.7	220	06.7	09.7	45	58	37	25	10	38	38	14 56	87
2	206	44.7	59.0	234	29.7	05.1	46	56	33	19	8 01	28	40	15 06	85
3	221	44.6	58.4	248	52.7	-18 00.4	47	54	30	13	7 52	18	42	15	82
4	236	44.5	57.7	263	15.8	-17 55.5	49	52	27	08	45	10	44	22	81
5	251	44.4	-17 57.0	277	38.8	-17 50.5	50	50	6 24	7 03	7 38	6 03	45	15 29	80
6	266	44.3	-17 56.4	292	01.9	-17 45.4	51	45	6 16	6 52	7 23	5 47	48	15 44	76
7	281	44.1	55.7	306	24.9	40.1	53	40	10	42	11	34	50	15 57	73
8	296	44.0	55.0	320	48.0	34.7	54	35	6 04	34	7 01	23	52	16 07	71
9	311	43.9	54.3	335	11.1	29.1	56	30	5 58	27	6 52	5 14	53	16	69
10	326	43.8	53.7	349	34.2	23.4	57	20	47	13	36	4 57	57	32	66
11	341	43.7	-17 53.0	3	57.4	-17 17.6	58	10 N	5 35	6 01	6 23	4 42	59	16 45	63
12	356	43.6	-17 52.3	18	20.6	-17 11.7	59	0	5 23	5 48	6 10	4 29	61	16 58	60
13	11	43.5	51.6	32	43.8	-17 05.6	61	10 S	5 08	34	5 56	15	64	17 11	57
14	26	43.4	51.0	47	07.0	-16 59.4	62	20	4 51	19	42	4 01	65	24	55
15	41	43.3	50.3	61	30.2	53.1	63	30	29	5 00	26	3 44	68	39	52
16	56	43.2	49.6	75	53.5	46.6	65	35	4 15	4 48	16	34	70	48	50
17	71	43.0	-17 48.9	90	16.8	-16 40.1	65	40	3 58	4 35	5 05	3 23	72	17 58	47
18	86	42.9	-17 48.3	104	40.1	-16 33.4	67	45	3 36	4 18	4 52	3 10	74	18 10	44
19	101	42.8	47.6	119	03.5	26.5	69	50	3 07	3 58	36	2 54	77	24	41
20	116	42.7	46.9	133	26.9	19.6	69	52	2 52	47	29	47	78	30	40
21	131	42.6	46.2	147	50.3	12.5	71	54	33	36	20	39	79	38	38
22	146	42.5	45.5	162	13.8	-16 05.3	72	56	2 10	22	11	29	82	46	36
23	161	42.4	44.9	176	37.3	-15 58.0	73	58	1 38	3 07	4 00	19	83	18 55	33
24	176	42.3	-17 44.2	191	00.9	-15 50.6	74	60 S	** **	2 47	3 48	2 06	86	19 05	31

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 24 ^m 8		Mag: -4.7 PMG: 10 ^h 22 ^m			Mag: +0.3 PMG: 4 ^h 53 ^m			Mag: -2.6 PMG: 22 ^h 18 ^m			Mag: +0.5 PMG: 6 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	128	10.2	204	00.3	-15 47.2	286	37.7	-6 21.1	24	31.2	+23 01.7	257	33.9	-16 11.9	
1	143	12.6	219	03.0	47.2	301	39.5	21.4	39	33.9	01.7	272	36.2	11.9	
2	158	15.1	234	05.8	47.2	316	41.2	21.6	54	36.7	01.7	287	38.5	12.0	
3	173	17.6	249	08.5	47.3	331	43.0	21.9	69	39.5	01.8	302	40.9	12.0	
4	188	20.0	264	11.3	47.3	346	44.7	22.1	84	42.2	01.8	317	43.2	12.0	
5	203	22.5	279	14.0	-15 47.3	1	46.5	-6 22.4	99	45.0	+23 01.8	332	45.5	-16 12.0	
6	218	24.9	294	16.8	-15 47.4	16	48.2	-6 22.6	114	47.7	+23 01.9	347	47.9	-16 12.1	
7	233	27.4	309	19.5	47.4	31	50.0	22.9	129	50.5	01.9	2	50.2	12.1	
8	248	29.9	324	22.2	47.4	46	51.7	23.1	144	53.2	01.9	17	52.5	12.1	
9	263	32.3	339	25.0	47.5	61	53.5	23.4	159	56.0	02.0	32	54.8	12.1	
10	278	34.8	354	27.7	47.5	76	55.2	23.6	174	58.7	02.0	47	57.2	12.2	
11	293	37.3	9	30.4	-15 47.6	91	57.0	-6 23.9	190	01.5	+23 02.0	62	59.5	-16 12.2	
12	308	39.7	24	33.1	-15 47.6	106	58.8	-6 24.1	205	04.3	+23 02.0	78	01.8	-16 12.2	
13	323	42.2	39	35.8	47.6	122	00.5	24.4	220	07.0	02.1	93	04.1	12.3	
14	338	44.7	54	38.5	47.7	137	02.3	24.6	235	09.8	02.1	108	06.5	12.3	
15	353	47.1	69	41.2	47.7	152	04.0	24.9	250	12.5	02.1	123	08.8	12.3	
16	8	49.6	84	43.9	47.8	167	05.8	25.1	265	15.3	02.2	138	11.1	12.3	
17	23	52.1	99	46.6	-15 47.8	182	07.5	-6 25.4	280	18.0	+23 02.2	153	13.5	-16 12.4	
18	38	54.5	114	49.3	-15 47.8	197	09.3	-6 25.6	295	20.8	+23 02.2	168	15.8	-16 12.4	
19	53	57.0	129	52.0	47.9	212	11.1	25.9	310	23.5	02.3	183	18.1	12.4	
20	68	59.4	144	54.7	47.9	227	12.8	26.1	325	26.3	02.3	198	20.4	12.4	
21	84	01.9	159	57.3	48.0	242	14.6	26.3	340	29.0	02.3	213	22.8	12.5	
22	99	04.4	175	00.0	48.0	257	16.4	26.6	355	31.8	02.3	228	25.1	12.5	
23	114	06.8	190	02.7	48.1	272	18.1	26.8	10	34.5	02.4	243	27.4	12.5	
24	129	09.3	205	05.3	-15 48.1	287	19.9	-6 27.1	25	37.3	+23 02.4	258	29.8	-16 12.5	
Dif	—		+27	0		+18	-2		+28		0	+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 3			Edad: 28 ^d 5 PHE { SD: 16:7 PMG: 11 ^h 44 ^m 4 ^h : 61:4 12 ^h : 61:4 20 ^h : 61:4 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	
0	176	42.3	-17 44.2	191	00.9	-15 50.6	75	60 N	16 09	16 57	17 48	7 25 27		16 14 94	
1	191	42.2	43.5	205	24.4	43.1	75	58	19	17 04	52	16 30		23 90	
2	206	42.1	42.8	219	48.1	35.4	77	56	28	10	55	08 32		31 87	
3	221	42.0	42.1	234	11.7	27.6	78	54	37	16	17 59	7 00 35		37 86	
4	236	41.9	41.4	248	35.4	19.8	78	52	44	21	18 02	6 54 36		43 83	
5	251	41.8	-17 40.8	262	59.2	-15 11.8	80	50	16 51	17 26	18 05	6 48 38		16 49 81	
6	266	41.7	-17 40.1	277	23.0	-15 03.7	81	45	17 05	17 36	18 12	6 35 42		17 00 78	
7	281	41.6	39.4	291	46.8	-14 55.4	83	40	17	45	18	24 45		10 74	
8	296	41.5	38.7	306	10.7	47.1	83	35	27	17 53	24	15 47		18 72	
9	311	41.4	38.0	320	34.7	38.7	84	30	35	18 01	29	6 07 50		25 69	
10	326	41.3	37.3	334	58.6	30.1	86	20	17 51	14	40	5 54 52		38 65	
11	341	41.2	-17 36.6	349	22.7	-14 21.5	86	10 N	18 04	18 26	18 51	5 41 57		17 48 62	
12	356	41.1	-17 36.0	3	46.8	-14 12.8	87	0	18 17	18 38	19 04	5 30 59		17 58 58	
13	11	41.0	35.3	18	10.9	-14 03.9	89	10 S	30	18 52	18	19 62		18 08 55	
14	26	40.9	34.6	32	35.1	-13 55.0	89	20	43	19 07	34	5 06 66		19 51	
15	41	40.8	33.9	46	59.3	45.9	91	30	18 59	25	19 56	4 52 70		31 47	
16	56	40.7	33.2	61	23.6	36.8	91	35	19 09	36	20 10	44 72		38 44	
17	71	40.6	-17 32.5	75	47.9	-13 27.6	92	40	19 19	19 50	20 27	4 35 74		18 45 43	
18	86	40.5	-17 31.8	90	12.3	-13 18.2	94	45	19 32	20 06	20 48	4 24 77		18 54 39	
19	101	40.4	31.1	104	36.8	-13 08.8	94	50	48	26	21 16	11 81		19 05 35	
20	116	40.3	30.4	119	01.3	-12 59.3	95	52	19 55	36	30	4 05 82		10 34	
21	131	40.2	29.7	133	25.9	49.7	96	54	20 03	20 47	21 48	3 58 85		16 31	
22	146	40.1	29.0	147	50.5	40.0	97	56	12	21 00	22 09	51 86		22 29	
23	161	40.0	28.4	162	15.2	30.2	98	58	22	15	22 38	42 89		28 27	
24	176	39.9	-17 27.7	176	39.9	-12 20.4	98	60 S	20 34	21 33	23 29	3 32 92		19 36 24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 15 ^h 20 ^m 9		Mag: -4.7 PMG: 10 ^h 18 ^m		Mag: +0.3 PMG: 4 ^h 50 ^m		Mag: -2.6 PMG: 22 ^h 13 ^m		Mag: +0.5 PMG: 6 ^h 45 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	129	09.3	205	05.3	-15 48.1	287	19.9	-6 27.1	25 37.3	+23 02.4	258	29.8	-16 12.5		
1	144	11.8	220	08.0	48.2	302	21.7	27.3	40 40.0	02.4	273	32.1	12.6		
2	159	14.2	235	10.6	48.2	317	23.4	27.6	55 42.8	02.5	288	34.4	12.6		
3	174	16.7	250	13.3	48.3	332	25.2	27.8	70 45.5	02.5	303	36.7	12.6		
4	189	19.2	265	15.9	48.3	347	27.0	28.1	85 48.3	02.5	318	39.1	12.6		
5	204	21.6	280	18.5	-15 48.3	2	28.7	-6 28.3	100 51.0	+23 02.5	333	41.4	-16 12.7		
6	219	24.1	295	21.2	-15 48.4	17	30.5	-6 28.5	115 53.8	+23 02.6	348	43.7	-16 12.7		
7	234	26.6	310	23.8	48.4	32	32.3	28.8	130 56.5	02.6	3	46.1	12.7		
8	249	29.0	325	26.4	48.5	47	34.0	29.0	145 59.3	02.6	18	48.4	12.7		
9	264	31.5	340	29.0	48.6	62	35.8	29.3	161 02.0	02.7	33	50.7	12.8		
10	279	33.9	355	31.7	48.6	77	37.6	29.5	176 04.8	02.7	48	53.1	12.8		
11	294	36.4	10	34.3	-15 48.7	92	39.3	-6 29.8	191 07.5	+23 02.7	63	55.4	-16 12.8		
12	309	38.9	25	36.9	-15 48.7	107	41.1	-6 30.0	206 10.3	+23 02.8	78	57.7	-16 12.8		
13	324	41.3	40	39.5	48.8	122	42.9	30.2	221 13.0	02.8	94	00.1	12.9		
14	339	43.8	55	42.1	48.8	137	44.7	30.5	236 15.8	02.8	109	02.4	12.9		
15	354	46.3	70	44.7	48.9	152	46.4	30.7	251 18.5	02.8	124	04.7	12.9		
16	9	48.7	85	47.2	48.9	167	48.2	31.0	266 21.3	02.9	139	07.0	12.9		
17	24	51.2	100	49.8	-15 49.0	182	50.0	-6 31.2	281 24.0	+23 02.9	154	09.4	-16 13.0		
18	39	53.7	115	52.4	-15 49.0	197	51.8	-6 31.4	296 26.8	+23 02.9	169	11.7	-16 13.0		
19	54	56.1	130	55.0	49.1	212	53.5	31.7	311 29.5	03.0	184	14.0	13.0		
20	69	58.6	145	57.5	49.1	227	55.3	31.9	326 32.3	03.0	199	16.4	13.0		
21	85	01.0	161	00.1	49.2	242	57.1	32.1	341 35.0	03.0	214	18.7	13.1		
22	100	03.5	176	02.7	49.3	257	58.9	32.4	356 37.8	03.0	229	21.0	13.1		
23	115	06.0	191	05.2	49.3	273	00.7	32.6	11 40.5	03.1	244	23.4	13.1		
24	130	08.4	206	07.8	-15 49.4	288	02.4	-6 32.9	26 43.3	+23 03.1	259	25.7	-16 13.1		
Dif	—		+26	-1		+18	-2		+27	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 4			Edad: 0 ^d 1 PHE { 4 ^h : 61/3 12 ^h : 61/2 20 ^h : 61/1 PMG: 12 ^h 43 ^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	176	39.9	-17 27.7	176	39.9	-12 20.4	60 N	6 38	7 29	8 16	7 52	22	17 48	92	
1	191	39.8	27.0	191	04.7 58	10.4 100	58	34	22	8 06	46	24	53	90	
2	206	39.7	26.3	205	29.5 58	-12 00.4 100	56	30	16	7 57	40	27	17 58	87	
3	221	39.6	25.6	219	54.4 59	-11 50.3 101	54	27	10	49	35	29	18 03	84	
4	236	39.5	24.9	234	19.4 60	40.1 102	52	24	05	42	30	31	06	83	
5	251	39.4	-17 24.2	248	44.4 60	-11 29.9 102	50	6 21	7 00	7 35	7 26	33	18 10	81	
6	266	39.3	-17 23.5	263	09.5 61	-11 19.5 104	45	6 15	6 50	7 21	7 17	36	18 18	76	
7	281	39.2	22.8	277	34.7 62	-11 09.1 104	40	08	41	10	09	40	24	73	
8	296	39.1	22.1	291	59.9 62	-10 58.6 105	35	6 03	33	7 00	7 02	43	30	70	
9	311	39.0	21.4	306	25.1 62	48.1 105	30	5 57	26	6 51	6 57	45	34	68	
10	326	38.9	20.7	320	50.5 64	37.5 106	20	46	13	36	46	50	43	63	
11	341	38.8	-17 20.0	335	15.9 64	-10 26.8 107	10 N	5 35	6 01	6 22	6 38	53	18 50	59	
12	356	38.8	-17 19.3	349	41.3 64	-10 16.0 108	0	5 23	5 48	6 10	6 29	57	18 56	56	
13	11	38.7	18.6	4	06.8 65	-10 05.2 108	10 S	5 09	35	5 57	21	60	19 03	52	
14	26	38.6	17.9	18	32.4 66	-9 54.3 109	20	4 52	20	43	12	64	10	48	
15	41	38.5	17.2	32	58.0 66	43.4 109	30	31	5 02	28	6 02	68	18	44	
16	56	38.4	16.5	47	23.7 67	32.4 110	35	17	4 51	18	5 56	71	22	42	
17	71	38.3	-17 15.8	61	49.5 68	-9 21.3 111	40	4 01	4 38	5 08	5 49	74	19 28	38	
18	86	38.2	-17 15.1	76	15.3 68	-9 10.2 111	45	3 40	4 22	4 55	5 41	77	19 33	36	
19	101	38.1	14.4	90	41.2 69	-8 59.1 111	50	3 11	4 01	40	32	81	40	32	
20	116	38.0	13.7	105	07.1 69	47.9 112	52	2 57	3 52	32	27	83	44	29	
21	131	37.9	12.9	119	33.1 70	36.6 113	54	40	41	24	23	85	47	28	
22	146	37.9	12.2	133	59.2 71	25.3 113	56	2 18	28	15	17	88	51	25	
23	161	37.8	11.5	148	25.3 71	13.9 114	58	1 49	3 13	4 05	11	90	19 55	23	
24	176	37.7	-17 10.8	162	51.5 72	-8 02.5 114	60 S	0 59	2 55	3 53	5 04	93	20 00	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 16 ^m 9		Mag: -4.8 PMG: 10 ^h 14 ^m		Mag: +0.3 PMG: 4 ^h 47 ^m		Mag: -2.6 PMG: 22 ^h 09 ^m		Mag: +0.5 PMG: 6 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	°	°	°	°	°
0	130	08.4	206	07.8 -15 49.4	288	02.4 -6 32.9	26	43.3 +23 03.1	259	25.7 -16 13.1
1	145	10.9	221	10.3 49.4	303	04.2 33.1	41	46.0 03.1	274	28.0 13.2
2	160	13.4	236	12.9 49.5	318	06.0 33.3	56	48.7 03.2	289	30.4 13.2
3	175	15.8	251	15.4 49.6	333	07.8 33.6	71	51.5 03.2	304	32.7 13.2
4	190	18.3	266	17.9 49.6	348	09.6 33.8	86	54.2 03.2	319	35.0 13.2
5	205	20.8	281	20.5 -15 49.7	3	11.4 -6 34.0	101	57.0 +23 03.2	334	37.4 -16 13.3
6	220	23.2	296	23.0 -15 49.7	18	13.1 -6 34.3	116	59.7 +23 03.3	349	39.7 -16 13.3
7	235	25.7	311	25.5 49.8	33	14.9 34.5	132	02.5 03.3	4	42.0 13.3
8	250	28.2	326	28.0 49.9	48	16.7 34.7	147	05.2 03.3	19	44.4 13.3
9	265	30.6	341	30.5 49.9	63	18.5 35.0	162	08.0 03.4	34	46.7 13.4
10	280	33.1	356	33.1 50.0	78	20.3 35.2	177	10.7 03.4	49	49.0 13.4
11	295	35.5	11	35.6 -15 50.0	93	22.1 -6 35.5	192	13.4 +23 03.4	64	51.4 -16 13.4
12	310	38.0	26	38.1 -15 50.1	108	23.9 -6 35.7	207	16.2 +23 03.4	79	53.7 -16 13.4
13	325	40.5	41	40.5 50.2	123	25.7 35.9	222	18.9 03.5	94	56.1 13.5
14	340	42.9	56	43.0 50.2	138	27.5 36.2	237	21.7 03.5	109	58.4 13.5
15	355	45.4	71	45.5 50.3	153	29.2 36.4	252	24.4 03.5	125	00.7 13.5
16	10	47.9	86	48.0 50.4	168	31.0 36.6	267	27.2 03.6	140	03.1 13.5
17	25	50.3	101	50.5 -15 50.4	183	32.8 -6 36.9	282	29.9 +23 03.6	155	05.4 -16 13.5
18	40	52.8	116	52.9 -15 50.5	198	34.6 -6 37.1	297	32.6 +23 03.6	170	07.7 -16 13.6
19	55	55.3	131	55.4 50.6	213	36.4 37.3	312	35.4 03.6	185	10.1 13.6
20	70	57.7	146	57.9 50.6	228	38.2 37.5	327	38.1 03.7	200	12.4 13.6
21	86	00.2	162	00.3 50.7	243	40.0 37.8	342	40.9 03.7	215	14.7 13.6
22	101	02.7	177	02.8 50.8	258	41.8 38.0	357	43.6 03.7	230	17.1 13.7
23	116	05.1	192	05.2 50.8	273	43.6 38.2	12	46.3 03.8	245	19.4 13.7
24	131	07.6	207	07.7 -15 50.9	288	45.4 -6 38.5	27	49.1 +23 03.8	260	21.8 -16 13.7
Dif	—		+25	-1	+18	-2	+27	0	+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 6			Edad: 1 ^d 1 PHE { 4 ^h : 60'9 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	176	37.7	-17	10.8	162	51.5	-8	02.5	60 N	16 14	17 01	17 52	8 14 18	19 20 90				
1	191	37.6		10.1	177	17.7 72	-7	51.1 ¹¹⁴	58	24	08	56	10 21	23 87				
2	206	37.5		09.4	191	44.0 73		39.6 ¹¹⁵	56	33	14	17 59	07 23	25 85				
3	221	37.4		08.7	206	10.4 74		28.0 ¹¹⁶	54	41	19	18 02	04 26	27 82				
4	236	37.3		08.0	220	36.8 74		16.4 ¹¹⁶	52	48	24	05	8 01 28	29 80				
5	251	37.2	-17	07.3	235	03.3 75	-7	04.8 ¹¹⁶	50	16 54	17 29	18 08	7 59 29	19 31 78				
6	266	37.2	-17	06.6	249	29.8 75	-6	53.2 ¹¹⁶	45	17 08	17 39	18 14	7 53 34	19 34 74				
7	281	37.1		05.9	263	56.4 76		41.5 ¹¹⁷	40	19	48	20	49 37	37 71				
8	296	37.0		05.2	278	23.1 77		29.8 ¹¹⁷	35	29	17 55	25	45 40	40 67				
9	311	36.9		04.4	292	49.8 77		18.0 ¹¹⁸	30	37	18 02	31	42 42	42 65				
10	326	36.8		03.7	307	16.6 78	-6	06.3 ¹¹⁷	20	17 52	15	41	36 47	46 60				
11	341	36.7	-17	03.0	321	43.5 79	-5	54.5 ¹¹⁸	10 N	18 05	18 27	18 52	7 31 50	19 49 57				
12	356	36.6	-17	02.3	336	10.4 79	-5	42.6 ¹¹⁹	0	18 17	18 39	19 04	7 26 54	19 52 53				
13	11	36.6		01.6	350	37.3 79		30.8 ¹¹⁸	10 S	29	18 52	17	21 58	55 49				
14	26	36.5		00.9	5	04.3 80		18.9 ¹¹⁹	20	43	19 06	34	16 62	19 58 46				
15	41	36.4	-17	00.2	19	31.4 81	-5	07.0 ¹¹⁹	30	18 58	24	19 55	10 66	20 02 41				
16	56	36.3	-16	59.4	33	58.5 81	-4	55.1 ¹¹⁹	35	19 07	35	20 08	07 68	04 38				
17	71	36.2	-16	58.7	48	25.7 82	-4	43.2 ¹¹⁹	40	19 18	19 47	20 24	7 03 71	20 06 36				
18	86	36.2	-16	58.0	62	53.0 83	-4	31.2 ¹²⁰	45	19 30	20 03	20 44	6 58 75	20 09 32				
19	101	36.1		57.3	77	20.3 83		19.2 ¹²⁰	50	45	22	21 12	53 79	12 29				
20	116	36.0		56.6	91	47.6 83	-4	07.3 ¹¹⁹	52	52	32	25	50 82	13 27				
21	131	35.9		55.9	106	15.1 85	-3	55.3 ¹²⁰	54	19 59	43	21 42	48 83	15 25				
22	146	35.8		55.1	120	42.5 84		43.3 ¹²⁰	56	20 08	20 55	22 02	45 85	16 23				
23	161	35.8		54.4	135	10.0 85		31.2 ¹²¹	58	18	21 09	22 29	41 88	18 21				
24	176	35.7	-16	53.7	149	37.6 86	-3	19.2 ¹²⁰	60 S	20 29	21 26	23 09	6 37 92	20 20 19				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 15 ^h 13 ^m 0		Mag: -4.8 PMG: 10 ^h 10 ^m			Mag: +0.2 PMG: 4 ^h 44 ^m			Mag: -2.6 PMG: 22 ^h 05 ^m			Mag: +0.5 PMG: 6 ^h 38 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	131	07.6	207	07.7	-15	50.9	288	45.4	-6	38.5	27	49.1	+23	03.8	260	21.8	-16	13.7
1	146	10.0	222	10.1		51.0	303	47.2		38.7	42	51.8		03.8	275	24.1		13.7
2	161	12.5	237	12.6		51.1	318	49.0		38.9	57	54.6		03.8	290	26.4		13.8
3	176	15.0	252	15.0		51.1	333	50.8		39.2	72	57.3		03.9	305	28.8		13.8
4	191	17.4	267	17.4		51.2	348	52.6		39.4	88	00.0		03.9	320	31.1		13.8
5	206	19.9	282	19.8	-15	51.3	3	54.4	-6	39.6	103	02.8	+23	03.9	335	33.4	-16	13.8
6	221	22.4	297	22.3	-15	51.3	18	56.2	-6	39.8	118	05.5	+23	04.0	350	35.8	-16	13.9
7	236	24.8	312	24.7		51.4	33	58.0		40.1	133	08.2		04.0	5	38.1		13.9
8	251	27.3	327	27.1		51.5	48	59.8		40.3	148	11.0		04.0	20	40.5		13.9
9	266	29.8	342	29.5		51.6	64	01.6		40.5	163	13.7		04.0	35	42.8		13.9
10	281	32.2	357	31.9		51.6	79	03.4		40.8	178	16.5		04.1	50	45.1		13.9
11	296	34.7	12	34.3	-15	51.7	94	05.2	-6	41.0	193	19.2	+23	04.1	65	47.5	-16	14.0
12	311	37.1	27	36.7	-15	51.8	109	07.0	-6	41.2	208	21.9	+23	04.1	80	49.8	-16	14.0
13	326	39.6	42	39.1		51.9	124	08.8		41.4	223	24.7		04.1	95	52.1		14.0
14	341	42.1	57	41.5		51.9	139	10.6		41.7	238	27.4		04.2	110	54.5		14.0
15	356	44.5	72	43.8		52.0	154	12.5		41.9	253	30.1		04.2	125	56.8		14.1
16	11	47.0	87	46.2		52.1	169	14.3		42.1	268	32.9		04.2	140	59.2		14.1
17	26	49.5	102	48.6	-15	52.2	184	16.1	-6	42.3	283	35.6	+23	04.3	156	01.5	-16	14.1
18	41	51.9	117	51.0	-15	52.2	199	17.9	-6	42.6	298	38.3	+23	04.3	171	03.8	-16	14.1
19	56	54.4	132	53.3		52.3	214	19.7		42.8	313	41.1		04.3	186	06.2		14.1
20	71	56.9	147	55.7		52.4	229	21.5		43.0	328	43.8		04.3	201	08.5		14.2
21	86	59.3	162	58.0		52.5	244	23.3		43.2	343	46.5		04.4	216	10.9		14.2
22	102	01.8	178	00.4		52.5	259	25.1		43.5	358	49.3		04.4	231	13.2		14.2
23	117	04.3	193	02.7		52.6	274	26.9		43.7	13	52.0		04.4	246	15.5		14.2
24	132	06.7	208	05.1	-15	52.7	289	28.8	-6	43.9	28	54.7	+23	04.5	261	17.9	-16	14.3
Dif	—		+24		-1		+18		-2		+27		0		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 2 ^d 1 PHE { 4 ^h : 60/2 12 ^h : 59/9 20 ^h : 59/6 PMG: 14 ^h 33 ^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	m
0	176	35.7	-16	53.7	149	37.6	-3	19.2	60 N	6 34	7 25	8 12	8 32	18	20	50	87
1	191	35.6		53.0	164	05.2	86	-3	07.2	58	31	18	8 02	31	20	50	84
2	206	35.5		52.3	178	32.9	87	-2	55.1	56	27	12	7 53	30	23	50	81
3	221	35.4		51.5	193	00.7	88		43.1	54	24	07	45	30	24	49	79
4	236	35.4		50.8	207	28.4	87		31.1	52	21	7 02	39	29	26	49	77
5	251	35.3	-16	50.1	221	56.3	89	-2	19.0	50	6 19	6 58	7 32	8 28	29	20	49 75
6	266	35.2	-16	49.4	236	24.2	89	-2	07.0	45	6 13	6 48	7 19	8 27	32	20	48 72
7	281	35.1		48.6	250	52.1	89	-1	54.9	40	07	39	7 08	26	35	48	68
8	296	35.0		47.9	265	20.1	90		42.9	35	6 01	32	6 58	25	38	47	66
9	311	35.0		47.2	279	48.1	90		30.9	30	5 56	25	50	24	40	47	63
10	326	34.9		46.5	294	16.2	91		18.9	20	46	12	35	23	44	46	59
11	341	34.8	-16	45.7	308	44.3	91	-1	06.8	10 N	5 35	6 00	6 22	8 21	49	20	46 54
12	356	34.7	-16	45.0	323	12.5	92	-0	54.8	0	5 23	5 49	6 10	8 20	52	20	45 51
13	11	34.7		44.3	337	40.7	92		42.8	10 S	5 10	36	5 58	19	55	44	48
14	26	34.6		43.6	352	09.0	93		30.8	20	4 54	21	45	18	59	44	44
15	41	34.5		42.8	6	37.3	93		18.9	30	33	5 04	29	16	64	43	40
16	56	34.4		42.1	21	05.7	94	-0	06.9	35	20	4 53	20	15	67	42	38
17	71	34.4	-16	41.4	35	34.1	94	+0	05.0	40	4 04	4 40	5 10	8 14	70	20	42 35
18	86	34.3	-16	40.7	50	02.6	95	+0	17.0	45	3 43	4 25	4 58	8 13	73	20	41 32
19	101	34.2		39.9	64	31.1	95		28.9	50	16	4 05	43	12	77	41	28
20	116	34.2		39.2	78	59.6	95		40.8	52	3 02	3 56	36	12	78	40	27
21	131	34.1		38.5	93	28.2	96	+0	52.6	54	2 46	45	29	11	80	40	24
22	146	34.0		37.7	107	56.8	96	+1	04.5	56	2 26	33	20	10	83	39	23
23	161	33.9		37.0	122	25.5	97		16.3	58	1 59	19	4 10	09	86	39	20
24	176	33.9	-16	36.3	136	54.2	97	+1	28.1	60 S	1 19	3 02	3 59	8 09	88	20	39 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 09 ^m 1		Mag: -4.8 PMG: 10 ^h 06 ^m		Mag: +0.2 PMG: 4 ^h 42 ^m		Mag: -2.6 PMG: 22 ^h 00 ^m		Mag: +0.5 PMG: 6 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	132	06.7	208	05.1	-15	52.7	289	28.8	-6	43.9	28	54.7	+23	04.5	261	17.9	-16	14.3
1	147	09.2	223	07.4		52.8	304	30.6		44.1	43	57.5		04.5	276	20.2		14.3
2	162	11.6	238	09.7		52.9	319	32.4		44.4	59	00.2		04.5	291	22.6		14.3
3	177	14.1	253	12.1		52.9	334	34.2		44.6	74	02.9		04.5	306	24.9		14.3
4	192	16.6	268	14.4		53.0	349	36.0		44.8	89	05.7		04.6	321	27.3		14.4
5	207	19.0	283	16.7	-15	53.1	4	37.8	-6	45.0	104	08.4	+23	04.6	336	29.6	-16	14.4
6	222	21.5	298	19.0	-15	53.2	19	39.7	-6	45.2	119	11.1	+23	04.6	351	31.9	-16	14.4
7	237	24.0	313	21.3		53.3	34	41.5		45.5	134	13.9		04.6	6	34.3		14.4
8	252	26.4	328	23.6		53.4	49	43.3		45.7	149	16.6		04.7	21	36.6		14.4
9	267	28.9	343	25.9		53.4	64	45.1		45.9	164	19.3		04.7	36	39.0		14.5
10	282	31.4	358	28.2		53.5	79	46.9		46.1	179	22.0		04.7	51	41.3		14.5
11	297	33.8	13	30.5	-15	53.6	94	48.8	-6	46.3	194	24.8	+23	04.7	66	43.7	-16	14.5
12	312	36.3	28	32.8	-15	53.7	109	50.6	-6	46.6	209	27.5	+23	04.8	81	46.0	-16	14.5
13	327	38.8	43	35.1		53.8	124	52.4		46.8	224	30.2		04.8	96	48.3		14.5
14	342	41.2	58	37.4		53.9	139	54.2		47.0	239	33.0		04.8	111	50.7		14.6
15	357	43.7	73	39.7		53.9	154	56.1		47.2	254	35.7		04.9	126	53.0		14.6
16	12	46.1	88	41.9		54.0	169	57.9		47.4	269	38.4		04.9	141	55.4		14.6
17	27	48.6	103	44.2	-15	54.1	184	59.7	-6	47.7	284	41.1	+23	04.9	156	57.7	-16	14.6
18	42	51.1	118	46.5	-15	54.2	200	01.6	-6	47.9	299	43.9	+23	04.9	172	00.1	-16	14.7
19	57	53.5	133	48.7		54.3	215	03.4		48.1	314	46.6		05.0	187	02.4		14.7
20	72	56.0	148	51.0		54.4	230	05.2		48.3	329	49.3		05.0	202	04.7		14.7
21	87	58.5	163	53.2		54.5	245	07.0		48.5	344	52.1		05.0	217	07.1		14.7
22	103	00.9	178	55.5		54.5	260	08.9		48.7	359	54.8		05.0	232	09.4		14.7
23	118	03.4	193	57.7		54.6	275	10.7		49.0	14	57.5		05.1	247	11.8		14.8
24	133	05.9	209	00.0	-15	54.7	290	12.5	-6	49.2	30	00.2	+23	05.1	262	14.1	-16	14.8
Dif	—		+23		-1		+18		-2		+27		0		+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 8			Edad: 3 ^d 1 PHE { 4 ^h : 59'3 12 ^h : 59'0 20 ^h : 58'7 R°: 51 ^m SD: 16'2 PMG: 15 ^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	m	m	m		
0	176	33.9	-16	36.3	136	54.2	+1	28.1	60 N	16 19	17 06	17 56	8 50 18	22 17 83				
1	191	33.8		35.5	151	22.9	97	39.9	58	29	12	18 00	51 21	14 80				
2	206	33.7		34.8	165	51.7	98	+1 51.7	56	37	18	03	53 22	11 78				
3	221	33.7		34.1	180	20.5	98	+2 03.4	54	45	23	06	54 25	08 76				
4	236	33.6		33.3	194	49.4	99	15.1	52	51	28	08	55 27	06 74				
5	251	33.5	-16	32.6	209	18.3	99	+2 26.7	50	16 57	17 32	18 11	8 57 28	22 04 72				
6	266	33.5	-16	31.9	223	47.3	100	+2 38.4	45	17 11	17 42	18 17	8 59 32	22 00 68				
7	281	33.4		31.1	238	16.2	99	+2 50.0	40	21	50	22	9 01 35	21 56 65				
8	296	33.3		30.4	252	45.3	101	+3 01.6	35	31	17 57	27	03 37	53 62				
9	311	33.3		29.7	267	14.3	100	13.1	30	39	18 04	32	04 40	50 60				
10	326	33.2		28.9	281	43.4	101	24.6	20	17 53	16	42	07 44	45 56				
11	341	33.1	-16	28.2	296	12.5	101	+3 36.1	10 N	18 05	18 27	18 53	9 10 47	21 40 54				
12	356	33.0	-16	27.4	310	41.7	102	+3 47.5	0	18 17	18 39	19 04	9 12 51	21 36 50				
13	11	33.0		26.7	325	10.8	101	+3 58.9	10 S	29	18 51	17	14 54	32 47				
14	26	32.9		26.0	339	40.1	103	+4 10.2	20	42	19 05	33	17 58	28 43				
15	41	32.9		25.2	354	09.3	102	21.6	30	18 57	23	19 53	20 62	23 40				
16	56	32.8		24.5	8	38.6	103	32.8	35	19 06	33	20 06	22 64	20 38				
17	71	32.7	-16	23.7	23	07.9	103	+4 44.1	40	19 16	19 45	20 22	9 24 66	21 17 35				
18	86	32.7	-16	23.0	37	37.2	103	+4 55.2	45	19 27	20 00	20 41	9 26 70	21 13 32				
19	101	32.6		22.3	52	06.6	104	+5 06.4	50	42	19	21 07	29 73	09 28				
20	116	32.5		21.5	66	36.0	104	17.5	52	48	28	20	30 75	07 27				
21	131	32.5		20.8	81	05.5	105	28.5	54	19 56	38	36	31 78	04 26				
22	146	32.4		20.0	95	34.9	104	39.6	56	20 04	20 50	21 55	33 80	21 02 23				
23	161	32.3		19.3	110	04.4	105	+5 50.5	58	13	21 04	22 19	35 82	20 59 21				
24	176	32.3	-16	18.6	124	33.9	105	+6 01.4	60 S	20 24	21 20	22 54	9 37 84	20 56 19				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 05 ^m 1			Mag: -4.8 PMG: 10 ^h 03 ^m			Mag: +0.2 PMG: 4 ^h 39 ^m			Mag: -2.6 PMG: 21 ^h 56 ^m			Mag: +0.5 PMG: 6 ^h 30 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	133	05.9	209	00.0	-15	54.7	290	12.5	-6	49.2	30	00.2	+23	05.1	262	14.1		
1	148	08.3	224	02.2		54.8	305	14.4		49.4	45	03.0		05.1	277	16.5		
2	163	10.8	239	04.4		54.9	320	16.2		49.6	60	05.7		05.1	292	18.8		
3	178	13.2	254	06.7		55.0	335	18.0		49.8	75	08.4		05.2	307	21.2		
4	193	15.7	269	08.9		55.1	350	19.9		50.0	90	11.1		05.2	322	23.5		
5	208	18.2	284	11.1	-15	55.2	5	21.7	-6	50.2	105	13.9	+23	05.2	337	25.8		
6	223	20.6	299	13.3	-15	55.3	20	23.5	-6	50.5	120	16.6	+23	05.3	352	28.2		
7	238	23.1	314	15.5		55.3	35	25.4		50.7	135	19.3		05.3	7	30.5		
8	253	25.6	329	17.7		55.4	50	27.2		50.9	150	22.0		05.3	22	32.9		
9	268	28.0	344	19.9		55.5	65	29.1		51.1	165	24.8		05.3	37	35.2		
10	283	30.5	359	22.1		55.6	80	30.9		51.3	180	27.5		05.4	52	37.6		
11	298	33.0	14	24.3	-15	55.7	95	32.7	-6	51.5	195	30.2	+23	05.4	67	39.9		
12	313	35.4	29	26.5	-15	55.8	110	34.6	-6	51.7	210	32.9	+23	05.4	82	42.3		
13	328	37.9	44	28.7		55.9	125	36.4		51.9	225	35.6		05.4	97	44.6		
14	343	40.4	59	30.9		56.0	140	38.3		52.2	240	38.4		05.5	112	47.0		
15	358	42.8	74	33.0		56.1	155	40.1		52.4	255	41.1		05.5	127	49.3		
16	13	45.3	89	35.2		56.2	170	42.0		52.6	270	43.8		05.5	142	51.7		
17	28	47.7	104	37.4	-15	56.3	185	43.8	-6	52.8	285	46.5	+23	05.5	157	54.0		
18	43	50.2	119	39.5	-15	56.4	200	45.6	-6	53.0	300	49.3	+23	05.6	172	56.4		
19	58	52.7	134	41.7		56.4	215	47.5		53.2	315	52.0		05.6	187	58.7		
20	73	55.1	149	43.9		56.5	230	49.3		53.4	330	54.7		05.6	203	01.1		
21	88	57.6	164	46.0		56.6	245	51.2		53.6	345	57.4		05.6	218	03.4		
22	104	00.1	179	48.2		56.7	260	53.0		53.8	1	00.1		05.7	233	05.8		
23	119	02.5	194	50.3		56.8	275	54.9		54.0	16	02.9		05.7	248	08.1		
24	134	05.0	209	52.4	-15	56.9	290	56.7	-6	54.3	31	05.6	+23	05.7	263	10.4		
Dif	—			+22			-1			+18			-2			+27		
													0			+23		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9			Edad: 4 ^d 1 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 0 20 ^h : 57 ^m 7 R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	32.3	-16	18.6	124	33.9	+6 01.4	60 N	6 30	7 20	8 07	9 08 19	23 40 78	
1	191	32.2		17.8	139	03.5 ¹⁰⁶	12.3 ¹⁰⁹	58	27	14	7 57	12 22	34 76	
2	206	32.2		17.1	153	33.0 ¹⁰⁵	23.1 ¹⁰⁸	56	24	09	49	15 25	29 74	
3	221	32.1		16.3	168	02.6 ¹⁰⁶	33.9 ¹⁰⁸	54	21	7 04	42	19 26	24 77	
4	236	32.0		15.6	182	32.2 ¹⁰⁶	44.6 ¹⁰⁷	52	19	6 59	35	22 28	20 70	
5	251	32.0	-16	14.8	197	01.9 ¹⁰⁷	+6 55.2 ¹⁰⁶	50	6 16	6 55	7 29	9 25 29	23 16 69	
6	266	31.9	-16	14.1	211	31.5 ¹⁰⁶	+7 05.8 ¹⁰⁶	45	6 10	6 45	7 16	9 31 32	23 08 66	
7	281	31.9		13.3	226	01.2 ¹⁰⁷	16.4 ¹⁰⁶	40	05	37	7 06	36 35	23 01 63	
8	296	31.8		12.6	240	30.9 ¹⁰⁷	26.9 ¹⁰⁵	35	6 00	30	6 57	40 38	22 55 61	
9	311	31.7		11.8	255	00.7 ¹⁰⁸	37.3 ¹⁰⁴	30	5 55	24	49	44 40	50 59	
10	326	31.7		11.1	269	30.4 ¹⁰⁷	47.7 ¹⁰⁴	20	45	12	34	51 43	41 56	
11	341	31.6	-16	10.3	284	00.2 ¹⁰⁸	+7 58.0 ¹⁰³	10 N	5 35	6 00	6 22	9 57 47	22 34 52	
12	356	31.6	-16	09.6	298	30.0 ¹⁰⁸	+8 08.3 ¹⁰³	0	5 24	5 49	6 10	10 03 49	22 26 50	
13	11	31.5		08.8	312	59.8 ¹⁰⁸	18.5 ¹⁰²	10 S	5 11	37	5 59	08 53	19 47	
14	26	31.4		08.1	327	29.6 ¹⁰⁸	28.6 ¹⁰¹	20	4 55	23	46	15 55	11 44	
15	41	31.4		07.3	341	59.5 ¹⁰⁹	38.7 ¹⁰¹	30	35	5 05	31	22 59	22 03 40	
16	56	31.3		06.6	356	29.4 ¹⁰⁹	48.7 ¹⁰⁰	35	22	4 55	22	26 61	21 58 38	
17	71	31.3	-16	05.8	10	59.3 ¹⁰⁹	+8 58.7 ¹⁰⁰	40	4 07	4 43	5 13	10 30 64	21 52 36	
18	86	31.2	-16	05.1	25	29.2 ¹⁰⁹	+9 08.6 ⁹⁹	45	3 47	4 28	5 01	10 36 67	21 45 34	
19	101	31.2		04.3	39	59.1 ¹⁰⁹	18.4 ⁹⁸	50	21	09	4 47	42 71	37 31	
20	116	31.1		03.6	54	29.0 ¹⁰⁹	28.2 ⁹⁸	52	3 08	4 00	40	45 72	34 29	
21	131	31.1		02.8	68	59.0 ¹¹⁰	37.9 ⁹⁷	54	2 52	3 50	33	49 74	30 27	
22	146	31.0		02.1	83	29.0 ¹¹⁰	47.6 ⁹⁷	56	33	38	24	53 75	25 26	
23	161	30.9		01.3	97	59.0 ¹¹⁰	+9 57.2 ⁹⁶	58	2 09	25	15	10 57 78	20 24	
24	176	30.9	-16	00.6	112	29.0 ¹¹⁰	+10 06.7 ⁹⁵	60 S	1 34	3 09	4 04	11 01 81	21 15 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 01 ^m 2		Mag: -4.8 PMG: 9 ^h 59 ^m		Mag: +0.2 PMG: 4 ^h 36 ^m		Mag: -2.6 PMG: 21 ^h 52 ^m		Mag: +0.5 PMG: 6 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	134	05.0	209	52.4	-15	56.9	290	56.7	-6	54.3	31	05.6	+23	05.7	263	10.4	-16	15.3
1	149	07.5	224	54.6		57.0	305	58.6		54.5	46	08.3		05.7	278	12.8		15.3
2	164	09.9	239	56.7		57.1	321	00.4		54.7	61	11.0		05.8	293	15.1		15.3
3	179	12.4	254	58.8		57.2	336	02.3		54.9	76	13.7		05.8	308	17.5		15.3
4	194	14.8	270	00.9		57.3	351	04.1		55.1	91	16.5		05.8	323	19.8		15.4
5	209	17.3	285	03.1	-15	57.4	6	06.0	-6	55.3	106	19.2	+23	05.8	338	22.2	-16	15.4
6	224	19.8	300	05.2	-15	57.5	21	07.8	-6	55.5	121	21.9	+23	05.9	353	24.5	-16	15.4
7	239	22.2	315	07.3		57.6	36	09.7		55.7	136	24.6		05.9	8	26.9		15.4
8	254	24.7	330	09.4		57.7	51	11.6		55.9	151	27.3		05.9	23	29.2		15.4
9	269	27.2	345	11.5		57.8	66	13.4		56.1	166	30.0		06.0	38	31.6		15.5
10	284	29.6	0	13.6		57.9	81	15.3		56.3	181	32.8		06.0	53	33.9		15.5
11	299	32.1	15	15.7	-15	58.0	96	17.1	-6	56.5	196	35.5	+23	06.0	68	36.3	-16	15.5
12	314	34.6	30	17.8	-15	58.1	111	19.0	-6	56.7	211	38.2	+23	06.0	83	38.6	-16	15.5
13	329	37.0	45	19.9		58.2	126	20.9		56.9	226	40.9		06.1	98	41.0		15.5
14	344	39.5	60	21.9		58.3	141	22.7		57.1	241	43.6		06.1	113	43.4		15.6
15	359	42.0	75	24.0		58.4	156	24.6		57.3	256	46.3		06.1	128	45.7		15.6
16	14	44.4	90	26.1		58.5	171	26.4		57.5	271	49.0		06.1	143	48.1		15.6
17	29	46.9	105	28.2	-15	58.6	186	28.3	-6	57.8	286	51.8	+23	06.2	158	50.4	-16	15.6
18	44	49.3	120	30.2	-15	58.7	201	30.2	-6	58.0	301	54.5	+23	06.2	173	52.8	-16	15.6
19	59	51.8	135	32.3		58.8	216	32.0		58.2	316	57.2		06.2	188	55.1		15.7
20	74	54.3	150	34.3		58.9	231	33.9		58.4	331	59.9		06.2	203	57.5		15.7
21	89	56.7	165	36.4		59.0	246	35.8		58.6	347	02.6		06.3	218	59.8		15.7
22	104	59.2	180	38.4		59.1	261	37.6		58.8	2	05.3		06.3	234	02.2		15.7
23	120	01.7	195	40.5		59.2	276	39.5		59.0	17	08.0		06.3	249	04.5		15.7
24	135	04.1	210	42.5	-15	59.3	291	41.4	-6	59.2	32	10.7	+23	06.3	264	06.9	-16	15.8
Dif	—		+21 -1		+19 -2		+27 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: 5 ^d 1 SD: 15:7 PMG: 17 ^h 04 ^m	PHE { 4 ^h : 57/4 12 ^h : 57/1 20 ^h : 56/8 R°: 49 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	30.9	-16	00.6	112	29.0	+10 06.7	60 N	16 24	17 11	18 01	9 27 23	** ** *	** ** *	
1	191	30.8	-15	59.8	126	59.0 ¹¹⁰	16.1	58	34	17	04	34 25	** ** *	** ** *	
2	206	30.8		59.0	141	29.1 ¹¹¹	25.5	56	42	22	07	40 27	** ** *	** ** *	
3	221	30.7		58.3	155	59.1 ¹¹⁰	34.8	54	49	27	09	45 29	** ** *	** ** *	
4	236	30.7		57.5	170	29.2 ¹¹¹	44.1	52	16 55	31	12	50 30	** ** *	** ** *	
5	251	30.6	-15	56.8	184	59.3 ¹¹¹	+10 53.2	50	17 01	17 35	18 14	9 54 32	** ** *	** ** *	
6	266	30.6	-15	56.0	199	29.3 ¹¹⁰	+11 02.3	45	17 13	17 44	18 19	10 03 35	** ** *	** ** *	
7	281	30.5		55.3	213	59.4 ¹¹¹	11.4	40	24	52	24	11 37	** ** *	** ** *	
8	296	30.5		54.5	228	29.6 ¹¹²	20.3	35	33	17 59	29	18 39	23 56 58		
9	311	30.4		53.7	242	59.7 ¹¹¹	29.2	30	40	18 05	34	24 41	49 56		
10	326	30.4		53.0	257	29.8 ¹¹¹	38.1	20	17 54	17	43	34 44	37 53		
11	341	30.3	-15	52.2	272	00.0 ¹¹²	+11 46.8	10 N	18 06	18 28	18 53	10 44 46	23 26 51		
12	356	30.3	-15	51.5	286	30.1 ¹¹¹	+11 55.5	0	18 17	18 39	19 04	10 52 49	23 16 49		
13	11	30.2		50.7	301	00.3 ¹¹²	+12 04.1	10 S	29	18 51	16	11 01 52	23 06 47		
14	26	30.2		49.9	315	30.5 ¹¹²	12.6	20	41	19 04	32	10 55	22 55 45		
15	41	30.1		49.2	330	00.7 ¹¹²	21.1	30	18 56	21	19 51	21 57	43 42		
16	56	30.1		48.4	344	30.9 ¹¹²	29.4	35	19 04	31	20 04	27 59	36 40		
17	71	30.0	-15	47.6	359	01.1 ¹¹²	+12 37.8	40	19 13	19 43	20 19	11 34 62	22 28 39		
18	86	30.0	-15	46.9	13	31.3 ¹¹²	+12 46.0	45	19 25	19 57	20 38	11 43 63	22 19 36		
19	101	29.9		46.1	28	01.6 ¹¹³	+12 54.1	50	38	20 15	21 03	53 66	08 33		
20	116	29.9		45.3	42	31.8 ¹¹²	+13 02.2	52	45	24	15	11 57 69	22 03 32		
21	131	29.9		44.6	57	02.0 ¹¹²	10.2	54	19 52	34	30	12 03 69	21 57 31		
22	146	29.8		43.8	71	32.3 ¹¹³	18.1	56	20 00	45	21 48	08 72	51 29		
23	161	29.8		43.0	86	02.6 ¹¹³	26.0	58	09	20 58	22 11	15 73	44 27		
24	176	29.7	-15	42.3	100	32.8 ¹¹²	+13 33.7	60 S	20 19	21 13	22 41	12 22 76	21 36 25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 57 ^m 3		Mag: -4.8 PMG: 9 ^h 56 ^m		Mag: +0.1 PMG: 4 ^h 33 ^m		Mag: -2.6 PMG: 21 ^h 47 ^m		Mag: +0.5 PMG: 6 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	04.1	210	42.5	-15	59.3	291	41.4	-6	59.2
1	150	06.6	225	44.6		59.4	306	43.2		59.4
2	165	09.1	240	46.6		59.5	321	45.1		59.6
3	180	11.5	255	48.6		59.6	336	47.0	-6	59.8
4	195	14.0	270	50.6		59.7	351	48.8	-7	00.0
5	210	16.5	285	52.7	-15	59.8	6	50.7	-7	00.2
6	225	18.9	300	54.7	-15	59.9	21	52.6	-7	00.4
7	240	21.4	315	56.7	-16	00.0	36	54.5		00.6
8	255	23.8	330	58.7	-16	00.1	51	56.3		00.8
9	270	26.3	346	00.7		00.2	66	58.2		01.0
10	285	28.8	1	02.7		00.3	82	00.1		01.2
11	300	31.2	16	04.7	-16	00.4	97	02.0	-7	01.4
12	315	33.7	31	06.7	-16	00.5	112	03.8	-7	01.6
13	330	36.2	46	08.7		00.6	127	05.7		01.7
14	345	38.6	61	10.7		00.7	142	07.6		01.9
15	0	41.1	76	12.6		00.8	157	09.5		02.1
16	15	43.6	91	14.6		00.9	172	11.4		02.3
17	30	46.0	106	16.6	-16	01.0	187	13.2	-7	02.5
18	45	48.5	121	18.6	-16	01.1	202	15.1	-7	02.7
19	60	50.9	136	20.5		01.3	217	17.0		02.9
20	75	53.4	151	22.5		01.4	232	18.9		03.1
21	90	55.9	166	24.4		01.5	247	20.8		03.3
22	105	58.3	181	26.4		01.6	262	22.7		03.5
23	121	00.8	196	28.3		01.7	277	24.5		03.7
24	136	03.3	211	30.3	-16	01.8	292	26.4	-7	03.9
Dif	—		+20		-1		+19		-2	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 6 ^d 1 PHE { 4 ^h : 56:5 12 ^h : 56:2 20 ^h : 55:9 Rº: 49 ^m	hG ☾ Dif	Dec		Dif							
	hG ☉	Dec							Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	29.7	-15 42.3	100	32.8	+13 33.7	60 N	6 26	7 16	8 02	9 50	27	0 58	74	
1	191	29.7	41.5	115	03.1 ¹¹³	41.4	58	23	10	7 53	9 59	29	50	71	
2	206	29.6	40.7	129	33.4 ¹¹³	49.0	56	21	05	45	10 07	31	43	69	
3	221	29.6	40.0	144	03.7 ¹¹³	+13 56.5	54	18	7 00	38	14	32	36	68	
4	236	29.5	39.2	158	34.0 ¹¹³	+14 04.0	52	16	6 56	32	20	34	30	66	
5	251	29.5	-15 38.4	173	04.3 ¹¹³	+14 11.4	50	6 13	6 52	7 26	10 26	35	0 25	65	
6	266	29.5	-15 37.7	187	34.6 ¹¹³	+14 18.6	45	6 08	6 43	7 14	10 38	38	0 14	61	
7	281	29.4	36.9	202	04.9 ¹¹³	25.8	40	6 03	35	7 04	48	40	0 04	60	
8	296	29.4	36.1	216	35.2 ¹¹³	33.0	35	5 59	29	6 55	10 57	41	** ** *	**	
9	311	29.3	35.4	231	05.5 ¹¹³	40.0	30	54	22	47	11 05	43	** ** *	**	
10	326	29.3	34.6	245	35.9 ¹¹⁴	47.0	20	45	11	34	18	45	** ** *	**	
11	341	29.2	-15 33.8	260	06.2 ¹¹³	+14 53.8	10 N	5 35	6 00	6 22	11 30	47	** ** *	**	
12	356	29.2	-15 33.0	274	36.5 ¹¹³	+15 00.6	0	5 24	5 49	6 11	11 41	49	** ** *	**	
13	11	29.2	32.3	289	06.9 ¹¹⁴	07.3	10 S	5 12	37	5 59	11 53	50	23 53	47	
14	26	29.1	31.5	303	37.2 ¹¹³	14.0	20	4 57	24	47	12 05	52	40	46	
15	41	29.1	30.7	318	07.6 ¹¹⁴	20.5	30	37	5 07	33	18	56	25	44	
16	56	29.0	30.0	332	38.0 ¹¹⁴	27.0	35	25	4 57	25	26	57	16	43	
17	71	29.0	-15 29.2	347	08.3 ¹¹³	+15 33.3	40	4 10	4 46	5 15	12 36	58	23 07	41	
18	86	29.0	-15 28.4	1	38.7 ¹¹⁴	+15 39.6	45	3 51	4 31	5 04	12 46	60	22 55	40	
19	101	28.9	27.6	16	09.1 ¹¹⁴	45.8	50	26	13	4 50	12 59	63	41	38	
20	116	28.9	26.9	30	39.4 ¹¹³	51.9	52	3 13	4 05	44	13 06	63	35	36	
21	131	28.9	26.1	45	09.8 ¹¹⁴	+15 58.0	54	2 58	3 55	37	12	65	28	35	
22	146	28.8	25.3	59	40.2 ¹¹⁴	+16 03.9	56	41	44	29	20	66	20	34	
23	161	28.8	24.5	74	10.6 ¹¹⁴	09.8	58	2 18	31	20	28	68	11	32	
24	176	28.7	-15 23.7	88	41.0 ¹¹⁴	+16 15.5	60 S	1 47	3 15	4 10	13 38	70	22 01	30	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 53 ^m 3		Mag: -4.8 PMG: 9 ^h 53 ^m			Mag: +0.1 PMG: 4 ^h 30 ^m			Mag: -2.6 PMG: 21 ^h 43 ^m			Mag: +0.5 PMG: 6 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	136	03.3	211	30.3	-16 01.8	292	26.4	-7 03.9	33	15.7	+23 06.9	265	03.4	-16 16.2
1	151	05.7	226	32.2	01.9	307	28.3	04.1	48	18.5	06.9	280	05.8	16.2
2	166	08.2	241	34.2	02.0	322	30.2	04.3	63	21.2	07.0	295	08.1	16.2
3	181	10.7	256	36.1	02.1	337	32.1	04.5	78	23.9	07.0	310	10.5	16.3
4	196	13.1	271	38.0	02.2	352	34.0	04.7	93	26.6	07.0	325	12.8	16.3
5	211	15.6	286	40.0	-16 02.3	7	35.9	-7 04.9	108	29.3	+23 07.0	340	15.2	-16 16.3
6	226	18.1	301	41.9	-16 02.4	22	37.8	-7 05.0	123	32.0	+23 07.1	355	17.5	-16 16.3
7	241	20.5	316	43.8	02.5	37	39.7	05.2	138	34.7	07.1	10	19.9	16.3
8	256	23.0	331	45.7	02.6	52	41.6	05.4	153	37.4	07.1	25	22.3	16.3
9	271	25.4	346	47.6	02.7	67	43.4	05.6	168	40.1	07.1	40	24.6	16.4
10	286	27.9	1	49.5	02.9	82	45.3	05.8	183	42.8	07.2	55	27.0	16.4
11	301	30.4	16	51.4	-16 03.0	97	47.2	-7 06.0	198	45.5	+23 07.2	70	29.3	-16 16.4
12	316	32.8	31	53.3	-16 03.1	112	49.1	-7 06.2	213	48.2	+23 07.2	85	31.7	-16 16.4
13	331	35.3	46	55.2	03.2	127	51.0	06.4	228	50.9	07.2	100	34.0	16.4
14	346	37.8	61	57.1	03.3	142	52.9	06.6	243	53.6	07.2	115	36.4	16.4
15	1	40.2	76	59.0	03.4	157	54.8	06.8	258	56.3	07.3	130	38.8	16.5
16	16	42.7	92	00.9	03.5	172	56.7	06.9	273	59.0	07.3	145	41.1	16.5
17	31	45.2	107	02.8	-16 03.6	187	58.6	-7 07.1	289	01.7	+23 07.3	160	43.5	-16 16.5
18	46	47.6	122	04.6	-16 03.7	203	00.5	-7 07.3	304	04.4	+23 07.3	175	45.8	-16 16.5
19	61	50.1	137	06.5	03.8	218	02.4	07.5	319	07.1	07.4	190	48.2	16.5
20	76	52.5	152	08.4	03.9	233	04.3	07.7	334	09.8	07.4	205	50.6	16.6
21	91	55.0	167	10.2	04.1	248	06.2	07.9	349	12.5	07.4	220	52.9	16.6
22	106	57.5	182	12.1	04.2	263	08.1	08.1	4	15.2	07.4	235	55.3	16.6
23	121	59.9	197	13.9	04.3	278	10.0	08.3	19	17.9	07.5	250	57.6	16.6
24	137	02.4	212	15.8	-16 04.4	293	12.0	-7 08.4	34	20.6	+23 07.5	266	00.0	-16 16.6
Dif	—		+19 -1			+19 -2			+27 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: 7 ^d 1 PHE { 4 ^h : 55:7 12 ^h : 55:5 20 ^h : 55:3 PMG: 18 ^h 42 ^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	176	28.7	-15	23.7	88	41.0	+16 15.5	60 N	16 30	17 15	18 05	10 17 34	2 12 66	
1	191	28.7		23.0	103	11.4 ¹¹⁴	21.2 ⁵⁷	58	38	21	08	28 36	2 01 65	
2	206	28.7		22.2	117	41.8 ¹¹⁴	26.8 ⁵⁶	56	46	26	10	38 37	1 52 63	
3	221	28.6		21.4	132	12.2 ¹¹⁴	32.3 ⁵⁵	54	53	31	13	46 39	44 61	
4	236	28.6		20.6	146	42.6 ¹¹⁴	37.8 ⁵⁵	52	16 59	35	15	10 54 39	36 61	
5	251	28.6	-15	19.8	161	13.0 ¹¹⁴	+16 43.1 ⁵³	50	17 04	17 39	18 17	11 01 40	1 30 59	
6	266	28.5	-15	19.1	175	43.5 ¹¹⁵	+16 48.4 ⁵³	45	17 16	17 47	18 22	11 16 41	1 15 58	
7	281	28.5		18.3	190	13.9 ¹¹⁴	53.5 ⁵¹	40	26	17 54	26	28 43	1 04 56	
8	296	28.5		17.5	204	44.3 ¹¹⁴	+16 58.6 ⁵¹	35	35	18 01	31	38 44	0 54 55	
9	311	28.4		16.7	219	14.7 ¹¹⁴	+17 03.6 ⁵⁰	30	42	07	35	11 48 44	45 54	
10	326	28.4		15.9	233	45.2 ¹¹⁵	08.5 ⁴⁹	20	17 55	18	44	12 03 47	30 52	
11	341	28.4	-15	15.2	248	15.6 ¹¹⁴	+17 13.3 ⁴⁸	10 N	18 07	18 28	18 54	12 17 48	0 17 51	
12	356	28.3	-15	14.4	262	46.1 ¹¹⁵	+17 18.0 ⁴⁷	0	18 18	18 39	19 04	12 30 49	0 05 49	
13	11	28.3		13.6	277	16.5 ¹¹⁴	22.6 ⁴⁶	10 S	29	18 50	16	43 50	*** ** *	
14	26	28.3		12.8	291	47.0 ¹¹⁵	27.2 ⁴⁶	20	40	19 03	31	12 57 52	*** ** *	
15	41	28.2		12.0	306	17.4 ¹¹⁴	31.6 ⁴⁴	30	18 54	19	19 50	13 14 52	*** ** *	
16	56	28.2		11.2	320	47.9 ¹¹⁵	36.0 ⁴⁴	35	19 02	29	20 02	23 53	23 59 45	
17	71	28.2	-15	10.5	335	18.3 ¹¹⁴	+17 40.2 ⁴²	40	19 11	19 41	20 16	13 34 54	23 48 44	
18	86	28.1	-15	09.7	349	48.8 ¹¹⁵	+17 44.4 ⁴²	45	19 22	19 54	20 34	13 46 56	23 35 43	
19	101	28.1		08.9	4	19.3 ¹¹⁵	48.5 ⁴¹	50	35	20 12	20 58	14 02 57	19 42	
20	116	28.1		08.1	18	49.8 ¹¹⁵	52.5 ⁴⁰	52	41	20	21 10	09 58	11 42	
21	131	28.1		07.3	33	20.2 ¹¹⁴	+17 56.4 ³⁹	54	48	29	24	17 59	23 03 41	
22	146	28.0		06.5	47	50.7 ¹¹⁵	+18 00.2 ³⁸	56	19 55	40	21 41	26 59	22 54 40	
23	161	28.0		05.7	62	21.2 ¹¹⁵	04.0 ³⁸	58	20 04	20 52	22 02	36 61	43 40	
24	176	28.0	-15	04.9	76	51.7 ¹¹⁵	+18 07.6 ³⁶	60 S	20 14	21 07	22 30	14 48 62	22 31 38	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 49 ^m 4	Mag: -4.8 PMG: 9 ^h 50 ^m	Mag: +0.1 PMG: 4 ^h 27 ^m	Mag: -2.6 PMG: 21 ^h 39 ^m	Mag: +0.5 PMG: 6 ^h 15 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'					
0	137	02.4	212	15.8	-16 04.4	293	12.0	34	20.6	+23 07.5	266	00.0	-16 16.6	
1	152	04.9	227	17.6	04.5	308	13.9	49	23.3	07.5	281	02.4	16.6	
2	167	07.3	242	19.5	04.6	323	15.8	64	26.0	07.5	296	04.7	16.7	
3	182	09.8	257	21.3	04.7	338	17.7	79	28.7	07.6	311	07.1	16.7	
4	197	12.3	272	23.2	04.8	353	19.6	94	31.4	07.6	326	09.5	16.7	
5	212	14.7	287	25.0	-16 04.9	8	21.5	-7 09.4	109	34.1	+23 07.6	341	11.8	-16 16.7
6	227	17.2	302	26.8	-16 05.0	23	23.4	-7 09.5	124	36.8	+23 07.6	356	14.2	-16 16.7
7	242	19.7	317	28.6	05.2	38	25.3	09.7	139	39.5	07.6	11	16.5	16.7
8	257	22.1	332	30.5	05.3	53	27.2	09.9	154	42.1	07.7	26	18.9	16.8
9	272	24.6	347	32.3	05.4	68	29.1	10.1	169	44.8	07.7	41	21.3	16.8
10	287	27.0	2	34.1	05.5	83	31.1	10.3	184	47.5	07.7	56	23.6	16.8
11	302	29.5	17	35.9	-16 05.6	98	33.0	-7 10.5	199	50.2	+23 07.7	71	26.0	-16 16.8
12	317	32.0	32	37.7	-16 05.7	113	34.9	-7 10.6	214	52.9	+23 07.8	86	28.4	-16 16.8
13	332	34.4	47	39.5	05.8	128	36.8	10.8	229	55.6	07.8	101	30.7	16.8
14	347	36.9	62	41.3	05.9	143	38.7	11.0	244	58.3	07.8	116	33.1	16.9
15	2	39.4	77	43.1	06.1	158	40.6	11.2	260	01.0	07.8	131	35.4	16.9
16	17	41.8	92	44.9	06.2	173	42.6	11.4	275	03.7	07.9	146	37.8	16.9
17	32	44.3	107	46.7	-16 06.3	188	44.5	-7 11.6	290	06.4	+23 07.9	161	40.2	-16 16.9
18	47	46.8	122	48.5	-16 06.4	203	46.4	-7 11.7	305	09.1	+23 07.9	176	42.5	-16 16.9
19	62	49.2	137	50.2	06.5	218	48.3	11.9	320	11.8	07.9	191	44.9	16.9
20	77	51.7	152	52.0	06.6	233	50.2	12.1	335	14.5	07.9	206	47.3	17.0
21	92	54.2	167	53.8	06.7	248	52.2	12.3	350	17.2	08.0	221	49.6	17.0
22	107	56.6	182	55.6	06.8	263	54.1	12.4	5	19.8	08.0	236	52.0	17.0
23	122	59.1	197	57.3	06.9	278	56.0	12.6	20	22.5	08.0	251	54.4	17.0
24	138	01.5	212	59.1	-16 07.1	293	57.9	-7 12.8	35	25.2	+23 08.0	266	56.7	-16 17.0
Dif	—		+18		-1	+19		-2	+27		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: 8 ^d 1	PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'7 Rº: 48 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	28.0	-15 04.9	76	51.7	+18 07.6	36	60 N	6 22	7 11	7 57	10 51	43	3 18	57
1	191	27.9	04.2	91	22.2 ¹¹⁵	11.2	36	58	19	06	48	11 04	43	3 06	56
2	206	27.9	03.4	105	52.7 ¹¹⁵	14.6	34	56	17	7 01	41	15 44		2 55	56
3	221	27.9	02.6	120	23.3 ¹¹⁶	18.0	34	54	15	6 57	34	25 44		45	56
4	236	27.9	01.8	134	53.8 ¹¹⁵	21.3	33	52	13	53	28	33 45		37	55
5	251	27.8	-15 01.0	149	24.3 ¹¹⁵	+18 24.4	31	50	6 11	6 49	7 23	11 41	45	2 29	55
6	266	27.8	-15 00.2	163	54.8 ¹¹⁵	+18 27.5	31	45	6 06	6 41	7 11	11 57	46	2 13	54
7	281	27.8	-14 59.4	178	25.4 ¹¹⁶	30.5	30	40	6 01	33	7 01	12 11	46	2 00	53
8	296	27.8	58.6	192	55.9 ¹¹⁵	33.4	29	35	5 57	27	6 53	22 47		1 49	52
9	311	27.7	57.8	207	26.5 ¹¹⁶	36.3	29	30	53	21	46	32 47		39	51
10	326	27.7	57.0	221	57.0 ¹¹⁵	39.0	27	20	44	10	33	12 50	47	22	51
11	341	27.7	-14 56.2	236	27.6 ¹¹⁶	+18 41.6	26	10 N	5 35	6 00	6 21	13 05	48	1 08	49
12	356	27.7	-14 55.4	250	58.2 ¹¹⁶	+18 44.2	26	0	5 24	5 49	6 11	13 19	49	0 54	49
13	11	27.6	54.7	265	28.8 ¹¹⁶	46.6	24	10 S	5 12	38	6 00	33 49		40	48
14	26	27.6	53.9	279	59.4 ¹¹⁶	49.0	24	20	4 58	25	5 48	13 49	49	26	46
15	41	27.6	53.1	294	29.9 ¹¹⁵	51.2	22	30	39	09	34	14 06	50	0 09	46
16	56	27.6	52.3	309	00.6 ¹¹⁷	53.4	22	35	27	5 00	27	16 50		** ** *	**
17	71	27.6	-14 51.5	323	31.2 ¹¹⁶	+18 55.5	21	40	4 12	4 48	5 17	14 28	50	** * *	**
18	86	27.5	-14 50.7	338	01.8 ¹¹⁶	+18 57.5	20	45	3 54	4 34	5 07	14 42	51	** * *	**
19	101	27.5	49.9	352	32.4 ¹¹⁶	+18 59.4	19	50	30	17	4 54	14 59	51	** * *	**
20	116	27.5	49.1	7	03.1 ¹¹⁷	+19 01.2	18	52	18	09	48	15 07	51	23 53	48
21	131	27.5	48.3	21	33.7 ¹¹⁶	02.9	17	54	3 05	4 00	41	16 51		44	48
22	146	27.4	47.5	36	04.4 ¹¹⁷	04.6	17	56	2 48	3 49	34	25 52		34	48
23	161	27.4	46.7	50	35.0 ¹¹⁶	06.1	15	58	2 27	37	25	37 52		23	47
24	176	27.4	-14 45.9	65	05.7 ¹¹⁷	+19 07.5	14	60 S	1 59	3 22	4 15	15 50	53	23 09	47
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 45 ^m 5		Mag: -4.9 PMG: 9 ^h 47 ^m			Mag: +0.1 PMG: 4 ^h 24 ^m			Mag: -2.6 PMG: 21 ^h 34 ^m			Mag: +0.5 PMG: 6 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	138	01.5	212 59.1	-16 07.1	293 57.9	-7 12.8	35	25.2	+23 08.0	266 56.7	-16 17.0	266 56.7	-16 17.0		
1	153	04.0	228 00.8	07.2	308 59.9	13.0	50	27.9	08.1	281 59.1	17.0	281 59.1	17.0		
2	168	06.5	243 02.6	07.3	324 01.8	13.2	65	30.6	08.1	297 01.5	17.0	297 01.5	17.0		
3	183	08.9	258 04.3	07.4	339 03.7	13.3	80	33.3	08.1	312 03.8	17.1	312 03.8	17.1		
4	198	11.4	273 06.1	07.5	354 05.6	13.5	95	36.0	08.1	327 06.2	17.1	327 06.2	17.1		
5	213	13.9	288 07.8	-16 07.6	9 07.6	-7 13.7	110	38.7	+23 08.1	342 08.6	-16 17.1	342 08.6	-16 17.1		
6	228	16.3	303 09.6	-16 07.7	24 09.5	-7 13.9	125	41.4	+23 08.2	357 10.9	-16 17.1	357 10.9	-16 17.1		
7	243	18.8	318 11.3	07.9	39 11.4	14.0	140	44.0	08.2	12 13.3	17.1	12 13.3	17.1		
8	258	21.3	333 13.0	08.0	54 13.4	14.2	155	46.7	08.2	27 15.6	17.1	27 15.6	17.1		
9	273	23.7	348 14.8	08.1	69 15.3	14.4	170	49.4	08.2	42 18.0	17.2	42 18.0	17.2		
10	288	26.2	3 16.5	08.2	84 17.2	14.6	185	52.1	08.3	57 20.4	17.2	57 20.4	17.2		
11	303	28.7	18 18.2	-16 08.3	99 19.2	-7 14.7	200	54.8	+23 08.3	72 22.7	-16 17.2	72 22.7	-16 17.2		
12	318	31.1	33 19.9	-16 08.4	114 21.1	-7 14.9	215	57.5	+23 08.3	87 25.1	-16 17.2	87 25.1	-16 17.2		
13	333	33.6	48 21.6	08.5	129 23.0	15.1	231	00.2	08.3	102 27.5	17.2	102 27.5	17.2		
14	348	36.0	63 23.3	08.6	144 25.0	15.3	246	02.9	08.3	117 29.9	17.2	117 29.9	17.2		
15	3 38.5	78 25.1	08.8	159 26.9	15.4	261 05.5	261 05.5	08.4	132 32.2	17.2	132 32.2	17.2	132 32.2	17.2	
16	18 41.0	93 26.8	08.9	174 28.8	15.6	276 08.2	276 08.2	08.4	147 34.6	17.3	147 34.6	17.3	147 34.6	17.3	
17	33 43.4	108 28.5	-16 09.0	189 30.8	-7 15.8	291 10.9	+23 08.4	162 37.0	-16 17.3	162 37.0	-16 17.3	162 37.0	-16 17.3		
18	48 45.9	123 30.1	-16 09.1	204 32.7	-7 16.0	306 13.6	+23 08.4	177 39.3	-16 17.3	177 39.3	-16 17.3	177 39.3	-16 17.3		
19	63 48.4	138 31.8	09.2	219 34.7	16.1	321 16.3	08.5	192 41.7	17.3	192 41.7	17.3	192 41.7	17.3		
20	78 50.8	153 33.5	09.3	234 36.6	16.3	336 19.0	08.5	207 44.1	17.3	207 44.1	17.3	207 44.1	17.3		
21	93 53.3	168 35.2	09.4	249 38.5	16.5	351 21.6	08.5	222 46.4	17.3	222 46.4	17.3	222 46.4	17.3		
22	108 55.8	183 36.9	09.6	264 40.5	16.6	6 24.3	08.5	237 48.8	17.4	237 48.8	17.4	237 48.8	17.4		
23	123 58.2	198 38.6	09.7	279 42.4	16.8	21 27.0	08.5	252 51.2	17.4	252 51.2	17.4	252 51.2	17.4		
24	139 00.7	213 40.2	-16 09.8	294 44.4	-7 17.0	36 29.7	+23 08.6	267 53.5	-16 17.4	267 53.5	-16 17.4	267 53.5	-16 17.4		
Dif	—		+17	-1	+19	-2	+27	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: 9 ^d 1 PHE { 4 ^h : 54/6 12 ^h : 54/4 20 ^h : 54/3 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	176	27.4	-14	45.9	65	05.7	+19 07.5	60 N	16 35	17 20	18 10	11 34	51	4 15	48
1	191	27.4		45.1	79	36.4 ¹¹⁷	08.9	58	43	25	12	47	51	4 02	48
2	206	27.4		44.3	94	07.1 ¹¹⁷	10.1	56	50	30	14	11 59	50	3 51	48
3	221	27.4		43.5	108	37.8 ¹¹⁷	11.3	54	16 57	34	16	12 09	50	41	48
4	236	27.3		42.7	123	08.5 ¹¹⁷	12.4	52	17 03	38	18	18 50		32	48
5	251	27.3	-14	41.9	137	39.2 ¹¹⁷	+19 13.4	50	17 08	17 42	18 20	12 26	50	3 24	48
6	266	27.3	-14	41.1	152	10.0 ¹¹⁸	+19 14.3	45	17 19	17 50	18 24	12 43	50	3 07	48
7	281	27.3		40.3	166	40.7 ¹¹⁷	15.1	40	29	17 57	29	12 57	49	2 53	48
8	296	27.3		39.5	181	11.5 ¹¹⁸	15.8	35	37	18 03	33	13 09	49	41	48
9	311	27.2		38.7	195	42.2 ¹¹⁷	16.4	30	44	08	37	19 49		30	49
10	326	27.2		37.9	210	13.0 ¹¹⁸	16.9	20	17 56	19	45	37 49		2 13	48
11	341	27.2	-14	37.1	224	43.8 ¹¹⁸	+19 17.4	10 N	18 07	18 29	18 54	13 53	48	1 57	48
12	356	27.2	-14	36.3	239	14.6 ¹¹⁸	+19 17.7	0	18 18	18 39	19 04	14 08	47	1 43	48
13	11	27.2		35.5	253	45.5 ¹¹⁹	18.0	10 S	28	18 50	15	22 48		28	48
14	26	27.2		34.7	268	16.3 ¹¹⁸	18.1	20	40	19 02	29	38 47		1 12	49
15	41	27.2		33.9	282	47.2 ¹¹⁹	18.2	30	18 53	18	48	14 56	46	0 55	48
16	56	27.1		33.0	297	18.0 ¹¹⁸	18.2	35	19 00	27	19 59	15 06	47	44	48
17	71	27.1	-14	32.2	311	48.9 ¹¹⁹	+19 18.1	40	19 09	19 38	20 13	15 18	46	0 32	48
18	86	27.1	-14	31.4	326	19.8 ¹¹⁹	+19 17.9	45	19 19	19 51	20 31	15 33	45	0 18	48
19	101	27.1		30.6	340	50.7 ¹¹⁹	17.6	50	32	20 08	20 54	50 45		0 01	48
20	116	27.1		29.8	355	21.6 ¹¹⁹	17.2	52	37	16	21 05	15 58	45	** ** *	**
21	131	27.1		29.0	9	52.6 ¹²⁰	16.8	54	44	25	19	16 07	44	** ** *	**
22	146	27.1		28.2	24	23.5 ¹¹⁹	16.2	56	51	35	34	17 44		** ** *	**
23	161	27.1		27.4	38	54.5 ¹²⁰	15.6	58	19 59	20 47	21 54	29 43		** ** *	**
24	176	27.0	-14	26.6	53	25.5 ¹²⁰	+19 14.8	60 S	20 08	21 00	22 19	16 43	42	23 56	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 41 ^m 5		Mag: -4.9 PMG: 9 ^h 44 ^m		Mag: 0.0 PMG: 4 ^h 20 ^m		Mag: -2.6 PMG: 21 ^h 30 ^m		Mag: +0.5 PMG: 6 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	00.7	213	40.2	294	44.4	36	29.7	267	53.5
1	154	03.1	228	41.9	309	46.3	51	32.4	282	55.9
2	169	05.6	243	43.6	324	48.3	66	35.1	297	58.3
3	184	08.1	258	45.2	339	50.2	81	37.7	313	00.6
4	199	10.5	273	46.9	354	52.2	96	40.4	328	03.0
5	214	13.0	288	48.5	9	54.1	111	43.1	343	05.4
6	229	15.5	303	50.2	24	56.1	126	45.8	358	07.8
7	244	17.9	318	51.8	39	58.0	141	48.5	13	10.1
8	259	20.4	333	53.5	55	00.0	156	51.1	28	12.5
9	274	22.9	348	55.1	70	01.9	171	53.8	43	14.9
10	289	25.3	3	56.8	85	03.9	186	56.5	58	17.2
11	304	27.8	18	58.4	100	05.8	201	59.2	73	19.6
12	319	30.3	34	00.0	115	07.8	217	01.9	88	22.0
13	334	32.7	49	01.7	130	09.7	232	04.5	103	24.3
14	349	35.2	64	03.3	145	11.7	247	07.2	118	26.7
15	4	37.6	79	04.9	160	13.7	262	09.9	133	29.1
16	19	40.1	94	06.5	175	15.6	277	12.6	148	31.5
17	34	42.6	109	08.1	190	17.6	292	15.2	163	33.8
18	49	45.0	124	09.7	205	19.5	307	17.9	178	36.2
19	64	47.5	139	11.3	220	21.5	322	20.6	193	38.6
20	79	50.0	154	12.9	235	23.5	337	23.3	208	41.0
21	94	52.4	169	14.5	250	25.4	352	26.0	223	43.3
22	109	54.9	184	16.1	265	27.4	7	28.6	238	45.7
23	124	57.4	199	17.7	280	29.3	22	31.3	253	48.1
24	139	59.8	214	19.3	295	31.3	37	34.0	268	50.4
Dif	—		+16		-1		+20		-2	
							+27		0	
									+24	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 10 ^d 1 PHE { SD: 14'8 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	176	27.0	-14	26.6	53	25.5	+19	14.8	60 N	6	17	7	07	7	52	12	25
1	191	27.0		25.8	67	56.4 ¹¹⁹		14.0	8	58	15	7	02	44	38	58	4
2	206	27.0		25.0	82	27.5 ¹²¹		13.1	9	56	13	6	57	37	49	57	39
3	221	27.0		24.2	96	58.5 ¹²⁰		12.1	10	54	11		53	30	12	59	56
4	236	27.0		23.3	111	29.5 ¹²⁰		11.0	11	52	09		49	25	13	08	55
5	251	27.0	-14	22.5	126	00.6 ¹²¹	+19	09.8	12	50	6	08	6	46	7	20	13
6	266	27.0	-14	21.7	140	31.7 ¹²¹	+19	08.6	12	45	6	03	6	38	7	08	13
7	281	27.0		20.9	155	02.8 ¹²¹		07.2	14	40	5	59	31	6	59	46	53
8	296	27.0		20.1	169	33.9 ¹²¹		05.8	14	35		55	25	51	13	58	51
9	311	27.0		19.3	184	05.0 ¹²¹		04.3	15	30		51	20	44	14	08	51
10	326	27.0		18.5	198	36.2 ¹²²		02.6	17	20		43	6	09	32	26	49
11	341	26.9	-14	17.7	213	07.4 ¹²²	+19	00.9	17	10 N	5	34	5	59	6	21	14
12	356	26.9	-14	16.8	227	38.6 ¹²²	+18	59.1	18	0	5	25	5	49	6	11	14
13	11	26.9		16.0	242	09.8 ¹²²		57.3	18	10 S	5	13	39	6	00	15	10
14	26	26.9		15.2	256	41.0 ¹²²		55.3	20	20	4	59	26	5	49	25	45
15	41	26.9		14.4	271	12.2 ¹²²		53.2	21	30		41	11	36	42	44	1
16	56	26.9		13.6	285	43.5 ¹²³		51.1	21	35		29	5	02	29	15	53
17	71	26.9	-14	12.8	300	14.8 ¹²³	+18	48.9	22	40	4	15	4	51	5	20	16
18	86	26.9	-14	12.0	314	46.1 ¹²³	+18	46.6	23	45	3	58	4	38	5	10	16
19	101	26.9		11.1	329	17.4 ¹²³		44.2	24	50		35	21	4	57	35	39
20	116	26.9		10.3	343	48.8 ¹²⁴		41.7	25	52		24	13	52	43	38	0
21	131	26.9		09.5	358	20.1 ¹²³		39.1	26	54		3	10	4	04	45	38
22	146	26.9		08.7	12	51.5 ¹²⁴		36.5	26	56		2	55	3	54	38	17
23	161	26.9		07.9	27	22.9 ¹²⁴		33.8	27	58		35	43	30	12	36	0
24	176	26.9	-14	07.0	41	54.4 ¹²⁵	+18	31.0	28	60 S	2	10	3	29	4	21	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 37 ^m 6		Mag: -4.9 PMG: 9 ^h 42 ^m		Mag: 0.0 PMG: 4 ^h 17 ^m		Mag: -2.6 PMG: 21 ^h 26 ^m		Mag: +0.5 PMG: 6 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	59.8	214	19.3	-16	12.5	295	31.3	-7	21.0
1	155	02.3	229	20.9		12.6	310	33.3		21.1
2	170	04.8	244	22.5		12.8	325	35.2		21.3
3	185	07.2	259	24.1		12.9	340	37.2		21.5
4	200	09.7	274	25.6		13.0	355	39.2		21.6
5	215	12.1	289	27.2	-16	13.1	10	41.1	-7	21.8
6	230	14.6	304	28.8	-16	13.2	25	43.1	-7	21.9
7	245	17.1	319	30.3		13.3	40	45.1		22.1
8	260	19.5	334	31.9		13.4	55	47.1		22.3
9	275	22.0	349	33.4		13.6	70	49.0		22.4
10	290	24.5	4	35.0		13.7	85	51.0		22.6
11	305	26.9	19	36.5	-16	13.8	100	53.0	-7	22.7
12	320	29.4	34	38.1	-16	13.9	115	55.0	-7	22.9
13	335	31.9	49	39.6		14.0	130	56.9		23.1
14	350	34.3	64	41.2		14.1	145	58.9		23.2
15	5	36.8	79	42.7		14.2	161	00.9		23.4
16	20	39.3	94	44.2		14.3	176	02.9		23.5
17	35	41.7	109	45.8	-16	14.5	191	04.8	-7	23.7
18	50	44.2	124	47.3	-16	14.6	206	06.8	-7	23.8
19	65	46.6	139	48.8		14.7	221	08.8		24.0
20	80	49.1	154	50.3		14.8	236	10.8		24.2
21	95	51.6	169	51.8		14.9	251	12.8		24.3
22	110	54.0	184	53.4		15.0	266	14.8		24.5
23	125	56.5	199	54.9		15.1	281	16.7		24.6
24	140	59.0	214	56.4	-16	15.3	296	18.7	-7	24.8
Dif	—		+15		-1		+20		-2	

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: 11 ^d 1 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 21 ^h 54 ^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	176	26.9	-14	07.0	41	54.4	+18	31.0	60 N	16 40	17 25	18 14	13 24	65	5 41	31		
1	191	26.9		06.2	56	25.8 ¹²⁴		28.1 ²⁹	58	48	30	16	36	63		29 32		
2	206	26.9		05.4	70	57.3 ¹²⁵		25.1 ³⁰	56	16 55	34	18	46	61		19 33		
3	221	26.9		04.6	85	28.8 ¹²⁵		22.0 ³¹	54	17 01	38	20	13 55	60		09 35		
4	236	26.9		03.8	100	00.3 ¹²⁵		18.9 ³¹	52	06	42	22	14 03	59	5 01	36		
5	251	26.9	-14	02.9	114	31.9 ¹²⁶	+18	15.6 ³³	50	17 11	17 45	18 23	14 10	58	4 54	36		
6	266	26.9	-14	02.1	129	03.4 ¹²⁵	+18	12.3 ³³	45	17 22	17 52	18 27	14 26	56	4 38	38		
7	281	26.9		01.3	143	35.0 ¹²⁶		08.9 ³⁴	40	31	17 59	31	39	54		25 39		
8	296	26.9	-14	00.5	158	06.6 ¹²⁶		05.5 ³⁴	35	39	18 05	35	49	53		14 40		
9	311	26.9	-13	59.7	172	38.2 ¹²⁶	+18	01.9 ³⁶	30	45	10	38	14 59	51	4 04	42		
10	326	26.9		58.8	187	09.9 ¹²⁷	+17	58.3 ³⁶	20	17 57	20	46	15 15	50	3 47	44		
11	341	26.9	-13	58.0	201	41.6 ¹²⁷	+17	54.5 ³⁸	10 N	18 08	18 29	18 54	15 29	48	3 32	45		
12	356	26.9	-13	57.2	216	13.3 ¹²⁷	+17	50.7 ³⁸	0	18 18	18 39	19 04	15 42	47	3 18	47		
13	11	26.9		56.4	230	45.0 ¹²⁷		46.9 ³⁸	10 S	28	18 49	15	15 56	44	3 04	48		
14	26	26.9		55.5	245	16.7 ¹²⁷		42.9 ⁴⁰	20	38	19 01	28	16 10	42	2 50	49		
15	41	26.9		54.7	259	48.5 ¹²⁸		38.9 ⁴⁰	30	51	16	46	26	40		33 51		
16	56	26.9		53.9	274	20.3 ¹²⁸		34.8 ⁴¹	35	18 58	25	19 57	35	40		23 52		
17	71	26.9	-13	53.1	288	52.1 ¹²⁸	+17	30.6 ⁴²	40	19 07	19 36	20 11	16 46	38	2 11	53		
18	86	26.9	-13	52.2	303	23.9 ¹²⁸	+17	26.3 ⁴³	45	19 16	19 48	20 27	16 59	36	1 58	54		
19	101	26.9		51.4	317	55.8 ¹²⁹		21.9 ⁴⁴	50	28	20 04	20 49	17 14	34	41	57		
20	116	26.9		50.6	332	27.7 ¹²⁹		17.5 ⁴⁴	52	34	12	21 00	21	33		34 57		
21	131	26.9		49.8	346	59.6 ¹²⁹		13.0 ⁴⁵	54	40	20	13	29	31		25 58		
22	146	26.9		48.9	1	31.5 ¹²⁹		08.4 ⁴⁶	56	47	30	28	38	30		15 60		
23	161	26.9		48.1	16	03.5 ¹³⁰	+17	03.8 ⁴⁶	58	19 54	41	21 46	48	28	1 04	61		
24	176	26.9	-13	47.3	30	35.5 ¹³⁰	+16	59.0 ⁴⁸	60 S	20 03	20 54	22 09	17 59	27	0 52	62		
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 14 ^h 33 ^m 7			Mag: -4.9 PMG: 9 ^h 39 ^m			Mag: 0.0 PMG: 4 ^h 14 ^m			Mag: -2.6 PMG: 21 ^h 22 ^m				Mag: +0.5 PMG: 6 ^h 00 ^m				
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	hG ♅		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	140	59.0	214	56.4	-16	15.3	296	18.7	-7	24.8	38	38.1	+23	09.6	269	47.5	-16	18.0
1	156	01.4	229	57.9		15.4	311	20.7		24.9	53	40.7		09.6	284	49.8		18.1
2	171	03.9	244	59.4		15.5	326	22.7		25.1	68	43.4		09.6	299	52.2		18.1
3	186	06.4	260	00.9		15.6	341	24.7		25.2	83	46.1		09.6	314	54.6		18.1
4	201	08.8	275	02.4		15.7	356	26.7		25.4	98	48.7		09.6	329	57.0		18.1
5	216	11.3	290	03.8	-16	15.8	11	28.7	-7	25.5	113	51.4	+23	09.7	344	59.3	-16	18.1
6	231	13.7	305	05.3	-16	15.9	26	30.7	-7	25.7	128	54.1	+23	09.7	0	01.7	-16	18.1
7	246	16.2	320	06.8		16.0	41	32.6		25.8	143	56.7		09.7	15	04.1		18.1
8	261	18.7	335	08.3		16.2	56	34.6		26.0	158	59.4		09.7	30	06.5		18.1
9	276	21.1	350	09.8		16.3	71	36.6		26.1	174	02.1		09.7	45	08.9		18.2
10	291	23.6	5	11.2		16.4	86	38.6		26.3	189	04.7		09.8	60	11.2		18.2
11	306	26.1	20	12.7	-16	16.5	101	40.6	-7	26.4	204	07.4	+23	09.8	75	13.6	-16	18.2
12	321	28.5	35	14.2	-16	16.6	116	42.6	-7	26.6	219	10.1	+23	09.8	90	16.0	-16	18.2
13	336	31.0	50	15.6		16.7	131	44.6		26.7	234	12.7		09.8	105	18.4		18.2
14	351	33.5	65	17.1		16.8	146	46.6		26.9	249	15.4		09.8	120	20.8		18.2
15	6	35.9	80	18.5		16.9	161	48.6		27.0	264	18.0		09.9	135	23.1		18.2
16	21	38.4	95	20.0		17.1	176	50.6		27.2	279	20.7		09.9	150	25.5		18.2
17	36	40.9	110	21.4	-16	17.2	191	52.6	-7	27.3	294	23.4	+23	09.9	165	27.9	-16	18.3
18	51	43.3	125	22.9	-16	17.3	206	54.6	-7	27.5	309	26.0	+23	09.9	180	30.3	-16	18.3
19	66	45.8	140	24.3		17.4	221	56.6		27.6	324	28.7		09.9	195	32.7		18.3
20	81	48.2	155	25.8		17.5	236	58.6		27.8	339	31.3		10.0	210	35.0		18.3
21	96	50.7	170	27.2		17.6	252	00.6		27.9	354	34.0		10.0	225	37.4		18.3
22	111	53.2	185	28.6		17.7	267	02.6		28.1	9	36.7		10.0	240	39.8		18.3
23	126	55.6	200	30.0		17.8	282	04.6		28.2	24	39.3		10.0	255	42.2		18.3
24	141	58.1	215	31.5	-16	17.9	297	06.6	-7	28.4	39	42.0	+23	10.0	270	44.6	-16	18.3
Dif	—		+15		-1		+20		-2		+27		0		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 12 ^d 1 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 22 ^h 40 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	176	26.9	-13	47.3	30	35.5	+16	59.0	48	60 N	6 13	7 02	7 46	14 29	68	
1	191	26.9		46.4	45	07.5	130	54.2	48	58	11	6 57	39	39	66	
2	206	26.9		45.6	59	39.5	130	49.4	48	56	09	53	32	47	65	
3	221	26.9		44.8	74	11.6	131	44.4	50	54	08	49	26	14 55	63	
4	236	26.9		44.0	88	43.7	131	39.4	50	52	06	46	21	15 02	62	
5	251	26.9	-13	43.1	103	15.8	131	+16 34.3	51	50	6 04	6 42	7 16	15 08	61	
6	266	26.9	-13	42.3	117	47.9	131	+16 29.1	52	45	6 01	6 35	7 06	15 22	57	
7	281	26.9		41.5	132	20.1	132	23.8	53	40	5 57	29	6 57	33	55	
8	296	27.0		40.6	146	52.2	131	18.5	53	35	53	23	49	42	54	
9	311	27.0		39.8	161	24.4	132	13.1	54	30	50	18	43	15 50	53	
10	326	27.0		39.0	175	56.7	133	07.7	54	20	42	6 08	31	16 05	49	
11	341	27.0	-13	38.1	190	28.9	132	+16 02.1	56	10 N	5 34	5 59	6 21	16 17	47	
12	356	27.0	-13	37.3	205	01.2	133	+15 56.5	56	0	5 25	5 49	6 11	16 29	45	
13	11	27.0		36.5	219	33.5	133	50.8	57	10 S	14	39	6 01	40	43	
14	26	27.0		35.6	234	05.8	133	45.1	57	20	5 00	27	5 50	16 52	41	
15	41	27.0		34.8	248	38.2	134	39.3	58	30	4 43	13	38	17 06	38	
16	56	27.0		34.0	263	10.6	134	33.4	59	35	32	5 04	31	15	36	
17	71	27.0	-13	33.1	277	43.0	134	+15 27.4	60	40	4 18	4 53	5 22	17 24	34	
18	86	27.0	-13	32.3	292	15.4	134	+15 21.4	60	45	4 02	4 41	5 13	17 35	32	
19	101	27.1		31.5	306	47.8	134	15.3	61	50	3 40	25	5 01	48	30	
20	116	27.1		30.6	321	20.3	135	09.2	61	52	29	18	4 55	17 54	28	
21	131	27.1		29.8	335	52.8	135	+15 03.0	62	54	16	4 09	49	18 00	28	
22	146	27.1		28.9	350	25.3	135	+14 56.7	63	56	3 01	3 59	43	08	25	
23	161	27.1		28.1	4	57.9	136	50.3	64	58	2 43	48	35	16	24	
24	176	27.1	-13	27.3	19	30.4	135	+14 43.9	64	60 S	2 20	3 35	4 26	18 26	21	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 14 ^h 29 ^m 7		Mag: -4.9 PMG: 9 ^h 37 ^m			Mag: 0.0 PMG: 4 ^h 11 ^m			Mag: -2.6 PMG: 21 ^h 17 ^m			Mag: +0.5 PMG: 5 ^h 56 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	141	58.1	215	31.5	-16	17.9	297	06.6	-7	28.4	39	42.0	+23	10.0	270	
1	157	00.6	230	32.9		18.1	312	08.6		28.5	54	44.6		10.1	285	
2	172	03.0	245	34.3		18.2	327	10.7		28.7	69	47.3		10.1	300	
3	187	05.5	260	35.7		18.3	342	12.7		28.8	84	50.0		10.1	315	
4	202	08.0	275	37.1		18.4	357	14.7		29.0	99	52.6		10.1	330	
5	217	10.4	290	38.5	-16	18.5	12	16.7	-7	29.1	114	55.3	+23	10.1	345	
6	232	12.9	305	40.0	-16	18.6	27	18.7	-7	29.2	129	57.9	+23	10.2	0	
7	247	15.4	320	41.4		18.7	42	20.7		29.4	145	00.6		10.2	16	
8	262	17.8	335	42.8		18.8	57	22.7		29.5	160	03.2		10.2	31	
9	277	20.3	350	44.1		18.9	72	24.7		29.7	175	05.9		10.2	46	
10	292	22.7	5	45.5		19.1	87	26.8		29.8	190	08.6		10.2	61	
11	307	25.2	20	46.9	-16	19.2	102	28.8	-7	30.0	205	11.2	+23	10.3	76	
12	322	27.7	35	48.3	-16	19.3	117	30.8	-7	30.1	220	13.9	+23	10.3	91	
13	337	30.1	50	49.7		19.4	132	32.8		30.2	235	16.5		10.3	106	
14	352	32.6	65	51.1		19.5	147	34.8		30.4	250	19.2		10.3	121	
15	7	35.1	80	52.5		19.6	162	36.8		30.5	265	21.8		10.3	136	
16	22	37.5	95	53.8		19.7	177	38.9		30.7	280	24.5		10.4	151	
17	37	40.0	110	55.2	-16	19.8	192	40.9	-7	30.8	295	27.1	+23	10.4	166	
18	52	42.5	125	56.6	-16	19.9	207	42.9	-7	31.0	310	29.8	+23	10.4	181	
19	67	44.9	140	57.9		20.0	222	44.9		31.1	325	32.4		10.4	196	
20	82	47.4	155	59.3		20.1	237	47.0		31.2	340	35.1		10.4	211	
21	97	49.8	171	00.6		20.3	252	49.0		31.4	355	37.7		10.4	226	
22	112	52.3	186	02.0		20.4	267	51.0		31.5	10	40.4		10.5	241	
23	127	54.8	201	03.3		20.5	282	53.0		31.6	25	43.0		10.5	256	
24	142	57.2	216	04.7	-16	20.6	297	55.1	-7	31.8	40	45.7	+23	10.5	271	
Dif	—		+14			-1	+20		-1		+27		0		+24	

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: 13 ^d 1 PHE { 4 ^h : 54/0 12 ^h : 54/1 20 ^h : 54/1 PMG: 23 ^h 24 ^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	176	27.1	-13	27.3	19	30.4	+14	43.9	60 N	16 46	17 30	18 19	15 37	71	6 36	19		
1	191	27.1		26.4	34	03.0 ¹³⁶		37.4 ⁶⁵	58	53	34	21	45	69	27	22		
2	206	27.1		25.6	48	35.7 ¹³⁷		30.9 ⁶⁵	56	16 59	38	22	52	67	20	23		
3	221	27.2		24.8	63	08.3 ¹³⁶		24.2 ⁶⁷	54	17 05	42	23	15 58	65	13	26		
4	236	27.2		23.9	77	41.0 ¹³⁷		17.6 ⁶⁶	52	10	45	25	16 04	63	07	27		
5	251	27.2	-13	23.1	92	13.6 ¹³⁶	+14	10.8 ⁶⁸	50	17 15	17 48	18 26	16 09	62	6 02	28		
6	266	27.2	-13	22.2	106	46.4 ¹³⁸	+14	04.0 ⁶⁸	45	17 25	17 55	18 30	16 19	59	5 50	31		
7	281	27.2		21.4	121	19.1 ¹³⁷	+13	57.2 ⁶⁸	40	33	18 01	33	28	57	41	33		
8	296	27.2		20.6	135	51.8 ¹³⁷		50.2 ⁷⁰	35	41	07	36	36	54	32	35		
9	311	27.3		19.7	150	24.6 ¹³⁸		43.3 ⁶⁹	30	47	12	40	43	52	25	37		
10	326	27.3		18.9	164	57.4 ¹³⁸		36.2 ⁷¹	20	17 58	21	47	16 54	50	12	40		
11	341	27.3	-13	18.0	179	30.2 ¹³⁸	+13	29.1 ⁷¹	10 N	18 08	18 30	18 55	17 04	47	5 01	42		
12	356	27.3	-13	17.2	194	03.1 ¹³⁹	+13	21.9 ⁷²	0	18 18	18 39	19 03	17 14	44	4 50	45		
13	11	27.3		16.3	208	36.0 ¹³⁹		14.7 ⁷²	10 S	27	18 49	14	23	42	40	47		
14	26	27.3		15.5	223	08.9 ¹³⁹		07.4 ⁷³	20	37	19 00	27	33	39	29	49		
15	41	27.4		14.7	237	41.8 ¹³⁹	+13	00.1 ⁷³	30	49	14	44	44	36	16	52		
16	56	27.4		13.8	252	14.7 ¹³⁹	+12	52.7 ⁷⁴	35	18 56	23	19 55	51	34	4 08	54		
17	71	27.4	-13	13.0	266	47.6 ¹³⁹	+12	45.2 ⁷⁵	40	19 04	19 33	20 08	17 58	32	3 59	56		
18	86	27.4	-13	12.1	281	20.6 ¹⁴⁰	+12	37.7 ⁷⁵	45	19 13	19 45	20 24	18 07	30	3 49	59		
19	101	27.4		11.3	295	53.6 ¹⁴⁰		30.2 ⁷⁵	50	25	20 00	45	18	26	37	61		
20	116	27.4		10.4	310	26.6 ¹⁴⁰		22.6 ⁷⁶	52	30	07	20 55	22	26	31	63		
21	131	27.5		09.6	324	59.7 ¹⁴¹		14.9 ⁷⁷	54	36	15	21 07	28	23	25	64		
22	146	27.5		08.7	339	32.7 ¹⁴⁰	+12	07.2 ⁷⁷	56	42	25	21	33	23	18	66		
23	161	27.5		07.9	354	05.8 ¹⁴¹	+11	59.4 ⁷⁸	58	49	35	38	40	20	10	68		
24	176	27.5	-13	07.0	8	38.9 ¹⁴¹	+11	51.5 ⁷⁹	60 S	19 57	20 47	21 59	18 47	18	3 01	70		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 25 ^m 8		Mag: -4.9 PMG: 9 ^h 35 ^m				Mag: -0.1 PMG: 4 ^h 08 ^m				Mag: -2.6 PMG: 21 ^h 13 ^m				Mag: +0.5 PMG: 5 ^h 52 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'		
0	142	57.2	216	04.7	-16	20.6	297	55.1	-7	31.8	40	45.7	+23	10.5	271	41.8	-16	18.6
1	157	59.7	231	06.0		20.7	312	57.1		31.9	55	48.4		10.5	286	44.2		18.6
2	173	02.2	246	07.4		20.8	327	59.1		32.1	70	51.0		10.5	301	46.5		18.6
3	188	04.6	261	08.7		20.9	343	01.2		32.2	85	53.7		10.6	316	48.9		18.6
4	203	07.1	276	10.1		21.0	358	03.2		32.3	100	56.3		10.6	331	51.3		18.6
5	218	09.6	291	11.4	-16	21.1	13	05.2	-7	32.5	115	58.9	+23	10.6	346	53.7	-16	18.7
6	233	12.0	306	12.7	-16	21.2	28	07.2	-7	32.6	131	01.6	+23	10.6	1	56.1	-16	18.7
7	248	14.5	321	14.0		21.3	43	09.3		32.7	146	04.2		10.6	16	58.5		18.7
8	263	17.0	336	15.4		21.4	58	11.3		32.9	161	06.9		10.7	32	00.9		18.7
9	278	19.4	351	16.7		21.5	73	13.4		33.0	176	09.5		10.7	47	03.2		18.7
10	293	21.9	6	18.0		21.6	88	15.4		33.1	191	12.2		10.7	62	05.6		18.7
11	308	24.3	21	19.3	-16	21.8	103	17.4	-7	33.3	206	14.8	+23	10.7	77	08.0	-16	18.7
12	323	26.8	36	20.6	-16	21.9	118	19.5	-7	33.4	221	17.5	+23	10.7	92	10.4	-16	18.7
13	338	29.3	51	21.9		22.0	133	21.5		33.5	236	20.1		10.7	107	12.8		18.7
14	353	31.7	66	23.2		22.1	148	23.5		33.7	251	22.8		10.8	122	15.2		18.8
15	8	34.2	81	24.5		22.2	163	25.6		33.8	266	25.4		10.8	137	17.6		18.8
16	23	36.7	96	25.8		22.3	178	27.6		33.9	281	28.1		10.8	152	20.0		18.8
17	38	39.1	111	27.1	-16	22.4	193	29.7	-7	34.1	296	30.7	+23	10.8	167	22.4	-16	18.8
18	53	41.6	126	28.4	-16	22.5	208	31.7	-7	34.2	311	33.4	+23	10.8	182	24.7	-16	18.8
19	68	44.1	141	29.7		22.6	223	33.8		34.3	326	36.0		10.9	197	27.1		18.8
20	83	46.5	156	31.0		22.7	238	35.8		34.5	341	38.6		10.9	212	29.5		18.8
21	98	49.0	171	32.3		22.8	253	37.9		34.6	356	41.3		10.9	227	31.9		18.8
22	113	51.5	186	33.5		22.9	268	39.9		34.7	11	43.9		10.9	242	34.3		18.8
23	128	53.9	201	34.8		23.0	283	42.0		34.9	26	46.6		10.9	257	36.7		18.8
24	143	56.4	216	36.1	-16	23.1	298	44.0	-7	35.0	41	49.2	+23	10.9	272	39.1	-16	18.8
Dif	—		+13		-1		+20		-1		+26		0		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 14 ^d 1 PHE { SD: 14'7 PMG: *** **m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	27.5	-13	07.0	8	38.9	+11	51.5	60 N	6 08	6 57	7 41	16 48	73	6 55	17	
1	191	27.6		06.2	23	12.0 ¹⁴¹		43.7	78	58	07	53	34	54	70	49	
2	206	27.6		05.4	37	45.2 ¹⁴²		35.7	80	56	05	49	28	16 59	68	43	
3	221	27.6		04.5	52	18.3 ¹⁴¹		27.7	80	54	04	45	22	17 03	66	39	
4	236	27.6		03.7	66	51.5 ¹⁴²		19.7	80	52	03	42	17	07	65	34	
5	251	27.6	-13	02.8	81	24.7 ¹⁴²	+11	11.6	81	50	6 01	6 39	7 13	17 11	63	6 30	
6	266	27.7	-13	02.0	95	57.9 ¹⁴²	+11	03.5	81	45	5 58	6 32	7 03	17 18	60	6 21	
7	281	27.7		01.1	110	31.1 ¹⁴²	+10	55.3	82	40	55	27	6 54	25	57	14	
8	296	27.7	-13	00.3	125	04.3 ¹⁴²		47.0	83	35	52	21	47	30	55	07	
9	311	27.7	-12	59.4	139	37.6 ¹⁴³		38.7	83	30	48	16	41	35	53	6 02	
10	326	27.8		58.6	154	10.9 ¹⁴³		30.4	83	20	41	6 07	30	44	49	5 52	
11	341	27.8	-12	57.7	168	44.2 ¹⁴³	+10	22.0	84	10 N	5 34	5 59	6 20	17 51	46	5 43	
12	356	27.8	-12	56.9	183	17.5 ¹⁴³	+10	13.6	84	0	5 25	5 50	6 11	17 58	43	5 35	
13	11	27.8		56.0	197	50.8 ¹⁴³	+10	05.1	85	10 S	14	40	6 01	18 05	41	27	
14	26	27.9		55.2	212	24.1 ¹⁴³	+9	56.6	85	20	5 02	28	5 51	12	38	18	
15	41	27.9		54.3	226	57.5 ¹⁴⁴		48.1	85	30	4 45	14	39	20	35	08	
16	56	27.9		53.4	241	30.9 ¹⁴⁴		39.4	87	35	34	5 06	33	25	33	5 02	
17	71	27.9	-12	52.6	256	04.3 ¹⁴⁴	+9	30.8	86	40	4 21	4 56	5 25	18 30	31	4 55	
18	86	28.0	-12	51.7	270	37.7 ¹⁴⁴	+9	22.1	87	45	4 05	4 44	5 16	18 37	28	4 48	
19	101	28.0		50.9	285	11.1 ¹⁴⁴		13.4	87	50	3 44	29	5 04	44	25	38	
20	116	28.0		50.0	299	44.5 ¹⁴⁴	+9	04.6	88	52	34	22	4 59	48	23	34	
21	131	28.0		49.2	314	17.9 ¹⁴⁴	+8	55.8	88	54	22	14	54	51	22	29	
22	146	28.1		48.3	328	51.4 ¹⁴⁵		46.9	89	56	3 08	4 05	47	18 56	20	24	
23	161	28.1		47.5	343	24.8 ¹⁴⁴		38.0	89	58	2 51	3 54	40	19 00	18	18	
24	176	28.1	-12	46.6	357	58.3 ¹⁴⁵	+8	29.1	89	60 S	2 30	3 42	4 32	19 05	16	4 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 21 ^m 9		Mag: -4.9 PMG: 9 ^h 33 ^m			Mag: -0.1 PMG: 4 ^h 05 ^m			Mag: -2.6 PMG: 21 ^h 09 ^m			Mag: +0.5 PMG: 5 ^h 48 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	143	56.4	216	36.1	-16	23.1	298	44.0	-7	35.0	41	49.2	+23	10.9	272	39.1	
1	158	58.8	231	37.4		23.2	313	46.1		35.1	56	51.9		11.0	287	41.5	
2	174	01.3	246	38.6		23.3	328	48.1		35.3	71	54.5		11.0	302	43.9	
3	189	03.8	261	39.9		23.4	343	50.2		35.4	86	57.1		11.0	317	46.2	
4	204	06.2	276	41.2		23.5	358	52.2		35.5	101	59.8		11.0	332	48.6	
5	219	08.7	291	42.4	-16	23.6	13	54.3	-7	35.6	117	02.4	+23	11.0	347	51.0	
6	234	11.2	306	43.7	-16	23.7	28	56.3	-7	35.8	132	05.1	+23	11.0	2	53.4	
7	249	13.6	321	44.9		23.8	43	58.4		35.9	147	07.7		11.1	17	55.8	
8	264	16.1	336	46.2		23.9	59	00.4		36.0	162	10.4		11.1	32	58.2	
9	279	18.6	351	47.4		24.0	74	02.5		36.1	177	13.0		11.1	48	00.6	
10	294	21.0	6	48.7		24.1	89	04.6		36.3	192	15.6		11.1	63	03.0	
11	309	23.5	21	49.9	-16	24.2	104	06.6	-7	36.4	207	18.3	+23	11.1	78	05.4	
12	324	25.9	36	51.1	-16	24.3	119	08.7	-7	36.5	222	20.9	+23	11.2	93	07.8	
13	339	28.4	51	52.4		24.4	134	10.7		36.7	237	23.5		11.2	108	10.2	
14	354	30.9	66	53.6		24.5	149	12.8		36.8	252	26.2		11.2	123	12.6	
15	9	33.3	81	54.8		24.6	164	14.9		36.9	267	28.8		11.2	138	14.9	
16	24	35.8	96	56.0		24.7	179	16.9		37.0	282	31.5		11.2	153	17.3	
17	39	38.3	111	57.3	-16	24.8	194	19.0	-7	37.2	297	34.1	+23	11.2	168	19.7	
18	54	40.7	126	58.5	-16	24.9	209	21.1	-7	37.3	312	36.7	+23	11.3	183	22.1	
19	69	43.2	141	59.7		25.0	224	23.1		37.4	327	39.4		11.3	198	24.5	
20	84	45.7	157	00.9		25.1	239	25.2		37.5	342	42.0		11.3	213	26.9	
21	99	48.1	172	02.1		25.2	254	27.3		37.6	357	44.6		11.3	228	29.3	
22	114	50.6	187	03.3		25.3	269	29.3		37.8	12	47.3		11.3	243	31.7	
23	129	53.1	202	04.5		25.4	284	31.4		37.9	27	49.9		11.3	258	34.1	
24	144	55.5	217	05.7	-16	25.5	299	33.5	-7	38.0	42	52.5	+23	11.4	273	36.5	
Dif	—		+12			-1	+21			-1	+26			0	+24		

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: 15 ^d 1 PHE { SD: 14:8 PMG: 0 ^h 08 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	28.1	-12	46.6	357	58.3	+8	29.1	60 N	16 51	17 35	18 24	18 01 73	7 12 15
1	191	28.2		45.8	12	31.8 ¹⁴⁵		20.1	58	16 58	39	25	04 71	08 17
2	206	28.2		44.9	27	05.3 ¹⁴⁵		11.1	56	17 04	42	26	07 69	04 20
3	221	28.2		44.0	41	38.8 ¹⁴⁵	+8	02.1	54	09	46	27	09 67	7 01 21
4	236	28.2		43.2	56	12.3 ¹⁴⁵	+7	53.0	52	14	49	28	12 65	6 58 23
5	251	28.3	-12	42.3	70	45.9 ¹⁴⁶	+7	43.8	50	17 18	17 52	18 29	18 14 64	6 56 24
6	266	28.3	-12	41.5	85	19.4 ¹⁴⁵	+7	34.7	45	17 28	17 58	18 32	18 18 61	6 50 27
7	281	28.3		40.6	99	52.9 ¹⁴⁵		25.5	40	36	18 03	35	22 58	45 30
8	296	28.4		39.8	114	26.5 ¹⁴⁶		16.3	35	43	08	38	25 56	41 32
9	311	28.4		38.9	129	00.0 ¹⁴⁵	+7	07.0	30	49	13	41	28 53	37 34
10	326	28.4		38.0	143	33.6 ¹⁴⁶	+6	57.7	20	17 59	22	48	33 50	30 38
11	341	28.5	-12	37.2	158	07.2 ¹⁴⁶	+6	48.4	10 N	18 09	18 30	18 55	18 37 47	6 24 41
12	356	28.5	-12	36.3	172	40.8 ¹⁴⁶	+6	39.0	0	18 17	18 39	19 03	18 41 44	6 19 43
13	11	28.5		35.5	187	14.4 ¹⁴⁶		29.6	10 S	27	48	13	46 40	13 47
14	26	28.6		34.6	201	48.0 ¹⁴⁶		20.2	20	36	18 59	26	50 37	07 50
15	41	28.6		33.7	216	21.6 ¹⁴⁶		10.8	30	47	19 12	42	55 34	6 01 53
16	56	28.6		32.9	230	55.2 ¹⁴⁶	+6	01.3	35	18 54	21	19 52	18 58 31	5 57 55
17	71	28.7	-12	32.0	245	28.8 ¹⁴⁶	+5	51.8	40	19 02	19 30	20 05	19 01 29	5 52 58
18	86	28.7	-12	31.2	260	02.4 ¹⁴⁶	+5	42.2	45	19 10	19 42	20 20	19 05 26	5 47 60
19	101	28.7		30.3	274	36.0 ¹⁴⁶		32.7	50	21	19 56	40	09 24	41 63
20	116	28.8		29.4	289	09.6 ¹⁴⁶		23.1	52	26	20 03	20 50	11 22	38 65
21	131	28.8		28.6	303	43.2 ¹⁴⁶		13.4	54	31	11	21 01	13 21	35 66
22	146	28.8		27.7	318	16.9 ¹⁴⁷	+5	03.8	56	37	19	15	16 19	31 69
23	161	28.9		26.8	332	50.5 ¹⁴⁶	+4	54.1	58	44	29	30	18 17	27 71
24	176	28.9	-12	26.0	347	24.1 ¹⁴⁶	+4	44.4	60 S	19 52	20 41	21 50	19 21 15	5 23 73
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 17 ^m 9		Mag: -4.9 PMG: 9 ^h 31 ^m		Mag: -0.1 PMG: 4 ^h 01 ^m		Mag: -2.6 PMG: 21 ^h 05 ^m		Mag: +0.5 PMG: 5 ^h 45 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	144	55.5	217	05.7	299	33.5	42	52.5	273	36.5				
1	159	58.0	232	06.9	314	35.6	57	55.2	288	38.9				
2	175	00.4	247	08.1	329	37.6	72	57.8	303	41.3				
3	190	02.9	262	09.3	344	39.7	88	00.5	318	43.7				
4	205	05.4	277	10.5	359	41.8	103	03.1	333	46.1				
5	220	07.8	292	11.7	14	43.9	118	05.7	348	48.5				
6	235	10.3	307	12.9	29	45.9	133	08.4	3	50.9				
7	250	12.8	322	14.1	44	48.0	148	11.0	18	53.3				
8	265	15.2	337	15.2	59	50.1	163	13.6	33	55.6				
9	280	17.7	352	16.4	74	52.2	178	16.2	48	58.0				
10	295	20.2	7	17.6	89	54.3	193	18.9	64	00.4				
11	310	22.6	22	18.7	104	56.3	208	21.5	79	02.8				
12	325	25.1	37	19.9	119	58.4	223	24.1	94	05.2				
13	340	27.6	52	21.1	135	00.5	238	26.8	109	07.6				
14	355	30.0	67	22.2	150	02.6	253	29.4	124	10.0				
15	10	32.5	82	23.4	165	04.7	268	32.0	139	12.4				
16	25	34.9	97	24.5	180	06.8	283	34.7	154	14.8				
17	40	37.4	112	25.7	195	08.9	298	37.3	169	17.2				
18	55	39.9	127	26.8	210	10.9	313	39.9	184	19.6				
19	70	42.3	142	28.0	225	13.0	328	42.5	199	22.0				
20	85	44.8	157	29.1	240	15.1	343	45.2	214	24.4				
21	100	47.3	172	30.3	255	17.2	358	47.8	229	26.8				
22	115	49.7	187	31.4	270	19.3	13	50.4	244	29.2				
23	130	52.2	202	32.5	285	21.4	28	53.1	259	31.6				
24	145	54.7	217	33.7	300	23.5	43	55.7	274	34.0				
Dif	—		+12		-1		+26		0					

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 16 ^d 1 PHE { 4 ^h : 54:7 12 ^h : 54:8 20 ^h : 54:9 PMG: 0 ^h 52 ^m R°: 43 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	28.9	-12	26.0	347	24.1	+4	44.4	97	58	60 N	6 03	6 52	7 36	19 14	75	7 27	15		
1	191	28.9		25.1	1	57.7 ¹⁴⁶		34.7	97	58		02	48	29	15	72	25	17		
2	206	29.0		24.2	16	31.4 ¹⁴⁷		25.0	97	56		01	45	23	16	70	24	18		
3	221	29.0		23.4	31	05.0 ¹⁴⁶		15.2	98	54		6 00	41	18	16	68	22	22		
4	236	29.0		22.5	45	38.6 ¹⁴⁶		+4	05.4	98	52	5 59	38	13	17	66	21	22		
5	251	29.1	-12	21.6	60	12.2 ¹⁴⁶		+3	55.6	98	50	5 58	6 36	7 09	19 18	64	7 20	23		
6	266	29.1	-12	20.8	74	45.9 ¹⁴⁷		+3	45.8	98	45	5 55	6 30	7 00	19 19	61	7 17	27		
7	281	29.2		19.9	89	19.5 ¹⁴⁶			35.9	99	40	52	24	6 52	20	58	15	29		
8	296	29.2		19.1	103	53.1 ¹⁴⁶			26.1	98	35	50	19	45	21	56	13	31		
9	311	29.2		18.2	118	26.7 ¹⁴⁶			16.2	99	30	47	15	39	21	54	11	34		
10	326	29.3		17.3	133	00.3 ¹⁴⁶		+3	06.3	99	20	40	6 06	29	23	50	08	37		
11	341	29.3	-12	16.4	147	33.9 ¹⁴⁶		+2	56.3	100	10 N	5 33	5 58	6 19	19 24	47	7 05	41		
12	356	29.4	-12	15.6	162	07.5 ¹⁴⁶		+2	46.4	99	0	5 25	5 49	6 11	19 25	44	7 02	44		
13	11	29.4		14.7	176	41.1 ¹⁴⁶			36.4	100	10 S	15	40	6 02	26	41	7 00	46		
14	26	29.4		13.8	191	14.7 ¹⁴⁶			26.5	99	20	5 03	29	5 52	27	38	6 57	50		
15	41	29.5		13.0	205	48.2 ¹⁴⁵			16.5	100	30	4 47	16	41	29	34	54	53		
16	56	29.5		12.1	220	21.8 ¹⁴⁶		+2	06.5	100	35	36	5 08	35	29	32	52	56		
17	71	29.6	-12	11.2	234	55.4 ¹⁴⁶		+1	56.5	100	40	4 24	4 59	5 27	19 30	30	6 50	58		
18	86	29.6	-12	10.4	249	28.9 ¹⁴⁵		+1	46.4	101	45	4 09	4 47	5 18	19 31	27	6 47	61		
19	101	29.6		09.5	264	02.5 ¹⁴⁶			36.4	100	50	3 49	33	08	33	23	44	64		
20	116	29.7		08.6	278	36.0 ¹⁴⁵			26.3	101	52	39	26	5 03	33	22	43	66		
21	131	29.7		07.8	293	09.5 ¹⁴⁵			16.3	100	54	28	18	4 58	34	21	41	68		
22	146	29.8		06.9	307	43.0 ¹⁴⁵		+1	06.2	101	56	3 14	10	52	35	18	40	69		
23	161	29.8		06.0	322	16.5 ¹⁴⁵		+0	56.1	101	58	2 59	4 00	45	35	17	38	71		
24	176	29.9	-12	05.1	336	50.0 ¹⁴⁵		+0	46.0	101	60 S	2 39	3 48	4 37	19 36	15	6 36	74		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 14 ^h 14 ^m 0		Mag: -4.9 PMG: 9 ^h 29 ^m				Mag: -0.1 PMG: 3 ^h 58 ^m				Mag: -2.6 PMG: 21 ^h 01 ^m				Mag: +0.5 PMG: 5 ^h 41 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	145	54.7	217	33.7	-16	27.8			300	23.5	-7	40.8	43	55.7	+23	11.8	274	34.0	-16	19.3
1	160	57.1	232	34.8		27.9			315	25.6		40.9	58	58.3		11.8	289	36.4		19.3
2	175	59.6	247	35.9		28.0			330	27.7		41.0	74	00.9		11.8	304	38.8		19.3
3	191	02.0	262	37.1		28.1			345	29.8		41.2	89	03.6		11.8	319	41.2		19.3
4	206	04.5	277	38.2		28.2			0	31.9		41.3	104	06.2		11.8	334	43.6		19.3
5	221	07.0	292	39.3	-16	28.3			15	34.0	-7	41.4	119	08.8	+23	11.8	349	46.0	-16	19.3
6	236	09.4	307	40.4	-16	28.4			30	36.1	-7	41.5	134	11.4	+23	11.9	4	48.4	-16	19.3
7	251	11.9	322	41.5		28.5			45	38.2		41.6	149	14.1		11.9	19	50.8		19.3
8	266	14.4	337	42.6		28.5			60	40.3		41.7	164	16.7		11.9	34	53.2		19.3
9	281	16.8	352	43.7		28.6			75	42.4		41.8	179	19.3		11.9	49	55.6		19.3
10	296	19.3	7	44.8		28.7			90	44.5		41.9	194	21.9		11.9	64	58.0		19.3
11	311	21.8	22	45.9	-16	28.8			105	46.6	-7	42.0	209	24.5	+23	11.9	80	00.4	-16	19.3
12	326	24.2	37	47.0	-16	28.9			120	48.7	-7	42.1	224	27.2	+23	12.0	95	02.8	-16	19.3
13	341	26.7	52	48.1		29.0			135	50.8		42.2	239	29.8		12.0	110	05.2		19.3
14	356	29.2	67	49.2		29.1			150	52.9		42.4	254	32.4		12.0	125	07.6		19.4
15	11	31.6	82	50.3		29.2			165	55.0		42.5	269	35.0		12.0	140	10.0		19.4
16	26	34.1	97	51.4		29.3			180	57.2		42.6	284	37.7		12.0	155	12.4		19.4
17	41	36.5	112	52.5	-16	29.3			195	59.3	-7	42.7	299	40.3	+23	12.0	170	14.8	-16	19.4
18	56	39.0	127	53.6	-16	29.4			211	01.4	-7	42.8	314	42.9	+23	12.1	185	17.2	-16	19.4
19	71	41.5	142	54.6		29.5			226	03.5		42.9	329	45.5		12.1	200	19.6		19.4
20	86	43.9	157	55.7		29.6			241	05.6		43.0	344	48.1		12.1	215	22.0		19.4
21	101	46.4	172	56.8		29.7			256	07.7		43.1	359	50.8		12.1	230	24.4		19.4
22	116	48.9	187	57.9		29.8			271	09.8		43.2	14	53.4		12.1	245	26.8		19.4
23	131	51.3	202	58.9		29.9			286	12.0		43.3	29	56.0		12.1	260	29.2		19.4
24	146	53.8	218	00.0	-16	29.9			301	14.1	-7	43.4	44	58.6	+23	12.2	275	31.6	-16	19.4
Dif	—		+11		-1		+21		-1		+26		0		+24					

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: 17 ^d 1 PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/3 SD: 15:0 PMG: 1 ^h 35 ^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	176	29.9	-12 05.1	336	50.0	+0 46.0	60 N	16 56	17 40	18 28	20 29 75	7 42 15		
1	191	29.9	04.3	351	23.5 ¹⁴⁵	35.9 ¹⁰¹	58	17 02	43	29	27 73	42 17		
2	206	29.9	03.4	5	56.9 ¹⁴⁴	25.8 ¹⁰¹	56	08	47	30	26 71	42 20		
3	221	30.0	02.5	20	30.4 ¹⁴⁵	15.7 ¹⁰¹	54	13	49	31	24 70	43 21		
4	236	30.0	01.6	35	03.8 ¹⁴⁴	+0 05.6 ¹⁰¹	52	17	52	32	23 68	43 23		
5	251	30.1	-12 00.8	49	37.2 ¹⁴⁴	-0 04.5 ¹⁰¹	50	17 22	17 55	18 33	20 22 66	7 43 24		
6	266	30.1	-11 59.9	64	10.6 ¹⁴⁴	-0 14.7 ¹⁰²	45	17 31	18 01	18 35	20 20 63	7 44 27		
7	281	30.2	59.0	78	44.0 ¹⁴⁴	24.8 ¹⁰¹	40	38	06	37	18 60	44 30		
8	296	30.2	58.1	93	17.4 ¹⁴⁴	34.9 ¹⁰¹	35	44	10	40	17 57	44 33		
9	311	30.3	57.3	107	50.7 ¹⁴³	45.1 ¹⁰²	30	17 50	15	43	15 55	45 34		
10	326	30.3	56.4	122	24.0 ¹⁴³	-0 55.2 ¹⁰¹	20	18 00	23	48	13 51	45 38		
11	341	30.3	-11 55.5	136	57.3 ¹⁴³	-1 05.3 ¹⁰¹	10 N	18 09	18 30	18 55	20 11 48	7 46 41		
12	356	30.4	-11 54.6	151	30.6 ¹⁴³	-1 15.5 ¹⁰²	0	18 17	18 38	19 03	20 09 45	7 46 44		
13	11	30.4	53.8	166	03.9 ¹⁴³	25.6 ¹⁰¹	10 S	26	47	12	07 42	46 48		
14	26	30.5	52.9	180	37.1 ¹⁴²	35.8 ¹⁰²	20	35	18 58	24	05 39	47 50		
15	41	30.5	52.0	195	10.4 ¹⁴³	45.9 ¹⁰¹	30	46	19 10	40	03 35	47 55		
16	56	30.6	51.1	209	43.6 ¹⁴²	-1 56.1 ¹⁰²	35	52	18	19 50	01 34	48 56		
17	71	30.6	-11 50.3	224	16.8 ¹⁴²	-2 06.2 ¹⁰¹	40	18 59	19 27	20 02	20 00 31	7 48 59		
18	86	30.7	-11 49.4	238	49.9 ¹⁴¹	-2 16.3 ¹⁰¹	45	19 07	19 38	20 16	19 58 28	7 48 62		
19	101	30.7	48.5	253	23.1 ¹⁴²	26.5 ¹⁰²	50	17	52	35	56 25	48 66		
20	116	30.8	47.6	267	56.2 ¹⁴¹	36.6 ¹⁰¹	52	22	19 59	45	55 24	49 66		
21	131	30.8	46.7	282	29.3 ¹⁴¹	46.7 ¹⁰¹	54	27	20 06	20 56	55 21	49 68		
22	146	30.9	45.9	297	02.3 ¹⁴⁰	-2 56.8 ¹⁰¹	56	33	14	21 08	53 20	49 70		
23	161	30.9	45.0	311	35.3 ¹⁴⁰	-3 06.9 ¹⁰¹	58	39	23	23	52 18	49 73		
24	176	31.0	-11 44.1	326	08.3 ¹⁴⁰	-3 17.0 ¹⁰¹	60 S	19 46	20 34	21 41	19 51 16	7 50 74		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 10 ^m 1		Mag: -4.8 PMG: 9 ^h 27 ^m		Mag: -0.2 PMG: 3 ^h 55 ^m		Mag: -2.5 PMG: 20 ^h 56 ^m		Mag: +0.5 PMG: 5 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	'	°	'
0	146	53.8	218 00.0	-16 29.9	301 14.1	-7 43.4	44 58.6	+23 12.2	275 31.6	-16 19.4
1	161	56.3	233 01.0	30.0	316 16.2	43.5	60 01.2	12.2	290 34.0	19.4
2	176	58.7	248 02.1	30.1	331 18.3	43.6	75 03.8	12.2	305 36.4	19.4
3	192	01.2	263 03.2	30.2	346 20.4	43.7	90 06.5	12.2	320 38.8	19.4
4	207	03.6	278 04.2	30.3	1 22.6	43.8	105 09.1	12.2	335 41.2	19.4
5	222	06.1	293 05.3	-16 30.4	16 24.7	-7 43.9	120 11.7	+23 12.2	350 43.6	-16 19.4
6	237	08.6	308 06.3	-16 30.4	31 26.8	-7 44.0	135 14.3	+23 12.2	5 46.0	-16 19.5
7	252	11.0	323 07.4	30.5	46 28.9	44.1	150 16.9	12.3	20 48.4	19.5
8	267	13.5	338 08.4	30.6	61 31.1	44.2	165 19.5	12.3	35 50.8	19.5
9	282	16.0	353 09.4	30.7	76 33.2	44.3	180 22.2	12.3	50 53.2	19.5
10	297	18.4	8 10.5	30.8	91 35.3	44.4	195 24.8	12.3	65 55.6	19.5
11	312	20.9	23 11.5	-16 30.9	106 37.4	-7 44.5	210 27.4	+23 12.3	80 58.0	-16 19.5
12	327	23.4	38 12.5	-16 30.9	121 39.6	-7 44.6	225 30.0	+23 12.3	96 00.5	-16 19.5
13	342	25.8	53 13.6	31.0	136 41.7	44.7	240 32.6	12.4	111 02.9	19.5
14	357	28.3	68 14.6	31.1	151 43.8	44.8	255 35.2	12.4	126 05.3	19.5
15	12	30.8	83 15.6	31.2	166 46.0	44.9	270 37.8	12.4	141 07.7	19.5
16	27	33.2	98 16.7	31.3	181 48.1	45.0	285 40.4	12.4	156 10.1	19.5
17	42	35.7	113 17.7	-16 31.3	196 50.2	-7 45.1	300 43.1	+23 12.4	171 12.5	-16 19.5
18	57	38.1	128 18.7	-16 31.4	211 52.4	-7 45.2	315 45.7	+23 12.4	186 14.9	-16 19.5
19	72	40.6	143 19.7	31.5	226 54.5	45.3	330 48.3	12.4	201 17.3	19.5
20	87	43.1	158 20.7	31.6	241 56.7	45.4	345 50.9	12.5	216 19.7	19.5
21	102	45.5	173 21.7	31.6	256 58.8	45.5	0 53.5	12.5	231 22.1	19.5
22	117	48.0	188 22.7	31.7	272 00.9	45.6	15 56.1	12.5	246 24.5	19.5
23	132	50.5	203 23.7	31.8	287 03.1	45.7	30 58.7	12.5	261 26.9	19.5
24	147	52.9	218 24.7	-16 31.9	302 05.2	-7 45.8	46 01.3	+23 12.5	276 29.3	-16 19.6
Dif	—		+10	-1	+21	-1	+26	0	+24	

ALMANAQUE NÁUTICO PERSEIS

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: 19 ^d 1 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/3 Rº: 47 ^m					Civil		Náutico	Hora	Rº	Hora	Rº					
	hG ☉	Dec		hG ☾	Dif	Dec			Dif											
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	176	32.3	-11	22.9	315	10.7	-7	14.9	60 N	17 01	17 45	18 33	23 01	77	8 13	20				
1	191	32.3		22.0	329	42.9 ¹³²		24.6 ⁹⁷	58	07		48	33	22 55	75	18	22			
2	206	32.4		21.1	344	14.9 ¹³⁰		34.2 ⁹⁶	56	12		51	34	49 73		22	24			
3	221	32.5		20.2	358	47.0 ¹³¹		43.8 ⁹⁶	54	17		53	34	44 71		26	26			
4	236	32.5		19.3	13	19.0 ¹³⁰		-7 53.4 ⁹⁶	52	21		56	35	39 69		30	27			
5	251	32.6	-11	18.4	27	50.9 ¹²⁹		-8 02.9 ⁹⁵	50	17 25	17 58	18 36	22 35	68	8 33	29				
6	266	32.6	-11	17.5	42	22.8 ¹²⁹		-8 12.4 ⁹⁵	45	17 33	18 03	18 38	22 26	65	8 40	32				
7	281	32.7		16.7	56	54.7 ¹²⁹		21.9 ⁹⁵	40	40		08	39	19 61		46	34			
8	296	32.7		15.8	71	26.5 ¹²⁸		31.3 ⁹⁴	35	46		12	42	12 60		51	37			
9	311	32.8		14.9	85	58.2 ¹²⁷		40.7 ⁹⁴	30	17 52		16	44	22 07	57	8 55	39			
10	326	32.9		14.0	100	30.0 ¹²⁸		50.1 ⁹⁴	20	18 01		23	49	21 57	55	9 03	42			
11	341	32.9	-11	13.1	115	01.6 ¹²⁶		-8 59.4 ⁹³	10 N	18 09	18 31	18 55	21 49	51	9 10	45				
12	356	33.0	-11	12.2	129	33.2 ¹²⁶		-9 08.7 ⁹³	0	18 17	18 38	19 03	21 41	49	9 16	48				
13	11	33.0		11.3	144	04.8 ¹²⁶		18.0 ⁹³	10 S	25		47	12	33 46		23	50			
14	26	33.1		10.4	158	36.3 ¹²⁵		27.2 ⁹²	20	34	18 56	23	25 43		29	54				
15	41	33.2		09.5	173	07.8 ¹²⁵		36.4 ⁹²	30	44	19 08	38	15 41		37	57				
16	56	33.2		08.6	187	39.2 ¹²⁴		45.5 ⁹¹	35	50		16	47	10 39		42	59			
17	71	33.3	-11	07.7	202	10.6 ¹²⁴		-9 54.7 ⁹²	40	18 56	19 24	19 58	21 04	36	9 47	61				
18	86	33.4	-11	06.8	216	41.9 ¹²³		-10 03.7 ⁹⁰	45	19 04	19 35	20 13	20 57	34	9 53	64				
19	101	33.4		06.0	231	13.1 ¹²²		12.7 ⁹⁰	50	13		48	31	48 31	10 00	67				
20	116	33.5		05.1	245	44.3 ¹²²		21.7 ⁹⁰	52	18	19 54	40	45 29		03	69				
21	131	33.5		04.2	260	15.5 ¹²²		30.7 ⁹⁰	54	22	20 01	20 50	40 28		07	70				
22	146	33.6		03.3	274	46.6 ¹²¹		39.5 ⁸⁸	56	28		09	21 02	36 26		11	72			
23	161	33.7		02.4	289	17.6 ¹²⁰		48.4 ⁸⁹	58	34		18	16	30 24		15	75			
24	176	33.7	-11	01.5	303	48.6 ¹²⁰		-10 57.2 ⁸⁸	60 S	19 40	20 28	21 32	20 25	21	10 21	77				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 02 ^m 2		Mag: -4.8 PMG: 9 ^h 24 ^m		Mag: -0.2 PMG: 3 ^h 48 ^m		Mag: -2.5 PMG: 20 ^h 48 ^m		Mag: +0.5 PMG: 5 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	°	'	°	'	°	'	°	'	°	'
0	148	52.1	218	48.0	-16	33.6	302	56.9	-7	48.0
1	163	54.5	233	48.9		33.7	317	59.1		48.1
2	178	57.0	248	49.8		33.7	333	01.3		48.2
3	193	59.5	263	50.8		33.8	348	03.4		48.2
4	209	01.9	278	51.7		33.9	3	05.6		48.3
5	224	04.4	293	52.6	-16	33.9	18	07.8	-7	48.4
6	239	06.9	308	53.5	-16	34.0	33	10.0	-7	48.5
7	254	09.3	323	54.5		34.1	48	12.1		48.6
8	269	11.8	338	55.4		34.1	63	14.3		48.7
9	284	14.2	353	56.3		34.2	78	16.5		48.8
10	299	16.7	8	57.2		34.3	93	18.7		48.8
11	314	19.2	23	58.1	-16	34.3	108	20.8	-7	48.9
12	329	21.6	38	59.0	-16	34.4	123	23.0	-7	49.0
13	344	24.1	53	59.9		34.5	138	25.2		49.1
14	359	26.6	69	00.8		34.5	153	27.4		49.2
15	14	29.0	84	01.7		34.6	168	29.6		49.2
16	29	31.5	99	02.6		34.6	183	31.8		49.3
17	44	34.0	114	03.5	-16	34.7	198	33.9	-7	49.4
18	59	36.4	129	04.4	-16	34.8	213	36.1	-7	49.5
19	74	38.9	144	05.3		34.8	228	38.3		49.6
20	89	41.3	159	06.2		34.9	243	40.5		49.6
21	104	43.8	174	07.1		34.9	258	42.7		49.7
22	119	46.3	189	08.0		35.0	273	44.9		49.8
23	134	48.7	204	08.9		35.1	288	47.1		49.9
24	149	51.2	219	09.7	-16	35.1	303	49.3	-7	50.0
Dif	—		+9		-1		+22		-1	
							+26		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: 20 ^d 1 PHE { 4 ^h : 56/5 12 ^h : 56/7 20 ^h : 57/0 PMG: 3 ^h 52 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	33.7	-11	01.5	303	48.6	-10	57.2	60 N	5 53	6 42	7 25	** ** *	**	8 33	24
1	191	33.8	-11	00.6	318	19.5 ¹¹⁹	-11	06.0 ⁸⁸	58	53	39	19	** ** *	**	40	26
2	206	33.9	-10	59.7	332	50.4 ¹¹⁹		14.7 ⁸⁷	56	53	36	14	** ** *	**	46	29
3	221	33.9		58.8	347	21.2 ¹¹⁸		23.3 ⁸⁶	54	52	33	09	23 55	70	52	30
4	236	34.0		57.9	1	51.9 ¹¹⁷		31.9 ⁸⁶	52	52	31	05	48	69	8 57	32
5	251	34.1	-10	57.0	16	22.6 ¹¹⁷	-11	40.5 ⁸⁶	50	5 51	6 29	7 01	23 43	67	9 02	33
6	266	34.1	-10	56.1	30	53.3 ¹¹⁷	-11	49.0 ⁸⁵	45	5 49	6 23	6 53	23 31	64	9 12	36
7	281	34.2		55.2	45	23.8 ¹¹⁵	-11	57.4 ⁸⁴	40	47	19	47	20	63	20	39
8	296	34.3		54.3	59	54.4 ¹¹⁶	-12	05.8 ⁸⁴	35	45	15	41	12	61	28	40
9	311	34.3		53.4	74	24.8 ¹¹⁴		14.2 ⁸⁴	30	43	11	35	23 04	59	34	42
10	326	34.4		52.5	88	55.2 ¹¹⁴		22.5 ⁸³	20	38	6 04	26	22 52	56	45	45
11	341	34.5	-10	51.6	103	25.6 ¹¹⁴	-12	30.7 ⁸²	10 N	5 32	5 57	6 18	22 40	54	9 55	48
12	356	34.5	-10	50.7	117	55.8 ¹¹²	-12	38.9 ⁸²	0	5 25	5 49	6 10	22 30	52	10 04	50
13	11	34.6		49.8	132	26.0 ¹¹²		47.0 ⁸¹	10 S	16	41	6 02	19	50	13	53
14	26	34.7		48.9	146	56.2 ¹¹²	-12	55.1 ⁸¹	20	5 05	31	5 54	22 08	48	23	55
15	41	34.7		48.0	161	26.3 ¹¹¹	-13	03.1 ⁸⁰	30	4 50	19	44	21 56	44	34	59
16	56	34.8		47.1	175	56.3 ¹¹⁰		11.0 ⁷⁹	35	41	12	38	49	43	41	60
17	71	34.9	-10	46.2	190	26.3 ¹¹⁰	-13	18.9 ⁷⁹	40	4 30	5 04	5 32	21 40	42	10 48	62
18	86	34.9	-10	45.3	204	56.2 ¹⁰⁹	-13	26.7 ⁷⁸	45	4 16	4 53	5 24	21 31	39	10 57	64
19	101	35.0		44.4	219	26.0 ¹⁰⁸		34.5 ⁷⁸	50	3 57	40	15	19	37	11 07	68
20	116	35.1		43.5	233	55.8 ¹⁰⁸		42.1 ⁷⁶	52	49	34	11	14	35	12	69
21	131	35.2		42.6	248	25.5 ¹⁰⁷		49.8 ⁷⁷	54	38	27	06	08	34	17	71
22	146	35.2		41.7	262	55.1 ¹⁰⁶	-13	57.3 ⁷⁵	56	27	20	5 01	21 02	32	23	73
23	161	35.3		40.8	277	24.7 ¹⁰⁶	-14	04.8 ⁷⁵	58	3 13	11	4 55	20 54	31	30	74
24	176	35.4	-10	39.9	291	54.2 ¹⁰⁵	-14	12.2 ⁷⁴	60 S	2 56	4 01	4 48	20 46	28	11 38	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 58 ^m 3		Mag: -4.8 PMG: 9 ^h 23 ^m		Mag: -0.2 PMG: 3 ^h 44 ^m		Mag: -2.5 PMG: 20 ^h 44 ^m		Mag: +0.5 PMG: 5 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	149	51.2	219	09.7	-16	35.1	303	49.3	-7	50.0	48	06.2	+23	13.2	278	25.1	-16	19.8
1	164	53.7	234	10.6		35.2	318	51.4		50.0	63	08.8		13.2	293	27.5		19.8
2	179	56.1	249	11.5		35.2	333	53.6		50.1	78	11.4		13.2	308	29.9		19.8
3	194	58.6	264	12.4		35.3	348	55.8		50.2	93	14.0		13.2	323	32.3		19.8
4	210	01.1	279	13.2		35.3	3	58.0		50.3	108	16.5		13.3	338	34.7		19.8
5	225	03.5	294	14.1	-16	35.4	19	00.2	-7	50.3	123	19.1	+23	13.3	353	37.1	-16	19.8
6	240	06.0	309	15.0	-16	35.4	34	02.4	-7	50.4	138	21.7	+23	13.3	8	39.6	-16	19.8
7	255	08.5	324	15.8		35.5	49	04.6		50.5	153	24.3		13.3	23	42.0		19.8
8	270	10.9	339	16.7		35.6	64	06.8		50.6	168	26.9		13.3	38	44.4		19.8
9	285	13.4	354	17.5		35.6	79	09.0		50.6	183	29.5		13.3	53	46.8		19.8
10	300	15.8	9	18.4		35.7	94	11.2		50.7	198	32.1		13.3	68	49.2		19.8
11	315	18.3	24	19.2	-16	35.7	109	13.4	-7	50.8	213	34.7	+23	13.3	83	51.6	-16	19.8
12	330	20.8	39	20.1	-16	35.8	124	15.6	-7	50.9	228	37.3	+23	13.4	98	54.1	-16	19.8
13	345	23.2	54	20.9		35.8	139	17.8		50.9	243	39.8		13.4	113	56.5		19.8
14	0	25.7	69	21.8		35.9	154	20.0		51.0	258	42.4		13.4	128	58.9		19.8
15	15	28.2	84	22.6		35.9	169	22.3		51.1	273	45.0		13.4	144	01.3		19.8
16	30	30.6	99	23.5		36.0	184	24.5		51.1	288	47.6		13.4	159	03.7		19.8
17	45	33.1	114	24.3	-16	36.0	199	26.7	-7	51.2	303	50.2	+23	13.4	174	06.1	-16	19.8
18	60	35.6	129	25.1	-16	36.1	214	28.9	-7	51.3	318	52.8	+23	13.4	189	08.6	-16	19.8
19	75	38.0	144	26.0		36.1	229	31.1		51.4	333	55.4		13.5	204	11.0		19.8
20	90	40.5	159	26.8		36.2	244	33.3		51.4	348	58.0		13.5	219	13.4		19.8
21	105	42.9	174	27.6		36.2	259	35.5		51.5	4	00.5		13.5	234	15.8		19.8
22	120	45.4	189	28.5		36.3	274	37.7		51.6	19	03.1		13.5	249	18.2		19.8
23	135	47.9	204	29.3		36.3	289	40.0		51.6	34	05.7		13.5	264	20.7		19.8
24	150	50.3	219	30.1	-16	36.4	304	42.2	-7	51.7	49	08.3	+23	13.5	279	23.1	-16	19.8
Dif	—		+8		-1		+22		-1		+26		0		+24			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:2 PMG: 12 ^h 13 ^m 6				Edad: 21 ^d 1 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6 SD: 15:5 PMG: 4 ^h 42 ^m R°: 53 ^m																	
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	176	35.4	-10	39.9	291	54.2	-14	12.2	60 N	17	06	17	49	18	38	0	18	77	8	57	31	
1	191	35.4		39.0	306	23.7 ¹⁰⁵		19.6 ⁷⁴	58	12		52		38		10	73		9	06	34	
2	206	35.5		38.1	320	53.0 ¹⁰³		26.9 ⁷³	56	17		55		38		0	02	71		15	35	
3	221	35.6		37.2	335	22.4 ¹⁰⁴		34.1 ⁷²	54	21		57		38		**	*	*		22	37	
4	236	35.6		36.3	349	51.6 ¹⁰²		41.2 ⁷¹	52	25	17	59	39			**	*	*	*	29	38	
5	251	35.7	-10	35.4	4	20.8 ¹⁰²	-14	48.3 ⁷¹	50	17	28	18	01	18	39	**	*	*	*	9	35	40
6	266	35.8	-10	34.5	18	49.9 ¹⁰¹	-14	55.3 ⁷⁰	45	17	36	18	06	18	40	**	*	*	*	9	48	42
7	281	35.9		33.6	33	18.9 ¹⁰⁰	-15	02.2 ⁶⁹	40	43		10		42		**	*	*	*	9	59	44
8	296	35.9		32.7	47	47.9 ¹⁰⁰		09.1 ⁶⁹	35	48		14		43		**	*	*	*	10	08	46
9	311	36.0		31.8	62	16.8 ⁹⁹		15.8 ⁶⁷	30	17	53	17		45		**	*	*	*	16	47	
10	326	36.1		30.9	76	45.7 ⁹⁹		22.5 ⁶⁷	20	18	02	24		50		23	48	58		30	50	
11	341	36.2	-10	30.0	91	14.5 ⁹⁸	-15	29.2 ⁶⁷	10 N	18	10	18	31	18	56	23	34	57	10	43	51	
12	356	36.2	-10	29.1	105	43.2 ⁹⁷	-15	35.7 ⁶⁵	0	18	17	18	38	19	02	23	22	54	10	54	54	
13	11	36.3		28.1	120	11.8 ⁹⁶		42.1 ⁶⁴	10 S	24		46		11		23	09	53	11	06	55	
14	26	36.4		27.2	134	40.4 ⁹⁶		48.5 ⁶⁴	20	32		18		55		22	56	51		18	57	
15	41	36.5		26.3	149	08.9 ⁹⁵	-15	54.8 ⁶³	30	42		19		06		40	50		33	59		
16	56	36.5		25.4	163	37.3 ⁹⁴	-16	01.0 ⁶²	35	47		13		44		32	48		41	60		
17	71	36.6	-10	24.5	178	05.7 ⁹⁴	-16	07.2 ⁶²	40	18	53	19	22	19	55	22	22	47	11	50	62	
18	86	36.7	-10	23.6	192	34.0 ⁹³	-16	13.2 ⁶⁰	45	19	01	19	31	20	09	22	10	46	12	01	64	
19	101	36.8		22.7	207	02.2 ⁹²		19.2 ⁶⁰	50	09		44		26		21	56	44	15	66		
20	116	36.8		21.8	221	30.4 ⁹²		25.0 ⁵⁸	52	13		50		35		49	43		21	67		
21	131	36.9		20.9	235	58.5 ⁹¹		30.8 ⁵⁸	54	18		19	56	44		42	42		28	68		
22	146	37.0		20.0	250	26.5 ⁹⁰		36.5 ⁵⁷	56	23		20	03	20	55	34	40		36	70		
23	161	37.1		19.1	264	54.5 ⁹⁰		42.1 ⁵⁶	58	28		12	21	08		25	38		44	72		
24	176	37.1	-10	18.2	279	22.4 ⁸⁹	-16	47.6 ⁵⁵	60 S	19	35	20	21	21	24	21	14	37	12	54	74	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 13 ^h 54 ^m 4		Mag: -4.8 PMG: 9 ^h 21 ^m				Mag: -0.3 PMG: 3 ^h 41 ^m				Mag: -2.5 PMG: 20 ^h 40 ^m				Mag: +0.5 PMG: 5 ^h 22 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	150	50.3	219	30.1	-16	36.4	304	42.2	-7	51.7	49	08.3	+23	13.5	279	23.1	-16	19.8				
1	165	52.8	234	30.9		36.4	319	44.4		51.8	64	10.9		13.5	294	25.5		19.8				
2	180	55.3	249	31.8		36.5	334	46.6		51.8	79	13.5		13.5	309	27.9		19.8				
3	195	57.7	264	32.6		36.5	349	48.8		51.9	94	16.0		13.6	324	30.3		19.8				
4	211	00.2	279	33.4		36.5	4	51.1		52.0	109	18.6		13.6	339	32.8		19.8				
5	226	02.7	294	34.2	-16	36.6	19	53.3	-7	52.0	124	21.2	+23	13.6	354	35.2	-16	19.8				
6	241	05.1	309	35.0	-16	36.6	34	55.5	-7	52.1	139	23.8	+23	13.6	9	37.6	-16	19.8				
7	256	07.6	324	35.8		36.7	49	57.7		52.2	154	26.4		13.6	24	40.0		19.8				
8	271	10.1	339	36.6		36.7	64	59.9		52.2	169	28.9		13.6	39	42.4		19.8				
9	286	12.5	354	37.4		36.8	80	02.2		52.3	184	31.5		13.6	54	44.9		19.8				
10	301	15.0	9	38.2		36.8	95	04.4		52.4	199	34.1		13.6	69	47.3		19.8				
11	316	17.4	24	39.0	-16	36.9	110	06.6	-7	52.4	214	36.7	+23	13.7	84	49.7	-16	19.8				
12	331	19.9	39	39.8	-16	36.9	125	08.9	-7	52.5	229	39.3	+23	13.7	99	52.1	-16	19.8				
13	346	22.4	54	40.6		36.9	140	11.1		52.6	244	41.8		13.7	114	54.6		19.8				
14	1	24.8	69	41.4		37.0	155	13.3		52.6	259	44.4		13.7	129	57.0		19.8				
15	16	27.3	84	42.2		37.0	170	15.6		52.7	274	47.0		13.7	144	59.4		19.8				
16	31	29.8	99	43.0		37.1	185	17.8		52.8	289	49.6		13.7	160	01.8		19.8				
17	46	32.2	114	43.7	-16	37.1	200	20.0	-7	52.8	304	52.2	+23	13.7	175	04.2	-16	19.8				
18	61	34.7	129	44.5	-16	37.1	215	22.3	-7	52.9	319	54.7	+23	13.7	190	06.7	-16	19.8				
19	76	37.2	144	45.3		37.2	230	24.5		52.9	334	57.3		13.8	205	09.1		19.8				
20	91	39.6	159	46.1		37.2	245	26.7		53.0	349	59.9		13.8	220	11.5		19.8				
21	106	42.1	174	46.9		37.2	260	29.0		53.1	5	02.5		13.8	235	13.9		19.8				
22	121	44.6	189	47.6		37.3	275	31.2		53.1	20	05.0		13.8	250	16.4		19.8				
23	136	47.0	204	48.4		37.3	290	33.5		53.2	35	07.6		13.8	265	18.8		19.8				
24	151	49.5	219	49.2	-16	37.4	305	35.7	-7	53.2	50	10.2	+23	13.8	280	21.2	-16	19.8				
Dif	—		+8		0		+22		-1		+26		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 5			Edad: 22 ^d 1 PHE { 4 ^h : 57/9 12 ^h : 58/1 20 ^h : 58/4 PMG: 5 ^h 35 ^m 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	37.1	-10	18.2	279	22.4	-16	47.6	60 N	5 48	6 36	7 19	1 35	71	9 28	43
1	191	37.2		17.3	293	50.2 88		53.1 55	58	48	34	14	23	70	40	44
2	206	37.3		16.3	308	18.0 88	-16	58.4 53	56	48	31	09	13	69	50	46
3	221	37.4		15.4	322	45.7 87	-17	03.6 52	54	48	29	05	1 05	67	9 59	47
4	236	37.5		14.5	337	13.3 86		08.8 52	52	48	27	7 01	0 57	66	10 07	47
5	251	37.5	-10	13.6	351	40.8 85	-17	13.8 50	50	5 47	6 25	6 58	0 50	65	10 15	48
6	266	37.6	-10	12.7	6	08.3 85	-17	18.8 50	45	5 46	6 20	6 50	0 35	63	10 30	50
7	281	37.7		11.8	20	35.7 84		23.7 49	40	45	16	44	23	62	43	50
8	296	37.8		10.9	35	03.1 84		28.4 47	35	43	13	38	13	60	10 54	51
9	311	37.9		10.0	49	30.4 83		33.1 47	30	41	09	33	0 03	60	11 03	53
10	326	37.9		09.1	63	57.6 82		37.7 46	20	37	6 03	25	** ** *	**	20	53
11	341	38.0	-10	08.1	78	24.8 82	-17	42.1 44	10 N	5 31	5 56	6 17	** ** *	**	11 34	55
12	356	38.1	-10	07.2	92	51.9 81	-17	46.5 44	0	5 25	5 49	6 10	** ** *	**	11 48	55
13	11	38.2		06.3	107	18.9 80		50.8 43	10 S	16	41	6 03	** ** *	**	12 01	57
14	26	38.3		05.4	121	45.9 80		54.9 41	20	5 06	32	5 55	23	47	56	15 58
15	41	38.3		04.5	136	12.8 79	-17	59.0 41	30	4 52	21	46	30	56	32	59
16	56	38.4		03.6	150	39.6 78	-18	02.9 39	35	43	14	40	20	55	41	60
17	71	38.5	-10	02.7	165	06.4 78	-18	06.8 39	40	4 32	5 06	5 34	23	09	54	12 52
18	86	38.6	-10	01.8	179	33.1 77	-18	10.5 37	45	4 19	4 56	5 27	22	56	53	13 05
19	101	38.7	-10	00.8	193	59.7 76		14.2 37	50	4 02	44	18	40	52	21	63
20	116	38.7	-9	59.9	208	26.3 76		17.7 35	52	3 53	38	14	32	52	28	64
21	131	38.8		59.0	222	52.8 75		21.1 34	54	44	32	10	24	51	36	65
22	146	38.9		58.1	237	19.3 75		24.4 33	56	33	25	05	14	51	46	65
23	161	39.0		57.2	251	45.7 74		27.6 32	58	20	16	5 00	22	03	51	13 56
24	176	39.1	-9	56.3	266	12.1 74	-18	30.7 31	60 S	3 04	4 07	4 53	21	51	50	14 08

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 50 ^m 4		Mag: -4.8 PMG: 9 ^h 20 ^m		Mag: -0.3 PMG: 3 ^h 37 ^m		Mag: -2.5 PMG: 20 ^h 36 ^m		Mag: +0.5 PMG: 5 ^h 18 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	151	49.5	219	49.2	-16	37.4	305	35.7	-7	53.2	50	10.2	+23	13.8	280	21.2	-16	19.8
1	166	51.9	234	49.9		37.4	320	37.9		53.3	65	12.8		13.8	295	23.6		19.8
2	181	54.4	249	50.7		37.4	335	40.2		53.4	80	15.3		13.8	310	26.1		19.9
3	196	56.9	264	51.4		37.5	350	42.4		53.4	95	17.9		13.8	325	28.5		19.9
4	211	59.3	279	52.2		37.5	5	44.7		53.5	110	20.5		13.9	340	30.9		19.9
5	227	01.8	294	53.0	-16	37.5	20	46.9	-7	53.5	125	23.1	+23	13.9	355	33.3	-16	19.9
6	242	04.3	309	53.7	-16	37.6	35	49.2	-7	53.6	140	25.6	+23	13.9	10	35.8	-16	19.9
7	257	06.7	324	54.5		37.6	50	51.4		53.6	155	28.2		13.9	25	38.2		19.9
8	272	09.2	339	55.2		37.6	65	53.7		53.7	170	30.8		13.9	40	40.6		19.9
9	287	11.7	354	56.0		37.7	80	55.9		53.8	185	33.4		13.9	55	43.0		19.9
10	302	14.1	9	56.7		37.7	95	58.2		53.8	200	35.9		13.9	70	45.5		19.9
11	317	16.6	24	57.5	-16	37.7	111	00.4	-7	53.9	215	38.5	+23	13.9	85	47.9	-16	19.9
12	332	19.1	39	58.2	-16	37.7	126	02.7	-7	53.9	230	41.1	+23	14.0	100	50.3	-16	19.9
13	347	21.5	54	58.9		37.8	141	05.0		54.0	245	43.6		14.0	115	52.7		19.9
14	2	24.0	69	59.7		37.8	156	07.2		54.0	260	46.2		14.0	130	55.2		19.9
15	17	26.4	85	00.4		37.8	171	09.5		54.1	275	48.8		14.0	145	57.6		19.9
16	32	28.9	100	01.1		37.9	186	11.7		54.1	290	51.3		14.0	161	00.0		19.9
17	47	31.4	115	01.9	-16	37.9	201	14.0	-7	54.2	305	53.9	+23	14.0	176	02.4	-16	19.9
18	62	33.8	130	02.6	-16	37.9	216	16.3	-7	54.2	320	56.5	+23	14.0	191	04.9	-16	19.9
19	77	36.3	145	03.3		37.9	231	18.5		54.3	335	59.1		14.0	206	07.3		19.9
20	92	38.8	160	04.1		38.0	246	20.8		54.3	351	01.6		14.0	221	09.7		19.9
21	107	41.2	175	04.8		38.0	261	23.1		54.4	6	04.2		14.1	236	12.1		19.9
22	122	43.7	190	05.5		38.0	276	25.3		54.4	21	06.8		14.1	251	14.6		19.9
23	137	46.2	205	06.2		38.0	291	27.6		54.5	36	09.3		14.1	266	17.0		19.9
24	152	48.6	220	06.9	-16	38.1	306	29.9	-7	54.5	51	11.9	+23	14.1	281	19.4	-16	19.9
Dif	—		+7		0		+23		-1		+26		0		+24			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 23 ^d 1	PHE { 4 ^h : 58/6 12 ^h : 58/8 20 ^h : 59/1	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 13 ^m 3					R°: 58 ^m			Hora		R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	39.1	-9 56.3	266	12.1	-18 30.7	30	60 N	17 12	17 54	18 43	2 46 63	10 11 56		
1	191	39.2	55.3	280	38.3	33.7	72	58	17	57	42	33 62	24 57		
2	206	39.2	54.4	295	04.6	36.6	29	56	21	17 59	42	22 61	36 57		
3	221	39.3	53.5	309	30.7	39.3	27	54	25	18 01	42	12 61	46 57		
4	236	39.4	52.6	323	56.8	42.0	27	52	29	03	42	2 03 61	10 54 58		
5	251	39.5	-9 51.7	338	22.9	-18 44.5	25	50	17 32	18 05	18 42	1 55 61	11 03 57		
6	266	39.6	-9 50.8	352	48.9	-18 46.9	24	45	17 39	18 09	18 43	1 38 61	11 20 57		
7	281	39.7	49.8	7	14.8	49.2	23	40	45	12	44	25 59	33 58		
8	296	39.8	48.9	21	40.7	51.4	22	35	50	16	45	13 59	45 58		
9	311	39.8	48.0	36	06.6	53.5	21	30	17 55	19	47	1 03 59	11 56 58		
10	326	39.9	47.1	50	32.3	55.4	19	20	18 03	25	51	0 46 58	12 13 58		
11	341	40.0	-9 46.2	64	58.1	-18 57.3	19	10 N	18 10	18 31	18 56	0 31 57	12 29 58		
12	356	40.1	-9 45.3	79	23.7	-18 59.0	17	0	18 17	18 38	19 02	0 16 58	12 43 59		
13	11	40.2	44.3	93	49.4	-19 00.6	16	10 S	24	45	10	0 02 57	12 58 58		
14	26	40.3	43.4	108	14.9	02.0	14	20	31	18 54	20	** ** *	13 13 58		
15	41	40.4	42.5	122	40.5	03.4	14	30	40	19 04	33	** ** *	31 58		
16	56	40.4	41.6	137	05.9	04.6	12	35	45	11	42	** ** *	41 58		
17	71	40.5	-9 40.7	151	31.4	-19 05.7	11	40	18 51	19 19	19 52	** ** *	13 53 58		
18	86	40.6	-9 39.7	165	56.8	-19 06.7	10	45	18 57	19 28	20 05	23 49 62	14 07 58		
19	101	40.7	38.8	180	22.1	07.6	9	50	19 05	39	21	32 63	24 58		
20	116	40.8	37.9	194	47.4	08.3	7	52	09	45	29	24 63	32 58		
21	131	40.9	37.0	209	12.6	08.9	6	54	13	51	38	15 63	41 57		
22	146	41.0	36.1	223	37.9	09.4	5	56	18	19 58	20 49	23 05 63	14 51 57		
23	161	41.1	35.1	238	03.0	09.8	4	58	23	20 06	21 01	22 54 63	15 02 57		
24	176	41.2	-9 34.2	252	28.1	-19 10.0	2	60 S	19 29	20 15	21 16	22 41 64	15 15 57		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 46 ^m 5		Mag: -4.8 PMG: 9 ^h 19 ^m		Mag: -0.3 PMG: 3 ^h 33 ^m		Mag: -2.5 PMG: 20 ^h 32 ^m		Mag: +0.5 PMG: 5 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	152	48.6	220 06.9	-16 38.1	306 29.9	-7 54.5	51 11.9	+23 14.1	281 19.4	-16 19.9
1	167	51.1	235 07.6	38.1	321 32.1	54.6	66 14.5	14.1	296 21.9	19.9
2	182	53.5	250 08.4	38.1	336 34.4	54.6	81 17.0	14.1	311 24.3	19.9
3	197	56.0	265 09.1	38.1	351 36.7	54.7	96 19.6	14.1	326 26.7	19.9
4	212	58.5	280 09.8	38.2	6 39.0	54.7	111 22.2	14.1	341 29.1	19.9
5	228	00.9	295 10.5	-16 38.2	21 41.2	-7 54.8	126 24.7	+23 14.1	356 31.6	-16 19.9
6	243	03.4	310 11.2	-16 38.2	36 43.5	-7 54.8	141 27.3	+23 14.2	11 34.0	-16 19.9
7	258	05.9	325 11.9	38.2	51 45.8	54.9	156 29.8	14.2	26 36.4	19.9
8	273	08.3	340 12.6	38.2	66 48.1	54.9	171 32.4	14.2	41 38.9	19.9
9	288	10.8	355 13.3	38.3	81 50.3	55.0	186 35.0	14.2	56 41.3	19.9
10	303	13.3	10 14.0	38.3	96 52.6	55.0	201 37.5	14.2	71 43.7	19.9
11	318	15.7	25 14.7	-16 38.3	111 54.9	-7 55.1	216 40.1	+23 14.2	86 46.2	-16 19.9
12	333	18.2	40 15.3	-16 38.3	126 57.2	-7 55.1	231 42.7	+23 14.2	101 48.6	-16 19.9
13	348	20.7	55 16.0	38.3	141 59.5	55.2	246 45.2	14.2	116 51.0	19.9
14	3	23.1	70 16.7	38.3	157 01.8	55.2	261 47.8	14.2	131 53.4	19.9
15	18	25.6	85 17.4	38.4	172 04.0	55.3	276 50.3	14.3	146 55.9	19.9
16	33	28.0	100 18.1	38.4	187 06.3	55.3	291 52.9	14.3	161 58.3	19.9
17	48	30.5	115 18.8	-16 38.4	202 08.6	-7 55.3	306 55.5	+23 14.3	177 00.7	-16 19.9
18	63	33.0	130 19.4	-16 38.4	217 10.9	-7 55.4	321 58.0	+23 14.3	192 03.2	-16 19.8
19	78	35.4	145 20.1	38.4	232 13.2	55.4	337 00.6	14.3	207 05.6	19.8
20	93	37.9	160 20.8	38.4	247 15.5	55.5	352 03.1	14.3	222 08.0	19.8
21	108	40.4	175 21.5	38.4	262 17.8	55.5	7 05.7	14.3	237 10.5	19.8
22	123	42.8	190 22.1	38.4	277 20.1	55.5	22 08.3	14.3	252 12.9	19.8
23	138	45.3	205 22.8	38.5	292 22.4	55.6	37 10.8	14.3	267 15.3	19.8
24	153	47.8	220 23.5	-16 38.5	307 24.7	-7 55.6	52 13.4	+23 14.4	282 17.8	-16 19.8
Dif	—		+7	0	+23	0	+26	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 2			Edad: 24 ^d 1 PHE { 4 ^h : 59/3 12 ^h : 59/5 20 ^h : 59/8 PMG: 7 ^h 28 ^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	176	41.2	-9 34.2	252	28.1	-19 10.0	60 N	5 43	6 31	7 13		3 49 51	11 07 71		
1	191	41.3		266	53.2	10.1	58	43	29	08		35 52	21 70		
2	206	41.3		281	18.3	10.1	56	43	26	04		23 53	33 68		
3	221	41.4		295	43.3	10.0	54	44	25	7 00		13 54	43 68		
4	236	41.5		310	08.3	09.7	52	44	23	6 57		3 04 54	11 52 67		
5	251	41.6	-9 29.6	324	33.2	-19 09.3	50	5 44	6 21	6 54		2 56 54	12 00 66		
6	266	41.7	-9 28.7	338	58.1	-19 08.8	45	5 43	6 17	6 47		2 39 55	12 17 65		
7	281	41.8		353	23.0	08.2	40	42	14	41		24 56	31 64		
8	296	41.9		7	47.8	07.4	35	41	10	36		12 57	43 64		
9	311	42.0		22	12.6	06.5	30	39	07	31		2 02 57	12 54 62		
10	326	42.1		36	37.4	05.5	20	36	6 01	24		1 44 58	13 11 62		
11	341	42.2	-9 24.1	51	02.1	-19 04.3	10 N	5 31	5 55	6 17		1 28 59	13 27 60		
12	356	42.3	-9 23.1	65	26.8	-19 03.0	0	5 25	5 49	6 10		1 14 58	13 42 59		
13	11	42.3		79	51.5	01.6	10 S	17	42	6 03		0 59 59	13 56 58		
14	26	42.4		94	16.2	-19 00.1	20	5 07	33	5 56		43 60	14 11 57		
15	41	42.5		108	40.8	-18 58.4	30	4 54	23	47		26 60	29 56		
16	56	42.6		123	05.4	56.6	35	45	16	42		15 61	39 55		
17	71	42.7	-9 18.5	137	30.0	-18 54.7	40	4 35	5 09	5 37		0 03 62	14 51 54		
18	86	42.8	-9 17.6	151	54.6	-18 52.6	45	4 22	4 59	5 30		*** ** *	15 05 52		
19	101	42.9		166	19.1	50.4	50	4 06	48	22		*** ** *	22 50		
20	116	43.0		180	43.7	48.1	52	3 58	42	18		*** ** *	30 50		
21	131	43.1		195	08.2	45.6	54	49	36	14		*** ** *	38 49		
22	146	43.2		209	32.7	43.0	56	38	29	10		*** ** *	48 48		
23	161	43.3		223	57.2	40.3	58	26	22	5 04		23 57 76	15 59 47		
24	176	43.4	-9 12.0	238	21.6	-18 37.5	60 S	3 12	4 13	4 59		23 45 77	16 12 46		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 42 ^m 6		Mag: -4.8 PMG: 9 ^h 18 ^m		Mag: -0.3 PMG: 3 ^h 30 ^m		Mag: -2.5 PMG: 20 ^h 28 ^m		Mag: +0.4 PMG: 5 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	153	47.8	220 23.5	-16 38.5	307 24.7	-7 55.6	52 13.4	+23 14.4	282 17.8	-16 19.8
1	168	50.2	235 24.1		322 27.0	55.7	67 15.9	14.4	297 20.2	19.8
2	183	52.7	250 24.8		337 29.3	55.7	82 18.5	14.4	312 22.6	19.8
3	198	55.2	265 25.5		352 31.6	55.8	97 21.0	14.4	327 25.1	19.8
4	213	57.6	280 26.1		7 33.9	55.8	112 23.6	14.4	342 27.5	19.8
5	229	00.1	295 26.8	-16 38.5	22 36.2	-7 55.8	127 26.2	+23 14.4	357 29.9	-16 19.8
6	244	02.5	310 27.4	-16 38.5	37 38.5	-7 55.9	142 28.7	+23 14.4	12 32.4	-16 19.8
7	259	05.0	325 28.1		52 40.8	55.9	157 31.3	14.4	27 34.8	19.8
8	274	07.5	340 28.7		67 43.1	55.9	172 33.8	14.4	42 37.2	19.8
9	289	09.9	355 29.4		82 45.4	56.0	187 36.4	14.4	57 39.7	19.8
10	304	12.4	10 30.0		97 47.7	56.0	202 38.9	14.5	72 42.1	19.8
11	319	14.9	25 30.7	-16 38.6	112 50.0	-7 56.1	217 41.5	+23 14.5	87 44.5	-16 19.8
12	334	17.3	40 31.3	-16 38.6	127 52.3	-7 56.1	232 44.0	+23 14.5	102 47.0	-16 19.8
13	349	19.8	55 31.9		142 54.6	56.1	247 46.6	14.5	117 49.4	19.8
14	4	22.3	70 32.6		157 56.9	56.2	262 49.1	14.5	132 51.8	19.8
15	19	24.7	85 33.2		172 59.2	56.2	277 51.7	14.5	147 54.3	19.8
16	34	27.2	100 33.8		188 01.6	56.2	292 54.2	14.5	162 56.7	19.8
17	49	29.7	115 34.5	-16 38.6	203 03.9	-7 56.3	307 56.8	+23 14.5	177 59.1	-16 19.8
18	64	32.1	130 35.1	-16 38.6	218 06.2	-7 56.3	322 59.3	+23 14.5	193 01.6	-16 19.8
19	79	34.6	145 35.7		233 08.5	56.3	338 01.9	14.5	208 04.0	19.8
20	94	37.0	160 36.4		248 10.8	56.4	353 04.5	14.6	223 06.5	19.8
21	109	39.5	175 37.0		263 13.2	56.4	8 07.0	14.6	238 08.9	19.8
22	124	42.0	190 37.6		278 15.5	56.4	23 09.5	14.6	253 11.3	19.8
23	139	44.4	205 38.2		293 17.8	56.5	38 12.1	14.6	268 13.8	19.8
24	154	46.9	220 38.8	-16 38.6	308 20.1	-7 56.5	53 14.6	+23 14.6	283 16.2	-16 19.8
Dif	—		+6 0		+23 0		+26 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 0			Edad: 25 ^d 1 PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'3 PMG: 8 ^h 27 ^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			
0	176	43.4	-9	12.0	238	21.6	-18	37.5	60 N	17 17	17 59	18 47	4 40 39		12 18 83			
1	191	43.5		11.1	252	46.1		34.5	58	21	18 01	47	27 42		31 80			
2	206	43.6		10.2	267	10.5		31.4	56	25	03	46	16 44		41 79			
3	221	43.7		09.2	281	35.0		28.2	54	29	05	46	4 07 45		51 76			
4	236	43.8		08.3	295	59.4		24.8	52	32	06	45	3 58 46		12 59 75			
5	251	43.9	-9	07.4	310	23.8	-18	21.3	50	17 35	18 08	18 45	3 50 48		13 06 74			
6	266	44.0	-9	06.4	324	48.2	-18	17.7	45	17 42	18 11	18 45	3 34 49		13 22 72			
7	281	44.1		05.5	339	12.6		13.9	40	47	14	46	20 52		35 70			
8	296	44.2		04.6	353	37.0		10.1	38	52	17	47	3 09 53		47 67			
9	311	44.3		03.6	8	01.4		06.1	30	17 56	20	48	2 59 54		13 56 66			
10	326	44.4		02.7	22	25.8	-18	01.9	20	18 03	26	51	42 56		14 13 63			
11	341	44.5	-9	01.8	36	50.1	-17	57.7	10 N	18 10	18 31	18 56	2 27 57		14 27 61			
12	356	44.6	-9	00.9	51	14.5	-17	53.3	0	18 16	18 37	19 02	2 12 60		14 41 59			
13	11	44.7	-8	59.9	65	38.9		48.8	10 S	23	44	09	1 58 61		14 54 57			
14	26	44.8		59.0	80	03.3		44.1	20	30	18 52	18	43 63		15 08 55			
15	41	44.9		58.1	94	27.7		39.4	47	30	38	19 02	31	26 65		25 52		
16	56	45.0		57.1	108	52.1		34.5	35	42	08	39	16 66		34 50			
17	71	45.1	-8	56.2	123	16.5	-17	29.5	40	18 48	19 16	19 49	1 05 67		15 45 48			
18	86	45.2	-8	55.3	137	40.9	-17	24.3	45	18 54	19 24	20 01	0 51 69		15 57 47			
19	101	45.3		54.3	152	05.3		19.1	50	19 01	35	17	35 70		16 12 44			
20	116	45.4		53.4	166	29.7		13.7	54	05	40	24	27 71		20 42			
21	131	45.5		52.5	180	54.1		08.2	55	09	46	33	18 73		27 41			
22	146	45.6		51.5	195	18.6	-17	02.5	57	13	19 53	43	0 08 74		36 39			
23	161	45.7		50.6	209	43.0	-16	56.8	57	18	20 00	20 54	** ** *		46 37			
24	176	45.8	-8	49.7	224	07.5	-16	50.9	59	19 23	20 08	21 08	** ** *		16 58 34			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 13 ^h 38 ^m 6		Mag: -4.8 PMG: 9 ^h 17 ^m			Mag: -0.4 PMG: 3 ^h 26 ^m			Mag: -2.5 PMG: 20 ^h 24 ^m				Mag: +0.4 PMG: 5 ^h 06 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	154	46.9	220	38.8	-16	38.6	308	20.1	-7	56.5	53	14.6	+23	14.6	283	16.2	-16	19.8
1	169	49.4	235	39.5		38.6	323	22.4		56.5	68	17.2		14.6	298	18.6		19.8
2	184	51.8	250	40.1		38.6	338	24.8		56.6	83	19.7		14.6	313	21.1		19.8
3	199	54.3	265	40.7		38.6	353	27.1		56.6	98	22.3		14.6	328	23.5		19.8
4	214	56.8	280	41.3		38.5	8	29.4		56.6	113	24.8		14.6	343	25.9		19.8
5	229	59.2	295	41.9	-16	38.5	23	31.8	-7	56.6	128	27.4	+23	14.6	358	28.4	-16	19.8
6	245	01.7	310	42.5	-16	38.5	38	34.1	-7	56.7	143	29.9	+23	14.7	13	30.8	-16	19.8
7	260	04.1	325	43.1		38.5	53	36.4		56.7	158	32.5		14.7	28	33.3		19.8
8	275	06.6	340	43.7		38.5	68	38.8		56.7	173	35.0		14.7	43	35.7		19.8
9	290	09.1	355	44.3		38.5	83	41.1		56.8	188	37.6		14.7	58	38.1		19.8
10	305	11.5	10	44.9		38.5	98	43.4		56.8	203	40.1		14.7	73	40.6		19.8
11	320	14.0	25	45.5	-16	38.5	113	45.8	-7	56.8	218	42.7	+23	14.7	88	43.0	-16	19.8
12	335	16.5	40	46.1	-16	38.5	128	48.1	-7	56.8	233	45.2	+23	14.7	103	45.5	-16	19.8
13	350	18.9	55	46.7		38.5	143	50.4		56.9	248	47.7		14.7	118	47.9		19.8
14	5	21.4	70	47.3		38.5	158	52.8		56.9	263	50.3		14.7	133	50.3		19.8
15	20	23.9	85	47.9		38.5	173	55.1		56.9	278	52.8		14.7	148	52.8		19.8
16	35	26.3	100	48.5		38.4	188	57.5		56.9	293	55.4		14.8	163	55.2		19.8
17	50	28.8	115	49.0	-16	38.4	203	59.8	-7	57.0	308	57.9	+23	14.8	178	57.7	-16	19.8
18	65	31.3	130	49.6	-16	38.4	219	02.1	-7	57.0	324	00.5	+23	14.8	194	00.1	-16	19.8
19	80	33.7	145	50.2		38.4	234	04.5		57.0	339	03.0		14.8	209	02.5		19.8
20	95	36.2	160	50.8		38.4	249	06.8		57.0	354	05.5		14.8	224	05.0		19.8
21	110	38.6	175	51.4		38.4	264	09.2		57.1	9	08.1		14.8	239	07.4		19.7
22	125	41.1	190	51.9		38.4	279	11.5		57.1	24	10.6		14.8	254	09.9		19.7
23	140	43.6	205	52.5		38.3	294	13.9		57.1	39	13.2		14.8	269	12.3		19.7
24	155	46.0	220	53.1	-16	38.3	309	16.2	-7	57.1	54	15.7	+23	14.8	284	14.7	-16	19.7
Dif	—		+6			0	+23			0	+25			0	+24			0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 9			Edad: 26 ^d 1	PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'7											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	45.8	-8 49.7	224	07.5	-16	50.9	60 N	5 37	6 25	7 08	5 19	31	13	41	89
1	191	45.9		48.7	238 31.9		54 44.9	60 58		38 23	7 03		09 33	13 51	87	
2	206	46.0		47.8	252 56.4		55 38.8	61 56		39 22	6 59		5 00 35	14 00	84	
3	221	46.1		46.9	267 20.9		55 32.5	63 54		39 20		56	4 52 37		07 82	
4	236	46.2		45.9	281 45.5		56 26.2	63 52		40 19	53	44	39 14	80		
5	251	46.3	-8 45.0	296	10.0	-16	19.7	65 50	5 40	6 17	6 50	4 38	40	14 20	79	
6	266	46.4	-8 44.1	310	34.5	-16	13.1	66 45	5 40	6 14	6 43	4 23	44	14 34	75	
7	281	46.5		43.1	324 59.1	-16	06.4	67 40		39 11	38		12 46		45 72	
8	296	46.6		42.2	339 23.7	-15	59.6	68 35		39 08	33	4 02	48	14 54	70	
9	311	46.7		41.3	353 48.3		56 52.7	69 30		37 05	29	3 53	50	15 02	68	
10	326	46.8		40.3	8 12.9		56 45.6	71 20		34 6 00	22		38 53		16 64	
11	341	46.9	-8 39.4	22	37.6	-15	38.5	71 10 N	5 30	5 54	6 16	3 24	56	15 28	61	
12	356	47.0	-8 38.5	37	02.3	-15	31.2	73 0	5 24	5 49	6 10	3 12	58	15 40	58	
13	11	47.1		37.5	51 27.0		23.8	74 10 S		17 42	6 03	2 59	61	15 51	55	
14	26	47.2		36.6	65 51.7		16.3	75 20	5 08	34	5 56	46	64	16 03	52	
15	41	47.3		35.6	80 16.5		08.7	76 30	4 55	24	49	31	67		17 48	
16	56	47.4		34.7	94 41.2	-15	01.0	77 35		47 18	44	22	69		24 47	
17	71	47.5	-8 33.8	109	06.1	-14	53.2	78 40	4 38	5 11	5 39	2 12	71	16 33	44	
18	86	47.6	-8 32.8	123	30.9	-14	45.3	79 45	4 26	5 02	5 33	2 00	73	16 44	41	
19	101	47.7		31.9	137 55.7		37.3	80 50		10 4 51	25	1 45	77	16 56	38	
20	116	47.8		31.0	152 20.6		29.1	82 52	4 02	46	22		38 78	17 02	36	
21	131	47.9		30.0	166 45.6		20.9	82 54	3 54	41	18		31 80		08 35	
22	146	48.0		29.1	181 10.5		12.6	83 56		44 34	14	22	82		15 33	
23	161	48.2		28.1	195 35.5	-14	04.1	85 58		33 27	09		13 84		23 30	
24	176	48.3	-8 27.2	210	00.5	-13	55.6	85 60 S	3 19	4 19	5 04	1 02	86	17 32	28	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 34 ^m 7		Mag: -4.8 PMG: 9 ^h 16 ^m		Mag: -0.4 PMG: 3 ^h 22 ^m		Mag: -2.5 PMG: 20 ^h 20 ^m		Mag: +0.4 PMG: 5 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	155	46.0	220	53.1	-16	38.3	309	16.2	-7	57.1	54	15.7	+23	14.8	284	14.7	-16	19.7
1	170	48.5	235	53.7		38.3	324	18.6		57.1	69	18.2		14.8	299	17.2		19.7
2	185	51.0	250	54.2		38.3	339	20.9		57.2	84	20.8		14.8	314	19.6		19.7
3	200	53.4	265	54.8		38.3	354	23.3		57.2	99	23.3		14.9	329	22.1		19.7
4	215	55.9	280	55.4		38.3	9	25.7		57.2	114	25.9		14.9	344	24.5		19.7
5	230	58.4	295	55.9	-16	38.2	24	28.0	-7	57.2	129	28.4	+23	14.9	359	27.0	-16	19.7
6	246	00.8	310	56.5	-16	38.2	39	30.4	-7	57.2	144	30.9	+23	14.9	14	29.4	-16	19.7
7	261	03.3	325	57.0		38.2	54	32.7		57.3	159	33.5		14.9	29	31.8		19.7
8	276	05.8	340	57.6		38.2	69	35.1		57.3	174	36.0		14.9	44	34.3		19.7
9	291	08.2	355	58.2		38.2	84	37.5		57.3	189	38.6		14.9	59	36.7		19.7
10	306	10.7	10	58.7		38.1	99	39.8		57.3	204	41.1		14.9	74	39.2		19.7
11	321	13.1	25	59.3	-16	38.1	114	42.2	-7	57.3	219	43.6	+23	14.9	89	41.6	-16	19.7
12	336	15.6	40	59.8	-16	38.1	129	44.5	-7	57.3	234	46.2	+23	14.9	104	44.1	-16	19.7
13	351	18.1	56	00.4		38.1	144	46.9		57.4	249	48.7		14.9	119	46.5		19.7
14	6	20.5	71	00.9		38.0	159	49.3		57.4	264	51.2		14.9	134	48.9		19.7
15	21	23.0	86	01.5		38.0	174	51.7		57.4	279	53.8		15.0	149	51.4		19.7
16	36	25.5	101	02.0		38.0	189	54.0		57.4	294	56.3		15.0	164	53.8		19.7
17	51	27.9	116	02.5	-16	38.0	204	56.4	-7	57.4	309	58.8	+23	15.0	179	56.3	-16	19.7
18	66	30.4	131	03.1	-16	37.9	219	58.8	-7	57.4	325	01.4	+23	15.0	194	58.7	-16	19.7
19	81	32.9	146	03.6		37.9	235	01.1		57.5	340	03.9		15.0	210	01.2		19.7
20	96	35.3	161	04.2		37.9	250	03.5		57.5	355	06.4		15.0	225	03.6		19.7
21	111	37.8	176	04.7		37.8	265	05.9		57.5	10	09.0		15.0	240	06.1		19.7
22	126	40.2	191	05.2		37.8	280	08.3		57.5	25	11.5		15.0	255	08.5		19.7
23	141	42.7	206	05.8		37.8	295	10.6		57.5	40	14.0		15.0	270	10.9		19.7
24	156	45.2	221	06.3	-16	37.8	310	13.0	-7	57.5	55	16.6	+23	15.0	285	13.4	-16	19.6
Dif	—		+5		0		+24		0		+25		0		+24			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2		Edad: 27 ^d 1 PHE { 4 ^h : 60:8 12 ^h : 60:8 20 ^h : 60:8						Civil		Náutico	Hora	R°	Hora	R°
	PMG: 12 ^h 12 ^m 7	PMG: 10 ^h 24 ^m	R°: 57 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	48.3	-8	27.2	210	00.5	-13 55.6	60 N	17 22	18 04	18 52	5 50	24	15 10 92	
1	191	48.4		26.3	224	25.6	61 47.0	58	26	06	51	42	27	18 88	
2	206	48.5		25.3	238	50.6	60 38.2	56	30	07	50	35	29	24 86	
3	221	48.6		24.4	253	15.7	61 29.4	54	33	09	49	29	31	29 84	
4	236	48.7		23.4	267	40.9	62 20.5	52	36	10	49	23	34	34 82	
5	251	48.8	-8	22.5	282	06.1	62 -13 11.5	50	17 39	18 11	18 49	5 18	35	15 39 80	
6	266	48.9	-8	21.6	296	31.3	62 -13 02.4	45	17 44	18 14	18 48	5 07	39	15 49 76	
7	281	49.0		20.6	310	56.5	62 -12 53.2	40	49	17	48	4 58	42	15 57 73	
8	296	49.1		19.7	325	21.8	63 43.9	35	54	19	49	50	44	16 04 70	
9	311	49.2		18.7	339	47.1	63 34.5	30	17 58	22	49	43	47	10 67	
10	326	49.3		17.8	354	12.5	64 25.1	20	18 04	26	52	31	50	20 64	
11	341	49.5	-8	16.9	8	37.9	64 -12 15.5	10 N	18 10	18 31	18 56	4 20	54	16 29 60	
12	356	49.6	-8	15.9	23	03.3	64 -12 05.9	0	18 16	18 37	19 01	4 10	58	16 38 56	
13	11	49.7		15.0	37	28.8	65 -11 56.2	10 S	22	43	08	4 00	61	46 53	
14	26	49.8		14.0	51	54.3	65 46.4	20	28	18 51	17	3 50	64	16 55 49	
15	41	49.9		13.1	66	19.9	66 36.5	30	36	19 00	29	38	67	17 05 45	
16	56	50.0		12.1	80	45.4	65 26.5	35	40	06	36	31	70	11 43	
17	71	50.1	-8	11.2	95	11.1	67 -11 16.5	40	18 45	19 12	19 46	3 23	72	17 17 40	
18	86	50.2	-8	10.3	109	36.7	66 -11 06.4	45	18 50	19 21	19 57	3 13	76	17 25 37	
19	101	50.3		09.3	124	02.4	67 -10 56.2	50	18 57	31	20 12	3 02	79	34 33	
20	116	50.5		08.4	138	28.2	68 46.0	52	19 00	36	19	2 56	82	38 32	
21	131	50.6		07.4	152	54.0	68 35.6	54	04	41	27	51	83	43 29	
22	146	50.7		06.5	167	19.8	68 25.2	56	08	47	37	44	86	48 27	
23	161	50.8		05.5	181	45.7	69 14.8	58	12	19 54	20 47	37	88	17 53 25	
24	176	50.9	-8	04.6	196	11.6	69 -10 04.2	60 S	19 17	20 02	21 00	2 28	91	18 00 22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 30 ^m 8		Mag: -4.8 PMG: 9 ^h 15 ^m		Mag: -0.4 PMG: 3 ^h 19 ^m		Mag: -2.5 PMG: 20 ^h 15 ^m		Mag: +0.4 PMG: 4 ^h 58 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	156	45.2	221	06.3	310	13.0	55	16.6	+23	15.0	
1	171	47.6	236	06.8	325	15.4	70	19.1		15.0	
2	186	50.1	251	07.3	340	17.8	85	21.6		15.1	
3	201	52.6	266	07.9	355	20.2	100	24.1		15.1	
4	216	55.0	281	08.4	10	22.6	115	26.7		15.1	
5	231	57.5	296	08.9	25	24.9	130	29.2	+23	15.1	
6	247	00.0	311	09.4	40	27.3	145	31.7	+23	15.1	
7	262	02.4	326	09.9	55	29.7	160	34.3		15.1	
8	277	04.9	341	10.4	70	32.1	175	36.8		15.1	
9	292	07.4	356	11.0	85	34.5	190	39.3		15.1	
10	307	09.8	11	11.5	100	36.9	205	41.8		15.1	
11	322	12.3	26	12.0	115	39.3	220	44.4	+23	15.1	
12	337	14.7	41	12.5	130	41.7	235	46.9	+23	15.1	
13	352	17.2	56	13.0	145	44.1	250	49.4		15.1	
14	7	19.7	71	13.5	160	46.5	265	51.9		15.2	
15	22	22.1	86	14.0	175	48.9	280	54.5		15.2	
16	37	24.6	101	14.5	190	51.3	295	57.0		15.2	
17	52	27.1	116	15.0	205	53.7	310	59.5	+23	15.2	
18	67	29.5	131	15.5	220	56.1	326	02.0	+23	15.2	
19	82	32.0	146	16.0	235	58.5	341	04.6		15.2	
20	97	34.5	161	16.5	251	00.9	356	07.1		15.2	
21	112	36.9	176	17.0	266	03.3	11	09.6		15.2	
22	127	39.4	191	17.5	281	05.7	26	12.1		15.2	
23	142	41.9	206	18.0	296	08.1	41	14.7		15.2	
24	157	44.3	221	18.5	311	10.5	56	17.2	+23	15.2	
Dif	—		+5	0	+24	0	+25	0		+24	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: 28 ^d 1 PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 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	176	50.9	-8	04.6	196	11.6	-10 04.2	60 N	5 32	6 20	7 02	6 14	21	16	42	92
1	191	51.0		03.7	210	37.5	69 -9 53.6	58	33	18	6 58	09	23	46	89	
2	206	51.1		02.7	225	03.5	70 43.0	56	34	17	54	04	26	50	86	
3	221	51.2		01.8	239	29.5	70 32.2	54	35	16	51	6	00	28	53	84
4	236	51.4	-8	00.8	253	55.6	71 21.4	52	35	14	48	5	57	29	56	82
5	251	51.5	-7	59.9	268	21.7	71 -9 10.6	50	5 36	6 13	6 46	5 53	32	16	59	80
6	266	51.6	-7	58.9	282	47.9	72 -8 59.7	45	5 37	6 10	6 40	5 46	35	17	05	75
7	281	51.7		58.0	297	14.0	71 48.7	40	37	08	35	40	38	10	72	
8	296	51.8		57.0	311	40.3	73 37.7	35	36	06	31	34	42	14	69	
9	311	51.9		56.1	326	06.6	73 26.6	30	35	6	03	27	30	44	17	67
10	326	52.0		55.2	340	32.9	73 15.5	20	33	5 59	21	21	49	24	62	
11	341	52.2	-7	54.2	354	59.2	73 -8 04.3	10 N	5 29	5 54	6 15	5 14	52	17	29	58
12	356	52.3	-7	53.3	9	25.6	74 -7 53.1	0	5 24	5 48	6 09	5 08	55	17	34	55
13	11	52.4		52.3	23	52.1	75 41.8	10 S	18	42	6 03	5 01	59	39	51	
14	26	52.5		51.4	38	18.5	74 30.4	20	5 09	35	5 57	4	54	62	44	47
15	41	52.6		50.4	52	45.1	76 19.1	30	4 57	26	50	45	67	50	43	
16	56	52.7		49.5	67	11.6	75 -7 07.7	35	49	20	46	41	69	54	40	
17	71	52.9	-7	48.5	81	38.2	76 -6 56.2	40	4 40	5 13	5 41	4 35	73	17	57	38
18	86	53.0	-7	47.6	96	04.9	77 -6 44.7	45	4 29	5 05	5 35	4 29	76	18	02	34
19	101	53.1		46.6	110	31.6	77 33.1	50	14	4 55	29	21	80	07	31	
20	116	53.2		45.7	124	58.3	77 21.6	52	4 07	50	26	18	82	10	28	
21	131	53.3		44.7	139	25.0	77 -6 10.0	54	3 59	45	22	14	84	12	27	
22	146	53.4		43.8	153	51.8	78 -5 58.3	56	50	39	18	10	86	15	25	
23	161	53.6		42.8	168	18.7	79 46.6	58	39	32	14	4	05	89	18	22
24	176	53.7	-7	41.9	182	45.6	79 -5 34.9	60 S	3 26	4 24	5 09	3 59	92	18	22	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 26 ^m 8		Mag: -4.8 PMG: 9 ^h 14 ^m		Mag: -0.5 PMG: 3 ^h 15 ^m		Mag: -2.5 PMG: 20 ^h 11 ^m		Mag: +0.4 PMG: 4 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	157	44.3	221	18.5	-16	36.8	311	10.5	-7	57.7	56	17.2	+23	15.2	286	12.1	-16	19.5
1	172	46.8	236	18.9		36.8	326	12.9		57.7	71	19.7		15.2	301	14.6		19.5
2	187	49.2	251	19.4		36.7	341	15.3		57.7	86	22.2		15.2	316	17.0		19.5
3	202	51.7	266	19.9		36.7	356	17.7		57.7	101	24.7		15.3	331	19.5		19.5
4	217	54.2	281	20.4		36.6	11	20.2		57.7	116	27.3		15.3	346	21.9		19.5
5	232	56.6	296	20.9	-16	36.6	26	22.6	-7	57.7	131	29.8	+23	15.3	1	24.4	-16	19.5
6	247	59.1	311	21.3	-16	36.5	41	25.0	-7	57.7	146	32.3	+23	15.3	16	26.8	-16	19.5
7	263	01.6	326	21.8		36.5	56	27.4		57.7	161	34.8		15.3	31	29.3		19.5
8	278	04.0	341	22.3		36.4	71	29.8		57.7	176	37.3		15.3	46	31.7		19.5
9	293	06.5	356	22.8		36.4	86	32.2		57.7	191	39.9		15.3	61	34.2		19.5
10	308	09.0	11	23.2		36.3	101	34.7		57.7	206	42.4		15.3	76	36.6		19.5
11	323	11.4	26	23.7	-16	36.3	116	37.1	-7	57.7	221	44.9	+23	15.3	91	39.1	-16	19.5
12	338	13.9	41	24.2	-16	36.2	131	39.5	-7	57.7	236	47.4	+23	15.3	106	41.6	-16	19.5
13	353	16.3	56	24.6		36.2	146	41.9		57.7	251	49.9		15.3	121	44.0		19.5
14	8	18.8	71	25.1		36.1	161	44.4		57.7	266	52.5		15.3	136	46.5		19.5
15	23	21.3	86	25.6		36.1	176	46.8		57.7	281	55.0		15.3	151	48.9		19.4
16	38	23.7	101	26.0		36.0	191	49.2		57.7	296	57.5		15.4	166	51.4		19.4
17	53	26.2	116	26.5	-16	35.9	206	51.6	-7	57.7	312	00.0	+23	15.4	181	53.8	-16	19.4
18	68	28.7	131	26.9	-16	35.9	221	54.1	-7	57.6	327	02.5	+23	15.4	196	56.3	-16	19.4
19	83	31.1	146	27.4		35.8	236	56.5		57.6	342	05.0		15.4	211	58.7		19.4
20	98	33.6	161	27.9		35.8	251	58.9		57.6	357	07.5		15.4	227	01.2		19.4
21	113	36.1	176	28.3		35.7	267	01.4		57.6	12	10.1		15.4	242	03.6		19.4
22	128	38.5	191	28.8		35.6	282	03.8		57.6	27	12.6		15.4	257	06.1		19.4
23	143	41.0	206	29.2		35.6	297	06.2		57.6	42	15.1		15.4	272	08.5		19.4
24	158	43.5	221	29.7	-16	35.5	312	08.7	-7	57.6	57	17.6	+23	15.4	287	11.0	-16	19.4
Dif	—		+5	+1			+24	0			+25	0			+25			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 29 ^d 1 PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'3 R°: 53 ^m											
	PMG: 12 ^h 12 ^m 3		SD: 16'5 PMG: 12 ^h 16 ^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	53.7	-7 41.9	182	45.6	-5 34.9	79	60 N	17 27	18 09	18 57	6 35 18	18 14 89	
1	191	53.8	40.9	197	12.5	23.2	117	58	31	10	56	32 22	15 87	
2	206	53.9	40.0	211	39.5	80	-5 11.4	56	34	11	54	30 24	16 84	
3	221	54.0	39.0	226	06.5	80	-4 59.6	54	37	12	53	28 26	17 82	
4	236	54.1	38.1	240	33.5	80	47.8	52	39	13	52	26 28	18 80	
5	251	54.3	-7 37.1	255	00.6	81	-4 35.9	50	17 42	18 14	18 52	6 25 29	18 19 78	
6	266	54.4	-7 36.2	269	27.7	81	-4 24.1	45	17 47	18 17	18 51	6 21 34	18 20 74	
7	281	54.5	35.2	283	54.9	82	12.2	40	52	19	50	18 37	22 70	
8	296	54.6	34.3	298	22.1	82	-4 00.3	35	55	21	50	16 39	23 68	
9	311	54.7	33.3	312	49.3	82	-3 48.3	30	17 59	23	51	14 41	24 65	
10	326	54.9	32.4	327	16.6	83	36.4	20	18 05	27	53	10 46	26 60	
11	341	55.0	-7 31.4	341	43.9	83	-3 24.4	10 N	18 10	18 32	18 56	6 06 50	18 27 57	
12	356	55.1	-7 30.5	356	11.2	83	-3 12.5	0	18 16	18 36	19 01	6 03 54	18 29 53	
13	11	55.2	29.5	10	38.6	84	-3 00.5	10 S	21	42	07	6 00 57	30 50	
14	26	55.3	28.6	25	06.0	84	-2 48.5	20	27	49	15	5 56 62	31 46	
15	41	55.5	27.6	39	33.5	85	36.5	30	33	18 58	26	52 66	33 41	
16	56	55.6	26.7	54	00.9	84	24.5	35	37	19 03	33	50 69	34 39	
17	71	55.7	-7 25.7	68	28.5	86	-2 12.4	40	18 42	19 09	19 42	5 48 71	18 35 36	
18	86	55.8	-7 24.8	82	56.0	85	-2 00.4	45	18 47	19 17	19 53	5 45 74	18 36 33	
19	101	56.0	23.8	97	23.6	86	-1 48.4	50	53	27	20 07	41 79	38 29	
20	116	56.1	22.9	111	51.2	86	36.4	52	56	31	14	40 80	38 28	
21	131	56.2	21.9	126	18.9	87	24.3	54	18 59	36	22	38 83	39 25	
22	146	56.3	21.0	140	46.6	87	12.3	56	19 03	42	30	36 85	40 23	
23	161	56.4	20.0	155	14.3	87	-1 00.3	58	07	48	40	34 87	40 22	
24	176	56.6	-7 19.1	169	42.1	88	-0 48.3	60 S	19 11	19 55	20 52	5 31 91	18 41 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 22 ^m 9		Mag: -4.8 PMG: 9 ^h 14 ^m			Mag: -0.5 PMG: 3 ^h 11 ^m			Mag: -2.5 PMG: 20 ^h 07 ^m			Mag: +0.4 PMG: 4 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	158	43.5	221 29.7	-16 35.5	312 08.7	-7 57.6	57 17.6	+23 15.4	287 11.0	-16 19.4				
1	173	45.9	236 30.1	35.5	327 11.1	57.6	72 20.1	15.4	302 13.4	19.4				
2	188	48.4	251 30.5	35.4	342 13.6	57.6	87 22.6	15.4	317 15.9	19.4				
3	203	50.8	266 31.0	35.3	357 16.0	57.6	102 25.1	15.4	332 18.4	19.4				
4	218	53.3	281 31.4	35.3	12 18.4	57.6	117 27.7	15.4	347 20.8	19.4				
5	233	55.8	296 31.9	-16 35.2	27 20.9	-7 57.6	132 30.2	+23 15.4	2 23.3	-16 19.4				
6	248	58.2	311 32.3	-16 35.1	42 23.3	-7 57.6	147 32.7	+23 15.4	17 25.7	-16 19.4				
7	264	00.7	326 32.7	35.1	57 25.8	57.5	162 35.2	15.5	32 28.2	19.3				
8	279	03.2	341 33.2	35.0	72 28.2	57.5	177 37.7	15.5	47 30.6	19.3				
9	294	05.6	356 33.6	34.9	87 30.7	57.5	192 40.2	15.5	62 33.1	19.3				
10	309	08.1	11 34.0	34.9	102 33.1	57.5	207 42.7	15.5	77 35.5	19.3				
11	324	10.6	26 34.5	-16 34.8	117 35.6	-7 57.5	222 45.2	+23 15.5	92 38.0	-16 19.3				
12	339	13.0	41 34.9	-16 34.7	132 38.0	-7 57.5	237 47.7	+23 15.5	107 40.5	-16 19.3				
13	354	15.5	56 35.3	34.7	147 40.5	57.5	252 50.2	15.5	122 42.9	19.3				
14	9	18.0	71 35.8	34.6	162 42.9	57.5	267 52.7	15.5	137 45.4	19.3				
15	24	20.4	86 36.2	34.5	177 45.4	57.4	282 55.3	15.5	152 47.8	19.3				
16	39	22.9	101 36.6	34.4	192 47.8	57.4	297 57.8	15.5	167 50.3	19.3				
17	54	25.3	116 37.0	-16 34.4	207 50.3	-7 57.4	313 00.3	+23 15.5	182 52.7	-16 19.3				
18	69	27.8	131 37.5	-16 34.3	222 52.8	-7 57.4	328 02.8	+23 15.5	197 55.2	-16 19.3				
19	84	30.3	146 37.9	34.2	237 55.2	57.4	343 05.3	15.5	212 57.7	19.3				
20	99	32.7	161 38.3	34.2	252 57.7	57.4	358 07.8	15.5	228 00.1	19.3				
21	114	35.2	176 38.7	34.1	268 00.2	57.3	13 10.3	15.5	243 02.6	19.2				
22	129	37.7	191 39.1	34.0	283 02.6	57.3	28 12.8	15.6	258 05.0	19.2				
23	144	40.1	206 39.5	33.9	298 05.1	57.3	43 15.3	15.6	273 07.5	19.2				
24	159	42.6	221 39.9	-16 33.8	313 07.5	-7 57.3	58 17.8	+23 15.6	288 10.0	-16 19.2				
Dif	—		+4	+1	+25	0	+25	0	+25	0		+25		

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: 0 ^d 7 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 8 20 ^h : 59 ^h 6 R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	56.6	-7 19.1	169	42.1	-0 48.3	120	5 26	6 14	6 56	6 53	19	19	43	87
1	191	56.7	18.1	184	09.9	88	36.3	28	13	52	54	20	42	84	
2	206	56.8	17.2	198	37.7	88	24.3	29	12	49	54	23	40	82	
3	221	56.9	16.2	213	05.6	89	12.3	30	11	46	54	25	39	79	
4	236	57.1	15.2	227	33.5	89	-0 00.3	31	10	44	54	27	38	77	
5	251	57.2	-7 14.3	242	01.4	89	+0 11.7	5 32	6 09	6 42	6 54	29	19 37	75	
6	266	57.3	-7 13.3	256	29.3	89	+0 23.7	5 33	6 07	6 36	6 55	32	19 34	72	
7	281	57.4	12.4	270	57.3	90	35.6	34	05	32	55	36	32	69	
8	296	57.6	11.4	285	25.3	90	47.6	34	03	28	55	39	31	65	
9	311	57.7	10.5	299	53.4	91	+0 59.5	33	6 01	25	55	41	29	63	
10	326	57.8	09.5	314	21.4	90	+1 11.4	31	5 57	19	56	45	26	59	
11	341	57.9	-7 08.6	328	49.5	91	+1 23.3	5 28	5 53	6 14	6 56	49	19 24	55	
12	356	58.1	-7 07.6	343	17.7	92	+1 35.1	5 24	5 48	6 09	6 57	52	19 22	52	
13	11	58.2	06.7	357	45.8	91	47.0	18	42	6 04	57	56	20	48	
14	26	58.3	05.7	12	14.0	92	+1 58.8	5 10	36	5 58	58	59	17	45	
15	41	58.4	04.7	26	42.2	92	+2 10.6	4 59	27	51	58	64	14	41	
16	56	58.6	03.8	41	10.4	92	22.3	52	22	48	59	66	13	39	
17	71	58.7	-7 02.8	55	38.7	93	+2 34.1	4 43	5 16	5 43	6 59	69	19 11	36	
18	86	58.8	-7 01.9	70	07.0	93	+2 45.8	4 32	5 08	5 38	6 59	73	19 09	33	
19	101	59.0	-7 00.9	84	35.3	93	+2 57.5	18	4 59	32	7 00	77	07	29	
20	116	59.1	-7 00.0	99	03.7	94	+3 09.1	11	54	29	00	79	06	27	
21	131	59.2	-6 59.0	113	32.0	93	20.7	4 04	49	26	01	80	04	26	
22	146	59.3	58.0	128	00.4	94	32.3	3 55	44	23	01	83	03	24	
23	161	59.5	57.1	142	28.8	94	43.9	45	37	19	01	86	02	21	
24	176	59.6	-6 56.1	156	57.3	95	+3 55.4	3 33	4 30	5 14	7 02	88	19 00	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 19 ^m 0		Mag: -4.7 PMG: 9 ^h 13 ^m		Mag: -0.5 PMG: 3 ^h 07 ^m		Mag: -2.5 PMG: 20 ^h 03 ^m		Mag: +0.4 PMG: 4 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	159	42.6	221	39.9	-16 33.8	313	07.5	-7 57.3	58	17.8
1	174	45.1	236	40.3	33.8	328	10.0	57.3	73	20.3
2	189	47.5	251	40.8	33.7	343	12.5	57.3	88	22.8
3	204	50.0	266	41.2	33.6	358	15.0	57.2	103	25.3
4	219	52.4	281	41.6	33.5	13	17.4	57.2	118	27.8
5	234	54.9	296	42.0	-16 33.4	28	19.9	-7 57.2	133	30.3
6	249	57.4	311	42.4	-16 33.4	43	22.4	-7 57.2	148	32.8
7	264	59.8	326	42.8	33.3	58	24.9	57.2	163	35.3
8	280	02.3	341	43.2	33.2	73	27.3	57.1	178	37.8
9	295	04.8	356	43.6	33.1	88	29.8	57.1	193	40.3
10	310	07.2	11	44.0	33.0	103	32.3	57.1	208	42.8
11	325	09.7	26	44.4	-16 32.9	118	34.8	-7 57.1	223	45.3
12	340	12.2	41	44.7	-16 32.9	133	37.3	-7 57.1	238	47.8
13	355	14.6	56	45.1	32.8	148	39.7	57.0	253	50.3
14	10	17.1	71	45.5	32.7	163	42.2	57.0	268	52.8
15	25	19.6	86	45.9	32.6	178	44.7	57.0	283	55.3
16	40	22.0	101	46.3	32.5	193	47.2	57.0	298	57.8
17	55	24.5	116	46.7	-16 32.4	208	49.7	-7 56.9	314	00.3
18	70	26.9	131	47.1	-16 32.3	223	52.2	-7 56.9	329	02.8
19	85	29.4	146	47.5	32.2	238	54.7	56.9	344	05.3
20	100	31.9	161	47.8	32.1	253	57.2	56.9	359	07.8
21	115	34.3	176	48.2	32.1	268	59.6	56.8	14	10.3
22	130	36.8	191	48.6	32.0	284	02.1	56.8	29	12.8
23	145	39.3	206	49.0	31.9	299	04.6	56.8	44	15.3
24	160	41.7	221	49.3	-16 31.8	314	07.1	-7 56.8	59	17.8
Dif	—		+4	+1		+25	0		+25	0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 12 ^h 11 ^m 9		Edad: 1. ^d 7 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/8 PMG: 14 ^h 02 ^m R°: 51 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	176	59.6	-6	56.1	156	57.3	+3 55.4	60 N	17 32	18 14	19 02	7 12 19	21 10 83					
1	191	59.7		55.2	171	25.7	94 +4 06.9	58	35	15	19 00	14 22	06 80					
2	206	59.9		54.2	185	54.2	95 18.3	56	38	15	18 58	17 24	21 02 78					
3	222	00.0		53.3	200	22.7	95 29.7	54	41	16	57	19 26	20 58 76					
4	237	00.1		52.3	214	51.3	96 41.1	52	43	17	56	21 28	55 74					
5	252	00.2	-6	51.3	229	19.8	95 +4 52.4	50	17 45	18 18	18 55	7 23 30	20 52 73					
6	267	00.4	-6	50.4	243	48.4	96 +5 03.7	45	17 50	18 19	18 53	7 27 33	20 46 69					
7	282	00.5		49.4	258	17.0	96 14.9	40	54	21	52	31 36	41 66					
8	297	00.6		48.5	272	45.6	96 26.1	35	17 57	23	52	34 38	36 64					
9	312	00.8		47.5	287	14.2	96 37.2	30	18 00	24	52	36 41	32 62					
10	327	00.9		46.6	301	42.9	97 48.3	20	06	28	53	41 45	25 58					
11	342	01.0	-6	45.6	316	11.6	97 +5 59.4	10 N	18 11	18 32	18 56	7 45 49	20 19 55					
12	357	01.2	-6	44.6	330	40.3	97 +6 10.4	0	18 15	18 36	19 00	7 49 52	20 14 51					
13	12	01.3		43.7	345	09.0	97 21.4	10 S	20	41	06	53 55	08 49					
14	27	01.4		42.7	359	37.7	97 32.3	20	25	47	13	7 57 59	20 02 45					
15	42	01.5		41.8	14	06.5	98 43.1	30	31	18 55	24	8 02 63	19 55 42					
16	57	01.7		40.8	28	35.3	98 +6 53.9	35	35	19 00	31	05 65	52 39					
17	72	01.8	-6	39.8	43	04.1	98 +7 04.7	40	18 39	19 06	19 39	8 08 68	19 47 37					
18	87	01.9	-6	38.9	57	32.9	98 +7 15.3	45	18 43	19 13	19 49	8 12 71	19 42 34					
19	102	02.1		37.9	72	01.7	98 26.0	50	49	22	20 02	17 74	36 31					
20	117	02.2		37.0	86	30.5	98 36.6	52	52	26	09	19 76	33 29					
21	132	02.3		36.0	100	59.4	99 47.1	54	54	31	16	21 78	30 27					
22	147	02.5		35.0	115	28.3	99 +7 57.5	56	18 58	36	24	24 80	27 25					
23	162	02.6		34.1	129	57.2	99 +8 07.9	58	19 01	42	34	27 82	23 23					
24	177	02.7	-6	33.1	144	26.1	99 +8 18.3	60 S	19 05	19 49	20 45	8 30 85	19 19 20					
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO							
	PMG: 13 ^h 15 ^m 0		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: -0.5 PMG: 3 ^h 03 ^m		Mag: -2.5 PMG: 19 ^h 59 ^m				Mag: +0.4 PMG: 4 ^h 43 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	160	41.7	221	49.3	-16	31.8	314	07.1	-7	56.8	59	17.8	+23	15.7	289	09.0	-16	19.0
1	175	44.2	236	49.7		31.7	329	09.6		56.7	74	20.3		15.7	304	11.5		19.0
2	190	46.7	251	50.1		31.6	344	12.1		56.7	89	22.8		15.7	319	13.9		19.0
3	205	49.1	266	50.5		31.5	359	14.6		56.7	104	25.3		15.7	334	16.4		19.0
4	220	51.6	281	50.8		31.4	14	17.1		56.6	119	27.8		15.7	349	18.9		19.0
5	235	54.0	296	51.2	-16	31.3	29	19.6	-7	56.6	134	30.3	+23	15.7	4	21.3	-16	19.0
6	250	56.5	311	51.6	-16	31.2	44	22.1	-7	56.6	149	32.7	+23	15.7	19	23.8	-16	19.0
7	265	59.0	326	51.9		31.1	59	24.6		56.5	164	35.2		15.7	34	26.3		19.0
8	281	01.4	341	52.3		31.0	74	27.1		56.5	179	37.7		15.8	49	28.7		19.0
9	296	03.9	356	52.7		30.9	89	29.7		56.5	194	40.2		15.8	64	31.2		19.0
10	311	06.4	11	53.0		30.8	104	32.2		56.5	209	42.7		15.8	79	33.7		18.9
11	326	08.8	26	53.4	-16	30.7	119	34.7	-7	56.4	224	45.2	+23	15.8	94	36.1	-16	18.9
12	341	11.3	41	53.7	-16	30.6	134	37.2	-7	56.4	239	47.7	+23	15.8	109	38.6	-16	18.9
13	356	13.8	56	54.1		30.5	149	39.7		56.4	254	50.2		15.8	124	41.1		18.9
14	11	16.2	71	54.4		30.4	164	42.2		56.3	269	52.7		15.8	139	43.5		18.9
15	26	18.7	86	54.8		30.3	179	44.7		56.3	284	55.2		15.8	154	46.0		18.9
16	41	21.2	101	55.1		30.2	194	47.2		56.3	299	57.7		15.8	169	48.5		18.9
17	56	23.6	116	55.5	-16	30.1	209	49.8	-7	56.2	315	00.1	+23	15.8	184	50.9	-16	18.9
18	71	26.1	131	55.8	-16	30.0	224	52.3	-7	56.2	330	02.6	+23	15.8	199	53.4	-16	18.9
19	86	28.5	146	56.2		29.9	239	54.8		56.2	345	05.1		15.8	214	55.9		18.9
20	101	31.0	161	56.5		29.8	254	57.3		56.1	0	07.6		15.8	229	58.3		18.9
21	116	33.5	176	56.9		29.6	269	59.9		56.1	15	10.1		15.8	245	00.8		18.8
22	131	35.9	191	57.2		29.5	285	02.4		56.0	30	12.6		15.8	260	03.3		18.8
23	146	38.4	206	57.6		29.4	300	04.9		56.0	45	15.1		15.8	275	05.7		18.8
24	161	40.9	221	57.9	-16	29.3	315	07.4	-7	56.0	60	17.6	+23	15.8	290	08.2	-16	18.8
Dif	—		+4		+1		+25		0		+25		0		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 2 ^d 7	PHE { 4 ^h : 58 ^m /5 12 ^h : 58 ^m /2 20 ^h : 57 ^m /9	SD: 16 ^h 0		Rº: 51 ^m	Rº		Rº							
	PMG: 12 ^h 11 ^m 7	PMG: 14 ^h 53 ^m	hG ☉			Dec			hG ☾		Dif	Dec	Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	177	02.7	-6	33.1	144	26.1	+8	18.3	60 N	5	20	6	08	6	50	7	31	22
1	192	02.9		32.1	158	55.0		28.6	58	22		08		47		36	25	
2	207	03.0		31.2	173	24.0		38.8	56	24		07		44		41	27	
3	222	03.1		30.2	187	52.9		49.0	54	26		06		42		45	29	
4	237	03.3		29.3	202	21.9	+8	59.1	52	27		06		40		49	30	
5	252	03.4	-6	28.3	216	50.9	+9	09.1	50	5	28	6	05	6	37	7	53	32
6	267	03.5	-6	27.3	231	19.9	+9	19.0	45	5	30	6	04	6	33	8	00	35
7	282	03.7		26.4	245	48.9		28.9	40	31		02		29		07	38	
8	297	03.8		25.4	260	17.9		38.8	35	31		6	00	26		12	40	
9	312	03.9		24.5	274	47.0		48.5	30	31		5	59	23		17	42	
10	327	04.1		23.5	289	16.0	+9	58.2	20	30		56		18		26	45	
11	342	04.2	-6	22.5	303	45.1	+10	07.9	10 N	5	27	5	52	6	13	8	34	48
12	357	04.4	-6	21.6	318	14.2	+10	17.4	0	5	23	5	48	6	08	8	41	51
13	12	04.5		20.6	332	43.3		26.9	10 S	18		43		6	04	48	54	
14	27	04.6		19.6	347	12.4		36.3	20	11		37		5	59	8	56	57
15	42	04.8		18.7	1	41.5		45.7	30	5	00	29		53		9	05	60
16	57	04.9		17.7	16	10.7	+10	54.9	35	4	54	24		49		10	62	
17	72	05.0	-6	16.7	30	39.8	+11	04.1	40	4	45	5	18	5	46	9	16	64
18	87	05.2	-6	15.8	45	09.0	+11	13.3	45	4	35	5	11	5	41	9	23	67
19	102	05.3		14.8	59	38.1		22.3	50	22		5	02	35		31	70	
20	117	05.4		13.9	74	07.3		31.3	52	16		4	58	33		35	72	
21	132	05.6		12.9	88	36.5		40.2	54	08		53		30		39	74	
22	147	05.7		11.9	103	05.7		49.0	56	4	00	48		27		44	75	
23	162	05.9		11.0	117	34.9	+11	57.8	58	3	51	42		24		49	78	
24	177	06.0	-6	10.0	132	04.2	+12	06.4	60 S	3	40	4	36	5	20	9	55	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 13 ^h 11 ^m 1	Mag: -4.7 PMG: 9 ^h 12 ^m	Mag: -0.6 PMG: 2 ^h 59 ^m	Mag: -2.5 PMG: 19 ^h 56 ^m	Mag: +0.4 PMG: 4 ^h 39 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	161	40.9	221	57.9	-16	29.3	315	07.4	-7	56.0	60	17.6	+23	15.8	290	08.2	-16	18.8
1	176	43.3	236	58.3		29.2	330	10.0		55.9	75	20.0		15.8	305	10.7		18.8
2	191	45.8	251	58.6		29.1	345	12.5		55.9	90	22.5		15.8	320	13.1		18.8
3	206	48.3	266	58.9		29.0	0	15.0		55.9	105	25.0		15.9	335	15.6		18.8
4	221	50.7	281	59.3		28.9	15	17.5		55.8	120	27.5		15.9	350	18.1		18.8
5	236	53.2	296	59.6	-16	28.7	30	20.1	-7	55.8	135	30.0	+23	15.9	5	20.5	-16	18.8
6	251	55.6	311	59.9	-16	28.6	45	22.6	-7	55.7	150	32.5	+23	15.9	20	23.0	-16	18.8
7	266	58.1	327	00.3		28.5	60	25.1		55.7	165	34.9		15.9	35	25.5		18.7
8	282	00.6	342	00.6		28.4	75	27.7		55.7	180	37.4		15.9	50	27.9		18.7
9	297	03.0	357	00.9		28.3	90	30.2		55.6	195	39.9		15.9	65	30.4		18.7
10	312	05.5	12	01.2		28.2	105	32.8		55.6	210	42.4		15.9	80	32.9		18.7
11	327	08.0	27	01.6	-16	28.0	120	35.3	-7	55.5	225	44.9	+23	15.9	95	35.3	-16	18.7
12	342	10.4	42	01.9	-16	27.9	135	37.8	-7	55.5	240	47.4	+23	15.9	110	37.8	-16	18.7
13	357	12.9	57	02.2		27.8	150	40.4		55.4	255	49.8		15.9	125	40.3		18.7
14	12	15.4	72	02.5		27.7	165	42.9		55.4	270	52.3		15.9	140	42.8		18.7
15	27	17.8	87	02.9		27.6	180	45.5		55.4	285	54.8		15.9	155	45.2		18.7
16	42	20.3	102	03.2		27.4	195	48.0		55.3	300	57.3		15.9	170	47.7		18.7
17	57	22.8	117	03.5	-16	27.3	210	50.6	-7	55.3	315	59.8	+23	15.9	185	50.2	-16	18.6
18	72	25.2	132	03.8	-16	27.2	225	53.1	-7	55.2	331	02.2	+23	15.9	200	52.6	-16	18.6
19	87	27.7	147	04.1		27.1	240	55.7		55.2	346	04.7		15.9	215	55.1		18.6
20	102	30.1	162	04.4		26.9	255	58.2		55.1	1	07.2		15.9	230	57.6		18.6
21	117	32.6	177	04.8		26.8	271	00.8		55.1	16	09.7		15.9	246	00.1		18.6
22	132	35.1	192	05.1		26.7	286	03.3		55.0	31	12.2		15.9	261	02.5		18.6
23	147	37.5	207	05.4		26.6	301	05.9		55.0	46	14.6		15.9	276	05.0		18.6
24	162	40.0	222	05.7	-16	26.4	316	08.4	-7	54.9	61	17.1	+23	15.9	291	07.5	-16	18.6
Dif	—		+3 +1		+25 0		+25 0		+25 0		+25 0		+25 0		+25 0		+25 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 3 ^d 7	PHE {	4 ^h : 57/6 12 ^h : 57/2 20 ^h : 57/0 R°: 50 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 5								Final del crepúsculo			Salida de Luna		Puesta de Luna	
	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	h m m	
0	177	06.0	-6 10.0	132	04.2	+12 06.4	86	60 N	17 37	18 19	19 07	7 53 26	23 51 71		
1	192	06.1	09.0	146	33.4 ¹⁰²	15.0	86	58	40	19	05	8 01 28	42 69		
2	207	06.3	08.1	161	02.7 ¹⁰³	23.5	85	56	42	20	03	08 30	33 68		
3	222	06.4	07.1	175	31.9 ¹⁰²	32.0	85	54	45	20	19 01	14 32	26 66		
4	237	06.6	06.1	190	01.2 ¹⁰³	40.3	83	52	47	20	18 59	19 34	19 65		
5	252	06.7	-6 05.2	204	30.5 ¹⁰³	+12 48.6	83	50	17 48	18 21	18 58	8 25 34	23 13 64		
6	267	06.8	-6 04.2	218	59.8 ¹⁰³	+12 56.8	82	45	17 53	18 22	18 56	8 35 38	23 00 62		
7	282	07.0	03.2	233	29.1 ¹⁰³	+13 04.9	81	40	56	23	54	45 39	22 50 59		
8	297	07.1	02.3	247	58.4 ¹⁰³	12.9	80	35	17 59	24	54	52 42	41 58		
9	312	07.2	01.3	262	27.7 ¹⁰³	20.9	80	30	18 02	26	53	8 59 44	33 56		
10	327	07.4	-6 00.3	276	57.0 ¹⁰³	28.7	78	20	06	28	54	9 11 46	19 54		
11	342	07.5	-5 59.4	291	26.4 ¹⁰⁴	+13 36.5	78	10 N	18 11	18 32	18 56	9 22 48	22 07 52		
12	357	07.7	-5 58.4	305	55.7 ¹⁰³	+13 44.2	77	0	18 15	18 36	19 00	9 32 50	21 56 50		
13	12	07.8	57.4	320	25.1 ¹⁰⁴	51.8	76	10 S	19	40	05	42 52	45 48		
14	27	08.0	56.5	334	54.5 ¹⁰⁴	+13 59.3	75	20	24	46	12	9 53 55	33 47		
15	42	08.1	55.5	349	23.9 ¹⁰⁴	+14 06.8	75	30	29	53	21	10 05 58	19 45		
16	57	08.2	54.5	3	53.3 ¹⁰⁴	14.1	73	35	32	18 58	28	12 59	12 42		
17	72	08.4	-5 53.6	18	22.7 ¹⁰⁴	+14 21.4	73	40	18 36	19 03	19 36	10 20 61	21 03 41		
18	87	08.5	-5 52.6	32	52.1 ¹⁰⁴	+14 28.6	72	45	18 40	19 10	19 45	10 30 63	20 52 40		
19	102	08.7	51.6	47	21.5 ¹⁰⁴	35.7	71	50	45	18	19 58	41 66	40 37		
20	117	08.8	50.7	61	51.0 ¹⁰⁵	42.7	70	52	47	22	20 04	47 67	34 36		
21	132	08.9	49.7	76	20.4 ¹⁰⁴	49.6	69	54	50	26	10	53 69	28 34		
22	147	09.1	48.7	90	49.9 ¹⁰⁵	+14 56.4	68	56	53	31	18	10 59 71	20 33		
23	162	09.2	47.8	105	19.3 ¹⁰⁴	+15 03.1	67	58	56	36	27	11 07 72	12 32		
24	177	09.4	-5 46.8	119	48.8 ¹⁰⁵	+15 09.8	67	60 S	18 59	19 43	20 37	11 15 75	20 03 29		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 07 ^m 2		Mag: -4.7 PMG: 9 ^h 11 ^m			Mag: -0.6 PMG: 2 ^h 55 ^m			Mag: -2.4 PMG: 19 ^h 52 ^m			Mag: +0.4 PMG: 4 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'	
0	162	40.0	222	05.7	-16 26.4	316	08.4	-7 54.9	61	17.1	+23 15.9	291	07.5	-16 18.6	
1	177	42.5	237	06.0	26.3	331	11.0	54.9	76	19.6	15.9	306	09.9	18.6	
2	192	44.9	252	06.3	26.2	346	13.6	54.8	91	22.1	16.0	321	12.4	18.6	
3	207	47.4	267	06.6	26.0	1	16.1	54.8	106	24.5	16.0	336	14.9	18.5	
4	222	49.9	282	06.9	25.9	16	18.7	54.8	121	27.0	16.0	351	17.4	18.5	
5	237	52.3	297	07.2	-16 25.8	31	21.2	-7 54.7	136	29.5	+23 16.0	6	19.8	-16 18.5	
6	252	54.8	312	07.5	-16 25.7	46	23.8	-7 54.7	151	32.0	+23 16.0	21	22.3	-16 18.5	
7	267	57.3	327	07.8	25.5	61	26.4	54.6	166	34.4	16.0	36	24.8	18.5	
8	282	59.7	342	08.1	25.4	76	28.9	54.6	181	36.9	16.0	51	27.2	18.5	
9	298	02.2	357	08.4	25.3	91	31.5	54.5	196	39.4	16.0	66	29.7	18.5	
10	313	04.6	12	08.7	25.1	106	34.1	54.4	211	41.9	16.0	81	32.2	18.5	
11	328	07.1	27	09.0	-16 25.0	121	36.7	-7 54.4	226	44.3	+23 16.0	96	34.7	-16 18.5	
12	343	09.6	42	09.3	-16 24.8	136	39.2	-7 54.3	241	46.8	+23 16.0	111	37.1	-16 18.4	
13	358	12.0	57	09.6	24.7	151	41.8	54.3	256	49.3	16.0	126	39.6	18.4	
14	13	14.5	72	09.9	24.6	166	44.4	54.2	271	51.7	16.0	141	42.1	18.4	
15	28	17.0	87	10.2	24.4	181	46.9	54.2	286	54.2	16.0	156	44.6	18.4	
16	43	19.4	102	10.4	24.3	196	49.5	54.1	301	56.7	16.0	171	47.0	18.4	
17	58	21.9	117	10.7	-16 24.1	211	52.1	-7 54.1	316	59.2	+23 16.0	186	49.5	-16 18.4	
18	73	24.4	132	11.0	-16 24.0	226	54.7	-7 54.0	332	01.6	+23 16.0	201	52.0	-16 18.4	
19	88	26.8	147	11.3	23.9	241	57.3	54.0	347	04.1	16.0	216	54.5	18.4	
20	103	29.3	162	11.6	23.7	256	59.8	53.9	2	06.6	16.0	231	56.9	18.4	
21	118	31.7	177	11.9	23.6	272	02.4	53.9	17	09.0	16.0	246	59.4	18.3	
22	133	34.2	192	12.1	23.4	287	05.0	53.8	32	11.5	16.0	262	01.9	18.3	
23	148	36.7	207	12.4	23.3	302	07.6	53.7	47	14.0	16.0	277	04.4	18.3	
24	163	39.1	222	12.7	-16 23.1	317	10.2	-7 53.7	62	16.4	+23 16.0	292	06.8	-16 18.3	
Dif	—	+3		+1	+26		+1	+25		0	+25		0		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 4 ^d 7	PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /4 20 ^h : 56 ^m /1											
	PMG: 12 ^h 11 ^m 3					SD: 15 ^h 5		PMG: 16 ^h 34 ^m			R°: 50 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	09.4	-5 46.8	119	48.8	+15 09.8	66	60 N	5 15	6 03	6 44	8 19	33	** ** *	** ** *	
1	192	09.5	45.8	134	18.3 ¹⁰⁵	16.4	66	58	17	02	42	29	35	** ** *	** ** *	
2	207	09.7	44.9	148	47.8 ¹⁰⁵	22.8	64	56	19	02	39	38	36	** ** *	** ** *	
3	222	09.8	43.9	163	17.3 ¹⁰⁵	29.2	64	54	21	02	37	46	37	** ** *	** ** *	
4	237	09.9	42.9	177	46.8 ¹⁰⁵	35.5	63	52	22	01	35	53	38	** ** *	** ** *	
5	252	10.1	-5 41.9	192	16.4 ¹⁰⁶	+15 41.7	62	50	5 24	6 01	6 33	8 59	39	** ** *	** ** *	
6	267	10.2	-5 41.0	206	45.9 ¹⁰⁵	+15 47.8	61	45	5 26	6 00	6 29	9 13	41	** ** *	** ** *	
7	282	10.4	40.0	221	15.4 ¹⁰⁵	53.9	61	40	28	5 59	26	24	43	23 49	55	
8	297	10.5	39.0	235	45.0 ¹⁰⁶	+15 59.8	59	35	29	58	23	34	44	39	54	
9	312	10.7	38.1	250	14.6 ¹⁰⁶	+16 05.6	58	30	29	57	21	43	45	29	54	
10	327	10.8	37.1	264	44.2 ¹⁰⁶	11.4	58	20	28	54	16	9 57	47	23 13	52	
11	342	11.0	-5 36.1	279	13.8 ¹⁰⁶	+16 17.1	57	10 N	5 26	5 51	6 12	10 10	49	22 59	51	
12	357	11.1	-5 35.2	293	43.4 ¹⁰⁶	+16 22.6	55	0	5 23	5 47	6 08	10 22	50	22 46	50	
13	12	11.2	34.2	308	13.0 ¹⁰⁶	28.1	55	10 S	18	43	6 04	34	52	33	49	
14	27	11.4	33.2	322	42.6 ¹⁰⁶	33.5	54	20	11	37	5 59	10 48	53	20	47	
15	42	11.5	32.3	337	12.2 ¹⁰⁶	38.8	53	30	5 02	30	54	11 03	55	22 04	46	
16	57	11.7	31.3	351	41.9 ¹⁰⁷	44.0	52	35	4 55	26	51	11 56		21 54	46	
17	72	11.8	-5 30.3	6	11.6 ¹⁰⁷	+16 49.1	51	40	4 48	5 20	5 48	11 21	58	21 44	44	
18	87	12.0	-5 29.3	20	41.2 ¹⁰⁶	+16 54.1	50	45	4 38	5 14	5 44	11 33	59	21 32	43	
19	102	12.1	28.4	35	10.9 ¹⁰⁷	+16 59.0	49	50	26	06	39	47	61	17	41	
20	117	12.3	27.4	49	40.6 ¹⁰⁷	+17 03.8	48	52	20	5 02	37	11 54	62	10	40	
21	132	12.4	26.4	64	10.3 ¹⁰⁷	08.5	47	54	13	4 58	34	12 02	62	21 02	40	
22	147	12.6	25.5	78	40.0 ¹⁰⁷	13.2	47	56	4 05	53	31	10	64	20 53	39	
23	162	12.7	24.5	93	09.8 ¹⁰⁸	17.7	45	58	3 57	47	28	19	65	44	37	
24	177	12.9	-5 23.5	107	39.5 ¹⁰⁷	+17 22.2	45	60 S	3 46	4 41	5 25	12 30	67	20 32	36	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 03 ^m 2		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: -0.6 PMG: 2 ^h 51 ^m		Mag: -2.4 PMG: 19 ^h 48 ^m		Mag: +0.4 PMG: 4 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	163	39.1	222	12.7	-16 23.1	317	10.2	-7 53.7	62	16.4	+23 16.0	292	06.8	-16 18.3	
1	178	41.6	237	13.0	23.0	332	12.8	53.6	77	18.9	16.0	307	09.3	18.3	
2	193	44.1	252	13.3	22.9	347	15.4	53.6	92	21.4	16.0	322	11.8	18.3	
3	208	46.5	267	13.5	22.7	2	18.0	53.5	107	23.8	16.0	337	14.3	18.3	
4	223	49.0	282	13.8	22.6	17	20.5	53.5	122	26.3	16.1	352	16.7	18.3	
5	238	51.5	297	14.1	-16 22.4	32	23.1	-7 53.4	137	28.8	+23 16.1	7	19.2	-16 18.2	
6	253	53.9	312	14.3	-16 22.3	47	25.7	-7 53.3	152	31.2	+23 16.1	22	21.7	-16 18.2	
7	268	56.4	327	14.6	22.1	62	28.3	53.3	167	33.7	16.1	37	24.2	18.2	
8	283	58.9	342	14.9	22.0	77	30.9	53.2	182	36.2	16.1	52	26.7	18.2	
9	299	01.3	357	15.1	21.8	92	33.5	53.1	197	38.6	16.1	67	29.1	18.2	
10	314	03.8	12	15.4	21.6	107	36.1	53.1	212	41.1	16.1	82	31.6	18.2	
11	329	06.2	27	15.7	-16 21.5	122	38.7	-7 53.0	227	43.6	+23 16.1	97	34.1	-16 18.2	
12	344	08.7	42	15.9	-16 21.3	137	41.3	-7 53.0	242	46.0	+23 16.1	112	36.6	-16 18.2	
13	359	11.2	57	16.2	21.2	152	43.9	52.9	257	48.5	16.1	127	39.0	18.2	
14	14	13.6	72	16.5	21.0	167	46.5	52.8	272	51.0	16.1	142	41.5	18.1	
15	29	16.1	87	16.7	20.9	182	49.1	52.8	287	53.4	16.1	157	44.0	18.1	
16	44	18.6	102	17.0	20.7	197	51.7	52.7	302	55.9	16.1	172	46.5	18.1	
17	59	21.0	117	17.2	-16 20.6	212	54.4	-7 52.6	317	58.3	+23 16.1	187	49.0	-16 18.1	
18	74	23.5	132	17.5	-16 20.4	227	57.0	-7 52.6	333	00.8	+23 16.1	202	51.4	-16 18.1	
19	89	26.0	147	17.7	20.2	242	59.6	52.5	348	03.3	16.1	217	53.9	18.1	
20	104	28.4	162	18.0	20.1	258	02.2	52.5	3	05.7	16.1	232	56.4	18.1	
21	119	30.9	177	18.2	19.9	273	04.8	52.4	18	08.2	16.1	247	58.9	18.1	
22	134	33.3	192	18.5	19.8	288	07.4	52.3	33	10.6	16.1	263	01.4	18.0	
23	149	35.8	207	18.7	19.6	303	10.0	52.3	48	13.1	16.1	278	03.8	18.0	
24	164	38.3	222	19.0	-16 19.4	318	12.7	-7 52.2	63	15.6	+23 16.1	293	06.3	-16 18.0	
Dif	—		+3		+2	+26		+1	+25		0	+25		0	

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 : 55 ^h /9 12 ^h : 55 ^h /6 20 ^h : 55 ^h /4										
	PMG: 12 ^h 11 ^m 0					PMG: 17 ^h 24 ^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
0	177	12.9	-5 23.5	107	39.5	+17 22.2	43	60 N	17 42	18 24	19 12	8 52	40	1 02	63
1	192	13.0	22.5	122	09.3 ¹⁰⁸	26.5	43	58	44	24	09	9 04	40	0 51	61
2	207	13.1	21.6	136	39.1 ¹⁰⁸	30.8	43	56	47	24	07	14 42		41	60
3	222	13.3	20.6	151	08.9 ¹⁰⁸	35.0	42	54	48	24	05	23 43		32	55
4	237	13.4	19.6	165	38.7 ¹⁰⁸	39.0	40	52	50	24	03	31 43		24	58
5	252	13.6	-5 18.7	180	08.5 ¹⁰⁸	+17 43.0	40	50	17 52	18 24	19 01	9 38	44	0 17	57
6	267	13.7	-5 17.7	194	38.3 ¹⁰⁸	+17 46.9	39	45	17 55	18 25	18 59	9 54	45	0 02	56
7	282	13.9	16.7	209	08.1 ¹⁰⁸	50.7	38	40	17 58	25	57	10 07	46	**	**
8	297	14.0	15.7	223	38.0 ¹⁰⁹	54.4	37	35	18 01	26	55	18 46		**	**
9	312	14.2	14.8	238	07.9 ¹⁰⁹	+17 58.0	36	30	03	27	55	28 46		**	**
10	327	14.3	13.8	252	37.8 ¹⁰⁹	+18 01.5	35	20	07	29	55	44 48		**	**
11	342	14.5	-5 12.8	267	07.6 ¹⁰⁸	+18 04.9	34	10 N	18 11	18 32	18 56	10 59	48	23 50	50
12	357	14.6	-5 11.8	281	37.6 ¹¹⁰	+18 08.2	33	0	18 14	18 35	18 59	11 12	50	23 36	49
13	12	14.8	10.9	296	07.5 ¹⁰⁹	11.4	32	10 S	18	39	19 04	26 50		22	49
14	27	14.9	09.9	310	37.4 ¹⁰⁹	14.6	32	20	22	44	10	41 51		23 07	48
15	42	15.1	08.9	325	07.4 ¹¹⁰	17.6	30	30	27	51	19	11 58	51	22 50	48
16	57	15.2	08.0	339	37.4 ¹¹⁰	20.5	29	35	29	18 55	25	12 07	53	40	47
17	72	15.4	-5 07.0	354	07.4 ¹¹⁰	+18 23.4	29	40	18 32	19 00	19 32	12 19	52	22 28	47
18	87	15.5	-5 06.0	8	37.4 ¹¹⁰	+18 26.1	27	45	18 36	19 06	19 41	12 32	53	22 15	46
19	102	15.7	05.0	23	07.4 ¹¹⁰	28.8	27	50	41	13	53	48 54		21 58	46
20	117	15.8	04.1	37	37.4 ¹¹⁰	31.3	25	52	43	17	59	12 56	54	50	46
21	132	16.0	03.1	52	07.5 ¹¹¹	33.8	25	54	45	21	20 05	13 04	55	42	45
22	147	16.1	02.1	66	37.6 ¹¹¹	36.2	24	56	47	25	12	14 55		32	45
23	162	16.3	01.1	81	07.7 ¹¹¹	38.4	22	58	50	30	20	24 57		21	45
24	177	16.4	-5 00.2	95	37.8 ¹¹¹	+18 40.6	22	60 S	18 53	19 36	20 30	13 37	57	21 08	44
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 59 ^m 3		Mag: -4.7 PMG: 9 ^h 11 ^m			Mag: -0.7 PMG: 2 ^h 47 ^m			Mag: -2.4 PMG: 19 ^h 44 ^m			Mag: +0.4 PMG: 4 ^h 27 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	164	38.3	222 19.0	-16 19.4	318 12.7	-7 52.2	63 15.6	+23 16.1	293 06.3	-16 18.0					
1	179	40.7	237 19.2	19.3	333 15.3	52.1	78 18.0	16.1	308 08.8	18.0					
2	194	43.2	252 19.5	19.1	348 17.9	52.0	93 20.5	16.1	323 11.3	18.0					
3	209	45.7	267 19.7	18.9	3 20.5	52.0	108 22.9	16.1	338 13.8	18.0					
4	224	48.1	282 20.0	18.8	18 23.1	51.9	123 25.4	16.1	353 16.2	18.0					
5	239	50.6	297 20.2	-16 18.6	33 25.8	-7 51.8	138 27.9	+23 16.1	8 18.7	-16 18.0					
6	254	53.1	312 20.5	-16 18.4	48 28.4	-7 51.8	153 30.3	+23 16.1	23 21.2	-16 17.9					
7	269	55.5	327 20.7	18.3	63 31.0	51.7	168 32.8	16.1	38 23.7	17.9					
8	284	58.0	342 20.9	18.1	78 33.6	51.6	183 35.2	16.1	53 26.2	17.9					
9	300	00.5	357 21.2	17.9	93 36.3	51.6	198 37.7	16.1	68 28.7	17.9					
10	315	02.9	12 21.4	17.8	108 38.9	51.5	213 40.1	16.1	83 31.1	17.9					
11	330	05.4	27 21.7	-16 17.6	123 41.5	-7 51.4	228 42.6	+23 16.1	98 33.6	-16 17.9					
12	345	07.8	42 21.9	-16 17.4	138 44.2	-7 51.3	243 45.0	+23 16.1	113 36.1	-16 17.9					
13	0	10.3	57 22.1	17.2	153 46.8	51.3	258 47.5	16.1	128 38.6	17.8					
14	15	12.8	72 22.4	17.1	168 49.4	51.2	273 49.9	16.2	143 41.1	17.8					
15	30	15.2	87 22.6	16.9	183 52.1	51.1	288 52.4	16.2	158 43.6	17.8					
16	45	17.7	102 22.8	16.7	198 54.7	51.1	303 54.9	16.2	173 46.0	17.8					
17	60	20.2	117 23.0	-16 16.5	213 57.3	-7 51.0	318 57.3	+23 16.2	188 48.5	-16 17.8					
18	75	22.6	132 23.3	-16 16.4	229 00.0	-7 50.9	333 59.8	+23 16.2	203 51.0	-16 17.8					
19	90	25.1	147 23.5	16.2	244 02.6	50.8	349 02.2	16.2	218 53.5	17.8					
20	105	27.6	162 23.7	16.0	259 05.3	50.8	4 04.7	16.2	233 56.0	17.8					
21	120	30.0	177 23.9	15.8	274 07.9	50.7	19 07.1	16.2	248 58.5	17.7					
22	135	32.5	192 24.2	15.6	289 10.6	50.6	34 09.6	16.2	264 00.9	17.7					
23	150	35.0	207 24.4	15.5	304 13.2	50.5	49 12.0	16.2	279 03.4	17.7					
24	165	37.4	222 24.6	-16 15.3	319 15.9	-7 50.4	64 14.5	+23 16.2	294 05.9	-16 17.7					
Dif	—		+2	+2	+26	+1	+25	0	+25	0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 6 ^d 7	PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 0 20 ^h : 54 ^m 8	SD: 15 ^h 1		R°: 48 ^m	R°		R°					
	PMG: 12 ^h 10 ^m 8					PMG: 18 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	16.4	-5	95	37.8	+18	40.6	21	60 N	5 09	5 57	6 38	9 32	48	2 05	52
1	192	16.6	-4	110	07.9 ¹¹¹		42.7	21	58	12	57	36	44	49	1 52	52
2	207	16.7		124	38.0 ¹¹¹		44.7	20	56	14	57	34	9 56	48	41	5
3	222	16.9		139	08.2 ¹¹²		46.6	19	54	16	57	32	10 06	48	31	5
4	237	17.0		153	38.4 ¹¹²		48.4	18	52	18	57	31	14	49	22	52
5	252	17.2	-4	168	08.6 ¹¹²	+18	50.1	17	50	5 20	5 57	6 29	10 22	49	1 14	52
6	267	17.4	-4	182	38.8 ¹¹²	+18	51.7	16	45	5 23	5 57	6 26	10 39	48	0 58	51
7	282	17.5		197	09.0 ¹¹²		53.2	15	40	25	56	23	10 53	48	44	51
8	297	17.7		211	39.3 ¹¹³		54.7	15	35	26	55	21	11 04	49	33	50
9	312	17.8		226	09.6 ¹¹³		56.0	13	30	27	54	18	14	49	23	50
10	327	18.0		240	39.9 ¹¹³		57.2	12	20	27	52	14	32	49	0 05	50
11	342	18.1	-4	255	10.2 ¹¹³	+18	58.4	12	10 N	5 25	5 50	6 11	11 47	49	** ** *	**
12	357	18.3	-4	269	40.5 ¹¹³	+18	59.4	10	0	5 23	5 47	6 07	12 02	48	** ** *	**
13	12	18.4		284	10.9 ¹¹⁴	+19	00.4	10	10 S	18	43	04	16	49	** ** *	**
14	27	18.6		298	41.2 ¹¹³		01.3	9	20	12	38	6 00	32	48	23 55	49
15	42	18.7		313	11.6 ¹¹⁴		02.0	7	30	5 03	32	5 56	12 49	49	38	49
16	57	18.9		327	42.0 ¹¹⁴		02.7	7	35	4 57	27	53	13 00	48	27	50
17	72	19.0	-4	342	12.5 ¹¹⁵	+19	03.3	6	40	4 50	5 23	5 50	13 11	49	23 15	51
18	87	19.2	-4	356	42.9 ¹¹⁴	+19	03.8	5	45	4 41	5 17	5 46	13 25	48	23 01	51
19	102	19.4		11	13.4 ¹¹⁵		04.2	4	50	30	09	42	42	48	22 44	51
20	117	19.5		25	43.9 ¹¹⁵		04.5	3	52	24	06	40	50	48	36	51
21	132	19.7		40	14.4 ¹¹⁵		04.7	2	54	18	5 02	38	13 59	48	27	52
22	147	19.8		54	45.0 ¹¹⁶		04.9	2	56	11	4 57	36	14 09	48	17	52
23	162	20.0		69	15.6 ¹¹⁶		04.9	0	58	4 02	52	33	21	47	22 06	52
24	177	20.1	-4	83	46.2 ¹¹⁶	+19	04.8	1	60 S	3 53	4 47	5 30	14 34	47	21 52	53

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 55 ^m 4		Mag: -4.7 PMG: 9 ^h 10 ^m			Mag: -0.7 PMG: 2 ^h 42 ^m			Mag: -2.4 PMG: 19 ^h 40 ^m			Mag: +0.4 PMG: 4 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	165	37.4	222	24.6	-16	15.3	319	15.9	-7	50.4	64	14.5	+23	16.2	294	05.9
1	180	39.9	237	24.8		15.1	334	18.5		50.4	79	16.9		16.2	309	08.4
2	195	42.3	252	25.0		14.9	349	21.2		50.3	94	19.4		16.2	324	10.9
3	210	44.8	267	25.3		14.7	4	23.8		50.2	109	21.8		16.2	339	13.4
4	225	47.3	282	25.5		14.5	19	26.5		50.1	124	24.3		16.2	354	15.8
5	240	49.7	297	25.7	-16	14.4	34	29.1	-7	50.1	139	26.7	+23	16.2	9	18.3
6	255	52.2	312	25.9	-16	14.2	49	31.8	-7	50.0	154	29.2	+23	16.2	24	20.8
7	270	54.7	327	26.1		14.0	64	34.4		49.9	169	31.6		16.2	39	23.3
8	285	57.1	342	26.3		13.8	79	37.1		49.8	184	34.1		16.2	54	25.8
9	300	59.6	357	26.5		13.6	94	39.7		49.7	199	36.5		16.2	69	28.3
10	316	02.1	12	26.7		13.4	109	42.4		49.6	214	38.9		16.2	84	30.8
11	331	04.5	27	27.0	-16	13.2	124	45.1	-7	49.6	229	41.4	+23	16.2	99	33.3
12	346	07.0	42	27.2	-16	13.0	139	47.7	-7	49.5	244	43.8	+23	16.2	114	35.7
13	1	09.5	57	27.4		12.8	154	50.4		49.4	259	46.3		16.2	129	38.2
14	16	11.9	72	27.6		12.7	169	53.1		49.3	274	48.7		16.2	144	40.7
15	31	14.4	87	27.8		12.5	184	55.7		49.2	289	51.2		16.2	159	43.2
16	46	16.8	102	28.0		12.3	199	58.4		49.2	304	53.6		16.2	174	45.7
17	61	19.3	117	28.2	-16	12.1	215	01.1	-7	49.1	319	56.1	+23	16.2	189	48.2
18	76	21.8	132	28.4	-16	11.9	230	03.7	-7	49.0	334	58.5	+23	16.2	204	50.7
19	91	24.2	147	28.6		11.7	245	06.4		48.9	350	00.9		16.2	219	53.2
20	106	26.7	162	28.8		11.5	260	09.1		48.8	5	03.4		16.2	234	55.6
21	121	29.2	177	29.0		11.3	275	11.8		48.7	20	05.8		16.2	249	58.1
22	136	31.6	192	29.2		11.1	290	14.4		48.6	35	08.3		16.2	265	00.6
23	151	34.1	207	29.4		10.9	305	17.1		48.6	50	10.7		16.2	280	03.1
24	166	36.6	222	29.6	-16	10.7	320	19.8	-7	48.5	65	13.2	+23	16.2	295	05.6
Dif	—		+2	+2			+27	+1			+24	0			+25	

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 : 54 ^m /7 12 ^h : 54 ^m /5 20 ^h : 54 ^m /4 PMG: 19 ^h 02 ^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	177	20.1	-4 36.8	83	46.2	+19 04.8	1	60 N	17 47	18 29	19 17	10 20 56	2 57 42	
1	192	20.3	35.8	98	16.8 ¹¹⁶	04.7	2	58	49	28	14	33 55	44 43	
2	207	20.4	34.8	112	47.4 ¹¹⁶	04.5	3	56	51	28	11	44 55	32 44	
3	222	20.6	33.8	127	18.1 ¹¹⁷	04.1	4	54	52	28	09	10 54 54	22 44	
4	237	20.8	32.8	141	48.7 ¹¹⁶	03.7	4	52	54	27	07	11 03 53	14 44	
5	252	20.9	-4 31.9	156	19.4 ¹¹⁷	+19 03.2	5	50	17 55	18 27	19 05	11 11 53	2 06 44	
6	267	21.1	-4 30.9	170	50.2 ¹¹⁸	+19 02.6	6	45	17 58	18 27	19 01	11 27 53	1 49 45	
7	282	21.2	29.9	185	20.9 ¹¹⁷	01.9	7	40	18 00	27	18 59	41 52	35 46	
8	297	21.4	28.9	199	51.7 ¹¹⁸	01.1	8	35	02	28	57	11 53 51	23 46	
9	312	21.5	28.0	214	22.5 ¹¹⁸	+19 00.3	8	30	04	28	56	12 03 50	1 13 47	
10	327	21.7	27.0	228	53.3 ¹¹⁸	+18 59.3	10	20	08	30	55	21 49	0 55 47	
11	342	21.8	-4 26.0	243	24.2 ¹¹⁹	+18 58.3	10	10 N	18 11	18 32	18 56	12 36 48	0 40 47	
12	357	22.0	-4 25.0	257	55.0 ¹¹⁸	+18 57.1	12	0	18 14	18 35	18 59	12 50 48	0 25 48	
13	12	22.2	24.0	272	25.9 ¹¹⁹	55.9	12	10 S	17	38	19 02	13 05 46	0 11 48	
14	27	22.3	23.1	286	56.9 ¹²⁰	54.6	13	20	20	42	08	20 46	** ** *	
15	42	22.5	22.1	301	27.8 ¹¹⁹	53.2	14	30	24	48	16	38 44	** ** *	
16	57	22.6	21.1	315	58.8 ¹²⁰	51.7	15	35	27	52	22	13 48 44	** ** *	
17	72	22.8	-4 20.1	330	29.8 ¹²⁰	+18 50.1	16	40	18 29	18 57	19 29	14 00 43	** ** *	
18	87	23.0	-4 19.2	345	00.8 ¹²⁰	+18 48.5	16	45	18 32	19 02	19 37	14 13 43	23 52 53	
19	102	23.1	18.2	359	31.9 ¹²¹	46.7	18	50	36	09	48	30 42	35 55	
20	117	23.3	17.2	14	02.9 ¹²⁰	44.9	19	52	38	12	53	38 41	27 56	
21	132	23.4	16.2	28	34.0 ¹²¹	43.0	18	54	40	16	19 59	47 40	19 56	
22	147	23.6	15.2	43	05.2 ¹²²	41.0	20	56	42	20	20 06	14 57 39	23 09 57	
23	162	23.7	14.3	57	36.3 ¹²¹	38.9	21	58	45	25	14	15 08 39	22 58 58	
24	177	23.9	-4 13.3	72	07.5 ¹²²	+18 36.7	22	60 S	18 47	19 30	20 23	15 21 37	22 45 60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 51 ^m 5		Mag: -4.7 PMG: 9 ^h 10 ^m		Mag: -0.7 PMG: 2 ^h 38 ^m		Mag: -2.4 PMG: 19 ^h 36 ^m		Mag: +0.4 PMG: 4 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	36.6	222 29.6	-16 10.7	320 19.8	-7 48.5	65 13.2	+23 16.2	295 05.6	-16 17.4
1	181	39.0	237 29.8	10.5	335 22.5	48.4	80 15.6	16.2	310 08.1	17.4
2	196	41.5	252 29.9	10.3	350 25.2	48.3	95 18.0	16.2	325 10.6	17.3
3	211	43.9	267 30.1	10.1	5 27.8	48.2	110 20.5	16.2	340 13.1	17.3
4	226	46.4	282 30.3	09.9	20 30.5	48.1	125 22.9	16.2	355 15.6	17.3
5	241	48.9	297 30.5	-16 09.7	35 33.2	-7 48.0	140 25.4	+23 16.2	10 18.0	-16 17.3
6	256	51.3	312 30.7	-16 09.5	50 35.9	-7 47.9	155 27.8	+23 16.2	25 20.5	-16 17.3
7	271	53.8	327 30.9	09.3	65 38.6	47.8	170 30.2	16.2	40 23.0	17.3
8	286	56.3	342 31.1	09.1	80 41.3	47.8	185 32.7	16.2	55 25.5	17.2
9	301	58.7	357 31.3	08.9	95 44.0	47.7	200 35.1	16.2	70 28.0	17.2
10	317	01.2	12 31.4	08.6	110 46.7	47.6	215 37.6	16.2	85 30.5	17.2
11	332	03.7	27 31.6	-16 08.4	125 49.3	-7 47.5	230 40.0	+23 16.2	100 33.0	-16 17.2
12	347	06.1	42 31.8	-16 08.2	140 52.0	-7 47.4	245 42.4	+23 16.2	115 35.5	-16 17.2
13	2	08.6	57 32.0	08.0	155 54.7	47.3	260 44.9	16.2	130 38.0	17.2
14	17	11.1	72 32.2	07.8	170 57.4	47.2	275 47.3	16.2	145 40.5	17.2
15	32	13.5	87 32.3	07.6	186 00.1	47.1	290 49.7	16.2	160 43.0	17.1
16	47	16.0	102 32.5	07.4	201 02.8	47.0	305 52.2	16.2	175 45.4	17.1
17	62	18.4	117 32.7	-16 07.2	216 05.5	-7 46.9	320 54.6	+23 16.2	190 47.9	-16 17.1
18	77	20.9	132 32.9	-16 07.0	231 08.2	-7 46.8	335 57.0	+23 16.2	205 50.4	-16 17.1
19	92	23.4	147 33.0	06.7	246 10.9	46.7	350 59.5	16.2	220 52.9	17.1
20	107	25.8	162 33.2	06.5	261 13.6	46.6	6 01.9	16.2	235 55.4	17.1
21	122	28.3	177 33.4	06.3	276 16.3	46.5	21 04.3	16.2	250 57.9	17.0
22	137	30.8	192 33.6	06.1	291 19.0	46.4	36 06.8	16.2	266 00.4	17.0
23	152	33.2	207 33.7	05.9	306 21.8	46.3	51 09.2	16.2	281 02.9	17.0
24	167	35.7	222 33.9	-16 05.7	321 24.5	-7 46.2	66 11.6	+23 16.2	296 05.4	-16 17.0
Dif	—		+2	+2	+27	+1	+24	0	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 3			Edad: 8 ^d 7 PHE { SD: 14'8 PMG: 19 ^h 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	23.9	-4	13.3	72	07.5	+18 36.7	60 N	5 03	5 51	6 32	11 16	63	3 39	33
1	192	24.1		12.3	86	38.7 ¹²²	34.4 ²³	58	06	51	30	28	61	27	34
2	207	24.2		11.3	101	09.9 ¹²²	32.1 ²³	56	09	52	29	39	59	16	36
3	222	24.4		10.3	115	41.2 ¹²³	29.7 ²⁴	54	11	52	27	48	58	3 06	36
4	237	24.5		09.4	130	12.5 ¹²³	27.1 ²⁶	52	13	52	26	11 56	58	2 58	38
5	252	24.7	-4	08.4	144	43.8 ¹²³	+18 24.5 ²⁶	50	5 15	5 53	6 25	12 04	56	2 50	39
6	267	24.9	-4	07.4	159	15.1 ¹²³	+18 21.9 ²⁶	45	5 19	5 53	6 22	12 20	54	2 34	40
7	282	25.0		06.4	173	46.5 ¹²⁴	19.1 ²⁸	40	22	53	20	33	53	21	41
8	297	25.2		05.4	188	17.9 ¹²⁴	16.2 ²⁹	35	23	53	18	44	52	09	43
9	312	25.3		04.5	202	49.3 ¹²⁴	13.3 ²⁹	30	24	52	16	12 53	51	2 00	43
10	327	25.5		03.5	217	20.7 ¹²⁴	10.3 ³⁰	20	25	51	13	13 10	49	1 42	45
11	342	25.7	-4	02.5	231	52.2 ¹²⁵	+18 07.2 ³¹	10 N	5 24	5 49	6 10	13 24	48	1 27	46
12	357	25.8	-4	01.5	246	23.7 ¹²⁵	+18 04.0 ³²	0	5 22	5 46	6 07	13 38	46	1 13	47
13	12	26.0	-4	00.5	260	55.2 ¹²⁵	+18 00.8 ³²	10 S	18	43	04	13 51	45	0 59	49
14	27	26.2	-3	59.6	275	26.8 ¹²⁶	+17 57.4 ³⁴	20	13	39	6 01	14 06	43	44	50
15	42	26.3		58.6	289	58.3 ¹²⁵	54.0 ³⁴	30	5 05	33	5 57	22	42	27	51
16	57	26.5		57.6	304	29.9 ¹²⁶	50.5 ³⁵	35	4 59	29	55	32	41	17	52
17	72	26.6	-3	56.6	319	01.6 ¹²⁷	+17 46.9 ³⁶	40	4 53	5 25	5 52	14 43	39	0 06	52
18	87	26.8	-3	55.6	333	33.2 ¹²⁶	+17 43.3 ³⁶	45	4 44	5 19	5 49	14 56	38	*** ** *	*** ** *
19	102	27.0		54.7	348	04.9 ¹²⁷	39.5 ³⁸	50	33	13	45	15 12	35	*** ** *	*** ** *
20	117	27.1		53.7	2	36.6 ¹²⁷	35.7 ³⁸	52	28	09	44	19	35	*** ** *	*** ** *
21	132	27.3		52.7	17	08.4 ¹²⁸	31.8 ³⁹	54	22	06	42	27	34	*** ** *	*** ** *
22	147	27.5		51.7	31	40.1 ¹²⁷	27.8 ⁴⁰	56	16	5 02	40	36	33	*** ** *	*** ** *
23	162	27.6		50.7	46	11.9 ¹²⁸	23.8 ⁴⁰	58	4 08	4 57	37	47	31	23 56	64
24	177	27.8	-3	49.8	60	43.7 ¹²⁸	+17 19.7 ⁴¹	60 S	3 59	4 52	5 35	15 58	30	23 45	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 47 ^m 5		Mag: -4.7 PMG: 9 ^h 10 ^m		Mag: -0.7 PMG: 2 ^h 34 ^m		Mag: -2.4 PMG: 19 ^h 32 ^m		Mag: +0.4 PMG: 4 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	35.7	222	33.9	-16	05.7	321	24.5	-7	46.2
1	182	38.2	237	34.1		05.4	336	27.2		46.2
2	197	40.6	252	34.2		05.2	351	29.9		46.1
3	212	43.1	267	34.4		05.0	6	32.6		46.0
4	227	45.6	282	34.6		04.8	21	35.3		45.9
5	242	48.0	297	34.7	-16	04.6	36	38.0	-7	45.8
6	257	50.5	312	34.9	-16	04.3	51	40.8	-7	45.7
7	272	52.9	327	35.1		04.1	66	43.5		45.6
8	287	55.4	342	35.2		03.9	81	46.2		45.5
9	302	57.9	357	35.4		03.7	96	48.9		45.4
10	318	00.3	12	35.5		03.4	111	51.6		45.3
11	333	02.8	27	35.7	-16	03.2	126	54.4	-7	45.2
12	348	05.3	42	35.8	-16	03.0	141	57.1	-7	45.1
13	3	07.7	57	36.0		02.7	156	59.8		44.9
14	18	10.2	72	36.2		02.5	172	02.5		44.8
15	33	12.7	87	36.3		02.3	187	05.3		44.7
16	48	15.1	102	36.5		02.1	202	08.0		44.6
17	63	17.6	117	36.6	-16	01.8	217	10.7	-7	44.5
18	78	20.0	132	36.8	-16	01.6	232	13.5	-7	44.4
19	93	22.5	147	36.9		01.4	247	16.2		44.3
20	108	25.0	162	37.1		01.1	262	18.9		44.2
21	123	27.4	177	37.2		00.9	277	21.7		44.1
22	138	29.9	192	37.4		00.7	292	24.4		44.0
23	153	32.4	207	37.5		00.4	307	27.1		43.9
24	168	34.8	222	37.6	-16	00.2	322	29.9	-7	43.8
Dif	—		+2		+2		+27		+1	

0	5 03	5 51	6 32	11 16	63	3 39	33
1	06	51	30	28	61	27	34
2	09	52	29	39	59	16	36
3	11	52	27	48	58	3 06	36
4	13	52	26	11 56	58	2 58	38
5	5 15	5 53	6 25	12 04	56	2 50	39
6	5 19	5 53	6 22	12 20	54	2 34	40
7	22	53	20	33	53	21	41
8	23	53	18	44	52	09	43
9	24	52	16	12 53	51	2 00	43
10	25	51	13	13 10	49	1 42	45
11	5 24	5 49	6 10	13 24	48	1 27	46
12	5 22	5 46	6 07	13 38	46	1 13	47
13	18	43	04	13 51	45	0 59	49
14	13	39	6 01	14 06	43	44	50
15	5 05	33	5 57	22	42	27	51
16	4 59	29	55	32	41	17	52
17	4 53	5 25	5 52	14 43	39	0 06	52
18	4 44	5 19	5 49	14 56	38	*** ** *	*** ** *
19	33	13	45	15 12	35	*** ** *	*** ** *
20	28	09	44	19	35	*** ** *	*** ** *
21	22	06	42	27	34	*** ** *	*** ** *
22	16	5 02	40	36	33	*** ** *	*** ** *
23	4 08	4 57	37	47	31	23 56	64
24	3 59	4 52	5 35	15 58	30	23 45	65

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 9 ^d 7 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 12 ^h 10 ^m 0		SD: 14 ^h 7 PMG: 20 ^h 35 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	27.8	-3 49.8	60	43.7	+17 19.7	42	60 N	17 52	18 34	19 22	12 19 67	4 12 27	
1	192	27.9	48.8	75	15.6 ¹²⁹	15.5	42	58	54	33	19	29 65	4 01 29	
2	207	28.1	47.8	89	47.5 ¹²⁹	11.2	43	56	55	32	15	38 64	3 52 30	
3	222	28.3	46.8	104	19.4 ¹²⁹	06.8	44	54	56	31	13	46 62	43 32	
4	237	28.4	45.8	118	51.3 ¹²⁹	+17 02.4	44	52	57	31	10	12 54 60	36 32	
5	252	28.6	-3 44.9	133	23.2 ¹²⁹	+16 57.9	45	50	17 58	18 30	19 08	13 00 60	3 29 33	
6	267	28.8	-3 43.9	147	55.2 ¹³⁰	+16 53.3	46	45	18 01	18 30	19 04	13 14 57	3 14 36	
7	282	28.9	42.9	162	27.2 ¹³⁰	48.6	47	40	02	29	19 01	26 55	3 02 38	
8	297	29.1	41.9	176	59.3 ¹³¹	43.9	47	35	04	29	18 59	36 53	2 52 39	
9	312	29.3	40.9	191	31.3 ¹³⁰	39.1	48	30	06	30	57	44 52	43 40	
10	327	29.4	39.9	206	03.4 ¹³¹	34.2	49	20	08	30	56	13 59 50	27 42	
11	342	29.6	-3 39.0	220	35.5 ¹³¹	+16 29.2	50	10 N	18 11	18 32	18 56	14 12 48	2 13 45	
12	357	29.7	-3 38.0	235	07.7 ¹³²	+16 24.2	50	0	18 13	18 34	18 58	14 24 46	2 00 46	
13	12	29.9	37.0	249	39.8 ¹³¹	19.1	51	10 S	16	37	19 01	36 44	1 48 47	
14	27	30.1	36.0	264	12.0 ¹³²	13.9	52	20	19	41	06	14 49 42	34 49	
15	42	30.2	35.0	278	44.2 ¹³²	08.7	52	30	22	46	14	15 04 39	18 51	
16	57	30.4	34.1	293	16.5 ¹³³	+16 03.4	53	35	24	49	19	13 37	1 09 52	
17	72	30.6	-3 33.1	307	48.8 ¹³³	+15 58.0	54	40	18 26	18 53	19 25	15 22 36	0 58 54	
18	87	30.7	-3 32.1	322	21.0 ¹³²	+15 52.6	54	45	18 29	18 58	19 33	15 34 34	0 45 56	
19	102	30.9	31.1	336	53.4 ¹³⁴	47.0	56	50	32	19 05	44	47 32	30 58	
20	117	31.1	30.1	351	25.7 ¹³³	41.4	56	52	33	08	48	15 54 30	23 59	
21	132	31.2	29.1	5	58.1 ¹³⁴	35.8	56	54	35	11	19 54	16 01 29	15 61	
22	147	31.4	28.2	20	30.5 ¹³⁴	30.0	58	56	37	15	20 00	09 27	0 06 62	
23	162	31.6	27.2	35	02.9 ¹³⁴	24.2	58	58	39	19	08	18 25	** ** *	
24	177	31.7	-3 26.2	49	35.3 ¹³⁴	+15 18.4	58	60 S	18 41	19 24	20 16	16 28 23	** ** *	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 12 ^h 43 ^m 6		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: -0.8 PMG: 2 ^h 30 ^m		Mag: -2.4 PMG: 19 ^h 28 ^m			Mag: +0.4 PMG: 4 ^h 11 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	168	34.8	222 37.6	-16 00.2	322 29.9	-7 43.8	67 09.9	+23 16.3	297 05.3	-16 16.6				
1	183	37.3	237 37.8	-15 59.9	337 32.6	43.7	82 12.3	16.3	312 07.8	16.6				
2	198	39.8	252 37.9	59.7	352 35.4	43.6	97 14.7	16.3	327 10.3	16.6				
3	213	42.2	267 38.1	59.5	7 38.1	43.5	112 17.2	16.3	342 12.8	16.6				
4	228	44.7	282 38.2	59.2	22 40.9	43.4	127 19.6	16.3	357 15.3	16.6				
5	243	47.2	297 38.4	-15 59.0	37 43.6	-7 43.3	142 22.0	+23 16.3	12 17.8	-16 16.5				
6	258	49.6	312 38.5	-15 58.7	52 46.3	-7 43.1	157 24.4	+23 16.3	27 20.3	-16 16.5				
7	273	52.1	327 38.6	58.5	67 49.1	43.0	172 26.9	16.3	42 22.8	16.5				
8	288	54.5	342 38.8	58.3	82 51.8	42.9	187 29.3	16.3	57 25.3	16.5				
9	303	57.0	357 38.9	58.0	97 54.6	42.8	202 31.7	16.3	72 27.8	16.5				
10	318	59.5	12 39.0	57.8	112 57.4	42.7	217 34.1	16.3	87 30.3	16.5				
11	334	01.9	27 39.2	-15 57.5	128 00.1	-7 42.6	232 36.5	+23 16.3	102 32.8	-16 16.4				
12	349	04.4	42 39.3	-15 57.3	143 02.9	-7 42.5	247 39.0	+23 16.3	117 35.3	-16 16.4				
13	4	06.9	57 39.4	57.0	158 05.6	42.4	262 41.4	16.3	132 37.8	16.4				
14	19	09.3	72 39.6	56.8	173 08.4	42.3	277 43.8	16.3	147 40.3	16.4				
15	34	11.8	87 39.7	56.5	188 11.1	42.1	292 46.2	16.3	162 42.8	16.4				
16	49	14.3	102 39.8	56.3	203 13.9	42.0	307 48.6	16.3	177 45.3	16.3				
17	64	16.7	117 40.0	-15 56.0	218 16.7	-7 41.9	322 51.0	+23 16.3	192 47.8	-16 16.3				
18	79	19.2	132 40.1	-15 55.8	233 19.4	-7 41.8	337 53.5	+23 16.3	207 50.3	-16 16.3				
19	94	21.7	147 40.2	55.5	248 22.2	41.7	352 55.9	16.3	222 52.8	16.3				
20	109	24.1	162 40.3	55.3	263 25.0	41.6	7 58.3	16.3	237 55.3	16.3				
21	124	26.6	177 40.5	55.0	278 27.7	41.5	23 00.7	16.3	252 57.8	16.3				
22	139	29.0	192 40.6	54.8	293 30.5	41.3	38 03.1	16.3	268 00.3	16.2				
23	154	31.5	207 40.7	54.5	308 33.3	41.2	53 05.5	16.3	283 02.8	16.2				
24	169	34.0	222 40.8	-15 54.2	323 36.0	-7 41.1	68 08.0	+23 16.3	298 05.3	-16 16.2				
Dif	—		+1	+2	+28	+1	+24	0	+25	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 10 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 45 ^m													
	PMG: 12 ^h 09 ^m 7			SD: 14'7 PMG: 21 ^h 20 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	177	31.7	-3 26.2	49	35.3	+15 18.4	60		60 N	4 56	5 45	6 26	13 26	69	4 39	21	
1	192	31.9		25.2	64 07.8 ¹³⁵		12.4	60	58	5 00	46	25	34	68	30	23	
2	207	32.1		24.2	78 40.3 ¹³⁵		06.4	60	56	03	47	24	42	65	22	25	
3	222	32.2		23.2	93 12.8 ¹³⁵	+15 00.4	60		54	06	47	23	48	64	15	26	
4	237	32.4		22.3	107 45.3 ¹³⁵	+14 54.2	62		52	09	48	21	13 54	63	08	28	
5	252	32.6	-3 21.3	122	17.9 ¹³⁶	+14 48.0	62		50	5 11	5 48	6 21	14 00	61	4 02	30	
6	267	32.7	-3 20.3	136	50.5 ¹³⁶	+14 41.8	62		45	5 15	5 49	6 18	14 11	59	3 50	32	
7	282	32.9		19.3	151 23.1 ¹³⁶		35.4	64	40	18	50	17	21	56	40	34	
8	297	33.1		18.3	165 55.7 ¹³⁶		29.0	64	35	21	50	15	29	54	31	36	
9	312	33.2		17.3	180 28.4 ¹³⁷		22.6	64	30	22	50	14	36	53	23	38	
10	327	33.4		16.4	195 01.1 ¹³⁷		16.1	65	20	24	49	11	14 49	49	3 09	41	
11	342	33.6	-3 15.4	209	33.8 ¹³⁷	+14 09.5	66		10 N	5 23	5 48	6 09	15 00	46	2 58	42	
12	357	33.7	-3 14.4	224	06.5 ¹³⁷	+14 02.8	67		0	5 22	5 46	6 06	15 10	44	2 46	45	
13	12	33.9		13.4	238 39.2 ¹³⁷	+13 56.1	67		10 S	19	43	04	20	42	35	47	
14	27	34.1		12.4	253 12.0 ¹³⁸		49.4	67	20	14	39	6 01	31 39		23	50	
15	42	34.2		11.4	267 44.8 ¹³⁸		42.5	69	30	06	34	5 58	43 37		09	52	
16	57	34.4		10.5	282 17.6 ¹³⁸		35.6	69	35	5 01	31	56	50 35		2 01	54	
17	72	34.6	-3 09.5	296	50.4 ¹³⁸	+13 28.7	69		40	4 55	5 27	5 54	15 58	33	1 52	56	
18	87	34.7	-3 08.5	311	23.3 ¹³⁹	+13 21.7	70		45	4 47	5 22	5 52	16 08	30	1 41	58	
19	102	34.9		07.5	325 56.1 ¹³⁸		14.6	71	50	37	16	49	19 28		28	61	
20	117	35.1		06.5	340 29.0 ¹³⁹		07.5	71	52	32	13	47	24 27		22	62	
21	132	35.3		05.5	355 01.9 ¹³⁹	+13 00.3	72		54	27	10	46	30 25		16	63	
22	147	35.4		04.6	9 34.9 ¹⁴⁰	+12 53.1	72		56	20	06	44	36 24		08	65	
23	162	35.6		03.6	24 07.8 ¹³⁹		45.8	73	58	13	5 02	42	43 22		1 00	66	
24	177	35.8	-3 02.6	38	40.8 ¹⁴⁰	+12 38.4	74		60 S	4 05	4 57	5 40	16 51	20	0 50	69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 39 ^m 7		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: -0.8 PMG: 2 ^h 25 ^m			Mag: -2.4 PMG: 19 ^h 24 ^m			Mag: +0.4 PMG: 4 ^h 07 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			hG ♅		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	169	34.0	222	40.8	-15 54.2	323	36.0	-7 41.1	68	08.0	+23 16.3	298	05.3	-16 16.2			
1	184	36.4	237	41.0		338	38.8		83	10.4		313	07.8				
2	199	38.9	252	41.1		353	41.6		98	12.8		328	10.3				
3	214	41.4	267	41.2		8	44.4		113	15.2		343	12.8				
4	229	43.8	282	41.3		23	47.1		128	17.6		358	15.3				
5	244	46.3	297	41.4	-15 52.9	38	49.9	-7 40.5	143	20.0	+23 16.3	13	17.8	-16 16.1			
6	259	48.8	312	41.6	-15 52.7	53	52.7	-7 40.4	158	22.4	+23 16.2	28	20.3	-16 16.1			
7	274	51.2	327	41.7		68	55.5		173	24.8		43	22.8				
8	289	53.7	342	41.8		83	58.2		188	27.3		58	25.3				
9	304	56.1	357	41.9		99	01.0		203	29.7		73	27.8				
10	319	58.6	12	42.0		114	03.8		218	32.1		88	30.3				
11	335	01.1	27	42.1	-15 51.4	129	06.6	-7 39.8	233	34.5	+23 16.2	103	32.8	-16 16.0			
12	350	03.5	42	42.2	-15 51.1	144	09.4	-7 39.7	248	36.9	+23 16.2	118	35.3	-16 16.0			
13	5	06.0	57	42.3		159	12.2		263	39.3		133	37.8				
14	20	08.5	72	42.5		174	15.0		278	41.7		148	40.3				
15	35	10.9	87	42.6		189	17.7		293	44.1		163	42.8				
16	50	13.4	102	42.7		204	20.5		308	46.5		178	45.3				
17	65	15.9	117	42.8	-15 49.8	219	23.3	-7 39.1	323	49.0	+23 16.2	193	47.8	-16 15.9			
18	80	18.3	132	42.9	-15 49.5	234	26.1	-7 38.9	338	51.4	+23 16.2	208	50.3	-16 15.9			
19	95	20.8	147	43.0		249	28.9		353	53.8		223	52.8				
20	110	23.3	162	43.1		264	31.7		8	56.2		238	55.3				
21	125	25.7	177	43.2		279	34.5		23	58.6		253	57.8				
22	140	28.2	192	43.3		294	37.3		39	01.0		269	00.3				
23	155	30.6	207	43.4		309	40.1		54	03.4		284	02.9				
24	170	33.1	222	43.5	-15 47.8	324	42.9	-7 38.2	69	05.8	+23 16.2	299	05.4	-16 15.8			
Dif	—		+1 +3			+28 +1			+24 0			+25 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 11 ^d 7 PHE	SD: 14 ^h 8				Civil	Náutico	Hora	R°	Hora	R°		
	PMG: 12 ^h 09 ^m 5				PMG: 22 ^h 05 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	35.8	-3 02.6	38	40.8	+12 38.4	74	60 N	17 57	18 38	19 27	14 35	72	5 00	18	
1	192	35.9	01.6	53	13.8 ¹⁴⁰	31.0	74	58	58	37	23	42	69	4 53	20	
2	207	36.1	-3 00.6	67	46.8 ¹⁴⁰	23.5	75	56	17 59	36	20	47	68	47	22	
3	222	36.3	-2 59.6	82	19.8 ¹⁴⁰	16.0	75	54	18 00	35	16	52	66	41	24	
4	237	36.4	58.6	96	52.8 ¹⁴⁰	08.4	76	52	01	34	14	14 57	64	36	26	
5	252	36.6	-2 57.7	111	25.9 ¹⁴¹	+12 00.8	76	50	18 01	18 34	19 11	15 01	62	4 32	27	
6	267	36.8	-2 56.7	125	59.0 ¹⁴¹	+11 53.1	77	45	18 03	18 32	19 07	15 10	59	4 22	30	
7	282	37.0	55.7	140	32.0 ¹⁴⁰	45.3	78	40	05	32	03	17	57	14	32	
8	297	37.1	54.7	155	05.2 ¹⁴²	37.5	78	35	06	31	19 00	23	55	07	34	
9	312	37.3	53.7	169	38.3 ¹⁴¹	29.7	78	30	07	31	18 59	29	52	4 01	35	
10	327	37.5	52.7	184	11.4 ¹⁴¹	21.8	79	20	09	31	57	38	50	3 50	39	
11	342	37.6	-2 51.8	198	44.6 ¹⁴²	+11 13.9	79	10 N	18 11	18 32	18 56	15 46	47	3 40	42	
12	357	37.8	-2 50.8	213	17.7 ¹⁴¹	+11 05.9	80	0	18 13	18 33	18 57	15 54	44	3 31	44	
13	12	38.0	49.8	227	50.9 ¹⁴²	+10 57.8	81	10 S	15	36	19 00	16 02	41	22	47	
14	27	38.1	48.8	242	24.1 ¹⁴²	49.7	81	20	17	39	05	10	39	13	49	
15	42	38.3	47.8	256	57.3 ¹⁴²	41.5	82	30	20	44	12	20	35	3 01	53	
16	57	38.5	46.8	271	30.5 ¹⁴²	33.4	81	35	21	47	16	25	33	2 55	54	
17	72	38.7	-2 45.8	286	03.8 ¹⁴³	+10 25.1	83	40	18 23	18 50	19 22	16 31	31	2 48	56	
18	87	38.8	-2 44.9	300	37.0 ¹⁴²	+10 16.8	83	45	18 25	18 55	19 29	16 38	29	2 39	59	
19	102	39.0	43.9	315	10.3 ¹⁴³	08.5	83	50	28	19 00	39	47	25	29	62	
20	117	39.2	42.9	329	43.5 ¹⁴²	+10 00.1	84	52	29	03	43	51	24	24	63	
21	132	39.4	41.9	344	16.8 ¹⁴³	+9 51.6	85	54	30	06	49	16	55	19	65	
22	147	39.5	40.9	358	50.1 ¹⁴³	43.2	84	56	32	09	19 54	17 00	21	13	66	
23	162	39.7	39.9	13	23.4 ¹⁴³	34.6	86	58	33	13	20 01	05	19	2 06	69	
24	177	39.9	-2 38.9	27	56.7 ¹⁴³	+9 26.1	85	60 S	18 35	19 17	20 09	17 11	17	1 59	71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 35 ^m 7		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: -0.8 PMG: 2 ^h 21 ^m			Mag: -2.4 PMG: 19 ^h 21 ^m			Mag: +0.4 PMG: 4 ^h 03 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	170	33.1	222 43.5	-15 47.8	324 42.9	-7 38.2	69 05.8	+23 16.2	299 05.4	-16 15.8						
1	185	35.6	237 43.6	47.6	339 45.7	38.0	84 08.2	16.2	314 07.9	15.8						
2	200	38.0	252 43.7	47.3	354 48.5	37.9	99 10.6	16.2	329 10.4	15.7						
3	215	40.5	267 43.8	47.0	9 51.3	37.8	114 13.0	16.2	344 12.9	15.7						
4	230	43.0	282 43.9	46.7	24 54.1	37.7	129 15.4	16.2	359 15.4	15.7						
5	245	45.4	297 44.0	-15 46.5	39 56.9	-7 37.5	144 17.8	+23 16.2	14 17.9	-16 15.7						
6	260	47.9	312 44.1	-15 46.2	54 59.8	-7 37.4	159 20.2	+23 16.2	29 20.4	-16 15.7						
7	275	50.4	327 44.2	45.9	70 02.6	37.3	174 22.6	16.2	44 22.9	15.6						
8	290	52.8	342 44.3	45.6	85 05.4	37.1	189 25.0	16.2	59 25.4	15.6						
9	305	55.3	357 44.4	45.3	100 08.2	37.0	204 27.4	16.2	74 27.9	15.6						
10	320	57.8	12 44.5	45.0	115 11.0	36.9	219 29.8	16.2	89 30.4	15.6						
11	336	00.2	27 44.5	-15 44.8	130 13.8	-7 36.8	234 32.2	+23 16.2	104 32.9	-16 15.6						
12	351	02.7	42 44.6	-15 44.5	145 16.6	-7 36.6	249 34.6	+23 16.2	119 35.4	-16 15.6						
13	6	05.1	57 44.7	44.2	160 19.5	36.5	264 37.0	16.2	134 38.0	15.5						
14	21	07.6	72 44.8	43.9	175 22.3	36.4	279 39.4	16.2	149 40.5	15.5						
15	36	10.1	87 44.9	43.6	190 25.1	36.2	294 41.8	16.2	164 43.0	15.5						
16	51	12.5	102 45.0	43.3	205 27.9	36.1	309 44.2	16.2	179 45.5	15.5						
17	66	15.0	117 45.1	-15 43.0	220 30.7	-7 36.0	324 46.6	+23 16.2	194 48.0	-16 15.5						
18	81	17.5	132 45.2	-15 42.8	235 33.6	-7 35.8	339 49.0	+23 16.2	209 50.5	-16 15.4						
19	96	19.9	147 45.2	42.5	250 36.4	35.7	354 51.4	16.2	224 53.0	15.4						
20	111	22.4	162 45.3	42.2	265 39.2	35.6	9 53.8	16.2	239 55.5	15.4						
21	126	24.9	177 45.4	41.9	280 42.1	35.4	24 56.2	16.2	254 58.0	15.4						
22	141	27.3	192 45.5	41.6	295 44.9	35.3	39 58.6	16.2	270 00.5	15.4						
23	156	29.8	207 45.6	41.3	310 47.7	35.1	55 01.0	16.2	285 03.0	15.3						
24	171	32.2	222 45.7	-15 41.0	325 50.5	-7 35.0	70 03.4	+23 16.2	300 05.6	-16 15.3						
Dif	—		+1	+3	+28	+1	+24	0	+25	0						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 12 ^d 7 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7												
	PMG: 12 ^h 09 ^m 2			SD: 14'8 PMG: 22 ^h 49 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	39.9	-2	38.9	27	56.7	+9	26.1	60 N	4	50	5	39	6	20	
1	192	40.0		38.0	42	30.1 ¹⁴⁴		17.5 ⁸⁶	58	54	40	19	51	71	5	18
2	207	40.2		37.0	57	03.4 ¹⁴³		08.8 ⁸⁷	56	4	58	41	55	69	09	20
3	222	40.4		36.0	71	36.7 ¹⁴³	+9	00.1 ⁸⁷	54	5	01	42	18	58	67	05
4	237	40.6		35.0	86	10.1 ¹⁴⁴	+8	51.4 ⁸⁷	52	04	43	17	16	01	65	5
5	252	40.7	-2	34.0	100	43.5 ¹⁴⁴	+8	42.6 ⁸⁸	50	5	07	5	44	16	03	64
6	267	40.9	-2	33.0	115	16.8 ¹⁴³	+8	33.7 ⁸⁹	45	5	11	5	46	16	09	61
7	282	41.1		32.0	129	50.2 ¹⁴⁴		24.9 ⁸⁸	40	15	47	13	14	58	46	30
8	297	41.3		31.1	144	23.6 ¹⁴⁴		16.0 ⁸⁹	35	18	47	12	18	55	41	33
9	312	41.4		30.1	158	57.0 ¹⁴⁴	+8	07.0 ⁹⁰	30	20	47	11	21	54	36	35
10	327	41.6		29.1	173	30.4 ¹⁴⁴	+7	58.0 ⁹⁰	20	22	47	09	28	50	29	38
11	342	41.8	-2	28.1	188	03.8 ¹⁴⁴	+7	49.0 ⁹⁰	10 N	5	22	5	47	6	08	16
12	357	41.9	-2	27.1	202	37.2 ¹⁴⁴	+7	40.0 ⁹⁰	0	5	21	5	45	6	06	16
13	12	42.1		26.1	217	10.6 ¹⁴⁴		30.9 ⁹¹	10 S	19	43	04	43	41	09	47
14	27	42.3		25.1	231	44.0 ¹⁴⁴		21.7 ⁹²	20	14	40	02	49	38	4	02
15	42	42.5		24.2	246	17.4 ¹⁴⁴		12.6 ⁹¹	30	08	36	6	00	55	34	3
16	57	42.6		23.2	260	50.8 ¹⁴⁴	+7	03.4 ⁹²	35	5	03	33	5	58	16	58
17	72	42.8	-2	22.2	275	24.2 ¹⁴⁴	+6	54.1 ⁹³	40	4	57	5	29	5	56	17
18	87	43.0	-2	21.2	289	57.7 ¹⁴⁵	+6	44.8 ⁹³	45	4	50	5	25	5	54	17
19	102	43.2		20.2	304	31.1 ¹⁴⁴		35.5 ⁹³	50	41	19	52	12	25	31	63
20	117	43.3		19.2	319	04.5 ¹⁴⁴		26.2 ⁹³	52	36	17	51	15	23	27	65
21	132	43.5		18.2	333	37.9 ¹⁴⁴		16.8 ⁹⁴	54	31	14	50	18	21	24	66
22	147	43.7		17.3	348	11.4 ¹⁴⁵	+6	07.4 ⁹⁴	56	25	11	48	21	19	19	69
23	162	43.9		16.3	2	44.8 ¹⁴⁴	+5	58.0 ⁹⁴	58	19	07	47	24	18	15	70
24	177	44.0	-2	15.3	17	18.2 ¹⁴⁴	+5	48.5 ⁹⁵	60 S	4	11	5	03	5	45	17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 31 ^m 8		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: -0.9 PMG: 2 ^h 16 ^m			Mag: -2.4 PMG: 19 ^h 17 ^m			Mag: +0.4 PMG: 3 ^h 59 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	171	32.2	222	45.7	-15	41.0	325	50.5	-7	35.0	70	03.4	+23	16.2	300	05.6
1	186	34.7	237	45.7		40.7	340	53.4		34.9	85	05.8		16.2	315	08.1
2	201	37.2	252	45.8		40.4	355	56.2		34.7	100	08.2		16.2	330	10.6
3	216	39.6	267	45.9		40.1	10	59.0		34.6	115	10.6		16.2	345	13.1
4	231	42.1	282	46.0		39.8	26	01.9		34.5	130	13.0		16.2	0	15.6
5	246	44.6	297	46.0	-15	39.5	41	04.7	-7	34.3	145	15.4	+23	16.2	15	18.1
6	261	47.0	312	46.1	-15	39.2	56	07.6	-7	34.2	160	17.8	+23	16.2	30	20.6
7	276	49.5	327	46.2		38.9	71	10.4		34.0	175	20.2		16.2	45	23.1
8	291	52.0	342	46.3		38.6	86	13.2		33.9	190	22.6		16.2	60	25.6
9	306	54.4	357	46.3		38.3	101	16.1		33.8	205	25.0		16.2	75	28.1
10	321	56.9	12	46.4		38.0	116	18.9		33.6	220	27.4		16.2	90	30.7
11	336	59.4	27	46.5	-15	37.7	131	21.8	-7	33.5	235	29.8	+23	16.2	105	33.2
12	352	01.8	42	46.6	-15	37.4	146	24.6	-7	33.3	250	32.2	+23	16.2	120	35.7
13	7	04.3	57	46.6		37.1	161	27.5		33.2	265	34.6		16.2	135	38.2
14	22	06.7	72	46.7		36.8	176	30.3		33.1	280	37.0		16.2	150	40.7
15	37	09.2	87	46.8		36.5	191	33.2		32.9	295	39.4		16.2	165	43.2
16	52	11.7	102	46.8		36.2	206	36.0		32.8	310	41.7		16.2	180	45.7
17	67	14.1	117	46.9	-15	35.9	221	38.9	-7	32.6	325	44.1	+23	16.2	195	48.2
18	82	16.6	132	47.0	-15	35.5	236	41.7	-7	32.5	340	46.5	+23	16.2	210	50.8
19	97	19.1	147	47.0		35.2	251	44.6		32.3	355	48.9		16.2	225	53.3
20	112	21.5	162	47.1		34.9	266	47.5		32.2	10	51.3		16.2	240	55.8
21	127	24.0	177	47.2		34.6	281	50.3		32.0	25	53.7		16.2	255	58.3
22	142	26.5	192	47.2		34.3	296	53.2		31.9	40	56.1		16.1	271	00.8
23	157	28.9	207	47.3		34.0	311	56.0		31.8	55	58.5		16.1	286	03.3
24	172	31.4	222	47.3	-15	33.7	326	58.9	-7	31.6	71	00.9	+23	16.1	301	05.8
Dif	—		+1		+3		+28		+1		+24		0		+25	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 08 ^m 9			Edad: 13 ^d 7 PHE { 4 ^h : 54 ^m /8 12 ^h : 54 ^m /9 20 ^h : 55 ^m /0 PMG: 23 ^h 33 ^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	177	44.0	-2 15.3	17	18.2	+5 48.5	95	60 N	18 02	18 43	19 33	17 01 74	5 34 15		
1	192	44.2	14.3	31	51.7 ¹⁴⁵	39.0	95	58	03	42	28	02 72	32 17		
2	207	44.4	13.3	46	25.1 ¹⁴⁴	29.5	95	56	03	40	24	04 70	29 19		
3	222	44.6	12.3	60	58.5 ¹⁴⁴	19.9	96	54	04	39	20	05 68	27 22		
4	237	44.7	11.3	75	31.9 ¹⁴⁴	10.3	96	52	04	38	17	06 67	25 23		
5	252	44.9	-2 10.3	90	05.3 ¹⁴⁴	+5 00.7	96	50	18 05	18 37	19 15	17 07 65	5 23 25		
6	267	45.1	-2 09.4	104	38.8 ¹⁴⁵	+4 51.1	96	45	18 06	18 35	19 09	17 10 61	5 20 27		
7	282	45.3	08.4	119	12.2 ¹⁴⁴	41.4	97	40	07	34	05	12 58	16 30		
8	297	45.4	07.4	133	45.6 ¹⁴⁴	31.7	97	35	07	33	02	13 57	14 32		
9	312	45.6	06.4	148	19.0 ¹⁴⁴	22.0	97	30	08	32	19 00	15 54	11 34		
10	327	45.8	05.4	162	52.4 ¹⁴⁴	12.3	97	20	10	32	18 57	18 50	07 38		
11	342	46.0	-2 04.4	177	25.7 ¹⁴³	+4 02.5	98	10 N	18 11	18 32	18 56	17 20 47	5 03 41		
12	357	46.1	-2 03.4	191	59.1 ¹⁴⁴	+3 52.7	98	0	18 12	18 33	18 57	17 22 44	4 59 44		
13	12	46.3	02.4	206	32.5 ¹⁴⁴	42.9	98	10 S	14	35	18 59	24 41	56 47		
14	27	46.5	01.5	221	05.9 ¹⁴⁴	33.1	98	20	15	37	19 03	27 38	52 50		
15	42	46.7	-2 00.5	235	39.2 ¹⁴³	23.2	99	30	17	41	09	29 35	47 54		
16	57	46.9	-1 59.5	250	12.6 ¹⁴⁴	13.3	99	35	18	44	13	31 32	45 55		
17	72	47.0	-1 58.5	264	45.9 ¹⁴³	+3 03.4	99	40	18 20	18 47	19 19	17 32 30	4 42 58		
18	87	47.2	-1 57.5	279	19.2 ¹⁴³	+2 53.5	99	45	18 21	18 51	19 25	17 34 28	4 38 61		
19	102	47.4	56.5	293	52.6 ¹⁴⁴	43.6	99	50	23	56	34	37 24	34 64		
20	117	47.6	55.5	308	25.9 ¹⁴³	33.6	100	52	24	18 58	38	38 23	32 66		
21	132	47.7	54.6	322	59.2 ¹⁴³	23.7	99	54	25	19 01	43	39 21	30 68		
22	147	47.9	53.6	337	32.4 ¹⁴²	13.7	100	56	26	04	49	40 20	28 69		
23	162	48.1	52.6	352	05.7 ¹⁴³	+2 03.7	100	58	28	07	19 55	42 17	25 72		
24	177	48.3	-1 51.6	6	39.0 ¹⁴³	+1 53.7	100	60 S	18 29	19 11	20 02	17 43 16	4 22 74		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 27 ^m 9		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: -0.9 PMG: 2 ^h 12 ^m			Mag: -2.4 PMG: 19 ^h 13 ^m			Mag: +0.4 PMG: 3 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	172	31.4	222 47.3	-15 33.7	326 58.9	-7 31.6	71 00.9	+23 16.1	301 05.8	-16 14.8					
1	187	33.8	237 47.4	33.4	342 01.8	31.5	86 03.3	16.1	316 08.4	14.8					
2	202	36.3	252 47.5	33.0	357 04.6	31.3	101 05.6	16.1	331 10.9	14.8					
3	217	38.8	267 47.5	32.7	12 07.5	31.2	116 08.0	16.1	346 13.4	14.8					
4	232	41.2	282 47.6	32.4	27 10.4	31.0	131 10.4	16.1	1 15.9	14.8					
5	247	43.7	297 47.6	-15 32.1	42 13.2	-7 30.9	146 12.8	+23 16.1	16 18.4	-16 14.7					
6	262	46.2	312 47.7	-15 31.8	57 16.1	-7 30.7	161 15.2	+23 16.1	31 20.9	-16 14.7					
7	277	48.6	327 47.7	31.4	72 19.0	30.6	176 17.6	16.1	46 23.4	14.7					
8	292	51.1	342 47.8	31.1	87 21.9	30.4	191 20.0	16.1	61 26.0	14.7					
9	307	53.6	357 47.9	30.8	102 24.7	30.3	206 22.3	16.1	76 28.5	14.7					
10	322	56.0	12 47.9	30.5	117 27.6	30.1	221 24.7	16.1	91 31.0	14.6					
11	337	58.5	27 48.0	-15 30.2	132 30.5	-7 30.0	236 27.1	+23 16.1	106 33.5	-16 14.6					
12	353	01.0	42 48.0	-15 29.8	147 33.4	-7 29.8	251 29.5	+23 16.1	121 36.0	-16 14.6					
13	8	03.4	57 48.1	29.5	162 36.2	29.7	266 31.9	16.1	136 38.5	14.6					
14	23	05.9	72 48.1	29.2	177 39.1	29.5	281 34.3	16.1	151 41.1	14.6					
15	38	08.3	87 48.2	28.9	192 42.0	29.4	296 36.6	16.1	166 43.6	14.5					
16	53	10.8	102 48.2	28.5	207 44.9	29.2	311 39.0	16.1	181 46.1	14.5					
17	68	13.3	117 48.3	-15 28.2	222 47.8	-7 29.1	326 41.4	+23 16.1	196 48.6	-16 14.5					
18	83	15.7	132 48.3	-15 27.9	237 50.7	-7 28.9	341 43.8	+23 16.1	211 51.1	-16 14.5					
19	98	18.2	147 48.4	27.5	252 53.5	28.8	356 46.2	16.1	226 53.6	14.5					
20	113	20.7	162 48.4	27.2	267 56.4	28.6	11 48.6	16.1	241 56.2	14.4					
21	128	23.1	177 48.4	26.9	282 59.3	28.4	26 50.9	16.1	256 58.7	14.4					
22	143	25.6	192 48.5	26.6	298 02.2	28.3	41 53.3	16.1	272 01.2	14.4					
23	158	28.1	207 48.5	26.2	313 05.1	28.1	56 55.7	16.1	287 03.7	14.4					
24	173	30.5	222 48.6	-15 25.9	328 08.0	-7 28.0	71 58.1	+23 16.1	302 06.2	-16 14.3					
Dif	—		+1	+3	+29	+2	+24		0		+25				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 7 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /3 20 ^h : 55 ^m /5										
	PMG: 12 ^h 08 ^m 6			SD: 15 ^h 0 PMG: **h **m R°: **m				Náutico	Civil		Hora	R°	Hora	R°
h	hG ☉	Dec	hG ☾ Dif	Dec	Dif		h m	h m	h m	h m m	m	h m m	m	
0	177 48.3	-1 51.6	6 39.0	+1 53.7		60 N	4 44	5 33	6 14	18 15	76	5 49	16	
1	192 48.5		21 12.2 ¹⁴²		43.6 ¹⁰¹	58	49	35	14	14 74		49	17	
2	207 48.6		35 45.4 ¹⁴²		33.6 ¹⁰⁰	56	53	36	13	14 71		48	20	
3	222 48.8		50 18.7 ¹⁴³		23.5 ¹⁰¹	54	56	38	13	13 70		48	21	
4	237 49.0		64 51.9 ¹⁴²		13.5 ¹⁰⁰	52	4 59	39	12	13 68		48	23	
5	252 49.2	-1 46.7	79 25.0 ¹⁴¹	+1 03.4 ¹⁰¹		50	5 02	5 40	6 12	18 12	67	5 48	24	
6	267 49.3	-1 45.7	93 58.2 ¹⁴²	+0 53.3 ¹⁰¹		45	5 08	5 42	6 11	18 11	63	5 47	27	
7	282 49.5		108 31.4 ¹⁴²		43.2 ¹⁰¹	40	12	43	10	10 60		46	31	
8	297 49.7		123 04.5 ¹⁴¹		33.1 ¹⁰¹	35	15	44	10	10 57		46	32	
9	312 49.9		137 37.6 ¹⁴¹		22.9 ¹⁰²	30	17	45	09	09 56		45	35	
10	327 50.1		152 10.7 ¹⁴¹		12.8 ¹⁰¹	20	20	46	08	08 52		45	38	
11	342 50.2	-1 40.7	166 43.8 ¹⁴¹	+0 02.7 ¹⁰¹		10 N	5 21	5 46	6 07	18 07	49	5 44	42	
12	357 50.4	-1 39.7	181 16.8 ¹⁴⁰	-0 07.5 ¹⁰²		0	5 21	5 45	6 05	18 06	46	5 43	45	
13	12 50.6		195 49.9 ¹⁴¹		17.6 ¹⁰¹	10 S	19	43	04	05 43		43	47	
14	27 50.8		210 22.9 ¹⁴⁰		27.8 ¹⁰²	20	15	41	03	05 39		42	51	
15	42 50.9		224 55.9 ¹⁴⁰		37.9 ¹⁰¹	30	09	37	01	04 35		41	55	
16	57 51.1		239 28.9 ¹⁴⁰		48.1 ¹⁰²	35	5 05	34	6 00	03 33		40	57	
17	72 51.3	-1 34.8	254 01.8 ¹³⁹	-0 58.3 ¹⁰²		40	4 59	5 31	5 58	18 02	31	5 40	59	
18	87 51.5	-1 33.8	268 34.8 ¹⁴⁰	-1 08.4 ¹⁰¹		45	4 53	5 28	5 57	18 02	28	5 39	62	
19	102 51.7		283 07.7 ¹³⁹		18.6 ¹⁰²	50	44	23	55	01 25		38	66	
20	117 51.8		297 40.5 ¹³⁸		28.8 ¹⁰²	52	40	20	54	01 23		38	67	
21	132 52.0		312 13.4 ¹³⁹		39.0 ¹⁰²	54	35	18	53	00 22		38	68	
22	147 52.2		326 46.2 ¹³⁸		49.1 ¹⁰¹	56	30	15	52	18 00	20	37	71	
23	162 52.4		341 19.0 ¹³⁸	-1 59.3 ¹⁰²		58	24	12	51	17 59	18	37	72	
24	177 52.6	-1 27.9	355 51.8 ¹³⁸	-2 09.5 ¹⁰²		60 S	4 17	5 08	5 50	17 59	15	5 36	75	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 23 ^m 9		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: -0.9 PMG: 2 ^h 07 ^m		Mag: -2.4 PMG: 19 ^h 09 ^m		Mag: +0.3 PMG: 3 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173 30.5	222 48.6	-15 25.9		328 08.0	-7 28.0	71 58.1	+23 16.1	302 06.2	-16 14.3
1	188 33.0	237 48.6	25.5		343 10.9	27.8	87 00.5	16.1	317 08.8	14.3
2	203 35.4	252 48.7	25.2		358 13.8	27.7	102 02.8	16.1	332 11.3	14.3
3	218 37.9	267 48.7	24.9		13 16.7	27.5	117 05.2	16.1	347 13.8	14.3
4	233 40.4	282 48.7	24.5		28 19.6	27.4	132 07.6	16.1	2 16.3	14.3
5	248 42.8	297 48.8	-15 24.2		43 22.5	-7 27.2	147 10.0	+23 16.1	17 18.8	-16 14.2
6	263 45.3	312 48.8	-15 23.9		58 25.4	-7 27.0	162 12.4	+23 16.1	32 21.3	-16 14.2
7	278 47.8	327 48.9	23.5		73 28.3	26.9	177 14.7	16.1	47 23.9	14.2
8	293 50.2	342 48.9	23.2		88 31.2	26.7	192 17.1	16.0	62 26.4	14.2
9	308 52.7	357 48.9	22.8		103 34.1	26.6	207 19.5	16.0	77 28.9	14.2
10	323 55.2	12 49.0	22.5		118 37.0	26.4	222 21.9	16.0	92 31.4	14.1
11	338 57.6	27 49.0	-15 22.2		133 39.9	-7 26.2	237 24.2	+23 16.0	107 33.9	-16 14.1
12	354 00.1	42 49.0	-15 21.8		148 42.8	-7 26.1	252 26.6	+23 16.0	122 36.5	-16 14.1
13	9 02.6	57 49.1	21.5		163 45.7	25.9	267 29.0	16.0	137 39.0	14.1
14	24 05.0	72 49.1	21.1		178 48.6	25.8	282 31.4	16.0	152 41.5	14.0
15	39 07.5	87 49.1	20.8		193 51.5	25.6	297 33.7	16.0	167 44.0	14.0
16	54 09.9	102 49.2	20.4		208 54.5	25.4	312 36.1	16.0	182 46.5	14.0
17	69 12.4	117 49.2	-15 20.1		223 57.4	-7 25.3	327 38.5	+23 16.0	197 49.1	-16 14.0
18	84 14.9	132 49.2	-15 19.7		239 00.3	-7 25.1	342 40.9	+23 16.0	212 51.6	-16 14.0
19	99 17.3	147 49.3	19.4		254 03.2	24.9	357 43.2	16.0	227 54.1	13.9
20	114 19.8	162 49.3	19.0		269 06.1	24.8	12 45.6	16.0	242 56.6	13.9
21	129 22.3	177 49.3	18.7		284 09.0	24.6	27 48.0	16.0	257 59.2	13.9
22	144 24.7	192 49.3	18.3		299 12.0	24.5	42 50.4	16.0	273 01.7	13.9
23	159 27.2	207 49.4	18.0		314 14.9	24.3	57 52.7	16.0	288 04.2	13.8
24	174 29.7	222 49.4	-15 17.6		329 17.8	-7 24.1	72 55.1	+23 16.0	303 06.7	-16 13.8
Dif	—	0	+3		+29	+2	+24	0	+25	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 4			Edad: 15 ^d 7 PHE { SD: 15 ^h 1 PMG: 0 ^h 17 ^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	177	52.6	-1	27.9	355	51.8	-2 09.5	60 N	18 07	18 48	19 38	19 31 78	6 05 16		
1	192	52.7		26.9	10	24.6 ¹³⁸	19.6 ¹⁰¹	58	07	46	33	28 75	06 19		
2	207	52.9		25.9	24	57.3 ¹³⁷	29.8 ¹⁰²	56	07	44	28	25 73	08 21		
3	222	53.1		24.9	39	30.0 ¹³⁷	40.0 ¹⁰²	54	08	43	24	23 71	09 22		
4	237	53.3		23.9	54	02.6 ¹³⁶	-2 50.1 ¹⁰¹	52	08	41	21	21 69	11 24		
5	252	53.5	-1	22.9	68	35.3 ¹³⁷	-3 00.2 ¹⁰¹	50	18 08	18 40	19 18	19 19 67	6 12 26		
6	267	53.6	-1	22.0	83	07.9 ¹³⁶	-3 10.4 ¹⁰²	45	18 08	18 38	19 12	19 14 64	6 14 29		
7	282	53.8		21.0	97	40.5 ¹³⁶	20.5 ¹⁰¹	40	09	36	07	10 62	17 31		
8	297	54.0		20.0	112	13.0 ¹³⁵	30.6 ¹⁰¹	35	09	34	04	07 59	18 34		
9	312	54.2		19.0	126	45.5 ¹³⁵	40.8 ¹⁰²	30	09	33	19 01	05 56	20 36		
10	327	54.4		18.0	141	18.0 ¹³⁵	-3 50.9 ¹⁰¹	20	10	32	18 58	19 00 53	23 40		
11	342	54.5	-1	17.0	155	50.5 ¹³⁵	-4 00.9 ¹⁰⁰	10 N	18 11	18 32	18 56	18 56 49	6 26 42		
12	357	54.7	-1	16.0	170	22.9 ¹³⁴	-4 11.0 ¹⁰¹	0	18 12	18 32	18 56	18 52 46	6 28 46		
13	12	54.9		15.0	184	55.3 ¹³⁴	21.1 ¹⁰¹	10 S	12	33	18 58	48 44	30 49		
14	27	55.1		14.1	199	27.6 ¹³³	31.1 ¹⁰⁰	20	14	36	19 01	44 40	33 52		
15	42	55.3		13.1	214	00.0 ¹³⁴	41.2 ¹⁰¹	30	15	39	07	39 37	36 56		
16	57	55.4		12.1	228	32.2 ¹³²	-4 51.2 ¹⁰⁰	35	16	41	10	36 36	37 58		
17	72	55.6	-1	11.1	243	04.5 ¹³³	-5 01.2 ¹⁰⁰	40	18 17	18 44	19 15	18 33 33	6 39 61		
18	87	55.8	-1	10.1	257	36.7 ¹³²	-5 11.2 ¹⁰⁰	45	18 18	18 47	19 21	18 30 30	6 41 64		
19	102	56.0		09.1	272	08.9 ¹³²	21.2 ¹⁰⁰	50	19	51	30	26 27	44 67		
20	117	56.2		08.1	286	41.0 ¹³¹	31.1 ⁹⁹	52	20	53	33	24 25	45 68		
21	132	56.4		07.1	301	13.1 ¹³¹	41.1 ¹⁰⁰	54	20	56	38	22 24	46 70		
22	147	56.5		06.2	315	45.2 ¹³¹	-5 51.0 ⁹⁹	56	21	18 58	43	20 22	48 72		
23	162	56.7		05.2	330	17.2 ¹³⁰	-6 00.9 ⁹⁹	58	22	19 01	49	17 20	49 75		
24	177	56.9	-1	04.2	344	49.2 ¹³⁰	-6 10.8 ⁹⁹	60 S	18 23	19 05	19 55	18 14 18	6 51 77		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 20 ^m 0		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: -1.0 PMG: 2 ^h 02 ^m		Mag: -2.4 PMG: 19 ^h 05 ^m		Mag: +0.3 PMG: 3 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	174	29.7	222	49.4	-15	17.6	329	17.8	-7	24.1
1	189	32.1	237	49.4		17.3	344	20.7		24.0
2	204	34.6	252	49.4		16.9	359	23.7		23.8
3	219	37.1	267	49.5		16.6	14	26.6		23.6
4	234	39.5	282	49.5		16.2	29	29.5		23.5
5	249	42.0	297	49.5	-15	15.8	44	32.4	-7	23.3
6	264	44.4	312	49.5	-15	15.5	59	35.4	-7	23.1
7	279	46.9	327	49.5		15.1	74	38.3		23.0
8	294	49.4	342	49.6		14.8	89	41.2		22.8
9	309	51.8	357	49.6		14.4	104	44.2		22.6
10	324	54.3	12	49.6		14.0	119	47.1		22.5
11	339	56.8	27	49.6	-15	13.7	134	50.0	-7	22.3
12	354	59.2	42	49.6	-15	13.3	149	53.0	-7	22.1
13	10	01.7	57	49.7		13.0	164	55.9		21.9
14	25	04.2	72	49.7		12.6	179	58.9		21.8
15	40	06.6	87	49.7		12.2	195	01.8		21.6
16	55	09.1	102	49.7		11.9	210	04.7		21.4
17	70	11.5	117	49.7	-15	11.5	225	07.7	-7	21.3
18	85	14.0	132	49.7	-15	11.1	240	10.6	-7	21.1
19	100	16.5	147	49.7		10.8	255	13.6		20.9
20	115	18.9	162	49.8		10.4	270	16.5		20.7
21	130	21.4	177	49.8		10.0	285	19.5		20.6
22	145	23.9	192	49.8		09.6	300	22.4		20.4
23	160	26.3	207	49.8		09.3	315	25.4		20.2
24	175	28.8	222	49.8	-15	08.9	330	28.3	-7	20.0
Dif	—		0 +4		+29		+2		+24 0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^d 1 PMG: 12 ^h 08 ^m 1			Edad: 16 ^d 7 PHE { 4 ^h : 56 ^m 1 12 ^h : 56 ^m 3 20 ^h : 56 ^m 4 PMG: 1 ^h 03 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	56.9	-1	344	49.2	-6	10.8	60 N	4 37	5 27	6 08	20 49	78	6 21	19
1	192	57.1		359	21.1 ¹²⁹		20.6 ⁹⁸	58	43	29	08	43 75		25	21
2	207	57.3		13	53.0 ¹²⁹		30.5 ⁹⁹	56	47	31	08	38 73		29	23
3	222	57.4		28	24.9 ¹²⁹		40.3 ⁹⁸	54	51	33	08	34 71		32	25
4	237	57.6	-1	42	56.7 ¹²⁸		50.0 ⁹⁷	52	55	34	08	30 69		35	27
5	252	57.8	-0	57	28.5 ¹²⁸	-6	59.8 ⁹⁸	50	4 58	5 35	6 08	20 26	68	6 38	28
6	267	58.0	-0	72	00.2 ¹²⁷	-7	09.5 ⁹⁷	45	5 04	5 38	6 07	20 18	65	6 43	32
7	282	58.2		86	31.9 ¹²⁷		19.2 ⁹⁷	40	09	40	07	12 62		48	34
8	297	58.4		101	03.6 ¹²⁷		28.9 ⁹⁷	35	12	42	07	06 60		52	37
9	312	58.5		115	35.2 ¹²⁶		38.5 ⁹⁶	30	15	43	07	20 01	58	6 56	39
10	327	58.7		130	06.8 ¹²⁶		48.1 ⁹⁶	20	18	44	06	19 53	54	7 03	42
11	342	58.9	-0	144	38.3 ¹²⁵	-7	57.7 ⁹⁶	10 N	5 20	5 44	6 05	19 45	52	7 08	45
12	357	59.1	-0	159	09.8 ¹²⁵	-8	07.3 ⁹⁶	0	5 20	5 44	6 05	19 38	49	7 14	48
13	12	59.3		173	41.2 ¹²⁴		16.8 ⁹⁵	10 S	19	43	04	32 46		19	51
14	27	59.5		188	12.6 ¹²⁴		26.3 ⁹⁵	20	16	41	03	24 44		25	54
15	42	59.6		202	43.9 ¹²³		35.7 ⁹⁴	30	10	38	02	16 40		32	57
16	57	59.8		217	15.2 ¹²³		45.1 ⁹⁴	35	06	36	01	12 38		35	60
17	73	00.0	-0	231	46.5 ¹²³	-8	54.5 ⁹⁴	40	5 02	5 33	6 01	19 06	36	7 40	61
18	88	00.2	-0	246	17.7 ¹²²	-9	03.8 ⁹³	45	4 56	5 30	6 00	19 00	33	7 45	64
19	103	00.4		260	48.8 ¹²¹		13.1 ⁹³	50	48	26	5 58	18 53	30	51	67
20	118	00.5		275	19.9 ¹²¹		22.4 ⁹³	52	44	24	58	49 29		53	70
21	133	00.7		289	51.0 ¹²¹		31.6 ⁹²	54	39	22	57	46 27		7 56	71
22	148	00.9		304	22.0 ¹²⁰		40.8 ⁹²	56	34	19	56	42 25		8 00	73
23	163	01.1		318	52.9 ¹¹⁹		49.9 ⁹¹	58	29	16	56	37 23		04	75
24	178	01.3	-0	333	23.8 ¹¹⁹	-9	59.0 ⁹¹	60 S	4 22	5 13	5 55	18 32	21	8 08	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 16 ^m 1		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: -1.0 PMG: 1 ^h 58 ^m		Mag: -2.4 PMG: 19 ^h 02 ^m		Mag: +0.3 PMG: 3 ^h 43 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	175	28.8	222	49.8	-15	08.9	330	28.3	-7	20.0	73	51.9	+23	15.9	304	07.3	-16	13.3
1	190	31.3	237	49.8		08.5	345	31.3		19.9	88	54.3		15.9	319	09.8		13.3
2	205	33.7	252	49.8		08.2	0	34.2		19.7	103	56.6		15.9	334	12.4		13.2
3	220	36.2	267	49.8		07.8	15	37.2		19.5	118	59.0		15.9	349	14.9		13.2
4	235	38.7	282	49.8		07.4	30	40.2		19.3	134	01.4		15.9	4	17.4		13.2
5	250	41.1	297	49.8	-15	07.0	45	43.1	-7	19.2	149	03.7	+23	15.9	19	19.9	-16	13.2
6	265	43.6	312	49.8	-15	06.6	60	46.1	-7	19.0	164	06.1	+23	15.9	34	22.5	-16	13.1
7	280	46.0	327	49.8		06.3	75	49.0		18.8	179	08.4		15.9	49	25.0		13.1
8	295	48.5	342	49.9		05.9	90	52.0		18.6	194	10.8		15.9	64	27.5		13.1
9	310	51.0	357	49.9		05.5	105	55.0		18.5	209	13.2		15.8	79	30.1		13.1
10	325	53.4	12	49.9		05.1	120	57.9		18.3	224	15.5		15.8	94	32.6		13.0
11	340	55.9	27	49.9	-15	04.7	136	00.9	-7	18.1	239	17.9	+23	15.8	109	35.1	-16	13.0
12	355	58.4	42	49.9	-15	04.4	151	03.9	-7	17.9	254	20.2	+23	15.8	124	37.6	-16	13.0
13	11	00.8	57	49.9		04.0	166	06.8		17.7	269	22.6		15.8	139	40.2		13.0
14	26	03.3	72	49.9		03.6	181	09.8		17.6	284	25.0		15.8	154	42.7		12.9
15	41	05.8	87	49.9		03.2	196	12.8		17.4	299	27.3		15.8	169	45.2		12.9
16	56	08.2	102	49.9		02.8	211	15.8		17.2	314	29.7		15.8	184	47.8		12.9
17	71	10.7	117	49.9	-15	02.4	226	18.7	-7	17.0	329	32.0	+23	15.8	199	50.3	-16	12.9
18	86	13.1	132	49.9	-15	02.0	241	21.7	-7	16.8	344	34.4	+23	15.8	214	52.8	-16	12.9
19	101	15.6	147	49.9		01.7	256	24.7		16.7	359	36.7		15.8	229	55.3		12.8
20	116	18.1	162	49.9		01.3	271	27.7		16.5	14	39.1		15.8	244	57.9		12.8
21	131	20.5	177	49.9		00.9	286	30.6		16.3	29	41.5		15.8	260	00.4		12.8
22	146	23.0	192	49.8		00.5	301	33.6		16.1	44	43.8		15.8	275	02.9		12.8
23	161	25.5	207	49.8	-15	00.1	316	36.6		15.9	59	46.2		15.8	290	05.5		12.7
24	176	27.9	222	49.8	-14	59.7	331	39.6	-7	15.7	74	48.5	+23	15.8	305	08.0	-16	12.7
Dif	—		0	+4		+30	+2		+24		0	+25		0				

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	SD: 15 ^h 4	PMG: 1 ^h 50 ^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	
0	178	01.3	-0	40.5	333	23.8	-9	59.0	60 N	18 12	18 53	19 43	22 07 76	6 40 23				
1	193	01.5		39.5	347	54.7 ¹¹⁹	-10	08.1	58	12	51	38	21 58 75	46 26				
2	208	01.6		38.5	2	25.5 ¹¹⁸		17.1	56	11	49	33	51 73	52 27				
3	223	01.8		37.5	16	56.2 ¹¹⁷		26.0	54	11	47	28	45 71	6 57 29				
4	238	02.0		36.5	31	26.9 ¹¹⁷		35.0	52	11	45	25	39 69	7 02 30				
5	253	02.2	-0	35.5	45	57.6 ¹¹⁷	-10	43.8	50	18 11	18 43	19 21	21 34 68	7 06 32				
6	268	02.4	-0	34.5	60	28.2 ¹¹⁶	-10	52.6	45	18 11	18 40	19 15	21 23 65	7 15 35				
7	283	02.6		33.5	74	58.7 ¹¹⁵	-11	01.4	40	11	38	09	14 62	22 38				
8	298	02.8		32.6	89	29.2 ¹¹⁵		10.1	35	11	36	05	21 06 61	29 40				
9	313	02.9		31.6	103	59.6 ¹¹⁴		18.8	30	11	35	19 02	20 59 59	35 41				
10	328	03.1		30.6	118	30.0 ¹¹⁴		27.4	20	11	33	18 58	47 56	45 44				
11	343	03.3	-0	29.6	133	00.4 ¹¹⁴	-11	36.0	10 N	18 11	18 32	18 56	20 37 54	7 53 48				
12	358	03.5	-0	28.6	147	30.6 ¹¹²	-11	44.5	0	18 11	18 32	18 56	20 27 52	8 02 50				
13	13	03.7		27.6	162	00.9 ¹¹³	-11	52.9	10 S	11	32	57	18 49	10 52				
14	28	03.9		26.6	176	31.0 ¹¹¹	-12	01.3	20	12	34	18 59	20 08 46	19 55				
15	43	04.0		25.6	191	01.1 ¹¹¹		09.7	30	12	36	19 04	19 56 44	29 58				
16	58	04.2		24.6	205	31.2 ¹¹¹		17.9	35	13	38	08	50 41	35 60				
17	73	04.4	-0	23.7	220	01.2 ¹¹⁰	-12	26.2	40	18 13	18 40	19 12	19 42 40	8 41 63				
18	88	04.6	-0	22.7	234	31.2 ¹¹⁰	-12	34.3	45	18 14	18 43	19 18	19 33 38	8 49 65				
19	103	04.8		21.7	249	01.1 ¹⁰⁹		42.4	50	15	47	25	23 35	8 58 68				
20	118	05.0		20.7	263	30.9 ¹⁰⁸		50.5	52	15	49	29	18 34	9 03 69				
21	133	05.1		19.7	278	00.7 ¹⁰⁸	-12	58.5	54	15	51	33	13 32	07 71				
22	148	05.3		18.7	292	30.4 ¹⁰⁷	-13	06.4	56	16	53	37	07 30	13 73				
23	163	05.5		17.7	307	00.1 ¹⁰⁷		14.2	58	16	56	43	19 00 29	19 75				
24	178	05.7	-0	16.7	321	29.7 ¹⁰⁶	-13	22.0	60 S	18 17	18 59	19 49	18 53 26	9 25 78				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 12 ^m 1		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: -1.0 PMG: 1 ^h 53 ^m		Mag: -2.3 PMG: 18 ^h 58 ^m		Mag: +0.3 PMG: 3 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	176	27.9	222	49.8	-14	59.7	331	39.6	-7	15.7	74	48.5	+23	15.8	305	08.0	-16	12.7
1	191	30.4	237	49.8		59.3	346	42.6		15.6	89	50.9		15.8	320	10.5		12.7
2	206	32.9	252	49.8		58.9	1	45.6		15.4	104	53.2		15.8	335	13.0		12.7
3	221	35.3	267	49.8		58.5	16	48.5		15.2	119	55.6		15.8	350	15.6		12.6
4	236	37.8	282	49.8		58.1	31	51.5		15.0	134	57.9		15.8	5	18.1		12.6
5	251	40.3	297	49.8	-14	57.7	46	54.5	-7	14.8	150	00.3	+23	15.7	20	20.6	-16	12.6
6	266	42.7	312	49.8	-14	57.3	61	57.5	-7	14.6	165	02.6	+23	15.7	35	23.2	-16	12.6
7	281	45.2	327	49.8		56.9	77	00.5		14.4	180	05.0		15.7	50	25.7		12.5
8	296	47.6	342	49.8		56.5	92	03.5		14.3	195	07.3		15.7	65	28.2		12.5
9	311	50.1	357	49.8		56.1	107	06.5		14.1	210	09.7		15.7	80	30.8		12.5
10	326	52.6	12	49.7		55.7	122	09.5		13.9	225	12.0		15.7	95	33.3		12.5
11	341	55.0	27	49.7	-14	55.3	137	12.5	-7	13.7	240	14.4	+23	15.7	110	35.8	-16	12.4
12	356	57.5	42	49.7	-14	54.9	152	15.5	-7	13.5	255	16.7	+23	15.7	125	38.4	-16	12.4
13	12	00.0	57	49.7		54.5	167	18.5		13.3	270	19.1		15.7	140	40.9		12.4
14	27	02.4	72	49.7		54.1	182	21.5		13.1	285	21.4		15.7	155	43.4		12.4
15	42	04.9	87	49.7		53.7	197	24.5		12.9	300	23.8		15.7	170	46.0		12.3
16	57	07.4	102	49.7		53.3	212	27.5		12.8	315	26.1		15.7	185	48.5		12.3
17	72	09.8	117	49.6	-14	52.9	227	30.5	-7	12.6	330	28.5	+23	15.7	200	51.0	-16	12.3
18	87	12.3	132	49.6	-14	52.5	242	33.5	-7	12.4	345	30.8	+23	15.7	215	53.6	-16	12.3
19	102	14.7	147	49.6		52.1	257	36.5		12.2	0	33.2		15.7	230	56.1		12.2
20	117	17.2	162	49.6		51.7	272	39.5		12.0	15	35.5		15.7	245	58.6		12.2
21	132	19.7	177	49.6		51.3	287	42.5		11.8	30	37.9		15.7	261	01.2		12.2
22	147	22.1	192	49.6		50.9	302	45.5		11.6	45	40.2		15.6	276	03.7		12.2
23	162	24.6	207	49.5		50.5	317	48.5		11.4	60	42.6		15.6	291	06.2		12.1
24	177	27.1	222	49.5	-14	50.0	332	51.5	-7	11.2	75	44.9	+23	15.6	306	08.8	-16	12.1
Dif	—		0		+4		+30		+2		+24		0		+25		0	

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 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 4													
	PMG: 12 ^h 07 ^m 5			SD: 15 ^h 5 PMG: 2 ^h 39 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	05.7	-0	16.7	321	29.7	-13	22.0	60 N	4	31	5	21	6	02	23	23
1	193	05.9		15.8	335	59.2 ¹⁰⁵		29.7 ⁷⁷	58	37	23		02		13	71	
2	208	06.1		14.8	350	28.7 ¹⁰⁵		37.4 ⁷⁶	56	42	26		03		23	04	
3	223	06.3		13.8	4	58.2 ¹⁰⁵		45.0 ⁷⁷	54	46	28		03		22	56	
4	238	06.4		12.8	19	27.6 ¹⁰⁴	-13	52.5 ⁷⁵	52	50	29		03		48	67	
5	253	06.6	-0	11.8	33	56.9 ¹⁰³	-14	00.0 ⁷⁵	50	4	53	5	31	6	03	22	42
6	268	06.8	-0	10.8	48	26.2 ¹⁰³	-14	07.3 ⁷³	45	5	00	5	34	6	04	22	28
7	283	07.0		09.8	62	55.4 ¹⁰²		14.7 ⁷²	40	05	37		04		16	62	
8	298	07.2		08.8	77	24.5 ¹⁰¹		21.9 ⁷⁴	35	09	39		04		22	07	
9	313	07.4		07.9	91	53.6 ¹⁰¹		29.1 ⁷²	30	12	40		04		21	58	
10	328	07.6		06.9	106	22.7 ¹⁰¹		36.1 ⁷⁰	20	17	42		04		43	57	
11	343	07.7	-0	05.9	120	51.7 ¹⁰⁰	-14	43.2 ⁷¹	10 N	5	19	5	43	6	04	21	31
12	358	07.9	-0	04.9	135	20.6 ⁹⁹	-14	50.1 ⁶⁹	0	5	20	5	44	6	04	21	19
13	13	08.1		03.9	149	49.5 ⁹⁹	-14	57.0 ⁶⁹	10 S	19	43		04		21	07	
14	28	08.3		02.9	164	18.3 ⁹⁸	-15	03.7 ⁶⁷	20	16	42		04		20	54	
15	43	08.5		01.9	178	47.0 ⁹⁷		10.4 ⁶⁷	30	12	39		03		40	48	
16	58	08.7	-0	00.9	193	15.7 ⁹⁷		17.1 ⁶⁵	35	08	38		03		31	47	
17	73	08.8	+0	00.1	207	44.4 ⁹⁷	-15	23.6 ⁶⁵	40	5	04	5	36	6	03	20	22
18	88	09.0	+0	01.0	222	13.0 ⁹⁶	-15	30.1 ⁶⁵	45	4	58	5	33	6	02	20	11
19	103	09.2		02.0	236	41.5 ⁹⁵		36.5 ⁶⁴	50	51	29		02		19	58	
20	118	09.4		03.0	251	10.0 ⁹⁵		42.8 ⁶³	52	48	27		01		52	40	
21	133	09.6		04.0	265	38.4 ⁹⁴		49.0 ⁶²	54	44	26		01		45	39	
22	148	09.8		05.0	280	06.7 ⁹³	-15	55.1 ⁶¹	56	39	23		01		37	38	
23	163	10.0		06.0	294	35.0 ⁹³	-16	01.2 ⁶¹	58	34	21		00		29	36	
24	178	10.2	+0	07.0	309	03.3 ⁹³	-16	07.1 ⁵⁹	60 S	4	28	5	18	6	00	19	19

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 08 ^m 2		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: -1.0 PMG: 1 ^h 48 ^m			Mag: -2.3 PMG: 18 ^h 54 ^m			Mag: +0.3 PMG: 3 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	177	27.1	222	49.5	-14	50.0	332	51.5	-7	11.2	75	44.9	+23	15.6	
1	192	29.5	237	49.5		49.6	347	54.5		11.0	90	47.3		15.6	
2	207	32.0	252	49.5		49.2	2	57.6		10.8	105	49.6		15.6	
3	222	34.5	267	49.5		48.8	18	00.6		10.6	120	52.0		15.6	
4	237	36.9	282	49.4		48.4	33	03.6		10.4	135	54.3		15.6	
5	252	39.4	297	49.4	-14	48.0	48	06.6	-7	10.3	150	56.7	+23	15.6	
6	267	41.9	312	49.4	-14	47.6	63	09.6	-7	10.1	165	59.0	+23	15.6	
7	282	44.3	327	49.4		47.1	78	12.6		09.9	181	01.3		15.6	
8	297	46.8	342	49.3		46.7	93	15.7		09.7	196	03.7		15.6	
9	312	49.2	357	49.3		46.3	108	18.7		09.5	211	06.0		15.6	
10	327	51.7	12	49.3		45.9	123	21.7		09.3	226	08.4		15.6	
11	342	54.2	27	49.3	-14	45.5	138	24.7	-7	09.1	241	10.7	+23	15.6	
12	357	56.6	42	49.2	-14	45.0	153	27.8	-7	08.9	256	13.1	+23	15.6	
13	12	59.1	57	49.2		44.6	168	30.8		08.7	271	15.4		15.6	
14	28	01.6	72	49.2		44.2	183	33.8		08.5	286	17.7		15.6	
15	43	04.0	87	49.2		43.8	198	36.9		08.3	301	20.1		15.5	
16	58	06.5	102	49.1		43.3	213	39.9		08.1	316	22.4		15.5	
17	73	09.0	117	49.1	-14	42.9	228	42.9	-7	07.9	331	24.8	+23	15.5	
18	88	11.4	132	49.1	-14	42.5	243	45.9	-7	07.7	346	27.1	+23	15.5	
19	103	13.9	147	49.0		42.1	258	49.0		07.5	1	29.4		15.5	
20	118	16.4	162	49.0		41.6	273	52.0		07.3	16	31.8		15.5	
21	133	18.8	177	49.0		41.2	288	55.1		07.1	31	34.1		15.5	
22	148	21.3	192	48.9		40.8	303	58.1		06.9	46	36.5		15.5	
23	163	23.7	207	48.9		40.3	319	01.1		06.7	61	38.8		15.5	
24	178	26.2	222	48.9	-14	39.9	334	04.2	-7	06.5	76	41.1	+23	15.5	
Dif	—		0	+4			+30	+2			+23	0			+25

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 07 ^m 2			Edad: 19 ^d 7 PHE { 4 ^h : 57/6 12 ^h : 57/8 20 ^h : 57/9 PMG: 3 ^h 31 ^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
0	178	10.2	+0	07.0	309	03.3	-16 07.1	60 N	18 17	18 58	19 49	** ** *	** ** *	7 32	39
1	193	10.3		08.0	323	31.5 92	13.0 59	58	16	55	43	** ** *	** ** *	43	41
2	208	10.5		08.9	337	59.6 91	18.8 58	56	16	53	37	** ** *	** ** *	7 53	42
3	223	10.7		09.9	352	27.7 91	24.5 57	54	15	50	33	** ** *	** ** *	8 01	43
4	238	10.9		10.9	6	55.7 90	30.1 56	52	15	48	28	23 55	62	09	44
5	253	11.1	+0	11.9	21	23.6 89	-16 35.6 55	50	18 14	18 47	19 25	23 47	62	8 16	45
6	268	11.3	+0	12.9	35	51.6 90	-16 41.0 54	45	18 13	18 43	19 17	23 31	61	8 30	47
7	283	11.5		13.9	50	19.4 88	46.3 53	40	13	40	12	18 60		42	49
8	298	11.6		14.9	64	47.2 88	51.6 53	35	12	38	07	23 07	59	8 53	49
9	313	11.8		15.9	79	15.0 88	-16 56.7 51	30	12	36	19 04	22 57	59	9 02	50
10	328	12.0		16.8	93	42.7 87	-17 01.7 50	20	11	33	18 59	40 58		18	52
11	343	12.2	+0	17.8	108	10.3 86	-17 06.7 50	10 N	18 11	18 32	18 56	22 26	56	9 31	54
12	358	12.4	+0	18.8	122	37.9 86	-17 11.6 49	0	18 10	18 31	18 55	22 12	56	9 44	55
13	13	12.6		19.8	137	05.4 85	16.3 47	10 S	10	31	56	21 59	55	9 57	56
14	28	12.8		20.8	151	32.9 85	21.0 47	20	10	32	18 58	44 54		10 11	57
15	43	12.9		21.8	166	00.3 84	25.5 45	30	10	34	19 02	28 53		26	59
16	58	13.1		22.8	180	27.7 84	30.0 45	35	10	35	05	18 52		35	60
17	73	13.3	+0	23.7	194	55.0 83	-17 34.4 44	40	18 10	18 37	19 09	21 07	52	10 46	61
18	88	13.5	+0	24.7	209	22.3 83	-17 38.6 42	45	18 10	18 39	19 14	20 55	50	10 58	62
19	103	13.7		25.7	223	49.5 82	42.8 42	50	10	42	20	39 49		11 13	64
20	118	13.9		26.7	238	16.7 82	46.8 40	52	10	44	24	32 48		20	64
21	133	14.1		27.7	252	43.9 82	50.8 40	54	10	46	27	24 48		28	65
22	148	14.3		28.7	267	10.9 80	54.6 38	56	11	48	32	15 47		36	67
23	163	14.4		29.7	281	38.0 81	-17 58.4 38	58	11	50	36	20 05	46	46	68
24	178	14.6	+0	30.7	296	04.9 79	-18 02.0 36	60 S	18 11	18 52	19 42	19 53	45	11 58	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 04 ^m 3		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: -1.1 PMG: 1 ^h 43 ^m		Mag: -2.3 PMG: 18 ^h 50 ^m		Mag: +0.3 PMG: 3 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	178	26.2	222	48.9	-14	39.9	334	04.2	-7	06.5
1	193	28.7	237	48.8		39.5	349	07.2		06.3
2	208	31.1	252	48.8		39.0	4	10.3		06.1
3	223	33.6	267	48.8		38.6	19	13.3		05.9
4	238	36.1	282	48.7		38.2	34	16.3		05.7
5	253	38.5	297	48.7	-14	37.7	49	19.4	-7	05.5
6	268	41.0	312	48.7	-14	37.3	64	22.4	-7	05.3
7	283	43.5	327	48.6		36.9	79	25.5		05.1
8	298	45.9	342	48.6		36.4	94	28.5		04.9
9	313	48.4	357	48.5		36.0	109	31.6		04.7
10	328	50.8	12	48.5		35.5	124	34.6		04.5
11	343	53.3	27	48.5	-14	35.1	139	37.7	-7	04.2
12	358	55.8	42	48.4	-14	34.7	154	40.7	-7	04.0
13	13	58.2	57	48.4		34.2	169	43.8		03.8
14	29	00.7	72	48.3		33.8	184	46.9		03.6
15	44	03.2	87	48.3		33.3	199	49.9		03.4
16	59	05.6	102	48.3		32.9	214	53.0		03.2
17	74	08.1	117	48.2	-14	32.4	229	56.0	-7	03.0
18	89	10.6	132	48.2	-14	32.0	244	59.1	-7	02.8
19	104	13.0	147	48.1		31.6	260	02.2		02.6
20	119	15.5	162	48.1		31.1	275	05.2		02.4
21	134	18.0	177	48.0		30.7	290	08.3		02.2
22	149	20.4	192	48.0		30.2	305	11.4		02.0
23	164	22.9	207	48.0		29.8	320	14.4		01.8
24	179	25.3	222	47.9	-14	29.3	335	17.5	-7	01.5
Dif	—		0	+4		+31	+2	+23		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 12 ^h 06 ^m 9			Edad: 20 ^d 7 PHE { 4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'4 SD: 15'8 PMG: 4 ^h 25 ^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			
0	178	14.6	+0	30.7	296	04.9	-18 02.0	60 N	4 24	5 14	5 56	0 36	65	8 11	51			
1	193	14.8		31.6	310	31.9	05.6	58	30	18	57	24	63	24	51			
2	208	15.0		32.6	324	58.8	09.0	56	36	20	57	13	63	35	52			
3	223	15.2		33.6	339	25.6	12.3	54	41	23	58	0 03	63	44	53			
4	238	15.4		34.6	353	52.4	15.5	52	45	25	58	** ** *	**	8 53	53			
5	253	15.6	+0	35.6	8	19.2	-18 18.6	50	4 48	5 27	5 59	** ** *	**	9 01	53			
6	268	15.7	+0	36.6	22	45.9	-18 21.6	45	4 56	5 31	6 00	** ** *	**	9 17	54			
7	283	15.9		37.6	37	12.6	24.5	40	5 02	34	01	** ** *	**	31	54			
8	298	16.1		38.6	51	39.2	27.3	35	06	36	01	** ** *	**	42	55			
9	313	16.3		39.5	66	05.8	30.0	30	10	38	02	23 56	56	9 52	55			
10	328	16.5		40.5	80	32.3	32.5	20	15	41	03	38 56	56	10 10	55			
11	343	16.7	+0	41.5	94	58.8	-18 35.0	10 N	5 18	5 42	6 03	23 22	57	10 25	56			
12	358	16.9	+0	42.5	109	25.3	-18 37.3	0	5 19	5 43	6 04	23 08	57	10 39	56			
13	13	17.1		43.5	123	51.7	39.5	10 S	19	43	04	22 54	57	10 53	57			
14	28	17.2		44.5	138	18.1	41.6	20	17	42	04	38 58	57	11 08	57			
15	43	17.4		45.5	152	44.4	43.6	30	13	41	05	21 57	25	25	58			
16	58	17.6		46.4	167	10.7	45.5	19	35	39	05	22 10	58	35	58			
17	73	17.8	+0	47.4	181	37.0	-18 47.3	40	5 06	5 38	6 05	21 59	57	11 47	58			
18	88	18.0	+0	48.4	196	03.2	-18 48.9	45	5 01	5 35	6 05	21 45	58	12 00	58			
19	103	18.2		49.4	210	29.4	50.4	50	4 54	32	05	28 58	57	17	58			
20	118	18.4		50.4	224	55.6	51.9	15	52	31	05	20 58	24	24	59			
21	133	18.6		51.4	239	21.7	53.2	13	54	48	05	12 58	33	33	59			
22	148	18.7		52.4	253	47.8	54.3	11	56	43	05	21 02	58	43	59			
23	163	18.9		53.3	268	13.9	55.4	11	58	39	05	20 51	58	12 54	59			
24	178	19.1	+0	54.3	282	39.9	-18 56.3	60 S	4 33	5 23	6 05	20 38	58	13 07	59			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 12 ^h 00 ^m 3		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: -1.1 PMG: 1 ^h 38 ^m			Mag: -2.3 PMG: 18 ^h 47 ^m			Mag: +0.3 PMG: 3 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	179	25.3	222	47.9	-14	29.3	335	17.5	-7	01.5	77	37.1	+23	15.3	308	10.6	-16	10.9
1	194	27.8	237	47.9		28.9	350	20.6		01.3	92	39.5		15.3	323	13.1		10.9
2	209	30.3	252	47.8		28.4	5	23.6		01.1	107	41.8		15.3	338	15.7		10.8
3	224	32.7	267	47.8		27.9	20	26.7		00.9	122	44.1		15.3	353	18.2		10.8
4	239	35.2	282	47.7		27.5	35	29.8		00.7	137	46.5		15.3	8	20.8		10.8
5	254	37.7	297	47.7	-14	27.0	50	32.9	-7	00.5	152	48.8	+23	15.3	23	23.3	-16	10.7
6	269	40.1	312	47.6	-14	26.6	65	35.9	-7	00.3	167	51.1	+23	15.3	38	25.9	-16	10.7
7	284	42.6	327	47.6		26.1	80	39.0	-7	00.1	182	53.4		15.3	53	28.4		10.7
8	299	45.1	342	47.5		25.7	95	42.1	-6	59.9	197	55.8		15.3	68	30.9		10.7
9	314	47.5	357	47.5		25.2	110	45.2		59.6	212	58.1		15.3	83	33.5		10.6
10	329	50.0	12	47.4		24.8	125	48.2		59.4	228	00.4		15.2	98	36.0		10.6
11	344	52.5	27	47.4	-14	24.3	140	51.3	-6	59.2	243	02.7	+23	15.2	113	38.6	-16	10.6
12	359	54.9	42	47.3	-14	23.8	155	54.4	-6	59.0	258	05.1	+23	15.2	128	41.1	-16	10.6
13	14	57.4	57	47.3		23.4	170	57.5		58.8	273	07.4		15.2	143	43.7		10.5
14	29	59.8	72	47.2		22.9	186	00.6		58.6	288	09.7		15.2	158	46.2		10.5
15	45	02.3	87	47.2		22.4	201	03.7		58.4	303	12.0		15.2	173	48.8		10.5
16	60	04.8	102	47.1		22.0	216	06.7		58.1	318	14.4		15.2	188	51.3		10.4
17	75	07.2	117	47.1	-14	21.5	231	09.8	-6	57.9	333	16.7	+23	15.2	203	53.8	-16	10.4
18	90	09.7	132	47.0	-14	21.0	246	12.9	-6	57.7	348	19.0	+23	15.2	218	56.4	-16	10.4
19	105	12.2	147	47.0		20.6	261	16.0		57.5	3	21.3		15.2	233	58.9		10.4
20	120	14.6	162	46.9		20.1	276	19.1		57.3	18	23.7		15.2	249	01.5		10.3
21	135	17.1	177	46.8		19.6	291	22.2		57.1	33	26.0		15.2	264	04.0		10.3
22	150	19.6	192	46.8		19.2	306	25.3		56.8	48	28.3		15.2	279	06.6		10.3
23	165	22.0	207	46.7		18.7	321	28.4		56.6	63	30.6		15.1	294	09.1		10.3
24	180	24.5	222	46.7	-14	18.2	336	31.5	-6	56.4	78	32.9	+23	15.1	309	11.7	-16	10.2
Dif	—		-1		+5		+31		+2		+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 7 PHE	SD: 15:9				Civil		Náutico	Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 6				PMG: 5 ^h 22 ^m				R°: 57 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	19.1	+0 54.3	282	39.9	-18 56.3	9	60 N	18 22	19 03	19 54	1 41 53	9 02 64		
1	193	19.3		297	06.0	71 57.2	9	58	21	19 00	48	27 55	15 64		
2	208	19.5	56.3	311	31.9	69 57.9	6	56	20	18 57	42	16 54	27 63		
3	223	19.7	57.3	325	57.9	70 58.5	5	54	19	54	37	1 06 55	37 62		
4	238	19.9	58.3	340	23.8	69 59.0	5	52	18	52	32	0 57 55	46 62		
5	253	20.1	+0 59.3	354	49.7	69 -18 59.3	3	50	18 17	18 50	19 28	0 49 55	9 54 62		
6	268	20.2	+1 00.2	9	15.6	69 -18 59.5	2	45	18 16	18 45	19 20	0 32 55	10 11 61		
7	283	20.4	01.2	23	41.4	68 59.7	2	40	15	42	14	18 56	25 60		
8	298	20.6	02.2	38	07.3	69 59.6	1	35	14	39	09	0 06 56	37 60		
9	313	20.8	03.2	52	33.1	68 59.5	1	30	13	37	19 05	** ** *	10 47 60		
10	328	21.0	04.2	66	58.8	67 59.3	2	20	12	34	18 59	** ** *	11 05 59		
11	343	21.2	+1 05.2	81	24.6	68 -18 58.9	4	10 N	18 11	18 32	18 56	** ** *	11 21 58		
12	358	21.4	+1 06.2	95	50.3	67 -18 58.4	5	0	18 10	18 30	18 54	** ** *	11 35 57		
13	13	21.6	07.1	110	16.1	68 57.8	6	10 S	09	30	54	23 51 58	11 50 56		
14	28	21.8	08.1	124	41.8	67 57.1	7	20	08	30	56	36 59	12 05 56		
15	43	21.9	09.1	139	07.4	66 56.2	9	30	08	31	18 59	18 61	23 54		
16	58	22.1	10.1	153	33.1	67 55.3	9	35	07	32	19 02	23 08 62	33 54		
17	73	22.3	+1 11.1	167	58.8	67 -18 54.2	11	40	18 07	18 34	19 05	22 56 63	12 45 53		
18	88	22.5	+1 12.1	182	24.4	66 -18 52.9	13	45	18 06	18 36	19 10	22 43 64	12 58 53		
19	103	22.7	13.1	196	50.0	66 51.6	13	50	06	38	16	26 66	13 15 52		
20	118	22.9	14.0	211	15.6	66 50.1	15	52	06	39	19	18 67	23 51		
21	133	23.1	15.0	225	41.2	66 48.6	15	54	06	41	22	10 67	32 50		
22	148	23.3	16.0	240	06.8	66 46.9	17	56	05	42	26	22 00 68	42 50		
23	163	23.4	17.0	254	32.4	66 45.0	19	58	05	44	30	21 49 69	13 53 49		
24	178	23.6	+1 18.0	268	57.9	65 -18 43.1	19	60 S	18 05	18 46	19 36	21 36 70	14 06 48		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 56 ^m 4		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: -1.1 PMG: 1 ^h 34 ^m		Mag: -2.3 PMG: 18 ^h 43 ^m		Mag: +0.3 PMG: 3 ^h 23 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	180	24.5	222	46.7	-14 18.2	336	31.5	-6 56.4	78 32.9	+23 15.1				
1	195	26.9	237	46.6	17.8	351	34.6	56.2	93 35.3	15.1				
2	210	29.4	252	46.6	17.3	6	37.7	56.0	108 37.6	15.1				
3	225	31.9	267	46.5	16.8	21	40.8	55.7	123 39.9	15.1				
4	240	34.3	282	46.4	16.4	36	43.9	55.5	138 42.2	15.1				
5	255	36.8	297	46.4	-14 15.9	51	47.0	-6 55.3	153 44.5	+23 15.1				
6	270	39.3	312	46.3	-14 15.4	66	50.1	-6 55.1	168 46.9	+23 15.1				
7	285	41.7	327	46.3	14.9	81	53.2	54.9	183 49.2	15.1				
8	300	44.2	342	46.2	14.4	96	56.3	54.6	198 51.5	15.1				
9	315	46.7	357	46.1	14.0	111	59.4	54.4	213 53.8	15.1				
10	330	49.1	12	46.1	13.5	127	02.5	54.2	228 56.1	15.1				
11	345	51.6	27	46.0	-14 13.0	142	05.6	-6 54.0	243 58.5	+23 15.0				
12	0	54.1	42	45.9	-14 12.5	157	08.7	-6 53.8	259 00.8	+23 15.0				
13	15	56.5	57	45.9	12.1	172	11.8	53.5	274 03.1	15.0				
14	30	59.0	72	45.8	11.6	187	14.9	53.3	289 05.4	15.0				
15	46	01.4	87	45.8	11.1	202	18.1	53.1	304 07.7	15.0				
16	61	03.9	102	45.7	10.6	217	21.2	52.9	319 10.0	15.0				
17	76	06.4	117	45.6	-14 10.1	232	24.3	-6 52.6	334 12.4	+23 15.0				
18	91	08.8	132	45.6	-14 09.6	247	27.4	-6 52.4	349 14.7	+23 15.0				
19	106	11.3	147	45.5	09.2	262	30.5	52.2	4 17.0	15.0				
20	121	13.8	162	45.4	08.7	277	33.6	52.0	19 19.3	15.0				
21	136	16.2	177	45.4	08.2	292	36.8	51.7	34 21.6	15.0				
22	151	18.7	192	45.3	07.7	307	39.9	51.5	49 23.9	15.0				
23	166	21.2	207	45.2	07.2	322	43.0	51.3	64 26.2	14.9				
24	181	23.6	222	45.2	-14 06.7	337	46.1	-6 51.1	79 28.6	+23 14.9				
Dif	—		-1	+5		+31	+2		+23	0		+25	0	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0			Edad: 22 ^d 7	PHE {	SD: 16:1	PMG: 6 ^h 19 ^m	R°: 57 ^m										
	hG ☉	Dec								hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	23.6	+1 18.0	268	57.9	-18 43.1	21	60 N	4 18	5 08	5 50	2 34	43	10 06	76			
1	193	23.8		283	23.5	66 41.0	21	58	24	12	51	22	44	19	74			
2	208	24.0		297	49.1	66 38.8	22	56	30	15	52	10	46	30	72			
3	223	24.2		312	14.6	65 36.5	23	54	35	18	53	2 01	46	39	72			
4	238	24.4		326	40.1	65 34.1	24	52	40	20	54	1 52	47	48	70			
5	253	24.6	+1 22.9	341	05.7	66 -18 31.5	26	50	4 44	5 22	5 54	1 44	48	10 56	69			
6	268	24.8	+1 23.9	355	31.2	65 -18 28.9	26	45	4 52	5 27	5 56	1 27	50	11 12	67			
7	283	25.0		9	56.7	65 26.1	28	40	4 59	30	57	14	51	25	66			
8	298	25.1		24	22.2	65 23.1	30	35	5 04	33	58	1 02	52	37	64			
9	313	25.3		38	47.8	66 20.1	30	30	07	35	5 59	0 52	53	11 47	62			
10	328	25.5		53	13.3	65 16.9	32	20	13	39	6 01	34	55	12 04	60			
11	343	25.7	+1 28.8	67	38.8	65 -18 13.7	32	10 N	5 17	5 41	6 02	0 19	56	12 19	58			
12	358	25.9	+1 29.8	82	04.3	65 -18 10.3	34	0	5 18	5 42	6 03	0 05	57	12 32	57			
13	13	26.1		96	29.9	66 06.7	36	10 S	19	43	04	** ** *	**	12 46	56			
14	28	26.3		110	55.4	65 -18 03.1	36	20	17	43	05	** ** *	**	13 01	53			
15	43	26.5		125	20.9	65 -17 59.4	37	30	14	42	06	** ** *	**	17	52			
16	58	26.6		139	46.5	66 55.5	39	35	12	41	06	** ** *	**	27	50			
17	73	26.8	+1 34.7	154	12.0	65 -17 51.5	40	40	5 08	5 40	6 07	23 59	67	13 38	49			
18	88	27.0	+1 35.7	168	37.6	66 -17 47.4	41	45	5 04	5 38	6 07	23 47	69	13 51	47			
19	103	27.2		183	03.1	65 43.1	43	50	4 58	36	08	32	71	14 07	45			
20	118	27.4		197	28.7	66 38.8	43	52	55	34	08	25	73	14	44			
21	133	27.6		211	54.3	66 34.3	45	54	52	33	08	17	74	22	43			
22	148	27.8		226	19.9	66 29.8	45	56	48	32	09	23 08	76	32	41			
23	163	28.0		240	45.4	65 25.1	47	58	43	30	09	22 58	78	42	39			
24	178	28.2	+1 41.6	255	11.1	67 -17 20.2	49	60 S	4 38	5 28	6 09	22 46	80	14 54	37			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 52 ^m 5	Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: -1.1 PMG: 1 ^h 29 ^m		Mag: -2.3 PMG: 18 ^h 39 ^m		Mag: +0.3 PMG: 3 ^h 19 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'		
0	181	23.6	222 45.2	-14 06.7		337 46.1	-6 51.1	79 28.6	+23 14.9	310 12.8	-16 09.6
1	196	26.1	237 45.1	06.2		352 49.2	50.8	94 30.9	14.9	325 15.4	09.5
2	211	28.6	252 45.0	05.7		7 52.4	50.6	109 33.2	14.9	340 17.9	09.5
3	226	31.0	267 44.9	05.2		22 55.5	50.4	124 35.5	14.9	355 20.5	09.5
4	241	33.5	282 44.9	04.7		37 58.6	50.2	139 37.8	14.9	10 23.0	09.4
5	256	35.9	297 44.8	-14 04.3		53 01.7	-6 49.9	154 40.1	+23 14.9	25 25.6	-16 09.4
6	271	38.4	312 44.7	-14 03.8		68 04.9	-6 49.7	169 42.4	+23 14.9	40 28.1	-16 09.4
7	286	40.9	327 44.7	03.3		83 08.0	49.5	184 44.7	14.9	55 30.7	09.4
8	301	43.3	342 44.6	02.8		98 11.1	49.2	199 47.1	14.9	70 33.2	09.3
9	316	45.8	357 44.5	02.3		113 14.3	49.0	214 49.4	14.9	85 35.8	09.3
10	331	48.3	12 44.4	01.8		128 17.4	48.8	229 51.7	14.8	100 38.3	09.3
11	346	50.7	27 44.4	-14 01.3		143 20.5	-6 48.6	244 54.0	+23 14.8	115 40.9	-16 09.2
12	1	53.2	42 44.3	-14 00.8		158 23.7	-6 48.3	259 56.3	+23 14.8	130 43.4	-16 09.2
13	16	55.7	57 44.2	-14 00.3		173 26.8	48.1	274 58.6	14.8	145 46.0	09.2
14	31	58.1	72 44.2	-13 59.8		188 29.9	47.9	290 00.9	14.8	160 48.5	09.2
15	47	00.6	87 44.1	59.3		203 33.1	47.6	305 03.2	14.8	175 51.1	09.1
16	62	03.1	102 44.0	58.8		218 36.2	47.4	320 05.5	14.8	190 53.6	09.1
17	77	05.5	117 43.9	-13 58.3		233 39.4	-6 47.2	335 07.8	+23 14.8	205 56.2	-16 09.1
18	92	08.0	132 43.9	-13 57.8		248 42.5	-6 46.9	350 10.1	+23 14.8	220 58.7	-16 09.0
19	107	10.4	147 43.8	57.3		263 45.7	46.7	5 12.4	14.8	236 01.3	09.0
20	122	12.9	162 43.7	56.8		278 48.8	46.5	20 14.8	14.8	251 03.9	09.0
21	137	15.4	177 43.6	56.2		293 51.9	46.2	35 17.1	14.7	266 06.4	08.9
22	152	17.8	192 43.5	55.7		308 55.1	46.0	50 19.4	14.7	281 09.0	08.9
23	167	20.3	207 43.5	55.2		323 58.2	45.8	65 21.7	14.7	296 11.5	08.9
24	182	22.8	222 43.4	-13 54.7		339 01.4	-6 45.5	80 24.0	+23 14.7	311 14.1	-16 08.9
Dif	—		-1	+5		+31	+2	+23	0		+26

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna						
	SD: 16:0 PMG: 12 ^h 06 ^m 0			Edad: 23 ^d 7 PHE { 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/6 PMG: 7 ^h 16 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'		h	m	h	m	h	m	h	m			
0	178	28.2	+1	41.6	255	11.1	-17 20.2	60 N	18 26	19 09	20 00	3 17 32	11 22 84					
1	193	28.3		42.6	269	36.7	66 15.3 49	58	25	05	19 53	3 06 35	33 81					
2	208	28.5		43.6	284	02.3	66 10.3 50	56	24	19 01	46	2 56 37	42 79					
3	223	28.7		44.5	298	27.9	66 -17 05.1 52	54	23	18 58	41	47 39	51 77					
4	238	28.9		45.5	312	53.6	67 -16 59.9 52	52	22	55	36	39 41	11 58 75					
5	253	29.1	+1	46.5	327	19.3	67 -16 54.5 54	50	18 21	18 53	19 32	2 32 42	12 05 74					
6	268	29.3	+1	47.5	341	45.0	67 -16 49.0 55	45	18 19	18 48	19 23	2 17 45	12 19 71					
7	283	29.5		48.5	356	10.7	67 43.4 56	40	17	44	16	2 05 46	31 68					
8	298	29.7		49.5	10	36.4	67 37.7 57	35	16	41	11	1 54 49	41 66					
9	313	29.8		50.4	25	02.1	67 31.8 59	30	14	38	06	45 50	12 49 65					
10	328	30.0		51.4	39	27.9	68 25.9 59	20	12	34	19 00	29 53	13 04 62					
11	343	30.2	+1	52.4	53	53.7	68 -16 19.8 61	10 N	18 11	18 32	18 56	1 15 55	13 17 59					
12	358	30.4	+1	53.4	68	19.4	67 -16 13.7 63	0	18 09	18 30	18 54	1 02 57	13 29 57					
13	13	30.6		54.4	82	45.3	69 07.4 61	10 S	08	29	53	0 49 59	42 53					
14	28	30.8		55.4	97	11.1	68 -16 01.0 64	20	07	29	54	35 61	13 54 51					
15	43	31.0		56.3	111	36.9	68 -15 54.6 64	30	05	29	57	19 64	14 09 48					
16	58	31.2		57.3	126	02.8	69 48.0 66	35	04	30	18 59	0 10 65	17 47					
17	73	31.4	+1	58.3	140	28.7	69 -15 41.3 67	40	18 04	18 31	19 02	** ** *	14 27 44					
18	88	31.5	+1	59.3	154	54.6	69 -15 34.5 68	45	18 03	18 32	19 06	** ** *	14 38 42					
19	103	31.7	+2	00.3	169	20.6	70 27.6 69	50	02	34	11	** ** *	52 38					
20	118	31.9		01.3	183	46.6	70 20.6 70	52	01	35	14	** ** *	14 58 37					
21	133	32.1		02.2	198	12.5	69 13.5 71	54	01	36	17	** ** *	15 05 35					
22	148	32.3		03.2	212	38.6	71 -15 06.3 72	56	18 00	37	21	** ** *	13 33					
23	163	32.5		04.2	227	04.6	70 -14 59.0 73	58	17 59	38	25	** ** *	21 32					
24	178	32.7	+2	05.2	241	30.7	71 -14 51.6 74	60 S	17 59	18 40	19 29	** ** *	15 31 29					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 48 ^m 5		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: -1.2 PMG: 1 ^h 24 ^m			Mag: -2.3 PMG: 18 ^h 36 ^m			Mag: +0.3 PMG: 3 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	182	22.8	222	43.4	-13	54.7	339	01.4	-6	45.5	80	24.0	+23	14.7	311	14.1	-16	08.9
1	197	25.2	237	43.3		54.2	354	04.5		45.3	95	26.3		14.7	326	16.6		08.8
2	212	27.7	252	43.2		53.7	9	07.7		45.1	110	28.6		14.7	341	19.2		08.8
3	227	30.2	267	43.2		53.2	24	10.8		44.8	125	30.9		14.7	356	21.7		08.8
4	242	32.6	282	43.1		52.7	39	14.0		44.6	140	33.2		14.7	11	24.3		08.7
5	257	35.1	297	43.0	-13	52.2	54	17.1	-6	44.4	155	35.5	+23	14.7	26	26.8	-16	08.7
6	272	37.5	312	42.9	-13	51.7	69	20.3	-6	44.1	170	37.8	+23	14.7	41	29.4	-16	08.7
7	287	40.0	327	42.8		51.1	84	23.5		43.9	185	40.1		14.7	56	31.9		08.7
8	302	42.5	342	42.8		50.6	99	26.6		43.7	200	42.4		14.6	71	34.5		08.6
9	317	44.9	357	42.7		50.1	114	29.8		43.4	215	44.7		14.6	86	37.1		08.6
10	332	47.4	12	42.6		49.6	129	32.9		43.2	230	47.0		14.6	101	39.6		08.6
11	347	49.9	27	42.5	-13	49.1	144	36.1	-6	42.9	245	49.3	+23	14.6	116	42.2	-16	08.5
12	2	52.3	42	42.4	-13	48.6	159	39.3	-6	42.7	260	51.6	+23	14.6	131	44.7	-16	08.5
13	17	54.8	57	42.3		48.0	174	42.4		42.5	275	53.9		14.6	146	47.3		08.5
14	32	57.3	72	42.3		47.5	189	45.6		42.2	290	56.2		14.6	161	49.8		08.4
15	47	59.7	87	42.2		47.0	204	48.7		42.0	305	58.5		14.6	176	52.4		08.4
16	63	02.2	102	42.1		46.5	219	51.9		41.8	321	00.8		14.6	191	54.9		08.4
17	78	04.7	117	42.0	-13	46.0	234	55.1	-6	41.5	336	03.1	+23	14.6	206	57.5	-16	08.4
18	93	07.1	132	41.9	-13	45.4	249	58.2	-6	41.3	351	05.4	+23	14.5	222	00.1	-16	08.3
19	108	09.6	147	41.8		44.9	265	01.4		41.0	6	07.7		14.5	237	02.6		08.3
20	123	12.0	162	41.7		44.4	280	04.6		40.8	21	10.0		14.5	252	05.2		08.3
21	138	14.5	177	41.7		43.9	295	07.8		40.6	36	12.3		14.5	267	07.7		08.2
22	153	17.0	192	41.6		43.3	310	10.9		40.3	51	14.6		14.5	282	10.3		08.2
23	168	19.4	207	41.5		42.8	325	14.1		40.1	66	16.9		14.5	297	12.8		08.2
24	183	21.9	222	41.4	-13	42.3	340	17.3	-6	39.8	81	19.2	+23	14.5	312	15.4	-16	08.1
Dif	—		-1		+5		+32		+2		+23		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 7			Edad: 24 ^d 7 PHE { 4 ^h : 59'7 12 ^h : 59'8 20 ^h : 59'9 SD: 16'3 PMG: 8 ^h 12 ^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	178	32.7	+2	05.2	241	30.7	-14	51.6	60 N	4 11	5 02	5 44	3 49	26	12 46	87
1	193	32.9		06.2	255	56.8	71	44.1	58	18	06	45	41	28	12 54	85
2	208	33.1		07.1	270	22.9	71	36.5	56	24	09	47	33	31	13 01	83
3	223	33.2		08.1	284	49.0	71	28.8	54	30	13	48	26	33	08 80	
4	238	33.4		09.1	299	15.2	72	21.0	52	35	15	49	20	34	13 79	
5	253	33.6	+2	10.1	313	41.4	72	-14	50	4 39	5 18	5 50	3 14	36	13 19	76
6	268	33.8	+2	11.1	328	07.6	72	-14	45	4 48	5 23	5 52	3 02	39	13 30	73
7	283	34.0		12.0	342	33.8	72	-13	40	4 55	27	54	2 51	43	39 70	
8	298	34.2		13.0	357	00.1	73	48.9	35	5 01	30	56	43	44	47 67	
9	313	34.4		14.0	11	26.4	73	40.6	30	05	33	57	35	46	13 54	65
10	328	34.6		15.0	25	52.8	74	32.3	20	11	37	5 59	22	50	14 06	61
11	343	34.7	+2	16.0	40	19.1	73	-13	10 N	5 15	5 40	6 01	2 10	53	14 16	58
12	358	34.9	+2	17.0	54	45.5	74	-13	0	5 18	5 42	6 02	1 59	56	14 26	55
13	13	35.1		17.9	69	12.0	75	-13	10 S	19	43	04	48	59	35 52	
14	28	35.3		18.9	83	38.4	74	-12	20	18	43	05	36	62	45 49	
15	43	35.5		19.9	98	04.9	75	49.2	30	15	43	07	23	65	14 57	45
16	58	35.7		20.9	112	31.4	75	40.3	35	13	43	08	15	67	15 04	42
17	73	35.9	+2	21.9	126	57.9	75	-12	40	5 10	5 42	6 09	1 06	70	15 11	40
18	88	36.1	+2	22.8	141	24.5	76	-12	45	5 06	5 41	6 10	0 56	72	15 20	37
19	103	36.3		23.8	155	51.1	76	13.2	50	5 01	39	11	43	76	30 34	
20	118	36.4		24.8	170	17.8	77	-12	52	4 58	38	12	38	77	35 32	
21	133	36.6		25.8	184	44.4	76	-11	54	55	37	12	31	79	40 31	
22	148	36.8		26.8	199	11.1	77	45.4	56	52	36	13	24	81	46 29	
23	163	37.0		27.7	213	37.8	77	36.0	58	48	34	13	16	83	15 53	26
24	178	37.2	+2	28.7	228	04.6	78	-11	60 S	4 44	5 33	6 14	0 06	86	16 00	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 44 ^m 6		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: -1.2 PMG: 1 ^h 19 ^m		Mag: -2.3 PMG: 18 ^h 32 ^m		Mag: +0.3 PMG: 3 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	183	21.9	222	41.4	340	17.3	81	19.2	312	15.4
1	198	24.4	237	41.3	355	20.4	96	21.5	327	18.0
2	213	26.8	252	41.2	10	23.6	111	23.8	342	20.5
3	228	29.3	267	41.1	25	26.8	126	26.1	357	23.1
4	243	31.8	282	41.0	40	30.0	141	28.4	12	25.6
5	258	34.2	297	41.0	55	33.2	156	30.7	27	28.2
6	273	36.7	312	40.9	70	36.3	171	33.0	42	30.8
7	288	39.2	327	40.8	85	39.5	186	35.3	57	33.3
8	303	41.6	342	40.7	100	42.7	201	37.6	72	35.9
9	318	44.1	357	40.6	115	45.9	216	39.9	87	38.4
10	333	46.5	12	40.5	130	49.1	231	42.2	102	41.0
11	348	49.0	27	40.4	145	52.2	246	44.4	117	43.5
12	3	51.5	42	40.3	160	55.4	261	46.7	132	46.1
13	18	53.9	57	40.2	175	58.6	276	49.0	147	48.7
14	33	56.4	72	40.1	191	01.8	291	51.3	162	51.2
15	48	58.9	87	40.0	206	05.0	306	53.6	177	53.8
16	64	01.3	102	40.0	221	08.2	321	55.9	192	56.3
17	79	03.8	117	39.9	236	11.4	336	58.2	207	58.9
18	94	06.3	132	39.8	251	14.6	352	00.5	223	01.5
19	109	08.7	147	39.7	266	17.8	7	02.8	238	04.0
20	124	11.2	162	39.6	281	21.0	22	05.1	253	06.6
21	139	13.6	177	39.5	296	24.1	37	07.4	268	09.1
22	154	16.1	192	39.4	311	27.3	52	09.7	283	11.7
23	169	18.6	207	39.3	326	30.5	67	11.9	298	14.3
24	184	21.0	222	39.2	341	33.7	82	14.2	313	16.8
Dif	—		-1		+5		+23		+26	
							0		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 4			Edad: 25 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'0 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	37.2	+2 28.7	228	04.6	-11 26.5	96	60 N	18 31	19 14	20 06	4 15 22	14 13 89		
1	193	37.4		242	31.4	16.9	96	58	29	09	19 58	09 24	19 86		
2	208	37.6	30.7	256	58.2	78	97	56	28	05	51	4 04 26	24 83		
3	223	37.8	31.7	271	25.0	78	97	54	26	19 02	45	3 59 28	28 81		
4	238	38.0	32.6	285	51.9	79	98	52	25	18 59	40	54 30	32 79		
5	253	38.1	+2 33.6	300	18.8	79	99	50	18 24	18 56	19 35	3 50 32	14 35 78		
6	268	38.3	+2 34.6	314	45.8	80	99	45	18 21	18 51	19 26	3 41 36	14 43 73		
7	283	38.5	35.6	329	12.7	79	100	40	19	46	18	34 38	49 70		
8	298	38.7	36.6	343	39.7	80	101	35	17	43	12	27 41	54 68		
9	313	38.9	37.5	358	06.8	81	101	30	16	40	08	21 44	14 59 65		
10	328	39.1	38.5	12	33.8	80	102	20	13	35	19 01	12 47	15 07 61		
11	343	39.3	+2 39.5	27	00.9	81	103	10 N	18 11	18 32	18 56	3 03 51	15 14 57		
12	358	39.5	+2 40.5	41	28.1	82	103	0	18 09	18 29	18 53	2 55 54	15 21 54		
13	13	39.6	41.4	55	55.2	81	104	10 S	07	28	52	47 57	27 51		
14	28	39.8	42.4	70	22.4	82	104	20	05	27	52	38 61	34 47		
15	43	40.0	43.4	84	49.6	82	105	30	03	27	54	28 65	42 43		
16	58	40.2	44.4	99	16.9	83	106	35	02	27	56	22 68	46 41		
17	73	40.4	+2 45.4	113	44.1	82	106	40	18 00	18 27	18 59	2 16 70	15 51 38		
18	88	40.6	+2 46.3	128	11.4	83	106	45	17 59	18 28	19 02	2 08 74	15 57 35		
19	103	40.8	47.3	142	38.8	84	108	50	57	29	07	1 59 77	16 04 31		
20	118	41.0	48.3	157	06.1	83	107	52	57	30	09	55 79	07 29		
21	133	41.2	49.3	171	33.5	84	108	54	56	31	12	50 81	11 27		
22	148	41.3	50.2	186	00.9	84	109	56	55	32	15	45 83	15 25		
23	163	41.5	51.2	200	28.4	85	109	58	54	33	19	39 86	19 23		
24	178	41.7	+2 52.2	214	55.9	85	110	60 S	17 53	18 34	19 23	1 32 89	16 24 20		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 40 ^m 7		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: -1.2 PMG: 1 ^h 13 ^m			Mag: -2.3 PMG: 18 ^h 28 ^m			Mag: +0.3 PMG: 3 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	184	21.0	222	39.2	-13 29.4	341	33.7	-6 33.9	82	14.2	+23 14.2	313	16.8	-16 07.4	
1	199	23.5	237	39.1	28.8	356	36.9	33.7	97	16.5	14.2	328	19.4	07.4	
2	214	26.0	252	39.0	28.3	11	40.1	33.5	112	18.8	14.2	343	22.0	07.4	
3	229	28.4	267	38.9	27.7	26	43.3	33.2	127	21.1	14.2	358	24.5	07.3	
4	244	30.9	282	38.8	27.2	41	46.5	33.0	142	23.4	14.2	13	27.1	07.3	
5	259	33.4	297	38.7	-13 26.6	56	49.7	-6 32.7	157	25.7	+23 14.2	28	29.6	-16 07.3	
6	274	35.8	312	38.6	-13 26.1	71	52.9	-6 32.5	172	28.0	+23 14.2	43	32.2	-16 07.2	
7	289	38.3	327	38.5	25.5	86	56.2	32.2	187	30.2	14.2	58	34.8	07.2	
8	304	40.8	342	38.4	25.0	101	59.4	32.0	202	32.5	14.1	73	37.3	07.2	
9	319	43.2	357	38.3	24.4	117	02.6	31.7	217	34.8	14.1	88	39.9	07.1	
10	334	45.7	12	38.2	23.9	132	05.8	31.4	232	37.1	14.1	103	42.5	07.1	
11	349	48.1	27	38.1	-13 23.3	147	09.0	-6 31.2	247	39.4	+23 14.1	118	45.0	-16 07.1	
12	4	50.6	42	38.0	-13 22.8	162	12.2	-6 30.9	262	41.7	+23 14.1	133	47.6	-16 07.0	
13	19	53.1	57	37.9	22.2	177	15.4	30.7	277	44.0	14.1	148	50.1	07.0	
14	34	55.5	72	37.8	21.7	192	18.6	30.4	292	46.2	14.1	163	52.7	07.0	
15	49	58.0	87	37.7	21.1	207	21.8	30.2	307	48.5	14.1	178	55.3	06.9	
16	65	00.5	102	37.6	20.5	222	25.0	29.9	322	50.8	14.1	193	57.8	06.9	
17	80	02.9	117	37.5	-13 20.0	237	28.3	-6 29.7	337	53.1	+23 14.0	209	00.4	-16 06.9	
18	95	05.4	132	37.4	-13 19.4	252	31.5	-6 29.4	352	55.4	+23 14.0	224	03.0	-16 06.9	
19	110	07.9	147	37.3	18.9	267	34.7	29.2	7	57.7	14.0	239	05.5	06.8	
20	125	10.3	162	37.2	18.3	282	37.9	28.9	22	59.9	14.0	254	08.1	06.8	
21	140	12.8	177	37.1	17.7	297	41.1	28.7	38	02.2	14.0	269	10.7	06.8	
22	155	15.3	192	37.0	17.2	312	44.3	28.4	53	04.5	14.0	284	13.2	06.7	
23	170	17.7	207	36.9	16.6	327	47.6	28.2	68	06.8	14.0	299	15.8	06.7	
24	185	20.2	222	36.8	-13 16.1	342	50.8	-6 27.9	83	09.1	+23 14.0	314	18.3	-16 06.7	
Dif	—		-1		+6	+32		+3	+23		0	+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 12 ^h 05 ^m 1			Edad: 26 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 R°: 53 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m												
0	178	41.7	+2	52.2	214	55.9	-7	18.7	60 N	4	04	4	38	4	37	19											
1	193	41.9		53.2	229	23.4	85	-7	07.7 ¹¹⁰	58	12	5	00	33	22	45											
2	208	42.1		54.2	243	50.9	85	-6	56.7 ¹¹⁰	56	19	04	42	30	24	47											
3	223	42.3		55.1	258	18.5	86		45.6 ¹¹¹	54	25	07	43	27	26	49											
4	238	42.5		56.1	272	46.1	86		34.4 ¹¹²	52	30	11	45	24	28	51											
5	253	42.7	+2	57.1	287	13.7	86	-6	23.3 ¹¹¹	50	4	35	5	13	4	22											
6	268	42.8	+2	58.1	301	41.3	86	-6	12.1 ¹¹²	45	4	44	5	19	4	17											
7	283	43.0	+2	59.0	316	09.0	87	-6	00.8 ¹¹³	40	52	24	51	12	37	15											
8	298	43.2	+3	00.0	330	36.7	87	-5	49.5 ¹¹³	35	4	58	27	53	08	40											
9	313	43.4	+3	01.0	345	04.4	87		38.2 ¹¹³	30	5	02	30	54	4	05											
10	328	43.6		02.0	359	32.2	88		26.9 ¹¹³	20	10	35	5	57	3	59											
11	343	43.8	+3	02.9	13	59.9	87	-5	15.5 ¹¹⁴	10 N	5	14	5	39	6	00											
12	358	44.0	+3	03.9	28	27.7	88	-5	04.1 ¹¹⁴	0	5	17	5	41	6	02											
13	13	44.2		04.9	42	55.6	89	-4	52.6 ¹¹⁵	10 S	18	43	04	44	57	18											
14	28	44.3		05.9	57	23.4	88		41.1 ¹¹⁵	20	18	44	06	39	61	21											
15	43	44.5		06.9	71	51.3	89		29.7 ¹¹⁴	30	17	44	08	33	65	25											
16	58	44.7		07.8	86	19.2	89		18.1 ¹¹⁶	35	15	44	09	30	67	27											
17	73	44.9	+3	08.8	100	47.1	89	-4	06.6 ¹¹⁵	40	5	12	5	44	6	11											
18	88	45.1	+3	09.8	115	15.0	89	-3	55.0 ¹¹⁶	45	5	09	5	43	6	12											
19	103	45.3		10.8	129	43.0	90		43.4 ¹¹⁶	50	04	42	14	16	78	35											
20	118	45.5		11.7	144	11.0	90		31.8 ¹¹⁶	52	5	02	41	15	14	79											
21	133	45.7		12.7	158	39.0	90		20.2 ¹¹⁶	54	4	59	41	16	11	81											
22	148	45.8		13.7	173	07.1	91	-3	08.6 ¹¹⁶	56	56	40	17	08	83	40											
23	163	46.0		14.7	187	35.1	90	-2	56.9 ¹¹⁷	58	53	39	18	05	86	42											
24	178	46.2	+3	15.6	202	03.2	91	-2	45.2 ¹¹⁷	60 S	4	49	5	38	6	19											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 11 ^h 36 ^m 7			Mag: -4.5 PMG: 9 ^h 10 ^m			Mag: -1.2 PMG: 1 ^h 08 ^m			Mag: -2.3 PMG: 18 ^h 25 ^m			Mag: +0.3 PMG: 3 ^h 02 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°												
0	185	20.2	222	36.8	-13	16.1	342	50.8	-6	27.9	83	09.1	+23	14.0	314	18.3											
1	200	22.6	237	36.7		15.5	357	54.0		27.6	98	11.4		14.0	329	20.9											
2	215	25.1	252	36.6		14.9	12	57.2		27.4	113	13.6		13.9	344	23.5											
3	230	27.6	267	36.5		14.4	28	00.4		27.1	128	15.9		13.9	359	26.0											
4	245	30.0	282	36.4		13.8	43	03.7		26.9	143	18.2		13.9	14	28.6											
5	260	32.5	297	36.3	-13	13.2	58	06.9	-6	26.6	158	20.5	+23	13.9	29	31.2											
6	275	35.0	312	36.2	-13	12.6	73	10.1	-6	26.4	173	22.8	+23	13.9	44	33.7											
7	290	37.4	327	36.1		12.1	88	13.3		26.1	188	25.0		13.9	59	36.3											
8	305	39.9	342	36.0		11.5	103	16.6		25.9	203	27.3		13.9	74	38.9											
9	320	42.4	357	35.9		10.9	118	19.8		25.6	218	29.6		13.9	89	41.4											
10	335	44.8	12	35.8		10.4	133	23.0		25.3	233	31.9		13.9	104	44.0											
11	350	47.3	27	35.6	-13	09.8	148	26.3	-6	25.1	248	34.1	+23	13.8	119	46.6											
12	5	49.7	42	35.5	-13	09.2	163	29.5	-6	24.8	263	36.4	+23	13.8	134	49.1											
13	20	52.2	57	35.4		08.6	178	32.7		24.6	278	38.7		13.8	149	51.7											
14	35	54.7	72	35.3		08.1	193	36.0		24.3	293	41.0		13.8	164	54.3											
15	50	57.1	87	35.2		07.5	208	39.2		24.1	308	43.3		13.8	179	56.8											
16	65	59.6	102	35.1		06.9	223	42.4		23.8	323	45.5		13.8	194	59.4											
17	81	02.1	117	35.0	-13	06.3	238	45.7	-6	23.5	338	47.8	+23	13.8	210	02.0											
18	96	04.5	132	34.9	-13	05.8	253	48.9	-6	23.3	353	50.1	+23	13.8	225	04.5											
19	111	07.0	147	34.8		05.2	268	52.1		23.0	8	52.4		13.7	240	07.1											
20	126	09.5	162	34.7		04.6	283	55.4		22.8	23	54.6		13.7	255	09.7											
21	141	11.9	177	34.6		04.0	298	58.6		22.5	38	56.9		13.7	270	12.2											
22	156	14.4	192	34.5		03.4	314	01.9		22.2	53	59.2		13.7	285	14.8											
23	171	16.9	207	34.3		02.9	329	05.1		22.0	69	01.4		13.7	300	17.4											
24	186	19.3	222	34.2	-13	02.3	344	08.3	-6	21.7	84	03.7	+23	13.7	315	20.0											
Dif	—			-1			+6			+32			+3			+23			0			+26			0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 8			Edad: 27 ^d 7 PHE { 4 ^h : 59'8 12 ^h : 59'7 20 ^h : 59'5 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	178	46.2	+3 15.6	202	03.2	-2 45.2	91	60 N	18 36	19 19	20 11	4 56 18	17 11 87		
1	193	46.4	16.6	216	31.3	33.5	117	58	34	14	20 03	55 21	11 84		
2	208	46.6	17.6	230	59.4	21.8	117	56	32	10	19 56	54 23	11 82		
3	223	46.8	18.6	245	27.5	-2 10.1	117	54	30	06	49	53 25	10 80		
4	238	47.0	19.5	259	55.7	-1 58.4	117	52	28	03	44	52 28	10 78		
5	253	47.2	+3 20.5	274	23.9	-1 46.7	117	50	18 27	19 00	19 39	4 52 29	17 10 76		
6	268	47.3	+3 21.5	288	52.1	-1 34.9	118	45	18 24	18 53	19 28	4 50 33	17 10 72		
7	283	47.5	22.5	303	20.3	23.2	117	40	21	48	20	49 36	09 69		
8	298	47.7	23.4	317	48.5	-1 11.5	117	35	19	44	14	48 38	09 66		
9	313	47.9	24.4	332	16.8	-0 59.7	118	30	17	41	09	47 41	09 63		
10	328	48.1	25.4	346	45.1	48.0	117	20	13	36	19 01	45 45	08 60		
11	343	48.3	+3 26.3	1	13.3	-0 36.2	118	10 N	18 11	18 32	18 56	4 44 49	17 08 56		
12	358	48.5	+3 27.3	15	41.6	-0 24.5	117	0	18 08	18 29	18 53	4 42 53	17 07 53		
13	13	48.7	28.3	30	10.0	12.8	117	10 S	06	27	51	41 56	07 49		
14	28	48.8	29.3	44	38.3	-0 01.0	118	20	03	25	51	40 59	06 46		
15	43	49.0	30.2	59	06.7	+0 10.7	117	30	18 00	24	52	38 64	06 41		
16	58	49.2	31.2	73	35.0	22.4	117	35	17 59	24	53	37 67	06 38		
17	73	49.4	+3 32.2	88	03.4	+0 34.1	117	40	17 57	18 24	18 55	4 36 70	17 05 36		
18	88	49.6	+3 33.2	102	31.8	+0 45.8	117	45	17 55	18 24	18 58	4 35 73	17 05 32		
19	103	49.8	34.1	117	00.2	+0 57.5	117	50	53	25	19 03	34 76	04 29		
20	118	50.0	35.1	131	28.7	+1 09.2	117	52	52	25	05	33 78	04 27		
21	133	50.2	36.1	145	57.1	20.9	117	54	51	26	07	32 81	04 25		
22	148	50.3	37.1	160	25.5	32.6	117	56	50	27	10	31 83	03 24		
23	163	50.5	38.0	174	54.0	44.2	116	58	48	27	13	31 85	03 21		
24	178	50.7	+3 39.0	189	22.5	+1 55.8	116	60 S	17 47	18 28	19 17	4 30 88	17 03 18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 32 ^m 8		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: -1.3 PMG: 1 ^h 03 ^m		Mag: -2.3 PMG: 18 ^h 21 ^m		Mag: +0.3 PMG: 2 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	186	19.3	222	34.2	-13 02.3	344	08.3	-6 21.7	84	03.7	+23 13.7	315	20.0	-16 05.9
1	201	21.8	237	34.1	01.7	359	11.6	21.4	99	06.0	13.7	330	22.5	05.9
2	216	24.2	252	34.0	01.1	14	14.8	21.2	114	08.3	13.7	345	25.1	05.8
3	231	26.7	267	33.9	-13 00.5	29	18.1	20.9	129	10.5	13.6	0	27.7	05.8
4	246	29.2	282	33.8	-12 59.9	44	21.3	20.7	144	12.8	13.6	15	30.2	05.8
5	261	31.6	297	33.7	-12 59.3	59	24.6	-6 20.4	159	15.1	+23 13.6	30	32.8	-16 05.7
6	276	34.1	312	33.6	-12 58.8	74	27.8	-6 20.1	174	17.4	+23 13.6	45	35.4	-16 05.7
7	291	36.6	327	33.5	58.2	89	31.1	19.9	189	19.6	13.6	60	37.9	05.7
8	306	39.0	342	33.3	57.6	104	34.3	19.6	204	21.9	13.6	75	40.5	05.6
9	321	41.5	357	33.2	57.0	119	37.6	19.3	219	24.2	13.6	90	43.1	05.6
10	336	44.0	12	33.1	56.4	134	40.8	19.1	234	26.4	13.6	105	45.6	05.6
11	351	46.4	27	33.0	-12 55.8	149	44.1	-6 18.8	249	28.7	+23 13.5	120	48.2	-16 05.5
12	6	48.9	42	32.9	-12 55.2	164	47.3	-6 18.6	264	31.0	+23 13.5	135	50.8	-16 05.5
13	21	51.3	57	32.8	54.6	179	50.6	18.3	279	33.2	13.5	150	53.4	05.5
14	36	53.8	72	32.7	54.0	194	53.8	18.0	294	35.5	13.5	165	55.9	05.4
15	51	56.3	87	32.5	53.4	209	57.1	17.8	309	37.8	13.5	180	58.5	05.4
16	66	58.7	102	32.4	52.8	225	00.3	17.5	324	40.1	13.5	196	01.1	05.4
17	82	01.2	117	32.3	-12 52.2	240	03.6	-6 17.2	339	42.3	+23 13.5	211	03.6	-16 05.3
18	97	03.7	132	32.2	-12 51.7	255	06.9	-6 17.0	354	44.6	+23 13.5	226	06.2	-16 05.3
19	112	06.1	147	32.1	51.1	270	10.1	16.7	9	46.9	13.4	241	08.8	05.3
20	127	08.6	162	32.0	50.5	285	13.4	16.4	24	49.1	13.4	256	11.4	05.2
21	142	11.1	177	31.9	49.9	300	16.6	16.2	39	51.4	13.4	271	13.9	05.2
22	157	13.5	192	31.7	49.3	315	19.9	15.9	54	53.7	13.4	286	16.5	05.2
23	172	16.0	207	31.6	48.7	330	23.2	15.6	69	55.9	13.4	301	19.1	05.1
24	187	18.5	222	31.5	-12 48.1	345	26.4	-6 15.4	84	58.2	+23 13.4	316	21.6	-16 05.1
Dif	—		-1 +6		+33 +3		+23		+23 0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 5			Edad: 28 ^d 7 PHE { 4 ^h : 59'4 12 ^h : 59'2 20 ^h : 59'0 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	50.7	+3	189	22.5	+1	55.8	60 N	3 57	4 49	5 32	5 14	19	18 38 86
1	193	50.9		203	51.0	+2	07.4	58	4 05	54	34	16	21	35 83
2	208	51.1		218	19.5		19.0	56	13	4 59	36	17	24	33 80
3	223	51.3		232	48.0		30.6	54	19	5 02	38	18	26	30 78
4	238	51.5		247	16.5		42.1	52	25	06	40	20	27	28 76
5	253	51.7	+3	261	45.1	+2	53.6	50	4 30	5 09	5 41	5 21	29	18 26 74
6	268	51.8	+3	276	13.6	+3	05.1	45	4 40	5 15	5 45	5 23	33	18 22 70
7	283	52.0		290	42.2		16.6	40	48	20	48	25	36	18 68
8	298	52.2		305	10.7		28.0	35	4 55	25	50	26	39	15 65
9	313	52.4		319	39.3		39.4	30	5 00	28	52	28	41	12 63
10	328	52.6		334	07.9	+3	50.8	20	08	33	56	30	45	08 58
11	343	52.8	+3	348	36.5	+4	02.2	10 N	5 13	5 37	5 59	5 33	48	18 04 55
12	358	53.0	+3	3	05.1	+4	13.5	0	5 16	5 40	6 01	5 35	52	18 00 51
13	13	53.1		17	33.7		24.8	10 S	18	43	04	37	55	17 56 48
14	28	53.3		32	02.3		36.0	20	19	44	06	39	59	52 45
15	43	53.5		46	31.0		47.3	30	18	45	09	42	63	47 41
16	58	53.7		60	59.6	+4	58.4	35	16	46	11	44	65	44 39
17	73	53.9	+3	75	28.3	+5	09.6	40	5 14	5 46	6 13	5 46	68	17 41 36
18	88	54.1	+3	89	56.9	+5	20.7	45	5 12	5 46	6 15	5 48	71	17 37 34
19	103	54.3		104	25.6		31.8	50	08	45	17	50	76	33 30
20	118	54.4		118	54.2		42.8	52	05	45	18	51	78	31 29
21	133	54.6	+3	133	22.9	+5	53.8	54	03	44	20	53	79	29 27
22	148	54.8	+4	147	51.6	+6	04.7	56	5 00	44	21	54	81	27 24
23	163	55.0		162	20.3		15.6	58	4 57	43	22	56	83	24 22
24	178	55.2	+4	176	48.9	+6	26.5	60 S	4 54	5 42	6 24	5 58	86	17 21 20

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 28 ^m 9		Mag: -4.4 PMG: 9 ^h 10 ^m			Mag: -1.3 PMG: 0 ^h 58 ^m			Mag: -2.3 PMG: 18 ^h 17 ^m			Mag: +0.3 PMG: 2 ^h 54 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	187	18.5	222	31.5	-12	345	26.4	-6	84	58.2	+23	316	21.6	-16
1	202	20.9	237	31.4		0	29.7		100	00.5		331	24.2	
2	217	23.4	252	31.3		15	33.0		115	02.7		346	26.8	
3	232	25.8	267	31.2		30	36.2		130	05.0		1	29.4	
4	247	28.3	282	31.0		45	39.5		145	07.2		16	31.9	
5	262	30.8	297	30.9	-12	60	42.8	-6	160	09.5	+23	31	34.5	-16
6	277	33.2	312	30.8	-12	75	46.0	-6	175	11.8	+23	46	37.1	-16
7	292	35.7	327	30.7		90	49.3		190	14.0		61	39.6	
8	307	38.2	342	30.6		105	52.6		205	16.3		76	42.2	
9	322	40.6	357	30.4		120	55.8		220	18.6		91	44.8	
10	337	43.1	12	30.3		135	59.1		235	20.8		106	47.4	
11	352	45.6	27	30.2	-12	151	02.4	-6	250	23.1	+23	121	49.9	-16
12	7	48.0	42	30.1	-12	166	05.6	-6	265	25.3	+23	136	52.5	-16
13	22	50.5	57	30.0		181	08.9		280	27.6		151	55.1	
14	37	52.9	72	29.8		196	12.2		295	29.9		166	57.7	
15	52	55.4	87	29.7		211	15.5		310	32.1		182	00.2	
16	67	57.9	102	29.6		226	18.7		325	34.4		197	02.8	
17	83	00.3	117	29.5	-12	241	22.0	-6	340	36.7	+23	212	05.4	-16
18	98	02.8	132	29.4	-12	256	25.3	-6	355	38.9	+23	227	08.0	-16
19	113	05.3	147	29.2		271	28.6		10	41.2		242	10.5	
20	128	07.7	162	29.1		286	31.9		25	43.4		257	13.1	
21	143	10.2	177	29.0		301	35.1		40	45.7		272	15.7	
22	158	12.7	192	28.9		316	38.4		55	47.9		287	18.3	
23	173	15.1	207	28.8		331	41.7		70	50.2		302	20.8	
24	188	17.6	222	28.6	-12	346	45.0	-6	85	52.5	+23	317	23.4	-16
Dif	—		-1	+6		+33	+3		+23	0		+26	0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 2			Edad: 29 ^d 7 PHE { SD: 16'1 PMG: 12 ^h 39 ^m 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'4 R°: 52 ^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	55.2	+4	02.3	176	48.9	+6 26.5	60 N	18 41	19 24	20 17	5 33 21	20 04 81	
1	193	55.4		03.3	191	17.6	37.3 ¹⁰⁸	58	38	19	08	37 24	19 58 79	
2	208	55.6		04.2	205	46.3	48.0 ¹⁰⁷	56	36	14	20 00	41 26	53 76	
3	223	55.8		05.2	220	15.0	+6 58.7 ¹⁰⁷	54	34	10	19 54	44 28	48 75	
4	238	55.9		06.2	234	43.7	+7 09.4 ¹⁰⁷	52	32	06	48	47 30	44 73	
5	253	56.1	+4	07.1	249	12.4	+7 20.0 ¹⁰⁶	50	18 30	19 03	19 42	5 50 31	19 40 72	
6	268	56.3	+4	08.1	263	41.2	+7 30.5 ¹⁰⁵	45	18 26	18 56	19 31	5 56 34	19 32 69	
7	283	56.5		09.1	278	09.9	41.0 ¹⁰⁵	40	23	50	23	6 01 37	26 65	
8	298	56.7		10.0	292	38.6	+7 51.5 ¹⁰⁵	35	20	46	16	05 40	20 63	
9	313	56.9		11.0	307	07.3	+8 01.9 ¹⁰⁴	30	18	42	10	09 42	15 61	
10	328	57.1		12.0	321	36.1	12.2 ¹⁰³	20	14	36	19 02	15 46	19 06 58	
11	343	57.2	+4	13.0	336	04.8	+8 22.5 ¹⁰³	10 N	18 11	18 32	18 56	6 21 49	18 59 54	
12	358	57.4	+4	13.9	350	33.5	+8 32.7 ¹⁰²	0	18 07	18 28	18 52	6 27 52	18 51 52	
13	13	57.6		14.9	5	02.3	42.9 ¹⁰²	10 S	04	25	50	32 55	44 49	
14	28	57.8		15.9	19	31.0	+8 53.0 ¹⁰¹	20	18 01	23	49	38 58	37 46	
15	43	58.0		16.8	33	59.8	+9 03.0 ¹⁰⁰	30	17 58	22	50	45 62	28 43	
16	58	58.2		17.8	48	28.5	13.0 ¹⁰⁰	35	56	21	51	49 64	23 41	
17	73	58.4	+4	18.8	62	57.3	+9 22.9 ⁹⁹	40	17 54	18 21	18 52	6 54 66	18 17 39	
18	88	58.5	+4	19.7	77	26.0	+9 32.8 ⁹⁹	45	17 51	18 21	18 55	6 59 70	18 11 36	
19	103	58.7		20.7	91	54.8	42.6 ⁹⁸	50	49	21	18 58	7 06 72	03 33	
20	118	58.9		21.7	106	23.5	+9 52.3 ⁹⁷	52	47	21	19 00	09 74	18 00 30	
21	133	59.1		22.6	120	52.3	+10 02.0 ⁹⁷	54	46	21	02	12 76	17 56 29	
22	148	59.3		23.6	135	21.1	11.6 ⁹⁶	56	44	21	04	15 79	51 28	
23	163	59.5		24.6	149	49.8	21.1 ⁹⁵	58	43	22	07	19 81	46 26	
24	178	59.7	+4	25.5	164	18.6	+10 30.5 ⁹⁴	60 S	17 41	18 22	19 10	7 24 83	17 41 23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 25 ^m 0		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: -1.3 PMG: 0 ^h 53 ^m		Mag: -2.3 PMG: 18 ^h 14 ^m		Mag: +0.3 PMG: 2 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	17.6	222	28.6	-12	33.4	346	45.0	-6	08.9	85	52.5	+23	13.1	317	23.4	-16	04.3
1	203	20.1	237	28.5		32.8	1	48.3		08.6	100	54.7		13.0	332	26.0		04.3
2	218	22.5	252	28.4		32.2	16	51.5		08.4	115	57.0		13.0	347	28.6		04.2
3	233	25.0	267	28.3		31.5	31	54.8		08.1	130	59.2		13.0	2	31.1		04.2
4	248	27.4	282	28.1		30.9	46	58.1		07.8	146	01.5		13.0	17	33.7		04.2
5	263	29.9	297	28.0	-12	30.3	62	01.4	-6	07.5	161	03.7	+23	13.0	32	36.3	-16	04.1
6	278	32.4	312	27.9	-12	29.7	77	04.7	-6	07.3	176	06.0	+23	13.0	47	38.9	-16	04.1
7	293	34.8	327	27.8		29.1	92	08.0		07.0	191	08.3		13.0	62	41.4		04.0
8	308	37.3	342	27.6		28.4	107	11.3		06.7	206	10.5		12.9	77	44.0		04.0
9	323	39.8	357	27.5		27.8	122	14.5		06.5	221	12.8		12.9	92	46.6		04.0
10	338	42.2	12	27.4		27.2	137	17.8		06.2	236	15.0		12.9	107	49.2		03.9
11	353	44.7	27	27.3	-12	26.6	152	21.1	-6	05.9	251	17.3	+23	12.9	122	51.8	-16	03.9
12	8	47.2	42	27.1	-12	25.9	167	24.4	-6	05.6	266	19.5	+23	12.9	137	54.3	-16	03.9
13	23	49.6	57	27.0		25.3	182	27.7		05.4	281	21.8		12.9	152	56.9		03.8
14	38	52.1	72	26.9		24.7	197	31.0		05.1	296	24.0		12.9	167	59.5		03.8
15	53	54.6	87	26.8		24.0	212	34.3		04.8	311	26.3		12.8	183	02.1		03.8
16	68	57.0	102	26.6		23.4	227	37.6		04.5	326	28.5		12.8	198	04.6		03.7
17	83	59.5	117	26.5	-12	22.8	242	40.9	-6	04.3	341	30.8	+23	12.8	213	07.2	-16	03.7
18	99	01.9	132	26.4	-12	22.1	257	44.2	-6	04.0	356	33.0	+23	12.8	228	09.8	-16	03.7
19	114	04.4	147	26.3		21.5	272	47.5		03.7	11	35.3		12.8	243	12.4		03.6
20	129	06.9	162	26.1		20.9	287	50.8		03.4	26	37.6		12.8	258	15.0		03.6
21	144	09.3	177	26.0		20.2	302	54.1		03.2	41	39.8		12.8	273	17.5		03.6
22	159	11.8	192	25.9		19.6	317	57.4		02.9	56	42.1		12.7	288	20.1		03.5
23	174	14.3	207	25.8		19.0	333	00.7		02.6	71	44.3		12.7	303	22.7		03.5
24	189	16.7	222	25.6	-12	18.3	348	04.0	-6	02.3	86	46.6	+23	12.7	318	25.3	-16	03.5
Dif	—		-1	+6		+33	+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: 12 ^h 03 ^m 9			Edad: 1 ^d 2 PHE { 4 ^h : 58' ¹ 12 ^h : 57' ⁹ 20 ^h : 57' ⁶ R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	59.7	+4	25.5	164	18.6	+10	30.5	94	60 N	3 50	4 43	5 26	5 54	25	21 25 76	
1	193	59.8		26.5	178	47.4	98	39.9	94	58	3 59	48	29	6 01	27	17 73	
2	209	00.0		27.5	193	16.1	97	49.3	94	56	4 07	53	31	07	29	09 72	
3	224	00.2		28.4	207	44.9	98	+10	58.5	54	14	4 57	33	12	31	21 03 70	
4	239	00.4		29.4	222	13.7	98	+11	07.7	52	20	5 01	35	17	32	20 57 69	
5	254	00.6	+4	30.4	236	42.5	98	+11	16.8	50	4 25	5 04	5 37	6 21	34	20 52 67	
6	269	00.8	+4	31.3	251	11.2	97	+11	25.8	45	4 36	5 11	5 41	6 30	37	20 41 64	
7	284	00.9		32.3	265	40.0	98	34.8	90	40	45	17	44	38	39	31 62	
8	299	01.1		33.2	280	08.8	98	43.6	88	35	52	22	47	45	41	23 61	
9	314	01.3		34.2	294	37.6	98	+11	52.4	30	4 57	26	50	6 51	43	16 59	
10	329	01.5		35.2	309	06.4	98	+12	01.2	20	5 06	32	54	7 01	46	20 04 56	
11	344	01.7	+4	36.1	323	35.2	98	+12	09.8	10 N	5 12	5 36	5 57	7 10	49	19 53 54	
12	359	01.9	+4	37.1	338	04.0	98	+12	18.4	0	5 16	5 40	6 01	7 19	51	19 43 52	
13	14	02.1		38.1	352	32.7	97	26.9	85	10 S	18	43	04	27	54	33 50	
14	29	02.2		39.0	7	01.5	98	35.3	84	20	19	45	07	36	57	23 47	
15	44	02.4		40.0	21	30.3	98	43.6	83	30	19	47	11	47	60	11 44	
16	59	02.6		41.0	35	59.1	98	+12	51.9	83	35	18	47	13	7 53	62	19 04 42
17	74	02.8	+4	41.9	50	28.0	99	+13	00.0	81	40	5 16	5 48	6 15	8 00	64	18 56 41
18	89	03.0	+4	42.9	64	56.8	98	+13	08.1	81	45	5 14	5 48	6 17	8 09	66	18 47 38
19	104	03.2		43.9	79	25.6	98	16.1	80	50	11	48	20	18	70	36 35	
20	119	03.3		44.8	93	54.4	98	24.1	80	52	09	48	22	23	71	30 35	
21	134	03.5		45.8	108	23.2	98	31.9	78	54	07	48	23	28	73	25 33	
22	149	03.7		46.7	122	52.0	98	39.6	77	56	05	48	25	34	74	19 31	
23	164	03.9		47.7	137	20.8	98	47.3	77	58	5 02	48	27	40	77	12 29	
24	179	04.1	+4	48.7	151	49.7	99	+13	54.9	76	60 S	4 59	5 47	6 29	8 47	79	18 04 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 21 ^m 0		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: -1.3 PMG: 0 ^h 48 ^m		Mag: -2.3 PMG: 18 ^h 10 ^m		Mag: +0.3 PMG: 2 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	189	16.7	222	25.6	-12	18.3	348	04.0	-6	02.3	86	46.6	+23	12.7	318	25.3	-16	03.5
1	204	19.2	237	25.5		17.7	3	07.3		02.1	101	48.8		12.7	333	27.9		03.4
2	219	21.7	252	25.4		17.1	18	10.6		01.8	116	51.1		12.7	348	30.4		03.4
3	234	24.1	267	25.2		16.4	33	13.9		01.5	131	53.3		12.7	3	33.0		03.4
4	249	26.6	282	25.1		15.8	48	17.2		01.2	146	55.6		12.7	18	35.6		03.3
5	264	29.0	297	25.0	-12	15.1	63	20.5	-6	00.9	161	57.8	+23	12.6	33	38.2	-16	03.3
6	279	31.5	312	24.9	-12	14.5	78	23.8	-6	00.7	177	00.1	+23	12.6	48	40.8	-16	03.2
7	294	34.0	327	24.7		13.9	93	27.1		00.4	192	02.3		12.6	63	43.3		03.2
8	309	36.4	342	24.6		13.2	108	30.4	-6	00.1	207	04.5		12.6	78	45.9		03.2
9	324	38.9	357	24.5		12.6	123	33.7	-5	59.8	222	06.8		12.6	93	48.5		03.1
10	339	41.4	12	24.3		11.9	138	37.0		59.6	237	09.0		12.6	108	51.1		03.1
11	354	43.8	27	24.2	-12	11.3	153	40.3	-5	59.3	252	11.3	+23	12.6	123	53.7	-16	03.1
12	9	46.3	42	24.1	-12	10.6	168	43.6	-5	59.0	267	13.5	+23	12.5	138	56.2	-16	03.0
13	24	48.8	57	23.9		10.0	183	46.9		58.7	282	15.8		12.5	153	58.8		03.0
14	39	51.2	72	23.8		09.4	198	50.2		58.4	297	18.0		12.5	169	01.4		03.0
15	54	53.7	87	23.7		08.7	213	53.5		58.2	312	20.3		12.5	184	04.0		02.9
16	69	56.2	102	23.6		08.1	228	56.8		57.9	327	22.5		12.5	199	06.6		02.9
17	84	58.6	117	23.4	-12	07.4	244	00.2	-5	57.6	342	24.8	+23	12.5	214	09.1	-16	02.9
18	100	01.1	132	23.3	-12	06.8	259	03.5	-5	57.3	357	27.0	+23	12.5	229	11.7	-16	02.8
19	115	03.5	147	23.2		06.1	274	06.8		57.0	12	29.2		12.4	244	14.3		02.8
20	130	06.0	162	23.0		05.5	289	10.1		56.8	27	31.5		12.4	259	16.9		02.8
21	145	08.5	177	22.9		04.8	304	13.4		56.5	42	33.7		12.4	274	19.5		02.7
22	160	10.9	192	22.8		04.2	319	16.7		56.2	57	36.0		12.4	289	22.0		02.7
23	175	13.4	207	22.6		03.5	334	20.0		55.9	72	38.2		12.4	304	24.6		02.6
24	190	15.9	222	22.5	-12	02.8	349	23.4	-5	55.6	87	40.5	+23	12.4	319	27.2	-16	02.6
Dif	—		-1	+6			+33	+3			+22	0			+26	0		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 03 ^m 6		Edad: 2 ^d 2 SD: 15:7 PMG: 14 ^h 23 ^m	PHE { 4 ^h : 57/4 12 ^h : 57/1 20 ^h : 56/9 R°: 51 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	04.1	+4 48.7	151	49.7	+13 54.9	60 N	18 46	19 29	20 23	6 19	30	22 41	68
1	194	04.3	49.6	166	18.5	+14 02.4	58	43	23	14	28	32	30	67
2	209	04.5	50.6	180	47.3	09.8	56	40	18	20 05	36	34	21	65
3	224	04.6	51.6	195	16.2	17.1	54	38	14	19 58	43	35	13	64
4	239	04.8	52.5	209	45.0	24.4	52	35	10	51	49	37	22	06
5	254	05.0	+4 53.5	224	13.9	+14 31.5	50	18 33	19 06	19 46	6 55	38	21	59
6	269	05.2	+4 54.4	238	42.7	+14 38.6	45	18 29	18 59	19 34	7 07	40	21	45
7	284	05.4	55.4	253	11.6	45.6	40	25	52	25	17	43	33	59
8	299	05.6	56.4	267	40.4	52.4	35	22	47	18	26	44	24	57
9	314	05.7	57.3	282	09.3	+14 59.2	30	19	43	12	34	45	15	56
10	329	05.9	58.3	296	38.2	+15 05.9	20	15	37	19 03	47	48	21	00
11	344	06.1	+4 59.2	311	07.1	+15 12.5	10 N	18 11	18 32	18 56	7 59	50	20	47
12	359	06.3	+5 00.2	325	36.0	+15 19.1	0	18 07	18 28	18 52	8 10	52	20	35
13	14	06.5	01.2	340	04.8	25.5	10 S	03	24	49	21	54	23	49
14	29	06.7	02.1	354	33.7	31.8	20	18 00	22	47	33	56	20	10
15	44	06.8	03.1	9	02.6	38.1	30	17 56	19	47	47	58	19	55
16	59	07.0	04.0	23	31.6	44.2	35	53	19	48	8 55	59	46	46
17	74	07.2	+5 05.0	38	00.5	+15 50.3	40	17 51	18 18	18 49	9 04	61	19	37
18	89	07.4	+5 06.0	52	29.4	+15 56.3	45	17 48	18 17	18 51	9 15	62	19	25
19	104	07.6	06.9	66	58.3	+16 02.1	50	44	17	54	28	64	11	41
20	119	07.8	07.9	81	27.3	07.9	52	43	16	55	34	66	19	05
21	134	07.9	08.8	95	56.2	13.6	54	41	16	57	41	67	18	58
22	149	08.1	09.8	110	25.2	19.2	56	39	16	18 59	48	69	50	37
23	164	08.3	10.8	124	54.2	24.7	58	37	16	19 02	9 57	70	41	35
24	179	08.5	+5 11.7	139	23.2	+16 30.1	60 S	17 35	18 16	19 04	10 06	73	18	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 17 ^m 1		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: -1.4 PMG: 0 ^h 42 ^m		Mag: -2.2 PMG: 18 ^h 07 ^m		Mag: +0.3 PMG: 2 ^h 42 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	'	°	'	°	'
0	190	15.9	222 22.5	-12 02.8	349 23.4	-5 55.6	87 40.5	+23 12.4	319 27.2	-16 02.6	
1	205	18.3	237 22.4	02.2	4 26.7	55.4	102 42.7	12.3	334 29.8	02.6	
2	220	20.8	252 22.2	01.5	19 30.0	55.1	117 45.0	12.3	349 32.4	02.5	
3	235	23.3	267 22.1	00.9	34 33.3	54.8	132 47.2	12.3	4 35.0	02.5	
4	250	25.7	282 22.0	-12 00.2	49 36.6	54.5	147 49.4	12.3	19 37.5	02.5	
5	265	28.2	297 21.8	-11 59.6	64 39.9	-5 54.2	162 51.7	+23 12.3	34 40.1	-16 02.4	
6	280	30.6	312 21.7	-11 58.9	79 43.3	-5 54.0	177 53.9	+23 12.3	49 42.7	-16 02.4	
7	295	33.1	327 21.6	58.3	94 46.6	53.7	192 56.2	12.3	64 45.3	02.4	
8	310	35.6	342 21.4	57.6	109 49.9	53.4	207 58.4	12.2	79 47.9	02.3	
9	325	38.0	357 21.3	56.9	124 53.2	53.1	223 00.6	12.2	94 50.5	02.3	
10	340	40.5	12 21.2	56.3	139 56.5	52.8	238 02.9	12.2	109 53.0	02.3	
11	355	43.0	27 21.0	-11 55.6	154 59.9	-5 52.6	253 05.1	+23 12.2	124 55.6	-16 02.2	
12	10	45.4	42 20.9	-11 54.9	170 03.2	-5 52.3	268 07.4	+23 12.2	139 58.2	-16 02.2	
13	25	47.9	57 20.8	54.3	185 06.5	52.0	283 09.6	12.2	155 00.8	02.1	
14	40	50.4	72 20.6	53.6	200 09.8	51.7	298 11.8	12.1	170 03.4	02.1	
15	55	52.8	87 20.5	53.0	215 13.2	51.4	313 14.1	12.1	185 06.0	02.1	
16	70	55.3	102 20.4	52.3	230 16.5	51.1	328 16.3	12.1	200 08.6	02.0	
17	85	57.8	117 20.2	-11 51.6	245 19.8	-5 50.9	343 18.5	+23 12.1	215 11.1	-16 02.0	
18	101	00.2	132 20.1	-11 51.0	260 23.1	-5 50.6	358 20.8	+23 12.1	230 13.7	-16 02.0	
19	116	02.7	147 19.9	50.3	275 26.5	50.3	13 23.0	12.1	245 16.3	01.9	
20	131	05.1	162 19.8	49.6	290 29.8	50.0	28 25.3	12.1	260 18.9	01.9	
21	146	07.6	177 19.7	49.0	305 33.1	49.7	43 27.5	12.0	275 21.5	01.9	
22	161	10.1	192 19.5	48.3	320 36.5	49.4	58 29.7	12.0	290 24.1	01.8	
23	176	12.5	207 19.4	47.6	335 39.8	49.2	73 32.0	12.0	305 26.6	01.8	
24	191	15.0	222 19.3	-11 46.9	350 43.1	-5 48.9	88 34.2	+23 12.0	320 29.2	-16 01.7	
Dif	—		-1	+7	+33	+3	+22		0	+26	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0			Edad: 3 ^d 2				PHE { 4 ^h : 56'6 12 ^h : 56'3 20 ^h : 56'1				R°		R°	
	PMG: 12 ^h 03 ^m 3			SD: 15:4								R°: 51 ^m		Hora	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	179	08.5	+5	11.7	139	23.2	+16	30.1	60 N	3 42	4 37	5 20	6 49	37	
1	194	08.7		12.7	153	52.2 ¹⁰⁰		35.4 ⁵³	58	3 52	42	23	7 00	39	
2	209	08.9		13.6	168	21.2 ¹⁰⁰		40.6 ⁵²	56	4 01	48	26	10 40		
3	224	09.0		14.6	182	50.2 ¹⁰⁰		45.7 ⁵¹	54	08	52	28	18 41		
4	239	09.2		15.6	197	19.2 ¹⁰⁰		50.7 ⁵⁰	52	15	4 56	31	26 42		
5	254	09.4	+5	16.5	211	48.2 ¹⁰⁰	+16	55.6 ⁴⁹	50	4 20	5 00	5 33	7 33	42	
6	269	09.6	+5	17.5	226	17.3 ¹⁰¹	+17	00.5 ⁴⁹	45	4 32	5 08	5 37	7 47	45	
7	284	09.8		18.4	240	46.3 ¹⁰⁰		05.2 ⁴⁷	40	41	14	41	8 00	45	
8	299	09.9		19.4	255	15.4 ¹⁰¹		09.8 ⁴⁶	35	49	19	44	10 46		
9	314	10.1		20.3	269	44.5 ¹⁰¹		14.3 ⁴⁵	30	4 55	23	47	19 47		
10	329	10.3		21.3	284	13.6 ¹⁰¹		18.8 ⁴⁵	20	5 04	30	52	35 48		
11	344	10.5	+5	22.3	298	42.7 ¹⁰¹	+17	23.1 ⁴³	10 N	5 11	5 35	5 56	8 49	49	
12	359	10.7	+5	23.2	313	11.8 ¹⁰¹	+17	27.4 ⁴³	0	5 15	5 39	6 00	9 02	50	
13	14	10.9		24.2	327	40.9 ¹⁰¹		31.5 ⁴⁰	10 S	18	43	04	15 52		
14	29	11.0		25.1	342	10.1 ¹⁰²		35.5 ⁴⁰	20	20	45	08	29 53		
15	44	11.2		26.1	356	39.3 ¹⁰²		39.5 ⁴⁰	30	20	48	12	45 54		
16	59	11.4		27.0	11	08.4 ¹⁰¹		43.3 ³⁸	35	20	49	14	9 54	55	
17	74	11.6	+5	28.0	25	37.6 ¹⁰²	+17	47.1 ³⁸	40	5 18	5 50	6 17	10 05	56	
18	89	11.8	+5	29.0	40	06.8 ¹⁰²	+17	50.7 ³⁶	45	5 17	5 51	6 20	10 17	57	
19	104	12.0		29.9	54	36.1 ¹⁰³		54.3 ³⁶	50	14	51	23	32 59		
20	119	12.1		30.9	69	05.3 ¹⁰²	+17	57.8 ³⁵	52	12	51	25	40 59		
21	134	12.3		31.8	83	34.6 ¹⁰³	+18	01.1 ³³	54	11	52	27	48 59		
22	149	12.5		32.8	98	03.9 ¹⁰³		04.4 ³³	56	09	52	29	10 57	60	
23	164	12.7		33.7	112	33.2 ¹⁰³		07.5 ³¹	58	06	52	31	11 07	62	
24	179	12.9	+5	34.7	127	02.5 ¹⁰³	+18	10.6 ³¹	60 S	5 04	5 52	6 34	11 19	62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 13 ^m 2		Mag: −4.4 PMG: 9 ^h 11 ^m		Mag: −1.4 PMG: 0 ^h 37 ^m		Mag: −2.2 PMG: 18 ^h 03 ^m		Mag: +0.2 PMG: 2 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	191	15.0	222	19.3	−11	46.9	350	43.1	−5	48.9
1	206	17.5	237	19.1		46.3	5	46.4		48.6
2	221	19.9	252	19.0		45.6	20	49.8		48.3
3	236	22.4	267	18.9		44.9	35	53.1		48.0
4	251	24.9	282	18.7		44.3	50	56.4		47.7
5	266	27.3	297	18.6	−11	43.6	65	59.8	−5	47.5
6	281	29.8	312	18.4	−11	42.9	81	03.1	−5	47.2
7	296	32.3	327	18.3		42.2	96	06.4		46.9
8	311	34.7	342	18.2		41.6	111	09.8		46.6
9	326	37.2	357	18.0		40.9	126	13.1		46.3
10	341	39.6	12	17.9		40.2	141	16.4		46.0
11	356	42.1	27	17.8	−11	39.5	156	19.8	−5	45.7
12	11	44.6	42	17.6	−11	38.8	171	23.1	−5	45.5
13	26	47.0	57	17.5		38.2	186	26.5		45.2
14	41	49.5	72	17.3		37.5	201	29.8		44.9
15	56	52.0	87	17.2		36.8	216	33.1		44.6
16	71	54.4	102	17.1		36.1	231	36.5		44.3
17	86	56.9	117	16.9	−11	35.4	246	39.8	−5	44.0
18	101	59.4	132	16.8	−11	34.8	261	43.1	−5	43.7
19	117	01.8	147	16.6		34.1	276	46.5		43.5
20	132	04.3	162	16.5		33.4	291	49.8		43.2
21	147	06.7	177	16.4		32.7	306	53.2		42.9
22	162	09.2	192	16.2		32.0	321	56.5		42.6
23	177	11.7	207	16.1		31.3	336	59.9		42.3
24	192	14.1	222	15.9	−11	30.6	352	03.2	−5	42.0
Dif	—		−1		+7		+33		+3	
								+22		0
									+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/0 PMG: 12 ^h 03 ^m 0			Edad: 4 ^d 2 PHE { SD: 15/2 PMG: 16 ^h 05 ^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	12.9	+5 34.7	127	02.5	+18 10.6	60 N	18 51	19 34	20 30	7 26 46	** ** *	**	
1	194	13.0	35.6	141	31.8 ¹⁰³	13.6 ³⁰	58	47	28	19	39 46	** ** *	**	
2	209	13.2	36.6	156	01.2 ¹⁰⁴	16.4 ²⁸	56	44	23	10	50 46	** ** *	**	
3	224	13.4	37.6	170	30.5 ¹⁰³	19.2 ²⁸	54	41	18	20 02	7 59 47	** ** *	**	
4	239	13.6	38.5	184	59.9 ¹⁰⁴	21.9 ²⁷	52	39	13	19 55	8 08 47	** ** *	**	
5	254	13.8	+5 39.5	199	29.3 ¹⁰⁴	+18 24.5 ²⁶	50	18 36	19 09	19 49	8 15 48	23 56 48		
6	269	13.9	+5 40.4	213	58.8 ¹⁰⁵	+18 26.9 ²⁴	45	18 31	19 01	19 37	8 32 47	23 39 49		
7	284	14.1	41.4	228	28.2 ¹⁰⁴	29.3 ²⁴	40	27	18 55	27	45 48	26 48		
8	299	14.3	42.3	242	57.7 ¹⁰⁵	31.6 ²³	35	24	49	19	8 56 49	14 49		
9	314	14.5	43.3	257	27.2 ¹⁰⁵	33.8 ²²	30	20	45	13	9 06 49	23 04 49		
10	329	14.7	44.2	271	56.7 ¹⁰⁵	35.9 ²¹	20	15	37	19 03	23 50	22 46 49		
11	344	14.9	+5 45.2	286	26.2 ¹⁰⁵	+18 37.8 ¹⁹	10 N	18 10	18 32	18 56	9 38 50	22 31 49		
12	359	15.0	+5 46.1	300	55.8 ¹⁰⁶	+18 39.7 ¹⁹	0	18 06	18 27	18 51	9 52 50	22 17 49		
13	14	15.2	47.1	315	25.4 ¹⁰⁶	41.5 ¹⁸	10 S	18 02	23	48	10 07 50	22 02 50		
14	29	15.4	48.0	329	55.0 ¹⁰⁶	43.2 ¹⁷	20	17 58	20	46	22 50	21 47 50		
15	44	15.6	49.0	344	24.6 ¹⁰⁶	44.8 ¹⁶	30	53	17	45	39 51	29 50		
16	59	15.8	49.9	358	54.3 ¹⁰⁷	46.3 ¹⁵	35	51	16	45	10 49 51	19 50		
17	74	15.9	+5 50.9	13	24.0 ¹⁰⁷	+18 47.7 ¹⁴	40	17 48	18 15	18 46	11 01 51	21 07 50		
18	89	16.1	+5 51.8	27	53.7 ¹⁰⁷	+18 49.0 ¹³	45	17 44	18 13	18 47	11 14 52	20 54 49		
19	104	16.3	52.8	42	23.4 ¹⁰⁷	50.2 ¹²	50	40	12	50	31 51	37 50		
20	119	16.5	53.7	56	53.1 ¹⁰⁷	51.4 ¹²	52	38	12	51	39 51	29 50		
21	134	16.7	54.7	71	22.9 ¹⁰⁸	52.4 ¹⁰	54	36	11	52	47 52	20 50		
22	149	16.8	55.7	85	52.7 ¹⁰⁸	53.3 ⁹	56	34	11	54	11 57 52	20 10 50		
23	164	17.0	56.6	100	22.6 ¹⁰⁹	54.1 ⁸	58	32	11	56	12 09 52	19 59 50		
24	179	17.2	+5 57.6	114	52.4 ¹⁰⁸	+18 54.9 ⁸	60 S	17 29	18 10	18 58	12 21 53	19 46 50		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 09 ^m 2		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: -1.4 PMG: 0 ^h 32 ^m		Mag: -2.2 PMG: 17 ^h 59 ^m		Mag: +0.2 PMG: 2 ^h 33 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	192	14.1	222	15.9	-11 30.6	352	03.2	-5 42.0	89	27.7	+23 11.6	321	31.3	-16 00.9
1	207	16.6	237	15.8	29.9	7	06.5	41.7	104	30.0	11.6	336	33.9	00.8
2	222	19.1	252	15.7	29.3	22	09.9	41.5	119	32.2	11.6	351	36.5	00.8
3	237	21.5	267	15.5	28.6	37	13.2	41.2	134	34.4	11.5	6	39.1	00.8
4	252	24.0	282	15.4	27.9	52	16.6	40.9	149	36.7	11.5	21	41.7	00.7
5	267	26.5	297	15.2	-11 27.2	67	19.9	-5 40.6	164	38.9	+23 11.5	36	44.3	-16 00.7
6	282	28.9	312	15.1	-11 26.5	82	23.3	-5 40.3	179	41.1	+23 11.5	51	46.9	-16 00.6
7	297	31.4	327	15.0	25.8	97	26.6	40.0	194	43.3	11.5	66	49.5	00.6
8	312	33.9	342	14.8	25.1	112	30.0	39.7	209	45.6	11.5	81	52.0	00.6
9	327	36.3	357	14.7	24.4	127	33.3	39.4	224	47.8	11.4	96	54.6	00.5
10	342	38.8	12	14.5	23.7	142	36.7	39.2	239	50.0	11.4	111	57.2	00.5
11	357	41.2	27	14.4	-11 23.0	157	40.0	-5 38.9	254	52.2	+23 11.4	126	59.8	-16 00.5
12	12	43.7	42	14.2	-11 22.3	172	43.3	-5 38.6	269	54.5	+23 11.4	142	02.4	-16 00.4
13	27	46.2	57	14.1	21.6	187	46.7	38.3	284	56.7	11.4	157	05.0	00.4
14	42	48.6	72	14.0	20.9	202	50.0	38.0	299	58.9	11.4	172	07.6	00.3
15	57	51.1	87	13.8	20.2	217	53.4	37.7	315	01.1	11.3	187	10.2	00.3
16	72	53.6	102	13.7	19.5	232	56.7	37.4	330	03.3	11.3	202	12.8	00.3
17	87	56.0	117	13.5	-11 18.8	248	00.1	-5 37.1	345	05.6	+23 11.3	217	15.4	-16 00.2
18	102	58.5	132	13.4	-11 18.1	263	03.4	-5 36.9	0	07.8	+23 11.3	232	18.0	-16 00.2
19	118	01.0	147	13.2	17.4	278	06.8	36.6	15	10.0	11.3	247	20.5	00.2
20	133	03.4	162	13.1	16.7	293	10.2	36.3	30	12.2	11.3	262	23.1	00.1
21	148	05.9	177	13.0	16.0	308	13.5	36.0	45	14.5	11.2	277	25.7	-16 00.1
22	163	08.4	192	12.8	15.3	323	16.9	35.7	60	16.7	11.2	292	28.3	-16 00.0
23	178	10.8	207	12.7	14.6	338	20.2	35.4	75	18.9	11.2	307	30.9	00.0
24	193	13.3	222	12.5	-11 13.9	353	23.6	-5 35.1	90	21.1	+23 11.2	322	33.5	-16 00.0
Dif	—		-1		+7	+33		+3	+22		0	+26		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 12 ^h 02 ^m 7			Edad: 5 ^d 2	PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/9 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	179	17.2	+5	57.6	114	52.4	+18	54.9	60 N	3 35	4 30	5 14	8 12	54	0 47	47
1	194	17.4		58.5	129	22.3	109	55.5	58	46	37	17	25	53	34	47
2	209	17.6	+5	59.5	143	52.2	109	56.0	56	3 55	42	21	36	53	23	47
3	224	17.7	+6	00.4	158	22.2	110	56.5	54	4 03	47	23	46	53	13	48
4	239	17.9		01.4	172	52.1	109	56.8	52	09	52	26	8 55	52	0 04	48
5	254	18.1	+6	02.3	187	22.1	110	+18	57.1	3	50	4 16	4 55	5 29	9 03	52
6	269	18.3	+6	03.3	201	52.2	111	+18	57.2	1	45	4 28	5 04	5 34	9 19	52
7	284	18.5		04.2	216	22.2	110	57.3	40	38	11	38	33	51	**	**
8	299	18.6		05.2	230	52.3	111	57.3	35	46	16	42	45	50	**	**
9	314	18.8		06.1	245	22.4	111	57.2	30	4 52	21	45	9 55	50	23	53
10	329	19.0		07.0	259	52.5	111	56.9	20	5 02	28	50	10 13	49	35	46
11	344	19.2	+6	08.0	274	22.7	112	+18	56.6	3	10 N	5 09	5 34	5 55	10 28	49
12	359	19.3	+6	08.9	288	52.9	112	+18	56.2	4	0	5 15	5 39	5 59	10 42	49
13	14	19.5		09.9	303	23.2	113	55.7	10 S	18	43	6 04	10 57	48	22	52
14	29	19.7		10.8	317	53.4	112	55.2	20	20	46	08	11 12	48	37	49
15	44	19.9		11.8	332	23.7	113	54.5	30	21	49	13	30	47	19	51
16	59	20.1		12.7	346	54.0	113	53.7	35	21	50	16	40	46	22	09
17	74	20.2	+6	13.7	1	24.4	114	+18	52.9	8	40	5 20	5 52	6 19	11 52	46
18	89	20.4	+6	14.6	15	54.8	114	+18	51.9	10	45	5 19	5 53	6 22	12 06	45
19	104	20.6		15.6	30	25.2	114	50.9	50	17	54	27	22	45	27	54
20	119	20.8		16.5	44	55.6	114	49.7	52	16	55	29	30	45	19	54
21	134	21.0		17.5	59	26.1	115	48.5	54	14	55	31	39	44	10	55
22	149	21.1		18.4	73	56.6	115	47.2	56	13	56	33	12	49	43	21
23	164	21.3		19.4	88	27.2	116	45.8	58	11	56	36	13 01	42	20	49
24	179	21.5	+6	20.3	102	57.8	116	+18	44.3	15	60 S	5 08	5 57	6 38	13 14	41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 05 ^m 3		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: -1.4 PMG: 0 ^h 26 ^m		Mag: -2.2 PMG: 17 ^h 56 ^m		Mag: +0.2 PMG: 2 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	193	13.3	222	12.5	-11	13.9	353	23.6	-5	35.1
1	208	15.7	237	12.4		13.2	8	26.9		34.8
2	223	18.2	252	12.2		12.5	23	30.3		34.5
3	238	20.7	267	12.1		11.8	38	33.6		34.3
4	253	23.1	282	11.9		11.1	53	37.0		34.0
5	268	25.6	297	11.8	-11	10.4	68	40.3	-5	33.7
6	283	28.1	312	11.7	-11	09.7	83	43.7	-5	33.4
7	298	30.5	327	11.5		09.0	98	47.1		33.1
8	313	33.0	342	11.4		08.3	113	50.4		32.8
9	328	35.5	357	11.2		07.6	128	53.8		32.5
10	343	37.9	12	11.1		06.8	143	57.1		32.2
11	358	40.4	27	10.9	-11	06.1	159	00.5	-5	31.9
12	13	42.8	42	10.8	-11	05.4	174	03.8	-5	31.6
13	28	45.3	57	10.6		04.7	189	07.2		31.4
14	43	47.8	72	10.5		04.0	204	10.6		31.1
15	58	50.2	87	10.3		03.3	219	13.9		30.8
16	73	52.7	102	10.2		02.6	234	17.3		30.5
17	88	55.2	117	10.1	-11	01.9	249	20.6	-5	30.2
18	103	57.6	132	09.9	-11	01.1	264	24.0	-5	29.9
19	119	00.1	147	09.8	-11	00.4	279	27.4		29.6
20	134	02.6	162	09.6	-10	59.7	294	30.7		29.3
21	149	05.0	177	09.5		59.0	309	34.1		29.0
22	164	07.5	192	09.3		58.3	324	37.5		28.7
23	179	10.0	207	09.2		57.5	339	40.8		28.5
24	194	12.4	222	09.0	-10	56.8	354	44.2	-5	28.2
Dif	—		-1		+7		+34		+3	
									+22	0
										+26

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: 6 ^d 2 SD: 14:9 PMG: 17 ^h 43 ^m	PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 R°: 46 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	179	21.5	+6 20.3	102	57.8	+18 44.3	16	60 N	18 56	19 40	20 36	9 06 60	1 34 37		
1	194	21.7		117	28.4 ¹¹⁶	42.7	16	58	52	33	25	18 59	21 38		
2	209	21.8	22.2	131	59.0 ¹¹⁶	41.1	16	56	48	27	15	29 58	10 39		
3	224	22.0	23.2	146	29.7 ¹¹⁷	39.3	18	54	45	22	07	39 57	1 00 41		
4	239	22.2	24.1	161	00.4 ¹¹⁷	37.5	18	52	42	17	20 00	47 56	0 52 41		
5	254	22.4	+6 25.0	175	31.2 ¹¹⁸	+18 35.5	20	50	18 39	19 13	19 53	9 55 55	0 44 42		
6	269	22.6	+6 26.0	190	01.9 ¹¹⁷	+18 33.5	20	45	18 34	19 04	19 40	10 11 54	0 28 42		
7	284	22.7	26.9	204	32.8 ¹¹⁹	31.4	21	40	29	18 57	29	24 53	14 44		
8	299	22.9	27.9	219	03.6 ¹¹⁸	29.2	22	35	25	51	21	35 52	0 03 44		
9	314	23.1	28.8	233	34.5 ¹¹⁹	26.9	23	30	22	46	14	10 45 51	** ** *		
10	329	23.3	29.8	248	05.4 ¹¹⁹	24.6	23	20	16	38	19 04	11 02 50	** ** *		
11	344	23.4	+6 30.7	262	36.3 ¹¹⁹	+18 22.1	25	10 N	18 10	18 32	18 56	11 17 49	** ** *		
12	359	23.6	+6 31.7	277	07.3 ¹²⁰	+18 19.6	25	0	18 06	18 27	18 51	11 31 47	23 54 47		
13	14	23.8	32.6	291	38.3 ¹²⁰	17.0	26	10 S	18 01	22	47	11 45 46	41 48		
14	29	24.0	33.5	306	09.4 ¹²¹	14.3	27	20	17 56	18	44	12 00 44	26 50		
15	44	24.2	34.5	320	40.5 ¹²¹	11.5	28	30	51	15	43	17 43	10 51		
16	59	24.3	35.4	335	11.6 ¹²¹	08.6	29	35	48	13	42	26 43	23 00 53		
17	74	24.5	+6 36.4	349	42.7 ¹²¹	+18 05.7	29	40	17 44	18 12	18 43	12 38 41	22 49 54		
18	89	24.7	+6 37.3	4	13.9 ¹²²	+18 02.6	31	45	17 40	18 10	18 44	12 51 40	22 36 56		
19	104	24.9	38.3	18	45.2 ¹²³	+17 59.5	31	50	36	08	45	13 07 38	21 57		
20	119	25.0	39.2	33	16.4 ¹²²	56.3	32	52	34	07	46	15 37	13 58		
21	134	25.2	40.1	47	47.7 ¹²³	53.1	32	54	31	07	48	23 37	22 05 59		
22	149	25.4	41.1	62	19.0 ¹²³	49.7	34	56	29	06	49	32 36	21 56 60		
23	164	25.6	42.0	76	50.4 ¹²⁴	46.3	34	58	26	05	51	43 34	45 62		
24	179	25.7	+6 43.0	91	21.8 ¹²⁴	+17 42.7	36	60 S	17 23	18 04	18 53	13 55 33	21 33 64		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 01 ^m 4		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: -1.4 PMG: 0 ^h 21 ^m		Mag: -2.2 PMG: 17 ^h 52 ^m		Mag: +0.2 PMG: 2 ^h 25 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	194	12.4	222	09.0	354	44.2	91	14.3	323	35.8					
1	209	14.9	237	08.9	9	47.6	106	16.5	338	38.4					
2	224	17.3	252	08.7	24	50.9	121	18.7	353	40.9					
3	239	19.8	267	08.6	39	54.3	136	21.0	8	43.5					
4	254	22.3	282	08.4	54	57.6	151	23.2	23	46.1					
5	269	24.7	297	08.3	70	01.0	166	25.4	38	48.7					
6	284	27.2	312	08.1	85	04.4	181	27.6	53	51.3					
7	299	29.7	327	08.0	100	07.7	196	29.8	68	53.9					
8	314	32.1	342	07.8	115	11.1	211	32.0	83	56.5					
9	329	34.6	357	07.7	130	14.5	226	34.2	98	59.1					
10	344	37.1	12	07.6	145	17.8	241	36.4	114	01.7					
11	359	39.5	27	07.4	160	21.2	256	38.6	129	04.3					
12	14	42.0	42	07.3	175	24.6	271	40.9	144	06.9					
13	29	44.5	57	07.1	190	27.9	286	43.1	159	09.5					
14	44	46.9	72	07.0	205	31.3	301	45.3	174	12.1					
15	59	49.4	87	06.8	220	34.7	316	47.5	189	14.7					
16	74	51.8	102	06.7	235	38.1	331	49.7	204	17.3					
17	89	54.3	117	06.5	250	41.4	346	51.9	219	19.9					
18	104	56.8	132	06.4	265	44.8	1	54.1	234	22.5					
19	119	59.2	147	06.2	280	48.2	16	56.3	249	25.1					
20	135	01.7	162	06.1	295	51.5	31	58.5	264	27.7					
21	150	04.2	177	05.9	310	54.9	47	00.7	279	30.3					
22	165	06.6	192	05.8	325	58.3	62	02.9	294	32.9					
23	180	09.1	207	05.6	341	01.6	77	05.1	309	35.5					
24	195	11.6	222	05.5	356	05.0	92	07.4	324	38.1					
Dif	—		-1	+7	+34	+3	+22	0	+26	0					

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: 7 ^d 2 SD: 14'8 PMG: 18 ^h 29 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 46 ^m											
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	25.7	+6 43.0	91	21.8	+17 42.7	36	60 N	3 28	4 24	5 08	10 06	66	2 11	29	
1	194	25.9		105	53.2 ¹²⁴	39.1	36	58	39	31	12	17	64	1 59	31	
2	209	26.1		120	24.7 ¹²⁵	35.5	36	56	49	37	15	27	62	49	33	
3	224	26.3		134	56.2 ¹²⁵	31.7	38	54	3 57	42	19	36	60	41	33	
4	239	26.4		149	27.7 ¹²⁵	27.9	38	52	4 04	47	22	43	60	33	34	
5	254	26.6	+6 47.7	163	59.3 ¹²⁶	+17 23.9	40	50	4 11	4 51	5 24	10 50	59	1 26	35	
6	269	26.8	+6 48.6	178	30.9 ¹²⁶	+17 20.0	39	45	4 24	5 00	5 30	11 05	56	1 10	38	
7	284	27.0		193	02.5 ¹²⁶	15.9	41	40	35	07	35	17	55	0 58	39	
8	299	27.1		207	34.2 ¹²⁷	11.7	42	35	43	13	39	27	53	47	41	
9	314	27.3		222	05.9 ¹²⁷	07.5	42	30	4 50	18	43	36	52	38	41	
10	329	27.5		236	37.6 ¹²⁷	+17 03.2	43	20	5 00	26	49	11 52	49	21	44	
11	344	27.7	+6 53.3	251	09.4 ¹²⁸	+16 58.8	44	10 N	5 08	5 33	5 54	12 06	47	0 07	45	
12	359	27.8	+6 54.2	265	41.2 ¹²⁸	+16 54.4	44	0	5 14	5 38	5 59	12 18	46	** ** *	**	
13	14	28.0		280	13.0 ¹²⁸	49.9	45	10 S	18	43	6 04	31	44	** ** *	**	
14	29	28.2		294	44.9 ¹²⁹	45.3	46	20	21	46	09	12 44	43	** ** *	**	
15	44	28.4		309	16.8 ¹²⁹	40.6	47	30	22	50	14	13 00	40	** ** *	**	
16	59	28.5		323	48.7 ¹²⁹	35.9	47	35	23	52	17	09	38	23 53	53	
17	74	28.7	+6 58.9	338	20.6 ¹²⁹	+16 31.0	49	40	5 22	5 54	6 21	13 19	37	23 43	55	
18	89	28.9	+6 59.9	352	52.6 ¹³⁰	+16 26.1	49	45	5 21	5 55	6 25	13 31	35	23 32	57	
19	104	29.1	+7 00.8	7	24.7 ¹³¹	21.2	49	50	20	57	30	45	34	18	59	
20	119	29.2		21	56.7 ¹³⁰	16.1	51	52	19	58	32	13 52	32	11	61	
21	134	29.4		36	28.8 ¹³¹	11.0	51	54	18	5 59	34	14 00	30	23 04	62	
22	149	29.6		51	01.0 ¹³²	05.9	51	56	17	6 00	37	08	29	22 56	64	
23	164	29.8		65	33.1 ¹³¹	+16 00.6	53	58	15	00	40	17	28	47	65	
24	179	29.9	+7 05.5	80	05.3 ¹³²	+15 55.3	53	60 S	5 13	6 01	6 43	14 28	26	22 37	67	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 10 ^h 57 ^m 4		Mag: -4.4 PMG: 9 ^h 12 ^m		Mag: -1.5 PMG: 0 ^h 16 ^m		Mag: -2.2 PMG: 17 ^h 49 ^m		Mag: +0.2 PMG: 2 ^h 21 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	195	11.6	222 05.5	-10 39.3	356 05.0	-5 21.2	92 07.4	+23 10.3	324 38.1	-15 58.1						
1	210	14.0	237 05.3	38.6	11 08.4	20.9	107 09.6	10.3	339 40.7	58.1						
2	225	16.5	252 05.2	37.9	26 11.8	20.6	122 11.8	10.3	354 43.3	58.1						
3	240	19.0	267 05.0	37.1	41 15.1	20.3	137 14.0	10.3	9 45.9	58.0						
4	255	21.4	282 04.9	36.4	56 18.5	20.0	152 16.2	10.2	24 48.5	58.0						
5	270	23.9	297 04.7	-10 35.7	71 21.9	-5 19.7	167 18.4	+23 10.2	39 51.1	-15 57.9						
6	285	26.3	312 04.6	-10 34.9	86 25.2	-5 19.4	182 20.6	+23 10.2	54 53.7	-15 57.9						
7	300	28.8	327 04.4	34.2	101 28.6	19.1	197 22.8	10.2	69 56.3	57.9						
8	315	31.3	342 04.3	33.4	116 32.0	18.9	212 25.0	10.2	84 58.9	57.8						
9	330	33.7	357 04.1	32.7	131 35.4	18.6	227 27.2	10.1	100 01.5	57.8						
10	345	36.2	12 04.0	31.9	146 38.7	18.3	242 29.4	10.1	115 04.1	57.7						
11	0	38.7	27 03.8	-10 31.2	161 42.1	-5 18.0	257 31.6	+23 10.1	130 06.7	-15 57.7						
12	15	41.1	42 03.7	-10 30.5	176 45.5	-5 17.7	272 33.8	+23 10.1	145 09.3	-15 57.7						
13	30	43.6	57 03.5	29.7	191 48.9	17.4	287 36.0	10.1	160 11.9	57.6						
14	45	46.1	72 03.4	29.0	206 52.2	17.1	302 38.2	10.0	175 14.5	57.6						
15	60	48.5	87 03.2	28.2	221 55.6	16.8	317 40.4	10.0	190 17.1	57.5						
16	75	51.0	102 03.1	27.5	236 59.0	16.5	332 42.6	10.0	205 19.7	57.5						
17	90	53.4	117 02.9	-10 26.7	252 02.4	-5 16.2	347 44.8	+23 10.0	220 22.3	-15 57.5						
18	105	55.9	132 02.7	-10 26.0	267 05.7	-5 15.9	2 47.0	+23 10.0	235 24.9	-15 57.4						
19	120	58.4	147 02.6	25.2	282 09.1	15.6	17 49.2	09.9	250 27.5	57.4						
20	136	00.8	162 02.4	24.5	297 12.5	15.4	32 51.4	09.9	265 30.1	57.3						
21	151	03.3	177 02.3	23.7	312 15.9	15.1	47 53.6	09.9	280 32.7	57.3						
22	166	05.8	192 02.1	23.0	327 19.3	14.8	62 55.8	09.9	295 35.3	57.3						
23	181	08.2	207 02.0	22.2	342 22.6	14.5	77 58.0	09.9	310 37.9	57.2						
24	196	10.7	222 01.8	-10 21.5	357 26.0	-5 14.2	93 00.2	+23 09.9	325 40.5	-15 57.2						
Dif	—		-2	+7	+34	+3	+22	0	+26	0						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 01 ^m 9			Edad: 8 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 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	h m m
0	179	29.9	+7 05.5	80	05.3	+15 55.3	54	60 N	19 01	19 45	20 42	11 12 68	2 40 23	
1	194	30.1	06.4	94	37.5 ¹³²	49.9	54	58	18 56	38	30	21 66	30 26	
2	209	30.3	07.4	109	09.8 ¹³³	44.5	54	56	52	31	20	29 65	22 27	
3	224	30.5	08.3	123	42.1 ¹³³	38.9	56	54	49	26	11	36 63	14 29	
4	239	30.6	09.2	138	14.4 ¹³³	33.3	56	52	46	21	20 04	43 61	07 30	
5	254	30.8	+7 10.2	152	46.7 ¹³³	+15 27.7	56	50	18 43	19 16	19 57	11 49 60	2 01 31	
6	269	31.0	+7 11.1	167	19.1 ¹³⁴	+15 22.0	57	45	18 36	19 07	19 43	12 01 58	1 48 33	
7	284	31.2	12.0	181	51.5 ¹³⁴	16.2	58	40	31	18 59	32	12 55	37 35	
8	299	31.3	13.0	196	23.9 ¹³⁴	10.3	59	35	27	52	23	20 54	28 37	
9	314	31.5	13.9	210	56.4 ¹³⁵	+15 04.4	59	30	23	47	16	28 52	19 39	
10	329	31.7	14.9	225	28.9 ¹³⁵	+14 58.4	60	20	16	38	19 05	41 50	1 05 41	
11	344	31.9	+7 15.8	240	01.4 ¹³⁵	+14 52.3	61	10 N	18 10	18 32	18 56	12 53 47	0 52 44	
12	359	32.0	+7 16.7	254	34.0 ¹³⁶	+14 46.2	61	0	18 05	18 26	18 50	13 04 45	0 41 45	
13	14	32.2	17.7	269	06.5 ¹³⁵	40.0	62	10 S	18 00	21	46	15 42	29 47	
14	29	32.4	18.6	283	39.1 ¹³⁶	33.8	62	20	17 55	17	42	27 40	16 49	
15	44	32.5	19.5	298	11.8 ¹³⁷	27.4	64	30	49	13	40	40 37	0 01 52	
16	59	32.7	20.5	312	44.4 ¹³⁶	21.1	63	35	45	11	40	47 36	** ** *	
17	74	32.9	+7 21.4	327	17.1 ¹³⁷	+14 14.6	65	40	17 41	18 08	18 40	13 56 34	** ** *	
18	89	33.1	+7 22.3	341	49.8 ¹³⁷	+14 08.1	65	45	17 37	18 06	18 40	14 06 32	** ** *	
19	104	33.2	23.3	356	22.6 ¹³⁸	+14 01.6	65	50	32	04	41	19 29	** ** *	
20	119	33.4	24.2	10	55.3 ¹³⁷	+13 55.0	66	52	29	03	42	24 28	** ** *	
21	134	33.6	25.1	25	28.1 ¹³⁸	48.3	67	54	27	02	43	30 27	** ** *	
22	149	33.7	26.0	40	00.9 ¹³⁸	41.5	68	56	24	01	44	37 25	** ** *	
23	164	33.9	27.0	54	33.8 ¹³⁹	34.7	68	58	21	18 00	45	45 23	23 52 68	
24	179	34.1	+7 27.9	69	06.6 ¹³⁸	+13 27.9	68	60 S	17 17	17 59	18 47	14 54 21	23 44 70	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 53 ^m 5		Mag: -4.3 PMG: 9 ^h 12 ^m			Mag: -1.5 PMG: 0 ^h 10 ^m			Mag: -2.2 PMG: 17 ^h 45 ^m			Mag: +0.2 PMG: 2 ^h 17 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	196	10.7	222 01.8	-10 21.5	357 26.0	-5 14.2	93 00.2	+23 09.9	325 40.5	-15 57.2				
1	211	13.2	237 01.7	20.7	12 29.4	13.9	108 02.4	09.8	340 43.1	57.1				
2	226	15.6	252 01.5	20.0	27 32.8	13.6	123 04.6	09.8	355 45.7	57.1				
3	241	18.1	267 01.4	19.2	42 36.1	13.3	138 06.8	09.8	10 48.3	57.1				
4	256	20.6	282 01.2	18.5	57 39.5	13.0	153 09.0	09.8	25 50.9	57.0				
5	271	23.0	297 01.1	-10 17.7	72 42.9	-5 12.7	168 11.2	+23 09.8	40 53.5	-15 57.0				
6	286	25.5	312 00.9	-10 17.0	87 46.3	-5 12.4	183 13.4	+23 09.7	55 56.1	-15 56.9				
7	301	27.9	327 00.8	16.2	102 49.7	12.1	198 15.6	09.7	70 58.7	56.9				
8	316	30.4	342 00.6	15.4	117 53.0	11.9	213 17.8	09.7	86 01.3	56.9				
9	331	32.9	357 00.5	14.7	132 56.4	11.6	228 20.0	09.7	101 03.9	56.8				
10	346	35.3	12 00.3	13.9	147 59.8	11.3	243 22.2	09.7	116 06.5	56.8				
11	1	37.8	27 00.2	-10 13.2	163 03.2	-5 11.0	258 24.4	+23 09.6	131 09.1	-15 56.8				
12	16	40.3	42 00.0	-10 12.4	178 06.6	-5 10.7	273 26.6	+23 09.6	146 11.7	-15 56.7				
13	31	42.7	56 59.8	11.6	193 09.9	10.4	288 28.8	09.6	161 14.3	56.7				
14	46	45.2	71 59.7	10.9	208 13.3	10.1	303 31.0	09.6	176 16.9	56.6				
15	61	47.7	86 59.5	10.1	223 16.7	09.8	318 33.2	09.6	191 19.5	56.6				
16	76	50.1	101 59.4	09.4	238 20.1	09.5	333 35.4	09.5	206 22.1	56.6				
17	91	52.6	116 59.2	-10 08.6	253 23.5	-5 09.2	348 37.6	+23 09.5	221 24.7	-15 56.5				
18	106	55.1	131 59.1	-10 07.8	268 26.8	-5 08.9	3 39.7	+23 09.5	236 27.3	-15 56.5				
19	121	57.5	146 58.9	07.1	283 30.2	08.6	18 41.9	09.5	251 29.9	56.4				
20	137	00.0	161 58.8	06.3	298 33.6	08.4	33 44.1	09.4	266 32.5	56.4				
21	152	02.4	176 58.6	05.5	313 37.0	08.1	48 46.3	09.4	281 35.1	56.4				
22	167	04.9	191 58.5	04.8	328 40.4	07.8	63 48.5	09.4	296 37.7	56.3				
23	182	07.4	206 58.3	04.0	343 43.7	07.5	78 50.7	09.4	311 40.3	56.3				
24	197	09.8	221 58.2	-10 03.2	358 47.1	-5 07.2	93 52.9	+23 09.4	326 42.9	-15 56.2				
Dif	—		-2 +8		+34 +3		+22 0		+26 0					

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 6			Edad: 9 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 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	179	34.1	+7 27.9	69	06.6	+13 27.9	70	60 N	3 20	4 17	5 02	12 20	71	3 03	20	
1	194	34.3	28.8	83	39.5 ¹³⁹	20.9	70	58	32	25	06	27	69	2 56	21	
2	209	34.4	29.8	98	12.4 ¹³⁹	14.0	69	56	42	31	10	34	66	49	23	
3	224	34.6	30.7	112	45.3 ¹³⁹	+13 06.9	71	54	51	37	14	39	65	43	25	
4	239	34.8	31.6	127	18.3 ¹⁴⁰	+12 59.8	71	52	3 59	42	17	44	64	37	27	
5	254	34.9	+7 32.6	141	51.3 ¹⁴⁰	+12 52.7	71	50	4 06	4 47	5 20	12 49	62	2 32	28	
6	269	35.1	+7 33.5	156	24.3 ¹⁴⁰	+12 45.5	72	45	4 20	4 56	5 26	12 59	59	2 21	31	
7	284	35.3	34.4	170	57.3 ¹⁴⁰	38.2	73	40	31	5 04	32	13 07	56	12	33	
8	299	35.5	35.4	185	30.3 ¹⁴⁰	30.9	73	35	40	10	36	14	54	2 05	34	
9	314	35.6	36.3	200	03.4 ¹⁴¹	23.5	74	30	47	16	40	20	53	1 58	36	
10	329	35.8	37.2	214	36.5 ¹⁴¹	16.1	74	20	4 59	25	47	31	49	46	39	
11	344	36.0	+7 38.1	229	09.6 ¹⁴¹	+12 08.6	75	10 N	5 07	5 32	5 53	13 40	47	1 36	41	
12	359	36.1	+7 39.1	243	42.7 ¹⁴¹	+12 01.1	75	0	5 13	5 37	5 58	13 49	44	1 26	44	
13	14	36.3	40.0	258	15.9 ¹⁴²	+11 53.5	76	10 S	18	42	6 04	13 57	42	16	47	
14	29	36.5	40.9	272	49.0 ¹⁴¹	45.8	77	20	21	47	09	14 07	38	1 05	50	
15	44	36.7	41.9	287	22.2 ¹⁴²	38.2	76	30	24	51	15	17	36	0 53	52	
16	59	36.8	42.8	301	55.4 ¹⁴²	30.4	78	35	24	53	19	23	34	46	54	
17	74	37.0	+7 43.7	316	28.6 ¹⁴²	+11 22.6	78	40	5 24	5 56	6 23	14 30	32	0 38	56	
18	89	37.2	+7 44.6	331	01.8 ¹⁴²	+11 14.8	78	45	5 24	5 58	6 27	14 38	29	0 29	58	
19	104	37.3	45.6	345	35.1 ¹⁴³	+11 06.9	79	50	23	6 00	33	48	26	17	61	
20	119	37.5	46.5	0	08.3 ¹⁴²	+10 58.9	80	52	22	01	35	52	25	12	62	
21	134	37.7	47.4	14	41.6 ¹⁴³	50.9	80	54	21	02	38	14 57	24	06	64	
22	149	37.8	48.3	29	14.9 ¹⁴³	42.9	80	56	21	04	41	15 02	22	0 00	65	
23	164	38.0	49.3	43	48.2 ¹⁴³	34.8	81	58	19	05	44	08	20	** ** *	**	
24	179	38.2	+7 50.2	58	21.5 ¹⁴³	+10 26.6	82	60 S	5 18	6 06	6 48	15 15	18	** ** *	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 49 ^m 6			Mag: -4.3 PMG: 9 ^h 12 ^m			Mag: -1.5 PMG: 0 ^h 05 ^m			Mag: -2.2 PMG: 17 ^h 42 ^m			Mag: +0.2 PMG: 2 ^h 13 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°
0	197	09.8	221	58.2	-10 03.2	358	47.1	-5 07.2	93	52.9	+23 09.4	326	42.9	-15 56.2		
1	212	12.3	236	58.0	02.5	13	50.5	06.9	108	55.1	09.3	341	45.6	56.2		
2	227	14.8	251	57.8	01.7	28	53.9	06.6	123	57.3	09.3	356	48.2	56.1		
3	242	17.2	266	57.7	00.9	43	57.3	06.3	138	59.5	09.3	11	50.8	56.1		
4	257	19.7	281	57.5	-10 00.2	59	00.7	06.0	154	01.7	09.3	26	53.4	56.1		
5	272	22.2	296	57.4	-9 59.4	74	04.0	-5 05.7	169	03.9	+23 09.3	41	56.0	-15 56.0		
6	287	24.6	311	57.2	-9 58.6	89	07.4	-5 05.4	184	06.0	+23 09.2	56	58.6	-15 56.0		
7	302	27.1	326	57.1	57.9	104	10.8	05.1	199	08.2	09.2	72	01.2	55.9		
8	317	29.5	341	56.9	57.1	119	14.2	04.9	214	10.4	09.2	87	03.8	55.9		
9	332	32.0	356	56.8	56.3	134	17.6	04.6	229	12.6	09.2	102	06.4	55.9		
10	347	34.5	11	56.6	55.5	149	20.9	04.3	244	14.8	09.2	117	09.0	55.8		
11	2	36.9	26	56.4	-9 54.8	164	24.3	-5 04.0	259	17.0	+23 09.1	132	11.6	-15 55.8		
12	17	39.4	41	56.3	-9 54.0	179	27.7	-5 03.7	274	19.2	+23 09.1	147	14.2	-15 55.7		
13	32	41.9	56	56.1	53.2	194	31.1	03.4	289	21.4	09.1	162	16.8	55.7		
14	47	44.3	71	56.0	52.4	209	34.5	03.1	304	23.6	09.1	177	19.4	55.7		
15	62	46.8	86	55.8	51.7	224	37.9	02.8	319	25.8	09.1	192	22.0	55.6		
16	77	49.3	101	55.7	50.9	239	41.2	02.5	334	27.9	09.0	207	24.6	55.6		
17	92	51.7	116	55.5	-9 50.1	254	44.6	-5 02.2	349	30.1	+23 09.0	222	27.2	-15 55.5		
18	107	54.2	131	55.4	-9 49.3	269	48.0	-5 01.9	4	32.3	+23 09.0	237	29.8	-15 55.5		
19	122	56.7	146	55.2	48.5	284	51.4	01.7	19	34.5	09.0	252	32.4	55.5		
20	137	59.1	161	55.0	47.8	299	54.8	01.4	34	36.7	09.0	267	35.1	55.4		
21	153	01.6	176	54.9	47.0	314	58.2	01.1	49	38.9	08.9	282	37.7	55.4		
22	168	04.0	191	54.7	46.2	330	01.6	00.8	64	41.1	08.9	297	40.3	55.3		
23	183	06.5	206	54.6	45.4	345	04.9	00.5	79	43.2	08.9	312	42.9	55.3		
24	198	09.0	221	54.4	-9 44.6	0	08.3	-5 00.2	94	45.4	+23 08.9	327	45.5	-15 55.3		
Dif	—			-2 +8			-8966 +3			+22 0			+26 0			

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: 10 ^d 2 PHE { SD: 14'8 PMG: 20 ^h 43 ^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	38.2	+7	50.2	58	21.5	+10 26.6	60 N	19 06	19 51	20 49	13 31 72	3 23 17	
1	194	38.3		51.1	72	54.9 ¹⁴⁴	18.5 81	58	19 01	43	36	36 70	17 19	
2	209	38.5		52.0	87	28.2 ¹⁴³	10.2 83	56	18 56	36	25	40 68	12 21	
3	224	38.7		53.0	102	01.6 ¹⁴⁴	+10 01.9 83	54	52	30	16	44 66	08 22	
4	239	38.9		53.9	116	35.0 ¹⁴⁴	+9 53.6 83	52	49	24	08	48 64	04 24	
5	254	39.0	+7	54.8	131	08.3 ¹⁴³	+9 45.2 84	50	18 46	19 19	20 01	13 51 63	3 00 25	
6	269	39.2	+7	55.7	145	41.7 ¹⁴⁴	+9 36.8 84	45	18 39	19 09	19 46	13 58 60	2 52 28	
7	284	39.4		56.7	160	15.1 ¹⁴⁴	28.4 84	40	33	19 01	34	14 03 58	45 31	
8	299	39.5		57.6	174	48.5 ¹⁴⁴	19.8 86	35	28	18 54	25	08 55	39 33	
9	314	39.7		58.5	189	22.0 ¹⁴⁵	11.3 85	30	24	48	17	13 53	34 35	
10	329	39.9	+7	59.4	203	55.4 ¹⁴⁴	+9 02.7 86	20	17	39	19 05	20 50	25 39	
11	344	40.0	+8	00.4	218	28.8 ¹⁴⁴	+8 54.1 86	10 N	18 10	18 32	18 56	14 27 46	2 17 42	
12	359	40.2	+8	01.3	233	02.3 ¹⁴⁵	+8 45.4 87	0	18 05	18 25	18 50	14 33 43	2 10 44	
13	14	40.4		02.2	247	35.7 ¹⁴⁴	36.7 87	10 S	17 59	20	45	39 41	2 03 46	
14	29	40.5		03.1	262	09.2 ¹⁴⁵	27.9 88	20	53	15	41	45 38	1 55 49	
15	44	40.7		04.1	276	42.7 ¹⁴⁵	19.1 88	30	46	10	38	53 34	45 53	
16	59	40.9		05.0	291	16.1 ¹⁴⁴	10.3 88	35	42	08	37	14 57 33	40 55	
17	74	41.0	+8	05.9	305	49.6 ¹⁴⁵	+8 01.4 89	40	17 38	18 05	18 37	15 02 30	1 34 57	
18	89	41.2	+8	06.8	320	23.1 ¹⁴⁵	+7 52.5 89	45	17 33	18 03	18 37	15 07 28	1 27 59	
19	104	41.4		07.7	334	56.6 ¹⁴⁵	43.5 90	50	27	18 00	37	14 25	18 63	
20	119	41.5		08.7	349	30.1 ¹⁴⁵	34.5 90	52	25	17 59	38	17 24	14 64	
21	134	41.7		09.6	4	03.6 ¹⁴⁵	25.5 90	54	22	57	38	21 21	10 66	
22	149	41.9		10.5	18	37.0 ¹⁴⁴	16.4 91	56	19	56	39	24 20	05 68	
23	164	42.0		11.4	33	10.5 ¹⁴⁵	+7 07.3 91	58	15	55	40	28 19	1 00 69	
24	179	42.2	+8	12.4	47	44.0 ¹⁴⁵	+6 58.2 91	60 S	17 11	17 53	18 41	15 33 16	0 54 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 45 ^m 6		Mag: -4.3 PMG: 9 ^h 12 ^m		Mag: -1.5 PMG: 23 ^h 54 ^m		Mag: -2.2 PMG: 17 ^h 38 ^m		Mag: +0.2 PMG: 2 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	198	09.0	221	54.4	-9	44.6	0 08.3	-5 00.2	94	45.4	+23 08.9	327	45.5	-15 55.3	
1	213	11.4	236	54.3		43.9	15 11.7	-4 59.9	109	47.6	08.8	342	48.1	55.2	
2	228	13.9	251	54.1		43.1	30 15.1	59.6	124	49.8	08.8	357	50.7	55.2	
3	243	16.4	266	53.9		42.3	45 18.5	59.3	139	52.0	08.8	12	53.3	55.1	
4	258	18.8	281	53.8		41.5	60 21.9	59.0	154	54.2	08.8	27	55.9	55.1	
5	273	21.3	296	53.6	-9	40.7	75 25.2	-4 58.8	169	56.4	+23 08.8	42	58.5	-15 55.1	
6	288	23.8	311	53.5	-9	39.9	90 28.6	-4 58.5	184	58.5	+23 08.7	58	01.1	-15 55.0	
7	303	26.2	326	53.3		39.2	105 32.0	58.2	200	00.7	08.7	73	03.7	55.0	
8	318	28.7	341	53.2		38.4	120 35.4	57.9	215	02.9	08.7	88	06.3	54.9	
9	333	31.1	356	53.0		37.6	135 38.8	57.6	230	05.1	08.7	103	08.9	54.9	
10	348	33.6	11	52.8		36.8	150 42.2	57.3	245	07.3	08.7	118	11.6	54.8	
11	3	36.1	26	52.7	-9	36.0	165 45.6	-4 57.0	260	09.5	+23 08.6	133	14.2	-15 54.8	
12	18	38.5	41	52.5	-9	35.2	180 48.9	-4 56.7	275	11.6	+23 08.6	148	16.8	-15 54.8	
13	33	41.0	56	52.4		34.4	195 52.3	56.4	290	13.8	08.6	163	19.4	54.7	
14	48	43.5	71	52.2		33.6	210 55.7	56.1	305	16.0	08.6	178	22.0	54.7	
15	63	45.9	86	52.1		32.8	225 59.1	55.9	320	18.2	08.5	193	24.6	54.6	
16	78	48.4	101	51.9		32.0	241 02.5	55.6	335	20.4	08.5	208	27.2	54.6	
17	93	50.9	116	51.7	-9	31.3	256 05.9	-4 55.3	350	22.5	+23 08.5	223	29.8	-15 54.6	
18	108	53.3	131	51.6	-9	30.5	271 09.3	-4 55.0	5	24.7	+23 08.5	238	32.4	-15 54.5	
19	123	55.8	146	51.4		29.7	286 12.6	54.7	20	26.9	08.5	253	35.0	54.5	
20	138	58.3	161	51.3		28.9	301 16.0	54.4	35	29.1	08.4	268	37.6	54.4	
21	154	00.7	176	51.1		28.1	316 19.4	54.1	50	31.3	08.4	283	40.3	54.4	
22	169	03.2	191	50.9		27.3	331 22.8	53.8	65	33.4	08.4	298	42.9	54.4	
23	184	05.6	206	50.8		26.5	346 26.2	53.5	80	35.6	08.4	313	45.5	54.3	
24	199	08.1	221	50.6	-9	25.7	1	29.6	-4 53.3	95	37.8	+23 08.3	328	48.1	-15 54.3
Dif	—		-2	+8		+34	+3		+22	0		+26		0	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 01 ^m 1			Edad: 11 ^d 2 PHE { SD: 14'9 PMG: 21 ^h 27 ^m										
				R ^o : 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	179	42.2	+8 12.4	47	44.0	+6 58.2	60 N	3 12	4 11	4 56	14 43	74	3 40	15
1	194	42.4		62	17.5 ¹⁴⁵	49.0 ⁹²	58	25	19	5 01	46	72	36	18
2	209	42.5		76	51.0 ¹⁴⁵	39.8 ⁹²	56	36	26	05	48	70	33	20
3	224	42.7		91	24.5 ¹⁴⁵	30.5 ⁹³	54	46	32	09	50	68	30	22
4	239	42.9		105	58.0 ¹⁴⁵	21.3 ⁹²	52	3 54	37	13	52	66	28	23
5	254	43.0	+8 16.9	120	31.5 ¹⁴⁵	+6 11.9 ⁹⁴	50	4 01	4 42	5 16	14 54	64	3 25	25
6	269	43.2	+8 17.9	135	05.0 ¹⁴⁵	+6 02.6 ⁹³	45	4 16	4 53	5 23	14 58	61	3 20	28
7	284	43.4		149	38.5 ¹⁴⁵	+5 53.2 ⁹⁴	40	28	5 01	29	15 01	58		16
8	299	43.5		164	12.0 ¹⁴⁵	43.8 ⁹⁴	35	37	08	34	03	56		12
9	314	43.7		178	45.4 ¹⁴⁴	34.4 ⁹⁴	30	45	14	38	06	53		09
10	329	43.9		193	18.9 ¹⁴⁵	24.9 ⁹⁵	20	4 57	23	45	10	50	3 04	37
11	344	44.0	+8 22.5	207	52.4 ¹⁴⁵	+5 15.4 ⁹⁵	10 N	5 06	5 31	5 52	15 13	47	2 59	40
12	359	44.2	+8 23.4	222	25.8 ¹⁴⁴	+5 05.9 ⁹⁵	0	5 13	5 37	5 58	15 16	45	2 54	44
13	14	44.4		236	59.3 ¹⁴⁵	+4 56.3 ⁹⁶	10 S	18	42	6 04	20	41	49	47
14	29	44.5		251	32.7 ¹⁴⁴	46.7 ⁹⁶	20	22	48	10	23	38	44	50
15	44	44.7		266	06.2 ¹⁴⁵	37.1 ⁹⁶	30	25	52	17	27	35	38	53
16	59	44.9		280	39.6 ¹⁴⁴	27.5 ⁹⁶	35	26	55	20	30	32	35	55
17	74	45.0	+8 28.0	295	13.0 ¹⁴⁴	+4 17.8 ⁹⁷	40	5 26	5 58	6 25	15 32	30	2 31	58
18	89	45.2	+8 28.9	309	46.4 ¹⁴⁴	+4 08.1 ⁹⁷	45	5 26	6 00	6 30	15 35	28	2 26	61
19	104	45.3		324	19.8 ¹⁴⁴	+3 58.4 ⁹⁷	50	26	03	36	39	24	21	64
20	119	45.5		338	53.2 ¹⁴⁴	48.7 ⁹⁷	52	26	05	39	41	22	18	66
21	134	45.7		353	26.6 ¹⁴⁴	38.9 ⁹⁸	54	25	06	42	42	22	16	67
22	149	45.8		8	00.0 ¹⁴⁴	29.1 ⁹⁸	56	24	07	45	44	20	13	68
23	164	46.0		22	33.3 ¹⁴³	19.3 ⁹⁸	58	24	09	49	47	17	09	71
24	179	46.2	+8 34.4	37	06.7 ¹⁴⁴	+3 09.5 ⁹⁸	60 S	5 22	6 11	6 53	15 49	15	2 05	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 41 ^m 7		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: -1.5 PMG: 23 ^h 49 ^m		Mag: -2.2 PMG: 17 ^h 35 ^m		Mag: +0.2 PMG: 2 ^h 04 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	199	08.1	221	50.6	-9 25.7	1 29.6	-4 53.3	95 37.8	+23 08.3	328 48.1	-15 54.3
1	214	10.6	236	50.5	24.9	16 32.9	53.0	110 40.0	08.3	343 50.7	54.2
2	229	13.0	251	50.3	24.1	31 36.3	52.7	125 42.2	08.3	358 53.3	54.2
3	244	15.5	266	50.2	23.3	46 39.7	52.4	140 44.3	08.3	13 55.9	54.1
4	259	18.0	281	50.0	22.5	61 43.1	52.1	155 46.5	08.3	28 58.5	54.1
5	274	20.4	296	49.8	-9 21.7	76 46.5	-4 51.8	170 48.7	+23 08.2	44 01.1	-15 54.1
6	289	22.9	311	49.7	-9 20.9	91 49.9	-4 51.5	185 50.9	+23 08.2	59 03.7	-15 54.0
7	304	25.4	326	49.5	20.1	106 53.3	51.2	200 53.0	08.2	74 06.4	54.0
8	319	27.8	341	49.4	19.3	121 56.6	50.9	215 55.2	08.2	89 09.0	53.9
9	334	30.3	356	49.2	18.5	137 00.0	50.7	230 57.4	08.1	104 11.6	53.9
10	349	32.8	11 49.0	17.7	152 03.4	50.4	50.4	245 59.6	08.1	119 14.2	53.9
11	4 35.2	26 48.9	-9 16.9	16.9	167 06.8	-4 50.1	50.1	261 01.7	+23 08.1	134 16.8	-15 53.8
12	19 37.7	41 48.7	-9 16.1	16.1	182 10.2	-4 49.8	49.8	276 03.9	+23 08.1	149 19.4	-15 53.8
13	34 40.1	56 48.6	15.3	15.3	197 13.6	49.5	49.5	291 06.1	08.1	164 22.0	53.7
14	49 42.6	71 48.4	14.5	14.5	212 17.0	49.2	49.2	306 08.3	08.0	179 24.6	53.7
15	64 45.1	86 48.2	13.7	13.7	227 20.3	48.9	48.9	321 10.4	08.0	194 27.2	53.6
16	79 47.5	101 48.1	12.9	12.9	242 23.7	48.6	48.6	336 12.6	08.0	209 29.9	53.6
17	94 50.0	116 47.9	-9 12.1	12.1	257 27.1	-4 48.4	48.4	351 14.8	+23 08.0	224 32.5	-15 53.6
18	109 52.5	131 47.8	-9 11.2	11.2	272 30.5	-4 48.1	48.1	6 17.0	+23 07.9	239 35.1	-15 53.5
19	124 54.9	146 47.6	10.4	10.4	287 33.9	47.8	47.8	21 19.1	07.9	254 37.7	53.5
20	139 57.4	161 47.4	09.6	09.6	302 37.3	47.5	47.5	36 21.3	07.9	269 40.3	53.4
21	154 59.9	176 47.3	08.8	08.8	317 40.7	47.2	47.2	51 23.5	07.9	284 42.9	53.4
22	170 02.3	191 47.1	08.0	08.0	332 44.0	46.9	46.9	66 25.7	07.9	299 45.5	53.4
23	185 04.8	206 47.0	07.2	07.2	347 47.4	46.6	46.6	81 27.8	07.8	314 48.1	53.3
24	200 07.2	221 46.8	-9 06.4	6.4	2 50.8	-4 46.3	46.3	96 30.0	+23 07.8	329 50.8	-15 53.3
Dif	—	-2	+8		+34	+3		+22	0	+26	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 12 ^d 2 PHE	SD: 15:0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 8				PMG: 22 ^h 11 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	179	46.2	+8 34.4	37	06.7	+3 09.5		60 N	19 10	19 56	20 56	15 57	76	3 55
1	194	46.3		51	40.0 ¹⁴³	+2 59.6 ⁹⁹		58	05	48	42	58	73	54
2	209	46.5		66	13.3 ¹⁴³	49.8 ⁹⁸		56	19 00	40	31	58	71	53
3	224	46.7		80	46.6 ¹⁴³	39.9 ⁹⁹		54	18 56	34	21	58	69	52
4	239	46.8		95	19.9 ¹⁴³	29.9 ¹⁰⁰		52	52	28	12	58	68	51
5	254	47.0	+8 38.9	109	53.2 ¹⁴³	+2 20.0 ⁹⁹		50	18 49	19 23	20 04	15 58	66	3 50
6	269	47.1	+8 39.8	124	26.4 ¹⁴²	+2 10.1 ⁹⁹		45	18 41	19 12	19 49	15 59	62	3 48
7	284	47.3		138	59.6 ¹⁴²	+2 00.1 ¹⁰⁰		40	35	19 03	36	59	60	46
8	299	47.5		153	32.8 ¹⁴²	+1 50.1 ¹⁰⁰		35	30	18 56	27	59	58	45
9	314	47.6		168	06.0 ¹⁴²	40.1 ¹⁰⁰		30	25	50	19	15	59	44
10	329	47.8		182	39.2 ¹⁴²	30.1 ¹⁰⁰		20	17	40	19 06	16 00	51	41
11	344	48.0	+8 44.4	197	12.4 ¹⁴²	+1 20.1 ¹⁰⁰		10 N	18 10	18 32	18 57	16 00	48	3 39
12	359	48.1	+8 45.3	211	45.5 ¹⁴¹	+1 10.0 ¹⁰¹		0	18 04	18 25	18 49	16 01	45	3 38
13	14	48.3		226	18.6 ¹⁴¹	+1 00.0 ¹⁰⁰		10 S	17 58	19	44	01	42	36
14	29	48.4		240	51.7 ¹⁴¹	+0 49.9 ¹⁰¹		20	51	14	39	01	39	34
15	44	48.6		255	24.7 ¹⁴⁰	39.8 ¹⁰¹		30	44	08	36	02	35	31
16	59	48.8		269	57.8 ¹⁴¹	29.7 ¹⁰¹		35	40	05	35	02	33	30
17	74	48.9	+8 49.9	284	30.8 ¹⁴⁰	+0 19.6 ¹⁰¹		40	17 35	18 02	18 34	16 02	31	3 29
18	89	49.1	+8 50.8	299	03.8 ¹⁴⁰	+0 09.5 ¹⁰¹		45	17 30	17 59	18 33	16 03	28	3 27
19	104	49.2		313	36.8 ¹⁴⁰	-0 00.7 ¹⁰²		50	23	56	33	03	25	25
20	119	49.4		328	09.7 ¹³⁹	10.8 ¹⁰¹		52	20	54	33	03	24	24
21	134	49.6		342	42.6 ¹³⁹	20.9 ¹⁰¹		54	17	53	34	04	21	23
22	149	49.7		357	15.5 ¹³⁹	31.1 ¹⁰²		56	14	51	34	04	20	21
23	164	49.9		11	48.4 ¹³⁹	41.2 ¹⁰¹		58	10	49	35	04	18	20
24	179	50.0	+8 56.2	26	21.2 ¹³⁸	-0 51.4 ¹⁰²		60 S	17 05	17 47	18 35	16 04	16	3 18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 37 ^m 8		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: -1.5 PMG: 23 ^h 43 ^m		Mag: -2.2 PMG: 17 ^h 31 ^m		Mag: +0.2 PMG: 2 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	200	07.2	221 46.8	-9 06.4	2 50.8	-4 46.3	96 30.0	+23 07.8	329 50.8	-15 53.3				
1	215	09.7	236 46.6	05.6	17 54.2	46.1	111 32.2	07.8	344 53.4	53.2				
2	230	12.2	251 46.5	04.8	32 57.6	45.8	126 34.3	07.8	359 56.0	53.2				
3	245	14.6	266 46.3	04.0	48 01.0	45.5	141 36.5	07.7	14 58.6	53.1				
4	260	17.1	281 46.2	03.1	63 04.3	45.2	156 38.7	07.7	30 01.2	53.1				
5	275	19.6	296 46.0	-9 02.3	78 07.7	-4 44.9	171 40.9	+23 07.7	45 03.8	-15 53.1				
6	290	22.0	311 45.8	-9 01.5	93 11.1	-4 44.6	186 43.0	+23 07.7	60 06.4	-15 53.0				
7	305	24.5	326 45.7	-9 00.7	108 14.5	44.3	201 45.2	07.6	75 09.0	53.0				
8	320	27.0	341 45.5	-8 59.9	123 17.9	44.1	216 47.4	07.6	90 11.7	52.9				
9	335	29.4	356 45.4	59.1	138 21.3	43.8	231 49.5	07.6	105 14.3	52.9				
10	350	31.9	11 45.2	58.2	153 24.6	43.5	246 51.7	07.6	120 16.9	52.8				
11	5 34.4	26 45.0	-8 57.4	168 28.0	-4 43.2	261 53.9	+23 07.6	261 53.9	135 19.5	-15 52.8				
12	20 36.8	41 44.9	-8 56.6	183 31.4	-4 42.9	276 56.0	+23 07.5	276 56.0	150 22.1	-15 52.8				
13	35 39.3	56 44.7	55.8	198 34.8	42.6	291 58.2	07.5	291 58.2	165 24.7	52.7				
14	50 41.7	71 44.6	55.0	213 38.2	42.3	307 00.4	07.5	307 00.4	180 27.3	52.7				
15	65 44.2	86 44.4	54.2	228 41.6	42.1	322 02.5	07.5	322 02.5	195 29.9	52.6				
16	80 46.7	101 44.2	53.3	243 44.9	41.8	337 04.7	07.4	337 04.7	210 32.6	52.6				
17	95 49.1	116 44.1	-8 52.5	258 48.3	-4 41.5	352 06.9	+23 07.4	352 06.9	225 35.2	-15 52.6				
18	110 51.6	131 43.9	-8 51.7	273 51.7	-4 41.2	7 09.0	+23 07.4	7 09.0	240 37.8	-15 52.5				
19	125 54.1	146 43.8	50.9	288 55.1	40.9	22 11.2	07.4	22 11.2	255 40.4	52.5				
20	140 56.5	161 43.6	50.0	303 58.5	40.6	37 13.4	07.3	37 13.4	270 43.0	52.4				
21	155 59.0	176 43.4	49.2	319 01.9	40.3	52 15.5	07.3	52 15.5	285 45.6	52.4				
22	171 01.5	191 43.3	48.4	334 05.2	40.1	67 17.7	07.3	67 17.7	300 48.3	52.3				
23	186 03.9	206 43.1	47.6	349 08.6	39.8	82 19.9	07.3	82 19.9	315 50.9	52.3				
24	201 06.4	221 42.9	-8 46.8	4 12.0	-4 39.5	97 22.0	+23 07.3	97 22.0	330 53.5	-15 52.3				
Dif	—		-2	+8		+34	+3		+22	0		+26	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 13 ^d 2 PHE { SD: 15'1 PMG: 22 ^h 57 ^m										
				R ^e : 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	50.0	+ 8 56.2	26	21.2	-0 51.4		60 N	3 05	4 04	4 50	17 13	78	4 10 17
1	194	50.2		40	54.0 ¹³⁸	-1 01.6 ¹⁰²		58	18	13	4 55	11 75		11 19
2	209	50.4		55	26.8 ¹³⁸		11.8 ¹⁰²	56	30	20	5 00	09 73		12 21
3	224	50.5		69	59.5 ¹³⁷		21.9 ¹⁰¹	54	40	27	04	07 72		13 22
4	239	50.7	+ 8 59.9	84	32.2 ¹³⁷		32.1 ¹⁰²	52	49	33	08	06 69		13 24
5	254	50.9	+ 9 00.8	99	04.9 ¹³⁷	-1 42.3 ¹⁰²		50	3 56	4 38	5 12	17 04	68	4 14 25
6	269	51.0	+ 9 01.7	113	37.5 ¹³⁶	-1 52.5 ¹⁰²		45	4 12	4 49	5 19	17 01	65	4 15 29
7	284	51.2		128	10.2 ¹³⁷	-2 02.7 ¹⁰²		40	24	4 58	26	16 59	61	16 32
8	299	51.3		142	42.7 ¹³⁵		12.8 ¹⁰¹	35	34	5 05	31	57 59		17 34
9	314	51.5		157	15.3 ¹³⁶		23.0 ¹⁰²	30	42	11	36	55 56		18 36
10	329	51.6		171	47.8 ¹³⁵		33.2 ¹⁰²	20	4 55	21	44	51 53		20 39
11	344	51.8	+ 9 06.2	186	20.3 ¹³⁵	-2 43.4 ¹⁰²		10 N	5 05	5 29	5 51	16 48	50	4 21 43
12	359	52.0	+ 9 07.1	200	52.7 ¹³⁴	-2 53.6 ¹⁰²		0	5 12	5 36	5 57	16 46	46	4 22 46
13	14	52.1		215	25.1 ¹³⁴	-3 03.7 ¹⁰¹		10 S	18	42	6 04	43 44		23 49
14	29	52.3		229	57.5 ¹³⁴		13.9 ¹⁰²	20	22	48	10	40 41		24 53
15	44	52.4		244	29.8 ¹³³		24.1 ¹⁰²	30	26	54	18	37 37		26 56
16	59	52.6		259	02.1 ¹³³		34.2 ¹⁰¹	35	27	56	22	35 35		27 58
17	74	52.8	+ 9 11.6	273	34.4 ¹³³	-3 44.4 ¹⁰²		40	5 28	5 59	6 27	16 33	33	4 28 60
18	89	52.9	+ 9 12.5	288	06.6 ¹³²	-3 54.5 ¹⁰¹		45	5 29	6 03	6 32	16 31	29	4 29 63
19	104	53.1		302	38.8 ¹³²	-4 04.6 ¹⁰¹		50	29	06	39	28 26		30 67
20	119	53.2		317	10.9 ¹³¹		14.8 ¹⁰²	52	29	08	42	27 25		30 69
21	134	53.4		331	43.0 ¹³¹		24.9 ¹⁰¹	54	28	09	45	25 24		31 70
22	149	53.5		346	15.0 ¹³⁰		35.0 ¹⁰¹	56	28	11	49	24 21		32 72
23	164	53.7		0	47.0 ¹³⁰		45.1 ¹⁰¹	58	28	13	53	22 19		32 75
24	179	53.9	+ 9 18.0	15	19.0 ¹³⁰	-4 55.1 ¹⁰⁰		60 S	5 27	6 15	6 58	16 20	17	4 33 77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 33 ^m 8		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: -1.5 PMG: 23 ^h 38 ^m		Mag: -2.2 PMG: 17 ^h 28 ^m		Mag: +0.2 PMG: 1 ^h 56 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	201	06.4	221	42.9	-8 46.8	4 12.0	-4 39.5	97 22.0	+23 07.3	330 53.5	-15 52.3
1	216	08.8	236	42.8	45.9	19 15.4	39.2	112 24.2	07.2	345 56.1	52.2
2	231	11.3	251	42.6	45.1	34 18.8	38.9	127 26.4	07.2	0 58.7	52.2
3	246	13.8	266	42.5	44.3	49 22.1	38.6	142 28.5	07.2	16 01.3	52.1
4	261	16.2	281	42.3	43.4	64 25.5	38.4	157 30.7	07.2	31 03.9	52.1
5	276	18.7	296	42.1	-8 42.6	79 28.9	-4 38.1	172 32.9	+23 07.1	46 06.6	-15 52.0
6	291	21.2	311	42.0	-8 41.8	94 32.3	-4 37.8	187 35.0	+23 07.1	61 09.2	-15 52.0
7	306	23.6	326	41.8	41.0	109 35.7	37.5	202 37.2	07.1	76 11.8	52.0
8	321	26.1	341	41.6	40.1	124 39.1	37.2	217 39.4	07.1	91 14.4	51.9
9	336	28.6	356	41.5	39.3	139 42.4	36.9	232 41.5	07.0	106 17.0	51.9
10	351	31.0	11 41.3	38.5	154 45.8	169 49.2	36.7	247 43.7	07.0	121 19.6	51.8
11	6	33.5	26 41.2	-8 37.6	169 49.2	-4 36.4		262 45.8	+23 07.0	136 22.3	-15 51.8
12	21	36.0	41 41.0	-8 36.8	184 52.6	-4 36.1		277 48.0	+23 07.0	151 24.9	-15 51.7
13	36	38.4	56 40.8	36.0	199 56.0	35.8		292 50.2	06.9	166 27.5	51.7
14	51	40.9	71 40.7	35.1	214 59.3	35.5		307 52.3	06.9	181 30.1	51.7
15	66	43.3	86 40.5	34.3	230 02.7	35.3		322 54.5	06.9	196 32.7	51.6
16	81	45.8	101 40.3	33.5	245 06.1	35.0		337 56.7	06.9	211 35.3	51.6
17	96	48.3	116 40.2	-8 32.6	260 09.5	-4 34.7		352 58.8	+23 06.8	226 38.0	-15 51.5
18	111	50.7	131 40.0	-8 31.8	275 12.9	-4 34.4		8 01.0	+23 06.8	241 40.6	-15 51.5
19	126	53.2	146 39.9	31.0	290 16.2	34.1		23 03.1	06.8	256 43.2	51.4
20	141	55.7	161 39.7	30.1	305 19.6	33.8		38 05.3	06.8	271 45.8	51.4
21	156	58.1	176 39.5	29.3	320 23.0	33.6		53 07.5	06.7	286 48.4	51.4
22	172	00.6	191 39.4	28.5	335 26.4	33.3		68 09.6	06.7	301 51.0	51.3
23	187	03.1	206 39.2	27.6	350 29.7	33.0		83 11.8	06.7	316 53.7	51.3
24	202	05.5	221 39.0	-8 26.8	5 33.1	-4 32.7		98 13.9	+23 06.7	331 56.3	-15 51.2
Dif	—		-2 +8		+34 +3		+22 0		+26 0		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 12 ^h 00 ^m 3			Edad: 14 ^d 2 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'7 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	h m m	h m m				
0	179	53.9	+9 18.0	15	19.0	-4 55.1	101	60 N	19 15	20 02	21 03	18 31 79	4 27 18					
1	194	54.0	18.9	29	50.9 ¹²⁹	-5 05.2 ¹⁰¹		58	10	19 53	20 48	26 77	30 20					
2	209	54.2	19.8	44	22.8 ¹²⁹	15.2 ¹⁰⁰		56	04	45	36	22 75	33 22					
3	224	54.3	20.7	58	54.7 ¹²⁹	25.3 ¹⁰¹		54	19 00	38	25	19 72	35 24					
4	239	54.5	21.6	73	26.5 ¹²⁸	35.3 ¹⁰⁰		52	18 56	32	16	15 71	37 26					
5	254	54.6	+9 22.5	87	58.2 ¹²⁷	-5 45.3 ¹⁰⁰		50	18 52	19 26	20 08	18 12 69	4 39 28					
6	269	54.8	+9 23.4	102	29.9 ¹²⁷	-5 55.3 ¹⁰⁰		45	18 44	19 15	19 52	18 06 65	4 44 31					
7	284	55.0	24.3	117	01.6 ¹²⁷	-6 05.2 ⁹⁹		40	37	19 05	39	18 00 63	48 33					
8	299	55.1	25.2	131	33.2 ¹²⁶	15.2 ¹⁰⁰		35	32	18 58	28	17 56 60	51 36					
9	314	55.3	26.1	146	04.7 ¹²⁵	25.1 ⁹⁹		30	27	51	20	51 59	54 38					
10	329	55.4	27.0	160	36.2 ¹²⁵	35.0 ⁹⁹		20	18	40	19 07	44 55	4 59 42					
11	344	55.6	+9 27.9	175	07.7 ¹²⁵	-6 44.8 ⁹⁸		10 N	18 10	18 32	18 57	17 38 52	5 04 44					
12	359	55.7	+9 28.8	189	39.1 ¹²⁴	-6 54.7 ⁹⁹		0	18 04	18 25	18 49	17 32 49	5 08 48					
13	14	55.9	29.7	204	10.5 ¹²⁴	-7 04.5 ⁹⁸		10 S	17 57	18	43	27 46	12 51					
14	29	56.0	30.6	218	41.8 ¹²³	14.3 ⁹⁸		20	50	12	38	21 43	17 54					
15	44	56.2	31.5	233	13.1 ¹²³	24.1 ⁹⁸		30	42	06	34	14 39	22 57					
16	59	56.4	32.3	247	44.3 ¹²²	33.8 ⁹⁷		35	37	03	32	10 38	25 59					
17	74	56.5	+9 33.2	262	15.4 ¹²¹	-7 43.5 ⁹⁷		40	17 32	18 00	18 31	17 06 35	5 28 62					
18	89	56.7	+9 34.1	276	46.5 ¹²¹	-7 53.2 ⁹⁷		45	17 26	17 56	18 30	17 00 33	5 32 65					
19	104	56.8	35.0	291	17.6 ¹²¹	-8 02.9 ⁹⁷		50	19	52	29	16 54 30	37 68					
20	119	57.0	35.9	305	48.6 ¹²⁰	12.5 ⁹⁶		52	16	50	29	52 27	39 70					
21	134	57.1	36.8	320	19.6 ¹²⁰	22.1 ⁹⁶		54	13	48	29	49 26	41 72					
22	149	57.3	37.7	334	50.5 ¹¹⁹	31.7 ⁹⁶		56	09	46	29	45 25	44 73					
23	164	57.4	38.6	349	21.3 ¹¹⁸	41.2 ⁹⁵		58	17 04	44	30	41 23	47 76					
24	179	57.6	+9 39.5	3	52.1 ¹¹⁸	-8 50.7 ⁹⁵		60 S	16 59	17 42	18 30	16 37 20	5 50 78					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 29 ^m 9		Mag: -4.3 PMG: 9 ^h 13 ^m			Mag: -1.4 PMG: 23 ^h 32 ^m			Mag: -2.2 PMG: 17 ^h 25 ^m			Mag: +0.2 PMG: 1 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	202	05.5	221	39.0	-8	26.8	5	33.1	-4	32.7	98	13.9	+23	06.7	331	56.3	-15	51.2
1	217	08.0	236	38.9		25.9	20	36.5		32.4	113	16.1		06.6	346	58.9		51.2
2	232	10.4	251	38.7		25.1	35	39.9		32.2	128	18.2		06.6	2	01.5		51.1
3	247	12.9	266	38.6		24.3	50	43.3		31.9	143	20.4		06.6	17	04.1		51.1
4	262	15.4	281	38.4		23.4	65	46.6		31.6	158	22.6		06.6	32	06.7		51.1
5	277	17.8	296	38.2	-8	22.6	80	50.0	-4	31.3	173	24.7	+23	06.6	47	09.4	-15	51.0
6	292	20.3	311	38.1	-8	21.7	95	53.4	-4	31.0	188	26.9	+23	06.5	62	12.0	-15	51.0
7	307	22.8	326	37.9		20.9	110	56.8		30.8	203	29.0		06.5	77	14.6		50.9
8	322	25.2	341	37.7		20.1	126	00.1		30.5	218	31.2		06.5	92	17.2		50.9
9	337	27.7	356	37.6		19.2	141	03.5		30.2	233	33.3		06.5	107	19.8		50.8
10	352	30.2	11	37.4		18.4	156	06.9		29.9	248	35.5		06.4	122	22.5		50.8
11	7	32.6	26	37.2	-8	17.5	171	10.3	-4	29.6	263	37.7	+23	06.4	137	25.1	-15	50.8
12	22	35.1	41	37.1	-8	16.7	186	13.6	-4	29.4	278	39.8	+23	06.4	152	27.7	-15	50.7
13	37	37.6	56	36.9		15.8	201	17.0		29.1	293	42.0		06.4	167	30.3		50.7
14	52	40.0	71	36.8		15.0	216	20.4		28.8	308	44.1		06.3	182	32.9		50.6
15	67	42.5	86	36.6		14.1	231	23.8		28.5	323	46.3		06.3	197	35.5		50.6
16	82	44.9	101	36.4		13.3	246	27.1		28.3	338	48.4		06.3	212	38.2		50.5
17	97	47.4	116	36.3	-8	12.4	261	30.5	-4	28.0	353	50.6	+23	06.3	227	40.8	-15	50.5
18	112	49.9	131	36.1	-8	11.6	276	33.9	-4	27.7	8	52.7	+23	06.2	242	43.4	-15	50.5
19	127	52.3	146	35.9		10.7	291	37.3		27.4	23	54.9		06.2	257	46.0		50.4
20	142	54.8	161	35.8		09.9	306	40.6		27.1	38	57.1		06.2	272	48.6		50.4
21	157	57.3	176	35.6		09.0	321	44.0		26.9	53	59.2		06.2	287	51.3		50.3
22	172	59.7	191	35.4		08.2	336	47.4		26.6	69	01.4		06.1	302	53.9		50.3
23	188	02.2	206	35.3		07.3	351	50.7		26.3	84	03.5		06.1	317	56.5		50.2
24	203	04.7	221	35.1	-8	06.5	6	54.1	-4	26.0	99	05.7	+23	06.1	332	59.1	-15	50.2
Dif	—		-2		+8		+34		+3		+22		0		+26		0	

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: 15 ^d 2 PHE { SD: 15'5 PMG: **h **m											
				R ^o : **m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	57.6	+9	39.5	3	52.1	-8	50.7	60 N	2 57	3 58	4 44	19 50	79	4 45 22
1	194	57.7		40.4	18	22.8 ¹¹⁷	-9	00.1 ⁹⁴	58	3 11	4 07	50	43 77		50 24
2	209	57.9		41.3	32	53.5 ¹¹⁷		09.5 ⁹⁴	56	24	15	4 55	37 74		55 26
3	224	58.0		42.2	47	24.1 ¹¹⁶		18.9 ⁹⁴	54	34	22	5 00	31 73	4 59	29
4	239	58.2		43.1	61	54.7 ¹¹⁶		28.2 ⁹³	52	43	28	04	26 71	5 03	30
5	254	58.4	+9	44.0	76	25.2 ¹¹⁵	-9	37.5 ⁹³	50	3 51	4 33	5 08	19 21	70	5 07 31
6	269	58.5	+9	44.9	90	55.7 ¹¹⁵	-9	46.8 ⁹³	45	4 08	4 45	5 16	19 11	67	5 15 34
7	284	58.7		45.8	105	26.1 ¹¹⁴	-9	56.0 ⁹²	40	21	4 55	23	19 03	64	21 37
8	299	58.8		46.7	119	56.4 ¹¹³	-10	05.2 ⁹²	35	31	5 02	28	18 56	62	27 39
9	314	59.0		47.6	134	26.7 ¹¹³		14.3 ⁹¹	30	40	09	33	50 60		32 41
10	329	59.1		48.5	148	56.9 ¹¹²		23.4 ⁹¹	20	4 53	20	42	39 57		41 44
11	344	59.3	+9	49.4	163	27.1 ¹¹²	-10	32.4 ⁹⁰	10 N	5 04	5 28	5 50	18 30	54	5 48 48
12	359	59.4	+9	50.2	177	57.2 ¹¹¹	-10	41.4 ⁹⁰	0	5 11	5 36	5 57	18 21	52	5 56 50
13	14	59.6		51.1	192	27.3 ¹¹¹		50.4 ⁹⁰	10 S	18	42	6 04	13 49		6 03 53
14	29	59.7		52.0	206	57.2 ¹⁰⁹	-10	59.2 ⁸⁸	20	23	49	11	18 04	46	11 55
15	44	59.9		52.9	221	27.2 ¹¹⁰	-11	08.1 ⁸⁹	30	27	55	19	17 53	44	19 59
16	60	00.0		53.8	235	57.1 ¹⁰⁹		16.9 ⁸⁸	35	29	5 58	24	48 41		24 61
17	75	00.2	+9	54.7	250	26.9 ¹⁰⁸	-11	25.6 ⁸⁷	40	5 30	6 01	6 29	17 41	39	6 30 64
18	90	00.3	+9	55.6	264	56.6 ¹⁰⁷	-11	34.3 ⁸⁷	45	5 31	6 05	6 35	17 33	37	6 37 66
19	105	00.5		56.5	279	26.3 ¹⁰⁷		42.9 ⁸⁶	50	32	09	42	24 34		45 69
20	120	00.6		57.4	293	56.0 ¹⁰⁷	-11	51.5 ⁸⁶	52	32	11	45	19 33		49 70
21	135	00.8		58.3	308	25.5 ¹⁰⁵	-12	00.0 ⁸⁵	54	32	13	49	15 31		53 72
22	150	00.9	+9	59.1	322	55.0 ¹⁰⁵	-12	08.5 ⁸⁵	56	32	15	53	10 29		6 57 75
23	165	01.1	+10	00.0	337	24.5 ¹⁰⁵		16.9 ⁸⁴	58	32	17	6 57	17 04	27	7 03 76
24	180	01.2	+10	00.9	351	53.9 ¹⁰⁴	-12	25.2 ⁸³	60 S	5 31	6 20	7 02	16 57	25	7 08 79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 26 ^m 0		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: -1.4 PMG: 23 ^h 27 ^m		Mag: -2.2 PMG: 17 ^h 21 ^m		Mag: +0.2 PMG: 1 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	203	04.7	221	35.1	-8	06.5	6	54.1	-4	26.0				
1	218	07.1	236	35.0		05.6	21	57.5		25.8				
2	233	09.6	251	34.8		04.8	37	00.9		25.5				
3	248	12.1	266	34.6		03.9	52	04.2		25.2				
4	263	14.5	281	34.5		03.1	67	07.6		24.9				
5	278	17.0	296	34.3	-8	02.2	82	11.0	-4	24.7				
6	293	19.4	311	34.1	-8	01.4	97	14.3	-4	24.4				
7	308	21.9	326	34.0	-8	00.5	112	17.7		24.1				
8	323	24.4	341	33.8	-7	59.7	127	21.1		23.8				
9	338	26.8	356	33.6		58.8	142	24.4		23.6				
10	353	29.3	11	33.5		57.9	157	27.8		23.3				
11	8	31.8	26	33.3	-7	57.1	172	31.2	-4	23.0				
12	23	34.2	41	33.1	-7	56.2	187	34.6	-4	22.7				
13	38	36.7	56	33.0		55.4	202	37.9		22.5				
14	53	39.2	71	32.8		54.5	217	41.3		22.2				
15	68	41.6	86	32.6		53.6	232	44.7		21.9				
16	83	44.1	101	32.5		52.8	247	48.0		21.6				
17	98	46.5	116	32.3	-7	51.9	262	51.4	-4	21.4				
18	113	49.0	131	32.1	-7	51.1	277	54.8	-4	21.1				
19	128	51.5	146	32.0		50.2	292	58.1		20.8				
20	143	53.9	161	31.8		49.3	308	01.5		20.5				
21	158	56.4	176	31.7		48.5	323	04.9		20.3				
22	173	58.9	191	31.5		47.6	338	08.2		20.0				
23	189	01.3	206	31.3		46.7	353	11.6		19.7				
24	204	03.8	221	31.2	-7	45.9	8	14.9	-4	19.5				
Dif	—		-2 +9		+34		+3		+21 0		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 59 ^m 8			Edad: 16 ^d 2 PHE { 4 ^h : 57/4 12 ^h : 57/6 20 ^h : 57/8 SD: 15°6 PMG: 0 ^h 34 ^m R°: 52 ^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	01.2	+10 00.9	351	53.9	-12 25.2	83	60 N	19 20	20 07	21 10	21 09 76	5 07 27	
1	195	01.4	01.8	6	23.2 ¹⁰³	33.5	83	58	14	19 58	20 54	21 00 73	14 30	
2	210	01.5	02.7	20	52.5 ¹⁰³	41.7	82	56	09	49	41	20 51 72	21 32	
3	225	01.7	03.6	35	21.7 ¹⁰²	49.9	82	54	19 04	42	30	44 70	28 33	
4	240	01.8	04.5	49	50.8 ¹⁰¹	-12 58.0	81	52	18 59	35	20	37 69	33 35	
5	255	02.0	+10 05.4	64	19.9 ¹⁰¹	-13 06.0	80	50	18 55	19 30	20 12	20 31 68	5 38 37	
6	270	02.1	+10 06.3	78	49.0 ¹⁰¹	-13 14.0	80	45	18 46	19 17	19 55	20 18 65	5 49 40	
7	285	02.3	07.1	93	17.9 ⁹⁹	21.9	79	40	39	19 07	41	20 07 63	5 58 42	
8	300	02.4	08.0	107	46.8 ⁹⁹	29.7	78	35	33	18 59	30	19 58 62	6 06 44	
9	315	02.6	08.9	122	15.7 ⁹⁹	37.5	78	30	28	52	21	50 60	13 45	
10	330	02.7	09.8	136	44.4 ⁹⁷	45.1	76	20	19	41	19 07	36 58	25 48	
11	345	02.9	+10 10.7	151	13.2 ⁹⁸	-13 52.8	77	10 N	18 11	18 32	18 57	19 24 56	6 36 50	
12	0	03.0	+10 11.6	165	41.8 ⁹⁶	-14 00.3	75	0	18 03	18 24	18 49	19 13 54	6 46 52	
13	15	03.2	12.5	180	10.4 ⁹⁶	07.8	75	10 S	17 56	17	42	19 02 52	6 56 55	
14	30	03.3	13.3	194	38.9 ⁹⁵	15.2	74	20	48	11	36	18 50 50	7 06 58	
15	45	03.5	14.2	209	07.4 ⁹⁵	22.5	73	30	40	04	32	37 47	18 61	
16	60	03.6	15.1	223	35.8 ⁹⁴	29.8	73	35	35	18 00	30	29 46	25 62	
17	75	03.8	+10 16.0	238	04.2 ⁹⁴	-14 36.9	71	40	17 29	17 57	18 28	18 20 45	7 34 63	
18	90	03.9	+10 16.9	252	32.5 ⁹³	-14 44.0	71	45	17 23	17 53	18 27	18 10 42	7 43 66	
19	105	04.0	17.8	267	00.7 ⁹²	51.1	71	50	15	48	26	17 58 40	54 69	
20	120	04.2	18.6	281	28.9 ⁹²	-14 58.0	69	52	12	46	25	52 39	7 59 71	
21	135	04.3	19.5	295	57.0 ⁹¹	-15 04.8	68	54	08	44	25	46 37	8 05 72	
22	150	04.5	20.4	310	25.1 ⁹¹	11.6	68	56	17 04	42	25	39 35	12 73	
23	165	04.6	21.3	324	53.0 ⁸⁹	18.3	67	58	16 59	39	25	31 34	19 75	
24	180	04.8	+10 22.2	339	21.0 ⁹⁰	-15 24.9	66	60 S	16 54	17 36	18 25	17 22 32	8 27 78	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 22 ^m 0		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: -1.4 PMG: 23 ^h 22 ^m		Mag: -2.2 PMG: 17 ^h 18 ^m		Mag: +0.2 PMG: 1 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	204	03.8	221 31.2	-7 45.9	8 14.9	-4 19.5	99 57.2	+23 05.5	334 02.0	-15 49.1
1	219	06.3	236 31.0	45.0	23 18.3	19.2	114 59.4	05.4	349 04.7	49.1
2	234	08.7	251 30.8	44.2	38 21.7	18.9	130 01.5	05.4	4 07.3	49.1
3	249	11.2	266 30.7	43.3	53 25.0	18.6	145 03.7	05.4	19 09.9	49.0
4	264	13.7	281 30.5	42.4	68 28.4	18.4	160 05.8	05.4	34 12.5	49.0
5	279	16.1	296 30.3	-7 41.6	83 31.8	-4 18.1	175 08.0	+23 05.3	49 15.1	-15 48.9
6	294	18.6	311 30.2	-7 40.7	98 35.1	-4 17.8	190 10.1	+23 05.3	64 17.8	-15 48.9
7	309	21.0	326 30.0	39.8	113 38.5	17.6	205 12.3	05.3	79 20.4	48.8
8	324	23.5	341 29.8	38.9	128 41.9	17.3	220 14.4	05.2	94 23.0	48.8
9	339	26.0	356 29.7	38.1	143 45.2	17.0	235 16.6	05.2	109 25.6	48.7
10	354	28.4	11 29.5	37.2	158 48.6	16.8	250 18.7	05.2	124 28.3	48.7
11	9	30.9	26 29.3	-7 36.3	173 51.9	-4 16.5	265 20.8	+23 05.2	139 30.9	-15 48.7
12	24	33.4	41 29.2	-7 35.5	188 55.3	-4 16.2	280 23.0	+23 05.1	154 33.5	-15 48.6
13	39	35.8	56 29.0	34.6	203 58.7	15.9	295 25.1	05.1	169 36.1	48.6
14	54	38.3	71 28.8	33.7	219 02.0	15.7	310 27.3	05.1	184 38.8	48.5
15	69	40.8	86 28.7	32.9	234 05.4	15.4	325 29.4	05.1	199 41.4	48.5
16	84	43.2	101 28.5	32.0	249 08.7	15.1	340 31.6	05.0	214 44.0	48.4
17	99	45.7	116 28.3	-7 31.1	264 12.1	-4 14.9	355 33.7	+23 05.0	229 46.6	-15 48.4
18	114	48.1	131 28.2	-7 30.2	279 15.4	-4 14.6	10 35.8	+23 05.0	244 49.2	-15 48.3
19	129	50.6	146 28.0	29.4	294 18.8	14.3	25 38.0	05.0	259 51.9	48.3
20	144	53.1	161 27.8	28.5	309 22.2	14.1	40 40.1	04.9	274 54.5	48.3
21	159	55.5	176 27.7	27.6	324 25.5	13.8	55 42.3	04.9	289 57.1	48.2
22	174	58.0	191 27.5	26.7	339 28.9	13.5	70 44.4	04.9	304 59.7	48.2
23	190	00.5	206 27.3	25.9	354 32.2	13.3	85 46.5	04.8	320 02.4	48.1
24	205	02.9	221 27.2	-7 25.0	9 35.6	-4 13.0	100 48.7	+23 04.8	335 05.0	-15 48.1
Dif	—		-2	+9	+34	+3	+21	0	+26	0

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: 17 ^d 2 PHE { 4 ^h : 57'9 12 ^h : 58'1 20 ^h : 58'2 SD: 15'8 PMG: 1 ^h 26 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	04.8	+10	22.2	339	21.0	-15	24.9	60 N	2	48	3	51	4	38	22	25	69
1	195	04.9		23.0	353	48.9	89	31.4	58	3	04	4	01	44		13	68	44
2	210	05.1		23.9	8	16.7	88	37.9	56	17	09	50		22	03	66	5	53
3	225	05.2		24.8	22	44.4	87	44.2	54	28	17	55		21	54	65	6	01
4	240	05.4		25.7	37	12.1	87	50.5	52	38	23	4	59	46	65		08	43
5	255	05.5	+10	26.6	51	39.8	87	-15	56.7	50	3	47	4	29	5	03	21	39
6	270	05.7	+10	27.4	66	07.4	86	-16	02.8	45	4	04	4	41	5	12	21	23
7	285	05.8		28.3	80	34.9	85	08.7	40	18	4	51	20		10	62		40
8	300	05.9		29.2	95	02.4	85	14.6	35	29	5	00	26		21	00	60	50
9	315	06.1		30.1	109	29.8	84	20.5	30	38	07	31		20	50	60	6	58
10	330	06.2		31.0	123	57.1	83	26.2	20	4	52	18	41		34	59	7	13
11	345	06.4	+10	31.8	138	24.4	83	-16	31.8	10 N	5	02	5	27	5	49	20	20
12	0	06.5	+10	32.7	152	51.7	83	-16	37.3	0	5	11	5	35	5	56	20	07
13	15	06.7		33.6	167	18.9	82	42.8	10 S	18	42	6	04		19	54	55	7
14	30	06.8		34.5	181	46.0	81	48.1	20	23	49	11		40	54		8	04
15	45	06.9		35.4	196	13.1	81	53.3	30	28	5	56	20		24	52		19
16	60	07.1		36.2	210	40.2	81	-16	58.5	35	30	6	00	25		15	51	27
17	75	07.2	+10	37.1	225	07.1	79	-17	03.5	40	5	32	6	03	6	31	19	05
18	90	07.4	+10	38.0	239	34.1	80	-17	08.5	45	5	33	6	07	6	37	18	52
19	105	07.5		38.9	254	01.0	79	13.3	48	50	35	12	45		38	47		9
20	120	07.7		39.7	268	27.8	78	18.0	47	52	35	14	49		31	46		10
21	135	07.8		40.6	282	54.6	78	22.7	47	54	35	16	53		23	46		17
22	150	07.9		41.5	297	21.3	77	27.2	45	56	36	19	6	57		14	45	25
23	165	08.1		42.4	311	48.0	77	31.6	44	58	36	21	7	02		18	05	43
24	180	08.2	+10	43.2	326	14.6	76	-17	36.0	44	5	36	6	24	7	07	17	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 18 ^m 1		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: -1.4 PMG: 23 ^h 16 ^m		Mag: -2.1 PMG: 17 ^h 14 ^m		Mag: +0.2 PMG: 1 ^h 39 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	205	02.9	221	27.2	-7	25.0	9	35.6	-4	13.0
1	220	05.4	236	27.0		24.1	24	38.9		12.7
2	235	07.9	251	26.8		23.2	39	42.3		12.5
3	250	10.3	266	26.7		22.3	54	45.6		12.2
4	265	12.8	281	26.5		21.5	69	49.0		11.9
5	280	15.3	296	26.3	-7	20.6	84	52.4	-4	11.7
6	295	17.7	311	26.2	-7	19.7	99	55.7	-4	11.4
7	310	20.2	326	26.0		18.8	114	59.1		11.1
8	325	22.6	341	25.8		17.9	130	02.4		10.9
9	340	25.1	356	25.7		17.1	145	05.8		10.6
10	355	27.6	11	25.5		16.2	160	09.1		10.3
11	10	30.0	26	25.3	-7	15.3	175	12.5	-4	10.1
12	25	32.5	41	25.2	-7	14.4	190	15.8	-4	09.8
13	40	35.0	56	25.0		13.5	205	19.2		09.6
14	55	37.4	71	24.8		12.6	220	22.5		09.3
15	70	39.9	86	24.7		11.8	235	25.9		09.0
16	85	42.4	101	24.5		10.9	250	29.2		08.8
17	100	44.8	116	24.3	-7	10.0	265	32.6	-4	08.5
18	115	47.3	131	24.2	-7	09.1	280	35.9	-4	08.2
19	130	49.8	146	24.0		08.2	295	39.2		08.0
20	145	52.2	161	23.8		07.3	310	42.6		07.7
21	160	54.7	176	23.7		06.4	325	45.9		07.5
22	175	57.1	191	23.5		05.5	340	49.3		07.2
23	190	59.6	206	23.3		04.7	355	52.6		06.9
24	206	02.1	221	23.1	-7	03.8	10	56.0	-4	06.7
Dif	—		-2		+9		+33		+3	

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: 18 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'5 20 ^h : 58'6 SD: 15°9 PMG: 2 ^h 20 ^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	180	08.2	+10 43.2	326	14.6	-17 36.0	42	60 N	19 25	20 13	21 18	23 34 58	6 10 48		
1	195	08.4	44.1	340	41.2	40.2	42	58	19	20 03	21 01	21 58	22 49		
2	210	08.5	45.0	355	07.8	44.3	41	56	13	19 54	20 47	23 09 58	33 50		
3	225	08.7	45.9	9	34.3	48.3	40	54	07	46	35	22 59 58	42 51		
4	240	08.8	46.7	24	00.7	52.2	39	52	19 03	39	25	51 58	51 51		
5	255	08.9	+10 47.6	38	27.2	-17 56.0	38	50	18 58	19 33	20 16	22 43 58	6 58 52		
6	270	09.1	+10 48.5	52	53.5	-17 59.7	37	45	18 49	19 20	19 58	22 26 58	7 14 53		
7	285	09.2	49.3	67	19.9	-18 03.2	35	40	41	10	44	12 58	27 54		
8	300	09.4	50.2	81	46.1	06.7	35	35	35	19 01	32	22 00 58	38 54		
9	315	09.5	51.1	96	12.4	10.0	33	30	29	18 54	23	21 50 58	7 48 55		
10	330	09.6	52.0	110	38.6	13.3	33	20	19	42	19 08	33 57	8 05 56		
11	345	09.8	+10 52.8	125	04.8	-18 16.4	31	10 N	18 11	18 32	18 57	21 17 58	8 20 56		
12	0	09.9	+10 53.7	139	30.9	-18 19.4	30	0	18 03	18 24	18 48	21 03 57	8 34 56		
13	15	10.1	54.6	153	57.0	22.3	29	10 S	17 55	16	41	20 49 57	8 47 58		
14	30	10.2	55.4	168	23.0	25.1	28	20	47	09	35	34 57	9 02 58		
15	45	10.3	56.3	182	49.1	27.8	27	30	38	18 02	30	16 57	19 59		
16	60	10.5	57.2	197	15.1	30.3	25	35	32	17 58	27	20 06 57	29 59		
17	75	10.6	+10 58.1	211	41.0	-18 32.8	25	40	17 26	17 54	18 25	19 55 56	9 40 60		
18	90	10.8	+10 58.9	226	06.9	-18 35.1	23	45	17 19	17 49	18 23	19 41 57	9 53 61		
19	105	10.9	+10 59.8	240	32.8	37.3	22	50	11	44	22	25 56	10 09 61		
20	120	11.0	+11 00.7	254	58.7	39.4	21	52	08	42	21	17 56	17 61		
21	135	11.2	01.5	269	24.5	41.3	19	54	17 03	40	21	19 09 55	25 62		
22	150	11.3	02.4	283	50.3	43.2	19	56	16 59	37	20	18 59 55	35 62		
23	165	11.4	03.3	298	16.1	44.9	17	58	54	34	20	48 55	45 63		
24	180	11.6	+11 04.1	312	41.8	-18 46.6	17	60 S	16 48	17 31	18 19	18 36 54	10 58 63		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 14 ^m 2		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: -1.4 PMG: 23 ^h 11 ^m		Mag: -2.1 PMG: 17 ^h 11 ^m		Mag: +0.2 PMG: 1 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	206	02.1	221 23.1	-7 03.8	10 56.0	-4 06.7	101 40.0	+23 04.2	336 08.0	-15 47.0
1	221	04.5	236 23.0	02.9	25 59.3	06.4	116 42.1	04.1	351 10.6	47.0
2	236	07.0	251 22.8	02.0	41 02.7	06.2	131 44.2	04.1	6 13.3	46.9
3	251	09.5	266 22.6	01.1	56 06.0	05.9	146 46.4	04.1	21 15.9	46.9
4	266	11.9	281 22.5	-7 00.2	71 09.4	05.6	161 48.5	04.1	36 18.5	46.8
5	281	14.4	296 22.3	-6 59.3	86 12.7	-4 05.4	176 50.6	+23 04.0	51 21.1	-15 46.8
6	296	16.9	311 22.1	-6 58.4	101 16.0	-4 05.1	191 52.8	+23 04.0	66 23.8	-15 46.7
7	311	19.3	326 22.0	57.5	116 19.4	04.9	206 54.9	04.0	81 26.4	46.7
8	326	21.8	341 21.8	56.6	131 22.7	04.6	221 57.0	03.9	96 29.0	46.6
9	341	24.3	356 21.6	55.7	146 26.1	04.3	236 59.2	03.9	111 31.7	46.6
10	356	26.7	11 21.5	54.8	161 29.4	04.1	252 01.3	03.9	126 34.3	46.6
11	11	29.2	26 21.3	-6 54.0	176 32.7	-4 03.8	267 03.4	+23 03.9	141 36.9	-15 46.5
12	26	31.6	41 21.1	-6 53.1	191 36.1	-4 03.6	282 05.5	+23 03.8	156 39.5	-15 46.5
13	41	34.1	56 21.0	52.2	206 39.4	03.3	297 07.7	03.8	171 42.2	46.4
14	56	36.6	71 20.8	51.3	221 42.7	03.1	312 09.8	03.8	186 44.8	46.4
15	71	39.0	86 20.6	50.4	236 46.1	02.8	327 11.9	03.7	201 47.4	46.3
16	86	41.5	101 20.5	49.5	251 49.4	02.5	342 14.1	03.7	216 50.1	46.3
17	101	44.0	116 20.3	-6 48.6	266 52.8	-4 02.3	357 16.2	+23 03.7	231 52.7	-15 46.2
18	116	46.4	131 20.1	-6 47.7	281 56.1	-4 02.0	12 18.3	+23 03.7	246 55.3	-15 46.2
19	131	48.9	146 19.9	46.8	296 59.4	01.8	27 20.5	03.6	261 57.9	46.2
20	146	51.4	161 19.8	45.9	312 02.8	01.5	42 22.6	03.6	277 00.6	46.1
21	161	53.8	176 19.6	45.0	327 06.1	01.3	57 24.7	03.6	292 03.2	46.1
22	176	56.3	191 19.4	44.1	342 09.4	01.0	72 26.8	03.5	307 05.8	46.0
23	191	58.7	206 19.3	43.2	357 12.8	00.8	87 29.0	03.5	322 08.4	46.0
24	207	01.2	221 19.1	-6 42.3	12 16.1	-4 00.5	102 31.1	+23 03.5	337 11.1	-15 45.9
Dif	—	-2	+9	+33	+3	+21	0	+26	0	

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: 19 ^d 2 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9 PMG: 3 ^h 17 ^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	11.6	+11	04.1	312	41.8	-18	46.6	60 N	2	40	3	45	4	32	**	**	**
1	195	11.7		05.0	327	07.6	68	48.1	58	2	57	3	55	39	**	**	**	
2	210	11.9		05.9	341	33.3	67	49.4	56	3	11	4	04	45	**	**	**	
3	225	12.0		06.7	355	58.9	66	50.7	54		23	12		50	23	57	49	
4	240	12.1		07.6	10	24.6	67	51.8	52		33	19		55		49	49	
5	255	12.3	+11	08.5	24	50.2	66	-18 52.9	50	3	42	4	25	4 59	23	41	50	
6	270	12.4	+11	09.3	39	15.8	66	-18 53.8	45	4	00	4	38	5 09	23	24	51	
7	285	12.5		10.2	53	41.4	66	54.5	40		14		48	17	23	10	53	
8	300	12.7		11.1	68	07.0	66	55.2	35		26	4	57	23	22	58	54	
9	315	12.8		11.9	82	32.6	66	55.7	30		35	5	04	29		48	54	
10	330	13.0		12.8	96	58.1	65	56.1	20	4	50		17	39		30	56	
11	345	13.1	+11	13.6	111	23.6	65	-18 56.4	10 N	5	01	5	26	5 48	22	15	56	
12	0	13.2	+11	14.5	125	49.1	65	-18 56.6	0	5	10	5	35	5 56	22	00	58	
13	15	13.4		15.4	140	14.6	65	56.7	10 S		18		42	6 04	21	46	58	
14	30	13.5		16.2	154	40.1	65	56.6	20		24		50	12		31	59	
15	45	13.6		17.1	169	05.6	65	56.4	30		29	5	57	21		13	60	
16	60	13.8		18.0	183	31.1	65	56.1	35		31	6	01	27		21	03	
17	75	13.9	+11	18.8	197	56.5	64	-18 55.6	40	5	34	6	05	6 33	20	51	62	
18	90	14.0	+11	19.7	212	22.0	65	-18 55.1	45	5	36	6	10	6 40	20	38	62	
19	105	14.2		20.5	226	47.4	64	54.4	50		37		15	48		21	63	
20	120	14.3		21.4	241	12.8	64	53.6	52		38		17	52		13	64	
21	135	14.4		22.3	255	38.3	65	52.6	54		39		20	6 56	20	04	65	
22	150	14.6		23.1	270	03.7	64	51.6	56		39		23	7 01	19	54	65	
23	165	14.7		24.0	284	29.1	64	50.4	58		40		26	06		43	66	
24	180	14.8	+11	24.8	298	54.6	65	-18 49.1	60 S	5	40	6	29	7 12	19	30	67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 10 ^m 2		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: -1.4 PMG: 23 ^h 06 ^m		Mag: -2.1 PMG: 17 ^h 08 ^m		Mag: +0.2 PMG: 1 ^h 31 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	207	01.2	221	19.1	-6	42.3	12	16.1	-4	00.5
1	222	03.7	236	18.9		41.4	27	19.4	-4	00.2
2	237	06.1	251	18.8		40.5	42	22.8	-4	00.0
3	252	08.6	266	18.6		39.6	57	26.1	-3	59.7
4	267	11.1	281	18.4		38.7	72	29.4		59.5
5	282	13.5	296	18.3	-6	37.8	87	32.8	-3	59.2
6	297	16.0	311	18.1	-6	36.9	102	36.1	-3	59.0
7	312	18.5	326	17.9		36.0	117	39.4		58.7
8	327	20.9	341	17.8		35.1	132	42.7		58.5
9	342	23.4	356	17.6		34.1	147	46.1		58.2
10	357	25.9	11	17.4		33.2	162	49.4		58.0
11	12	28.3	26	17.2	-6	32.3	177	52.7	-3	57.7
12	27	30.8	41	17.1	-6	31.4	192	56.0	-3	57.5
13	42	33.2	56	16.9		30.5	207	59.4		57.2
14	57	35.7	71	16.7		29.6	223	02.7		57.0
15	72	38.2	86	16.6		28.7	238	06.0		56.7
16	87	40.6	101	16.4		27.8	253	09.3		56.5
17	102	43.1	116	16.2	-6	26.9	268	12.7	-3	56.2
18	117	45.6	131	16.1	-6	26.0	283	16.0	-3	56.0
19	132	48.0	146	15.9		25.1	298	19.3		55.7
20	147	50.5	161	15.7		24.2	313	22.6		55.5
21	162	53.0	176	15.5		23.2	328	25.9		55.2
22	177	55.4	191	15.4		22.3	343	29.3		55.0
23	192	57.9	206	15.2		21.4	358	32.6		54.7
24	208	00.4	221	15.0	-6	20.5	13	35.9	-3	54.5
Dif	—		-2		+9		+33		+3	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 20 ^d 2 PHE { 4 ^h : 59°0 12 ^h : 59°0 20 ^h : 59°1							Civil			Náutico		Hora R°	
	PMG: 11 ^h 58 ^m 9			SD: 16°1 PMG: 4 ^h 14 ^m R°: 57 ^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	
0	180	14.8	+11	24.8	298	54.6	-18	49.1	60 N	19 30	20 18	21 25	0 32 45	7 59 72			
1	195	15.0		25.7	313	20.0		47.7	58	23	20 08	21 07	19 47	8 12 71			
2	210	15.1		26.6	327	45.4		46.2	56	17	19 58	20 52	0 07 48	23 70			
3	225	15.2		27.4	342	10.9		44.5	54	11	50	40	** ** *	33 68			
4	240	15.4		28.3	356	36.3		42.7	52	06	43	29	** ** *	42 67			
5	255	15.5	+11	29.1	11	01.7	-18	40.8	50	19 01	19 36	20 20	** ** *	8 49 67			
6	270	15.6	+11	30.0	25	27.2	-18	38.8	45	18 52	19 23	20 01	** ** *	9 06 65			
7	285	15.8		30.8	39	52.6		36.6	40	43	12	19 46	** ** *	20 63			
8	300	15.9		31.7	54	18.1		34.4	35	36	19 03	34	23 52 49	31 63			
9	315	16.0		32.6	68	43.5		32.0	30	30	18 55	24	42 50	41 62			
10	330	16.2		33.4	83	09.0		29.5	20	20	42	19 09	26 52	9 59 60			
11	345	16.3	+11	34.3	97	34.5	-18	26.8	10 N	18 11	18 32	18 57	23 11 55	10 14 58			
12	0	16.4	+11	35.1	112	00.0	-18	24.1	0	18 02	18 23	18 48	22 58 56	10 28 57			
13	15	16.5		36.0	126	25.5		21.2	10 S	17 54	15	40	44 59	42 56			
14	30	16.7		36.8	140	51.0		18.2	20	45	08	34	30 60	10 57 54			
15	45	16.8		37.7	155	16.5		15.1	30	35	18 00	28	13 63	11 14 52			
16	60	16.9		38.5	169	42.1		11.9	35	30	17 56	25	22 04 64	24 51			
17	75	17.1	+11	39.4	184	07.6	-18	08.5	40	17 23	17 51	18 23	21 53 65	11 35 50			
18	90	17.2	+11	40.3	198	33.2	-18	05.1	45	17 16	17 46	18 20	21 40 67	11 48 49			
19	105	17.3		41.1	212	58.8	-18	01.5	50	07	40	18	24 70	12 05 46			
20	120	17.5		42.0	227	24.4	-17	57.8	52	17 03	38	17	17 70	12 46			
21	135	17.6		42.8	241	50.0		54.0	54	16 59	35	16	21 09 71	20 45			
22	150	17.7		43.7	256	15.7		50.0	56	54	32	16	20 59 74	30 43			
23	165	17.8		44.5	270	41.4		46.0	58	49	29	15	49 75	41 42			
24	180	18.0	+11	45.4	285	07.0	-17	41.8	60 S	16 42	17 26	18 14	20 37 77	12 53 40			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 06 ^m 3			Mag: -4.2 PMG: 9 ^h 15 ^m			Mag: -1.4 PMG: 23 ^h 01 ^m			Mag: -2.1 PMG: 17 ^h 04 ^m			Mag: +0.2 PMG: 1 ^h 27 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	208	00.4	221	15.0	-6	20.5	13	35.9	-3	54.5	103	22.1	+23	02.8	338	14.2	
1	223	02.8	236	14.9		19.6	28	39.2		54.2	118	24.2		02.8	353	16.8	
2	238	05.3	251	14.7		18.7	43	42.5		54.0	133	26.3		02.7	8	19.5	
3	253	07.7	266	14.5		17.8	58	45.9		53.7	148	28.5		02.7	23	22.1	
4	268	10.2	281	14.4		16.9	73	49.2		53.5	163	30.6		02.7	38	24.7	
5	283	12.7	296	14.2	-6	15.9	88	52.5	-3	53.2	178	32.7	+23	02.6	53	27.4	
6	298	15.1	311	14.0	-6	15.0	103	55.8	-3	53.0	193	34.8	+23	02.6	68	30.0	
7	313	17.6	326	13.8		14.1	118	59.1		52.8	208	36.9		02.6	83	32.6	
8	328	20.1	341	13.7		13.2	134	02.4		52.5	223	39.1		02.6	98	35.2	
9	343	22.5	356	13.5		12.3	149	05.7		52.3	238	41.2		02.5	113	37.9	
10	358	25.0	11	13.3		11.4	164	09.1		52.0	253	43.3		02.5	128	40.5	
11	13	27.5	26	13.2	-6	10.4	179	12.4	-3	51.8	268	45.4	+23	02.5	143	43.1	
12	28	29.9	41	13.0	-6	09.5	194	15.7	-3	51.5	283	47.5	+23	02.4	158	45.8	
13	43	32.4	56	12.8		08.6	209	19.0		51.3	298	49.7		02.4	173	48.4	
14	58	34.9	71	12.7		07.7	224	22.3		51.0	313	51.8		02.4	188	51.0	
15	73	37.3	86	12.5		06.8	239	25.6		50.8	328	53.9		02.3	203	53.7	
16	88	39.8	101	12.3		05.8	254	28.9		50.6	343	56.0		02.3	218	56.3	
17	103	42.2	116	12.1	-6	04.9	269	32.2	-3	50.3	358	58.1	+23	02.3	233	58.9	
18	118	44.7	131	12.0	-6	04.0	284	35.5	-3	50.1	14	00.2	+23	02.3	249	01.6	
19	133	47.2	146	11.8		03.1	299	38.8		49.8	29	02.4		02.2	264	04.2	
20	148	49.6	161	11.6		02.2	314	42.1		49.6	44	04.5		02.2	279	06.8	
21	163	52.1	176	11.5		01.2	329	45.5		49.4	59	06.6		02.2	294	09.5	
22	178	54.6	191	11.3	-6	00.3	344	48.8		49.1	74	08.7		02.1	309	12.1	
23	193	57.0	206	11.1	-5	59.4	359	52.1		48.9	89	10.8		02.1	324	14.7	
24	208	59.5	221	10.9	-5	58.5	14	55.4	-3	48.6	104	12.9	+23	02.1	339	17.4	
Dif	—		-2	+9			+33		+2		+21	0			+26		

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 7				Edad: 21 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 5 ^h 11 ^m R°: 57 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	18.0	+11	45.4	285	07.0	-17	41.8	60 N	2	31	3	38	4	26	1	17
1	195	18.1		46.2	299	32.8	68	37.5	58	2	50		49	34		1	06
2	210	18.2		47.1	313	58.5	67	33.2	56	3	04	3	58	40		0	55
3	225	18.4		47.9	328	24.3	68	28.7	54		17	4	07	46			46
4	240	18.5		48.8	342	50.0	67	24.0	52		28		14	51			38
5	255	18.6	+11	49.6	357	15.9	69	-17	50	3	37	4	21	4	55	0	31
6	270	18.7	+11	50.5	11	41.7	68	-17	45	3	56	4	34	5	05	0	15
7	285	18.9		51.3	26	07.5	68		40	4	11		45	14		0	03
8	300	19.0		52.2	40	33.4	69	-17	35		23	4	54	21		**	**
9	315	19.1		53.0	54	59.4	70	-16	30		33	5	02	27		**	**
10	330	19.2		53.9	69	25.3	69		20	4	48		15	38		**	**
11	345	19.4	+11	54.7	83	51.3	70	-16	10 N	5	00	5	25	5	47	**	**
12	0	19.5	+11	55.6	98	17.3	70	-16	0	5	10	5	34	5	55	23	54
13	15	19.6		56.4	112	43.3	70		10 S		18		42	6	04		43
14	30	19.7		57.3	127	09.4	71		20		24		50	13			30
15	45	19.9		58.1	141	35.5	71		30		30	5	58	23			16
16	60	20.0		58.9	156	01.6	71		35		33	6	03	28			23
17	75	20.1	+11	59.8	170	27.8	72	-16	40	5	35	6	07	6	35	22	58
18	90	20.2	+12	00.6	184	54.0	72	-16	45	5	38	6	12	6	42	22	47
19	105	20.4		01.5	199	20.2	72	-16	50		40		18	51			34
20	120	20.5		02.3	213	46.4	72	-15	55		41		21	6	55		27
21	135	20.6		03.2	228	12.7	73		54		42		23	7	00		20
22	150	20.7		04.0	242	39.1	74		56		43		26	05			13
23	165	20.9		04.9	257	05.4	73		58		44		30	10			22
24	180	21.0	+12	05.7	271	31.8	74	-15	60 S	5	45	6	33	7	17	21	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 02 ^m 4		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: -1.3 PMG: 22 ^h 55 ^m		Mag: -2.1 PMG: 17 ^h 01 ^m		Mag: +0.1 PMG: 1 ^h 23 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	208	59.5	221	10.9	-5	58.5	104	12.9	+23	02.1	339	17.4	-15	43.7				
1	224	02.0	236	10.8		57.6	119	15.1		02.0	354	20.0		43.7				
2	239	04.4	251	10.6		56.6	134	17.2		02.0	9	22.6		43.6				
3	254	06.9	266	10.4		55.7	149	19.3		02.0	24	25.3		43.6				
4	269	09.3	281	10.3		54.8	164	21.4		02.0	39	27.9		43.6				
5	284	11.8	296	10.1	-5	53.9	179	23.5	+23	01.9	54	30.5	-15	43.5				
6	299	14.3	311	09.9	-5	52.9	194	25.6	+23	01.9	69	33.2	-15	43.5				
7	314	16.7	326	09.7		52.0	209	27.7		01.9	84	35.8		43.4				
8	329	19.2	341	09.6		51.1	224	29.9		01.8	99	38.4		43.4				
9	344	21.7	356	09.4		50.1	239	32.0		01.8	114	41.1		43.3				
10	359	24.1	11	09.2		49.2	254	34.1		01.8	129	43.7		43.3				
11	14	26.6	26	09.1	-5	48.3	269	36.2	+23	01.7	144	46.3	-15	43.2				
12	29	29.1	41	08.9	-5	47.4	284	38.3	+23	01.7	159	49.0	-15	43.2				
13	44	31.5	56	08.7		46.4	299	40.4		01.7	174	51.6		43.1				
14	59	34.0	71	08.5		45.5	314	42.5		01.6	189	54.2		43.1				
15	74	36.5	86	08.4		44.6	329	44.6		01.6	204	56.9		43.0				
16	89	38.9	101	08.2		43.6	344	46.8		01.6	219	59.5		43.0				
17	104	41.4	116	08.0	-5	42.7	359	48.9	+23	01.6	235	02.1	-15	43.0				
18	119	43.8	131	07.9	-5	41.8	14	51.0	+23	01.5	250	04.8	-15	42.9				
19	134	46.3	146	07.7		40.8	29	53.1		01.5	265	07.4		42.9				
20	149	48.8	161	07.5		39.9	44	55.2		01.5	280	10.0		42.8				
21	164	51.2	176	07.3		39.0	59	57.3		01.4	295	12.7		42.8				
22	179	53.7	191	07.2		38.1	74	59.4		01.4	310	15.3		42.7				
23	194	56.2	206	07.0		37.1	90	01.5		01.4	325	17.9		42.7				
24	209	58.6	221	06.8	-5	36.2	105	03.6	+23	01.3	340	20.6	-15	42.6				
Dif	—		-2		+9		+33		+2		+21		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 22 ^d 2 PHE { 4 ^h : 59'3 12 ^h : 59'3 20 ^h : 59'3					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 5			PMG: 6 ^h 08 ^m R°: 54 ^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	h m m
0	180	21.0	+12 05.7	271	31.8	-15 29.0	69	60 N	19 35	20 24	21 33	1 52 28	10 32 85		
1	195	21.1	06.5	285	58.3	22.1	69	58	28	13	21 14	43 30	41 82		
2	210	21.2	07.4	300	24.7	15.2	69	56	21	20 03	20 58	34 32	49 80		
3	225	21.4	08.2	314	51.2	08.2	70	54	15	19 54	45	27 34	10 56 77		
4	240	21.5	09.1	329	17.8	-15 01.0	72	52	09	47	34	20 36	11 02 76		
5	255	21.6	+12 09.9	343	44.4	-14 53.8	72	50	19 05	19 40	20 24	1 14 37	11 08 74		
6	270	21.7	+12 10.8	358	11.0	-14 46.5	73	45	18 54	19 25	20 04	1 01 40	11 20 71		
7	285	21.9	11.6	12	37.6	39.1	74	40	45	14	19 48	0 50 43	30 68		
8	300	22.0	12.4	27	04.3	31.6	75	35	38	19 04	36	41 44	39 65		
9	315	22.1	13.3	41	31.1	24.0	76	30	31	18 56	26	32 47	46 64		
10	330	22.2	14.1	55	57.8	16.3	77	20	20	43	19 10	18 50	11 59 60		
11	345	22.3	+12 15.0	70	24.6	-14 08.6	77	10 N	18 11	18 32	18 57	0 06 52	12 10 57		
12	0	22.5	+12 15.8	84	51.5	-14 00.7	79	0	18 02	18 23	18 48	** ** *	12 21 54		
13	15	22.6	16.6	99	18.4	-13 52.8	79	10 S	17 53	15	39	** ** *	31 51		
14	30	22.7	17.5	113	45.3	44.8	80	20	44	18 06	32	** ** *	42 48		
15	45	22.8	18.3	128	12.3	36.6	82	30	33	17 58	26	** ** *	12 55 45		
16	60	22.9	19.1	142	39.3	28.4	82	35	27	53	23	** ** *	13 02 43		
17	75	23.1	+12 20.0	157	06.3	-13 20.2	82	40	17 21	17 48	18 20	** ** *	13 10 41		
18	90	23.2	+12 20.8	171	33.4	-13 11.8	84	45	17 13	17 43	18 17	23 57 71	13 20 37		
19	105	23.3	21.7	186	00.5	-13 03.4	84	50	17 04	37	15	47 75	31 35		
20	120	23.4	22.5	200	27.6	-12 54.8	86	52	16 59	34	13	42 77	36 33		
21	135	23.5	23.3	214	54.8	46.2	86	54	54	31	12	37 78	42 31		
22	150	23.7	24.2	229	22.1	37.6	86	56	49	28	11	31 80	49 29		
23	165	23.8	25.0	243	49.3	28.8	88	58	43	24	10	24 83	13 56 27		
24	180	23.9	+12 25.8	258	16.7	-12 20.0	88	60 S	16 37	17 21	18 09	23 17 85	14 04 25		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 58 ^m 5		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: -1.3 PMG: 22 ^h 50 ^m		Mag: -2.1 PMG: 16 ^h 57 ^m		Mag: +0.1 PMG: 1 ^h 18 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	209	58.6	221	06.8	-5 36.2	16 14.4	105 03.6	+23 01.3	340 20.6	-15 42.6					
1	225	01.1	236	06.7	35.2	31 17.7	120 05.8	01.3	355 23.2	42.6					
2	240	03.6	251	06.5	34.3	46 21.0	135 07.9	01.3	10 25.8	42.5					
3	255	06.0	266	06.3	33.4	61 24.3	150 10.0	01.2	25 28.5	42.5					
4	270	08.5	281	06.1	32.4	76 27.6	165 12.1	01.2	40 31.1	42.4					
5	285	11.0	296	06.0	-5 31.5	91 30.9	180 14.2	+23 01.2	55 33.8	-15 42.4					
6	300	13.4	311	05.8	-5 30.6	106 34.2	195 16.3	+23 01.1	70 36.4	-15 42.4					
7	315	15.9	326	05.6	29.6	121 37.4	210 18.4	01.1	85 39.0	42.3					
8	330	18.3	341	05.5	28.7	136 40.7	225 20.5	01.1	100 41.7	42.3					
9	345	20.8	356	05.3	27.8	151 44.0	240 22.6	01.1	115 44.3	42.2					
10	0	23.3	11 05.1	26.8	166 47.3	40.7	255 24.7	01.0	130 46.9	42.2					
11	15	25.7	26 04.9	-5 25.9	181 50.6	-3 40.4	270 26.8	+23 01.0	145 49.6	-15 42.1					
12	30	28.2	41 04.8	-5 24.9	196 53.8	-3 40.2	285 28.9	+23 01.0	160 52.2	-15 42.1					
13	45	30.7	56 04.6	24.0	211 57.1	40.0	300 31.1	00.9	175 54.8	42.0					
14	60	33.1	71 04.4	23.1	227 00.4	39.8	315 33.2	00.9	190 57.5	42.0					
15	75	35.6	86 04.2	22.1	242 03.7	39.5	330 35.3	00.9	206 00.1	41.9					
16	90	38.1	101 04.1	21.2	257 06.9	39.3	345 37.4	00.8	221 02.7	41.9					
17	105	40.5	116 03.9	-5 20.2	272 10.2	-3 39.1	0 39.5	+23 00.8	236 05.4	-15 41.8					
18	120	43.0	131 03.7	-5 19.3	287 13.5	-3 38.9	15 41.6	+23 00.8	251 08.0	-15 41.8					
19	135	45.4	146 03.6	18.4	302 16.8	38.6	30 43.7	00.7	266 10.7	41.7					
20	150	47.9	161 03.4	17.4	317 20.0	38.4	45 45.8	00.7	281 13.3	41.7					
21	165	50.4	176 03.2	16.5	332 23.3	38.2	60 47.9	00.7	296 15.9	41.7					
22	180	52.8	191 03.0	15.5	347 26.6	38.0	75 50.0	00.6	311 18.6	41.6					
23	195	55.3	206 02.9	14.6	2 29.8	37.7	90 52.1	00.6	326 21.2	41.6					
24	210	57.8	221 02.7	-5 13.6	17 33.1	-3 37.5	105 54.2	+23 00.6	341 23.8	-15 41.5					
Dif	—		-2 +9		+33 +2		+21 0		+26 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: 23 ^d 2 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 3 20 ^h : 59 ^h 3 PMG: 7 ^h 02 ^m R°: 53 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	23.9	+12	25.8	258	16.7	-12	20.0	60 N	2	23	3	32	4	21	2	20
1	195	24.0		26.7	272	44.0	83	11.1	89	58	42	43	28		13	24	
2	210	24.1		27.5	287	11.4	84	-12	02.1	90	56	2	58	3	53	35	
3	225	24.3		28.3	301	38.8	84	-11	53.0	91	54	3	11	4	02	41	
4	240	24.4		29.2	316	06.3	85		43.9	91	52	22	10		47	1	
5	255	24.5	+12	30.0	330	33.8	85	-11	34.7	92	50	3	32	4	16	4	
6	270	24.6	+12	30.8	345	01.3	85	-11	25.4	93	45	3	52	4	31	5	
7	285	24.7		31.7	359	28.9	86		16.1	93	40	4	08		42	11	
8	300	24.8		32.5	13	56.5	86	-11	06.7	94	35	20	4	52	18		
9	315	25.0		33.3	28	24.2	87	-10	57.2	95	30	31	5	00	25		
10	330	25.1		34.2	42	51.9	87		47.7	95	20	47	13	36	1	08	
11	345	25.2	+12	35.0	57	19.6	87	-10	38.1	96	10 N	4	59	5	24	5	
12	0	25.3	+12	35.8	71	47.4	88	-10	28.4	97	0	5	09	5	34	5	
13	15	25.4		36.7	86	15.2	88		18.7	97	10 S	18		42	6		
14	30	25.5		37.5	100	43.0	88	-10	08.9	98	20	25	51	13			
15	45	25.7		38.3	115	10.9	89	-9	59.0	99	30	31	5	59	24		
16	60	25.8		39.2	129	38.8	89		49.1	99	35	34	6	04	30		
17	75	25.9	+12	40.0	144	06.8	90	-9	39.1	100	40	5	37	6	09		
18	90	26.0	+12	40.8	158	34.8	90	-9	29.1	100	45	5	40	6	15		
19	105	26.1		41.6	173	02.8	90		19.0	101	50	43	21	54			
20	120	26.2		42.5	187	30.8	90	-9	08.9	101	52	44	24	6	59		
21	135	26.4		43.3	201	58.9	91	-8	58.7	102	54	45	27	7	04		
22	150	26.5		44.1	216	27.1	92		48.5	102	56	46	30	09			
23	165	26.6		44.9	230	55.2	91		38.2	103	58	48	34	15			
24	180	26.7	+12	45.8	245	23.4	92	-8	27.9	103	60 S	5	49	6	38		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 54 ^m 5	Mag: -4.2 PMG: 9 ^h 16 ^m	Mag: -4.2 PMG: 9 ^h 16 ^m	Mag: -1.3 PMG: 22 ^h 45 ^m	Mag: -1.3 PMG: 22 ^h 45 ^m	Mag: -2.1 PMG: 16 ^h 54 ^m	Mag: -2.1 PMG: 16 ^h 54 ^m	Mag: +0.1 PMG: 1 ^h 14 ^m	Mag: +0.1 PMG: 1 ^h 14 ^m	
	hG ♈	hG ♎	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	210	221	-5	17	-3	105	+23	341	-15	
1	226	236		32		120		356		
2	241	251		47		135		11		
3	256	266		62		151		26		
4	271	281		77		166		41		
5	286	296	-5	92	-3	181	+23	56	-15	
6	301	311	-5	107	-3	196	+23	71	-15	
7	316	326		122		211		86		
8	331	341		137		226		101		
9	346	356		153		241		116		
10	1	11		168		256		131		
11	16	26	-5	183	-3	271	+23	146	-15	
12	31	41	-5	198	-3	286	+23	161	-15	
13	46	56		213		301		176		
14	61	71	-5	228		316		192		
15	76	86	-4	243		331		207		
16	91	100		258		346	+23	222		
17	106	115	-4	273	-3	1	+23	237	-15	
18	121	130	-4	288	-3	16	+23	252	-15	
19	136	145		303		31	+23	267		
20	151	160		318		46	+22	282		
21	166	175		333		61		297		
22	181	190		348		76		312		
23	196	205		3		91		327		
24	211	220	-4	18	-3	106	+22	342	-15	
Dif	—	-2	+9	+33	+2	+21	0	+26	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 24 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2										
	PMG: 11 ^h 58 ^m 1			SD: 16 ^h 1 PMG: 7 ^h 55 ^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	h m	h m
0	180	26.7	+12 45.8	245	23.4	-8 27.9	92	60 N	19 40	20 30	21 42	2 42	19	13 23 86
1	195	26.8	46.6	259	51.6	17.5	104	58	32	18	21	37	22	26 84
2	210	26.9	47.4	274	19.9	-8 07.0	105	56	25	20 08	21 04	33	24	29 81
3	225	27.0	48.2	288	48.2	-7 56.5	105	54	19	19 58	20 50	30	26	32 79
4	240	27.1	49.1	303	16.5	46.0	105	52	13	50	38	26	28	35 77
5	255	27.3	+12 49.9	317	44.9	-7 35.4	106	50	19 08	19 43	20 28	2 23	30	13 37 75
6	270	27.4	+12 50.7	332	13.2	-7 24.8	106	45	18 57	19 28	20 07	2 17	33	13 42 71
7	285	27.5	51.5	346	41.7	14.2	106	40	47	16	19 51	11	36	46 68
8	300	27.6	52.4	1	10.1	-7 03.5	107	35	40	19 06	38	07	38	50 65
9	315	27.7	53.2	15	38.6	-6 52.7	108	30	33	18 58	27	2 02	41	53 63
10	330	27.8	54.0	30	07.1	41.9	108	20	21	44	19 11	1 55	45	13 58 59
11	345	27.9	+12 54.8	44	35.6	-6 31.1	108	10 N	18 11	18 33	18 58	1 49	48	14 03 55
12	0	28.0	+12 55.7	59	04.2	-6 20.3	108	0	18 02	18 23	18 47	1 43	52	14 08 51
13	15	28.2	56.5	73	32.8	-6 09.4	109	10 S	17 52	14	39	37	55	12 48
14	30	28.3	57.3	88	01.4	-5 58.4	110	20	42	18 05	31	30	59	16 45
15	45	28.4	58.1	102	30.0	47.5	109	30	31	17 56	24	23	63	22 40
16	60	28.5	58.9	116	58.7	36.5	110	35	25	51	21	19	65	25 38
17	75	28.6	+12 59.8	131	27.4	-5 25.5	110	40	17 18	17 46	18 18	1 14	68	14 28 35
18	90	28.7	+13 00.6	145	56.1	-5 14.4	111	45	17 10	17 40	18 14	1 08	72	14 32 32
19	105	28.8	01.4	160	24.9	-5 03.4	110	50	17 00	33	11	1 02	75	36 29
20	120	28.9	02.2	174	53.7	-4 52.3	111	52	16 55	30	10	0 59	76	38 27
21	135	29.0	03.0	189	22.5	41.1	112	54	50	27	08	55	79	41 25
22	150	29.1	03.9	203	51.3	30.0	111	56	45	23	07	51	81	43 23
23	165	29.3	04.7	218	20.1	18.8	112	58	38	20	06	47	84	46 21
24	180	29.4	+13 05.5	232	49.0	-4 07.6	112	60 S	16 31	17 15	18 04	0 42	86	14 49 19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 9 ^h 50 ^m 6		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: -1.3 PMG: 22 ^h 40 ^m		Mag: -2.1 PMG: 16 ^h 51 ^m		Mag: +0.1 PMG: 1 ^h 10 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	211	56.9	220 58.5	-4 50.9	18 51.3	-3 32.3	106	44.6	+22 59.8	342	27.1	
1	226	59.4	235 58.4	49.9	33 54.6	32.0	121	46.7	59.8	357	29.8	
2	242	01.8	250 58.2	49.0	48 57.8	31.8	136	48.8	59.7	12	32.4	
3	257	04.3	265 58.0	48.0	64 01.1	31.6	151	50.9	59.7	27	35.1	
4	272	06.8	280 57.8	47.1	79 04.3	31.4	166	53.0	59.7	42	37.7	
5	287	09.2	295 57.7	-4 46.1	94 07.6	-3 31.2	181	55.1	+22 59.6	57	40.3	
6	302	11.7	310 57.5	-4 45.1	109 10.8	-3 31.0	196	57.2	+22 59.6	72	43.0	
7	317	14.2	325 57.3	44.2	124 14.0	30.8	211	59.3	59.6	87	45.6	
8	332	16.6	340 57.1	43.2	139 17.3	30.6	227	01.4	59.5	102	48.2	
9	347	19.1	355 57.0	42.3	154 20.5	30.3	242	03.5	59.5	117	50.9	
10	2	21.5	10 56.8	41.3	169 23.8	30.1	257	05.6	59.5	132	53.5	
11	17	24.0	25 56.6	-4 40.4	184 27.0	-3 29.9	272	07.7	+22 59.4	147	56.2	
12	32	26.5	40 56.4	-4 39.4	199 30.3	-3 29.7	287	09.8	+22 59.4	162	58.8	
13	47	28.9	55 56.3	38.4	214 33.5	29.5	302	11.9	59.4	178	01.4	
14	62	31.4	70 56.1	37.5	229 36.7	29.3	317	14.0	59.3	193	04.1	
15	77	33.9	85 55.9	36.5	244 40.0	29.1	332	16.1	59.3	208	06.7	
16	92	36.3	100 55.7	35.6	259 43.2	28.9	347	18.2	59.3	223	09.4	
17	107	38.8	115 55.6	-4 34.6	274 46.4	-3 28.7	2	20.3	+22 59.2	238	12.0	
18	122	41.3	130 55.4	-4 33.6	289 49.7	-3 28.5	17	22.4	+22 59.2	253	14.6	
19	137	43.7	145 55.2	32.7	304 52.9	28.2	32	24.5	59.2	268	17.3	
20	152	46.2	160 55.1	31.7	319 56.1	28.0	47	26.6	59.1	283	19.9	
21	167	48.7	175 54.9	30.8	334 59.4	27.8	62	28.7	59.1	298	22.6	
22	182	51.1	190 54.7	29.8	350 02.6	27.6	77	30.8	59.1	313	25.2	
23	197	53.6	205 54.5	28.8	5 05.8	27.4	92	32.9	59.0	328	27.8	
24	212	56.0	220 54.4	-4 27.9	20 09.1	-3 27.2	107	34.9	+22 59.0	343	30.5	
Dif	—	-2	+10		+32	+2		+21	0		+26	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 0				Edad: 25 ^d 2 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9 PMG: 8 ^h 47 ^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	29.4	+13	05.5	232	49.0	-4	07.6	60 N	2	13	3	25	4	15	3	01							
1	195	29.5		06.3	247	17.9	99	-3	56.4 ¹¹²	58	34	37	23	2	59	20	50							
2	210	29.6		07.1	261	46.8	99		45.1 ¹¹³	56	2	51	48	30	57	23	50							
3	225	29.7		07.9	276	15.7	99		33.9 ¹¹²	54	3	05	3	57	56	24	51							
4	240	29.8		08.8	290	44.7 ¹⁰⁰			22.6 ¹¹³	52	17	4	05	43	54	27	52							
5	255	29.9	+13	09.6	305	13.7 ¹⁰⁰	-3	11.3 ¹¹³	50	3	28	4	12	4	48	2	53							
6	270	30.0	+13	10.4	319	42.7 ¹⁰⁰	-3	00.0 ¹¹³	45	3	49	4	27	4	59	2	50							
7	285	30.1		11.2	334	11.7 ¹⁰⁰	-2	48.6 ¹¹⁴	40	4	05	39	5	08	47	35	54							
8	300	30.2		12.0	348	40.7 ¹⁰⁰		37.3 ¹¹³	35	18	49	16	45	38	55	65								
9	315	30.3		12.8	3	09.7 ¹⁰⁰	3	09.7 ¹⁰⁰	30	28	4	58	23	43	40	56	62							
10	330	30.4		13.7	17	38.8 ¹⁰¹		14.6 ¹¹⁴	20	45	5	12	35	40	44	57	58							
11	345	30.5	+13	14.5	32	07.9 ¹⁰¹	-2	03.2 ¹¹⁴	10 N	4	58	5	23	5	45	2	37							
12	0	30.6	+13	15.3	46	37.0 ¹⁰¹	-1	51.8 ¹¹⁴	0	5	09	5	33	5	55	2	35							
13	15	30.8		16.1	61	06.1 ¹⁰¹		40.4 ¹¹⁴	10 S	18	42	6	04	32	55	15	00							
14	30	30.9		16.9	75	35.2 ¹⁰¹		29.0 ¹¹⁴	20	25	5	51	14	29	58	01	44							
15	45	31.0		17.7	90	04.4 ¹⁰²		17.6 ¹¹⁴	30	32	6	01	25	26	62	02	40							
16	60	31.1		18.5	104	33.6 ¹⁰²	-1	06.2 ¹¹⁴	35	36	06	32	24	65	03	37								
17	75	31.2	+13	19.3	119	02.7 ¹⁰¹	-0	54.8 ¹¹⁴	40	5	39	6	11	6	39	2	22							
18	90	31.3	+13	20.1	133	31.9 ¹⁰²	-0	43.4 ¹¹⁴	45	5	42	6	17	6	47	2	20							
19	105	31.4		21.0	148	01.1 ¹⁰²		32.0 ¹¹⁴	50	46	24	6	57	17	74	05	28							
20	120	31.5		21.8	162	30.3 ¹⁰²		20.6 ¹¹⁴	52	47	27	7	02	15	77	05	27							
21	135	31.6		22.6	176	59.6 ¹⁰³	-0	09.2 ¹¹⁴	54	49	30	07	14	78	06	24								
22	150	31.7		23.4	191	28.8 ¹⁰²	+0	02.2 ¹¹⁴	56	50	34	13	12	81	06	23								
23	165	31.8		24.2	205	58.0 ¹⁰²		13.6 ¹¹⁴	58	51	38	19	11	83	07	20								
24	180	31.9	+13	25.0	220	27.3 ¹⁰³	+0	25.0 ¹¹⁴	60 S	5	53	6	42	7	26	2	08							
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 9 ^h 46 ^m 7				Mag: -4.2 PMG: 9 ^h 16 ^m				Mag: -1.3 PMG: 22 ^h 35 ^m				Mag: -2.1 PMG: 16 ^h 47 ^m				Mag: +0.1 PMG: 1 ^h 06 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	212	56.0	220	54.4	-4	27.9	20	09.1	-3	27.2	107	34.9	+22	59.0	343	30.5	-15	39.3						
1	227	58.5	235	54.2		26.9	35	12.3		27.0	122	37.0		59.0	358	33.1		39.2						
2	243	01.0	250	54.0		25.9	50	15.5		26.8	137	39.1		58.9	13	35.8		39.2						
3	258	03.4	265	53.8		25.0	65	18.7		26.6	152	41.2		58.9	28	38.4		39.1						
4	273	05.9	280	53.7		24.0	80	22.0		26.4	167	43.3		58.9	43	41.0		39.1						
5	288	08.4	295	53.5	-4	23.1	95	25.2	-3	26.2	182	45.4	+22	58.8	58	43.7	-15	39.0						
6	303	10.8	310	53.3	-4	22.1	110	28.4	-3	26.0	197	47.5	+22	58.8	73	46.3	-15	39.0						
7	318	13.3	325	53.1		21.1	125	31.6		25.8	212	49.6		58.8	88	49.0		38.9						
8	333	15.8	340	53.0		20.2	140	34.9		25.6	227	51.7		58.7	103	51.6		38.9						
9	348	18.2	355	52.8		19.2	155	38.1		25.4	242	53.8		58.7	118	54.2		38.8						
10	3	20.7	10	52.6		18.2	170	41.3		25.2	257	55.9		58.7	133	56.9		38.8						
11	18	23.2	25	52.4	-4	17.3	185	44.5	-3	25.0	272	58.0	+22	58.6	148	59.5	-15	38.7						
12	33	25.6	40	52.3	-4	16.3	200	47.7	-3	24.8	288	00.0	+22	58.6	164	02.2	-15	38.7						
13	48	28.1	55	52.1		15.3	215	51.0		24.6	303	02.1		58.5	179	04.8		38.6						
14	63	30.5	70	51.9		14.4	230	54.2		24.4	318	04.2		58.5	194	07.4		38.6						
15	78	33.0	85	51.7		13.4	245	57.4		24.2	333	06.3		58.5	209	10.1		38.5						
16	93	35.5	100	51.6		12.4	261	00.6		24.0	348	08.4		58.4	224	12.7		38.5						
17	108	37.9	115	51.4	-4	11.5	276	03.8	-3	23.8	3	10.5	+22	58.4	239	15.4	-15	38.5						
18	123	40.4	130	51.2	-4	10.5	291	07.0	-3	23.6	18	12.6	+22	58.4	254	18.0	-15	38.4						
19	138	42.9	145	51.0		09.5	306	10.2		23.4	33	14.7		58.3	269	20.6		38.4						
20	153	45.3	160	50.8		08.5	321	13.4		23.2	48	16.8		58.3	284	23.3		38.3						
21	168	47.8	175	50.7		07.6	336	16.7		23.0	63	18.8		58.3	299	25.9		38.3						
22	183	50.3	190	50.5		06.6	351	19.9		22.8	78	20.9		58.2	314	28.6		38.2						
23	198	52.7	205	50.3		05.6	6	23.1		22.6	93	23.0		58.2	329	31.2		38.2						
24	213	55.2	220	50.1	-4	04.7	21	26.3	-3	22.4	108	25.1	+22	58.2	344	33.9	-15	38.1						
Dif	—				-2				+10				+21				0				+26			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 8				Edad: 26 ^d 2 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 7 20 ^h : 58 ^m 6 PMG: 9 ^h 38 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	180	31.9	+13	25.0	220	27.3	+0	25.0	60 N	19 45	20 36	21 51	3 19 18		16 14 85			
1	195	32.0		25.8	234	56.6 ¹⁰³		36.4 ¹¹⁴	58	37	23	28	19 21		12 82			
2	210	32.1		26.6	249	25.8 ¹⁰²		47.8 ¹¹⁴	56	29	12	21 10	20 23		11 79			
3	225	32.2		27.4	263	55.1 ¹⁰³	+0	59.2 ¹¹⁴	54	22	20 03	20 55	20 25		09 77			
4	240	32.3		28.2	278	24.4 ¹⁰³	+1	10.5 ¹¹³	52	16	19 54	43	21 26		08 75			
5	255	32.4	+13	29.0	292	53.7 ¹⁰³	+1	21.9 ¹¹⁴	50	19 11	19 47	20 32	3 21 28		16 07 73			
6	270	32.5	+13	29.8	307	23.0 ¹⁰³	+1	33.2 ¹¹³	45	18 59	19 31	20 10	3 22 31		16 04 70			
7	285	32.6		30.7	321	52.3 ¹⁰³		44.6 ¹¹⁴	40	49	18	19 53	22 35		02 66			
8	300	32.7		31.5	336	21.7 ¹⁰⁴	+1	55.9 ¹¹³	35	41	19 08	40	23 37		16 00 64			
9	315	32.8		32.3	350	51.0 ¹⁰³	+2	07.2 ¹¹³	30	34	18 59	29	23 40		15 58 62			
10	330	32.9		33.1	5	20.3 ¹⁰³		18.5 ¹¹³	20	22	45	19 11	24 44		55 58			
11	345	33.0	+13	33.9	19	49.6 ¹⁰³	+2	29.7 ¹¹²	10 N	18 11	18 33	18 58	3 25 47		15 52 55			
12	0	33.1	+13	34.7	34	19.0 ¹⁰⁴	+2	41.0 ¹¹³	0	18 01	18 22	18 47	3 26 51		15 50 51			
13	15	33.2		35.5	48	48.3 ¹⁰³	+2	52.2 ¹¹²	10 S	17 51	13	38	27 54		47 48			
14	30	33.3		36.3	63	17.7 ¹⁰⁴	+3	03.4 ¹¹²	20	41	18 04	30	27 58		45 44			
15	45	33.4		37.1	77	47.0 ¹⁰³		14.6 ¹¹²	30	30	17 54	22	28 62		42 40			
16	60	33.5		37.9	92	16.4 ¹⁰⁴		25.8 ¹¹²	35	23	49	19	29 64		40 38			
17	75	33.6	+13	38.7	106	45.7 ¹⁰³	+3	36.9 ¹¹¹	40	17 15	17 43	18 15	3 30 67		15 38 35			
18	90	33.7	+13	39.5	121	15.1 ¹⁰⁴	+3	48.0 ¹¹¹	45	17 07	17 37	18 11	3 31 70		15 36 32			
19	105	33.8		40.3	135	44.4 ¹⁰³	+3	59.1 ¹¹¹	50	16 56	30	08	31 75		33 29			
20	120	33.9		41.1	150	13.8 ¹⁰⁴	+4	10.2 ¹¹¹	52	51	26	06	32 76		32 27			
21	135	34.0		41.9	164	43.2 ¹⁰⁴		21.2 ¹¹⁰	54	46	23	05	32 78		30 26			
22	150	34.1		42.7	179	12.5 ¹⁰³		32.2 ¹¹⁰	56	40	19	03	33 80		29 23			
23	165	34.2		43.5	193	41.9 ¹⁰⁴		43.2 ¹¹⁰	58	33	15	18 01	34 82		27 21			
24	180	34.3	+13	44.3	208	11.2 ¹⁰³	+4	54.2 ¹¹⁰	60 S	16 26	17 10	17 59	3 34 85		15 25 19			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 9 ^h 42 ^m 7			Mag: -4.2 PMG: 9 ^h 17 ^m			Mag: -1.3 PMG: 22 ^h 29 ^m			Mag: -2.1 PMG: 16 ^h 44 ^m			Mag: +0.1 PMG: 1 ^h 02 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	213	55.2	220	50.1	-4	04.7	21	26.3	-3	22.4	108	25.1	+22	58.2	344	33.9	-15	38.1
1	228	57.6	235	50.0		03.7	36	29.5		22.2	123	27.2		58.1	359	36.5		38.1
2	244	00.1	250	49.8		02.7	51	32.7		22.0	138	29.3		58.1	14	39.1		38.0
3	259	02.6	265	49.6		01.7	66	35.9		21.8	153	31.4		58.1	29	41.8		38.0
4	274	05.0	280	49.4	-4	00.8	81	39.1		21.6	168	33.5		58.0	44	44.4		37.9
5	289	07.5	295	49.3	-3	59.8	96	42.3	-3	21.4	183	35.5	+22	58.0	59	47.1	-15	37.9
6	304	10.0	310	49.1	-3	58.8	111	45.5	-3	21.2	198	37.6	+22	58.0	74	49.7	-15	37.8
7	319	12.4	325	48.9		57.9	126	48.7		21.1	213	39.7		57.9	89	52.3		37.8
8	334	14.9	340	48.7		56.9	141	51.9		20.9	228	41.8		57.9	104	55.0		37.7
9	349	17.4	355	48.6		55.9	156	55.1		20.7	243	43.9		57.9	119	57.6		37.7
10	4	19.8	10	48.4		54.9	171	58.3		20.5	258	46.0		57.8	135	00.3		37.6
11	19	22.3	25	48.2	-3	54.0	187	01.5	-3	20.3	273	48.1	+22	57.8	150	02.9	-15	37.6
12	34	24.8	40	48.0	-3	53.0	202	04.7	-3	20.1	288	50.1	+22	57.7	165	05.6	-15	37.5
13	49	27.2	55	47.9		52.0	217	07.9		19.9	303	52.2		57.7	180	08.2		37.5
14	64	29.7	70	47.7		51.0	232	11.1		19.7	318	54.3		57.7	195	10.8		37.5
15	79	32.1	85	47.5		50.0	247	14.3		19.5	333	56.4		57.6	210	13.5		37.4
16	94	34.6	100	47.3		49.1	262	17.5		19.3	348	58.5		57.6	225	16.1		37.4
17	109	37.1	115	47.2	-3	48.1	277	20.6	-3	19.2	4	00.6	+22	57.6	240	18.8	-15	37.3
18	124	39.5	130	47.0	-3	47.1	292	23.8	-3	19.0	19	02.6	+22	57.5	255	21.4	-15	37.3
19	139	42.0	145	46.8		46.1	307	27.0		18.8	34	04.7		57.5	270	24.1		37.2
20	154	44.5	160	46.6		45.2	322	30.2		18.6	49	06.8		57.5	285	26.7		37.2
21	169	46.9	175	46.4		44.2	337	33.4		18.4	64	08.9		57.4	300	29.3		37.1
22	184	49.4	190	46.3		43.2	352	36.6		18.2	79	11.0		57.4	315	32.0		37.1
23	199	51.9	205	46.1		42.2	7	39.8		18.0	94	13.1		57.4	330	34.6		37.0
24	214	54.3	220	45.9	-3	41.2	22	43.0	-3	17.9	109	15.1	+22	57.3	345	37.3	-15	37.0
Dif	—		-2	+10			+32	+2			+21	0			+26	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 6			Edad: 27 ^d 2 PHE { 4 ^h : 58 ^s 5 12 ^h : 58 ^s 3 20 ^h : 58 ^s 2 R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	34.3	+13 44.3	208	11.2	+4 54.2	60 N	2 04	3 18	4 09	3 37	20	17 39	82
1	195	34.4	45.1	222	40.6 ¹⁰⁴	+5 05.1 ¹⁰⁹	58	27	31	18	40	22	34	80
2	210	34.5	45.9	237	09.9 ¹⁰³	15.9 ¹⁰⁸	56	45	42	26	43	24	30	77
3	225	34.6	46.7	251	39.3 ¹⁰⁴	26.8 ¹⁰⁹	54	2 59	3 52	32	45	26	26	76
4	240	34.7	47.5	266	08.6 ¹⁰³	37.6 ¹⁰⁸	52	3 12	4 01	38	47	28	23	74
5	255	34.8	+13 48.3	280	38.0 ¹⁰⁴	+5 48.4 ¹⁰⁸	50	3 23	4 08	4 44	3 49	30	17 20	72
6	270	34.9	+13 49.1	295	07.3 ¹⁰³	+5 59.1 ¹⁰⁷	45	3 45	4 24	4 56	3 53	33	17 14	68
7	285	35.0	49.9	309	36.7 ¹⁰⁴	+6 09.8 ¹⁰⁷	40	4 02	37	5 05	3 57	36	08	66
8	300	35.1	50.7	324	06.0 ¹⁰³	20.4 ¹⁰⁶	35	15	47	14	4 00	39	04	63
9	315	35.2	51.5	338	35.3 ¹⁰³	31.0 ¹⁰⁶	30	26	4 56	21	03	41	17 00	61
10	330	35.3	52.3	353	04.7 ¹⁰⁴	41.6 ¹⁰⁶	20	44	5 11	33	08	44	16 53	57
11	345	35.4	+13 53.1	7	34.0 ¹⁰³	+6 52.1 ¹⁰⁵	10 N	4 57	5 23	5 44	4 12	48	16 47	54
12	0	35.5	+13 53.9	22	03.3 ¹⁰³	+7 02.6 ¹⁰⁵	0	5 08	5 33	5 54	4 17	50	16 41	51
13	15	35.6	54.6	36	32.6 ¹⁰³	13.1 ¹⁰⁵	10 S	18	43	6 04	21	54	35	48
14	30	35.7	55.4	51	01.9 ¹⁰³	23.4 ¹⁰³	20	26	5 52	15	25	58	29	45
15	45	35.8	56.2	65	31.2 ¹⁰³	33.8 ¹⁰⁴	30	34	6 02	26	30	62	22	41
16	60	35.9	57.0	80	00.5 ¹⁰³	44.1 ¹⁰³	35	37	07	33	33	64	18	39
17	75	36.0	+13 57.8	94	29.8 ¹⁰³	+7 54.3 ¹⁰²	40	5 41	6 13	6 41	4 37	66	16 13	37
18	90	36.0	+13 58.6	108	59.1 ¹⁰³	+8 04.5 ¹⁰²	45	5 45	6 19	6 50	4 41	69	16 08	34
19	105	36.1	+13 59.4	123	28.4 ¹⁰³	14.7 ¹⁰²	50	48	27	7 00	46	72	16 02	31
20	120	36.2	+14 00.2	137	57.6 ¹⁰²	24.8 ¹⁰¹	52	50	30	05	48	74	15 59	29
21	135	36.3	01.0	152	26.9 ¹⁰³	34.8 ¹⁰⁰	54	52	33	11	50	76	56	27
22	150	36.4	01.8	166	56.1 ¹⁰²	44.8 ¹⁰⁰	56	53	37	17	53	78	52	26
23	165	36.5	02.6	181	25.4 ¹⁰³	+8 54.7 ⁹⁹	58	55	42	24	56	80	48	24
24	180	36.6	+14 03.4	195	54.6 ¹⁰²	+9 04.6 ⁹⁹	60 S	5 57	6 46	7 31	4 59	84	15 44	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 38 ^m 8		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: -1.2 PMG: 22 ^h 24 ^m		Mag: -2.1 PMG: 16 ^h 41 ^m		Mag: +0.1 PMG: 0 ^h 57 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	214	54.3	220	45.9	-3 41.2	22 43.0	-3 17.9	109 15.1	+22 57.3	345 37.3	-15 37.0
1	229	56.8	235	45.7	40.3	37 46.1	17.7	124 17.2	57.3	0 39.9	36.9
2	244	59.2	250	45.6	39.3	52 49.3	17.5	139 19.3	57.3	15 42.6	36.9
3	260	01.7	265	45.4	38.3	67 52.5	17.3	154 21.4	57.2	30 45.2	36.8
4	275	04.2	280	45.2	37.3	82 55.7	17.1	169 23.5	57.2	45 47.8	36.8
5	290	06.6	295	45.0	-3 36.3	97 58.9	-3 16.9	184 25.5	+22 57.1	60 50.5	-15 36.7
6	305	09.1	310	44.9	-3 35.4	113 02.0	-3 16.7	199 27.6	+22 57.1	75 53.1	-15 36.7
7	320	11.6	325	44.7	34.4	128 05.2	16.6	214 29.7	57.1	90 55.8	36.6
8	335	14.0	340	44.5	33.4	143 08.4	16.4	229 31.8	57.0	105 58.4	36.6
9	350	16.5	355	44.3	32.4	158 11.6	16.2	244 33.9	57.0	121 01.1	36.5
10	5 19.0	10 44.1	31.4	173 14.7	16.0	173 14.7	16.0	259 35.9	57.0	136 03.7	36.5
11	20 21.4	25 44.0	-3 30.4	188 17.9	-3 15.8	188 17.9	-3 15.8	274 38.0	+22 56.9	151 06.3	-15 36.5
12	35 23.9	40 43.8	-3 29.5	203 21.1	-3 15.7	203 21.1	-3 15.7	289 40.1	+22 56.9	166 09.0	-15 36.4
13	50 26.4	55 43.6	28.5	218 24.3	15.5	218 24.3	15.5	304 42.2	56.9	181 11.6	36.4
14	65 28.8	70 43.4	27.5	233 27.4	15.3	233 27.4	15.3	319 44.3	56.8	196 14.3	36.3
15	80 31.3	85 43.3	26.5	248 30.6	15.1	248 30.6	15.1	334 46.3	56.8	211 16.9	36.3
16	95 33.7	100 43.1	25.5	263 33.8	14.9	263 33.8	14.9	349 48.4	56.7	226 19.6	36.2
17	110 36.2	115 42.9	-3 24.5	278 36.9	-3 14.8	278 36.9	-3 14.8	4 50.5	+22 56.7	241 22.2	-15 36.2
18	125 38.7	130 42.7	-3 23.6	293 40.1	-3 14.6	293 40.1	-3 14.6	19 52.6	+22 56.7	256 24.8	-15 36.1
19	140 41.1	145 42.5	22.6	308 43.3	14.4	308 43.3	14.4	34 54.7	56.6	271 27.5	36.1
20	155 43.6	160 42.4	21.6	323 46.4	14.2	323 46.4	14.2	49 56.7	56.6	286 30.1	36.0
21	170 46.1	175 42.2	20.6	338 49.6	14.1	338 49.6	14.1	64 58.8	56.6	301 32.8	36.0
22	185 48.5	190 42.0	19.6	353 52.7	13.9	353 52.7	13.9	80 00.9	56.5	316 35.4	35.9
23	200 51.0	205 41.8	18.6	8 55.9	13.7	8 55.9	13.7	95 03.0	56.5	331 38.1	35.9
24	215 53.5	220 41.7	-3 17.6	23 59.1	-3 13.5	23 59.1	-3 13.5	110 05.0	+22 56.5	346 40.7	-15 35.8
Dif	—	-2	+10	+32	+2	+32	+2	+21	0	+26	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 5		Edad: 28 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'6 R°: 51 ^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	180	36.6	+14	03.4	195	54.6	+9	04.6	60 N	19 50	20 42	22 00	3 57	22	19 01 78
1	195	36.7		04.1	210	23.9 ¹⁰³		14.4 98	58	41	28	21 35	4 02	25	18 54 76
2	210	36.8		04.9	224	53.1 ¹⁰²		24.2 98	56	33	17	16	07	27	47 74
3	225	36.9		05.7	239	22.3 ¹⁰²		33.9 97	54	26	20 07	21 01	11	29	42 72
4	240	37.0		06.5	253	51.5 ¹⁰²		43.5 96	52	20	19 58	20 47	15	31	37 70
5	255	37.1	+14	07.3	268	20.7 ¹⁰²	+9	53.1 96	50	19 14	19 50	20 36	4 19	32	18 32 69
6	270	37.2	+14	08.1	282	49.9 ¹⁰²	+10	02.6 95	45	19 02	19 34	20 13	4 26	36	18 22 66
7	285	37.3		08.9	297	19.1 ¹⁰²		12.1 95	40	18 51	21	19 56	33	38	14 63
8	300	37.3		09.7	311	48.3 ¹⁰²		21.5 94	35	43	10	42	39	40	07 61
9	315	37.4		10.4	326	17.4 ¹⁰¹		30.8 93	30	35	19 01	31	44	42	18 01 59
10	330	37.5		11.2	340	46.6 ¹⁰²		40.1 93	20	22	18 45	19 12	4 52	46	17 50 57
11	345	37.6	+14	12.0	355	15.7 ¹⁰¹	+10	49.3 92	10 N	18 11	18 33	18 58	5 00	49	17 41 54
12	0	37.7	+14	12.8	9	44.9 ¹⁰²	+10	58.4 91	0	18 01	18 22	18 47	5 07	52	17 32 51
13	15	37.8		13.6	24	14.0 ¹⁰¹	+11	07.5 91	10 S	17 51	12	37	15	54	23 49
14	30	37.9		14.4	38	43.1 ¹⁰¹		16.5 90	20	40	18 03	29	23	57	14 46
15	45	38.0		15.2	53	12.2 ¹⁰¹		25.5 90	30	28	17 52	21	32	60	17 03 43
16	60	38.1		15.9	67	41.3 ¹⁰¹		34.3 88	35	21	47	17	37	62	16 57 42
17	75	38.2	+14	16.7	82	10.4 ¹⁰¹	+11	43.1 88	40	17 13	17 41	18 13	5 43	64	16 50 40
18	90	38.2	+14	17.5	96	39.5 ¹⁰¹	+11	51.8 87	45	17 03	17 34	18 09	5 50	67	16 42 37
19	105	38.3		18.3	111	08.6 ¹⁰¹	+12	00.5 87	50	16 52	26	04	5 58	71	33 34
20	120	38.4		19.1	125	37.6 ¹⁰⁰		09.1 86	52	47	23	03	6 02	72	28 33
21	135	38.5		19.8	140	06.7 ¹⁰¹		17.6 85	54	42	19	18 01	06	74	23 31
22	150	38.6		20.6	154	35.7 ¹⁰⁰		26.0 84	56	35	15	17 59	11	76	18 29
23	165	38.7		21.4	169	04.8 ¹⁰¹		34.4 84	58	28	10	57	16	78	12 27
24	180	38.8	+14	22.2	183	33.8 ¹⁰⁰	+12	42.6 82	60 S	16 21	17 05	17 55	6 23	80	16 05 25
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 34 ^m 9		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: -1.2 PMG: 22 ^h 19 ^m		Mag: -2.1 PMG: 16 ^h 37 ^m		Mag: +0.1 PMG: 0 ^h 53 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	215	53.5	220	41.7	23	59.1	110	05.0	346	40.7					
1	230	55.9	235	41.5	39	02.2	125	07.1	1	43.4					
2	245	58.4	250	41.3	54	05.4	140	09.2	16	46.0					
3	261	00.8	265	41.1	69	08.5	155	11.3	31	48.6					
4	276	03.3	280	40.9	84	11.7	170	13.3	46	51.3					
5	291	05.8	295	40.8	99	14.8	185	15.4	61	53.9					
6	306	08.2	310	40.6	114	18.0	200	17.5	76	56.6					
7	321	10.7	325	40.4	129	21.2	215	19.6	91	59.2					
8	336	13.2	340	40.2	144	24.3	230	21.6	107	01.9					
9	351	15.6	355	40.1	159	27.5	245	23.7	122	04.5					
10	6	18.1	10	39.9	174	30.6	260	25.8	137	07.2					
11	21	20.6	25	39.7	189	33.7	275	27.9	152	09.8					
12	36	23.0	40	39.5	204	36.9	290	29.9	167	12.4					
13	51	25.5	55	39.3	219	40.0	305	32.0	182	15.1					
14	66	28.0	70	39.2	234	43.2	320	34.1	197	17.7					
15	81	30.4	85	39.0	249	46.3	335	36.2	212	20.4					
16	96	32.9	100	38.8	264	49.5	350	38.2	227	23.0					
17	111	35.3	115	38.6	279	52.6	5	40.3	242	25.7					
18	126	37.8	130	38.5	294	55.8	20	42.4	257	28.3					
19	141	40.3	145	38.3	309	58.9	35	44.5	272	31.0					
20	156	42.7	160	38.1	325	02.0	50	46.5	287	33.6					
21	171	45.2	175	37.9	340	05.2	65	48.6	302	36.3					
22	186	47.7	190	37.7	355	08.3	80	50.7	317	38.9					
23	201	50.1	205	37.6	54.8	10 11.4	95	52.7	332	41.5					
24	216	52.6	220	37.4	25	14.6	110	54.8	347	44.2					
Dif	—		-2	+10	+31	+2	+21	0	+26	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 57 ^m 3			Edad: 29 ^d 2 SD: 15°7 PMG: 12 ^h 11 ^m	PHE { 4 ^h : 57/5 12 ^h : 57/3 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	180	38.8	+14	22.2	183	33.8	+12	42.6	60 N	1 54	3 12	4 04	4 19	28	20 19	72	
1	195	38.9		23.0	198	02.8		50.8	58	2 19	26	13	27	30	10	70	
2	210	38.9		23.7	212	31.8	+12	59.0	82	38	37	21	34	32	20 01	69	
3	225	39.0		24.5	227	00.8	+13	07.0	80	2 54	47	28	40	33	19 54	66	
4	240	39.1		25.3	241	29.8		15.0	80	3 07	3 56	35	46	34	47	66	
5	255	39.2	+14	26.1	255	58.8	+13	22.9	79	3 18	4 04	4 40	4 51	36	19 41	65	
6	270	39.3	+14	26.9	270	27.8	+13	30.7	78	3 41	4 21	4 53	5 02	39	19 28	62	
7	285	39.4		27.6	284	56.8		38.4	77	3 58	34	5 03	11	41	17	61	
8	300	39.5		28.4	299	25.7		46.0	76	4 12	45	12	19	43	08	59	
9	315	39.5		29.2	313	54.7	+13	53.6	76	30	24	4 54	19	26	44	19 00	58
10	330	39.6		30.0	328	23.7	+14	01.1	75	20	42	5 09	32	38	47	18 47	55
11	345	39.7	+14	30.7	342	52.6	+14	08.5	74	10 N	4 56	5 22	5 43	5 49	49	18 35	53
12	0	39.8	+14	31.5	357	21.5	+14	15.8	73	0	5 08	5 33	5 54	5 59	51	18 23	52
13	15	39.9		32.3	11	50.5		23.0	72	10 S	18	43	6 04	6 09	53	12	50
14	30	40.0		33.1	26	19.4		30.2	72	20	26	5 53	15	20	56	18 00	48
15	45	40.1		33.8	40	48.3		37.2	70	30	35	6 03	28	32	59	17 46	46
16	60	40.1		34.6	55	17.2		44.2	70	35	39	09	35	39	60	39	44
17	75	40.2	+14	35.4	69	46.1	+14	51.1	69	40	5 43	6 15	6 43	6 47	62	17 30	42
18	90	40.3	+14	36.2	84	15.1	+14	57.9	68	45	5 47	6 22	6 52	6 57	64	17 19	41
19	105	40.4		36.9	98	44.0	+15	04.6	67	50	51	29	7 03	7 09	67	07	38
20	120	40.5		37.7	113	12.9		11.2	66	52	53	33	09	14	68	17 01	37
21	135	40.6		38.5	127	41.7		17.8	66	54	55	37	14	20	70	16 54	36
22	150	40.6		39.2	142	10.6		24.2	64	56	57	41	21	27	71	47	34
23	165	40.7		40.0	156	39.5		30.6	64	58	5 59	46	28	34	74	39	33
24	180	40.8	+14	40.8	171	08.4	+15	36.8	62	60 S	6 01	6 51	7 36	7 43	76	16 30	30
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 30 ^m 9			Mag: -4.2 PMG: 9 ^h 18 ^m			Mag: -1.2 PMG: 22 ^h 14 ^m			Mag: -2.1 PMG: 16 ^h 34 ^m			Mag: +0.1 PMG: 0 ^h 49 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	216	52.6	220	37.4	-2	53.8	25	14.6	-3	09.5	110	54.8	+22	55.6	347	44.2	
1	231	55.1	235	37.2		52.8	40	17.7		09.3	125	56.9		55.5	2	46.8	
2	246	57.5	250	37.0		51.8	55	20.8		09.2	140	59.0		55.5	17	49.5	
3	262	00.0	265	36.8		50.8	70	24.0		09.0	156	01.0		55.5	32	52.1	
4	277	02.5	280	36.7		49.9	85	27.1		08.8	171	03.1		55.4	47	54.8	
5	292	04.9	295	36.5	-2	48.9	100	30.2	-3	08.7	186	05.2	+22	55.4	62	57.4	
6	307	07.4	310	36.3	-2	47.9	115	33.4	-3	08.5	201	07.2	+22	55.3	78	00.1	
7	322	09.8	325	36.1		46.9	130	36.5		08.3	216	09.3		55.3	93	02.7	
8	337	12.3	340	35.9		45.9	145	39.6		08.2	231	11.4		55.3	108	05.4	
9	352	14.8	355	35.8		44.9	160	42.7		08.0	246	13.4		55.2	123	08.0	
10	7	17.2	10	35.6		43.9	175	45.9		07.9	261	15.5		55.2	138	10.6	
11	22	19.7	25	35.4	-2	42.9	190	49.0	-3	07.7	276	17.6	+22	55.2	153	13.3	
12	37	22.2	40	35.2	-2	41.9	205	52.1	-3	07.6	291	19.7	+22	55.1	168	15.9	
13	52	24.6	55	35.1		40.9	220	55.2		07.4	306	21.7		55.1	183	18.6	
14	67	27.1	70	34.9		39.9	235	58.3		07.2	321	23.8		55.0	198	21.2	
15	82	29.6	85	34.7		38.9	251	01.5		07.1	336	25.9		55.0	213	23.9	
16	97	32.0	100	34.5		37.9	266	04.6		06.9	351	27.9		55.0	228	26.5	
17	112	34.5	115	34.3	-2	36.9	281	07.7	-3	06.8	6	30.0	+22	54.9	243	29.2	
18	127	36.9	130	34.2	-2	35.9	296	10.8	-3	06.6	21	32.1	+22	54.9	258	31.8	
19	142	39.4	145	34.0		34.9	311	13.9		06.5	36	34.1		54.8	273	34.5	
20	157	41.9	160	33.8		33.9	326	17.0		06.3	51	36.2		54.8	288	37.1	
21	172	44.3	175	33.6		32.9	341	20.1		06.2	66	38.3		54.8	303	39.8	
22	187	46.8	190	33.4		31.9	356	23.3		06.0	81	40.3		54.7	318	42.4	
23	202	49.3	205	33.3		30.9	11	26.4		05.8	96	42.4		54.7	333	45.0	
24	217	51.7	220	33.1	-2	29.9	26	29.5	-3	05.7	111	44.5	+22	54.7	348	47.7	
Dif	—		-2		+10		+31		+2		+21		0		+26		

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: 30 ^d 2 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 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	180	40.8	+14 40.8	171	08.4	+15 36.8	60 N	19 55	20 48	22 10	4 47 34	21 31 63			
1	195	40.9		185	37.3	99	58	45	34	21 43	4 57 36	20 62			
2	210	41.0	42.3	200	06.2	99	56	37	22	22	5 06 37	10 60			
3	225	41.0	43.1	214	35.0	98	54	30	11	21 06	13 39	21 01 60			
4	240	41.1	43.9	229	03.9	99	52	23	20 02	20 52	20 40	20 53 59			
5	255	41.2	+14 44.6	243	32.8	99	50	19 17	19 54	20 40	5 27 40	20 46 58			
6	270	41.3	+14 45.4	258	01.7	99	45	19 04	19 36	20 16	5 41 42	20 30 58			
7	285	41.4	46.2	272	30.5	98	40	18 53	23	19 58	5 52 44	18 56			
8	300	41.4	46.9	286	59.4	99	35	44	12	44	6 02 45	20 07 56			
9	315	41.5	47.7	301	28.3	99	30	37	19 02	32	10 47	19 58 55			
10	330	41.6	48.5	315	57.2	99	20	23	18 46	19 13	25 48	42 53			
11	345	41.7	+14 49.2	330	26.0	98	10 N	18 11	18 33	18 59	6 38 50	19 28 52			
12	0	41.8	+14 50.0	344	54.9	99	0	18 01	18 22	18 47	6 50 52	19 15 51			
13	15	41.8	50.8	359	23.8	99	10 S	17 50	12	37	7 02 53	19 02 50			
14	30	41.9	51.5	13	52.7	99	20	39	18 01	28	16 54	18 48 49			
15	45	42.0	52.3	28	21.6	99	30	26	17 51	19	31 56	32 48			
16	60	42.1	53.0	42	50.5	99	35	19	45	15	39 58	23 47			
17	75	42.2	+14 53.8	57	19.4	99	40	17 10	17 38	18 10	7 49 59	18 12 46			
18	90	42.2	+14 54.6	71	48.3	99	45	17 01	17 31	18 06	8 01 60	18 00 45			
19	105	42.3	55.3	86	17.2	99	50	16 49	23	18 01	16 61	17 45 43			
20	120	42.4	56.1	100	46.1	99	52	44	19	17 59	22 63	38 42			
21	135	42.5	56.9	115	15.0	99	54	38	15	57	30 64	30 42			
22	150	42.5	57.6	129	43.9	99	56	31	11	55	38 65	21 41			
23	165	42.6	58.4	144	12.9	100	58	24	06	53	48 66	12 39			
24	180	42.7	+14 59.1	158	41.8	99	60 S	16 15	17 01	17 50	8 59 67	17 00 38			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 27 ^m 0		Mag: -4.2 PMG: 9 ^h 18 ^m			Mag: -1.2 PMG: 22 ^h 09 ^m			Mag: -2.1 PMG: 16 ^h 31 ^m			Mag: +0.1 PMG: 0 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	217	51.7	220 33.1	-2 29.9	26 29.5	-3 05.7	111	44.5	+22 54.7	348	47.7	-15 33.5			
1	232	54.2	235 32.9	28.9	41 32.6	05.5	126	46.5	54.6	3	50.3	33.5			
2	247	56.7	250 32.7	27.9	56 35.7	05.4	141	48.6	54.6	18	53.0	33.4			
3	262	59.1	265 32.5	26.9	71 38.8	05.2	156	50.7	54.5	33	55.6	33.4			
4	278	01.6	280 32.4	25.9	86 41.9	05.1	171	52.7	54.5	48	58.3	33.3			
5	293	04.1	295 32.2	-2 24.9	101 45.0	-3 04.9	186	54.8	+22 54.5	64	00.9	-15 33.3			
6	308	06.5	310 32.0	-2 23.8	116 48.1	-3 04.8	201	56.9	+22 54.4	79	03.6	-15 33.2			
7	323	09.0	325 31.8	22.8	131 51.2	04.6	216	58.9	54.4	94	06.2	33.2			
8	338	11.4	340 31.6	21.8	146 54.3	04.5	232	01.0	54.3	109	08.9	33.1			
9	353	13.9	355 31.4	20.8	161 57.4	04.3	247	03.0	54.3	124	11.5	33.1			
10	8	16.4	10 31.3	19.8	177 00.5	04.2	262	05.1	54.3	139	14.2	33.0			
11	23	18.8	25 31.1	-2 18.8	192 03.6	-3 04.0	277	07.2	+22 54.2	154	16.8	-15 33.0			
12	38	21.3	40 30.9	-2 17.8	207 06.7	-3 03.9	292	09.2	+22 54.2	169	19.5	-15 32.9			
13	53	23.8	55 30.7	16.8	222 09.8	03.8	307	11.3	54.2	184	22.1	32.9			
14	68	26.2	70 30.5	15.8	237 12.9	03.6	322	13.4	54.1	199	24.8	32.8			
15	83	28.7	85 30.4	14.8	252 16.0	03.5	337	15.4	54.1	214	27.4	32.8			
16	98	31.2	100 30.2	13.8	267 19.0	03.3	352	17.5	54.0	229	30.0	32.7			
17	113	33.6	115 30.0	-2 12.8	282 22.1	-3 03.2	7	19.6	+22 54.0	244	32.7	-15 32.7			
18	128	36.1	130 29.8	-2 11.8	297 25.2	-3 03.0	22	21.6	+22 54.0	259	35.3	-15 32.6			
19	143	38.6	145 29.6	10.8	312 28.3	02.9	37	23.7	53.9	274	38.0	32.6			
20	158	41.0	160 29.5	09.8	327 31.4	02.7	52	25.7	53.9	289	40.6	32.5			
21	173	43.5	175 29.3	08.8	342 34.5	02.6	67	27.8	53.8	304	43.3	32.5			
22	188	45.9	190 29.1	07.8	357 37.6	02.5	82	29.9	53.8	319	45.9	32.5			
23	203	48.4	205 28.9	06.7	12 40.6	02.3	97	31.9	53.8	334	48.6	32.4			
24	218	50.9	220 28.7	-2 05.7	27 43.7	-3 02.2	112	34.0	+22 53.7	349	51.2	-15 32.4			
Dif	—		-2	+10	+31	+1	+21		0		+26				

UT	SOL				● LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 1				Edad: 1 ^d 7 PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'8 PMG: 13 ^h 54 ^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 m	h m m	h m m		
0	180	42.7	+14	59.1	158	41.8	+17	39.1	39	43.0	39	60 N	1 43	3 05	3 58	5 21	42	22 34 53		
1	195	42.8	+14	59.9	173	10.7	99		43.0	39	58	2 11	20	4 08		33 43	22 52			
2	210	42.8	+15	00.7	187	39.7	100		46.8	38	56	31	32	16		43 44	10 53			
3	225	42.9		01.4	202	08.7	100		50.5	37	54	2 48	43	24		5 52 45	22 01 52			
4	240	43.0		02.2	216	37.6	99		54.1	36	52	3 02	3 52	31		6 00 45	21 52 52			
5	255	43.1	+15	02.9	231	06.6	100	+17	57.6	35	50	3 14	4 00	4 37		6 07 46	21 44 52			
6	270	43.2	+15	03.7	245	35.6	100	+18	01.0	34	45	3 37	4 17	4 50		6 23 47	21 28 52			
7	285	43.2		04.4	260	04.6	100		04.2	32	40	3 55	31	5 00		36 48	14 52			
8	300	43.3		05.2	274	33.7	101		07.4	32	35	4 10	42	09		47 48	21 03 51			
9	315	43.4		06.0	289	02.7	100		10.5	31	30	22	4 52	17		6 57 48	20 53 51			
10	330	43.4		06.7	303	31.8	101		13.5	30	20	41	5 08	31		7 13 50	35 51			
11	345	43.5	+15	07.5	318	00.8	100	+18	16.4	29	10 N	4 55	5 21	5 43		7 28 50	20 20 51			
12	0	43.6	+15	08.2	332	29.9	101	+18	19.2	28	0	5 07	5 32	5 54		7 42 51	20 06 51			
13	15	43.7		09.0	346	59.0	101		21.9	27	10 S	18	43	6 04		7 55 52	19 52 50			
14	30	43.7		09.7	1	28.1	101		24.6	27	20	27	5 53	16		8 10 52	37 50			
15	45	43.8		10.5	15	57.2	101		27.1	25	30	36	6 04	29		27 53	20 49			
16	60	43.9		11.2	30	26.4	102		29.5	24	35	40	10	36		37 53	19 10 49			
17	75	44.0	+15	12.0	44	55.5	101	+18	31.8	23	40	5 44	6 17	6 45		8 48 54	18 58 49			
18	90	44.0	+15	12.7	59	24.7	102	+18	34.0	22	45	5 49	6 24	6 55		9 01 55	18 45 48			
19	105	44.1		13.5	73	53.9	102		36.1	21	50	54	32	7 06		17 56	28 48			
20	120	44.2		14.2	88	23.1	102		38.1	20	52	56	36	12		25 56	20 48			
21	135	44.3		15.0	102	52.3	102		40.0	19	54	5 58	40	18		34 56	12 48			
22	150	44.3		15.7	117	21.6	103		41.8	18	56	6 00	45	25		43 57	18 02 48			
23	165	44.4		16.5	131	50.8	102		43.5	17	58	03	50	32		9 54 57	17 51 47			
24	180	44.5	+15	17.2	146	20.1	103	+18	45.1	16	60 S	6 05	6 55	7 41		10 06 58	17 38 47			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 9 ^h 23 ^m 1		Mag: -4.1 PMG: 9 ^h 18 ^m				Mag: -1.2 PMG: 22 ^h 05 ^m				Mag: -2.1 PMG: 16 ^h 27 ^m				Mag: +0.1 PMG: 0 ^h 40 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	218	50.9	220	28.7	-2	05.7			27	43.7	-3	02.2	112	34.0	+22	53.7	349	51.2	-15	32.4
1	233	53.3	235	28.5		04.7			42	46.8		02.0	127	36.0		53.7	4	53.9		32.3
2	248	55.8	250	28.4		03.7			57	49.9		01.9	142	38.1		53.6	19	56.5		32.3
3	263	58.3	265	28.2		02.7			72	53.0		01.8	157	40.2		53.6	34	59.2		32.2
4	279	00.7	280	28.0		01.7			87	56.0		01.6	172	42.2		53.6	50	01.8		32.2
5	294	03.2	295	27.8	-2	00.7			102	59.1	-3	01.5	187	44.3	+22	53.5	65	04.5	-15	32.1
6	309	05.7	310	27.6	-1	59.7			118	02.2	-3	01.3	202	46.3	+22	53.5	80	07.1	-15	32.1
7	324	08.1	325	27.5		58.7			133	05.3		01.2	217	48.4		53.4	95	09.8		32.0
8	339	10.6	340	27.3		57.7			148	08.3		01.1	232	50.5		53.4	110	12.4		32.0
9	354	13.1	355	27.1		56.6			163	11.4		00.9	247	52.5		53.4	125	15.1		31.9
10	9	15.5	10	26.9		55.6			178	14.5		00.8	262	54.6		53.3	140	17.7		31.9
11	24	18.0	25	26.7	-1	54.6			193	17.5	-3	00.7	277	56.6	+22	53.3	155	20.4	-15	31.8
12	39	20.4	40	26.5	-1	53.6			208	20.6	-3	00.5	292	58.7	+22	53.2	170	23.0	-15	31.8
13	54	22.9	55	26.4		52.6			223	23.7		00.4	308	00.8		53.2	185	25.6		31.7
14	69	25.4	70	26.2		51.6			238	26.7		00.3	323	02.8		53.2	200	28.3		31.7
15	84	27.8	85	26.0		50.6			253	29.8	-3	00.1	338	04.9		53.1	215	30.9		31.6
16	99	30.3	100	25.8		49.6			268	32.9	-3	00.0	353	06.9		53.1	230	33.6		31.6
17	114	32.8	115	25.6	-1	48.5			283	35.9	-2	59.9	8	09.0	+22	53.0	245	36.2	-15	31.5
18	129	35.2	130	25.5	-1	47.5			298	39.0	-2	59.7	23	11.0	+22	53.0	260	38.9	-15	31.5
19	144	37.7	145	25.3		46.5			313	42.0		59.6	38	13.1		53.0	275	41.5		31.4
20	159	40.2	160	25.1		45.5			328	45.1		59.5	53	15.2		52.9	290	44.2		31.4
21	174	42.6	175	24.9		44.5			343	48.1		59.3	68	17.2		52.9	305	46.8		31.3
22	189	45.1	190	24.7		43.5			358	51.2		59.2	83	19.3		52.8	320	49.5		31.3
23	204	47.5	205	24.5		42.5			13	54.3		59.1	98	21.3		52.8	335	52.1		31.2
24	219	50.0	220	24.4	-1	41.4			28	57.3	-2	58.9	113	23.4	+22	52.8	350	54.8	-15	31.2
Dif	—		-2		+10				+31		+1		+21		0		+26		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 0			Edad: 2 ^d 7 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/3 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	180	44.5	+15	17.2	146	20.1	+18 45.1	60 N	20 00	20 54	22 21	6 03 51	23 27 42		
1	195	44.5		18.0	160	49.4 ¹⁰³	46.6 ¹⁵	58	19 50	39	21 51	16 51	14 42		
2	210	44.6		18.7	175	18.8 ¹⁰⁴	48.0 ¹⁴	56	41	26	29	27 51	23 03 43		
3	225	44.7		19.5	189	48.1 ¹⁰³	49.4 ¹⁴	54	33	15	21 11	37 50	22 53 44		
4	240	44.7		20.2	204	17.5 ¹⁰⁴	50.6 ¹²	52	26	20 06	20 57	45 51	44 44		
5	255	44.8	+15	21.0	218	46.9 ¹⁰⁴	+18 51.7 ¹¹	50	19 20	19 57	20 44	6 53 51	22 36 45		
6	270	44.9	+15	21.7	233	16.3 ¹⁰⁴	+18 52.7 ¹⁰	45	19 07	19 39	20 20	7 10 50	22 20 45		
7	285	45.0		22.5	247	45.8 ¹⁰⁵	53.6 ⁹	40	18 56	25	20 01	24 50	22 06 46		
8	300	45.0		23.2	262	15.2 ¹⁰⁴	54.5 ⁹	35	46	13	19 46	35 51	21 54 47		
9	315	45.1		24.0	276	44.7 ¹⁰⁵	55.2 ⁷	30	38	19 03	34	7 45 51	44 47		
10	330	45.2		24.7	291	14.3 ¹⁰⁶	55.8 ⁶	20	24	18 47	19 14	8 03 50	26 48		
11	345	45.2	+15	25.5	305	43.8 ¹⁰⁵	+18 56.3 ⁵	10 N	18 12	18 34	18 59	8 18 50	21 11 49		
12	0	45.3	+15	26.2	320	13.4 ¹⁰⁶	+18 56.8 ⁵	0	18 00	18 22	18 47	8 33 49	20 57 49		
13	15	45.4		26.9	334	43.0 ¹⁰⁶	57.1 ³	10 S	17 49	11	36	8 47 50	42 50		
14	30	45.4		27.7	349	12.6 ¹⁰⁶	57.4 ³	20	37	18 00	27	9 02 50	27 50		
15	45	45.5		28.4	3	42.3 ¹⁰⁷	57.5 ¹	30	24	17 49	17	20 49	20 09 51		
16	60	45.6		29.2	18	12.0 ¹⁰⁷	57.6 ¹	35	16	43	13	30 49	19 59 51		
17	75	45.6	+15	29.9	32	41.7 ¹⁰⁷	+18 57.5 ¹	40	17 08	17 36	18 08	9 42 49	19 47 52		
18	90	45.7	+15	30.7	47	11.5 ¹⁰⁸	+18 57.4 ¹	45	16 58	17 28	18 03	9 56 48	19 33 53		
19	105	45.8		31.4	61	41.2 ¹⁰⁷	57.1 ³	50	45	20	17 58	10 13 48	16 53		
20	120	45.8		32.1	76	11.0 ¹⁰⁸	56.8 ³	52	40	16	56	21 48	08 54		
21	135	45.9		32.9	90	40.9 ¹⁰⁹	56.4 ⁴	54	34	11	54	30 47	19 00 53		
22	150	46.0		33.6	105	10.8 ¹⁰⁹	55.9 ⁵	56	27	07	51	40 47	18 50 54		
23	165	46.0		34.4	119	40.7 ¹⁰⁹	55.2 ⁷	58	19	17 02	48	10 51 47	38 55		
24	180	46.1	+15	35.1	134	10.6 ¹⁰⁹	+18 54.5 ⁷	60 S	16 10	16 56	17 46	11 04 47	18 25 55		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 19 ^m 1		Mag: -4.1 PMG: 9 ^h 18 ^m		Mag: -1.1 PMG: 22 ^h 00 ^m		Mag: -2.1 PMG: 16 ^h 24 ^m		Mag: +0.1 PMG: 0 ^h 36 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	219	50.0	220	24.4	-1	41.4	28	57.3	-2	58.9	113	23.4	+22	52.8	350	54.8	-15	31.2
1	234	52.5	235	24.2		40.4	44	00.4		58.8	128	25.4		52.7	5	57.4		31.1
2	249	54.9	250	24.0		39.4	59	03.4		58.7	143	27.5		52.7	21	00.1		31.1
3	264	57.4	265	23.8		38.4	74	06.5		58.6	158	29.6		52.6	36	02.7		31.0
4	279	59.9	280	23.6		37.4	89	09.5		58.4	173	31.6		52.6	51	05.4		31.0
5	295	02.3	295	23.4	-1	36.4	104	12.6	-2	58.3	188	33.7	+22	52.6	66	08.0	-15	30.9
6	310	04.8	310	23.3	-1	35.4	119	15.6	-2	58.2	203	35.7	+22	52.5	81	10.7	-15	30.9
7	325	07.3	325	23.1		34.3	134	18.6		58.1	218	37.8		52.5	96	13.3		30.9
8	340	09.7	340	22.9		33.3	149	21.7		57.9	233	39.8		52.4	111	16.0		30.8
9	355	12.2	355	22.7		32.3	164	24.7		57.8	248	41.9		52.4	126	18.6		30.8
10	10	14.7	10	22.5		31.3	179	27.8		57.7	263	43.9		52.4	141	21.3		30.7
11	25	17.1	25	22.3	-1	30.3	194	30.8	-2	57.6	278	46.0	+22	52.3	156	23.9	-15	30.7
12	40	19.6	40	22.2	-1	29.3	209	33.8	-2	57.4	293	48.0	+22	52.3	171	26.6	-15	30.6
13	55	22.0	55	22.0		28.2	224	36.9		57.3	308	50.1		52.2	186	29.2		30.6
14	70	24.5	70	21.8		27.2	239	39.9		57.2	323	52.1		52.2	201	31.9		30.5
15	85	27.0	85	21.6		26.2	254	43.0		57.1	338	54.2		52.2	216	34.5		30.5
16	100	29.4	100	21.4		25.2	269	46.0		56.9	353	56.3		52.1	231	37.2		30.4
17	115	31.9	115	21.2	-1	24.2	284	49.0	-2	56.8	8	58.3	+22	52.1	246	39.8	-15	30.4
18	130	34.4	130	21.1	-1	23.1	299	52.1	-2	56.7	24	00.4	+22	52.0	261	42.5	-15	30.3
19	145	36.8	145	20.9		22.1	314	55.1		56.6	39	02.4		52.0	276	45.1		30.3
20	160	39.3	160	20.7		21.1	329	58.1		56.5	54	04.5		51.9	291	47.8		30.2
21	175	41.8	175	20.5		20.1	345	01.1		56.3	69	06.5		51.9	306	50.4		30.2
22	190	44.2	190	20.3		19.1	0	04.2		56.2	84	08.6		51.9	321	53.1		30.1
23	205	46.7	205	20.1		18.0	15	07.2		56.1	99	10.6		51.8	336	55.7		30.1
24	220	49.2	220	19.9	-1	17.0	30	10.2	-2	56.0	114	12.7	+22	51.8	351	58.4	-15	30.0
Dif	—		-2 +10		+30 +1		+21 0		+26 0									

UT	SOL			☉ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 3 ^d 7	PHE {										
	PMG: 11 ^h 56 ^m 9					SD: 15 ^h 0		R ^o : 48 ^m			R ^o		R ^o		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	180	46.1	+15	35.1	134	10.6	+18	54.5	60 N	1 32	2 59	3 53	6 54	58	
1	195	46.2		35.8	148	40.6 ¹¹⁰		53.7	58	2 02	3 14	4 03	7 07	57	
2	210	46.2		36.6	163	10.6 ¹¹⁰		52.8	56		24	27	18	56	
3	225	46.3		37.3	177	40.6 ¹¹⁰		51.8	54		42	38	27	56	
4	240	46.4		38.0	192	10.7 ¹¹¹		50.8	52	2 56	48	27	36	55	
5	255	46.4	+15	38.8	206	40.8 ¹¹¹	+18	49.6	50	3 09	3 56	4 33	7 44	55	
6	270	46.5	+15	39.5	221	10.9 ¹¹¹	+18	48.3	45	3 34	4 14	4 47	8 00	54	
7	285	46.6		40.2	235	41.1 ¹¹²		47.0	40	3 52	28	4 58	14	53	
8	300	46.6		41.0	250	11.3 ¹¹²		45.5	35	4 07	40	5 07	26	52	
9	315	46.7		41.7	264	41.5 ¹¹²		44.0	30		20	4 50	16	36	
10	330	46.7		42.5	279	11.8 ¹¹³		42.3	20		39	5 07	30	8 53	
11	345	46.8	+15	43.2	293	42.1 ¹¹³	+18	40.6	10 N	4 55	5 20	5 42	9 08	50	
12	0	46.9	+15	43.9	308	12.4 ¹¹³	+18	38.8	0	5 07	5 32	5 53	9 22	49	
13	15	46.9		44.7	322	42.8 ¹¹⁴		36.9	10 S		18	43	6 05	37	
14	30	47.0		45.4	337	13.2 ¹¹⁴		34.9	20		28	5 54	17	9 52	
15	45	47.1		46.1	351	43.7 ¹¹⁵		32.8	30		37	6 05	30	10 09	
16	60	47.1		46.8	6	14.2 ¹¹⁵		30.7	35		41	12	38	19 45	
17	75	47.2	+15	47.6	20	44.7 ¹¹⁵	+18	28.4	40	5 46	6 18	6 47	10 31	43	
18	90	47.2	+15	48.3	35	15.2 ¹¹⁵	+18	26.1	45	5 51	6 26	6 57	10 44	43	
19	105	47.3		49.0	49	45.8 ¹¹⁶		23.7	50		56	35	7 09	11 01	
20	120	47.4		49.8	64	16.5 ¹¹⁷		21.1	52	5 59	39	15	09	40	
21	135	47.4		50.5	78	47.2 ¹¹⁷		18.5	54	6 01	43	21	17	40	
22	150	47.5		51.2	93	17.9 ¹¹⁷		15.9	56		04	48	28	27 39	
23	165	47.5		52.0	107	48.6 ¹¹⁷		13.1	58		06	53	36	38 38	
24	180	47.6	+15	52.7	122	19.4 ¹¹⁸	+18	10.2	60 S	6 09	6 59	7 45	11 51	37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 15 ^m 2		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: -1.1 PMG: 21 ^h 55 ^m		Mag: -2.0 PMG: 16 ^h 21 ^m		Mag: +0.1 PMG: 0 ^h 32 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	220	49.2	220	19.9	-1	17.0	30	10.2	-2	56.0
1	235	51.6	235	19.8		16.0	45	13.2		55.9
2	250	54.1	250	19.6		15.0	60	16.3		55.8
3	265	56.5	265	19.4		14.0	75	19.3		55.6
4	280	59.0	280	19.2		12.9	90	22.3		55.5
5	296	01.5	295	19.0	-1	11.9	105	25.3	-2	55.4
6	311	03.9	310	18.8	-1	10.9	120	28.3	-2	55.3
7	326	06.4	325	18.7		09.9	135	31.4		55.2
8	341	08.9	340	18.5		08.8	150	34.4		55.1
9	356	11.3	355	18.3		07.8	165	37.4		55.0
10	11	13.8	10	18.1		06.8	180	40.4		54.9
11	26	16.3	25	17.9	-1	05.8	195	43.4	-2	54.7
12	41	18.7	40	17.7	-1	04.8	210	46.4	-2	54.6
13	56	21.2	55	17.5		03.7	225	49.4		54.5
14	71	23.7	70	17.4		02.7	240	52.4		54.4
15	86	26.1	85	17.2		01.7	255	55.4		54.3
16	101	28.6	100	17.0	-1	00.7	270	58.4		54.2
17	116	31.0	115	16.8	-0	59.6	286	01.4	-2	54.1
18	131	33.5	130	16.6	-0	58.6	301	04.4	-2	54.0
19	146	36.0	145	16.4		57.6	316	07.4		53.9
20	161	38.4	160	16.2		56.6	331	10.4		53.8
21	176	40.9	175	16.1		55.5	346	13.4		53.7
22	191	43.4	190	15.9		54.5	1	16.4		53.5
23	206	45.8	205	15.7		53.5	16	19.4		53.4
24	221	48.3	220	15.5	-0	52.5	31	22.4	-2	53.3
Dif	—		-2		+10		+30		+1	
							+20		0	
									+26	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9		Edad: 4 ^d 7	PHE	SD: 14'9	Rº: 47 ^m			Civil		Náutico	Hora	Rº	Hora	Rº
	PMG: 11 ^h 56 ^m 8	hG ☉							Dec	hG ☾					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	47.6	+15	52.7	122	19.4	+18 10.2	60 N	20 05	21 00	22 33	7 52 64	0 09 32		
1	195	47.7		53.4	136	50.3 ¹¹⁹	07.3 ²⁹	58	19 54	20 44	21 59	8 04 62	*** ** *		
2	210	47.7		54.1	151	21.1 ¹¹⁸	04.3 ³⁰	56	45	31	36	14 61	*** ** *		
3	225	47.8		54.9	165	52.0 ¹¹⁹	+18 01.2 ³¹	54	37	19	17	23 60	*** ** *		
4	240	47.8		55.6	180	23.0 ¹²⁰	+17 58.0 ³²	52	30	09	21 02	31 59	*** ** *		
5	255	47.9	+15	56.3	194	54.0 ¹²⁰	+17 54.7 ³³	50	19 23	20 00	20 49	8 39 57	23 59 33		
6	270	48.0	+15	57.0	209	25.0 ¹²⁰	+17 51.3 ³⁴	45	19 09	19 42	20 23	8 54 56	23 45 35		
7	285	48.0		57.8	223	56.1 ¹²¹	47.9 ³⁴	40	18 58	27	20 03	9 07 54	33 38		
8	300	48.1		58.5	238	27.2 ¹²¹	44.4 ³⁵	35	48	15	19 48	18 53	23 39		
9	315	48.1		59.2	252	58.3 ¹²¹	40.8 ³⁶	30	39	19 05	35	27 52	23 15 40		
10	330	48.2	+15	59.9	267	29.5 ¹²²	37.1 ³⁷	20	25	18 48	15	43 50	22 59 43		
11	345	48.2	+16	00.7	282	00.7 ¹²²	+17 33.4 ³⁷	10 N	18 12	18 34	19 00	9 58 48	22 46 44		
12	0	48.3	+16	01.4	296	32.0 ¹²³	+17 29.5 ³⁹	0	18 00	18 22	18 47	10 11 47	22 34 46		
13	15	48.4		02.1	311	03.3 ¹²³	25.6 ³⁹	10 S	17 49	18 10	36	24 45	21 48		
14	30	48.4		02.8	325	34.6 ¹²³	21.6 ⁴⁰	20	36	17 59	26	38 44	22 08 49		
15	45	48.5		03.5	340	06.0 ¹²⁴	17.5 ⁴¹	30	22	47	16	10 54 42	21 52 52		
16	60	48.5		04.3	354	37.4 ¹²⁴	13.4 ⁴¹	35	14	41	11	11 04 40	43 53		
17	75	48.6	+16	05.0	9	08.9 ¹²⁵	+17 09.2 ⁴²	40	17 05	17 34	18 06	11 14 40	21 33 55		
18	90	48.6	+16	05.7	23	40.4 ¹²⁵	+17 04.9 ⁴³	45	16 55	17 26	18 01	11 27 38	21 21 56		
19	105	48.7		06.4	38	11.9 ¹²⁵	+17 00.5 ⁴⁴	50	42	17	17 55	42 36	21 06 59		
20	120	48.7		07.1	52	43.5 ¹²⁶	+16 56.0 ⁴⁵	52	36	12	53	49 35	20 59 60		
21	135	48.8		07.9	67	15.1 ¹²⁶	51.5 ⁴⁵	54	30	08	50	11 57 34	51 62		
22	150	48.9		08.6	81	46.7 ¹²⁶	46.9 ⁴⁶	56	22	17 03	47	12 06 32	43 62		
23	165	48.9		09.3	96	18.4 ¹²⁷	42.2 ⁴⁷	58	14	16 57	45	16 31	33 64		
24	180	49.0	+16	10.0	110	50.2 ¹²⁸	+16 37.5 ⁴⁷	60 S	16 05	16 51	17 41	12 28 28	20 22 66		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 11 ^m 3		Mag: -4.1		Mag: -1.1		Mag: -2.0		Mag: +0.1									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	221	48.3	220	15.5	-0	52.5	31	22.4	-2	53.3	115	01.8	+22	50.8	353	01.9	-15	28.9
1	236	50.8	235	15.3		51.4	46	25.4		53.2	130	03.9		50.7	8	04.6		28.8
2	251	53.2	250	15.1		50.4	61	28.4		53.1	145	05.9		50.7	23	07.2		28.8
3	266	55.7	265	14.9		49.4	76	31.4		53.0	160	08.0		50.7	38	09.9		28.7
4	281	58.1	280	14.7		48.4	91	34.4		52.9	175	10.0		50.6	53	12.5		28.7
5	297	00.6	295	14.6	-0	47.3	106	37.4	-2	52.8	190	12.1	+22	50.6	68	15.2	-15	28.6
6	312	03.1	310	14.4	-0	46.3	121	40.4	-2	52.7	205	14.1	+22	50.5	83	17.8	-15	28.6
7	327	05.5	325	14.2		45.3	136	43.4		52.6	220	16.2		50.5	98	20.5		28.5
8	342	08.0	340	14.0		44.2	151	46.4		52.5	235	18.2		50.4	113	23.1		28.5
9	357	10.5	355	13.8		43.2	166	49.3		52.4	250	20.2		50.4	128	25.8		28.4
10	12	12.9	10	13.6		42.2	181	52.3		52.3	265	22.3		50.4	143	28.4		28.4
11	27	15.4	25	13.4	-0	41.2	196	55.3	-2	52.2	280	24.3	+22	50.3	158	31.1	-15	28.3
12	42	17.9	40	13.2	-0	40.1	211	58.3	-2	52.1	295	26.4	+22	50.3	173	33.7	-15	28.3
13	57	20.3	55	13.1		39.1	227	01.3		52.0	310	28.4		50.2	188	36.4		28.2
14	72	22.8	70	12.9		38.1	242	04.2		51.9	325	30.5		50.2	203	39.0		28.2
15	87	25.3	85	12.7		37.1	257	07.2		51.8	340	32.5		50.1	218	41.7		28.1
16	102	27.7	100	12.5		36.0	272	10.2		51.7	355	34.5		50.1	233	44.3		28.1
17	117	30.2	115	12.3	-0	35.0	287	13.2	-2	51.6	10	36.6	+22	50.1	248	47.0	-15	28.0
18	132	32.6	130	12.1	-0	34.0	302	16.1	-2	51.5	25	38.6	+22	50.0	263	49.7	-15	28.0
19	147	35.1	145	11.9		32.9	317	19.1		51.4	40	40.7		50.0	278	52.3		27.9
20	162	37.6	160	11.7		31.9	332	22.1		51.3	55	42.7		49.9	293	55.0		27.9
21	177	40.0	175	11.6		30.9	347	25.0		51.2	70	44.8		49.9	308	57.6		27.8
22	192	42.5	190	11.4		29.8	2	28.0		51.2	85	46.8		49.8	324	00.3		27.8
23	207	45.0	205	11.2		28.8	17	31.0		51.1	100	48.8		49.8	339	02.9		27.7
24	222	47.4	220	11.0	-0	27.8	32	33.9	-2	51.0	115	50.9	+22	49.8	354	05.6	-15	27.7
Dif	—		-2		+10		+30		+1		+20		0		+27		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9				Edad: 5 ^d 7	PHE { 4 ^h : 54 ^m .4 12 ^h : 54 ^m .3 20 ^h : 54 ^m .3	SD: 14 ^h 8	PMG: 17 ^h 09 ^m		R ^o : 44 ^m									
	hG ☉	Dec									Hora		R ^o	Hora	R ^o				
h	°	'	°	'	hG ☾	Dif	Dec	Dif	°	h	m	h	m	h	m	m	h	m	m
0	180	49.0	+16	10.0	110	50.2	+16	37.5	60 N	1	19	2	52	3	48		8	56	68
1	195	49.0		10.7	125	21.9 ¹²⁷		32.6	58	1	53	3	08	3	58		9	06	66
2	210	49.1		11.4	139	53.7 ¹²⁸		27.7	56	2	17		22	4	08		15	64	21
3	225	49.1		12.2	154	25.6 ¹²⁹		22.8	54		36	33		16			23	62	13
4	240	49.2		12.9	168	57.5 ¹²⁹		17.7	52	2	51		44		23		30	61	0
5	255	49.2	+16	13.6	183	29.4 ¹²⁹	+16	12.6	50	3	04	3	52	4	30		9	36	60
6	270	49.3	+16	14.3	198	01.4 ¹³⁰	+16	07.4	45	3	30	4	11	4	44		9	50	57
7	285	49.3		15.0	212	33.4 ¹³⁰	+16	02.2	40	3	50		26	4	55	10	01	55	
8	300	49.4		15.7	227	05.4 ¹³⁰	+15	56.8	35	4	05		38	5	05		11	53	
9	315	49.4		16.4	241	37.5 ¹³¹		51.4	30		18	4	48		14		19	52	23
10	330	49.5		17.2	256	09.6 ¹³¹		46.0	20		38	5	05		29		33	50	42
11	345	49.5	+16	17.9	270	41.7 ¹³¹	+15	40.5	10 N	4	54	5	19	5	41	10	46	47	23
12	0	49.6	+16	18.6	285	13.9 ¹³²	+15	34.9	0	5	07	5	32	5	53	10	58	45	23
13	15	49.6		19.3	299	46.1 ¹³²		29.2	10 S		18		43	6	05	11	09	43	23
14	30	49.7		20.0	314	18.4 ¹³³		23.5	20		28	5	54		17		22	41	22
15	45	49.8		20.7	328	50.7 ¹³³		17.7	30		38	6	06		31		36	38	44
16	60	49.8		21.4	343	23.0 ¹³³		11.8	35		43		13		39		44	37	36
17	75	49.9	+16	22.1	357	55.4 ¹³⁴	+15	05.9	40	5	48	6	20	6	49	11	54	35	22
18	90	49.9	+16	22.8	12	27.8 ¹³⁴	+14	59.9	45	5	53	6	28	6	59	12	05	33	22
19	105	50.0		23.5	27	00.2 ¹³⁴		53.8	50	5	59		38	7	12		18	30	22
20	120	50.0		24.2	41	32.7 ¹³⁵		47.7	52	6	02		42		18		24	29	21
21	135	50.0		25.0	56	05.2 ¹³⁵		41.5	54		04		47		25		31	28	53
22	150	50.1		25.7	70	37.7 ¹³⁵		35.3	56		07		52		32		38	27	45
23	165	50.1		26.4	85	10.3 ¹³⁶		28.9	58		10	6	57		41		47	25	37
24	180	50.2	+16	27.1	99	42.9 ¹³⁶	+14	22.6	60 S	6	13	7	03	7	50	12	56	23	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 07 ^m 3		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: -1.1 PMG: 21 ^h 45 ^m		Mag: -2.0 PMG: 16 ^h 14 ^m		Mag: +0.1 PMG: 0 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	222	47.4	220	11.0	32	33.9	115	50.9	354	05.6
1	237	49.9	235	10.8	47	36.9	130	52.9	9	08.2
2	252	52.4	250	10.6	62	39.9	145	55.0	24	10.9
3	267	54.8	265	10.4	77	42.8	160	57.0	39	13.5
4	282	57.3	280	10.2	92	45.8	175	59.1	54	16.2
5	297	59.8	295	10.0	107	48.8	191	01.1	69	18.8
6	313	02.2	310	09.9	122	51.7	206	03.1	84	21.5
7	328	04.7	325	09.7	137	54.7	221	05.2	99	24.1
8	343	07.1	340	09.5	152	57.6	236	07.2	114	26.8
9	358	09.6	355	09.3	168	00.6	251	09.3	129	29.4
10	13	12.1	10	09.1	183	03.5	266	11.3	144	32.1
11	28	14.5	25	08.9	198	06.5	281	13.3	159	34.7
12	43	17.0	40	08.7	213	09.4	296	15.4	174	37.4
13	58	19.5	55	08.5	228	12.4	311	17.4	189	40.0
14	73	21.9	70	08.3	243	15.3	326	19.4	204	42.7
15	88	24.4	85	08.2	258	18.3	341	21.5	219	45.3
16	103	26.9	100	08.0	273	21.2	356	23.5	234	48.0
17	118	29.3	115	07.8	288	24.2	11	25.6	249	50.6
18	133	31.8	130	07.6	303	27.1	26	27.6	264	53.3
19	148	34.2	145	07.4	318	30.1	41	29.6	279	55.9
20	163	36.7	160	07.2	333	33.0	56	31.7	294	58.6
21	178	39.2	175	07.0	348	35.9	71	33.7	310	01.2
22	193	41.6	190	06.8	3	38.9	86	35.8	325	03.9
23	208	44.1	205	06.6	18	41.8	101	37.8	340	06.5
24	223	46.6	220	06.4	33	44.7	116	39.8	355	09.2
Dif	—		-2	+10	+29	+1	+20	0	+27	0

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/9				Edad: 6 ^d 7	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 R°: 44 ^m										
	PMG: 11 ^h 56 ^m 6															
	PMG: 17 ^h 53 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m
0	180	50.2	+16	27.1	99	42.9	+14	22.6	60 N	20 10	21 07	22 47	10 04	70	1 07	21
1	195	50.2		27.8	114	15.5 ¹³⁶		16.1	58	19 59	20 50	22 08	12 67		0 58	23
2	210	50.3		28.5	128	48.2 ¹³⁷		09.6	56	49	36	21 42	19 66		51	24
3	225	50.3		29.2	143	20.9 ¹³⁷	+14	03.1	54	41	24	22	25 64		44	26
4	240	50.4		29.9	157	53.6 ¹³⁷	+13	56.5	52	33	13	21 06	31 62		38	28
5	255	50.4	+16	30.6	172	26.4 ¹³⁸	+13	49.8	50	19 26	20 04	20 53	10 36	61	0 32	29
6	270	50.5	+16	31.3	186	59.2 ¹³⁸	+13	43.1	45	19 11	19 45	20 26	10 47	58	0 20	32
7	285	50.5		32.0	201	32.0 ¹³⁸		36.3	40	19 00	29	20 06	10 56	56	11	33
8	300	50.6		32.7	216	04.9 ¹³⁹		29.4	35	18 49	17	19 50	11 04	54	0 02	36
9	315	50.6		33.4	230	37.8 ¹³⁹		22.5	30	41	19 06	37	11 52		** ** *	**
10	330	50.7		34.1	245	10.7 ¹³⁹		15.6	20	25	18 49	16	23 49		** ** *	**
11	345	50.7	+16	34.8	259	43.6 ¹³⁹	+13	08.5	10 N	18 12	18 34	19 00	11 33	47	** ** *	**
12	0	50.8	+16	35.5	274	16.6 ¹⁴⁰	+13	01.5	0	18 00	18 22	18 47	11 43	44	** ** *	**
13	15	50.8		36.2	288	49.6 ¹⁴⁰	+12	54.3	10 S	17 48	18 10	35	11 52	42	23 56	46
14	30	50.9		36.9	303	22.7 ¹⁴¹		47.1	20	35	17 58	25	12 03	39	46	49
15	45	50.9		37.6	317	55.7 ¹⁴⁰		39.9	30	21	46	14	14 36		36	52
16	60	50.9		38.3	332	28.8 ¹⁴¹		32.6	35	13	39	09	21 35		30	54
17	75	51.0	+16	39.0	347	01.9 ¹⁴¹	+12	25.3	40	17 03	17 32	18 04	12 29	32	23 23	56
18	90	51.0	+16	39.7	1	35.0 ¹⁴¹	+12	17.9	45	16 52	17 23	17 58	12 38	30	23 15	58
19	105	51.1		40.4	16	08.2 ¹⁴²		10.4	50	39	14	52	48 28		05	62
20	120	51.1		41.1	30	41.4 ¹⁴²	+12	02.9	52	33	09	50	53 26		23 01	63
21	135	51.2		41.8	45	14.6 ¹⁴²	+11	55.3	54	26	17 04	47	12 59	24	22 56	64
22	150	51.2		42.5	59	47.8 ¹⁴²		47.7	56	18	16 59	44	13 05	23	50	66
23	165	51.2		43.2	74	21.1 ¹⁴³		40.1	58	10	53	41	12 21		44	68
24	180	51.3	+16	43.9	88	54.4 ¹⁴³	+11	32.4	60 S	16 00	16 47	17 37	13 19	19	22 37	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 03 ^m 4		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: -1.1 PMG: 21 ^h 41 ^m		Mag: -2.0 PMG: 16 ^h 11 ^m		Mag: +0.1 PMG: 0 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	223	46.6	220	06.4	-0	03.0	33	44.7	-2	48.9	116	39.8	+22	48.7	355	09.2	-15	26.5
1	238	49.0	235	06.3		02.0	48	47.7		48.8	131	41.9		48.7	10	11.8		26.5
2	253	51.5	250	06.1	-0	00.9	63	50.6		48.7	146	43.9		48.6	25	14.5		26.4
3	268	54.0	265	05.9	+0	00.1	78	53.5		48.7	161	45.9		48.6	40	17.1		26.4
4	283	56.4	280	05.7		01.2	93	56.5		48.6	176	48.0		48.5	55	19.8		26.3
5	298	58.9	295	05.5	+0	02.2	108	59.4	-2	48.5	191	50.0	+22	48.5	70	22.4	-15	26.3
6	314	01.4	310	05.3	+0	03.2	124	02.3	-2	48.4	206	52.0	+22	48.4	85	25.1	-15	26.2
7	329	03.8	325	05.1		04.3	139	05.3		48.3	221	54.1		48.4	100	27.7		26.2
8	344	06.3	340	04.9		05.3	154	08.2		48.3	236	56.1		48.4	115	30.4		26.1
9	359	08.7	355	04.7		06.3	169	11.1		48.2	251	58.2		48.3	130	33.0		26.1
10	14	11.2	10	04.5		07.4	184	14.0		48.1	267	00.2		48.3	145	35.7		26.0
11	29	13.7	25	04.3	+0	08.4	199	16.9	-2	48.0	282	02.2	+22	48.2	160	38.3	-15	26.0
12	44	16.1	40	04.1	+0	09.4	214	19.9	-2	48.0	297	04.3	+22	48.2	175	41.0	-15	25.9
13	59	18.6	55	04.0		10.5	229	22.8		47.9	312	06.3		48.1	190	43.6		25.9
14	74	21.1	70	03.8		11.5	244	25.7		47.8	327	08.3		48.1	205	46.3		25.8
15	89	23.5	85	03.6		12.6	259	28.6		47.7	342	10.4		48.0	220	48.9		25.8
16	104	26.0	100	03.4		13.6	274	31.5		47.7	357	12.4		48.0	235	51.6		25.7
17	119	28.5	115	03.2	+0	14.6	289	34.4	-2	47.6	12	14.4	+22	48.0	250	54.2	-15	25.7
18	134	30.9	130	03.0	+0	15.7	304	37.4	-2	47.5	27	16.5	+22	47.9	265	56.9	-15	25.6
19	149	33.4	145	02.8		16.7	319	40.3		47.5	42	18.5		47.9	280	59.6		25.6
20	164	35.9	160	02.6		17.7	334	43.2		47.4	57	20.5		47.8	296	02.2		25.5
21	179	38.3	175	02.4		18.8	349	46.1		47.3	72	22.6		47.8	311	04.9		25.5
22	194	40.8	190	02.2		19.8	4	49.0		47.3	87	24.6		47.7	326	07.5		25.5
23	209	43.2	205	02.0		20.9	19	51.9		47.2	102	26.6		47.7	341	10.2		25.4
24	224	45.7	220	01.8	+0	21.9	34	54.8	-2	47.1	117	28.7	+22	47.6	356	12.8	-15	25.4
Dif	—		-2		+10		+29		+1		+20		0		+27		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5				Edad: 7 ^d 7 PHE { SD: 14 ^h 8 PMG: 18 ^h 37 ^m R ^o : 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	51.3	+16	43.9	88	54.4	+11	32.4	78	60 N	1 05	2 46	3 42	11 14	71	1 28	17	
1	195	51.3		44.5	103	27.7 ¹⁴³		24.6	78	58	1 44	3 03	3 54	19 69		21	20	
2	210	51.4		45.2	118	01.0 ¹⁴³		16.8	78	56	2 10	17	4 03	25 66		15	22	
3	225	51.4		45.9	132	34.4 ¹⁴⁴		08.9	79	54	30	29	12	29 65		10	23	
4	240	51.5		46.6	147	07.7 ¹⁴³	+11	01.0	79	52	2 46	39	20	33 64		06	24	
5	255	51.5	+16	47.3	161	41.1 ¹⁴⁴	+10	53.1	79	50	3 00	3 49	4 26	11 37	62	1 01	26	
6	270	51.5	+16	48.0	176	14.5 ¹⁴⁴	+10	45.1	80	45	3 27	4 08	4 41	11 45	59	0 52	29	
7	285	51.6		48.7	190	48.0 ¹⁴⁵		37.0	81	40	3 47	23	4 53	52 56		44	32	
8	300	51.6		49.4	205	21.4 ¹⁴⁴		29.0	80	35	4 03	36	5 03	11 58	54	38	33	
9	315	51.7		50.1	219	54.9 ¹⁴⁵		20.8	82	30	16	4 47	12	12 03	52	32	35	
10	330	51.7		50.8	234	28.4 ¹⁴⁵		12.6	82	20	37	5 04	28	12 49		22	38	
11	345	51.7	+16	51.5	249	01.9 ¹⁴⁵	+10	04.4	82	10 N	4 53	5 19	5 41	12 20	46	0 13	41	
12	0	51.8	+16	52.1	263	35.4 ¹⁴⁵	+9	56.1	83	0	5 06	5 31	5 53	12 27	43	0 04	44	
13	15	51.8		52.8	278	08.9 ¹⁴⁵		47.8	83	10 S	18	43	6 05	34 41		**	**	**
14	30	51.9		53.5	292	42.5 ¹⁴⁶		39.4	84	20	29	5 55	18	42 38		**	**	**
15	45	51.9		54.2	307	16.0 ¹⁴⁵		31.0	84	30	39	6 08	33	50 35		**	**	**
16	60	51.9		54.9	321	49.6 ¹⁴⁶		22.6	84	35	44	14	41	12 56	32	**	**	**
17	75	52.0	+16	55.6	336	23.2 ¹⁴⁶	+9	14.1	85	40	5 50	6 22	6 51	13 01	31	**	**	**
18	90	52.0	+16	56.3	350	56.8 ¹⁴⁶	+9	05.6	85	45	5 55	6 31	7 02	13 08	28	**	**	**
19	105	52.1		56.9	5	30.4 ¹⁴⁶	+8	57.0	86	50	6 02	40	15	16 25		**	**	**
20	120	52.1		57.6	20	04.1 ¹⁴⁷		48.4	86	52	04	45	21	19 24		**	**	**
21	135	52.1		58.3	34	37.7 ¹⁴⁶		39.8	86	54	07	50	28	23 23		**	**	**
22	150	52.2		59.0	49	11.4 ¹⁴⁷		31.1	87	56	10	6 55	36	28 20		23	56	68
23	165	52.2	+16	59.7	63	45.0 ¹⁴⁶		22.3	88	58	13	7 01	45	33 18		52	70	
24	180	52.2	+17	00.4	78	18.7 ¹⁴⁷	+8	13.6	87	60 S	6 17	7 08	7 55	13 38	17	23	47	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 59 ^m 5		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: -1.0 PMG: 21 ^h 36 ^m		Mag: -2.0 PMG: 16 ^h 08 ^m		Mag: +0.1 PMG: 0 ^h 15 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	224	45.7	220	01.8	+0	21.9	34	54.8	-2	47.1
1	239	48.2	235	01.6		22.9	49	57.7		47.0
2	254	50.6	250	01.4		24.0	65	00.6		47.0
3	269	53.1	265	01.3		25.0	80	03.5		46.9
4	284	55.6	280	01.1		26.1	95	06.4		46.8
5	299	58.0	295	00.9	+0	27.1	110	09.3	-2	46.8
6	315	00.5	310	00.7	+0	28.1	125	12.2	-2	46.7
7	330	03.0	325	00.5		29.2	140	15.1		46.7
8	345	05.4	340	00.3		30.2	155	18.0		46.6
9	0	07.9	355	00.1		31.3	170	20.9		46.5
10	15	10.3	9	59.9		32.3	185	23.8		46.5
11	30	12.8	24	59.7	+0	33.3	200	26.7	-2	46.4
12	45	15.3	39	59.5	+0	34.4	215	29.6	-2	46.3
13	60	17.7	54	59.3		35.4	230	32.5		46.3
14	75	20.2	69	59.1		36.5	245	35.3		46.2
15	90	22.7	84	58.9		37.5	260	38.2		46.2
16	105	25.1	99	58.7		38.5	275	41.1		46.1
17	120	27.6	114	58.5	+0	39.6	290	44.0	-2	46.0
18	135	30.1	129	58.3	+0	40.6	305	46.9	-2	46.0
19	150	32.5	144	58.1		41.7	320	49.8		45.9
20	165	35.0	159	58.0		42.7	335	52.6		45.9
21	180	37.5	174	57.8		43.8	350	55.5		45.8
22	195	39.9	189	57.6		44.8	5	58.4		45.8
23	210	42.4	204	57.4		45.8	21	01.3		45.7
24	225	44.8	219	57.2	+0	46.9	36	04.1	-2	45.6
Dif	—		-2		+10		+29		+1	

+20		0		+27		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 56 ^m 5		Edad: 8 ^d 7 PHE { 4 ^h : 54'5 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			
0	180	52.2	+17	00.4	78	18.7	+8 13.6	60 N	20 15	21 13	23 04	12 25 72	1 45 16					
1	195	52.3		01.0	92	52.4 ¹⁴⁷	+8 04.8 ⁸⁸	58	20 03	20 55	22 17	28 71	41 18					
2	210	52.3		01.7	107	26.0 ¹⁴⁶	+7 55.9 ⁸⁹	56	19 53	40	21 49	31 69	37 20					
3	225	52.4		02.4	121	59.7 ¹⁴⁷	47.0 ⁸⁹	54	44	28	28	34 67	33 22					
4	240	52.4		03.1	136	33.4 ¹⁴⁷	38.1 ⁸⁹	52	36	17	21 11	37 65	30 23					
5	255	52.4	+17	03.8	151	07.1 ¹⁴⁷	+7 29.2 ⁸⁹	50	19 29	20 07	20 57	12 39 63	1 27 25					
6	270	52.5	+17	04.4	165	40.9 ¹⁴⁸	+7 20.2 ⁹⁰	45	19 14	19 47	20 29	12 44 60	1 21 28					
7	285	52.5		05.1	180	14.6 ¹⁴⁷	11.2 ⁹⁰	40	19 02	32	20 08	48 58	16 30					
8	300	52.5		05.8	194	48.3 ¹⁴⁷	+7 02.1 ⁹¹	35	18 51	19	19 52	52 55	11 32					
9	315	52.6		06.5	209	22.0 ¹⁴⁷	+6 53.0 ⁹¹	30	42	19 08	38	12 55 53	07 34					
10	330	52.6		07.1	223	55.7 ¹⁴⁷	43.9 ⁹¹	20	26	18 49	17	13 01 49	1 00 38					
11	345	52.6	+17	07.8	238	29.5 ¹⁴⁸	+6 34.7 ⁹²	10 N	18 13	18 35	19 00	13 06 46	0 54 40					
12	0	52.7	+17	08.5	253	03.2 ¹⁴⁷	+6 25.5 ⁹²	0	18 00	18 22	18 47	13 10 44	0 48 43					
13	15	52.7		09.2	267	36.9 ¹⁴⁷	16.3 ⁹²	10 S	17 48	18 09	35	15 40	42 46					
14	30	52.7		09.9	282	10.6 ¹⁴⁷	+6 07.0 ⁹³	20	34	17 57	24	20 37	35 50					
15	45	52.8		10.5	296	44.4 ¹⁴⁸	+5 57.8 ⁹²	30	19	44	13	25 34	28 53					
16	60	52.8		11.2	311	18.1 ¹⁴⁷	48.4 ⁹⁴	35	11	37	08	28 32	24 54					
17	75	52.8	+17	11.9	325	51.8 ¹⁴⁷	+5 39.1 ⁹³	40	17 01	17 30	18 02	13 32 30	0 19 57					
18	90	52.9	+17	12.5	340	25.5 ¹⁴⁷	+5 29.7 ⁹⁴	45	16 50	17 21	17 56	13 36 27	0 13 60					
19	105	52.9		13.2	354	59.3 ¹⁴⁸	20.3 ⁹⁴	50	36	11	49	41 24	07 62					
20	120	52.9		13.9	9	33.0 ¹⁴⁷	10.9 ⁹⁴	52	29	06	47	43 23	04 64					
21	135	53.0		14.6	24	06.7 ¹⁴⁷	+5 01.4 ⁹⁵	54	22	17 01	44	46 21	0 00 66					
22	150	53.0		15.2	38	40.4 ¹⁴⁷	+4 51.9 ⁹⁵	56	14	16 55	40	48 20	** ** *	** ** *				
23	165	53.0		15.9	53	14.1 ¹⁴⁷	42.4 ⁹⁵	58	16 05	49	37	51 18	** ** *	** ** *				
24	180	53.1	+17	16.6	67	47.8 ¹⁴⁷	+4 32.9 ⁹⁵	60 S	15 55	16 43	17 33	13 55 15	** ** *	** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 55 ^m 5		Mag: -4.1 PMG: 9 ^h 20 ^m			Mag: -1.0 PMG: 21 ^h 32 ^m			Mag: -2.0 PMG: 16 ^h 05 ^m			Mag: +0.1 PMG: 0 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	225	44.8	219	57.2	+0	46.9	36	04.1	-2	45.6	118	17.4	+22	46.6	357	16.5	-15	24.2
1	240	47.3	234	57.0		47.9	51	07.0		45.6	133	19.4		46.5	12	19.1		24.1
2	255	49.8	249	56.8		49.0	66	09.9		45.5	148	21.4		46.5	27	21.8		24.1
3	270	52.2	264	56.6		50.0	81	12.8		45.5	163	23.5		46.4	42	24.4		24.0
4	285	54.7	279	56.4		51.1	96	15.6		45.4	178	25.5		46.4	57	27.1		24.0
5	300	57.2	294	56.2	+0	52.1	111	18.5	-2	45.4	193	27.5	+22	46.3	72	29.7	-15	23.9
6	315	59.6	309	56.0	+0	53.1	126	21.4	-2	45.3	208	29.5	+22	46.3	87	32.4	-15	23.9
7	331	02.1	324	55.8		54.2	141	24.2		45.3	223	31.6		46.2	102	35.0		23.8
8	346	04.6	339	55.6		55.2	156	27.1		45.2	238	33.6		46.2	117	37.7		23.8
9	1	07.0	354	55.4		56.3	171	30.0		45.2	253	35.6		46.1	132	40.3		23.7
10	16	09.5	9	55.2		57.3	186	32.8		45.1	268	37.6		46.1	147	43.0		23.7
11	31	12.0	24	55.0	+0	58.4	201	35.7	-2	45.1	283	39.7	+22	46.0	162	45.6	-15	23.7
12	46	14.4	39	54.8	+0	59.4	216	38.5	-2	45.0	298	41.7	+22	46.0	177	48.3	-15	23.6
13	61	16.9	54	54.6	+1	00.4	231	41.4		45.0	313	43.7		45.9	192	50.9		23.6
14	76	19.3	69	54.4		01.5	246	44.2		44.9	328	45.7		45.9	207	53.6		23.5
15	91	21.8	84	54.2		02.5	261	47.1		44.9	343	47.8		45.9	222	56.2		23.5
16	106	24.3	99	54.0		03.6	276	50.0		44.8	358	49.8		45.8	237	58.9		23.4
17	121	26.7	114	53.8	+1	04.6	291	52.8	-2	44.8	13	51.8	+22	45.8	253	01.5	-15	23.4
18	136	29.2	129	53.6	+1	05.7	306	55.7	-2	44.7	28	53.8	+22	45.7	268	04.2	-15	23.3
19	151	31.7	144	53.4		06.7	321	58.5		44.7	43	55.9		45.7	283	06.8		23.3
20	166	34.1	159	53.2		07.8	337	01.4		44.6	58	57.9		45.6	298	09.5		23.2
21	181	36.6	174	53.0		08.8	352	04.2		44.6	73	59.9		45.6	313	12.1		23.2
22	196	39.1	189	52.8		09.8	7	07.0		44.5	89	01.9		45.5	328	14.8		23.1
23	211	41.5	204	52.6		10.9	22	09.9		44.5	104	04.0		45.5	343	17.4		23.1
24	226	44.0	219	52.4	+1	11.9	37	12.7	-2	44.5	119	06.0	+22	45.4	358	20.1	-15	23.0
Dif	—		-2		+10		+29		0		+20		0		+27		0	

ALMANAQUE NÁUTICO PERSEUS

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: 10 ^d 7 PHE { SD: 15 ^h 1 PMG: 20 ^h 49 ^m 4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 8 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	53.7	+17 32.5	57	12.3	+0 37.3		60 N	20 20	21 20	23 29	14 52 76	2 16 16		
1	195	53.8		71	45.6 ¹⁴³	27.3 ¹⁰⁰		58	20 08	21 01	22 27	51 74	16 18		
2	210	53.8	33.8	86	18.9 ¹⁴³	17.3 ¹⁰⁰		56	19 57	20 45	21 56	50 72	16 20		
3	225	53.8	34.5	100	52.1 ¹⁴²	+0 07.2 ¹⁰¹		54	48	32	34	49 70	16 21		
4	240	53.8	35.1	115	25.3 ¹⁴²	-0 02.8 ¹⁰⁰		52	39	21	16	48 68	16 23		
5	255	53.9	+17 35.8	129	58.5 ¹⁴²	-0 12.9 ¹⁰¹		50	19 32	20 11	21 01	14 47 67	2 16 24		
6	270	53.9	+17 36.4	144	31.6 ¹⁴¹	-0 23.0 ¹⁰¹		45	19 16	19 50	20 32	14 46 63	2 16 27		
7	285	53.9	37.1	159	04.7 ¹⁴¹	33.1 ¹⁰¹		40	19 03	34	20 11	44 61	15 31		
8	300	53.9	37.8	173	37.8 ¹⁴¹	43.2 ¹⁰¹		35	18 53	20	19 54	43 58	15 33		
9	315	54.0	38.4	188	10.8 ¹⁴⁰	-0 53.2 ¹⁰⁰		30	43	19 09	40	42 56	15 35		
10	330	54.0	39.1	202	43.9 ¹⁴¹	-1 03.4 ¹⁰²		20	27	18 50	18	41 52	15 39		
11	345	54.0	+17 39.7	217	16.8 ¹³⁹	-1 13.5 ¹⁰¹		10 N	18 13	18 35	19 01	14 39 49	2 15 42		
12	0	54.0	+17 40.4	231	49.8 ¹⁴⁰	-1 23.6 ¹⁰¹		0	18 00	18 22	18 47	14 38 46	2 15 45		
13	15	54.1	41.0	246	22.7 ¹³⁹	33.7 ¹⁰¹		10 S	17 47	18 09	34	37 42	15 47		
14	30	54.1	41.7	260	55.6 ¹³⁹	43.8 ¹⁰¹		20	33	17 56	23	35 40	14 51		
15	45	54.1	42.3	275	28.4 ¹³⁸	-1 53.9 ¹⁰¹		30	18	43	12	34 35	14 55		
16	60	54.1	43.0	290	01.2 ¹³⁸	-2 04.1 ¹⁰²		35	17 09	36	06	33 33	14 57		
17	75	54.1	+17 43.6	304	34.0 ¹³⁸	-2 14.2 ¹⁰¹		40	16 59	17 28	18 00	14 32 31	2 14 59		
18	90	54.2	+17 44.3	319	06.7 ¹³⁷	-2 24.3 ¹⁰¹		45	16 47	17 19	17 54	14 31 28	2 14 62		
19	105	54.2	44.9	333	39.4 ¹³⁷	34.4 ¹⁰¹		50	33	08	47	29 26	13 66		
20	120	54.2	45.6	348	12.1 ¹³⁷	44.6 ¹⁰²		52	26	17 03	44	29 23	13 67		
21	135	54.2	46.2	2	44.7 ¹³⁶	-2 54.7 ¹⁰¹		54	19	16 58	41	28 22	13 69		
22	150	54.3	46.9	17	17.3 ¹³⁶	-3 04.8 ¹⁰¹		56	10	52	37	27 21	13 71		
23	165	54.3	47.5	31	49.8 ¹³⁵	14.9 ¹⁰¹		58	16 01	46	33	26 19	13 73		
24	180	54.3	+17 48.1	46	22.3 ¹³⁵	-3 25.1 ¹⁰²		60 S	15 50	16 38	17 29	14 25 17	2 13 75		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 47 ^m 7		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: -1.0 PMG: 21 ^h 23 ^m		Mag: -2.0 PMG: 15 ^h 58 ^m		Mag: +0.1 PMG: 0 ^h 02 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	227	43.1	219	47.6	+1	37.1	38	20.6	-2	43.6	119	54.5	+22	44.3	359	23.8	-15	21.9
1	242	45.6	234	47.4		38.1	53	23.4		43.6	134	56.5		44.2	14	26.4		21.8
2	257	48.0	249	47.2		39.2	68	26.2		43.5	149	58.5		44.2	29	29.1		21.8
3	272	50.5	264	47.0		40.2	83	29.0		43.5	165	00.6		44.2	44	31.7		21.7
4	287	53.0	279	46.8		41.3	98	31.8		43.5	180	02.6		44.1	59	34.4		21.7
5	302	55.4	294	46.6	+1	42.3	113	34.6	-2	43.4	195	04.6	+22	44.1	74	37.0	-15	21.6
6	317	57.9	309	46.4	+1	43.4	128	37.4	-2	43.4	210	06.6	+22	44.0	89	39.7	-15	21.6
7	333	00.4	324	46.2		44.4	143	40.2		43.4	225	08.6		44.0	104	42.3		21.5
8	348	02.8	339	46.0		45.5	158	43.0		43.4	240	10.6		43.9	119	45.0		21.5
9	3	05.3	354	45.8		46.5	173	45.8		43.3	255	12.7		43.9	134	47.6		21.4
10	18	07.8	9	45.6		47.6	188	48.6		43.3	270	14.7		43.8	149	50.3		21.4
11	33	10.2	24	45.4	+1	48.6	203	51.4	-2	43.3	285	16.7	+22	43.8	164	52.9	-15	21.3
12	48	12.7	39	45.2	+1	49.7	218	54.2	-2	43.3	300	18.7	+22	43.7	179	55.6	-15	21.3
13	63	15.2	54	45.0		50.7	233	57.0		43.2	315	20.7		43.7	194	58.2		21.2
14	78	17.6	69	44.8		51.8	248	59.8		43.2	330	22.8		43.6	210	00.9		21.2
15	93	20.1	84	44.6		52.8	264	02.6		43.2	345	24.8		43.6	225	03.5		21.1
16	108	22.5	99	44.4		53.9	279	05.4		43.2	0	26.8		43.5	240	06.2		21.1
17	123	25.0	114	44.2	+1	54.9	294	08.2	-2	43.1	15	28.8	+22	43.5	255	08.8	-15	21.0
18	138	27.5	129	44.0	+1	56.0	309	11.0	-2	43.1	30	30.8	+22	43.4	270	11.5	-15	21.0
19	153	29.9	144	43.8		57.0	324	13.8		43.1	45	32.8		43.4	285	14.1		20.9
20	168	32.4	159	43.6		58.1	339	16.6		43.1	60	34.8		43.3	300	16.8		20.9
21	183	34.9	174	43.4	+1	59.1	354	19.3		43.1	75	36.9		43.3	315	19.5		20.8
22	198	37.3	189	43.2	+2	00.2	9	22.1		43.0	90	38.9		43.2	330	22.1		20.8
23	213	39.8	204	42.9		01.2	24	24.9		43.0	105	40.9		43.2	345	24.8		20.7
24	228	42.3	219	42.7	+2	02.3	39	27.7	-2	43.0	120	42.9	+22	43.1	0	27.4	-15	20.7
Dif	—		-2		+10		+28		0		+20		0		-8973			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 11 ^d 7 PHE { 4 ^h : 56/0 12 ^h : 56/3 20 ^h : 56/5 PMG: 21 ^h 35 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	54.3	+17	48.1	46	22.3	-3	25.1	60 N	0	23	2	33	3	32	16	08	79
1	195	54.3		48.8	60	54.8 ¹³⁵		35.2 ¹⁰¹	58	1	25	2	51		45	05	76	34
2	210	54.3		49.4	75	27.2 ¹³⁴		45.3 ¹⁰¹	56	1	56	3	07	3	55	16	02	74
3	225	54.3		50.1	89	59.5 ¹³³	-3	55.4 ¹⁰¹	54	2	18		20	4	04	15	59	72
4	240	54.4		50.7	104	31.8 ¹³³	-4	05.5 ¹⁰¹	52		36		32		13	56	71	39
5	255	54.4	+17	51.4	119	04.1 ¹³³	-4	15.6 ¹⁰¹	50	2	51	3	42	4	20	15	54	69
6	270	54.4	+17	52.0	133	36.3 ¹³²	-4	25.6 ¹⁰⁰	45	3	20	4	02	4	36	15	49	65
7	285	54.4		52.6	148	08.5 ¹³²		35.7 ¹⁰¹	40		41		19	4	49	45	62	46
8	300	54.4		53.3	162	40.6 ¹³¹		45.8 ¹⁰¹	35	3	58	32	5	00	41	60		48
9	315	54.5		53.9	177	12.7 ¹³¹	-4	55.8 ¹⁰⁰	30	4	12	4	43		09	38	58	50
10	330	54.5		54.6	191	44.7 ¹³⁰	-5	05.9 ¹⁰¹	20		35	5	02		26	33	54	54
11	345	54.5	+17	55.2	206	16.7 ¹³⁰	-5	15.9 ¹⁰⁰	10 N	4	52		5	18	5	40	15	28
12	0	54.5	+17	55.8	220	48.6 ¹²⁹	-5	25.9 ¹⁰⁰	0	5	06	5	31	5	53	15	24	48
13	15	54.5		56.5	235	20.5 ¹²⁹		35.9 ¹⁰⁰	10 S		18		44	6	06	19	45	02
14	30	54.5		57.1	249	52.3 ¹²⁸		45.9 ¹⁰⁰	20		30	5	56	20		15	41	05
15	45	54.6		57.8	264	24.1 ¹²⁸	-5	55.8 ⁹⁹	30	41	6	10		35	09	39		09
16	60	54.6		58.4	278	55.8 ¹²⁷	-6	05.8 ¹⁰⁰	35	47		17		44	06	37		11
17	75	54.6	+17	59.0	293	27.5 ¹²⁷	-6	15.7 ⁹⁹	40	5	53	6	26	6	54	15	03	34
18	90	54.6	+17	59.7	307	59.1 ¹²⁶	-6	25.6 ⁹⁹	45	5	59	6	35	7	06	14	59	31
19	105	54.6	+18	00.3	322	30.7 ¹²⁶		35.5 ⁹⁹	50	6	07		46	21		55	27	19
20	120	54.6		00.9	337	02.2 ¹²⁵		45.4 ⁹⁹	52	10		51		28	52	27		20
21	135	54.7		01.6	351	33.6 ¹²⁴	-6	55.3 ⁹⁹	54	13	6	56		35	50	25		22
22	150	54.7		02.2	6	05.0 ¹²⁴	-7	05.1 ⁹⁸	56	16	7	02		44	48	22		24
23	165	54.7		02.8	20	36.3 ¹²³		14.9 ⁹⁸	58	20		08	7	53	45	21		26
24	180	54.7	+18	03.5	35	07.6 ¹²³	-7	24.7 ⁹⁸	60 S	6	24	7	16	8	04	14	42	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 43 ^m 7		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: -0.9 PMG: 21 ^h 18 ^m		Mag: -2.0 PMG: 15 ^h 55 ^m		Mag: +0.1 PMG: 23 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	42.3	219	42.7	+2	02.3	39	27.7	-2	43.0
1	243	44.7	234	42.5		03.3	54	30.5		43.0
2	258	47.2	249	42.3		04.4	69	33.2		43.0
3	273	49.7	264	42.1		05.4	84	36.0		43.0
4	288	52.1	279	41.9		06.5	99	38.8		42.9
5	303	54.6	294	41.7	+2	07.5	114	41.6	-2	42.9
6	318	57.0	309	41.5	+2	08.6	129	44.4	-2	42.9
7	333	59.5	324	41.3		09.6	144	47.1		42.9
8	349	02.0	339	41.1		10.7	159	49.9		42.9
9	4	04.4	354	40.9		11.7	174	52.7		42.9
10	19	06.9	9	40.7		12.8	189	55.4		42.8
11	34	09.4	24	40.5	+2	13.8	204	58.2	-2	42.8
12	49	11.8	39	40.3	+2	14.9	220	01.0	-2	42.8
13	64	14.3	54	40.1		15.9	235	03.7		42.8
14	79	16.8	69	39.9		17.0	250	06.5		42.8
15	94	19.2	84	39.6		18.0	265	09.3		42.8
16	109	21.7	99	39.4		19.1	280	12.0		42.8
17	124	24.1	114	39.2	+2	20.1	295	14.8	-2	42.8
18	139	26.6	129	39.0	+2	21.2	310	17.5	-2	42.8
19	154	29.1	144	38.8		22.2	325	20.3		42.8
20	169	31.5	159	38.6		23.3	340	23.0		42.7
21	184	34.0	174	38.4		24.3	355	25.8		42.7
22	199	36.5	189	38.2		25.4	10	28.5		42.7
23	214	38.9	204	38.0		26.4	25	31.3		42.7
24	229	41.4	219	37.8	+2	27.5	40	34.1	-2	42.7
Dif	—		-2 +11		+28		0		+20	
									0	
									+27	
									0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 3		Edad: 12 ^d 7 PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/2 R°: 52 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.7	+18	03.5	35	07.6	-7 24.7	60 N	20 25	21 26	** **	17 27	80	2 48	20
1	195	54.7		04.1	49	38.8 ¹²²	34.4 ⁹⁷	58	12	21 06	22 38	21	78	53	22
2	210	54.7		04.7	64	10.0 ¹²²	44.2 ⁹⁸	56	20 01	20 50	22 04	16	75	2 57	24
3	225	54.7		05.4	78	41.0 ¹²⁰	-7 53.9 ⁹⁷	54	19 51	36	21 40	11	73	3 00	27
4	240	54.7		06.0	93	12.1 ¹²¹	-8 03.5 ⁹⁶	52	43	24	21	07	71	04	28
5	255	54.8	+18	06.6	107	43.0 ¹¹⁹	-8 13.2 ⁹⁷	50	19 35	20 14	21 05	17 03	70	3 07	29
6	270	54.8	+18	07.3	122	14.0 ¹²⁰	-8 22.8 ⁹⁶	45	19 19	19 53	20 35	16 54	67	3 13	33
7	285	54.8		07.9	136	44.8 ¹¹⁸	32.4 ⁹⁶	40	19 05	36	20 13	47	64	18	36
8	300	54.8		08.5	151	15.6 ¹¹⁸	42.0 ⁹⁶	35	18 54	22	19 56	41	62	23	38
9	315	54.8		09.2	165	46.3 ¹¹⁷	-8 51.5 ⁹⁵	30	44	19 10	42	36	60	27	40
10	330	54.8		09.8	180	17.0 ¹¹⁷	-9 01.0 ⁹⁵	20	28	18 51	19	27	56	34	43
11	345	54.8	+18	10.4	194	47.6 ¹¹⁶	-9 10.4 ⁹⁴	10 N	18 13	18 35	19 01	16 19	54	3 40	47
12	0	54.8	+18	11.0	209	18.1 ¹¹⁵	-9 19.8 ⁹⁴	0	18 00	18 22	18 47	16 12	50	3 46	50
13	15	54.9		11.7	223	48.5 ¹¹⁴	29.2 ⁹⁴	10 S	17 47	18 09	34	16 04	48	52	52
14	30	54.9		12.3	238	18.9 ¹¹⁴	38.6 ⁹⁴	20	33	17 56	22	15 56	46	3 58	56
15	45	54.9		12.9	252	49.3 ¹¹⁴	47.9 ⁹³	30	17	42	11	48	42	4 06	58
16	60	54.9		13.5	267	19.5 ¹¹²	-9 57.2 ⁹³	35	17 07	34	18 05	43	40	10	61
17	75	54.9	+18	14.2	281	49.7 ¹¹²	-10 06.4 ⁹²	40	16 57	17 26	17 58	15 37	38	4 14	64
18	90	54.9	+18	14.8	296	19.8 ¹¹¹	-10 15.6 ⁹²	45	16 45	17 16	17 52	15 30	35	4 20	66
19	105	54.9		15.4	310	49.9 ¹¹¹	24.7 ⁹¹	50	30	05	44	22	32	26	70
20	120	54.9		16.0	325	19.9 ¹¹⁰	33.8 ⁹¹	52	23	17 00	41	19	30	30	70
21	135	54.9		16.6	339	49.8 ¹⁰⁹	42.9 ⁹¹	54	15	16 55	38	15	29	33	73
22	150	54.9		17.3	354	19.7 ¹⁰⁹	-10 51.9 ⁹⁰	56	16 07	49	34	10	27	37	74
23	165	54.9		17.9	8	49.5 ¹⁰⁸	-11 00.8 ⁸⁹	58	15 57	42	30	06	24	41	77
24	180	55.0	+18	18.5	23	19.2 ¹⁰⁷	-11 09.7 ⁸⁹	60 S	15 46	16 34	17 26	15 00	23	4 45	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 8 ^h 39 ^m 8		Mag: -4.1 PMG: 9 ^h 22 ^m		Mag: -0.9 PMG: 21 ^h 14 ^m		Mag: -2.0 PMG: 15 ^h 52 ^m		Mag: +0.1 PMG: 23 ^h 50 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	229	41.4	219	37.8	+2	27.5	40	34.1	-2	42.7	121	31.2	+22	41.9	1	31.1	-15	19.5	
1	244	43.9	234	37.6		28.5	55	36.8		42.7	136	33.2		41.9	16	33.7		19.5	
2	259	46.3	249	37.4		29.6	70	39.5		42.7	151	35.2		41.8	31	36.4		19.4	
3	274	48.8	264	37.1		30.6	85	42.3		42.7	166	37.3		41.8	46	39.0		19.4	
4	289	51.3	279	36.9		31.7	100	45.0		42.7	181	39.3		41.7	61	41.7		19.3	
5	304	53.7	294	36.7	+2	32.7	115	47.8	-2	42.7	196	41.3	+22	41.7	76	44.3	-15	19.3	
6	319	56.2	309	36.5	+2	33.8	130	50.5	-2	42.7	211	43.3	+22	41.6	91	47.0	-15	19.2	
7	334	58.6	324	36.3		34.9	145	53.3		42.7	226	45.3		41.6	106	49.6		19.2	
8	350	01.1	339	36.1		35.9	160	56.0		42.7	241	47.3		41.5	121	52.3		19.2	
9	5	03.6	354	35.9		37.0	175	58.7		42.7	256	49.3		41.5	136	54.9		19.1	
10	20	06.0	9	35.7		38.0	191	01.5		42.7	271	51.3		41.4	151	57.6		19.1	
11	35	08.5	24	35.5	+2	39.1	206	04.2	-2	42.7	286	53.3	+22	41.4	167	00.2	-15	19.0	
12	50	11.0	39	35.3	+2	40.1	221	07.0	-2	42.7	301	55.3	+22	41.3	182	02.9	-15	19.0	
13	65	13.4	54	35.0		41.2	236	09.7		42.7	316	57.3		41.3	197	05.5		18.9	
14	80	15.9	69	34.8		42.2	251	12.4		42.7	331	59.4		41.2	212	08.2		18.9	
15	95	18.4	84	34.6		43.3	266	15.1		42.7	347	01.4		41.2	227	10.8		18.8	
16	110	20.8	99	34.4		44.3	281	17.9		42.7	2	03.4		41.1	242	13.5		18.8	
17	125	23.3	114	34.2	+2	45.4	296	20.6	-2	42.7	17	05.4	+22	41.1	257	16.2	-15	18.7	
18	140	25.8	129	34.0	+2	46.4	311	23.3	-2	42.7	32	07.4	+22	41.0	272	18.8	-15	18.7	
19	155	28.2	144	33.8		47.5	326	26.1		42.7	47	09.4		41.0	287	21.5		18.6	
20	170	30.7	159	33.6		48.5	341	28.8		42.7	62	11.4		40.9	302	24.1		18.6	
21	185	33.1	174	33.3		49.6	356	31.5		42.7	77	13.4		40.9	317	26.8		18.5	
22	200	35.6	189	33.1		50.7	11	34.2		42.7	92	15.4		40.8	332	29.4		18.5	
23	215	38.1	204	32.9		51.7	26	36.9		42.7	107	17.4		40.8	347	32.1		18.4	
24	230	40.5	219	32.7	+2	52.8	41	39.7	-2	42.7	122	19.4	+22	40.7	2	34.7	-15	18.4	
Dif	—		-2		+11		+27		0		+20		-1		+27				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 13 ^d 7 PHE { SD: 15 ^h 6 PMG: 23 ^h 15 ^m R ^o : 55 ^m																	
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R ^o		Hora		R ^o	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	h	m	m
0	180	55.0	+18	18.5	23	19.2	-11	09.7	60 N	**	**	2	26	3	27		18	47	80	3	08	25
1	195	55.0		19.1	37	48.8 ¹⁰⁶		18.6 ⁸⁹	58	1	14	2	46	40		39	77		15	28		
2	210	55.0		19.7	52	18.4 ¹⁰⁶		27.4 ⁸⁸	56	1	48	3	02	3	51		31	75		21	30	
3	225	55.0		20.4	66	47.9 ¹⁰⁵		36.2 ⁸⁸	54	2	12	16		4	01		24	73		27	31	
4	240	55.0		21.0	81	17.3 ¹⁰⁴		44.9 ⁸⁷	52	31		28	09				18	72		32	33	
5	255	55.0	+18	21.6	95	46.7 ¹⁰⁴	-11	53.5 ⁸⁶	50	2	47	3	38	4	17	18	13	70	3	36	34	
6	270	55.0	+18	22.2	110	16.0 ¹⁰³	-12	02.1 ⁸⁶	45	3	17	4	00	4	34	18	01	67	3	46	37	
7	285	55.0		22.8	124	45.2 ¹⁰²		10.7 ⁸⁶	40	39		16	47			17	51	65	3	54	40	
8	300	55.0		23.5	139	14.3 ¹⁰¹		19.2 ⁸⁵	35	3	56	30	4	58		43	63		4	01	42	
9	315	55.0		24.1	153	43.4 ¹⁰¹		27.6 ⁸⁴	30	4	11	4	42	5	08	36	61		07	44		
10	330	55.0		24.7	168	12.4 ¹⁰⁰		36.0 ⁸⁴	20	33		5	01	25		23	59		17	47		
11	345	55.0	+18	25.3	182	41.3 ⁹⁹	-12	44.3 ⁸³	10 N	4	51	5	17	5	39	17	13	56	4	27	49	
12	0	55.0	+18	25.9	197	10.2 ⁹⁹	-12	52.5 ⁸²	0	5	06	5	31	5	53	17	02	54	4	36	52	
13	15	55.0		26.5	211	39.0 ⁹⁸	-13	00.7 ⁸²	10 S	19		44	6	06		16	52	52	4	44	55	
14	30	55.0		27.1	226	07.7 ⁹⁷		08.8 ⁸¹	20	31		5	57	20		42	49		4	54	57	
15	45	55.0		27.7	240	36.3 ⁹⁶		16.9 ⁸¹	30	42		6	11	36		30	46		5	04	61	
16	60	55.1		28.4	255	04.9 ⁹⁶		24.9 ⁸⁰	35	48		19	46			23	44		11	62		
17	75	55.1	+18	29.0	269	33.4 ⁹⁵	-13	32.8 ⁷⁹	40	5	55	6	27	6	56	16	15	42	5	18	64	
18	90	55.1	+18	29.6	284	01.8 ⁹⁴	-13	40.7 ⁷⁹	45	6	01	6	37	7	09	16	05	41	5	26	67	
19	105	55.1		30.2	298	30.1 ⁹³		48.4 ⁷⁷	50	09		48	24			15	54	38		36	70	
20	120	55.1		30.8	312	58.4 ⁹³	-13	56.2 ⁷⁸	52	12		53	31			49	37		40	72		
21	135	55.1		31.4	327	26.6 ⁹²	-14	03.8 ⁷⁶	54	16		6	59	39		44	35		46	73		
22	150	55.1		32.0	341	54.7 ⁹¹		11.4 ⁷⁶	56	19		7	05	47		37	34		51	75		
23	165	55.1		32.6	356	22.8 ⁹¹		18.9 ⁷⁵	58	23		12	7	57		30	32		5	58	77	
24	180	55.1	+18	33.2	10	50.8 ⁹⁰	-14	26.3 ⁷⁴	60 S	6	28	7	20	8	09	15	23	28	6	05	80	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 35 ^m 9		Mag: -4.1 PMG: 9 ^h 22 ^m		Mag: -0.9 PMG: 21 ^h 10 ^m		Mag: -2.0 PMG: 15 ^h 49 ^m		Mag: +0.1 PMG: 23 ^h 45 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	230	40.5	219	32.7	+2	52.8	41	39.7	-2	42.7	122	19.4	+22	40.7	2	34.7	-15	18.4
1	245	43.0	234	32.5		53.8	56	42.4		42.7	137	21.4		40.7	17	37.4		18.3
2	260	45.5	249	32.3		54.9	71	45.1		42.8	152	23.4		40.6	32	40.0		18.3
3	275	47.9	264	32.1		55.9	86	47.8		42.8	167	25.4		40.6	47	42.7		18.2
4	290	50.4	279	31.9		57.0	101	50.5		42.8	182	27.5		40.5	62	45.3		18.2
5	305	52.9	294	31.6	+2	58.0	116	53.2	-2	42.8	197	29.5	+22	40.5	77	48.0	-15	18.1
6	320	55.3	309	31.4	+2	59.1	131	56.0	-2	42.8	212	31.5	+22	40.4	92	50.6	-15	18.1
7	335	57.8	324	31.2	+3	00.1	146	58.7		42.8	227	33.5		40.4	107	53.3		18.0
8	351	00.2	339	31.0		01.2	162	01.4		42.8	242	35.5		40.3	122	55.9		18.0
9	6	02.7	354	30.8		02.2	177	04.1		42.8	257	37.5		40.3	137	58.6		18.0
10	21	05.2	9	30.6		03.3	192	06.8		42.8	272	39.5		40.2	153	01.2		17.9
11	36	07.6	24	30.4	+3	04.4	207	09.5	-2	42.8	287	41.5	+22	40.2	168	03.9	-15	17.9
12	51	10.1	39	30.1	+3	05.4	222	12.2	-2	42.9	302	43.5	+22	40.1	183	06.5	-15	17.8
13	66	12.6	54	29.9		06.5	237	14.9		42.9	317	45.5		40.1	198	09.2		17.8
14	81	15.0	69	29.7		07.5	252	17.6		42.9	332	47.5		40.0	213	11.8		17.7
15	96	17.5	84	29.5		08.6	267	20.3		42.9	347	49.5		40.0	228	14.5		17.7
16	111	20.0	99	29.3		09.6	282	23.0		42.9	2	51.5		39.9	243	17.1		17.6
17	126	22.4	114	29.1	+3	10.7	297	25.7	-2	42.9	17	53.5	+22	39.9	258	19.8	-15	17.6
18	141	24.9	129	28.8	+3	11.7	312	28.4	-2	42.9	32	55.5	+22	39.8	273	22.5	-15	17.5
19	156	27.4	144	28.6		12.8	327	31.1		43.0	47	57.5		39.8	288	25.1		17.5
20	171	29.8	159	28.4		13.8	342	33.8		43.0	62	59.5		39.7	303	27.8		17.4
21	186	32.3	174	28.2		14.9	357	36.5		43.0	78	01.5		39.7	318	30.4		17.4
22	201	34.7	189	28.0		15.9	12	39.2		43.0	93	03.5		39.6	333	33.1		17.3
23	216	37.2	204	27.8		17.0	27	41.8		43.0	108	05.5		39.6	348	35.7		17.3
24	231	39.7	219	27.5	+3	18.1	42	44.5	-2	43.1	123	07.5	+22	39.5	3	38.4	-15	17.2
Dif	—		-2		+11		+27		0		+20		-1		+27		0	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 3				Edad: 14 ^d 7 PHE { SD: 15'8 PMG: *** **m R°: ***m													
	hG ☉		Dec		hG ☾		Dif							Hora R°		Hora R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	55.1	+18	33.2	10	50.8	-14	26.3	60 N	20 29	21 32	** **	20 07	74	3 33	33		
1	195	55.1		33.8	25	18.7	89	33.6	58	16	21 11	22 50	19 56	72	43	35		
2	210	55.1		34.4	39	46.5	88	40.9	56	20 05	20 54	22 11	46	71	51	37		
3	225	55.1		35.1	54	14.3	88	48.1	54	19 55	40	21 45	37	70	3 58	38		
4	240	55.1		35.7	68	42.0	87	-14 55.2	52	46	28	26	30	68	4 05	39		
5	255	55.1	+18	36.3	83	09.6	86	-15 02.3	50	19 38	20 17	21 09	19 23	68	4 10	42		
6	270	55.1	+18	36.9	97	37.1	85	-15 09.2	45	19 21	19 55	20 39	19 08	66	4 23	44		
7	285	55.1		37.5	112	04.6	85	16.1	40	19 07	38	20 16	18 56	65	34	45		
8	300	55.1		38.1	126	32.0	84	22.9	35	18 56	24	19 58	46	63	43	47		
9	315	55.1		38.7	140	59.3	83	29.5	30	46	19 12	43	37	62	4 51	48		
10	330	55.1		39.3	155	26.6	83	36.2	20	28	18 52	20	22	60	5 04	52		
11	345	55.1	+18	39.9	169	53.8	82	-15 42.7	10 N	18 14	18 36	19 02	18 09	58	5 16	54		
12	0	55.1	+18	40.5	184	20.9	81	-15 49.1	0	18 00	18 22	18 47	17 56	57	5 28	55		
13	15	55.1		41.1	198	48.0	81	-15 55.5	10 S	17 46	18 08	34	44	55	39	57		
14	30	55.1		41.7	213	15.0	80	-16 01.7	20	32	17 55	22	31	53	5 51	59		
15	45	55.1		42.3	227	41.9	79	07.9	30	15	41	10	16	51	6 05	62		
16	60	55.1		42.9	242	08.7	78	14.0	35	17 06	33	18 03	17 07	51	13	63		
17	75	55.1	+18	43.5	256	35.5	78	-16 19.9	40	16 55	17 24	17 57	16 57	49	6 22	65		
18	90	55.1	+18	44.1	271	02.2	77	-16 25.8	45	16 42	17 14	17 50	16 46	47	6 33	67		
19	105	55.1		44.7	285	28.9	77	31.6	50	27	17 03	42	32	45	46	69		
20	120	55.1		45.3	299	55.4	75	37.3	52	20	16 57	39	26	44	52	70		
21	135	55.1		45.9	314	22.0	76	42.9	54	12	52	35	19	43	6 59	71		
22	150	55.1		46.5	328	48.4	74	48.4	56	16 03	45	31	11	41	7 06	73		
23	165	55.1		47.1	343	14.8	74	53.8	58	15 53	38	27	16 02	40	15	75		
24	180	55.1	+18	47.6	357	41.1	73	-16 59.1	60 S	15 41	16 30	17 22	15 51	39	7 25	76		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 32 ^m 0		Mag: -4.1 PMG: 9 ^h 22 ^m				Mag: -0.9 PMG: 21 ^h 05 ^m				Mag: -2.0 PMG: 15 ^h 45 ^m				Mag: +0.1 PMG: 23 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	231	39.7	219	27.5	+3	18.1	42	44.5	-2	43.1	123	07.5	+22	39.5	3	38.4	-15	17.2
1	246	42.1	234	27.3		19.1	57	47.2		43.1	138	09.5		39.5	18	41.0		17.2
2	261	44.6	249	27.1		20.2	72	49.9		43.1	153	11.5		39.4	33	43.7		17.1
3	276	47.1	264	26.9		21.2	87	52.6		43.1	168	13.6		39.3	48	46.3		17.1
4	291	49.5	279	26.7		22.3	102	55.3		43.1	183	15.6		39.3	63	49.0		17.0
5	306	52.0	294	26.5	+3	23.3	117	58.0	-2	43.2	198	17.6	+22	39.2	78	51.6	-15	17.0
6	321	54.5	309	26.2	+3	24.4	133	00.6	-2	43.2	213	19.6	+22	39.2	93	54.3	-15	16.9
7	336	56.9	324	26.0		25.4	148	03.3		43.2	228	21.6		39.1	108	56.9		16.9
8	351	59.4	339	25.8		26.5	163	06.0		43.2	243	23.6		39.1	123	59.6		16.9
9	7	01.9	354	25.6		27.5	178	08.7		43.2	258	25.6		39.0	139	02.2		16.8
10	22	04.3	9	25.4		28.6	193	11.3		43.3	273	27.6		39.0	154	04.9		16.8
11	37	06.8	24	25.1	+3	29.7	208	14.0	-2	43.3	288	29.6	+22	38.9	169	07.5	-15	16.7
12	52	09.2	39	24.9	+3	30.7	223	16.7	-2	43.3	303	31.6	+22	38.9	184	10.2	-15	16.7
13	67	11.7	54	24.7		31.8	238	19.4		43.3	318	33.6		38.8	199	12.8		16.6
14	82	14.2	69	24.5		32.8	253	22.0		43.4	333	35.6		38.8	214	15.5		16.6
15	97	16.6	84	24.3		33.9	268	24.7		43.4	348	37.6		38.7	229	18.1		16.5
16	112	19.1	99	24.1		34.9	283	27.4		43.4	3	39.6		38.7	244	20.8		16.5
17	127	21.6	114	23.8	+3	36.0	298	30.0	-2	43.5	18	41.6	+22	38.6	259	23.4	-15	16.4
18	142	24.0	129	23.6	+3	37.0	313	32.7	-2	43.5	33	43.6	+22	38.6	274	26.1	-15	16.4
19	157	26.5	144	23.4		38.1	328	35.4		43.5	48	45.6		38.5	289	28.7		16.3
20	172	29.0	159	23.2		39.2	343	38.0		43.5	63	47.6		38.5	304	31.4		16.3
21	187	31.4	174	22.9		40.2	358	40.7		43.6	78	49.6		38.4	319	34.0		16.2
22	202	33.9	189	22.7		41.3	373	43.3		43.6	93	51.6		38.4	334	36.7		16.2
23	217	36.3	204	22.5		42.3	388	46.0		43.6	108	53.6		38.3	349	39.4		16.1
24	232	38.8	219	22.3	+3	43.4	403	48.7	-2	43.7	123	55.6	+22	38.2	4	42.0	-15	16.1
Dif	—		-2		+11		+27		0		+20		-1		+27		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 15 ^d 7 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 3			SD: 16 ^h 0 PMG: 0 ^h 10 ^m R°: 57 ^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	m	h m	m
0	180	55.1	+18 47.6	357	41.1	73	-16 59.1	52	60 N	**	**	2 20	3 23	21 21	64	4 06 44
1	195	55.1	48.2	12	07.4	73	-17 04.3	50	58	1 02	41	36	21 08	64	18 45	
2	210	55.1	48.8	26	33.6	72	09.3	50	56	1 41	2 58	47	20 57	63	28 46	
3	225	55.0	49.4	40	59.7	71	14.3	50	54	2 07	3 12	3 57	47	63	36 48	
4	240	55.0	50.0	55	25.8	71	19.2	49	52	26	24	4 06	38	63	44 49	
5	255	55.0	+18 50.6	69	51.8	70	-17 24.0	48	50	2 43	3 35	4 14	20 31	62	4 52 49	
6	270	55.0	+18 51.2	84	17.8	70	-17 28.6	46	45	3 14	3 57	4 31	20 14	62	5 07 51	
7	285	55.0	51.8	98	43.7	69	33.2	46	40	37	4 14	45	20 01	61	19 53	
8	300	55.0	52.4	113	09.5	68	37.7	45	35	3 54	29	4 57	19 49	61	30 53	
9	315	55.0	53.0	127	35.3	68	42.0	43	30	4 09	4 41	5 07	39	60	39 55	
10	330	55.0	53.6	142	01.0	67	46.2	42	20	32	5 00	24	22	60	5 56 55	
11	345	55.0	+18 54.1	156	26.7	67	-17 50.3	41	10 N	4 51	5 17	5 39	19 07	59	6 10 56	
12	0	55.0	+18 54.7	170	52.3	66	-17 54.4	41	0	5 06	5 31	5 53	18 53	59	6 23 58	
13	15	55.0	55.3	185	17.9	66	-17 58.2	38	10 S	19	44	6 07	39	58	36 59	
14	30	55.0	55.9	199	43.4	65	-18 02.0	38	20	31	5 58	21	24	58	6 50 60	
15	45	55.0	56.5	214	08.9	65	05.7	37	30	43	6 12	38	18 07	57	7 07 61	
16	60	55.0	57.1	228	34.3	64	09.2	35	35	50	20	47	17 58	56	16 62	
17	75	55.0	+18 57.7	242	59.7	64	-18 12.7	35	40	5 56	6 29	6 58	17 46	56	7 27 63	
18	90	55.0	+18 58.2	257	25.0	63	-18 16.0	33	45	6 03	6 39	7 11	17 33	55	7 40 64	
19	105	54.9	58.8	271	50.3	63	19.2	32	50	11	51	27	17	54	7 55 65	
20	120	54.9	+18 59.4	286	15.5	62	22.3	31	52	15	6 56	34	10	53	8 02 66	
21	135	54.9	+19 00.0	300	40.7	62	25.3	30	54	18	7 02	42	17	02	53 10 67	
22	150	54.9	+19 00.6	315	05.8	61	28.1	28	56	22	08	7 51	16	52	53 19 68	
23	165	54.9	01.2	329	30.9	61	30.8	27	58	27	15	8 01	42	51	30 68	
24	180	54.9	+19 01.7	343	56.0	61	-18 33.4	26	60 S	6 31	7 23	8 13	16 30	50	8 41 70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 28 ^m 0		Mag: -4.0 PMG: 9 ^h 23 ^m		Mag: -0.9 PMG: 21 ^h 01 ^m		Mag: -2.0 PMG: 15 ^h 42 ^m		Mag: +0.1 PMG: 23 ^h 37 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	232	38.8	219	22.3	+3	43.4	43	48.7	-2	43.7	123	55.6	+22	38.2	4	42.0	-15	16.1
1	247	41.3	234	22.1		44.4	58	51.3		43.7	138	57.6		38.2	19	44.7		16.0
2	262	43.7	249	21.8		45.5	73	54.0		43.7	153	59.6		38.1	34	47.3		16.0
3	277	46.2	264	21.6		46.5	88	56.6		43.8	169	01.6		38.1	49	50.0		15.9
4	292	48.7	279	21.4		47.6	103	59.3		43.8	184	03.6		38.0	64	52.6		15.9
5	307	51.1	294	21.2	+3	48.6	119	01.9	-2	43.8	199	05.6	+22	38.0	79	55.3	-15	15.9
6	322	53.6	309	21.0	+3	49.7	134	04.6	-2	43.9	214	07.6	+22	37.9	94	57.9	-15	15.8
7	337	56.1	324	20.7		50.8	149	07.2		43.9	229	09.5		37.9	110	00.6		15.8
8	352	58.5	339	20.5		51.8	164	09.9		43.9	244	11.5		37.8	125	03.2		15.7
9	8	01.0	354	20.3		52.9	179	12.5		44.0	259	13.5		37.8	140	05.9		15.7
10	23	03.5	9	20.1		53.9	194	15.2		44.0	274	15.5		37.7	155	08.5		15.6
11	38	05.9	24	19.8	+3	55.0	209	17.8	-2	44.0	289	17.5	+22	37.7	170	11.2	-15	15.6
12	53	08.4	39	19.6	+3	56.0	224	20.4	-2	44.1	304	19.5	+22	37.6	185	13.8	-15	15.5
13	68	10.8	54	19.4		57.1	239	23.1		44.1	319	21.5		37.6	200	16.5		15.5
14	83	13.3	69	19.2		58.1	254	25.7		44.1	334	23.5		37.5	215	19.1		15.4
15	98	15.8	84	18.9	+3	59.2	269	28.4		44.2	349	25.5		37.4	230	21.8		15.4
16	113	18.2	99	18.7	+4	00.3	284	31.0		44.2	4	27.5		37.4	245	24.4		15.3
17	128	20.7	114	18.5	+4	01.3	299	33.6	-2	44.3	19	29.5	+22	37.3	260	27.1	-15	15.3
18	143	23.2	129	18.3	+4	02.4	314	36.3	-2	44.3	34	31.5	+22	37.3	275	29.7	-15	15.2
19	158	25.6	144	18.0		03.4	329	38.9		44.3	49	33.5		37.2	290	32.4		15.2
20	173	28.1	159	17.8		04.5	344	41.5		44.4	64	35.5		37.2	305	35.0		15.1
21	188	30.6	174	17.6		05.5	359	44.2		44.4	79	37.5		37.1	320	37.7		15.1
22	203	33.0	189	17.4		06.6	14	46.8		44.5	94	39.5		37.1	335	40.3		15.0
23	218	35.5	204	17.1		07.6	29	49.4		44.5	109	41.5		37.0	350	43.0		15.0
24	233	38.0	219	16.9	+4	08.7	44	52.1	-2	44.6	124	43.5	+22	37.0	5	45.6	-15	15.0
Dif	—		-2		+11		+26		0		+20		-1		+27		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 56 ^m 3			Edad: 16 ^d 7 PHE { SD: 16 ^h 1 PMG: 1 ^h 07 ^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	180	54.9	+19 01.7	343	56.0	-18 33.4	25	60 N	20 34	21 39	** **	22 25 51		4 50 57	
1	195	54.9	02.3	358	21.0	35.9	25	58	20	21 17	23 04	12 52		5 03 58	
2	210	54.9	02.9	12	46.0	38.3	24	56	20 08	20 59	22 19	22 00 53		14 58	
3	225	54.9	03.5	27	10.9	40.5	22	54	19 58	44	21 51	21 50 54		24 58	
4	240	54.9	04.1	41	35.9	42.6	21	52	49	31	31	41 54		33 58	
5	255	54.8	+19 04.6	56	00.7	-18 44.6	20	50	19 41	20 20	21 14	21 33 55		5 41 58	
6	270	54.8	+19 05.2	70	25.6	-18 46.5	19	45	19 23	19 58	20 42	21 16 55		5 58 58	
7	285	54.8	05.8	84	50.4	48.2	17	40	19 09	40	18	21 02 56		6 12 58	
8	300	54.8	06.4	99	15.2	49.9	17	35	18 57	25	20 00	20 50 57		23 59	
9	315	54.8	06.9	113	39.9	51.4	15	30	47	19 13	19 45	39 58		34 58	
10	330	54.8	07.5	128	04.6	52.7	13	20	29	18 53	21	22 58		6 51 59	
11	345	54.8	+19 08.1	142	29.3	-18 54.0	13	10 N	18 14	18 36	19 03	20 06 59		7 06 59	
12	0	54.8	+19 08.7	156	54.0	-18 55.1	11	0	18 00	18 22	18 47	19 52 59		7 21 59	
13	15	54.7	09.2	171	18.7	56.1	10	10 S	17 46	18 08	34	37 60		35 59	
14	30	54.7	09.8	185	43.3	56.9	8	20	31	17 54	21	22 60		7 50 59	
15	45	54.7	10.4	200	07.9	57.7	8	30	14	40	09	19 04 61		8 08 59	
16	60	54.7	11.0	214	32.5	58.3	6	35	17 04	31	18 02	18 54 61		18 59	
17	75	54.7	+19 11.5	228	57.0	-18 58.7	4	40	16 53	17 22	17 55	18 42 62		8 30 59	
18	90	54.7	+19 12.1	243	21.6	-18 59.1	4	45	16 40	17 12	17 48	18 28 62		8 44 58	
19	105	54.7	12.7	257	46.1	59.3	2	50	24	17 00	40	11 63		9 00 59	
20	120	54.7	13.2	272	10.6	59.4	1	52	17	16 55	36	18 03 63		08 59	
21	135	54.6	13.8	286	35.1	59.4	0	54	16 09	49	32	17 55 63		17 58	
22	150	54.6	14.4	300	59.6	59.2	2	56	15 59	42	28	45 63		27 58	
23	165	54.6	14.9	315	24.1	58.9	3	58	49	35	24	33 64		38 58	
24	180	54.6	+19 15.5	329	48.6	-18 58.5	4	60 S	15 37	16 27	17 19	17 20 65		9 51 58	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 24 ^m 1		Mag: -4.0 PMG: 9 ^h 23 ^m			Mag: -0.8 PMG: 20 ^h 57 ^m			Mag: -2.0 PMG: 15 ^h 39 ^m			Mag: +0.1 PMG: 23 ^h 33 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	233	38.0	219	16.9	+4 08.7	44 52.1	-2 44.6	124 43.5	+22 37.0	5 45.6	-15 15.0				
1	248	40.4	234	16.7	09.7	59 54.7	44.6	139 45.5	36.9	20 48.3	14.9				
2	263	42.9	249	16.5	10.8	74 57.3	44.6	154 47.5	36.9	35 50.9	14.9				
3	278	45.3	264	16.2	11.9	89 59.9	44.7	169 49.5	36.8	50 53.6	14.8				
4	293	47.8	279	16.0	12.9	105 02.5	44.7	184 51.5	36.7	65 56.2	14.8				
5	308	50.3	294	15.8	+4 14.0	120 05.2	-2 44.8	199 53.5	+22 36.7	80 58.9	-15 14.7				
6	323	52.7	309	15.5	+4 15.0	135 07.8	-2 44.8	214 55.5	+22 36.6	96 01.5	-15 14.7				
7	338	55.2	324	15.3	16.1	150 10.4	44.9	229 57.4	36.6	111 04.2	14.6				
8	353	57.7	339	15.1	17.1	165 13.0	44.9	244 59.4	36.5	126 06.8	14.6				
9	9 00.1	354 14.9	18.2	180 15.6	45.0	260 01.4	36.5	260 01.4	36.5	141 09.5	14.5				
10	24 02.6	9 14.6	19.2	195 18.2	45.0	275 03.4	36.4	275 03.4	36.4	156 12.1	14.5				
11	39 05.1	24 14.4	+4 20.3	210 20.9	-2 45.1	290 05.4	+22 36.4	290 05.4	+22 36.4	171 14.8	-15 14.4				
12	54 07.5	39 14.2	+4 21.4	225 23.5	-2 45.1	305 07.4	+22 36.3	305 07.4	+22 36.3	186 17.4	-15 14.4				
13	69 10.0	54 13.9	22.4	240 26.1	45.2	320 09.4	36.3	320 09.4	36.3	201 20.1	14.3				
14	84 12.5	69 13.7	23.5	255 28.7	45.2	335 11.4	36.2	335 11.4	36.2	216 22.7	14.3				
15	99 14.9	84 13.5	24.5	270 31.3	45.3	350 13.4	36.1	350 13.4	36.1	231 25.4	14.2				
16	114 17.4	99 13.3	25.6	285 33.9	45.3	5 15.4	36.1	5 15.4	36.1	246 28.0	14.2				
17	129 19.8	114 13.0	+4 26.6	300 36.5	-2 45.4	20 17.4	+22 36.0	20 17.4	+22 36.0	261 30.7	-15 14.2				
18	144 22.3	129 12.8	+4 27.7	315 39.1	-2 45.4	35 19.4	+22 36.0	35 19.4	+22 36.0	276 33.4	-15 14.1				
19	159 24.8	144 12.6	28.7	330 41.7	45.5	50 21.4	35.9	50 21.4	35.9	291 36.0	14.1				
20	174 27.2	159 12.3	29.8	345 44.3	45.5	65 23.4	35.9	65 23.4	35.9	306 38.7	14.0				
21	189 29.7	174 12.1	30.8	0 46.9	45.6	80 25.3	35.8	80 25.3	35.8	321 41.3	14.0				
22	204 32.2	189 11.9	31.9	15 49.5	45.6	95 27.3	35.8	95 27.3	35.8	336 44.0	13.9				
23	219 34.6	204 11.6	33.0	30 52.1	45.7	110 29.3	35.7	110 29.3	35.7	351 46.6	13.9				
24	234 37.1	219 11.4	+4 34.0	45 54.7	-2 45.7	125 31.3	+22 35.7	125 31.3	+22 35.7	6 49.3	-15 13.8				
Dif	—		-2		+11	+26		0		+20		-1		+27	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15/8 PMG: 11 ^h 56 ^m 4				Edad: 17 ^d 7 PHE { 4 ^h : 59/6 12 ^h : 59/7 20 ^h : 59/7 SD: 16/2 PMG: 2 ^h 06 ^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	180	54.6	+19	15.5	329	48.6		-18	58.5	6	60 N	** **	2	13	3	18	23	16	40	5	47	71	
1	195	54.6		16.1	344	13.1	55		57.9	6	58	0	48	35	32	23	04	41	6	01	69		
2	210	54.6		16.6	358	37.5	54		57.3	6	56	1	33	2	53	44	22	53	43	12	69		
3	225	54.5		17.2	13	02.0	55		56.5	8	54	2	01	3	08	3	54	44	44	22	68		
4	240	54.5		17.8	27	26.4	54		55.5	10	52	22	21	4	03	35	46		31	67			
5	255	54.5	+19	18.3	41	50.9	55	-18	54.5	10	50	2	39	3	32	4	12	22	28	46	6	39	67
6	270	54.5	+19	18.9	56	15.3	54	-18	53.3	12	45	3	11	3	55	4	29	22	11	49	6	56	65
7	285	54.5		19.5	70	39.8	55		51.9	14	40	34	4	12	43	21	58	50	7	10	64		
8	300	54.5		20.0	85	04.2	54		50.5	14	35	3	53	27	4	55	47	51		22	63		
9	315	54.4		20.6	99	28.7	55		48.9	16	30	4	08	4	39	5	06	37	53		32	63	
10	330	54.4		21.2	113	53.2	55		47.2	17	20	31	5	00	23	20	55		7	50	61		
11	345	54.4	+19	21.7	128	17.6	54	-18	45.3	19	10 N	4	50	5	16	5	39	21	05	56	8	05	60
12	0	54.4	+19	22.3	142	42.1	55	-18	43.4	19	0	5	05	5	31	5	53	20	51	58	8	20	59
13	15	54.4		22.8	157	06.6	55		41.3	21	10 S	19	45	6	07	37	60		34	58			
14	30	54.3		23.4	171	31.1	55		39.1	22	20	32	5	59	22	22	61		8	49	57		
15	45	54.3		24.0	185	55.6	55		36.7	24	30	44	6	13	39	20	05	63		9	07	55	
16	60	54.3		24.5	200	20.1	55		34.2	25	35	51	22	6	49	19	55	64		17	55		
17	75	54.3	+19	25.1	214	44.7	56	-18	31.6	26	40	5	58	6	31	7	00	19	44	65	9	29	53
18	90	54.3	+19	25.6	229	09.2	55	-18	28.9	27	45	6	05	6	41	7	13	19	30	68	9	42	53
19	105	54.2		26.2	243	33.8	56		26.0	29	50	14	53	29		14	69		9	59	51		
20	120	54.2		26.7	257	58.4	56		23.1	29	52	17	6	59	37	19	06	71		10	07	50	
21	135	54.2		27.3	272	23.0	56		20.0	31	54	21	7	05	45	18	58	71		15	49		
22	150	54.2		27.8	286	47.6	56		16.7	33	56	25	11	7	54	48	73		25	48			
23	165	54.2		28.4	301	12.2	56		13.4	33	58	30	19	8	05	37	74		36	47			
24	180	54.1	+19	29.0	315	36.9	57	-18	09.9	35	60 S	6	35	7	27	8	17	18	25	75	10	49	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 8 ^h 20 ^m 2		Mag: -4.0 PMG: 9 ^h 23 ^m		Mag: -0.8 PMG: 20 ^h 53 ^m		Mag: -2.0 PMG: 15 ^h 36 ^m		Mag: +0.1 PMG: 23 ^h 29 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	234	37.1	219	11.4	+4	34.0	45	54.7	-2	45.7	125	31.3	+22	35.7	6	49.3	-15	13.8
1	249	39.6	234	11.2		35.1	60	57.3		45.8	140	33.3		35.6	21	51.9		13.8
2	264	42.0	249	10.9		36.1	75	59.9		45.9	155	35.3		35.5	36	54.6		13.7
3	279	44.5	264	10.7		37.2	91	02.5		45.9	170	37.3		35.5	51	57.2		13.7
4	294	46.9	279	10.5		38.2	106	05.1		46.0	185	39.3		35.4	66	59.9		13.6
5	309	49.4	294	10.2	+4	39.3	121	07.7	-2	46.0	200	41.3	+22	35.4	82	02.5	-15	13.6
6	324	51.9	309	10.0	+4	40.3	136	10.3	-2	46.1	215	43.3	+22	35.3	97	05.2	-15	13.5
7	339	54.3	324	09.8		41.4	151	12.8		46.1	230	45.3		35.3	112	07.8		13.5
8	354	56.8	339	09.5		42.4	166	15.4		46.2	245	47.2		35.2	127	10.5		13.4
9	9	59.3	354	09.3		43.5	181	18.0		46.3	260	49.2		35.2	142	13.1		13.4
10	25	01.7	9	09.1		44.6	196	20.6		46.3	275	51.2		35.1	157	15.8		13.4
11	40	04.2	24	08.8	+4	45.6	211	23.2	-2	46.4	290	53.2	+22	35.0	172	18.4	-15	13.3
12	55	06.7	39	08.6	+4	46.7	226	25.8	-2	46.4	305	55.2	+22	35.0	187	21.1	-15	13.3
13	70	09.1	54	08.4		47.7	241	28.3		46.5	320	57.2		34.9	202	23.7		13.2
14	85	11.6	69	08.1		48.8	256	30.9		46.6	335	59.2		34.9	217	26.4		13.2
15	100	14.1	84	07.9		49.8	271	33.5		46.6	351	01.2		34.8	232	29.0		13.1
16	115	16.5	99	07.7		50.9	286	36.1		46.7	6	03.2		34.8	247	31.7		13.1
17	130	19.0	114	07.4	+4	51.9	301	38.7	-2	46.8	21	05.2	+22	34.7	262	34.3	-15	13.0
18	145	21.4	129	07.2	+4	53.0	316	41.2	-2	46.8	36	07.1	+22	34.7	277	37.0	-15	13.0
19	160	23.9	144	07.0		54.0	331	43.8		46.9	51	09.1		34.6	292	39.6		12.9
20	175	26.4	159	06.7		55.1	346	46.4		47.0	66	11.1		34.5	307	42.3		12.9
21	190	28.8	174	06.5		56.1	1	48.9		47.0	81	13.1		34.5	322	44.9		12.8
22	205	31.3	189	06.3		57.2	16	51.5		47.1	96	15.1		34.4	337	47.6		12.8
23	220	33.8	204	06.0		58.3	31	54.1		47.2	111	17.1		34.4	352	50.2		12.7
24	235	36.2	219	05.8	+4	59.3	46	56.6	-2	47.2	126	19.1	+22	34.3	7	52.9	-15	12.7
Dif	—		-2		+11		+26		-1		+20		-1		+27		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 18 ^d 7 PHE { 4 ^h : 59 ^m /7 12 ^h : 59 ^m /7 20 ^h : 59 ^m /7											
	PMG: 11 ^h 56 ^m 4		SD: 16 ^h 3		PMG: 3 ^h 05 ^m R°: 58 ^m				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	54.1	+19	29.0	315	36.9	-18 09.9	60 N	20 39	21 46	** **	23 56 29	6 58 80	
1	195	54.1		29.5	330	01.6	57 06.3	58	24	22	23 23	45 32	7 10 78	
2	210	54.1		30.1	344	26.3	57 -18 02.6	56	12	21 04	22 27	36 34	21 76	
3	225	54.1		30.6	358	51.1	58 -17 58.7	54	20 01	20 48	21 57	28 36	30 74	
4	240	54.1		31.2	13	15.8	57 54.8	52	19 52	35	35	21 38	38 73	
5	255	54.0	+19	31.7	27	40.6	58 -17 50.7	50	19 43	20 24	21 18	23 14 39	7 46 71	
6	270	54.0	+19	32.3	42	05.5	59 -17 46.5	45	19 26	20 00	20 45	23 00 42	8 01 70	
7	285	54.0		32.8	56	30.3	58 42.1	40	19 11	19 42	21	22 48 45	14 67	
8	300	54.0		33.4	70	55.2	59 37.7	35	18 59	27	20 02	38 47	25 66	
9	315	53.9		33.9	85	20.2	60 33.1	30	48	19 15	19 46	30 48	35 64	
10	330	53.9		34.5	99	45.1	59 28.5	20	30	18 54	22	15 51	8 51 62	
11	345	53.9	+19	35.0	114	10.1	60 -17 23.7	10 N	18 14	18 37	19 03	22 01 54	9 05 60	
12	0	53.9	+19	35.6	128	35.1	60 -17 18.8	0	18 00	18 22	18 47	21 49 57	9 19 57	
13	15	53.8		36.1	143	00.2	61 13.7	10 S	17 46	18 08	34	37 59	32 55	
14	30	53.8		36.6	157	25.3	61 08.6	20	30	17 54	21	23 62	9 46 53	
15	45	53.8		37.2	171	50.4	61 -17 03.3	30	13	39	08	21 08 65	10 02 51	
16	60	53.8		37.7	186	15.6	62 -16 58.0	35	17 03	30	18 01	20 59 67	12 49	
17	75	53.7	+19	38.3	200	40.8	62 -16 52.5	40	16 52	17 21	17 54	20 49 69	10 22 48	
18	90	53.7	+19	38.8	215	06.1	63 -16 46.9	45	16 38	17 10	17 46	20 38 70	10 35 45	
19	105	53.7		39.4	229	31.4	63 41.2	50	22	16 58	38	23 74	50 42	
20	120	53.7		39.9	243	56.7	63 35.4	52	14	52	34	17 74	10 57 41	
21	135	53.6		40.5	258	22.1	64 29.4	54	16 06	46	30	09 76	11 04 41	
22	150	53.6		41.0	272	47.6	65 23.4	56	15 56	39	26	20 01 78	13 39	
23	165	53.6		41.5	287	13.0	64 17.3	58	45	32	21	19 51 81	23 36	
24	180	53.6	+19	42.1	301	38.5	65 -16 11.0	60 S	15 33	16 23	17 16	19 40 83	11 34 34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 16 ^m 2		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: -0.8 PMG: 20 ^h 49 ^m		Mag: -2.0 PMG: 15 ^h 33 ^m		Mag: +0.1 PMG: 23 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	235	36.2	219 05.8	+4 59.3	46 56.6	-2 47.2	126 19.1	+22 34.3	7 52.9	-15 12.7
1	250	38.7	234 05.6	+5 00.4	61 59.2	47.3	141 21.1	34.3	22 55.5	12.6
2	265	41.2	249 05.3	01.4	77 01.8	47.4	156 23.0	34.2	37 58.2	12.6
3	280	43.6	264 05.1	02.5	92 04.3	47.4	171 25.0	34.2	53 00.8	12.6
4	295	46.1	279 04.8	03.5	107 06.9	47.5	186 27.0	34.1	68 03.5	12.5
5	310	48.6	294 04.6	+5 04.6	122 09.4	-2 47.6	201 29.0	+22 34.0	83 06.1	-15 12.5
6	325	51.0	309 04.4	+5 05.6	137 12.0	-2 47.6	216 31.0	+22 34.0	98 08.8	-15 12.4
7	340	53.5	324 04.1	06.7	152 14.6	47.7	231 33.0	33.9	113 11.4	12.4
8	355	55.9	339 03.9	07.7	167 17.1	47.8	246 35.0	33.9	128 14.1	12.3
9	10	58.4	354 03.6	08.8	182 19.7	47.8	261 37.0	33.8	143 16.7	12.3
10	26	00.9	9 03.4	09.8	197 22.2	47.9	276 38.9	33.8	158 19.4	12.2
11	41	03.3	24 03.2	+5 10.9	212 24.8	-2 48.0	291 40.9	+22 33.7	173 22.0	-15 12.2
12	56	05.8	39 02.9	+5 11.9	227 27.3	-2 48.1	306 42.9	+22 33.7	188 24.7	-15 12.1
13	71	08.3	54 02.7	13.0	242 29.9	48.1	321 44.9	33.6	203 27.3	12.1
14	86	10.7	69 02.4	14.1	257 32.4	48.2	336 46.9	33.5	218 30.0	12.0
15	101	13.2	84 02.2	15.1	272 35.0	48.3	351 48.9	33.5	233 32.6	12.0
16	116	15.7	99 02.0	16.2	287 37.5	48.4	6 50.8	33.4	248 35.3	12.0
17	131	18.1	114 01.7	+5 17.2	302 40.1	-2 48.4	21 52.8	+22 33.4	263 37.9	-15 11.9
18	146	20.6	129 01.5	+5 18.3	317 42.6	-2 48.5	36 54.8	+22 33.3	278 40.6	-15 11.9
19	161	23.1	144 01.2	19.3	332 45.1	48.6	51 56.8	33.3	293 43.2	11.8
20	176	25.5	159 01.0	20.4	347 47.7	48.7	66 58.8	33.2	308 45.9	11.8
21	191	28.0	174 00.8	21.4	2 50.2	48.7	82 00.8	33.1	323 48.5	11.7
22	206	30.4	189 00.5	22.5	17 52.8	48.8	97 02.8	33.1	338 51.2	11.7
23	221	32.9	204 00.3	23.5	32 55.3	48.9	112 04.7	33.0	353 53.8	11.6
24	236	35.4	219 00.0	+5 24.6	47 57.8	-2 49.0	127 06.7	+22 33.0	8 56.5	-15 11.6
Dif	—		-2	+11	+26	-1	+20	-1	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 11 ^h 56 ^m 5				Edad: 19 ^d 7 PHE { SD: 16/3 PMG: 4 ^h 03 ^m R°: 56 ^m 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/6														
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	53.6	+19	42.1	301	38.5	-16	11.0	60 N	**	**	2 07	3 14	**	**	**	8 18	85	
1	195	53.5		42.6	316	04.1	-16	04.7	58	0	29	30	28	**	**	**	28	82	
2	210	53.5		43.1	330	29.7	-15	58.2	56	1	25	2 49	40	**	**	**	37	80	
3	225	53.5		43.7	344	55.4		51.7	54	1	55	3 04	3 51	**	**	**	44	78	
4	240	53.4		44.2	359	21.1		45.0	52	2	17	17	4 01	23	59	32	51	76	
5	255	53.4	+19	44.8	13	46.8	-15	38.3	50	2	35	3 29	4 09	23	53	34	8 57	75	
6	270	53.4	+19	45.3	28	12.6	-15	31.4	45	3	08	3 52	4 27	23	42	38	9 11	71	
7	285	53.4		45.8	42	38.5		24.5	40		32	4 10	41	33	40		21	69	
8	300	53.3		46.4	57	04.4		17.4	35	3	51	25	4 54	25	43		31	66	
9	315	53.3		46.9	71	30.3		10.3	30	4	06	38	5 04	18	45		39	64	
10	330	53.3		47.4	85	56.3	-15	03.0	20		31	4 59	23	23	06	48	9 53	61	
11	345	53.2	+19	48.0	100	22.4	-14	55.7	10 N	4	50	5 16	5 38	22	55	52	10 05	58	
12	0	53.2	+19	48.5	114	48.5	-14	48.2	0	5	05	5 31	5 53	22	46	54	10 16	56	
13	15	53.2		49.0	129	14.6		40.7	10 S		19	45	6 07	36	57		27	53	
14	30	53.1		49.6	143	40.8		33.1	20	32	5 59	23	25	60		39	50		
15	45	53.1		50.1	158	07.1		25.4	30	45	6 15	40	13	64	10 53	46			
16	60	53.1		50.6	172	33.4		17.6	35	52	23	6 50	22	06	66	11 01	44		
17	75	53.1	+19	51.2	186	59.7	-14	09.7	40	5	59	6 32	7 02	21	58	68	11 10	42	
18	90	53.0	+19	51.7	201	26.1	-14	01.7	45	6	07	6 43	7 15	21	48	71	11 20	40	
19	105	53.0		52.2	215	52.6	-13	53.6	50	16	6 56	32	37	75	32	37			
20	120	53.0		52.7	230	19.1		45.5	52	20	7 01	40	31	77	38	35			
21	135	52.9		53.3	244	45.7		37.3	54	24	08	48	25	79	45	33			
22	150	52.9		53.8	259	12.3		29.0	56	28	15	7 58	19	80	52	31			
23	165	52.9		54.3	273	39.0		20.6	58	33	22	8 09	12	83	11 59	30			
24	180	52.8	+19	54.9	288	05.7	-13	12.1	60 S	6	38	7 31	8 22	21	03	86	12 08	27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 12 ^m 3		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: -0.8 PMG: 20 ^h 45 ^m		Mag: -2.0 PMG: 15 ^h 30 ^m		Mag: +0.1 PMG: 23 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	35.4	219	00.0	+5	24.6	47	57.8	-2	49.0
1	251	37.8	233	59.8		25.6	63	00.4		49.1
2	266	40.3	248	59.5		26.7	78	02.9		49.1
3	281	42.8	263	59.3		27.7	93	05.4		49.2
4	296	45.2	278	59.1		28.8	108	08.0		49.3
5	311	47.7	293	58.8	+5	29.8	123	10.5	-2	49.4
6	326	50.2	308	58.6	+5	30.9	138	13.0	-2	49.5
7	341	52.6	323	58.3		31.9	153	15.6		49.5
8	356	55.1	338	58.1		33.0	168	18.1		49.6
9	11	57.6	353	57.8		34.0	183	20.6		49.7
10	27	00.0	8	57.6		35.1	198	23.1		49.8
11	42	02.5	23	57.4	+5	36.1	213	25.7	-2	49.9
12	57	04.9	38	57.1	+5	37.2	228	28.2	-2	50.0
13	72	07.4	53	56.9		38.2	243	30.7		50.0
14	87	09.9	68	56.6		39.3	258	33.2		50.1
15	102	12.3	83	56.4		40.4	273	35.7		50.2
16	117	14.8	98	56.1		41.4	288	38.2		50.3
17	132	17.3	113	55.9	+5	42.5	303	40.8	-2	50.4
18	147	19.7	128	55.6	+5	43.5	318	43.3	-2	50.5
19	162	22.2	143	55.4		44.6	333	45.8		50.6
20	177	24.7	158	55.1		45.6	348	48.3		50.7
21	192	27.1	173	54.9		46.7	3	50.8		50.7
22	207	29.6	188	54.6		47.7	18	53.3		50.8
23	222	32.0	203	54.4		48.8	33	55.8		50.9
24	237	34.5	218	54.1	+5	49.8	48	58.3	-2	51.0
Dif	—		-2		+11		+25		-1	

0	180	53.6	+19	42.1	301	38.5	-16	11.0	60 N	**	**	2 07	3 14	**	**	**	8 18	85
1	195	53.5		42.6	316	04.1	-16	04.7	58	0	29	30	28	**	**	**	28	82
2	210	53.5		43.1	330	29.7	-15	58.2	56	1	25	2 49	40	**	**	**	37	80
3	225	53.5		43.7	344	55.4		51.7	54	1	55	3 04	3 51	**	**	**	44	78
4	240	53.4		44.2	359	21.1		45.0	52	2	17	17	4 01	23	59	32	51	76
5	255	53.4	+19	44.8	13	46.8	-15	38.3	50	2	35	3 29	4 09	23	53	34	8 57	75
6	270	53.4	+19	45.3	28	12.6	-15	31.4	45	3	08	3 52	4 27	23	42	38	9 11	71
7	285	53.4		45.8	42	38.5		24.5	40		32	4 10	41	33	40		21	69
8	300	53.3		46.4	57	04.4		17.4	35	3	51	25	4 54	25	43		31	66
9	315	53.3		46.9	71	30.3		10.3	30	4	06	38	5 04	18	45		39	64
10	330	53.3		47.4	85	56.3	-15	03.0	20		31	4 59	23	23	06	48	9 53	61
11	345	53.2	+19	48.0	100	22.4	-14	55.7	10 N	4	50	5 16	5 38	22	55	52	10 05	58
12	0	53.2	+19	48.5	114	48.5	-14	48.2	0	5	05	5 31	5 53	22	46	54	10 16	56
13	15	53.2		49.0	129	14.6		40.7	10 S		19	45	6 07	36	57		27	53
14	30	53.1		49.6	143	40.8		33.1	20	32	5 59	23	25	60		39	50	
15	45	53.1		50.1	158	07.1		25.4	30	45	6 15	40	13	64	10 53	46		
16	60	53.1		50.6	172	33.4		17.6	35	52	23	6 50	22	06	66	11 01	44	
17	75	53.1	+19	51.2	186	59.7	-14	09.7	40	5	59	6 32	7 02	21	58	68	11 10	42
18	90	53.0	+19	51.7	201	26.1	-14	01.7	45	6	07	6 43	7 15	21	48	71	11 20	40
19	105	53.0		52.2	215	52.6	-13	53.6	50	16	6 56	32	37	75	32	37		
20	120	53.0		52.7	230	19.1		45.5	52	20	7 01	40	31	77	38	35		
21	135	52.9		53.3	244	45.7		37.3	54	24	08	48	25	79	45	33		
22	150	52.9		53.8	259	12.3		29.0	56	28	15	7 58	19	80	52	31		
23	165	52.9		54.3	273	39.0		20.6	58	33	22	8 09	12	83	11 59	30		
24	180	52.8	+19	54.9	288	05.7	-13	12.1	60 S	6	38	7 31	8 22	21	03	86	12 08	27

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: 20 ^d 7 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'4 SD: 16'2 PMG: 4 ^h 59 ^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
0	180	52.8	+19 54.9	288	05.7	-13 12.1	86	60 N	20 43	21 52	** **	0 25	24	9 43	86	
1	195	52.8		302	32.5	-13 03.5	86	58	28	27	** **	17 27		50 84		
2	210	52.8		316	59.3	-12 54.9	86	56	16	21 08	22 36	10 29		9 57	81	
3	225	52.7		331	26.2		87	54	20 04	20 52	22 03	0 04	31	10 02	79	
4	240	52.7		345	53.1		88	52	19 55	38	21 40	** **	**	07 77		
5	255	52.7	+19 57.5	0	20.1	-12 28.5	89	50	19 46	20 27	21 22	** **	**	10 12	75	
6	270	52.6	+19 58.0	14	47.2	-12 19.6	89	45	19 28	20 03	20 48	** **	**	10 22	71	
7	285	52.6		29	14.3		90	40	13	19 44	23	** **	**	30 68		
8	300	52.5		43	41.4	-12 01.5	91	35	19 00	29	20 04	** **	**	37 66		
9	315	52.5	+19 59.6	58	08.6	-11 52.3	92	30	18 49	19 16	19 48	** **	**	43 64		
10	330	52.5	+20 00.1	72	35.9		92	20	31	18 55	23	23 54	46	10 54	59	
11	345	52.4	+20 00.6	87	03.2	-11 33.8	93	10 N	18 15	18 37	19 04	23 47	49	11 03	56	
12	0	52.4	+20 01.1	101	30.5	-11 24.5	93	0	18 00	18 22	18 48	23 40	52	11 12	53	
13	15	52.4		115	57.9		94	10 S	17 45	18 08	33	33 55		20 50		
14	30	52.3		130	25.4	-11 05.5	95	20	30	17 53	20	25 59		29 47		
15	45	52.3		144	52.9	-10 56.0	95	30	12	38	07	17 63		39 43		
16	60	52.3		159	20.5		96	35	17 02	29	18 00	12 65		45 41		
17	75	52.2	+20 03.7	173	48.1	-10 36.7	97	40	16 50	17 19	17 52	23 06	68	11 52	38	
18	90	52.2	+20 04.2	188	15.8	-10 27.0	97	45	16 36	17 09	17 45	22 59	72	12 00	35	
19	105	52.1		202	43.5		98	50	19	16 56	36	52 74		09 32		
20	120	52.1		217	11.3	-10 07.3	99	52	12	50	32	48 77		13 30		
21	135	52.1		231	39.1	-9 57.4	99	54	16 03	43	28	44 78		18 28		
22	150	52.0		246	07.0		99	56	15 53	36	23	39 81		23 26		
23	165	52.0		260	34.9		101	58	42	29	18	35 83		29 24		
24	180	52.0	+20 07.3	275	02.9	-9 27.4	100	60 S	15 29	16 20	17 13	22 29	86	12 35	22	

UT	♈ ARIES		♊ VENUS		♈ MARTE		♃ JÚPITER		♄ SATURNO	
	PMG: 8 ^h 08 ^m 4		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: -0.7 PMG: 20 ^h 41 ^m		Mag: -2.0 PMG: 15 ^h 26 ^m		Mag: +0.1 PMG: 23 ^h 16 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	237	34.5	218 54.1	+5 49.8	48 58.3	-2 51.0	127 54.3	+22 31.6	10 00.0	-15 10.5
1	252	37.0	233 53.9	50.9	64 00.8	51.1	142 56.3	31.5	25 02.7	10.4
2	267	39.4	248 53.6	51.9	79 03.3	51.2	157 58.3	31.5	40 05.3	10.4
3	282	41.9	263 53.4	53.0	94 05.8	51.3	173 00.2	31.4	55 08.0	10.3
4	297	44.4	278 53.1	54.0	109 08.3	51.4	188 02.2	31.4	70 10.6	10.3
5	312	46.8	293 52.9	+5 55.1	124 10.8	-2 51.5	203 04.2	+22 31.3	85 13.3	-15 10.2
6	327	49.3	308 52.6	+5 56.1	139 13.3	-2 51.6	218 06.2	+22 31.2	100 15.9	-15 10.2
7	342	51.8	323 52.4	57.2	154 15.8	51.7	233 08.2	31.2	115 18.6	10.1
8	357	54.2	338 52.1	58.2	169 18.3	51.8	248 10.1	31.1	130 21.2	10.1
9	12	56.7	353 51.9	+5 59.3	184 20.8	51.9	263 12.1	31.1	145 23.9	10.1
10	27	59.2	8 51.6	+6 00.3	199 23.3	52.0	278 14.1	31.0	160 26.5	10.0
11	43	01.6	23 51.4	+6 01.4	214 25.8	-2 52.0	293 16.1	+22 31.0	175 29.2	-15 10.0
12	58	04.1	38 51.1	+6 02.4	229 28.3	-2 52.1	308 18.1	+22 30.9	190 31.8	-15 09.9
13	73	06.5	53 50.9	03.5	244 30.8	52.2	323 20.0	30.8	205 34.5	09.9
14	88	09.0	68 50.6	04.5	259 33.3	52.3	338 22.0	30.8	220 37.1	09.8
15	103	11.5	83 50.4	05.6	274 35.8	52.4	353 24.0	30.7	235 39.7	09.8
16	118	13.9	98 50.1	06.6	289 38.2	52.5	8 26.0	30.7	250 42.4	09.7
17	133	16.4	113 49.9	+6 07.7	304 40.7	-2 52.6	23 27.9	+22 30.6	265 45.0	-15 09.7
18	148	18.9	128 49.6	+6 08.7	319 43.2	-2 52.7	38 29.9	+22 30.5	280 47.7	-15 09.6
19	163	21.3	143 49.4	09.7	334 45.7	52.8	53 31.9	30.5	295 50.3	09.6
20	178	23.8	158 49.1	10.8	349 48.2	52.9	68 33.9	30.4	310 53.0	09.6
21	193	26.3	173 48.9	11.8	4 50.7	53.0	83 35.9	30.4	325 55.6	09.5
22	208	28.7	188 48.6	12.9	19 53.1	53.1	98 37.8	30.3	340 58.3	09.5
23	223	31.2	203 48.4	13.9	34 55.6	53.2	113 39.8	30.2	356 00.9	09.4
24	238	33.7	218 48.1	+6 15.0	49 58.1	-2 53.3	128 41.8	+22 30.2	11 03.6	-15 09.4
Dif	—		-3	+10	+25	-1	+20	-1	+26	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 56 ^m 6				Edad: 21 ^d 7 PHE { SD: 16/2 PMG: 5 ^h 52 ^m R°: 52 ^m 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1											
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	52.0	+20	07.3	275	02.9	-9	27.4	60 N	** **	2 00	3 09	0 49 20	11 09 86		
1	195	51.9		07.8	289	30.9	90	17.3 ¹⁰¹	58	** **	25	24	44 22	14 82		
2	210	51.9		08.3	303	58.9	90	-9 07.1 ¹⁰²	56	1 17	2 45	37	39 24	18 80		
3	225	51.8		08.8	318	27.1	92	-8 56.9 ¹⁰²	54	1 49	3 01	48	35 26	21 78		
4	240	51.8		09.3	332	55.2	91	46.6 ¹⁰³	52	2 13	14	3 58	31 28	24 77		
5	255	51.8	+20	09.8	347	23.4	92	-8 36.3 ¹⁰³	50	2 31	3 26	4 07	0 27 30	11 27 75		
6	270	51.7	+20	10.3	1	51.7	93	-8 25.9 ¹⁰⁴	45	3 05	3 50	4 25	0 20 33	11 33 71		
7	285	51.7		10.9	16	20.0	93	15.5 ¹⁰⁴	40	30	4 09	40	13 37	38 68		
8	300	51.6		11.4	30	48.3	93	-8 05.1 ¹⁰⁴	35	3 49	24	4 52	08 39	43 65		
9	315	51.6		11.9	45	16.7	94	-7 54.6 ¹⁰⁵	30	4 05	37	5 03	0 03 41	47 62		
10	330	51.5		12.4	59	45.2	95	44.0 ¹⁰⁶	20	30	4 58	22	** ** *	53 59		
11	345	51.5	+20	12.9	74	13.6	94	-7 33.5 ¹⁰⁵	10 N	4 49	5 16	5 38	** ** *	11 59 55		
12	0	51.5	+20	13.4	88	42.2	96	-7 22.9 ¹⁰⁶	0	5 05	5 31	5 53	** ** *	12 05 51		
13	15	51.4		13.9	103	10.7	95	12.2 ¹⁰⁷	10 S	20	5 45	6 08	** ** *	10 48		
14	30	51.4		14.4	117	39.3	96	-7 01.5 ¹⁰⁷	20	33	6 00	23	** ** *	16 44		
15	45	51.3		14.9	132	08.0	97	-6 50.8 ¹⁰⁷	30	47	16	41	** ** *	22 41		
16	60	51.3		15.4	146	36.7	97	40.0 ¹⁰⁸	35	5 54	24	6 52	** ** *	26 38		
17	75	51.2	+20	15.9	161	05.4	97	-6 29.3 ¹⁰⁷	40	6 01	6 34	7 04	** ** *	12 30 36		
18	90	51.2	+20	16.4	175	34.2	98	-6 18.4 ¹⁰⁹	45	6 09	6 45	7 17	** ** *	12 35 32		
19	105	51.2		16.9	190	03.0	98	-6 07.6 ¹⁰⁸	50	18	6 58	34	** ** *	41 28		
20	120	51.1		17.4	204	31.9	99	-5 56.7 ¹⁰⁹	52	22	7 04	42	** ** *	43 27		
21	135	51.1		17.9	219	00.8	99	45.8 ¹⁰⁹	54	26	10	7 51	** ** *	46 25		
22	150	51.0		18.4	233	29.7	99	34.9 ¹⁰⁹	56	31	17	8 01	** ** *	49 24		
23	165	51.0		18.9	247	58.7 ¹⁰⁰		23.9 ¹¹⁰	58	36	25	13	23 58 82	53 21		
24	180	50.9	+20	19.4	262	27.7 ¹⁰⁰	-5	12.9 ¹¹⁰	60 S	6 41	7 34	8 26	23 55 85	12 57 18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 04 ^m 4		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: -0.7 PMG: 20 ^h 37 ^m		Mag: -2.0 PMG: 15 ^h 23 ^m		Mag: +0.1 PMG: 23 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	238	33.7	218	48.1	+6	15.0	49	58.1	-2	53.3	128	41.8	+22	30.2	11	03.6	-15	09.4
1	253	36.1	233	47.8		16.0	65	00.6		53.4	143	43.8		30.1	26	06.2		09.3
2	268	38.6	248	47.6		17.1	80	03.0		53.5	158	45.7		30.1	41	08.9		09.3
3	283	41.0	263	47.3		18.1	95	05.5		53.6	173	47.7		30.0	56	11.5		09.2
4	298	43.5	278	47.1		19.2	110	08.0		53.7	188	49.7		30.0	71	14.2		09.2
5	313	46.0	293	46.8	+6	20.2	125	10.5	-2	53.9	203	51.7	+22	29.9	86	16.8	-15	09.1
6	328	48.4	308	46.6	+6	21.3	140	12.9	-2	54.0	218	53.6	+22	29.8	101	19.5	-15	09.1
7	343	50.9	323	46.3		22.3	155	15.4		54.1	233	55.6		29.8	116	22.1		09.1
8	358	53.4	338	46.1		23.4	170	17.9		54.2	248	57.6		29.7	131	24.8		09.0
9	13	55.8	353	45.8		24.4	185	20.3		54.3	263	59.6		29.7	146	27.4		09.0
10	28	58.3	8	45.5		25.5	200	22.8		54.4	279	01.5		29.6	161	30.1		08.9
11	44	00.8	23	45.3	+6	26.5	215	25.2	-2	54.5	294	03.5	+22	29.5	176	32.7	-15	08.9
12	59	03.2	38	45.0	+6	27.6	230	27.7	-2	54.6	309	05.5	+22	29.5	191	35.3	-15	08.8
13	74	05.7	53	44.8		28.6	245	30.2		54.7	324	07.5		29.4	206	38.0		08.8
14	89	08.1	68	44.5		29.7	260	32.6		54.8	339	09.4		29.4	221	40.6		08.7
15	104	10.6	83	44.3		30.7	275	35.1		54.9	354	11.4		29.3	236	43.3		08.7
16	119	13.1	98	44.0		31.7	290	37.5		55.0	9	13.4		29.2	251	45.9		08.6
17	134	15.5	113	43.7	+6	32.8	305	40.0	-2	55.1	24	15.4	+22	29.2	266	48.6	-15	08.6
18	149	18.0	128	43.5	+6	33.8	320	42.5	-2	55.3	39	17.3	+22	29.1	281	51.2	-15	08.6
19	164	20.5	143	43.2		34.9	335	44.9		55.4	54	19.3		29.1	296	53.9		08.5
20	179	22.9	158	43.0		35.9	350	47.4		55.5	69	21.3		29.0	311	56.5		08.5
21	194	25.4	173	42.7		37.0	5	49.8		55.6	84	23.3		28.9	326	59.2		08.4
22	209	27.9	188	42.4		38.0	20	52.3		55.7	99	25.2		28.9	342	01.8		08.4
23	224	30.3	203	42.2		39.1	35	54.7		55.8	114	27.2		28.8	357	04.5		08.3
24	239	32.8	218	41.9	+6	40.1	50	57.2	-2	55.9	129	29.2	+22	28.8	12	07.1	-15	08.3
Dif	—		-3		+10		+25		-1		+20		-1		+26		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 6			Edad: 22 ^d 7 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 SD: 16'1 PMG: 6 ^h 44 ^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	50.9	+20 19.4	262	27.7	-5 12.9		60 N	20 48	21 59	** **	1 09 17	12 35 84	
1	195	50.9		276	56.7 ¹⁰⁰	-5 01.9 ¹¹⁰		58	32	33	** **	06 20	36 82	
2	210	50.9		291	25.8 ¹⁰¹	-4 50.9 ¹¹⁰		56	19	21 12	22 45	03 23	38 79	
3	225	50.8		305	54.9 ¹⁰¹	39.8 ¹¹¹		54	20 08	20 56	22 09	1 01 25	39 77	
4	240	50.8		320	24.0 ¹⁰¹	28.7 ¹¹¹		52	19 58	42	21 45	0 59 26	41 75	
5	255	50.7	+20 21.9	334	53.2 ¹⁰²	-4 17.6 ¹¹¹		50	19 49	20 30	21 26	0 57 28	12 42 73	
6	270	50.7	+20 22.4	349	22.4 ¹⁰²	-4 06.5 ¹¹¹		45	19 30	20 05	20 50	0 53 32	12 44 70	
7	285	50.6		3	51.7 ¹⁰³	-3 55.4 ¹¹¹		40	15	19 46	25	50 34	46 67	
8	300	50.6		18	21.0 ¹⁰³	44.2 ¹¹²		35	19 02	30	20 05	47 37	48 63	
9	315	50.5		32	50.3 ¹⁰³	33.1 ¹¹¹		30	18 51	19 17	19 49	44 40	49 62	
10	330	50.5		47	19.6 ¹⁰³	21.9 ¹¹²		20	32	18 56	24	40 43	52 57	
11	345	50.4	+20 24.8	61	49.0 ¹⁰⁴	-3 10.7 ¹¹²		10 N	18 15	18 38	19 04	0 36 47	12 54 54	
12	0	50.4	+20 25.3	76	18.4 ¹⁰⁴	-2 59.5 ¹¹²		0	18 00	18 22	18 48	0 32 50	12 56 50	
13	15	50.3		90	47.8 ¹⁰⁴	48.3 ¹¹²		10 S	17 45	18 08	33	28 54	12 58 47	
14	30	50.3		105	17.2 ¹⁰⁴	37.1 ¹¹²		20	29	17 53	20	24 58	13 00 43	
15	45	50.2		119	46.7 ¹⁰⁵	25.8 ¹¹³		30	11	37	18 06	20 61	03 39	
16	60	50.2		134	16.2 ¹⁰⁵	14.6 ¹¹²		35	17 01	28	17 59	17 64	04 37	
17	75	50.1	+20 27.7	148	45.8 ¹⁰⁶	-2 03.4 ¹¹²		40	16 49	17 18	17 51	0 14 67	13 06 34	
18	90	50.1	+20 28.2	163	15.3 ¹⁰⁵	-1 52.1 ¹¹³		45	16 34	17 07	17 43	0 11 70	13 07 32	
19	105	50.0		177	44.9 ¹⁰⁶	40.9 ¹¹²		50	17	16 54	34	06 74	09 28	
20	120	50.0		192	14.5 ¹⁰⁶	29.6 ¹¹³		52	09	48	30	05 75	10 26	
21	135	49.9		206	44.1 ¹⁰⁶	18.3 ¹¹³		54	16 00	41	25	02 78	11 25	
22	150	49.9		221	13.8 ¹⁰⁷	-1 07.1 ¹¹²		56	15 50	34	21	0 00 80	13 22	
23	165	49.8		235	43.5 ¹⁰⁷	-0 55.8 ¹¹³		58	38	26	16	** ** *	14 20	
24	180	49.8	+20 31.1	250	13.1 ¹⁰⁶	-0 44.6 ¹¹²		60 S	15 25	16 17	17 10	** ** *	13 15 18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 00 ^m 5		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: -0.7 PMG: 20 ^h 33 ^m		Mag: -2.0 PMG: 15 ^h 20 ^m		Mag: +0.1 PMG: 23 ^h 07 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	239	32.8	218	41.9	+6 40.1	50 57.2	-2 55.9	129 29.2	+22 28.8	12 07.1	-15 08.3
1	254	35.3	233	41.7	41.2	65 59.6	56.0	144 31.2	28.7	27 09.8	08.2
2	269	37.7	248	41.4	42.2	81 02.0	56.2	159 33.1	28.6	42 12.4	08.2
3	284	40.2	263	41.1	43.2	96 04.5	56.3	174 35.1	28.6	57 15.0	08.1
4	299	42.6	278	40.9	44.3	111 06.9	56.4	189 37.1	28.5	72 17.7	08.1
5	314	45.1	293	40.6	+6 45.3	126 09.4	-2 56.5	204 39.1	+22 28.5	87 20.3	-15 08.1
6	329	47.6	308	40.3	+6 46.4	141 11.8	-2 56.6	219 41.0	+22 28.4	102 23.0	-15 08.0
7	344	50.0	323	40.1	47.4	156 14.2	56.7	234 43.0	28.3	117 25.6	08.0
8	359	52.5	338	39.8	48.5	171 16.7	56.9	249 45.0	28.3	132 28.3	07.9
9	14	55.0	353	39.6	49.5	186 19.1	57.0	264 46.9	28.2	147 30.9	07.9
10	29	57.4	8	39.3	50.6	201 21.5	57.1	279 48.9	28.2	162 33.6	07.8
11	44	59.9	23	39.0	+6 51.6	216 24.0	-2 57.2	294 50.9	+22 28.1	177 36.2	-15 07.8
12	60	02.4	38	38.8	+6 52.6	231 26.4	-2 57.3	309 52.9	+22 28.0	192 38.9	-15 07.7
13	75	04.8	53	38.5	53.7	246 28.8	57.4	324 54.8	28.0	207 41.5	07.7
14	90	07.3	68	38.2	54.7	261 31.3	57.6	339 56.8	27.9	222 44.2	07.6
15	105	09.8	83	38.0	55.8	276 33.7	57.7	354 58.8	27.9	237 46.8	07.6
16	120	12.2	98	37.7	56.8	291 36.1	57.8	10 00.7	27.8	252 49.4	07.6
17	135	14.7	113	37.4	+6 57.9	306 38.6	-2 57.9	25 02.7	+22 27.7	267 52.1	-15 07.5
18	150	17.1	128	37.2	+6 58.9	321 41.0	-2 58.0	40 04.7	+22 27.7	282 54.7	-15 07.5
19	165	19.6	143	36.9	+6 59.9	336 43.4	58.2	55 06.7	27.6	297 57.4	07.4
20	180	22.1	158	36.6	+7 01.0	351 45.8	58.3	70 08.6	27.6	313 00.0	07.4
21	195	24.5	173	36.4	02.0	6 48.2	58.4	85 10.6	27.5	328 02.7	07.3
22	210	27.0	188	36.1	03.1	21 50.7	58.5	100 12.6	27.4	343 05.3	07.3
23	225	29.5	203	35.8	04.1	36 53.1	58.7	115 14.5	27.4	358 08.0	07.2
24	240	31.9	218	35.6	+7 05.2	51 55.5	-2 58.8	130 16.5	+22 27.3	13 10.6	-15 07.2
Dif	—		-3	+10		+24	-1	+20	-1	+26	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 7				Edad: 23 ^d 7 PHE { 4 ^h : 58 ^h 5 12 ^h : 58 ^h 4 20 ^h : 58 ^h 2 PMG: 7 ^h 34 ^m R°: 50 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	180	49.8	+20	31.1	250	13.1	-0	44.6	60 N	** **	1 54	3 05	1 26	18	13 59	83				
1	195	49.7		31.6	264	42.9 ¹⁰⁸		33.3 ¹¹³	58	** **	2 20	21	26	20	58	80				
2	210	49.7		32.1	279	12.6 ¹⁰⁷		22.0 ¹¹³	56	1 08	41	34	26	22	57	78				
3	225	49.6		32.6	293	42.3 ¹⁰⁷	-0	10.8 ¹¹²	54	1 44	2 57	45	26	24	56	76				
4	240	49.6		33.1	308	12.1 ¹⁰⁸	+0	00.5 ¹¹³	52	2 08	3 11	3 55	25	26	56	74				
5	255	49.5	+20	33.5	322	41.9 ¹⁰⁸	+0	11.7 ¹¹²	50	2 27	3 23	4 04	1 25	28	13 55	72				
6	270	49.5	+20	34.0	337	11.7 ¹⁰⁸	+0	22.9 ¹¹²	45	3 03	3 48	4 23	1 25	31	13 54	68				
7	285	49.4		34.5	351	41.5 ¹⁰⁸		34.2 ¹¹³	40	28	4 07	38	24	34	53	65				
8	300	49.4		35.0	6	11.4 ¹⁰⁹		45.4 ¹¹²	35	3 48	23	4 51	24	37	51	63				
9	315	49.3		35.5	20	41.2 ¹⁰⁸	+0	56.6 ¹¹²	30	4 04	36	5 02	24	39	51	60				
10	330	49.3		35.9	35	11.1 ¹⁰⁹	+1	07.8 ¹¹²	20	29	4 58	21	23	43	49	56				
11	345	49.2	+20	36.4	49	41.0 ¹⁰⁹	+1	19.0 ¹¹²	10 N	4 49	5 15	5 38	1 23	46	13 48	53				
12	0	49.2	+20	36.9	64	10.9 ¹⁰⁹	+1	30.1 ¹¹¹	0	5 05	5 31	5 53	1 22	50	13 46	50				
13	15	49.1		37.4	78	40.8 ¹⁰⁹		41.3 ¹¹²	10 S	20	5 46	6 08	22	53	45	46				
14	30	49.1		37.8	93	10.7 ¹⁰⁹	+1	52.4 ¹¹¹	20	34	6 01	24	22	57	43	43				
15	45	49.0		38.3	107	40.6 ¹⁰⁹	+2	03.6 ¹¹²	30	48	17	43	21	61	42	39				
16	60	49.0		38.8	122	10.6 ¹¹⁰		14.7 ¹¹¹	35	5 55	26	6 53	21	63	41	37				
17	75	48.9	+20	39.3	136	40.5 ¹⁰⁹	+2	25.8 ¹¹¹	40	6 02	6 36	7 05	1 21	66	13 40	34				
18	90	48.8	+20	39.7	151	10.5 ¹¹⁰	+2	36.8 ¹¹⁰	45	6 11	6 47	7 20	1 21	69	13 39	31				
19	105	48.8		40.2	165	40.5 ¹¹⁰		47.9 ¹¹¹	50	20	7 00	37	20	73	37	28				
20	120	48.7		40.7	180	10.4 ¹⁰⁹	+2	58.9 ¹¹⁰	52	24	06	45	20	75	36	26				
21	135	48.7		41.1	194	40.4 ¹¹⁰	+3	09.9 ¹¹⁰	54	29	13	7 54	20	77	36	24				
22	150	48.6		41.6	209	10.4 ¹¹⁰		20.9 ¹¹⁰	56	33	20	8 04	20	79	35	22				
23	165	48.6		42.1	223	40.4 ¹¹⁰		31.9 ¹¹⁰	58	39	29	16	20	81	34	20				
24	180	48.5	+20	42.5	238	10.4 ¹¹⁰	+3	42.8 ¹⁰⁹	60 S	6 44	7 38	8 30	1 20	83	13 33	18				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 7 ^h 56 ^m 6		Mag: -4.0 PMG: 9 ^h 26 ^m			Mag: -0.7 PMG: 20 ^h 29 ^m			Mag: -1.9 PMG: 15 ^h 17 ^m			Mag: +0.1 PMG: 23 ^h 03 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	240	31.9	218	35.6	+7	05.2	51	55.5	-2	58.8	130	16.5	+22	27.3	13	10.6	-15	07.2		
1	255	34.4	233	35.3		06.2	66	57.9		58.9	145	18.5		27.2	28	13.3		07.2		
2	270	36.9	248	35.0		07.2	82	00.3		59.0	160	20.4		27.2	43	15.9		07.1		
3	285	39.3	263	34.8		08.3	97	02.7		59.2	175	22.4		27.1	58	18.6		07.1		
4	300	41.8	278	34.5		09.3	112	05.2		59.3	190	24.4		27.1	73	21.2		07.0		
5	315	44.2	293	34.2	+7	10.4	127	07.6	-2	59.4	205	26.4	+22	27.0	88	23.8	-15	07.0		
6	330	46.7	308	34.0	+7	11.4	142	10.0	-2	59.5	220	28.3	+22	26.9	103	26.5	-15	06.9		
7	345	49.2	323	33.7		12.5	157	12.4		59.7	235	30.3		26.9	118	29.1		06.9		
8	0	51.6	338	33.4		13.5	172	14.8		59.8	250	32.3		26.8	133	31.8		06.8		
9	15	54.1	353	33.2		14.5	187	17.2	-2	59.9	265	34.2		26.8	148	34.4		06.8		
10	30	56.6	8	32.9		15.6	202	19.6	-3	00.1	280	36.2		26.7	163	37.1		06.7		
11	45	59.0	23	32.6	+7	16.6	217	22.0	-3	00.2	295	38.2	+22	26.6	178	39.7	-15	06.7		
12	61	01.5	38	32.3	+7	17.7	232	24.4	-3	00.3	310	40.1	+22	26.6	193	42.4	-15	06.7		
13	76	04.0	53	32.1		18.7	247	26.8		00.5	325	42.1		26.5	208	45.0		06.6		
14	91	06.4	68	31.8		19.7	262	29.2		00.6	340	44.1		26.5	223	47.6		06.6		
15	106	08.9	83	31.5		20.8	277	31.6		00.7	355	46.0		26.4	238	50.3		06.5		
16	121	11.4	98	31.3		21.8	292	34.0		00.8	10	48.0		26.3	253	52.9		06.5		
17	136	13.8	113	31.0	+7	22.9	307	36.4	-3	01.0	25	50.0	+22	26.3	268	55.6	-15	06.4		
18	151	16.3	128	30.7	+7	23.9	322	38.8	-3	01.1	40	51.9	+22	26.2	283	58.2	-15	06.4		
19	166	18.7	143	30.4		24.9	337	41.2		01.2	55	53.9		26.1	299	00.9		06.3		
20	181	21.2	158	30.2		26.0	352	43.6		01.4	70	55.9		26.1	314	03.5		06.3		
21	196	23.7	173	29.9		27.0	7	46.0		01.5	85	57.8		26.0	329	06.2		06.3		
22	211	26.1	188	29.6		28.0	22	48.4		01.7	100	59.8		26.0	344	08.8		06.2		
23	226	28.6	203	29.3		29.1	37	50.8		01.8	116	01.8		25.9	359	11.5		06.2		
24	241	31.1	218	29.1	+7	30.1	52	53.2	-3	01.9	131	03.7	+22	25.8	14	14.1	-15	06.1		
Dif	—		-3 +10			+24 -1			+20 -1			-1			+26 0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 8			Edad: 24 ^d 7 PHE { SD: 15'8 PMG: 8 ^h 24 ^m					Civil			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	48.5	+20 42.5	238	10.4	+3 42.8		60 N	20 52	22 06	** **	1 44 18		15 22 81	
1	195	48.5		252	40.4 ¹¹⁰	+3 53.7 ¹⁰⁹		58	36	21 38	** **	46 21		18 79	
2	210	48.4		267	10.4 ¹¹⁰	+4 04.6 ¹⁰⁹		56	22	21 17	22 55	48 23		15 77	
3	225	48.3		281	40.5 ¹¹¹	15.4 ¹⁰⁸		54	11	20 59	22 15	50 24		12 75	
4	240	48.3		296	10.5 ¹¹⁰	26.3 ¹⁰⁹		52	20 00	45	21 50	51 27		10 72	
5	255	48.2	+20 44.9	310	40.5 ¹¹⁰	+4 37.1 ¹⁰⁸		50	19 51	20 33	21 30	1 53 28		15 07 71	
6	270	48.2	+20 45.3	325	10.5 ¹¹⁰	+4 47.8 ¹⁰⁷		45	19 32	20 07	20 53	1 56 31		15 02 68	
7	285	48.1		339	40.6 ¹¹¹	+4 58.6 ¹⁰⁸		40	16	19 48	27	1 58 35		14 58 65	
8	300	48.1		354	10.6 ¹¹⁰	+5 09.3 ¹⁰⁷		35	19 03	32	20 07	2 01 37		54 62	
9	315	48.0		8	40.6 ¹¹⁰	19.9 ¹⁰⁶		30	18 52	19 19	19 51	03 39		51 60	
10	330	47.9		23	10.7 ¹¹¹	30.6 ¹⁰⁷		20	33	18 57	25	06 43		45 57	
11	345	47.9	+20 47.6	37	40.7 ¹¹⁰	+5 41.2 ¹⁰⁶		10 N	18 16	18 38	19 05	2 09 47		14 41 52	
12	0	47.8	+20 48.1	52	10.7 ¹¹⁰	+5 51.7 ¹⁰⁵		0	18 00	18 23	18 48	2 12 50		14 36 50	
13	15	47.8		66	40.7 ¹¹⁰	+6 02.3 ¹⁰⁶		10 S	17 45	18 07	33	15 53		31 47	
14	30	47.7		81	10.8 ¹¹¹	12.7 ¹⁰⁴		20	29	17 52	19	19 56		26 44	
15	45	47.6		95	40.8 ¹¹⁰	23.2 ¹⁰⁵		30	10	36	18 05	22 60		21 40	
16	60	47.6		110	10.8 ¹¹⁰	33.6 ¹⁰⁴		35	17 00	27	17 58	24 63		18 37	
17	75	47.5	+20 50.4	124	40.8 ¹¹⁰	+6 44.0 ¹⁰⁴		40	16 47	17 17	17 50	2 27 65		14 14 35	
18	90	47.5	+20 50.9	139	10.9 ¹¹¹	+6 54.3 ¹⁰³		45	16 33	17 05	17 42	2 30 68		14 10 32	
19	105	47.4		153	40.9 ¹¹⁰	+7 04.6 ¹⁰³		50	15	16 52	32	33 72		05 29	
20	120	47.3		168	10.9 ¹¹⁰	14.8 ¹⁰²		52	16 07	46	28	35 73		02 28	
21	135	47.3		182	40.9 ¹¹⁰	25.0 ¹⁰²		54	15 58	39	23	37 75		14 00 26	
22	150	47.2		197	10.9 ¹¹⁰	35.2 ¹⁰²		56	47	31	18	39 77		13 57 24	
23	165	47.2		211	40.9 ¹¹⁰	45.3 ¹⁰¹		58	35	23	13	41 79		54 22	
24	180	47.1	+20 53.6	226	10.8 ¹⁰⁹	+7 55.3 ¹⁰⁰		60 S	15 21	16 14	17 07	2 43 82		13 51 19	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 52 ^m 6			Mag: -4.0 PMG: 9 ^h 26 ^m			Mag: -0.7 PMG: 20 ^h 25 ^m			Mag: -1.9 PMG: 15 ^h 14 ^m			Mag: +0.1 PMG: 22 ^h 59 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	241	31.1		218	29.1	+7 30.1	52	53.2	-3 01.9	131	03.7	+22 25.8	14	14.1	-15 06.1
1	256	33.5		233	28.8		67	55.5	02.1	146	05.7	25.8	29	16.7	06.1
2	271	36.0		248	28.5		82	57.9	02.2	161	07.7	25.7	44	19.4	06.0
3	286	38.5		263	28.2		98	00.3	02.3	176	09.6	25.6	59	22.0	06.0
4	301	40.9		278	28.0		113	02.7	02.5	191	11.6	25.6	74	24.7	05.9
5	316	43.4		293	27.7	+7 35.3	128	05.1	-3 02.6	206	13.6	+22 25.5	89	27.3	-15 05.9
6	331	45.9		308	27.4	+7 36.3	143	07.5	-3 02.7	221	15.5	+22 25.5	104	30.0	-15 05.9
7	346	48.3		323	27.1		158	09.8	02.9	236	17.5	25.4	119	32.6	05.8
8	1	50.8		338	26.9		173	12.2	03.0	251	19.5	25.3	134	35.2	05.8
9	16	53.2		353	26.6		188	14.6	03.2	266	21.4	25.3	149	37.9	05.7
10	31	55.7		8	26.3		203	17.0	03.3	281	23.4	25.2	164	40.5	05.7
11	46	58.2		23	26.0	+7 41.5	218	19.4	-3 03.4	296	25.4	+22 25.1	179	43.2	-15 05.6
12	62	00.6		38	25.8	+7 42.6	233	21.7	-3 03.6	311	27.3	+22 25.1	194	45.8	-15 05.6
13	77	03.1		53	25.5		248	24.1	03.7	326	29.3	25.0	209	48.5	05.5
14	92	05.6		68	25.2		263	26.5	03.9	341	31.3	25.0	224	51.1	05.5
15	107	08.0		83	24.9		278	28.8	04.0	356	33.2	24.9	239	53.8	05.5
16	122	10.5		98	24.6		293	31.2	04.2	11	35.2	24.8	254	56.4	05.4
17	137	13.0		113	24.4	+7 47.7	308	33.6	-3 04.3	26	37.2	+22 24.8	269	59.0	-15 05.4
18	152	15.4		128	24.1	+7 48.8	323	35.9	-3 04.4	41	39.1	+22 24.7	285	01.7	-15 05.3
19	167	17.9		143	23.8		338	38.3	04.6	56	41.1	24.6	300	04.3	05.3
20	182	20.3		158	23.5		353	40.7	04.7	71	43.1	24.6	315	07.0	05.2
21	197	22.8		173	23.2		8	43.0	04.9	86	45.0	24.5	330	09.6	05.2
22	212	25.3		188	23.0		23	45.4	05.0	101	47.0	24.5	345	12.3	05.2
23	227	27.7		203	22.7		38	47.8	05.2	116	48.9	24.4	0	14.9	05.1
24	242	30.2		218	22.4	+7 55.0	53	50.1	-3 05.3	131	50.9	+22 24.3	15	17.5	-15 05.1
Dif	—			-3 +10			+24 -1			+20 -1			+26 0		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 56 ^m 9				Edad: 25 ^d 7 PHE SD: 15/7 PMG: 9 ^h 14 ^m R°: 50 ^m 4^h: 57/6 12^h: 57/5 20^h: 57/3													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	47.1	+20	53.6	226	10.8	+7	55.3	60 N	**	**	1	48	3	01	2	02	21
1	195	47.0		54.0	240	40.8	+8	05.3	58	**	**	2	15		17	07	23	37
2	210	47.0		54.5	255	10.8		15.3	56	0	58		37		31	11	25	32
3	225	46.9		54.9	269	40.8		25.2	54	1	38		2	54	43	14	27	27
4	240	46.8		55.4	284	10.7		35.1	52	2	04		3	08	3	53	18	28
5	255	46.8	+20	55.8	298	40.7	+8	44.9	50	2	24		3	21	4	02	2	21
6	270	46.7	+20	56.3	313	10.6	+8	54.6	45	3	00		3	46	4	21	2	27
7	285	46.7		56.7	327	40.5	+9	04.3	40		26		4	06		37	33	36
8	300	46.6		57.2	342	10.4		14.0	35	3	46		21		4	50	38	38
9	315	46.5		57.6	356	40.4		23.6	30	4	03		35		5	02	42	40
10	330	46.5		58.1	11	10.3		33.1	20		29		4	57		21	49	44
11	345	46.4	+20	58.5	25	40.1	+9	42.6	10 N	4	49		5	15		5	38	2
12	0	46.3	+20	59.0	40	10.0	+9	52.0	0	5	05		5	31		5	53	3
13	15	46.3		59.4	54	39.9	+10	01.4	10 S		20		5	46		6	09	08
14	30	46.2	+20	59.9	69	09.8		10.7	20		34		6	02		25	15	56
15	45	46.1	+21	00.3	83	39.6		20.0	30		49		18		44	22	60	15
16	60	46.1		00.7	98	09.4		29.2	35	5	56		27		6	55	27	61
17	75	46.0	+21	01.2	112	39.3	+10	38.3	40	6	04		6	37		7	07	3
18	90	45.9	+21	01.6	127	09.1	+10	47.4	45	6	12		6	49		7	21	3
19	105	45.9		02.1	141	38.9	+10	56.4	50		22		7	02		39	45	70
20	120	45.8		02.5	156	08.7	+11	05.3	52		26		09		48	48	72	30
21	135	45.8		02.9	170	38.5		14.2	54		31		16		7	57	52	73
22	150	45.7		03.4	185	08.2		23.0	56		36		23		8	08	3	56
23	165	45.6		03.8	199	38.0		31.7	58		41		32		20	4	00	78
24	180	45.6	+21	04.3	214	07.7	+11	40.4	60 S	6	47		7	41		8	34	4
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 48 ^m 7		Mag: -4.0 PMG: 9 ^h 27 ^m				Mag: -0.6 PMG: 20 ^h 21 ^m				Mag: -1.9 PMG: 15 ^h 11 ^m				Mag: +0.1 PMG: 22 ^h 55 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	242	30.2	218	22.4	+7	55.0	53	50.1	-3	05.3	131	50.9	+22	24.3	15	17.5	-15	05.1
1	257	32.7	233	22.1		56.0	68	52.5		05.5	146	52.9		24.3	30	20.2		05.0
2	272	35.1	248	21.8		57.1	83	54.8		05.6	161	54.8		24.2	45	22.8		05.0
3	287	37.6	263	21.5		58.1	98	57.2		05.8	176	56.8		24.1	60	25.5		04.9
4	302	40.1	278	21.3	+7	59.1	113	59.6		05.9	191	58.8		24.1	75	28.1		04.9
5	317	42.5	293	21.0	+8	00.2	129	01.9	-3	06.1	207	00.7	+22	24.0	90	30.8	-15	04.8
6	332	45.0	308	20.7	+8	01.2	144	04.3	-3	06.2	222	02.7	+22	23.9	105	33.4	-15	04.8
7	347	47.5	323	20.4		02.2	159	06.6		06.4	237	04.7		23.9	120	36.0		04.8
8	2	49.9	338	20.1		03.3	174	09.0		06.5	252	06.6		23.8	135	38.7		04.7
9	17	52.4	353	19.8		04.3	189	11.3		06.7	267	08.6		23.8	150	41.3		04.7
10	32	54.8	8	19.6		05.3	204	13.7		06.8	282	10.5		23.7	165	44.0		04.6
11	47	57.3	23	19.3	+8	06.4	219	16.0	-3	07.0	297	12.5	+22	23.6	180	46.6	-15	04.6
12	62	59.8	38	19.0	+8	07.4	234	18.3	-3	07.1	312	14.5	+22	23.6	195	49.3	-15	04.5
13	78	02.2	53	18.7		08.4	249	20.7		07.3	327	16.4		23.5	210	51.9		04.5
14	93	04.7	68	18.4		09.4	264	23.0		07.4	342	18.4		23.4	225	54.5		04.5
15	108	07.2	83	18.1		10.5	279	25.4		07.6	357	20.3		23.4	240	57.2		04.4
16	123	09.6	98	17.8		11.5	294	27.7		07.7	12	22.3		23.3	255	59.8		04.4
17	138	12.1	113	17.6	+8	12.5	309	30.1	-3	07.9	27	24.3	+22	23.2	271	02.5	-15	04.3
18	153	14.6	128	17.3	+8	13.6	324	32.4	-3	08.0	42	26.2	+22	23.2	286	05.1	-15	04.3
19	168	17.0	143	17.0		14.6	339	34.7		08.2	57	28.2		23.1	301	07.8		04.2
20	183	19.5	158	16.7		15.6	354	37.1		08.4	72	30.2		23.1	316	10.4		04.2
21	198	21.9	173	16.4		16.7	9	39.4		08.5	87	32.1		23.0	331	13.0		04.1
22	213	24.4	188	16.1		17.7	24	41.7		08.7	102	34.1		22.9	346	15.7		04.1
23	228	26.9	203	15.8		18.7	39	44.1		08.8	117	36.0		22.9	1	18.3		04.1
24	243	29.3	218	15.5	+8	19.8	54	46.4	-3	09.0	132	38.0	+22	22.8	16	21.0	-15	04.0
Dif	—		-3		+10		+23		-2		+20		-1		+26			

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: 26 ^d 7 PHE { 4 ^h : 57'1 12 ^h : 57'0 20 ^h : 56'8 SD: 15'6 PMG: 10 ^h 04 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	45.6	+21 04.3	214	07.7	+11 40.4	86	60 N	20 56	22 12	** **	2 23	25	18 02	74
1	195	45.5	04.7	228	37.4 ¹⁰⁷	49.0	86	58	39	21 43	** **	30	27	17 53	72
2	210	45.4	05.1	243	07.2 ¹⁰⁸	+11 57.6	86	56	26	21	23 06	36	29	46	69
3	225	45.3	05.6	257	36.9 ¹⁰⁷	+12 06.1	85	54	14	21 03	22 21	41	31	39	68
4	240	45.3	06.0	272	06.6 ¹⁰⁷	14.5	84	52	20 03	20 48	21 54	46	33	33	67
5	255	45.2	+21 06.4	286	36.2 ¹⁰⁶	+12 22.8	83	50	19 54	20 35	21 33	2 51	34	17 27	66
6	270	45.1	+21 06.9	301	05.9 ¹⁰⁷	+12 31.1	83	45	19 34	20 10	20 56	3 01	36	17 15	63
7	285	45.1	07.3	315	35.5 ¹⁰⁶	39.3	82	40	18	19 50	29	09	39	17 06	61
8	300	45.0	07.7	330	05.2 ¹⁰⁷	47.4	81	35	19 05	34	20 09	16	41	16 57	59
9	315	44.9	08.2	344	34.8 ¹⁰⁶	+12 55.5	81	30	18 53	19 20	19 52	22	43	50	58
10	330	44.9	08.6	359	04.4 ¹⁰⁶	+13 03.4	79	20	33	18 57	26	33	46	37	55
11	345	44.8	+21 09.0	13	34.0 ¹⁰⁶	+13 11.3	79	10 N	18 16	18 39	19 06	3 43	48	16 26	53
12	0	44.7	+21 09.5	28	03.6 ¹⁰⁶	+13 19.2	79	0	18 01	18 23	18 49	3 52	50	16 16	51
13	15	44.7	09.9	42	33.2 ¹⁰⁶	26.9	77	10 S	17 45	18 07	33	4 01	53	16 06	48
14	30	44.6	10.3	57	02.7 ¹⁰⁵	34.6	77	20	28	17 52	19	11	55	15 55	46
15	45	44.5	10.8	71	32.3 ¹⁰⁶	42.2	76	30	17 10	35	18 05	22	58	42	44
16	60	44.5	11.2	86	01.8 ¹⁰⁵	49.7	75	35	16 59	26	17 57	28	60	35	42
17	75	44.4	+21 11.6	100	31.3 ¹⁰⁵	+13 57.2	75	40	16 46	17 16	17 49	4 36	62	15 27	40
18	90	44.3	+21 12.0	115	00.8 ¹⁰⁵	+14 04.5	73	45	16 31	17 04	17 40	4 44	65	15 17	38
19	105	44.2	12.5	129	30.3 ¹⁰⁵	11.8	73	50	13	16 50	31	4 55	67	06	35
20	120	44.2	12.9	143	59.8 ¹⁰⁵	19.0	72	52	16 05	44	26	5 00	68	15 00	35
21	135	44.1	13.3	158	29.3 ¹⁰⁵	26.2	72	54	15 55	37	22	05	70	14 54	33
22	150	44.0	13.7	172	58.7 ¹⁰⁴	33.2	70	56	44	29	16	11	72	48	31
23	165	44.0	14.2	187	28.2 ¹⁰⁵	40.2	70	58	32	21	11	18	74	41	29
24	180	43.9	+21 14.6	201	57.6 ¹⁰⁴	+14 47.0	68	60 S	15 18	16 11	17 05	5 25	77	14 32	28
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 44 ^m 8		Mag: -4.0 PMG: 9 ^h 27 ^m			Mag: -0.6 PMG: 20 ^h 18 ^m			Mag: -1.9 PMG: 15 ^h 07 ^m			Mag: +0.1 PMG: 22 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	243	29.3	218 15.5	+8 19.8	54 46.4	-3 09.0	132 38.0	+22 22.8	16 21.0	-15 04.0					
1	258	31.8	233 15.3	20.8	69 48.7	09.1	147 40.0	22.7	31 23.6	04.0					
2	273	34.3	248 15.0	21.8	84 51.1	09.3	162 41.9	22.7	46 26.3	03.9					
3	288	36.7	263 14.7	22.8	99 53.4	09.5	177 43.9	22.6	61 28.9	03.9					
4	303	39.2	278 14.4	23.9	114 55.7	09.6	192 45.8	22.5	76 31.5	03.8					
5	318	41.7	293 14.1	+8 24.9	129 58.0	-3 09.8	207 47.8	+22 22.5	91 34.2	-15 03.8					
6	333	44.1	308 13.8	+8 25.9	145 00.4	-3 09.9	222 49.8	+22 22.4	106 36.8	-15 03.8					
7	348	46.6	323 13.5	27.0	160 02.7	10.1	237 51.7	22.3	121 39.5	03.7					
8	3	49.1	338 13.2	28.0	175 05.0	10.3	252 53.7	22.3	136 42.1	03.7					
9	18	51.5	353 12.9	29.0	190 07.3	10.4	267 55.6	22.2	151 44.7	03.6					
10	33	54.0	8 12.6	30.0	205 09.7	10.6	282 57.6	22.2	166 47.4	03.6					
11	48	56.4	23 12.3	+8 31.1	220 12.0	-3 10.7	297 59.6	+22 22.1	181 50.0	-15 03.5					
12	63	58.9	38 12.1	+8 32.1	235 14.3	-3 10.9	313 01.5	+22 22.0	196 52.7	-15 03.5					
13	79	01.4	53 11.8	33.1	250 16.6	11.1	328 03.5	22.0	211 55.3	03.5					
14	94	03.8	68 11.5	34.1	265 18.9	11.2	343 05.4	21.9	226 57.9	03.4					
15	109	06.3	83 11.2	35.2	280 21.2	11.4	358 07.4	21.8	242 00.6	03.4					
16	124	08.8	98 10.9	36.2	295 23.5	11.6	13 09.3	21.8	257 03.2	03.3					
17	139	11.2	113 10.6	+8 37.2	310 25.9	-3 11.7	28 11.3	+22 21.7	272 05.9	-15 03.3					
18	154	13.7	128 10.3	+8 38.2	325 28.2	-3 11.9	43 13.3	+22 21.6	287 08.5	-15 03.2					
19	169	16.2	143 10.0	39.3	340 30.5	12.1	58 15.2	21.6	302 11.2	03.2					
20	184	18.6	158 09.7	40.3	355 32.8	12.2	73 17.2	21.5	317 13.8	03.2					
21	199	21.1	173 09.4	41.3	10 35.1	12.4	88 19.1	21.4	332 16.4	03.1					
22	214	23.6	188 09.1	42.3	25 37.4	12.6	103 21.1	21.4	347 19.1	03.1					
23	229	26.0	203 08.8	43.4	40 39.7	12.7	118 23.1	21.3	2 21.7	03.0					
24	244	28.5	218 08.5	+8 44.4	55 42.0	-3 12.9	133 25.0	+22 21.2	17 24.4	-15 03.0					
Dif	—		-3	+10	+23	-2	+20	-1	+26		0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 57 ^m 1				Edad: 27 ^d 7 PHE SD: 15/4 PMG: 10 ^h 54 ^m R ^o : 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	43.9	+21	14.6	201	57.6	+14	47.0	60 N	** **	1 41	2 58	2 48	30	19 16	66	
1	195	43.8		15.0	216	27.0 ¹⁰⁴	+14	53.8	58	** **	2 11	3 14	2 57	32	19 05	65	
2	210	43.7		15.4	230	56.4 ¹⁰⁴	+15	00.6	56	0 48	33	28	3 05	34	18 55	64	
3	225	43.7		15.8	245	25.8 ¹⁰⁴		07.2	54	1 32	2 51	40	12	36	47	66	
4	240	43.6		16.3	259	55.2 ¹⁰⁴		13.7	52	2 00	3 06	3 51	19	37	40	61	
5	255	43.5	+21	16.7	274	24.6 ¹⁰⁴	+15	20.2	50	2 20	3 18	4 00	3 25	38	18 33	61	
6	270	43.4	+21	17.1	288	54.0 ¹⁰⁴	+15	26.6	45	2 58	3 44	4 20	3 37	41	18 18	60	
7	285	43.4		17.5	303	23.3 ¹⁰³		32.9	40	3 24	4 04	36	48	42	18 07	57	
8	300	43.3		17.9	317	52.7 ¹⁰⁴		39.1	35	3 45	20	4 49	3 57	44	17 56	57	
9	315	43.2		18.4	332	22.0 ¹⁰³		45.2	30	4 02	34	5 01	4 05	45	48	55	
10	330	43.2		18.8	346	51.3 ¹⁰³		51.2	20	28	4 57	21	19	47	32	54	
11	345	43.1	+21	19.2	1	20.7 ¹⁰⁴	+15	57.2	10 N	4 48	5 15	5 38	4 31	49	17 19	52	
12	0	43.0	+21	19.6	15	50.0 ¹⁰³	+16	03.0	0	5 06	5 31	5 54	4 42	51	17 07	51	
13	15	42.9		20.0	30	19.3 ¹⁰³		08.8	10 S	21	5 47	6 09	4 54	52	16 54	50	
14	30	42.9		20.4	44	48.6 ¹⁰³		14.5	20	35	6 02	26	5 06	55	41	48	
15	45	42.8		20.8	59	17.8 ¹⁰²		20.0	30	50	19	45	20	57	26	46	
16	60	42.7		21.3	73	47.1 ¹⁰³		25.5	35	5 57	28	6 56	28	58	17	45	
17	75	42.6	+21	21.7	88	16.4 ¹⁰³	+16	30.9	40	6 05	6 39	7 09	5 38	59	16 07	44	
18	90	42.6	+21	22.1	102	45.6 ¹⁰²	+16	36.2	45	6 14	6 51	7 23	5 49	61	15 55	43	
19	105	42.5		22.5	117	14.9 ¹⁰³		41.5	50	24	7 05	42	6 02	64	41	41	
20	120	42.4		22.9	131	44.2 ¹⁰³		46.6	52	28	11	7 50	08	65	35	39	
21	135	42.3		23.3	146	13.4 ¹⁰²		51.6	54	33	18	8 00	15	66	27	39	
22	150	42.2		23.7	160	42.6 ¹⁰²	+16	56.6	56	38	26	11	23	67	19	38	
23	165	42.2		24.1	175	11.9 ¹⁰³	+17	01.4	58	44	34	23	32	69	10	36	
24	180	42.1	+21	24.5	189	41.1 ¹⁰²	+17	06.2	60 S	6 50	7 44	8 38	6 42	71	15 00	34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 40 ^m 8		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: -0.6 PMG: 20 ^h 14 ^m		Mag: -1.9 PMG: 15 ^h 04 ^m		Mag: +0.2 PMG: 22 ^h 46 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	244	28.5	218	08.5	+8	44.4	55	42.0	-3	12.9	133	25.0	+22	21.2	17	24.4	-15	03.0
1	259	30.9	233	08.2		45.4	70	44.3		13.1	148	27.0		21.2	32	27.0		02.9
2	274	33.4	248	07.9		46.4	85	46.6		13.2	163	28.9		21.1	47	29.6		02.9
3	289	35.9	263	07.6		47.5	100	48.9		13.4	178	30.9		21.0	62	32.3		02.9
4	304	38.3	278	07.3		48.5	115	51.2		13.6	193	32.8		21.0	77	34.9		02.8
5	319	40.8	293	07.0	+8	49.5	130	53.5	-3	13.7	208	34.8	+22	20.9	92	37.6	-15	02.8
6	334	43.3	308	06.7	+8	50.5	145	55.8	-3	13.9	223	36.7	+22	20.9	107	40.2	-15	02.7
7	349	45.7	323	06.4		51.6	160	58.1		14.1	238	38.7		20.8	122	42.8		02.7
8	4	48.2	338	06.1		52.6	176	00.4		14.3	253	40.7		20.7	137	45.5		02.6
9	19	50.7	353	05.8		53.6	191	02.7		14.4	268	42.6		20.7	152	48.1		02.6
10	34	53.1	8	05.5		54.6	206	05.0		14.6	283	44.6		20.6	167	50.8		02.6
11	49	55.6	23	05.2	+8	55.6	221	07.3	-3	14.8	298	46.5	+22	20.5	182	53.4	-15	02.5
12	64	58.1	38	04.9	+8	56.7	236	09.5	-3	15.0	313	48.5	+22	20.5	197	56.0	-15	02.5
13	80	00.5	53	04.6		57.7	251	11.8		15.1	328	50.4		20.4	212	58.7		02.4
14	95	03.0	68	04.3		58.7	266	14.1		15.3	343	52.4		20.3	228	01.3		02.4
15	110	05.4	83	04.0	+8	59.7	281	16.4		15.5	358	54.4		20.3	243	04.0		02.3
16	125	07.9	98	03.7	+9	00.8	296	18.7		15.7	13	56.3		20.2	258	06.6		02.3
17	140	10.4	113	03.4	+9	01.8	311	21.0	-3	15.8	28	58.3	+22	20.1	273	09.2	-15	02.3
18	155	12.8	128	03.1	+9	02.8	326	23.3	-3	16.0	44	00.2	+22	20.1	288	11.9	-15	02.2
19	170	15.3	143	02.8		03.8	341	25.5		16.2	59	02.2		20.0	303	14.5		02.2
20	185	17.8	158	02.5		04.8	356	27.8		16.4	74	04.1		19.9	318	17.1		02.1
21	200	20.2	173	02.2		05.9	11	30.1		16.5	89	06.1		19.9	333	19.8		02.1
22	215	22.7	188	01.9		06.9	26	32.4		16.7	104	08.0		19.8	348	22.4		02.0
23	230	25.2	203	01.6		07.9	41	34.7		16.9	119	10.0		19.7	3	25.1		02.0
24	245	27.6	218	01.3	+9	08.9	56	36.9	-3	17.1	134	11.9	+22	19.7	18	27.7	-15	02.0
Dif	—		-3		+10		+23		-2		+20		-1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 3			Edad: 28 ^d 7 PHE { SD: 15 ^h 3 PMG: 11 ^h 45 ^m 4 ^h : 56 ^m 1 12 ^h : 56 ^m 0 20 ^h : 55 ^m 8 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	180	42.1	+21	24.5	189	41.1	+17	06.2	60 N	21 00	22 19	** **	3 18 38	20 22 57				
1	195	42.0		24.9	204	10.3 ¹⁰²		10.9 47	58	20 43	21 48	** **	29 40	20 10 56				
2	210	41.9		25.3	218	39.6 ¹⁰³		15.4 45	56	29	25	23 19	39 41	19 59 56				
3	225	41.9		25.8	233	08.8 ¹⁰²		19.9 45	54	16	21 06	22 27	48 42	50 55				
4	240	41.8		26.2	247	38.0 ¹⁰²		24.3 44	52	20 06	20 51	21 59	3 56 42	41 55				
5	255	41.7	+21	26.6	262	07.2 ¹⁰²	+17	28.6 43	50	19 56	20 38	21 37	4 03 43	19 34 54				
6	270	41.6	+21	27.0	276	36.4 ¹⁰²	+17	32.8 42	45	19 36	20 12	20 59	4 18 44	19 18 54				
7	285	41.6		27.4	291	05.6 ¹⁰²		36.9 41	40	20	19 52	31	30 46	19 04 54				
8	300	41.5		27.8	305	34.9 ¹⁰³		40.9 40	35	19 06	35	20 11	41 46	18 53 53				
9	315	41.4		28.2	320	04.1 ¹⁰²		44.8 39	30	18 54	19 21	19 54	4 50 47	43 53				
10	330	41.3		28.6	334	33.3 ¹⁰²		48.6 38	20	34	18 58	27	5 06 49	26 52				
11	345	41.2	+21	29.0	349	02.5 ¹⁰²	+17	52.3 37	10 N	18 17	18 40	19 06	5 20 50	18 11 52				
12	0	41.2	+21	29.4	3	31.7 ¹⁰²	+17	55.9 36	0	18 01	18 23	18 49	5 33 51	17 58 50				
13	15	41.1		29.8	18	00.9 ¹⁰²	+17	59.5 36	10 S	17 45	18 08	34	5 46 52	44 50				
14	30	41.0		30.2	32	30.2 ¹⁰³	+18	02.9 34	20	28	17 52	19	6 01 52	29 50				
15	45	40.9		30.6	46	59.4 ¹⁰²		06.2 33	30	17 09	35	18 04	17 54	12 49				
16	60	40.8		31.0	61	28.6 ¹⁰²		09.5 33	35	16 58	25	17 57	26 55	17 02 49				
17	75	40.8	+21	31.4	75	57.9 ¹⁰³	+18	12.6 31	40	16 45	17 15	17 48	6 37 56	16 51 48				
18	90	40.7	+21	31.8	90	27.1 ¹⁰²	+18	15.6 30	45	16 30	17 03	17 39	6 50 57	16 38 47				
19	105	40.6		32.2	104	56.3 ¹⁰²		18.6 30	50	11	16 49	29	7 06 57	22 46				
20	120	40.5		32.5	119	25.6 ¹⁰³		21.4 28	52	16 03	42	25	13 58	14 46				
21	135	40.4		32.9	133	54.9 ¹⁰³		24.2 28	54	15 53	35	20	21 59	16 06 45				
22	150	40.4		33.3	148	24.1 ¹⁰²		26.8 26	56	42	27	15	30 60	15 57 44				
23	165	40.3		33.7	162	53.4 ¹⁰³		29.4 26	58	29	18	09	41 60	46 44				
24	180	40.2	+21	34.1	177	22.7 ¹⁰³	+18	31.8 24	60 S	15 15	16 08	17 03	7 53 62	15 34 42				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 36 ^m 9		Mag: -4.0 PMG: 9 ^h 28 ^m			Mag: -0.6 PMG: 20 ^h 10 ^m			Mag: -1.9 PMG: 15 ^h 01 ^m			Mag: +0.2 PMG: 22 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	245	27.6	218	01.3	+9	08.9	56	36.9	-3	17.1	134	11.9	+22	19.7	18	27.7	-15	02.0
1	260	30.1	233	01.0		09.9	71	39.2		17.3	149	13.9		19.6	33	30.3		01.9
2	275	32.5	248	00.7		10.9	86	41.5		17.4	164	15.9		19.5	48	33.0		01.9
3	290	35.0	263	00.4		12.0	101	43.7		17.6	179	17.8		19.5	63	35.6		01.8
4	305	37.5	278	00.1		13.0	116	46.0		17.8	194	19.8		19.4	78	38.3		01.8
5	320	39.9	292	59.8	+9	14.0	131	48.3	-3	18.0	209	21.7	+22	19.3	93	40.9	-15	01.7
6	335	42.4	307	59.5	+9	15.0	146	50.6	-3	18.2	224	23.7	+22	19.3	108	43.5	-15	01.7
7	350	44.9	322	59.2		16.0	161	52.8		18.3	239	25.6		19.2	123	46.2		01.7
8	5	47.3	337	58.9		17.0	176	55.1		18.5	254	27.6		19.1	138	48.8		01.6
9	20	49.8	352	58.6		18.1	191	57.4		18.7	269	29.5		19.1	153	51.4		01.6
10	35	52.3	7	58.3		19.1	206	59.6		18.9	284	31.5		19.0	168	54.1		01.5
11	50	54.7	22	57.9	+9	20.1	222	01.9	-3	19.1	299	33.4	+22	18.9	183	56.7	-15	01.5
12	65	57.2	37	57.6	+9	21.1	237	04.1	-3	19.3	314	35.4	+22	18.9	198	59.4	-15	01.4
13	80	59.7	52	57.3		22.1	252	06.4		19.4	329	37.3		18.8	214	02.0		01.4
14	96	02.1	67	57.0		23.1	267	08.7		19.6	344	39.3		18.7	229	04.6		01.4
15	111	04.6	82	56.7		24.2	282	10.9		19.8	359	41.2		18.7	244	07.3		01.3
16	126	07.0	97	56.4		25.2	297	13.2		20.0	14	43.2		18.6	259	09.9		01.3
17	141	09.5	112	56.1	+9	26.2	312	15.4	-3	20.2	29	45.2	+22	18.5	274	12.6	-15	01.2
18	156	12.0	127	55.8	+9	27.2	327	17.7	-3	20.4	44	47.1	+22	18.5	289	15.2	-15	01.2
19	171	14.4	142	55.5		28.2	342	19.9		20.6	59	49.1		18.4	304	17.8		01.2
20	186	16.9	157	55.2		29.2	357	22.2		20.7	74	51.0		18.3	319	20.5		01.1
21	201	19.4	172	54.8		30.2	12	24.4		20.9	89	53.0		18.3	334	23.1		01.1
22	216	21.8	187	54.5		31.3	27	26.7		21.1	104	54.9		18.2	349	25.7		01.0
23	231	24.3	202	54.2		32.3	42	28.9		21.3	119	56.9		18.1	4	28.4		01.0
24	246	26.8	217	53.9	+9	33.3	57	31.2	-3	21.5	134	58.8	+22	18.1	19	31.0	-15	00.9
Dif	—		-3		+10		+23		-2		+20		-1		+26		0	

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: 0 ^d 2	PHE { 4 ^h : 55/6 12 ^h : 55/5 20 ^h : 55/3 Rº: 50 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	40.2	+21 34.1	177	22.7	+18 31.8	24	60 N	** **	1 35	2 54	3 56	47	21 19	47	
1	195	40.1	34.5	191	52.0 ¹⁰³	34.2	24	58	** **	2 07	3 11	4 09	47	21 06	47	
2	210	40.0	34.9	206	21.3 ¹⁰³	36.4	22	56	0 36	30	26	20	48	20 55	47	
3	225	39.9	35.3	220	50.6 ¹⁰³	38.6	22	54	1 27	2 48	38	30	48	45	48	
4	240	39.9	35.7	235	19.9 ¹⁰³	40.6	20	52	1 56	3 03	49	38	49	36	48	
5	255	39.8	+21 36.1	249	49.2 ¹⁰³	+18 42.6	20	50	2 17	3 16	3 58	4 46	48	20 28	48	
6	270	39.7	+21 36.5	264	18.6 ¹⁰⁴	+18 44.5	19	45	2 56	3 43	4 19	5 02	49	20 12	48	
7	285	39.6	36.8	278	47.9 ¹⁰³	46.2	17	40	3 23	4 03	35	16	49	19 58	48	
8	300	39.5	37.2	293	17.3 ¹⁰⁴	47.9	17	35	3 44	19	4 48	27	50	46	49	
9	315	39.4	37.6	307	46.7 ¹⁰⁴	49.5	16	30	4 01	33	5 00	37	50	36	49	
10	330	39.4	38.0	322	16.1 ¹⁰⁴	50.9	14	20	28	4 56	20	5 55	50	18	50	
11	345	39.3	+21 38.4	336	45.5 ¹⁰⁴	+18 52.3	14	10 N	4 48	5 15	5 38	6 10	50	19 03	49	
12	0	39.2	+21 38.8	351	15.0 ¹⁰⁵	+18 53.6	13	0	5 06	5 32	5 54	6 24	50	18 48	50	
13	15	39.1	39.2	5	44.4 ¹⁰⁴	54.8	12	10 S	21	5 47	6 10	38	51	34	50	
14	30	39.0	39.5	20	13.9 ¹⁰⁵	55.8	10	20	36	6 03	27	6 53	51	19	50	
15	45	38.9	39.9	34	43.4 ¹⁰⁵	56.8	10	30	51	20	46	7 11	51	18 01	50	
16	60	38.9	40.3	49	12.9 ¹⁰⁵	57.7	9	35	5 58	30	6 57	21	51	17 51	50	
17	75	38.8	+21 40.7	63	42.4 ¹⁰⁵	+18 58.5	8	40	6 07	6 40	7 10	7 33	51	17 39	51	
18	90	38.7	+21 41.1	78	11.9 ¹⁰⁵	+18 59.2	7	45	6 16	6 52	7 25	7 47	51	17 25	51	
19	105	38.6	41.4	92	41.5 ¹⁰⁶	+18 59.8	6	50	26	7 07	44	8 03	52	08	51	
20	120	38.5	41.8	107	11.1 ¹⁰⁶	+19 00.3	5	52	30	13	7 53	11	52	17 00	51	
21	135	38.4	42.2	121	40.7 ¹⁰⁶	00.7	4	54	35	20	8 02	20	52	16 51	51	
22	150	38.3	42.6	136	10.3 ¹⁰⁶	01.0	3	56	41	28	13	30	52	41	51	
23	165	38.3	43.0	150	39.9 ¹⁰⁶	01.2	2	58	46	37	26	41	52	30	51	
24	180	38.2	+21 43.3	165	09.6 ¹⁰⁷	+19 01.3	1	60 S	6 53	7 47	8 41	8 55	51	16 16	52	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 33 ^m 0			Mag: -4.0 PMG: 9 ^h 29 ^m			Mag: -0.6 PMG: 20 ^h 07 ^m			Mag: -1.9 PMG: 14 ^h 58 ^m			Mag: +0.2 PMG: 22 ^h 38 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	246	26.8	217 53.9	+9 33.3		57 31.2	-3 21.5		134 58.8	+22 18.1		19 31.0	-15 00.9			
1	261	29.2	232 53.6	34.3		72 33.4	21.7		150 00.8	18.0		34 33.7	00.9			
2	276	31.7	247 53.3	35.3		87 35.7	21.9		165 02.7	17.9		49 36.3	00.9			
3	291	34.2	262 53.0	36.3		102 37.9	22.1		180 04.7	17.9		64 38.9	00.8			
4	306	36.6	277 52.7	37.3		117 40.2	22.3		195 06.6	17.8		79 41.6	00.8			
5	321	39.1	292 52.3	+9 38.3		132 42.4	-3 22.5		210 08.6	+22 17.7		94 44.2	-15 00.7			
6	336	41.5	307 52.0	+9 39.3		147 44.7	-3 22.6		225 10.5	+22 17.7		109 46.8	-15 00.7			
7	351	44.0	322 51.7	40.4		162 46.9	22.8		240 12.5	17.6		124 49.5	00.7			
8	6	46.5	337 51.4	41.4		177 49.1	23.0		255 14.4	17.5		139 52.1	00.6			
9	21	48.9	352 51.1	42.4		192 51.4	23.2		270 16.4	17.5		154 54.7	00.6			
10	36	51.4	7 50.8	43.4		207 53.6	23.4		285 18.3	17.4		169 57.4	00.5			
11	51	53.9	22 50.5	+9 44.4		222 55.8	-3 23.6		300 20.3	+22 17.3		185 00.0	-15 00.5			
12	66	56.3	37 50.1	+9 45.4		237 58.1	-3 23.8		315 22.2	+22 17.3		200 02.7	-15 00.4			
13	81	58.8	52 49.8	46.4		253 00.3	24.0		330 24.2	17.2		215 05.3	00.4			
14	97	01.3	67 49.5	47.4		268 02.5	24.2		345 26.1	17.1		230 07.9	00.4			
15	112	03.7	82 49.2	48.4		283 04.8	24.4		0 28.1	17.0		245 10.6	00.3			
16	127	06.2	97 48.9	49.4		298 07.0	24.6		15 30.0	17.0		260 13.2	00.3			
17	142	08.7	112 48.6	+9 50.5		313 09.2	-3 24.8		30 32.0	+22 16.9		275 15.8	-15 00.2			
18	157	11.1	127 48.2	+9 51.5		328 11.5	-3 25.0		45 33.9	+22 16.8		290 18.5	-15 00.2			
19	172	13.6	142 47.9	52.5		343 13.7	25.2		60 35.9	16.8		305 21.1	00.2			
20	187	16.0	157 47.6	53.5		358 15.9	25.4		75 37.8	16.7		320 23.7	00.1			
21	202	18.5	172 47.3	54.5		13 18.1	25.6		90 39.8	16.6		335 26.4	-15 00.1			
22	217	21.0	187 47.0	55.5		28 20.4	25.8		105 41.7	16.6		350 29.0	-15 00.0			
23	232	23.4	202 46.6	56.5		43 22.6	26.0		120 43.7	16.5		5 31.7	-15 00.0			
24	247	25.9	217 46.3	+9 57.5		58 24.8	-3 26.2		135 45.6	+22 16.4		20 34.3	-14 59.9			
Dif	—		-3	+10		+22	-2		+19	-1		+26				

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: 1 ^d 2 SD: 15 ^h 0 PMG: 13 ^h 26 ^m	PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /0 20 ^h : 54 ^h /9 Rº: 49 ^m															
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m
0	180	38.2	+21	43.3	165	09.6	+19	01.3	60 N	21 04	22 25	** **	4 43	56	22 06	36				
1	195	38.1		43.7	179	39.3 ¹⁰⁷		01.3	58	20 46	21 52	** **	4 56	55	21 53	38				
2	210	38.0		44.1	194	09.0 ¹⁰⁷		01.2	56	32	29	23 36	5 08	54	42	39				
3	225	37.9		44.5	208	38.7 ¹⁰⁷		01.0	54	19	21 10	22 33	18 54		33	39				
4	240	37.8		44.8	223	08.5 ¹⁰⁸		00.8	52	20 08	20 54	22 03	27 53		24	41				
5	255	37.7	+21	45.2	237	38.3 ¹⁰⁸	+19	00.4	50	19 58	20 41	21 41	5 34	54	21 16	42				
6	270	37.7	+21	45.6	252	08.1 ¹⁰⁸	+18	59.9	45	19 38	20 14	21 01	5 51	53	21 00	42				
7	285	37.6		45.9	266	37.9 ¹⁰⁸		59.4	40	21	19 53	20 33	6 05	52	20 46	44				
8	300	37.5		46.3	281	07.8 ¹⁰⁹		58.7	35	19 07	36	20 12	17 51		35	44				
9	315	37.4		46.7	295	37.7 ¹⁰⁹		58.0	30	18 55	19 22	19 55	27 51		25	45				
10	330	37.3		47.1	310	07.6 ¹⁰⁹		57.1	20	35	18 59	28	6 45	50	20 08	46				
11	345	37.2	+21	47.4	324	37.6 ¹¹⁰	+18	56.2	10 N	18 17	18 40	19 07	7 00	50	19 52	48				
12	0	37.1	+21	47.8	339	07.5 ¹⁰⁹	+18	55.2	0	18 01	18 23	18 49	7 14	50	19 38	49				
13	15	37.0		48.2	353	37.6 ¹¹¹		54.1	10 S	17 45	18 08	34	29	48	24	50				
14	30	37.0		48.5	8	07.6 ¹¹⁰		52.8	20	28	17 52	19	7 44	48	19 09	50				
15	45	36.9		48.9	22	37.7 ¹¹¹		51.5	30	17 08	34	18 04	8 02	47	18 51	52				
16	60	36.8		49.3	37	07.8 ¹¹¹		50.1	35	16 57	25	17 56	12	47	41	53				
17	75	36.7	+21	49.6	51	37.9 ¹¹¹	+18	48.6	40	16 44	17 14	17 48	8 24	46	18 30	53				
18	90	36.6	+21	50.0	66	08.1 ¹¹²	+18	47.1	45	16 29	17 02	17 38	8 38	45	18 16	54				
19	105	36.5		50.3	80	38.3 ¹¹²		45.4	50	10	16 47	28	8 55	44	17 59	55				
20	120	36.4		50.7	95	08.5 ¹¹²		43.6	52	16 01	41	23	9 03	44	51	56				
21	135	36.3		51.1	109	38.7 ¹¹²		41.8	54	15 51	33	18	12	43	42	57				
22	150	36.2		51.4	124	09.0 ¹¹³		39.8	56	40	25	13	22	42	32	58				
23	165	36.1		51.8	138	39.4 ¹¹⁴		37.8	58	27	16	07	33	42	21	58				
24	180	36.1	+21	52.2	153	09.7 ¹¹³	+18	35.7	60 S	15 12	16 06	17 01	9 46	41	17 08	60				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 7 ^h 29 ^m 0		Mag: -4.0 PMG: 9 ^h 29 ^m			Mag: -0.5 PMG: 20 ^h 03 ^m			Mag: -1.9 PMG: 14 ^h 55 ^m			Mag: +0.2 PMG: 22 ^h 34 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♊	Dec		hG ♎	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	25.9	217	46.3	+9	57.5	58	24.8	-3	26.2	135	45.6	+22	16.4	20	34.3	-14	59.9		
1	262	28.4	232	46.0		58.5	73	27.0		26.4	150	47.6		16.4	35	36.9		59.9		
2	277	30.8	247	45.7	+9	59.5	88	29.2		26.6	165	49.5		16.3	50	39.6		59.9		
3	292	33.3	262	45.4	+10	00.5	103	31.5		26.8	180	51.5		16.2	65	42.2		59.8		
4	307	35.8	277	45.0		01.5	118	33.7		27.0	195	53.4		16.2	80	44.8		59.8		
5	322	38.2	292	44.7	+10	02.5	133	35.9	-3	27.2	210	55.3	+22	16.1	95	47.5	-14	59.7		
6	337	40.7	307	44.4	+10	03.5	148	38.1	-3	27.4	225	57.3	+22	16.0	110	50.1	-14	59.7		
7	352	43.1	322	44.1		04.5	163	40.3		27.6	240	59.2		16.0	125	52.7		59.7		
8	7	45.6	337	43.7		05.5	178	42.5		27.8	256	01.2		15.9	140	55.4		59.6		
9	22	48.1	352	43.4		06.5	193	44.7		28.0	271	03.1		15.8	155	58.0		59.6		
10	37	50.5	7	43.1		07.5	208	47.0		28.2	286	05.1		15.7	171	00.6		59.5		
11	52	53.0	22	42.8	+10	08.5	223	49.2	-3	28.4	301	07.0	+22	15.7	186	03.3	-14	59.5		
12	67	55.5	37	42.4	+10	09.5	238	51.4	-3	28.6	316	09.0	+22	15.6	201	05.9	-14	59.5		
13	82	57.9	52	42.1		10.5	253	53.6		28.8	331	10.9		15.5	216	08.5		59.4		
14	98	00.4	67	41.8		11.5	268	55.8		29.0	346	12.9		15.5	231	11.2		59.4		
15	113	02.9	82	41.5		12.6	283	58.0		29.2	1	14.8		15.4	246	13.8		59.3		
16	128	05.3	97	41.1		13.6	299	00.2		29.4	16	16.8		15.3	261	16.4		59.3		
17	143	07.8	112	40.8	+10	14.6	314	02.4	-3	29.6	31	18.7	+22	15.3	276	19.1	-14	59.3		
18	158	10.3	127	40.5	+10	15.6	329	04.6	-3	29.8	46	20.7	+22	15.2	291	21.7	-14	59.2		
19	173	12.7	142	40.2		16.6	344	06.8		30.0	61	22.6		15.1	306	24.3		59.2		
20	188	15.2	157	39.8		17.6	359	09.0		30.2	76	24.6		15.1	321	27.0		59.1		
21	203	17.6	172	39.5		18.6	14	11.2		30.5	91	26.5		15.0	336	29.6		59.1		
22	218	20.1	187	39.2		19.6	29	13.4		30.7	106	28.4		14.9	351	32.3		59.1		
23	233	22.6	202	38.9		20.6	44	15.6		30.9	121	30.4		14.8	6	34.9		59.0		
24	248	25.0	217	38.5	+10	21.6	59	17.8	-3	31.1	136	32.3	+22	14.8	21	37.5	-14	59.0		
Dif	—		-3			+10	+22			-2	+19			-1		+26			0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7			Edad: 2 ^d 2 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 14 ^h 15 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	36.1	+21	52.2	153	09.7	+18	35.7	22	60 N	** **	1 29	2 51	5 39	62	22 42 29
1	195	36.0		52.5	167	40.1 ¹¹⁴		33.5	22	58	** **	2 02	3 09	5 51	61	31 30
2	210	35.9		52.9	182	10.6 ¹¹⁵		31.2	23	56	0 19	26	23	6 02	60	21 32
3	225	35.8		53.2	196	41.0 ¹¹⁴		28.8	24	54	1 21	2 45	36	12	58	12 33
4	240	35.7		53.6	211	11.5 ¹¹⁵		26.3	25	52	1 52	3 01	47	20	58	22 05 34
5	255	35.6	+21	54.0	225	42.1 ¹¹⁶	+18	23.7	26	50	2 14	3 14	3 57	6 28	57	21 58 35
6	270	35.5	+21	54.3	240	12.6 ¹¹⁵	+18	21.1	26	45	2 54	3 41	4 17	6 44	55	21 42 38
7	285	35.4		54.7	254	43.2 ¹¹⁶		18.4	27	40	3 22	4 02	34	6 57	54	30 39
8	300	35.3		55.0	269	13.9 ¹¹⁷		15.5	29	35	3 43	19	4 48	7 08	53	19 41
9	315	35.2		55.4	283	44.6 ¹¹⁷		12.6	29	30	4 00	33	5 00	18	52	21 10 42
10	330	35.1		55.7	298	15.3 ¹¹⁷		09.6	30	20	27	4 56	20	35	50	20 54 44
11	345	35.0	+21	56.1	312	46.1 ¹¹⁸	+18	06.6	30	10 N	4 48	5 15	5 38	7 50	49	20 40 45
12	0	35.0	+21	56.4	327	16.9 ¹¹⁸	+18	03.4	32	0	5 06	5 32	5 54	8 04	47	20 27 47
13	15	34.9		56.8	341	47.7 ¹¹⁸	+18	00.2	32	10 S	22	5 48	6 10	17	47	20 14 48
14	30	34.8		57.1	356	18.6 ¹¹⁹	+17	56.8	34	20	36	6 04	27	32	45	19 59 51
15	45	34.7		57.5	10	49.5 ¹¹⁹		53.4	34	30	52	21	47	49	43	43 52
16	60	34.6		57.8	25	20.4 ¹¹⁹		49.9	35	35	5 59	31	6 59	8 59	42	34 53
17	75	34.5	+21	58.2	39	51.4 ¹²⁰	+17	46.4	35	40	6 08	6 42	7 12	9 10	41	19 23 54
18	90	34.4	+21	58.5	54	22.4 ¹²⁰	+17	42.7	37	45	6 17	6 54	7 27	9 23	40	19 10 56
19	105	34.3		58.9	68	53.5 ¹²¹		39.0	37	50	28	7 08	46	39	38	18 54 59
20	120	34.2		59.2	83	24.6 ¹²¹		35.1	39	52	32	15	7 55	47	37	47 59
21	135	34.1		59.6	97	55.8 ¹²²		31.2	39	54	37	23	8 05	9 55	36	39 60
22	150	34.0	+21	59.9	112	26.9 ¹²¹		27.3	39	56	43	31	16	10 04	35	30 61
23	165	33.9	+22	00.3	126	58.2 ¹²³		23.2	41	58	49	40	29	15	34	19 64
24	180	33.8	+22	00.6	141	29.4 ¹²²	+17	19.1	41	60 S	6 55	7 50	8 45	10 27	32	18 08 64

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 25 ^m 1		Mag: -4.0 PMG: 9 ^h 30 ^m		Mag: -0.5 PMG: 20 ^h 00 ^m		Mag: -1.9 PMG: 14 ^h 52 ^m		Mag: +0.2 PMG: 22 ^h 30 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	248	25.0	217	38.5	+10	21.6	136	32.3	+22	14.8	21	37.5	-14	59.0
1	263	27.5	232	38.2		22.5	151	34.3		14.7	36	40.2		58.9
2	278	30.0	247	37.9		23.5	166	36.2		14.6	51	42.8		58.9
3	293	32.4	262	37.5		24.5	181	38.2		14.6	66	45.4		58.8
4	308	34.9	277	37.2		25.5	196	40.1		14.5	81	48.1		58.8
5	323	37.4	292	36.9	+10	26.5	211	42.1	+22	14.4	96	50.7	-14	58.8
6	338	39.8	307	36.5	+10	27.5	226	44.0	+22	14.4	111	53.3	-14	58.7
7	353	42.3	322	36.2		28.5	241	46.0		14.3	126	56.0		58.7
8	8	44.8	337	35.9		29.5	256	47.9		14.2	141	58.6		58.6
9	23	47.2	352	35.5		30.5	271	49.8		14.2	157	01.2		58.6
10	38	49.7	7	35.2		31.5	286	51.8		14.1	172	03.9		58.6
11	53	52.1	22	34.9	+10	32.5	301	53.7	+22	14.0	187	06.5	-14	58.5
12	68	54.6	37	34.6	+10	33.5	316	55.7	+22	13.9	202	09.1	-14	58.5
13	83	57.1	52	34.2		34.5	331	57.6		13.9	217	11.7		58.4
14	98	59.5	67	33.9		35.5	346	59.6		13.8	232	14.4		58.4
15	114	02.0	82	33.5		36.5	2	01.5		13.7	247	17.0		58.4
16	129	04.5	97	33.2		37.5	17	03.5		13.7	262	19.6		58.3
17	144	06.9	112	32.9	+10	38.5	32	05.4	+22	13.6	277	22.3	-14	58.3
18	159	09.4	127	32.5	+10	39.5	47	07.3	+22	13.5	292	24.9	-14	58.2
19	174	11.9	142	32.2		40.5	62	09.3		13.5	307	27.5		58.2
20	189	14.3	157	31.9		41.5	77	11.2		13.4	322	30.2		58.2
21	204	16.8	172	31.5		42.5	92	13.2		13.3	337	32.8		58.1
22	219	19.3	187	31.2		43.4	107	15.1		13.2	352	35.4		58.1
23	234	21.7	202	30.9		44.4	122	17.1		13.2	7	38.1		58.0
24	249	24.2	217	30.5	+10	45.4	137	19.0	+22	13.1	22	40.7	-14	58.0
Dif	—		-3		+10		+22		-1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 8			Edad: 3 ^d 2 SD: 14'8 PMG: 15 ^h 03 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3 R°: 45 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	33.8	+22	00.6	141	29.4	+17 19.1	60 N	21 07	22 32	** **	6 41	67	23 11	22	
1	195	33.7		01.0	156	00.7 ¹²³	14.9 42	58	20 49	21 57	** **	6 52	65	23 01	25	
2	210	33.6		01.3	170	32.1 ¹²⁴	10.6 43	56	34	32	** **	7 02	63	22 53	26	
3	225	33.5		01.6	185	03.5 ¹²⁴	06.2 44	54	21	21 13	22 39	10 62		45 28		
4	240	33.4		02.0	199	34.9 ¹²⁴	+17 01.8 44	52	10	20 57	22 07	18 60		39 29		
5	255	33.4	+22	02.3	214	06.4 ¹²⁵	+16 57.3 45	50	20 00	20 43	21 44	7 25	59	22 33	30	
6	270	33.3	+22	02.7	228	37.9 ¹²⁵	+16 52.7 46	45	19 39	20 16	21 03	7 39	57	22 20	33	
7	285	33.2		03.0	243	09.4 ¹²⁵	48.0 47	40	23	19 55	20 35	7 51	55	09 35		
8	300	33.1		03.3	257	41.0 ¹²⁶	43.2 48	35	19 09	38	20 14	8 01	54	22 00	37	
9	315	33.0		03.7	272	12.6 ¹²⁶	38.4 48	30	18 56	23	19 56	10 52		21 52	38	
10	330	32.9		04.0	286	44.3 ¹²⁷	33.5 49	20	36	19 00	29	25 50		38 41		
11	345	32.8	+22	04.4	301	16.0 ¹²⁷	+16 28.6 49	10 N	18 18	18 41	19 08	8 39	48	21 25	43	
12	0	32.7	+22	04.7	315	47.7 ¹²⁷	+16 23.5 51	0	18 01	18 24	18 50	8 51	46	21 14	45	
13	15	32.6		05.0	330	19.5 ¹²⁸	18.4 51	10 S	17 45	18 08	34	9 04	44	21 02	47	
14	30	32.5		05.4	344	51.4 ¹²⁹	13.3 51	20	28	17 51	19	17 42		20 50	49	
15	45	32.4		05.7	359	23.2 ¹²⁸	08.0 53	30	17 08	34	18 03	32 40		35 52		
16	60	32.3		06.0	13	55.1 ¹²⁹	+16 02.7 53	35	16 56	24	17 55	41 39		27 54		
17	75	32.2	+22	06.4	28	27.1 ¹³⁰	+15 57.3 54	40	16 43	17 13	17 47	9 51	37	20 17	56	
18	90	32.1	+22	06.7	42	59.1 ¹³⁰	+15 51.8 55	45	16 28	17 01	17 37	10 03	35	20 06	58	
19	105	32.0		07.0	57	31.1 ¹³⁰	46.3 55	50	16 08	16 46	27	17 33		19 53	60	
20	120	31.9		07.4	72	03.2 ¹³¹	40.7 56	52	15 59	39	22	24 31		46 62		
21	135	31.8		07.7	86	35.3 ¹³¹	35.1 56	54	49	32	17	31 30		39 63		
22	150	31.7		08.0	101	07.4 ¹³¹	29.3 58	56	38	23	11	39 29		31 65		
23	165	31.6		08.3	115	39.6 ¹³²	23.5 58	58	25	14	17 05	49 27		23 66		
24	180	31.5	+22	08.7	130	11.8 ¹³²	+15 17.7 58	60 S	15 09	16 04	16 59	10 59	25	19 12	69	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 21 ^m 2		Mag: -4.0 PMG: 9 ^h 30 ^m			Mag: -0.5 PMG: 19 ^h 56 ^m			Mag: -1.9 PMG: 14 ^h 49 ^m			Mag: +0.2 PMG: 22 ^h 25 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	249	24.2	217	30.5	+10	45.4	60	10.1	-3	36.2	137	19.0	+22	13.1	22	40.7	-14	58.0
1	264	26.6	232	30.2		46.4	75	12.3		36.5	152	20.9		13.0	37	43.3		58.0
2	279	29.1	247	29.8		47.4	90	14.4		36.7	167	22.9		13.0	52	46.0		57.9
3	294	31.6	262	29.5		48.4	105	16.6		36.9	182	24.8		12.9	67	48.6		57.9
4	309	34.0	277	29.2		49.4	120	18.8		37.1	197	26.8		12.8	82	51.2		57.8
5	324	36.5	292	28.8	+10	50.4	135	20.9	-3	37.3	212	28.7	+22	12.7	97	53.9	-14	57.8
6	339	39.0	307	28.5	+10	51.4	150	23.1	-3	37.6	227	30.7	+22	12.7	112	56.5	-14	57.8
7	354	41.4	322	28.2		52.4	165	25.2		37.8	242	32.6		12.6	127	59.1		57.7
8	9	43.9	337	27.8		53.3	180	27.4		38.0	257	34.5		12.5	143	01.8		57.7
9	24	46.4	352	27.5		54.3	195	29.6		38.2	272	36.5		12.5	158	04.4		57.6
10	39	48.8	7	27.1		55.3	210	31.7		38.4	287	38.4		12.4	173	07.0		57.6
11	54	51.3	22	26.8	+10	56.3	225	33.9	-3	38.7	302	40.4	+22	12.3	188	09.6	-14	57.6
12	69	53.7	37	26.4	+10	57.3	240	36.0	-3	38.9	317	42.3	+22	12.3	203	12.3	-14	57.5
13	84	56.2	52	26.1		58.3	255	38.2		39.1	332	44.2		12.2	218	14.9		57.5
14	99	58.7	67	25.8	+10	59.3	270	40.3		39.3	347	46.2		12.1	233	17.5		57.4
15	115	01.1	82	25.4	+11	00.3	285	42.5		39.6	2	48.1		12.0	248	20.2		57.4
16	130	03.6	97	25.1		01.2	300	44.6		39.8	17	50.1		12.0	263	22.8		57.4
17	145	06.1	112	24.7	+11	02.2	315	46.8	-3	40.0	32	52.0	+22	11.9	278	25.4	-14	57.3
18	160	08.5	127	24.4	+11	03.2	330	48.9	-3	40.2	47	54.0	+22	11.8	293	28.1	-14	57.3
19	175	11.0	142	24.0		04.2	345	51.1		40.5	62	55.9		11.8	308	30.7		57.2
20	190	13.5	157	23.7		05.2	0	53.2		40.7	77	57.8		11.7	323	33.3		57.2
21	205	15.9	172	23.3		06.2	15	55.4		40.9	92	59.8		11.6	338	36.0		57.2
22	220	18.4	187	23.0		07.2	30	57.5		41.2	108	01.7		11.5	353	38.6		57.1
23	235	20.9	202	22.7		08.1	45	59.7		41.4	123	03.7		11.5	8	41.2		57.1
24	250	23.3	217	22.3	+11	09.1	61	01.8	-3	41.6	138	05.6	+22	11.4	23	43.8	-14	57.1
Dif	—		-3		+10		+22		-2		+19		-1		+26			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 0				Edad: 4 ^d 2 PHE { SD: 14'8 PMG: 15 ^h 48 ^m R°: 44 ^m 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	31.5	+22	08.7	130	11.8	+15	17.7	59	60 N	** **	1 24	2 48	7 48	69	23	33	19
1	195	31.4		09.0	144	44.1 ¹³³		11.8	60	58	** **	1 59	3 06	7 57	67	26	21	
2	210	31.3		09.3	159	16.4 ¹³³	+15	05.8	61	56	** **	2 23	21	8 05	65	19	23	
3	225	31.2		09.7	173	48.7 ¹³³	+14	59.7	61	54	1 16	43	34	12	63	13	25	
4	240	31.1		10.0	188	21.1 ¹³⁴		53.6	61	52	1 49	2 59	45	18	62	08	26	
5	255	31.0	+22	10.3	202	53.5 ¹³⁴	+14	47.4	62	50	2 12	3 12	3 55	8 24	60	23	03	27
6	270	30.9	+22	10.6	217	26.0 ¹³⁵	+14	41.2	62	45	2 52	3 40	4 16	8 36	58	22	53	30
7	285	30.8		11.0	231	58.5 ¹³⁵		34.9	63	40	3 20	4 01	33	46	56	44	32	
8	300	30.7		11.3	246	31.0 ¹³⁵		28.5	64	35	42	18	47	8 55	53	37	34	
9	315	30.6		11.6	261	03.6 ¹³⁶		22.1	64	30	3 59	32	4 59	9 02	52	30	36	
10	330	30.5		11.9	275	36.2 ¹³⁶		15.6	65	20	4 27	4 56	5 20	15	49	19	38	
11	345	30.4	+22	12.2	290	08.8 ¹³⁶	+14	09.0	66	10 N	4 48	5 15	5 38	9 27	46	22	08	42
12	0	30.3	+22	12.6	304	41.5 ¹³⁷	+14	02.4	66	0	5 06	5 32	5 54	9 37	45	21	59	44
13	15	30.2		12.9	319	14.2 ¹³⁷	+13	55.7	67	10 S	22	5 48	6 11	48	42	49	47	
14	30	30.1		13.2	333	46.9 ¹³⁷		49.0	67	20	37	6 04	28	9 59	40	39	49	
15	45	30.0		13.5	348	19.7 ¹³⁸		42.2	68	30	5 52	22	6 48	10 12	37	27	52	
16	60	29.9		13.8	2	52.5 ¹³⁸		35.4	68	35	6 01	32	7 00	20	35	21	53	
17	75	29.8	+22	14.2	17	25.4 ¹³⁹	+13	28.5	69	40	6 09	6 43	7 13	10 28	33	21	13	56
18	90	29.7	+22	14.5	31	58.3 ¹³⁹	+13	21.5	70	45	6 19	6 55	7 29	10 38	31	21	04	58
19	105	29.6		14.8	46	31.2 ¹³⁹		14.5	70	50	29	7 10	48	50	28	20	53	61
20	120	29.5		15.1	61	04.1 ¹³⁹		07.5	70	52	34	17	7 57	10 55	28	48	62	
21	135	29.4		15.4	75	37.1 ¹⁴⁰	+13	00.3	72	54	39	25	8 07	11 01	26	42	64	
22	150	29.3		15.7	90	10.1 ¹⁴⁰	+12	53.2	71	56	45	33	19	08	24	36	65	
23	165	29.2		16.0	104	43.2 ¹⁴¹		45.9	73	58	51	42	32	16	22	29	67	
24	180	29.1	+22	16.4	119	16.3 ¹⁴¹	+12	38.6	73	60 S	6 58	7 53	8 48	11 24	21	20	21	69

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 17 ^m 2		Mag: -4.0 PMG: 9 ^h 31 ^m				Mag: -0.5 PMG: 19 ^h 53 ^m				Mag: -1.9 PMG: 14 ^h 46 ^m				Mag: +0.2 PMG: 22 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	23.3	217	22.3	+11	09.1	61	01.8	-3	41.6	138	05.6	+22	11.4	23	43.8	-14	57.1
1	265	25.8	232	22.0		10.1	76	03.9		41.8	153	07.5		11.3	38	46.5		57.0
2	280	28.2	247	21.6		11.1	91	06.1		42.1	168	09.5		11.3	53	49.1		57.0
3	295	30.7	262	21.3		12.1	106	08.2		42.3	183	11.4		11.2	68	51.7		56.9
4	310	33.2	277	20.9		13.0	121	10.4		42.5	198	13.4		11.1	83	54.4		56.9
5	325	35.6	292	20.6	+11	14.0	136	12.5	-3	42.8	213	15.3	+22	11.0	98	57.0	-14	56.9
6	340	38.1	307	20.2	+11	15.0	151	14.6	-3	43.0	228	17.2	+22	11.0	113	59.6	-14	56.8
7	355	40.6	322	19.9		16.0	166	16.8		43.2	243	19.2		10.9	129	02.2		56.8
8	10	43.0	337	19.5		17.0	181	18.9		43.5	258	21.1		10.8	144	04.9		56.7
9	25	45.5	352	19.2		18.0	196	21.0		43.7	273	23.1		10.8	159	07.5		56.7
10	40	48.0	7	18.8		18.9	211	23.2		43.9	288	25.0		10.7	174	10.1		56.7
11	55	50.4	22	18.5	+11	19.9	226	25.3	-3	44.2	303	26.9	+22	10.6	189	12.8	-14	56.6
12	70	52.9	37	18.1	+11	20.9	241	27.4	-3	44.4	318	28.9	+22	10.5	204	15.4	-14	56.6
13	85	55.4	52	17.8		21.9	256	29.6		44.6	333	30.8		10.5	219	18.0		56.5
14	100	57.8	67	17.4		22.8	271	31.7		44.9	348	32.8		10.4	234	20.7		56.5
15	116	00.3	82	17.1		23.8	286	33.8		45.1	3	34.7		10.3	249	23.3		56.5
16	131	02.7	97	16.7		24.8	301	35.9		45.3	18	36.6		10.2	264	25.9		56.4
17	146	05.2	112	16.4	+11	25.8	316	38.1	-3	45.6	33	38.6	+22	10.2	279	28.5	-14	56.4
18	161	07.7	127	16.0	+11	26.8	331	40.2	-3	45.8	48	40.5	+22	10.1	294	31.2	-14	56.4
19	176	10.1	142	15.7		27.7	346	42.3		46.0	63	42.4		10.0	309	33.8		56.3
20	191	12.6	157	15.3		28.7	1	44.4		46.3	78	44.4		10.0	324	36.4		56.3
21	206	15.1	172	14.9		29.7	16	46.5		46.5	93	46.3		09.9	339	39.1		56.2
22	221	17.5	187	14.6		30.7	31	48.7		46.8	108	48.3		09.8	354	41.7		56.2
23	236	20.0	202	14.2		31.6	46	50.8		47.0	123	50.2		09.7	9	44.3		56.2
24	251	22.5	217	13.9	+11	32.6	61	52.9	-3	47.2	138	52.1	+22	09.7	24	46.9	-14	56.1
Dif	—		-4		+10		+21		-2		+19		-1		+26			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 5 ^d 2	PHE {	4 ^h : 54 ^h /1 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2			Civil			Náutico		Hora	R°	Hora	R°
	PMG: 11 ^h 58 ^m 1	hG ☉	Dec						hG ☾	Dif	Dec	Dif	h m				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	29.1	+22 16.4	119	16.3	+12 38.6	73	60 N	21 11	22 38	** **	8 57 70	23 52 16				
1	195	29.0		133	49.4 ¹⁴¹	31.3	73	58	20 52	22 01	** **	9 04 68	47 18				
2	210	28.9		148	22.5 ¹⁴¹	23.9	74	56	37	21 36	** **	10 66	42 20				
3	225	28.8		162	55.7 ¹⁴²	16.5	74	54	24	21 16	22 45	15 64	38 22				
4	240	28.7		177	28.9 ¹⁴²	09.0	75	52	12	20 59	22 11	20 63	34 23				
5	255	28.6	+22 17.9	192	02.1 ¹⁴²	+12 01.5	75	50	20 02	20 45	21 47	9 24 62	23 30 25				
6	270	28.5	+22 18.2	206	35.4 ¹⁴³	+11 53.9	76	45	19 41	20 18	21 06	9 34 58	23 23 27				
7	285	28.4		221	08.7 ¹⁴³	46.2	77	40	24	19 56	20 37	42 56	16 31				
8	300	28.3		235	42.0 ¹⁴³	38.6	76	35	19 10	39	20 15	48 54	11 32				
9	315	28.2		250	15.4 ¹⁴⁴	30.8	78	30	18 57	25	19 57	9 54 52	23 06 34				
10	330	28.1		264	48.7 ¹⁴³	23.0	78	20	37	19 01	30	10 04 49	22 57 38				
11	345	28.0	+22 19.7	279	22.1 ¹⁴⁴	+11 15.2	78	10 N	18 19	18 41	19 08	10 13 46	22 50 40				
12	0	27.9	+22 20.1	293	55.6 ¹⁴⁵	+11 07.3	79	0	18 02	18 24	18 50	10 22 43	22 43 43				
13	15	27.7		308	29.0 ¹⁴⁴	+10 59.4	79	10 S	17 45	18 08	34	30 41	36 45				
14	30	27.6		323	02.5 ¹⁴⁵	51.4	80	20	28	17 51	19	39 38	28 49				
15	45	27.5		337	36.0 ¹⁴⁵	43.4	80	30	17 08	34	18 03	49 35	19 52				
16	60	27.4		352	09.5 ¹⁴⁵	35.4	80	35	16 56	24	17 55	10 55 33	14 54				
17	75	27.3	+22 21.6	6	43.1 ¹⁴⁶	+10 27.3	81	40	16 42	17 13	17 46	11 01 32	22 09 56				
18	90	27.2	+22 21.9	21	16.7 ¹⁴⁶	+10 19.1	82	45	16 27	17 00	17 37	11 09 29	22 02 58				
19	105	27.1		35	50.3 ¹⁴⁶	10.9	82	50	16 07	16 45	26	18 26	21 54 61				
20	120	27.0		50	23.9 ¹⁴⁶	+10 02.7	82	52	15 58	38	21	23 24	50 63				
21	135	26.9		64	57.5 ¹⁴⁶	+9 54.4	83	54	48	30	16	27 23	46 65				
22	150	26.8		79	31.2 ¹⁴⁷	46.1	83	56	36	22	10	32 22	41 67				
23	165	26.7		94	04.9 ¹⁴⁷	37.7	84	58	22	13	17 04	38 19	36 69				
24	180	26.6	+22 23.6	108	38.6 ¹⁴⁷	+9 29.3	84	60 S	15 07	16 02	16 57	11 45 17	21 30 71				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 13 ^m 3		Mag: -3.9		Mag: -0.4		Mag: -1.9		Mag: +0.2	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	251	22.5	217 13.9	+11 32.6	61 52.9	-3 47.2	138 52.1	+22 09.7	24 46.9	-14 56.1
1	266	24.9	232 13.5	33.6	76 55.0	47.5	153 54.1	09.6	39 49.6	56.1
2	281	27.4	247 13.2	34.6	91 57.1	47.7	168 56.0	09.5	54 52.2	56.0
3	296	29.9	262 12.8	35.5	106 59.2	47.9	183 57.9	09.5	69 54.8	56.0
4	311	32.3	277 12.5	36.5	122 01.4	48.2	198 59.9	09.4	84 57.4	56.0
5	326	34.8	292 12.1	+11 37.5	137 03.5	-3 48.4	214 01.8	+22 09.3	100 00.1	-14 55.9
6	341	37.2	307 11.7	+11 38.5	152 05.6	-3 48.7	229 03.8	+22 09.2	115 02.7	-14 55.9
7	356	39.7	322 11.4	39.4	167 07.7	48.9	244 05.7	09.2	130 05.3	55.9
8	11	42.2	337 11.0	40.4	182 09.8	49.1	259 07.6	09.1	145 08.0	55.8
9	26	44.6	352 10.7	41.4	197 11.9	49.4	274 09.6	09.0	160 10.6	55.8
10	41	47.1	7 10.3	42.3	212 14.0	49.6	289 11.5	08.9	175 13.2	55.7
11	56	49.6	22 09.9	+11 43.3	227 16.1	-3 49.9	304 13.4	+22 08.9	190 15.8	-14 55.7
12	71	52.0	37 09.6	+11 44.3	242 18.2	-3 50.1	319 15.4	+22 08.8	205 18.5	-14 55.7
13	86	54.5	52 09.2	45.2	257 20.3	50.4	334 17.3	08.7	220 21.1	55.6
14	101	57.0	67 08.9	46.2	272 22.4	50.6	349 19.3	08.7	235 23.7	55.6
15	116	59.4	82 08.5	47.2	287 24.5	50.8	4 21.2	08.6	250 26.3	55.5
16	132	01.9	97 08.1	48.2	302 26.6	51.1	19 23.1	08.5	265 29.0	55.5
17	147	04.3	112 07.8	+11 49.1	317 28.7	-3 51.3	34 25.1	+22 08.4	280 31.6	-14 55.5
18	162	06.8	127 07.4	+11 50.1	332 30.8	-3 51.6	49 27.0	+22 08.4	295 34.2	-14 55.4
19	177	09.3	142 07.0	51.1	347 32.9	51.8	64 28.9	08.3	310 36.8	55.4
20	192	11.7	157 06.7	52.0	2 35.0	52.1	79 30.9	08.2	325 39.5	55.4
21	207	14.2	172 06.3	53.0	17 37.1	52.3	94 32.8	08.1	340 42.1	55.3
22	222	16.7	187 06.0	54.0	32 39.2	52.6	109 34.7	08.1	355 44.7	55.3
23	237	19.1	202 05.6	54.9	47 41.3	52.8	124 36.7	08.0	10 47.3	55.2
24	252	21.6	217 05.2	+11 55.9	62 43.4	-3 53.1	139 38.6	+22 07.9	25 50.0	-14 55.2
Dif	—		-4	+10	+21	-2	+19	-1	+26	0

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: 6 ^d 2 PHE { SD: 14'8 PMG: 17 ^h 16 ^m R°: 42 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	180	26.6	+22	23.6	108	38.6	+9	29.3	60 N	**	**	1	18	2	45	10	07	72	
1	195	26.5		23.9	123	12.3		20.9	58	**	**	1	55	3	04		12	69	
2	210	26.4		24.2	137	46.1		12.4	56	**	**	2	21		19		16	67	
3	225	26.3		24.5	152	19.8	+9	03.9	54	1	11		40		32		19	66	
4	240	26.2		24.8	166	53.6	+8	55.3	52	1	45		2	57		44		23	63
5	255	26.1	+22	25.1	181	27.4	+8	46.7	50	2	09		3	11	3	54	10	26	62
6	270	25.9	+22	25.4	196	01.2	+8	38.1	45	2	51		3	39	4	15	10	32	59
7	285	25.8		25.7	210	35.0		29.4	40	3	19		4	00		32		38	56
8	300	25.7		26.0	225	08.9		20.7	35		41		17		46		42	54	
9	315	25.6		26.3	239	42.7		12.0	30	3	59		32		4	59		46	52
10	330	25.5		26.6	254	16.6	+8	03.2	20	4	27		4	55	5	20		53	49
11	345	25.4	+22	26.9	268	50.5	+7	54.4	10 N	4	48		5	15	5	38	10	59	46
12	0	25.3	+22	27.1	283	24.4	+7	45.5	0	5	06		5	32	5	55	11	05	43
13	15	25.2		27.4	297	58.3		36.7	10 S		22		5	49	6	11		11	40
14	30	25.1		27.7	312	32.2		27.7	20		38		6	05		29		17	37
15	45	25.0		28.0	327	06.1		18.8	30	5	53		23		6	49		24	34
16	60	24.9		28.3	341	40.1		09.8	35	6	02		33		7	01		28	32
17	75	24.8	+22	28.6	356	14.0	+7	00.8	40	6	10		6	44	7	14	11	33	29
18	90	24.7	+22	28.9	10	48.0	+6	51.7	45	6	20		6	57	7	30	11	38	27
19	105	24.5		29.1	25	22.0		42.7	50		31		7	12		50		44	24
20	120	24.4		29.4	39	55.9		33.6	52		36		19		7	59		47	23
21	135	24.3		29.7	54	29.9		24.4	54		41		27		8	09		50	21
22	150	24.2		30.0	69	03.9		15.3	56		47		35		21			54	19
23	165	24.1		30.3	83	37.9	+6	06.1	58	6	53		45		35		11	57	18
24	180	24.0	+22	30.5	98	11.9	+5	56.8	60 S	7	00		7	55	8	51	12	02	15

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 09 ^m 4		Mag: -3.9 PMG: 9 ^h 32 ^m			Mag: -0.4 PMG: 19 ^h 46 ^m			Mag: -1.9 PMG: 14 ^h 40 ^m			Mag: +0.2 PMG: 22 ^h 13 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	252	21.6	217	05.2	+11	55.9	62	43.4	-3	53.1	139	38.6	+22	07.9	25	50.0	-14	55.2
1	267	24.1	232	04.9		56.9	77	45.5		53.3	154	40.5		07.8	40	52.6		55.2
2	282	26.5	247	04.5		57.8	92	47.6		53.6	169	42.5		07.8	55	55.2		55.1
3	297	29.0	262	04.1		58.8	107	49.7		53.8	184	44.4		07.7	70	57.9		55.1
4	312	31.5	277	03.8	+11	59.8	122	51.7		54.1	199	46.4		07.6	86	00.5		55.1
5	327	33.9	292	03.4	+12	00.7	137	53.8	-3	54.3	214	48.3	+22	07.5	101	03.1	-14	55.0
6	342	36.4	307	03.0	+12	01.7	152	55.9	-3	54.6	229	50.2	+22	07.5	116	05.7	-14	55.0
7	357	38.8	322	02.7		02.6	167	58.0		54.8	244	52.2		07.4	131	08.4		54.9
8	12	41.3	337	02.3		03.6	183	00.1		55.1	259	54.1		07.3	146	11.0		54.9
9	27	43.8	352	01.9		04.6	198	02.2		55.3	274	56.0		07.3	161	13.6		54.9
10	42	46.2	7	01.6		05.5	213	04.2		55.6	289	58.0		07.2	176	16.2		54.8
11	57	48.7	22	01.2	+12	06.5	228	06.3	-3	55.8	304	59.9	+22	07.1	191	18.9	-14	54.8
12	72	51.2	37	00.8	+12	07.5	243	08.4	-3	56.1	320	01.8	+22	07.0	206	21.5	-14	54.8
13	87	53.6	52	00.4		08.4	258	10.5		56.3	335	03.8		07.0	221	24.1		54.7
14	102	56.1	67	00.1		09.4	273	12.6		56.6	350	05.7		06.9	236	26.7		54.7
15	117	58.6	81	59.7		10.3	288	14.6		56.8	5	07.6		06.8	251	29.3		54.6
16	133	01.0	96	59.3		11.3	303	16.7		57.1	20	09.6		06.7	266	32.0		54.6
17	148	03.5	111	59.0	+12	12.3	318	18.8	-3	57.3	35	11.5	+22	06.7	281	34.6	-14	54.6
18	163	06.0	126	58.6	+12	13.2	333	20.9	-3	57.6	50	13.4	+22	06.6	296	37.2	-14	54.5
19	178	08.4	141	58.2		14.2	348	22.9		57.8	65	15.4		06.5	311	39.8		54.5
20	193	10.9	156	57.8		15.1	3	25.0		58.1	80	17.3		06.4	326	42.5		54.5
21	208	13.3	171	57.5		16.1	18	27.1		58.3	95	19.2		06.4	341	45.1		54.4
22	223	15.8	186	57.1		17.0	33	29.1		58.6	110	21.2		06.3	356	47.7		54.4
23	238	18.3	201	56.7		18.0	48	31.2		58.9	125	23.1		06.2	11	50.3		54.3
24	253	20.7	216	56.3	+12	19.0	63	33.3	-3	59.1	140	25.0	+22	06.1	26	53.0	-14	54.3
Dif	—		-4		+10		+21		-3		+19		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 58 ^m 5			Edad: 7 ^d 2 SD: 14°8 PMG: 17 ^h 58 ^m	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: 44 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	24.0	+22	30.5	98	11.9	+5	56.8	60 N	21 14	22 44	** **	11 19	72	0 08	15
1	195	23.9		30.8	112	45.9 ¹⁵⁰		47.6	58	20 55	22 05	** **		21 70	05	17
2	210	23.8		31.1	127	19.9 ¹⁵⁰		38.3	56	39	21 39	** **		23 68	02	19
3	225	23.7		31.4	141	53.9 ¹⁵⁰		29.0	54	26	18	22 51		25 66	0 00	20
4	240	23.6		31.7	156	27.9 ¹⁵⁰		19.6	52	14	21 02	22 15		26 65	** **	** **
5	255	23.5	+22	31.9	171	01.9 ¹⁵⁰	+5	10.3	50	20 04	20 48	21 50	11 28	63	** **	** **
6	270	23.3	+22	32.2	185	35.9 ¹⁵⁰	+5	00.9	45	19 43	20 19	21 08	11 31	60	** **	** **
7	285	23.2		32.5	200	09.9 ¹⁵⁰	+4	51.5	40	25	19 58	20 39		34 57	** **	** **
8	300	23.1		32.8	214	43.9 ¹⁵⁰		42.0	35	19 11	40	20 17		36 55	** **	** **
9	315	23.0		33.0	229	17.9 ¹⁵⁰		32.6	30	18 58	26	19 59		38 53	** **	** **
10	330	22.9		33.3	243	51.9 ¹⁵⁰		23.1	20	37	19 02	31		42 49	** **	** **
11	345	22.8	+22	33.6	258	25.9 ¹⁵⁰	+4	13.6	10 N	18 19	18 42	19 09	11 45	46	** **	** **
12	0	22.7	+22	33.9	272	59.9 ¹⁵⁰	+4	04.1	0	18 02	18 25	18 51	11 48	43	** **	** **
13	15	22.6		34.1	287	33.9 ¹⁵⁰	+3	54.5	10 S	17 45	18 08	34		51 40	** **	** **
14	30	22.5		34.4	302	07.9 ¹⁵⁰		44.9	20	28	17 51	19		54 37	** **	** **
15	45	22.3		34.7	316	41.8 ¹⁴⁹		35.3	30	17 07	33	18 03	11 58	33	** **	** **
16	60	22.2		34.9	331	15.8 ¹⁵⁰		25.7	35	16 55	23	17 55	12 00	31	** **	** **
17	75	22.1	+22	35.2	345	49.8 ¹⁵⁰	+3	16.1	40	16 42	17 12	17 46	12 02	30	** **	** **
18	90	22.0	+22	35.5	0	23.7 ¹⁴⁹	+3	06.4	45	16 26	16 59	17 36	12 05	27	** **	** **
19	105	21.9		35.7	14	57.7 ¹⁵⁰	+2	56.7	50	16 06	44	25		08 24	23 58	64
20	120	21.8		36.0	29	31.6 ¹⁴⁹		47.0	52	15 57	37	20		10 22	57	65
21	135	21.7		36.3	44	05.5 ¹⁴⁹		37.3	54	46	29	15		11 21	56	67
22	150	21.6		36.5	58	39.4 ¹⁴⁹		27.6	56	34	21	09		13 19	55	69
23	165	21.5		36.8	73	13.3 ¹⁴⁹		17.9	58	21	11	17 03		15 17	54	71
24	180	21.3	+22	37.1	87	47.2 ¹⁴⁹	+2	08.1	60 S	15 04	16 00	16 56	12 17	15	23 53	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 05 ^m 5		Mag: -3.9 PMG: 9 ^h 32 ^m		Mag: -0.4 PMG: 19 ^h 43 ^m		Mag: -1.9 PMG: 14 ^h 36 ^m		Mag: +0.2 PMG: 22 ^h 09 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	253	20.7	216	56.3	+12	19.0	63	33.3	-3	59.1	140	25.0	+22	06.1	26	53.0	-14	54.3
1	268	23.2	231	56.0		19.9	78	35.3		59.4	155	27.0		06.1	41	55.6		54.3
2	283	25.7	246	55.6		20.9	93	37.4		59.6	170	28.9		06.0	56	58.2		54.2
3	298	28.1	261	55.2		21.8	108	39.5	-3	59.9	185	30.8		05.9	72	00.8		54.2
4	313	30.6	276	54.8		22.8	123	41.5	-4	00.1	200	32.8		05.8	87	03.5		54.2
5	328	33.1	291	54.5	+12	23.7	138	43.6	-4	00.4	215	34.7	+22	05.8	102	06.1	-14	54.1
6	343	35.5	306	54.1	+12	24.7	153	45.7	-4	00.7	230	36.6	+22	05.7	117	08.7	-14	54.1
7	358	38.0	321	53.7		25.6	168	47.7		00.9	245	38.6		05.6	132	11.3		54.0
8	13	40.4	336	53.3		26.6	183	49.8		01.2	260	40.5		05.5	147	13.9		54.0
9	28	42.9	351	53.0		27.5	198	51.8		01.4	275	42.4		05.5	162	16.6		54.0
10	43	45.4	6	52.6		28.5	213	53.9		01.7	290	44.4		05.4	177	19.2		53.9
11	58	47.8	21	52.2	+12	29.4	228	55.9	-4	02.0	305	46.3	+22	05.3	192	21.8	-14	53.9
12	73	50.3	36	51.8	+12	30.4	243	58.0	-4	02.2	320	48.2	+22	05.2	207	24.4	-14	53.9
13	88	52.8	51	51.4		31.3	259	00.1		02.5	335	50.1		05.2	222	27.1		53.8
14	103	55.2	66	51.1		32.3	274	02.1		02.7	350	52.1		05.1	237	29.7		53.8
15	118	57.7	81	50.7		33.2	289	04.2		03.0	5	54.0		05.0	252	32.3		53.7
16	134	00.2	96	50.3		34.2	304	06.2		03.3	20	55.9		04.9	267	34.9		53.7
17	149	02.6	111	49.9	+12	35.1	319	08.3	-4	03.5	35	57.9	+22	04.9	282	37.5	-14	53.7
18	164	05.1	126	49.5	+12	36.1	334	10.3	-4	03.8	50	59.8	+22	04.8	297	40.2	-14	53.6
19	179	07.6	141	49.1		37.0	349	12.4		04.1	66	01.7		04.7	312	42.8		53.6
20	194	10.0	156	48.8		38.0	4	14.4		04.3	81	03.7		04.6	327	45.4		53.6
21	209	12.5	171	48.4		38.9	19	16.4		04.6	96	05.6		04.6	342	48.0		53.5
22	224	14.9	186	48.0		39.9	34	18.5		04.9	111	07.5		04.5	357	50.7		53.5
23	239	17.4	201	47.6		40.8	49	20.5		05.1	126	09.5		04.4	12	53.3		53.5
24	254	19.9	216	47.2	+12	41.8	64	22.6	-4	05.4	141	11.4	+22	04.3	27	55.9	-14	53.4
Dif	—		-4		+10		+21		-3		+19		-1		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 58 ^m 7				Edad: 8 ^d 2 PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/2 PMG: 18 ^h 42 ^m R°: 44 ^m															
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	21.3	+22	37.1	87	47.2	+2	08.1	60 N	** **	1 13	2 43	12 31	74	0 23	15				
1	195	21.2		37.3	102	21.1 ¹⁴⁹	+1	58.3 ⁹⁸	58	** **	1 52	3 02		31 72		22	17			
2	210	21.1		37.6	116	54.9 ¹⁴⁸		48.5 ⁹⁸	56	** **	2 18	18		31 70		21	19			
3	225	21.0		37.8	131	28.7 ¹⁴⁸		38.7 ⁹⁸	54	1 06	38	31		31 68		20	21			
4	240	20.9		38.1	146	02.6 ¹⁴⁹		28.9 ⁹⁸	52	1 42	2 55	43		31 66		19	23			
5	255	20.8	+22	38.4	160	36.4 ¹⁴⁸	+1	19.1 ⁹⁸	50	2 07	3 09	3 53	12 31	65	0 19	23				
6	270	20.7	+22	38.6	175	10.1 ¹⁴⁷	+1	09.2 ⁹⁹	45	2 49	3 38	4 14	12 31	61	0 17	27				
7	285	20.5		38.9	189	43.9 ¹⁴⁸	+0	59.3 ⁹⁹	40	3 18	3 59	32		31 59		16	29			
8	300	20.4		39.1	204	17.6 ¹⁴⁷		49.5 ⁹⁸	35	40	4 17	46		31 56		15	31			
9	315	20.3		39.4	218	51.4 ¹⁴⁸		39.6 ⁹⁹	30	3 58	31	4 59		31 54		14	33			
10	330	20.2		39.6	233	25.1 ¹⁴⁷		29.7 ⁹⁹	20	4 26	4 55	5 20		31 50		12	37			
11	345	20.1	+22	39.9	247	58.7 ¹⁴⁶	+0	19.8 ⁹⁹	10 N	4 48	5 15	5 38	12 31	47	0 10	41				
12	0	20.0	+22	40.2	262	32.4 ¹⁴⁷	+0	09.9 ⁹⁹	0	5 07	5 33	5 55	12 31	44	0 09	43				
13	15	19.9		40.4	277	06.0 ¹⁴⁶	-0	00.1 ¹⁰⁰	10 S	23	5 49	6 12		31 41		07	47			
14	30	19.7		40.7	291	39.6 ¹⁴⁶		10.0 ⁹⁹	20	38	6 06	30		31 38		06	49			
15	45	19.6		40.9	306	13.2 ¹⁴⁶		19.9 ⁹⁹	30	5 54	24	6 50		31 35		04	53			
16	60	19.5		41.2	320	46.8 ¹⁴⁶		29.9 ¹⁰⁰	35	6 03	34	7 02		31 33		02	56			
17	75	19.4	+22	41.4	335	20.3 ¹⁴⁵	-0	39.9 ¹⁰⁰	40	6 11	6 45	7 16	12 32	30	0 01	58				
18	90	19.3	+22	41.7	349	53.8 ¹⁴⁵	-0	49.8 ⁹⁹	45	6 21	6 58	7 32	12 32	27	0 00	60				
19	105	19.2		41.9	4	27.3 ¹⁴⁵	-0	59.8 ¹⁰⁰	50	32	7 14	7 52		32 24		** ** *	**			
20	120	19.1		42.2	19	00.7 ¹⁴⁴	-1	09.8 ¹⁰⁰	52	37	21	8 01		32 23		** ** *	**			
21	135	18.9		42.4	33	34.1 ¹⁴⁴		19.7 ⁹⁹	54	43	28	11		32 21		** ** *	**			
22	150	18.8		42.7	48	07.5 ¹⁴⁴		29.7 ¹⁰⁰	56	48	37	23		32 19		** ** *	**			
23	165	18.7		42.9	62	40.8 ¹⁴³		39.7 ¹⁰⁰	58	6 55	47	37		32 17		** ** *	**			
24	180	18.6	+22	43.2	77	14.1 ¹⁴³	-1	49.7 ¹⁰⁰	60 S	7 02	7 58	8 54	12 32	15	** ** *	**				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 01 ^m 5				Mag: -3.9 PMG: 9 ^h 33 ^m				Mag: -0.4 PMG: 19 ^h 40 ^m				Mag: -1.9 PMG: 14 ^h 33 ^m				Mag: +0.2 PMG: 22 ^h 04 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	254	19.9	216	47.2	+12	41.8	64	22.6	-4	05.4	141	11.4	+22	04.3	27	55.9	-14	53.4		
1	269	22.3	231	46.8		42.7	79	24.6		05.7	156	13.3		04.3	42	58.5		53.4		
2	284	24.8	246	46.5		43.7	94	26.7		05.9	171	15.2		04.2	58	01.1		53.3		
3	299	27.3	261	46.1		44.6	109	28.7		06.2	186	17.2		04.1	73	03.8		53.3		
4	314	29.7	276	45.7		45.6	124	30.7		06.4	201	19.1		04.0	88	06.4		53.3		
5	329	32.2	291	45.3	+12	46.5	139	32.8	-4	06.7	216	21.0	+22	04.0	103	09.0	-14	53.2		
6	344	34.7	306	44.9	+12	47.4	154	34.8	-4	07.0	231	23.0	+22	03.9	118	11.6	-14	53.2		
7	359	37.1	321	44.5		48.4	169	36.9		07.3	246	24.9		03.8	133	14.2		53.2		
8	14	39.6	336	44.1		49.3	184	38.9		07.5	261	26.8		03.7	148	16.9		53.1		
9	29	42.1	351	43.7		50.3	199	40.9		07.8	276	28.8		03.7	163	19.5		53.1		
10	44	44.5	6	43.4		51.2	214	43.0		08.1	291	30.7		03.6	178	22.1		53.1		
11	59	47.0	21	43.0	+12	52.2	229	45.0	-4	08.3	306	32.6	+22	03.5	193	24.7	-14	53.0		
12	74	49.4	36	42.6	+12	53.1	244	47.0	-4	08.6	321	34.5	+22	03.4	208	27.3	-14	53.0		
13	89	51.9	51	42.2		54.0	259	49.0		08.9	336	36.5		03.4	223	30.0		52.9		
14	104	54.4	66	41.8		55.0	274	51.1		09.1	351	38.4		03.3	238	32.6		52.9		
15	119	56.8	81	41.4		55.9	289	53.1		09.4	6	40.3		03.2	253	35.2		52.9		
16	134	59.3	96	41.0		56.9	304	55.1		09.7	21	42.3		03.1	268	37.8		52.8		
17	150	01.8	111	40.6	+12	57.8	319	57.2	-4	10.0	36	44.2	+22	03.0	283	40.4	-14	52.8		
18	165	04.2	126	40.2	+12	58.7	334	59.2	-4	10.2	51	46.1	+22	03.0	298	43.1	-14	52.8		
19	180	06.7	141	39.8	+12	59.7	350	01.2		10.5	66	48.1		02.9	313	45.7		52.7		
20	195	09.2	156	39.4	+13	00.6	5	03.2		10.8	81	50.0		02.8	328	48.3		52.7		
21	210	11.6	171	39.1		01.6	20	05.3		11.0	96	51.9		02.7	343	50.9		52.7		
22	225	14.1	186	38.7		02.5	35	07.3		11.3	111	53.8		02.7	358	53.5		52.6		
23	240	16.5	201	38.3		03.4	50	09.3		11.6	126	55.8		02.6	13	56.2		52.6		
24	255	19.0	216	37.9	+13	04.4	65	11.3	-4	11.9	141	57.7	+22	02.5	28	58.8	-14	52.6		
Dif	—		-4		+9		+20		-3		+19		-1		+26		0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 9 ^d 2	PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'9 R°: 47 ^m										
	PMG: 11 ^h 58 ^m 9					SD: 15'1			SD: 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	m	h m m	m
0	180	18.6	+22 43.2	77	14.1	-1 49.7	100	60 N	21 17	22 50	** **	13 45 77	0 38 16		
1	195	18.5	43.4	91	47.4 ¹⁴³	-1 59.7 ¹⁰⁰	100	58	20 57	22 09	** **	43 74	39 18		
2	210	18.4	43.7	106	20.7 ¹⁴³	-2 09.7 ¹⁰⁰	100	56	42	21 42	** **	41 72	40 20		
3	225	18.3	43.9	120	53.9 ¹⁴²	19.7 ¹⁰⁰	100	54	28	21	22 56	39 70	41 22		
4	240	18.1	44.1	135	27.1 ¹⁴²	29.7 ¹⁰⁰	100	52	16	21 04	22 18	37 69	42 23		
5	255	18.0	+22 44.4	150	00.2 ¹⁴¹	-2 39.6 ⁹⁹	99	50	20 06	20 49	21 53	13 36 66	0 42 25		
6	270	17.9	+22 44.6	164	33.3 ¹⁴¹	-2 49.6 ¹⁰⁰	100	45	19 44	20 21	21 10	13 32 64	0 44 28		
7	285	17.8	44.9	179	06.3 ¹⁴⁰	-2 59.6 ¹⁰⁰	100	40	27	19 59	20 40	30 60	45 31		
8	300	17.7	45.1	193	39.4 ¹⁴¹	-3 09.6 ¹⁰⁰	100	35	19 12	41	18	27 58	46 34		
9	315	17.6	45.3	208	12.3 ¹³⁹	19.6 ¹⁰⁰	100	30	18 59	27	20 00	25 56	47 36		
10	330	17.4	45.6	222	45.3 ¹⁴⁰	29.6 ¹⁰⁰	100	20	38	19 02	19 31	21 53	49 39		
11	345	17.3	+22 45.8	237	18.2 ¹³⁹	-3 39.5 ⁹⁹	99	10 N	18 20	18 43	19 09	13 18 49	0 51 42		
12	0	17.2	+22 46.1	251	51.0 ¹³⁸	-3 49.5 ¹⁰⁰	100	0	18 03	18 25	18 51	13 15 46	0 52 45		
13	15	17.1	46.3	266	23.8 ¹³⁸	-3 59.5 ¹⁰⁰	100	10 S	17 46	18 08	35	12 43	54 48		
14	30	17.0	46.5	280	56.6 ¹³⁸	-4 09.4 ⁹⁹	99	20	28	17 52	19	09 40	55 51		
15	45	16.9	46.8	295	29.3 ¹³⁷	19.4 ¹⁰⁰	100	30	17 07	33	18 03	06 36	57 55		
16	60	16.7	47.0	310	02.0 ¹³⁷	29.3 ⁹⁹	99	35	16 55	23	17 55	04 34	58 57		
17	75	16.6	+22 47.2	324	34.6 ¹³⁶	-4 39.2 ⁹⁹	99	40	16 41	17 12	17 46	13 02 32	0 59 59		
18	90	16.5	+22 47.5	339	07.2 ¹³⁶	-4 49.2 ¹⁰⁰	100	45	16 25	16 59	17 36	12 59 29	1 00 62		
19	105	16.4	47.7	353	39.7 ¹³⁵	-4 59.1 ⁹⁹	99	50	16 05	43	24	56 26	02 65		
20	120	16.3	47.9	8	12.2 ¹³⁵	-5 09.0 ⁹⁹	99	52	15 56	36	19	55 24	02 68		
21	135	16.1	48.2	22	44.7 ¹³⁵	18.8 ⁹⁸	98	54	45	28	14	53 23	03 69		
22	150	16.0	48.4	37	17.0 ¹³³	28.7 ⁹⁹	99	56	33	20	08	51 21	04 71		
23	165	15.9	48.6	51	49.4 ¹³⁴	38.6 ⁹⁹	99	58	19	16 10	17 02	49 20	05 73		
24	180	15.8	+22 48.9	66	21.6 ¹³²	-5 48.4 ⁹⁸	98	60 S	15 03	15 59	16 55	12 47 17	1 06 75		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 57 ^m 6		Mag: -3.9 PMG: 9 ^h 34 ^m		Mag: -0.4 PMG: 19 ^h 37 ^m		Mag: -1.9 PMG: 14 ^h 30 ^m		Mag: +0.2 PMG: 22 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	255	19.0	216 37.9	+13 04.4	65 11.3	-4 11.9	141 57.7	+22 02.5	28 58.8	-14 52.6
1	270	21.5	231 37.5	05.3	80 13.3	12.1	156 59.6	02.4	44 01.4	52.5
2	285	23.9	246 37.1	06.2	95 15.3	12.4	172 01.5	02.4	59 04.0	52.5
3	300	26.4	261 36.7	07.2	110 17.4	12.7	187 03.5	02.3	74 06.6	52.4
4	315	28.9	276 36.3	08.1	125 19.4	13.0	202 05.4	02.2	89 09.3	52.4
5	330	31.3	291 35.9	+13 09.0	140 21.4	-4 13.2	217 07.3	+22 02.1	104 11.9	-14 52.4
6	345	33.8	306 35.5	+13 10.0	155 23.4	-4 13.5	232 09.3	+22 02.0	119 14.5	-14 52.3
7	0	36.3	321 35.1	10.9	170 25.4	13.8	247 11.2	02.0	134 17.1	52.3
8	15	38.7	336 34.7	11.8	185 27.4	14.1	262 13.1	01.9	149 19.7	52.3
9	30	41.2	351 34.3	12.8	200 29.4	14.3	277 15.0	01.8	164 22.3	52.2
10	45	43.7	6 33.9	13.7	215 31.5	14.6	292 17.0	01.7	179 25.0	52.2
11	60	46.1	21 33.5	+13 14.6	230 33.5	-4 14.9	307 18.9	+22 01.7	194 27.6	-14 52.2
12	75	48.6	36 33.1	+13 15.6	245 35.5	-4 15.2	322 20.8	+22 01.6	209 30.2	-14 52.1
13	90	51.0	51 32.7	16.5	260 37.5	15.5	337 22.8	01.5	224 32.8	52.1
14	105	53.5	66 32.3	17.4	275 39.5	15.7	352 24.7	01.4	239 35.4	52.1
15	120	56.0	81 31.9	18.3	290 41.5	16.0	7 26.6	01.4	254 38.0	52.0
16	135	58.4	96 31.5	19.3	305 43.5	16.3	22 28.5	01.3	269 40.7	52.0
17	151	00.9	111 31.1	+13 20.2	320 45.5	-4 16.6	37 30.5	+22 01.2	284 43.3	-14 52.0
18	166	03.4	126 30.7	+13 21.1	335 47.5	-4 16.9	52 32.4	+22 01.1	299 45.9	-14 51.9
19	181	05.8	141 30.3	22.1	350 49.5	17.1	67 34.3	01.0	314 48.5	51.9
20	196	08.3	156 29.9	23.0	5 51.5	17.4	82 36.2	01.0	329 51.1	51.8
21	211	10.8	171 29.5	23.9	20 53.5	17.7	97 38.2	00.9	344 53.7	51.8
22	226	13.2	186 29.1	24.8	35 55.5	18.0	112 40.1	00.8	359 56.4	51.8
23	241	15.7	201 28.7	25.8	50 57.5	18.3	127 42.0	00.7	14 59.0	51.7
24	256	18.1	216 28.3	+13 26.7	65 59.5	-4 18.5	142 43.9	+22 00.7	30 01.6	-14 51.7
Dif	—		-4	+9	+20	-3	+19	-1	+26	0

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: 10 ^d 2 PHE { SD: 15'3 PMG: 20 ^h 13 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	15.8	+22	48.9	66	21.6	-5	48.4	60 N	** **	1 08	2 41	15 02	79	0 54	18		
1	195	15.7		49.1	80	53.9 ¹³³	-5	58.3 ⁹⁹	58	** **	1 49	3 00	14 57	76	0 57	20		
2	210	15.6		49.3	95	26.0 ¹³¹	-6	08.1 ⁹⁸	56	** **	2 16	16	53	74	1 00	22		
3	225	15.4		49.6	109	58.2 ¹³²		17.9 ⁹⁸	54	1 02	37	30	49	72	03	22		
4	240	15.3		49.8	124	30.2 ¹³⁰		27.7 ⁹⁸	52	1 40	2 54	42	46	70	05	26		
5	255	15.2	+22	50.0	139	02.2 ¹³⁰	-6	37.4 ⁹⁷	50	2 05	3 08	3 52	14 42	69	1 07	27		
6	270	15.1	+22	50.2	153	34.2 ¹³⁰	-6	47.2 ⁹⁸	45	2 48	3 37	4 14	14 36	65	1 12	31		
7	285	15.0		50.5	168	06.1 ¹²⁹	-6	56.9 ⁹⁷	40	3 18	3 59	31	30	63	16	33		
8	300	14.8		50.7	182	37.9 ¹²⁸	-7	06.6 ⁹⁷	35	40	4 16	46	25	60	20	35		
9	315	14.7		50.9	197	09.7 ¹²⁸		16.3 ⁹⁷	30	3 58	31	4 58	21	58	23	37		
10	330	14.6		51.1	211	41.4 ¹²⁷		25.9 ⁹⁶	20	4 26	4 55	5 20	14	54	28	41		
11	345	14.5	+22	51.4	226	13.0 ¹²⁶	-7	35.6 ⁹⁷	10 N	4 48	5 15	5 38	14 07	52	1 33	44		
12	0	14.4	+22	51.6	240	44.6 ¹²⁶	-7	45.2 ⁹⁶	0	5 07	5 33	5 55	14 01	49	1 37	47		
13	15	14.2		51.8	255	16.1 ¹²⁵	-7	54.8 ⁹⁶	10 S	23	5 50	6 12	13 55	46	42	50		
14	30	14.1		52.0	269	47.6 ¹²⁵	-8	04.3 ⁹⁵	20	39	6 06	30	49	43	46	54		
15	45	14.0		52.2	284	19.0 ¹²⁴		13.9 ⁹⁶	30	5 55	25	6 51	42	40	52	57		
16	60	13.9		52.5	298	50.3 ¹²³		23.4 ⁹⁵	35	6 03	35	7 03	38	37	55	59		
17	75	13.8	+22	52.7	313	21.6 ¹²³	-8	32.9 ⁹⁵	40	6 12	6 46	7 17	13 34	35	1 58	62		
18	90	13.6	+22	52.9	327	52.8 ¹²²	-8	42.3 ⁹⁴	45	6 22	6 59	7 33	13 28	33	2 02	65		
19	105	13.5		53.1	342	23.9 ¹²¹	-8	51.7 ⁹⁴	50	34	7 15	7 53	22	29	07	68		
20	120	13.4		53.3	356	55.0 ¹²¹	-9	01.1 ⁹⁴	52	39	22	8 03	19	28	10	69		
21	135	13.3		53.5	11	26.0 ¹²⁰		10.5 ⁹⁴	54	44	30	13	16	26	12	71		
22	150	13.2		53.8	25	56.9 ¹¹⁹		19.8 ⁹³	56	50	39	25	12	25	15	73		
23	165	13.0		54.0	40	27.8 ¹¹⁹		29.1 ⁹³	58	6 57	7 49	40	09	22	18	75		
24	180	12.9	+22	54.2	54	58.6 ¹¹⁸	-9	38.3 ⁹²	60 S	7 04	8 00	8 56	13 04	20	2 21	78		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 53 ^m 7	Mag: -3.9 PMG: 9 ^h 34 ^m	Mag: -0.3 PMG: 19 ^h 33 ^m	Mag: -1.9 PMG: 14 ^h 27 ^m	Mag: +0.2 PMG: 21 ^h 56 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	256	18.1	216	28.3	65	59.5	142	43.9	30	01.6
1	271	20.6	231	27.9	81	01.5	157	45.9	45	04.2
2	286	23.1	246	27.5	96	03.5	172	47.8	60	06.8
3	301	25.5	261	27.1	111	05.5	187	49.7	75	09.4
4	316	28.0	276	26.6	126	07.5	202	51.6	90	12.1
5	331	30.5	291	26.2	141	09.5	217	53.6	105	14.7
6	346	32.9	306	25.8	156	11.4	232	55.5	120	17.3
7	1	35.4	321	25.4	171	13.4	247	57.4	135	19.9
8	16	37.9	336	25.0	186	15.4	262	59.3	150	22.5
9	31	40.3	351	24.6	201	17.4	278	01.3	165	25.1
10	46	42.8	6	24.2	216	19.4	293	03.2	180	27.8
11	61	45.3	21	23.8	231	21.4	308	05.1	195	30.4
12	76	47.7	36	23.4	246	23.4	323	07.1	210	33.0
13	91	50.2	51	23.0	261	25.3	338	09.0	225	35.6
14	106	52.6	66	22.6	276	27.3	353	10.9	240	38.2
15	121	55.1	81	22.1	291	29.3	8	12.8	255	40.8
16	136	57.6	96	21.7	306	31.3	23	14.7	270	43.4
17	152	00.0	111	21.3	321	33.3	38	16.7	285	46.1
18	167	02.5	126	20.9	336	35.3	53	18.6	300	48.7
19	182	05.0	141	20.5	351	37.2	68	20.5	315	51.3
20	197	07.4	156	20.1	6	39.2	83	22.4	330	53.9
21	212	09.9	171	19.7	21	41.2	98	24.4	345	56.5
22	227	12.4	186	19.3	36	43.2	113	26.3	0	59.1
23	242	14.8	201	18.8	51	45.1	128	28.2	16	01.7
24	257	17.3	216	18.4	66	47.1	143	30.1	31	04.4
Dif	—	-4	+9	+20	-3	+19	-1	+26	0	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 2			Edad: 11 ^d 2 PHE { 4 ^h : 57 ⁰ 12 ^h : 57 ³ 20 ^h : 57 ⁶ R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	12.9	+22 54.2	54 58.6		-9 38.3	60 N	21 19	22 56	** **	16 21 79		1 12 21	
1	195	12.8		69 29.3 ¹¹⁷		47.6 ⁹³	58	21 00	22 12	** **	13 78		17 24	
2	210	12.7		84 00.0 ¹¹⁷		-9 56.7 ⁹¹	56	20 44	21 44	** **	07 75		22 27	
3	225	12.6		98 30.5 ¹¹⁵		-10 05.9 ⁹²	54	30	23	23 01	16 01 73		27 28	
4	240	12.4		113 01.1 ¹¹⁶		15.0 ⁹¹	52	18	21 06	22 21	15 56 71		31 30	
5	255	12.3	+22 55.2	127 31.5 ¹¹⁴		-10 24.1 ⁹¹	50	20 07	20 51	21 55	15 51 70		1 34 32	
6	270	12.2	+22 55.4	142 01.9 ¹¹⁴		-10 33.1 ⁹⁰	45	19 45	20 22	21 11	15 41 67		1 43 34	
7	285	12.1		156 32.1 ¹¹²		42.1 ⁹⁰	40	28	20 00	20 42	33 64		49 37	
8	300	12.0		171 02.4 ¹¹³		51.0 ⁸⁹	35	13	19 43	19	25 63		1 55 39	
9	315	11.8		185 32.5 ¹¹¹		-10 59.9 ⁸⁹	30	19 00	28	20 01	19 61		2 00 41	
10	330	11.7		200 02.6 ¹¹¹		-11 08.7 ⁸⁸	20	18 39	19 03	19 32	15 08 58		09 45	
11	345	11.6	+22 56.5	214 32.5 ¹⁰⁹		-11 17.6 ⁸⁹	10 N	18 20	18 43	19 10	14 59 54		2 17 47	
12	0	11.5	+22 56.7	229 02.5 ¹¹⁰		-11 26.3 ⁸⁷	0	18 03	18 25	18 51	14 50 52		2 24 51	
13	15	11.3		243 32.3 ¹⁰⁸		35.0 ⁸⁷	10 S	17 46	18 09	35	41 50		32 53	
14	30	11.2		258 02.1 ¹⁰⁸		43.7 ⁸⁷	20	28	17 52	19	32 47		40 55	
15	45	11.1		272 31.7 ¹⁰⁶		-11 52.3 ⁸⁶	30	17 07	33	18 03	22 43		49 59	
16	60	11.0		287 01.3 ¹⁰⁶		-12 00.8 ⁸⁵	35	16 55	23	17 54	15 42		2 54 61	
17	75	10.9	+22 57.7	301 30.9 ¹⁰⁶		-12 09.4 ⁸⁶	40	16 41	17 11	17 45	14 09 39		3 00 63	
18	90	10.7	+22 57.9	316 00.3 ¹⁰⁴		-12 17.8 ⁸⁴	45	16 25	16 58	17 35	14 01 37		3 07 66	
19	105	10.6		330 29.7 ¹⁰⁴		26.2 ⁸⁴	50	16 04	43	24	13 51 35		15 69	
20	120	10.5		344 58.9 ¹⁰²		34.5 ⁸³	52	15 55	35	19	47 33		19 71	
21	135	10.4		359 28.1 ¹⁰²		42.8 ⁸³	54	44	27	13	42 31		23 72	
22	150	10.2		58.7 ¹⁰²		51.1 ⁸³	56	32	19	07	37 29		28 74	
23	165	10.1		58.9 ¹⁰⁰		-12 59.2 ⁸¹	58	18	16 09	17 01	31 27		33 77	
24	180	10.0	+22 59.1	42 55.3 ¹⁰⁰		-13 07.3 ⁸¹	60 S	15 01	15 57	16 54	13 24 25		3 39 79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 49 ^m 7		Mag: -3.9 PMG: 9 ^h 35 ^m		Mag: -0.3 PMG: 19 ^h 30 ^m		Mag: -1.9 PMG: 14 ^h 24 ^m		Mag: +0.2 PMG: 21 ^h 52 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	257 17.3	216 18.4	+13 48.7	66 47.1	-4 25.4	143 30.1	+21 58.8	31 04.4	-14 50.9	
1	272 19.8	231 18.0	49.7	81 49.1	25.7	158 32.1	58.7	46 07.0	50.8	
2	287 22.2	246 17.6	50.6	96 51.1	26.0	173 34.0	58.6	61 09.6	50.8	
3	302 24.7	261 17.2	51.5	111 53.0	26.3	188 35.9	58.5	76 12.2	50.8	
4	317 27.1	276 16.8	52.4	126 55.0	26.6	203 37.8	58.5	91 14.8	50.7	
5	332 29.6	291 16.3	+13 53.3	141 57.0	-4 26.9	218 39.8	+21 58.4	106 17.4	-14 50.7	
6	347 32.1	306 15.9	+13 54.2	156 58.9	-4 27.2	233 41.7	+21 58.3	121 20.0	-14 50.7	
7	2 34.5	321 15.5	55.1	172 00.9	27.5	248 43.6	58.2	136 22.7	50.6	
8	17 37.0	336 15.1	56.0	187 02.9	27.8	263 45.5	58.1	151 25.3	50.6	
9	32 39.5	351 14.7	56.9	202 04.8	28.1	278 47.5	58.1	166 27.9	50.6	
10	47 41.9	6 14.2	57.9	217 06.8	28.3	293 49.4	58.0	181 30.5	50.5	
11	62 44.4	21 13.8	+13 58.8	232 08.8	-4 28.6	308 51.3	+21 57.9	196 33.1	-14 50.5	
12	77 46.9	36 13.4	+13 59.7	247 10.7	-4 28.9	323 53.2	+21 57.8	211 35.7	-14 50.5	
13	92 49.3	51 13.0	+14 00.6	262 12.7	29.2	338 55.1	57.8	226 38.3	50.4	
14	107 51.8	66 12.6	01.5	277 14.6	29.5	353 57.1	57.7	241 40.9	50.4	
15	122 54.2	81 12.1	02.4	292 16.6	29.8	8 59.0	57.6	256 43.6	50.4	
16	137 56.7	96 11.7	03.3	307 18.6	30.1	24 00.9	57.5	271 46.2	50.3	
17	152 59.2	111 11.3	+14 04.2	322 20.5	-4 30.4	39 02.8	+21 57.4	286 48.8	-14 50.3	
18	168 01.6	126 10.9	+14 05.1	337 22.5	-4 30.7	54 04.8	+21 57.4	301 51.4	-14 50.3	
19	183 04.1	141 10.4	06.0	352 24.4	31.0	69 06.7	57.3	316 54.0	50.2	
20	198 06.6	156 10.0	06.9	7 26.4	31.3	84 08.6	57.2	331 56.6	50.2	
21	213 09.0	171 09.6	07.8	22 28.3	31.6	99 10.5	57.1	346 59.2	50.2	
22	228 11.5	186 09.2	08.7	37 30.3	31.9	114 12.4	57.0	2 01.8	50.1	
23	243 14.0	201 08.7	09.6	52 32.2	32.2	129 14.4	57.0	17 04.5	50.1	
24	258 16.4	216 08.3	+14 10.5	67 34.2	-4 32.5	144 16.3	+21 56.9	32 07.1	-14 50.1	
Dif	—	-4	+9	+20	-3	+19	-1	+26	0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8			Edad: 12 ^d 2 PHE { 4 ^h : 57/8 12 ^h : 58/1 20 ^h : 58/4																
	PMG: 11 ^h 59 ^m 4			SD: 15 ^h 7 PMG: 21 ^h 55 ^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	180	10.0	+22 59.1	42	55.3	-13 07.3	81	60 N	** **	1	03	2	39	17	40	78	1 33 29			
1	195	09.9	59.3	57	24.1	15.4	80	58	** **	1	46	2	59	31	75	41	31			
2	210	09.7	59.5	71	52.9	23.4	79	56	** **	2	14	3	15	22	74	49	32			
3	225	09.6	59.7	86	21.6	31.3	78	54	0	57	35	29	14	72	1	55	34			
4	240	09.5	+22 59.9	100	50.3	39.1	78	52	1	37	2	53	41	07	71	2	01	36		
5	255	09.4	+23 00.1	115	18.8	-13 46.9	78	50	2	03	3	07	3	51	17	01	70	2 06 37		
6	270	09.3	+23 00.2	129	47.3	-13 54.6	77	45	2	47	3	36	4	13	16	48	67	2 17 40		
7	285	09.1	00.4	144	15.7	-14 02.3	77	40	3	17	3	58	31	37	65	26	43			
8	300	09.0	00.6	158	44.0	09.9	76	35	40	4	16	46	28	63	34	45				
9	315	08.9	00.8	173	12.2	17.4	75	30	3	58	31	4	58	20	62	41	47			
10	330	08.8	01.0	187	40.3	24.8	74	20	4	26	4	55	5	20	16	06	59	2 54 49		
11	345	08.6	+23 01.2	202	08.4	-14 32.2	74	10 N	4	49	5	16	5	39	15	53	58	3 04 52		
12	0	08.5	+23 01.4	216	36.3	-14 39.5	73	0	5	07	5	33	5	56	15	42	56	3 15 53		
13	15	08.4	01.6	231	04.2	46.7	72	10 S	24	5	50	6	13	31	53	25	56			
14	30	08.3	01.8	245	32.0	-14 53.9	72	20	40	6	07	31	19	51	35	59				
15	45	08.1	01.9	259	59.7	-15 00.9	70	30	5	56	26	6	52	15	05	49	48	61		
16	60	08.0	02.1	274	27.4	07.9	70	35	6	04	36	7	04	14	57	48	3	55	63	
17	75	07.9	+23 02.3	288	54.9	-15 14.8	69	40	6	13	6	47	7	18	14	48	46	4	03	65
18	90	07.8	+23 02.5	303	22.4	-15 21.7	69	45	6	24	7	01	7	34	14	38	44	4	13	67
19	105	07.6	02.7	317	49.8	28.4	67	50	35	16	7	55	26	41	24	70				
20	120	07.5	02.9	332	17.1	35.1	67	52	40	24	8	04	20	40	30	71				
21	135	07.4	03.0	346	44.3	41.7	66	54	46	32	15	13	39	35	73					
22	150	07.3	03.2	1	11.5	48.1	64	56	52	40	27	14	06	37	42	75				
23	165	07.1	03.4	15	38.5	-15 54.6	65	58	6	58	7	50	42	13	58	35	50	76		
24	180	07.0	+23 03.6	30	05.5	-16 00.9	63	60 S	7	05	8	02	8	58	13	49	33	4	58	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 6 ^h 45 ^m 8		Mag: -3.9 PMG: 9 ^h 36 ^m		Mag: -0.3 PMG: 19 ^h 27 ^m		Mag: -1.9 PMG: 14 ^h 21 ^m		Mag: +0.2 PMG: 21 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	258	16.4	216	08.3	+14 10.5	67	34.2	-4 32.5	144	16.3	+21 56.9	32	07.1	-14 50.1
1	273	18.9	231	07.9	11.4	82	36.1	32.8	159	18.2	56.8	47	09.7	50.0
2	288	21.4	246	07.5	12.3	97	38.1	33.1	174	20.1	56.7	62	12.3	50.0
3	303	23.8	261	07.0	13.2	112	40.0	33.4	189	22.1	56.6	77	14.9	50.0
4	318	26.3	276	06.6	14.1	127	42.0	33.7	204	24.0	56.6	92	17.5	49.9
5	333	28.7	291	06.2	+14 15.0	142	43.9	-4 34.0	219	25.9	+21 56.5	107	20.1	-14 49.9
6	348	31.2	306	05.8	+14 15.9	157	45.9	-4 34.3	234	27.8	+21 56.4	122	22.7	-14 49.9
7	3	33.7	321	05.3	16.8	172	47.8	34.6	249	29.7	56.3	137	25.3	49.8
8	18	36.1	336	04.9	17.7	187	49.8	34.9	264	31.7	56.2	152	27.9	49.8
9	33	38.6	351	04.5	18.6	202	51.7	35.2	279	33.6	56.2	167	30.6	49.8
10	48	41.1	6	04.0	19.5	217	53.6	35.5	294	35.5	56.1	182	33.2	49.7
11	63	43.5	21	03.6	+14 20.4	232	55.6	-4 35.8	309	37.4	+21 56.0	197	35.8	-14 49.7
12	78	46.0	36	03.2	+14 21.3	247	57.5	-4 36.1	324	39.3	+21 55.9	212	38.4	-14 49.7
13	93	48.5	51	02.7	22.2	262	59.5	36.4	339	41.3	55.8	227	41.0	49.6
14	108	50.9	66	02.3	23.1	278	01.4	36.7	354	43.2	55.8	242	43.6	49.6
15	123	53.4	81	01.9	24.0	293	03.3	37.0	9	45.1	55.7	257	46.2	49.6
16	138	55.9	96	01.4	24.9	308	05.3	37.3	24	47.0	55.6	272	48.8	49.5
17	153	58.3	111	01.0	+14 25.8	323	07.2	-4 37.6	39	49.0	+21 55.5	287	51.4	-14 49.5
18	169	00.8	126	00.6	+14 26.7	338	09.1	-4 37.9	54	50.9	+21 55.4	302	54.0	-14 49.5
19	184	03.2	141	00.1	27.6	353	11.1	38.2	69	52.8	55.4	317	56.7	49.4
20	199	05.7	155	59.7	28.4	8	13.0	38.5	84	54.7	55.3	332	59.3	49.4
21	214	08.2	170	59.3	29.3	23	14.9	38.8	99	56.6	55.2	348	01.9	49.4
22	229	10.6	185	58.8	30.2	38	16.9	39.2	114	58.6	55.1	3	04.5	49.4
23	244	13.1	200	58.4	31.1	53	18.8	39.5	130	00.5	55.0	18	07.1	49.3
24	259	15.6	215	58.0	+14 32.0	68	20.7	-4 39.8	145	02.4	+21 54.9	33	09.7	-14 49.3
Dif	—		-4 +9		+19 -3		+19 -1		+19 -1		+26 0			

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: 13 ^d 2 PHE { SD: 15°9 PMG: 22 ^h 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	07.0	+23	03.6	30	05.5	-16	00.9	60 N	21 22	23 01	** **	18 58	71	2 02	38	
1	195	06.9		03.8	44	32.4	79	07.1	58	21 02	22 15	** **	46	70	12	40	
2	210	06.8		03.9	58	59.2	78	13.2	56	20 45	21 47	** **	36	68	21	42	
3	225	06.6		04.1	73	25.9	77	19.3	54	31	25	23 06	26	68	29	43	
4	240	06.5		04.3	87	52.6	77	25.2	52	19	21 08	22 24	18	67	37	44	
5	255	06.4	+23	04.5	102	19.1	75	-16	31.1	50	20 09	20 53	21 57	18 11	66	2 43	45
6	270	06.3	+23	04.6	116	45.6	75	-16	36.9	45	19 46	20 24	21 13	17 55	65	2 57	48
7	285	06.1		04.8	131	12.0	74	42.5	40	29	20 01	20 43	20 43	42	64	3 09	49
8	300	06.0		05.0	145	38.4	74	48.1	35	14	19 44	20	20	31	63	19	50
9	315	05.9		05.2	160	04.6	72	53.6	30	19 01	28	20 02	22	62	28	51	
10	330	05.8		05.3	174	30.8	72	-16	58.9	20	18 39	19 04	19 33	17 05	61	43	53
11	345	05.6	+23	05.5	188	56.9	71	-17	04.2	10 N	18 21	18 44	19 11	16 51	60	3 56	55
12	0	05.5	+23	05.7	203	22.9	70	-17	09.4	0	18 03	18 26	18 52	16 38	58	4 08	57
13	15	05.4		05.8	217	48.9	70	14.4	50	10 S	17 46	18 09	35	24	58	21	58
14	30	05.3		06.0	232	14.7	68	19.4	20	28	17 52	19	19	16 10	57	34	60
15	45	05.1		06.2	246	40.5	68	24.3	30	17 07	33	18 03	18 03	15 54	55	49	62
16	60	05.0		06.4	261	06.3	68	29.0	35	16 55	23	17 54	17 54	45	54	4 58	63
17	75	04.9	+23	06.5	275	31.9	66	-17	33.7	40	16 41	17 11	17 45	15 34	53	5 08	65
18	90	04.7	+23	06.7	289	57.5	66	-17	38.2	45	16 24	16 58	17 35	15 22	52	5 20	66
19	105	04.6		06.9	304	23.0	65	42.6	50	16 04	42	24	24	07	50	34	68
20	120	04.5		07.0	318	48.4	64	47.0	52	15 54	35	18	18	15 00	49	41	69
21	135	04.4		07.2	333	13.8	64	51.2	42	54	43	27	13	14 52	48	48	70
22	150	04.2		07.4	347	39.1	63	55.3	41	56	31	18	07	43	48	5 57	71
23	165	04.1		07.5	2	04.3	62	-17	59.2	39	17	16 08	17 00	33	47	6 06	73
24	180	04.0	+23	07.7	16	29.5	62	-18	03.1	39	15 00	15 57	16 53	14 22	45	6 17	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 41 ^m 9		Mag: -3.9 PMG: 9 ^h 36 ^m		Mag: -0.3 PMG: 19 ^h 24 ^m		Mag: -1.9 PMG: 14 ^h 18 ^m		Mag: +0.2 PMG: 21 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	259	15.6	215	58.0	+14	32.0	68	20.7	-4	39.8	145	02.4	+21	54.9	33	09.7	-14	49.3
1	274	18.0	230	57.5		32.9	83	22.7		40.1	160	04.3		54.9	48	12.3		49.3
2	289	20.5	245	57.1		33.8	98	24.6		40.4	175	06.2		54.8	63	14.9		49.2
3	304	23.0	260	56.6		34.7	113	26.5		40.7	190	08.2		54.7	78	17.5		49.2
4	319	25.4	275	56.2		35.6	128	28.4		41.0	205	10.1		54.6	93	20.1		49.2
5	334	27.9	290	55.8	+14	36.4	143	30.4	-4	41.3	220	12.0	+21	54.5	108	22.7	-14	49.1
6	349	30.4	305	55.3	+14	37.3	158	32.3	-4	41.6	235	13.9	+21	54.5	123	25.4	-14	49.1
7	4	32.8	320	54.9		38.2	173	34.2		41.9	250	15.8		54.4	138	28.0		49.1
8	19	35.3	335	54.4		39.1	188	36.1		42.2	265	17.7		54.3	153	30.6		49.0
9	34	37.7	350	54.0		40.0	203	38.1		42.5	280	19.7		54.2	168	33.2		49.0
10	49	40.2	5	53.6		40.9	218	40.0		42.8	295	21.6		54.1	183	35.8		49.0
11	64	42.7	20	53.1	+14	41.8	233	41.9	-4	43.2	310	23.5	+21	54.1	198	38.4	-14	48.9
12	79	45.1	35	52.7	+14	42.6	248	43.8	-4	43.5	325	25.4	+21	54.0	213	41.0	-14	48.9
13	94	47.6	50	52.2		43.5	263	45.7		43.8	340	27.3		53.9	228	43.6		48.9
14	109	50.1	65	51.8		44.4	278	47.7		44.1	355	29.3		53.8	243	46.2		48.8
15	124	52.5	80	51.3		45.3	293	49.6		44.4	10	31.2		53.7	258	48.8		48.8
16	139	55.0	95	50.9		46.2	308	51.5		44.7	25	33.1		53.6	273	51.4		48.8
17	154	57.5	110	50.5	+14	47.0	323	53.4	-4	45.0	40	35.0	+21	53.6	288	54.0	-14	48.7
18	169	59.9	125	50.0	+14	47.9	338	55.3	-4	45.3	55	36.9	+21	53.5	303	56.6	-14	48.7
19	185	02.4	140	49.6		48.8	353	57.2		45.6	70	38.9		53.4	318	59.2		48.7
20	200	04.8	155	49.1		49.7	8	59.1		46.0	85	40.8		53.3	334	01.9		48.6
21	215	07.3	170	48.7		50.6	24	01.0		46.3	100	42.7		53.2	349	04.5		48.6
22	230	09.8	185	48.2		51.4	39	03.0		46.6	115	44.6		53.2	4	07.1		48.6
23	245	12.2	200	47.8		52.3	54	04.9		46.9	130	46.5		53.1	19	09.7		48.6
24	260	14.7	215	47.3	+14	53.2	69	06.8	-4	47.2	145	48.4	+21	53.0	34	12.3	-14	48.5
Dif	—		-4		+9		+19		-3		+19		-1		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 8				Edad: 14 ^d 2 PHE { 4 ^h : 59 ^h 5 12 ^h : 59 ^h 7 20 ^h : 59 ^h 9 PMG: 23 ^h 51 ^m R°: 60 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	04.0	+23	07.7	16	29.5	-18	03.1	60 N	** **	0 59	2 38	20 09	59	2 40	51	
1	195	03.9		07.8	30	54.6		06.9	58	** **	1 44	2 58	19 56	59	2 52	52	
2	210	03.7		08.0	45	19.6		10.5	56	** **	2 13	3 14		44	60	3 03	53
3	225	03.6		08.2	59	44.6		14.0	54	0 54	34	28		34	60	12	55
4	240	03.5		08.3	74	09.5		17.4	52	1 35	2 52	40		25	60	21	54
5	255	03.3	+23	08.5	88	34.3	58	-18	50	2 02	3 06	3 51	19 17	60	3 28	55	
6	270	03.2	+23	08.6	102	59.1	58	-18	45	2 46	3 36	4 13	19 00	60	3 45	55	
7	285	03.1		08.8	117	23.8	57		40	3 16	3 58	31	18 46	60	3 58	57	
8	300	03.0		08.9	131	48.5	57		35		39	4 16		34	60	4 09	57
9	315	02.8		09.1	146	13.1	56		30	3 58	31	4 58		24	60	19	58
10	330	02.7		09.3	160	37.6	55		20	4 26	4 56	5 20	18 06	61		36	59
11	345	02.6	+23	09.4	175	02.1	55	-18	10 N	4 49	5 16	5 39	17 51	60	4 51	59	
12	0	02.4	+23	09.6	189	26.6	55	-18	0	5 08	5 34	5 56	17 36	61	5 05	60	
13	15	02.3		09.7	203	51.0	54		10 S		5 51	6 13		22	60	19	60
14	30	02.2		09.9	218	15.3	53		20	40	6 08	32	17 07	60	34	61	
15	45	02.1		10.0	232	39.6	53		30	5 57	26	6 53	16 49	60	5 51	62	
16	60	01.9		10.2	247	03.9	53		35	6 05	37	7 05		39	60	6 01	62
17	75	01.8	+23	10.3	261	28.0	51	-18	40	6 14	6 48	7 19	16 27	60	6 13	62	
18	90	01.7	+23	10.5	275	52.2	52	-18	45	6 25	7 02	7 35	16 14	60	6 26	63	
19	105	01.5		10.6	290	16.3	51		50		36	18	15 57	60	42	64	
20	120	01.4		10.8	304	40.4	51		52	41	25	8 06		49	60	50	64
21	135	01.3		10.9	319	04.4	50		54	47	33	16		40	60	6 58	64
22	150	01.2		11.1	333	28.4	50		56		53	42		29		31	59
23	165	01.0		11.2	347	52.3	49		58	6 59	7 52	8 43	20 59		19	65	
24	180	00.9	+23	11.4	2	16.2	49	-18	60 S	7 07	8 03	9 00	15 07	59	7 31	66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 6 ^h 37 ^m 9		Mag: -3.9 PMG: 9 ^h 37 ^m		Mag: -0.3 PMG: 19 ^h 21 ^m		Mag: -1.9 PMG: 14 ^h 15 ^m		Mag: +0.3 PMG: 21 ^h 39 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	260	14.7	215	47.3	+14	69	06.8	-4	145	48.4	+21	53.0	34	12.3	-14	48.5	
1	275	17.2	230	46.9		84	08.7		160	50.4		52.9	49	14.9		48.5	
2	290	19.6	245	46.4		99	10.6		175	52.3		52.8	64	17.5		48.5	
3	305	22.1	260	46.0		114	12.5		190	54.2		52.7	79	20.1		48.4	
4	320	24.6	275	45.5		129	14.4		205	56.1		52.7	94	22.7		48.4	
5	335	27.0	290	45.1	+14	144	16.3	-4	220	58.0	+21	52.6	109	25.3	-14	48.4	
6	350	29.5	305	44.6	+14	159	18.2	-4	235	59.9	+21	52.5	124	27.9	-14	48.3	
7	5	32.0	320	44.2	+14	174	20.1		251	01.9		52.4	139	30.5		48.3	
8	20	34.4	335	43.7	+15	189	22.0		266	03.8		52.3	154	33.1		48.3	
9	35	36.9	350	43.3		204	23.9		281	05.7		52.3	169	35.7		48.2	
10	50	39.3	5	42.8		219	25.8		296	07.6		52.2	184	38.3		48.2	
11	65	41.8	20	42.4	+15	234	27.7	-4	311	09.5	+21	52.1	199	40.9	-14	48.2	
12	80	44.3	35	41.9	+15	249	29.6	-4	326	11.5	+21	52.0	214	43.5	-14	48.1	
13	95	46.7	50	41.5		264	31.5		341	13.4		51.9	229	46.1		48.1	
14	110	49.2	65	41.0		279	33.4		356	15.3		51.8	244	48.7		48.1	
15	125	51.7	80	40.6		294	35.3		11	17.2		51.8	259	51.4		48.1	
16	140	54.1	95	40.1		309	37.2		26	19.1		51.7	274	54.0		48.0	
17	155	56.6	110	39.6	+15	324	39.1	-4	41	21.0	+21	51.6	289	56.6	-14	48.0	
18	170	59.1	125	39.2	+15	339	41.0	-4	56	23.0	+21	51.5	304	59.2	-14	48.0	
19	186	01.5	140	38.7		354	42.8		71	24.9		51.4	320	01.8		47.9	
20	201	04.0	155	38.3		9	44.7		86	26.8		51.3	335	04.4		47.9	
21	216	06.5	170	37.8		24	46.6		101	28.7		51.3	350	07.0		47.9	
22	231	08.9	185	37.4		39	48.5		116	30.6		51.2	5	09.6		47.8	
23	246	11.4	200	36.9		54	50.4		131	32.5		51.1	20	12.2		47.8	
24	261	13.8	215	36.4	+15	69	52.3	-4	146	34.4	+21	51.0	35	14.8	-14	47.8	
Dif	—		-5		+9		+19		-3		+19		-1		+26		0

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: 15 ^d 2 PHE { 4 ^h : 60 ^l 1 12 ^h : 60 ^l 2 20 ^h : 60 ^l 3 PMG: *** **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	h m m	h m m		
0	180	00.9	+23	11.4	2	16.2	–18	59.4	60 N	21 23	23 05	*** **	21 08 46		3 31 66			
1	195	00.8		11.5	16	40.1	49	–19 00.2	58	21 03	22 18	*** **	20 55 48		44 66			
2	210	00.6		11.7	31	03.9	48	00.8	56	20 47	21 49	*** **	44 49		3 56 65			
3	225	00.5		11.8	45	27.8	49	01.3	54	33	27	23 10	34 50		4 06 65			
4	240	00.4		11.9	59	51.5	47	01.6	52	21	21 09	22 26	25 51		15 65			
5	255	00.3	+23	12.1	74	15.3	48	–19 01.9	50	20 10	20 54	21 59	20 17 52		4 23 65			
6	270	00.1	+23	12.2	88	39.0	47	–19 01.9	45	19 48	20 25	21 14	20 00 54		4 40 64			
7	285	00.0		12.4	103	02.7	47	01.9	40	30	20 02	20 44	19 46 55		4 55 63			
8	299	59.9		12.5	117	26.4	47	01.7	35	15	19 44	21	34 56		5 06 63			
9	314	59.7		12.6	131	50.0	46	01.4	30	19 02	29	20 03	24 57		17 62			
10	329	59.6		12.8	146	13.7	47	00.9	20	18 40	19 05	19 34	19 07 58		35 62			
11	344	59.5	+23	12.9	160	37.3	46	–19 00.3	10 N	18 21	18 44	19 11	18 51 60		5 50 62			
12	359	59.3	+23	13.1	175	00.9	46	–18 59.6	0	18 04	18 26	18 52	18 37 60		6 05 61			
13	14	59.2		13.2	189	24.4	45	58.8	10 S	17 46	18 09	36	22 62		19 61			
14	29	59.1		13.3	203	48.0	46	57.8	20	28	17 52	19	18 07 63		35 59			
15	44	59.0		13.5	218	11.6	46	56.6	30	17 07	33	18 03	17 49 65		6 53 58			
16	59	58.8		13.6	232	35.1	45	55.4	35	16 55	23	17 55	39 65		7 03 58			
17	74	58.7	+23	13.7	246	58.6	45	–18 54.0	40	16 41	17 11	17 45	17 27 67		7 15 57			
18	89	58.6	+23	13.9	261	22.2	46	–18 52.4	45	16 24	16 58	17 35	17 14 67		7 29 57			
19	104	58.4		14.0	275	45.7	45	50.8	50	16 04	42	23	16 57 68		46 56			
20	119	58.3		14.1	290	09.2	45	48.9	52	15 54	35	18	49 69		7 54 55			
21	134	58.2		14.3	304	32.7	45	47.0	54	43	26	13	40 70		8 02 55			
22	149	58.0		14.4	318	56.2	45	44.9	56	30	17	06	30 71		12 55			
23	164	57.9		14.5	333	19.7	45	42.7	58	15 16	16 07	17 00	19 72		24 53			
24	179	57.8	+23	14.6	347	43.2	45	–18 40.4	60 S	14 59	15 56	16 52	16 06 73		8 37 52			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 34 ^m 0		Mag: –3.9 PMG: 9 ^h 38 ^m			Mag: –0.3 PMG: 19 ^h 18 ^m			Mag: –1.9 PMG: 14 ^h 12 ^m			Mag: +0.3 PMG: 21 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	261	13.8	215	36.4	+15	14.1	69	52.3	–4	54.8	146	34.4	+21	51.0	35	14.8	–14	47.8
1	276	16.3	230	36.0		14.9	84	54.2		55.2	161	36.4		50.9	50	17.4		47.7
2	291	18.8	245	35.5		15.8	99	56.1		55.5	176	38.3		50.9	65	20.0		47.7
3	306	21.2	260	35.1		16.7	114	57.9		55.8	191	40.2		50.8	80	22.6		47.7
4	321	23.7	275	34.6		17.5	129	59.8		56.1	206	42.1		50.7	95	25.2		47.7
5	336	26.2	290	34.1	+15	18.4	145	01.7	–4	56.5	221	44.0	+21	50.6	110	27.8	–14	47.6
6	351	28.6	305	33.7	+15	19.2	160	03.6	–4	56.8	236	45.9	+21	50.5	125	30.4	–14	47.6
7	6	31.1	320	33.2		20.1	175	05.5		57.1	251	47.9		50.4	140	33.0		47.6
8	21	33.6	335	32.7		21.0	190	07.4		57.4	266	49.8		50.4	155	35.6		47.5
9	36	36.0	350	32.3		21.8	205	09.2		57.8	281	51.7		50.3	170	38.2		47.5
10	51	38.5	5	31.8		22.7	220	11.1		58.1	296	53.6		50.2	185	40.8		47.5
11	66	41.0	20	31.4	+15	23.5	235	13.0	–4	58.4	311	55.5	+21	50.1	200	43.4	–14	47.4
12	81	43.4	35	30.9	+15	24.4	250	14.9	–4	58.7	326	57.4	+21	50.0	215	46.0	–14	47.4
13	96	45.9	50	30.4		25.2	265	16.7		59.1	341	59.4		49.9	230	48.6		47.4
14	111	48.3	65	30.0		26.1	280	18.6		59.4	357	01.3		49.9	245	51.2		47.4
15	126	50.8	80	29.5		27.0	295	20.5	–4	59.7	12	03.2		49.8	260	53.8		47.3
16	141	53.3	95	29.0		27.8	310	22.4	–5	00.0	27	05.1		49.7	275	56.4		47.3
17	156	55.7	110	28.6	+15	28.7	325	24.2	–5	00.4	42	07.0	+21	49.6	290	59.0	–14	47.3
18	171	58.2	125	28.1	+15	29.5	340	26.1	–5	00.7	57	08.9	+21	49.5	306	01.6	–14	47.2
19	187	00.7	140	27.6		30.4	355	28.0		01.0	72	10.8		49.4	321	04.2		47.2
20	202	03.1	155	27.1		31.2	10	29.8		01.3	87	12.8		49.4	336	06.8		47.2
21	217	05.6	170	26.7		32.1	25	31.7		01.7	102	14.7		49.3	351	09.4		47.1
22	232	08.1	185	26.2		32.9	40	33.6		02.0	117	16.6		49.2	6	12.0		47.1
23	247	10.5	200	25.7		33.8	55	35.4		02.3	132	18.5		49.1	21	14.6		47.1
24	262	13.0	215	25.3	+15	34.6	70	37.3	–5	02.7	147	20.4	+21	49.0	36	17.2	–14	47.1
Dif	—		–5		+9		+19		–3		+19		–1		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7			Edad: 16 ^d 2 PHE { 4 ^h : 60 ^m 4 12 ^h : 60 ^m 5 20 ^h : 60 ^m 6															
	PMG: 12 ^h 00 ^m 3			SD: 16 ^d 4 PMG: 0 ^h 51 ^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	179	57.8	+23	14.6	347	43.2	-18	40.4	60 N	** **	0 55	2 37	21	54	35	4	37	79	
1	194	57.7		14.8	2	06.7	45	37.9	58	** **	1 42	2 57		43	37	4	50	77	
2	209	57.5		14.9	16	30.3	46	35.3	56	** **	2 11	3 13		33	39	5	01	76	
3	224	57.4		15.0	30	53.8	45	32.5	54	0 50	33	27		24	41		11	74	
4	239	57.3		15.1	45	17.3	45	29.6	52	1 34	2 51	40		16	42		20	73	
5	254	57.1	+23	15.3	59	40.9	46	-18	50	2 01	3 06	3 50	21	09	44		5	28	72
6	269	57.0	+23	15.4	74	04.4	45	-18	45	2 46	3 35	4 13	20	54	46		5	44	70
7	284	56.9		15.5	88	28.0	46	20.2	40	3 16	3 58	31		41	49		5	58	68
8	299	56.7		15.6	102	51.6	46	16.8	35	39	4 16	45		30	51		6	09	67
9	314	56.6		15.8	117	15.2	46	13.2	30	3 58	31	4 58		21	52		19	66	
10	329	56.5		15.9	131	38.8	46	09.5	20	4 27	4 56	5 20		20	05	55		37	63
11	344	56.3	+23	16.0	146	02.4	46	-18	10 N	4 49	5 16	5 39	19	51	57		6	52	62
12	359	56.2	+23	16.1	160	26.1	47	-18	0	5 08	5 34	5 57	19	37	60		7	06	60
13	14	56.1		16.2	174	49.8	47	-17	10 S	25	5 51	6 14		24	62		20	58	
14	29	55.9		16.4	189	13.5	47	53.5	20	41	6 08	32	19	10	64		34	57	
15	44	55.8		16.5	203	37.2	47	49.2	30	5 57	27	6 53	18	54	66		7	51	55
16	59	55.7		16.6	218	01.0	48	44.8	35	6 06	38	7 06		44	68		8	01	53
17	74	55.6	+23	16.7	232	24.8	48	-17	40	6 15	6 49	7 20	18	34	69		8	12	52
18	89	55.4	+23	16.8	246	48.6	48	-17	45	6 25	7 03	7 36	18	21	72		8	26	50
19	104	55.3		16.9	261	12.4	48	30.6	50	37	19	7 57	18	05	75		42	47	
20	119	55.2		17.1	275	36.3	49	25.7	52	42	26	8 07	17	58	76		49	47	
21	134	55.0		17.2	290	00.2	49	20.6	54	48	34	18		50	77		8	57	46
22	149	54.9		17.3	304	24.1	49	15.4	56	6 54	43	30		41	79		9	07	43
23	164	54.8		17.4	318	48.1	50	10.1	58	7 01	7 53	8 45		31	81		17	42	
24	179	54.6	+23	17.5	333	12.1	50	-17	60 S	7 08	8 05	9 02	17	19	83		9	29	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 30 ^m 1		Mag: -3.9 PMG: 9 ^h 39 ^m		Mag: -0.2 PMG: 19 ^h 15 ^m		Mag: -1.9 PMG: 14 ^h 09 ^m		Mag: +0.3 PMG: 21 ^h 31 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	°	'	°	°	'	°	°	'							
0	262	13.0	215	25.3	+15	34.6	70	37.3	-5	02.7	147	20.4	+21	49.0	36	17.2	-14	47.1
1	277	15.5	230	24.8		35.5	85	39.2		03.0	162	22.3		48.9	51	19.8		47.0
2	292	17.9	245	24.3		36.3	100	41.0		03.3	177	24.2		48.8	66	22.4		47.0
3	307	20.4	260	23.9		37.2	115	42.9		03.6	192	26.2		48.8	81	25.0		47.0
4	322	22.8	275	23.4		38.0	130	44.8		04.0	207	28.1		48.7	96	27.6		46.9
5	337	25.3	290	22.9	+15	38.9	145	46.6	-5	04.3	222	30.0	+21	48.6	111	30.2	-14	46.9
6	352	27.8	305	22.4	+15	39.7	160	48.5	-5	04.6	237	31.9	+21	48.5	126	32.8	-14	46.9
7	7	30.2	320	22.0		40.5	175	50.4		05.0	252	33.8		48.4	141	35.4		46.8
8	22	32.7	335	21.5		41.4	190	52.2		05.3	267	35.7		48.3	156	38.0		46.8
9	37	35.2	350	21.0		42.2	205	54.1		05.6	282	37.6		48.3	171	40.6		46.8
10	52	37.6	5	20.5		43.1	220	55.9		06.0	297	39.5		48.2	186	43.2		46.8
11	67	40.1	20	20.1	+15	43.9	235	57.8	-5	06.3	312	41.5	+21	48.1	201	45.8	-14	46.7
12	82	42.6	35	19.6	+15	44.8	250	59.6	-5	06.6	327	43.4	+21	48.0	216	48.4	-14	46.7
13	97	45.0	50	19.1		45.6	266	01.5		07.0	342	45.3		47.9	231	51.0		46.7
14	112	47.5	65	18.6		46.5	281	03.4		07.3	357	47.2		47.8	246	53.6		46.6
15	127	50.0	80	18.1		47.3	296	05.2		07.6	12	49.1		47.8	261	56.2		46.6
16	142	52.4	95	17.7		48.1	311	07.1		08.0	27	51.0		47.7	276	58.8		46.6
17	157	54.9	110	17.2	+15	49.0	326	08.9	-5	08.3	42	52.9	+21	47.6	292	01.4	-14	46.6
18	172	57.3	125	16.7	+15	49.8	341	10.8	-5	08.6	57	54.9	+21	47.5	307	04.0	-14	46.5
19	187	59.8	140	16.2		50.6	356	12.6		09.0	72	56.8		47.4	322	06.6		46.5
20	203	02.3	155	15.8		51.5	11	14.5		09.3	87	58.7		47.3	337	09.2		46.5
21	218	04.7	170	15.3		52.3	26	16.3		09.6	103	00.6		47.2	352	11.8		46.4
22	233	07.2	185	14.8		53.2	41	18.2		10.0	118	02.5		47.2	7	14.4		46.4
23	248	09.7	200	14.3		54.0	56	20.0		10.3	133	04.4		47.1	22	17.0		46.4
24	263	12.1	215	13.8	+15	54.8	71	21.8	-5	10.6	148	06.3	+21	47.0	37	19.6	-14	46.3
Dif	—		-5		+8		+19		-3		+19		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15:7 PMG: 12 ^h 00 ^m 5			Edad: 17 ^d 2 PHE { 4 ^h : 60/6 12 ^h : 60/5 20 ^h : 60/5 SD: 16:5 PMG: 1 ^h 52 ^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	h m m			
0	179	54.6	+23	17.5	333	12.1	−17	04.7	60 N	21 25	23 09	** **	22 29 26	5 56	87			
1	194	54.5		17.6	347	36.2	51	−16	59.1	58	21 05	22 20	** **	20 29	6 07 84			
2	209	54.4		17.7	2	00.3	51		53.4	57	20 48	21 50	** **	12 31	17 81			
3	224	54.2		17.8	16	24.4	51		47.6	58	34	28	23 13	22 05 33	25 80			
4	239	54.1		17.9	30	48.6	52		41.7	59	22	21 10	22 28	21 58 36	33 78			
5	254	54.0	+23	18.1	45	12.8	52	−16	35.7	60	20 11	20 55	22 01	21 53 36	6 40 76			
6	269	53.8	+23	18.2	59	37.1	53	−16	29.5	62	19 48	20 26	21 15	21 40 40	6 54 73			
7	284	53.7		18.3	74	01.4	53		23.2	63	30	20 03	20 45	30 43	7 06 71			
8	299	53.6		18.4	88	25.7	53		16.9	63	15	19 45	22	21 45	16 69			
9	314	53.4		18.5	102	50.1	54		10.4	65	19 03	30	20 03	13 48	25 67			
10	329	53.3		18.6	117	14.5	54	−16	03.8	66	18 41	19 05	19 34	21 00 51	40 64			
11	344	53.2	+23	18.7	131	39.0	55	−15	57.1	67	18 22	18 45	19 12	20 48 54	7 54 60			
12	359	53.0	+23	18.8	146	03.6	56	−15	50.2	69	18 04	18 27	18 53	20 37 57	8 06 58			
13	14	52.9		18.9	160	28.2	56		43.3	69	17 47	18 10	36	26 59	18 56			
14	29	52.8		19.0	174	52.8	56		36.3	70	28	17 52	20	14 63	31 53			
15	44	52.6		19.1	189	17.5	57		29.1	72	17 07	34	18 03	20 00 66	46 50			
16	59	52.5		19.2	203	42.2	57		21.9	72	16 55	23	17 55	19 52 69	8 54 48			
17	74	52.4	+23	19.3	218	07.0	58	−15	14.5	74	16 41	17 11	17 45	19 43 71	9 04 46			
18	89	52.2	+23	19.4	232	31.9	59	−15	07.1	74	16 24	16 58	17 35	19 33 73	9 16 43			
19	104	52.1		19.5	246	56.8	59	−14	59.5	76	16 03	42	23	20 77	29 40			
20	119	52.0		19.6	261	21.7	59		51.9	76	15 54	34	18	14 79	36 38			
21	134	51.8		19.7	275	46.8	61		44.1	78	43	26	12	07 81	43 37			
22	149	51.7		19.8	290	11.8	60		36.3	78	30	17	06	19 00 83	50 36			
23	164	51.6		19.9	304	37.0	62		28.3	80	15 15	16 07	17 00	18 52 85	9 59 33			
24	179	51.4	+23	20.0	319	02.1	61	−14	20.3	80	14 58	15 55	16 52	18 42 88	10 09 31			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 26 ^m 1		Mag: −3.9 PMG: 9 ^h 39 ^m				Mag: −0.2 PMG: 19 ^h 12 ^m				Mag: −1.9 PMG: 14 ^h 06 ^m				Mag: +0.3 PMG: 21 ^h 27 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	263	12.1	215	13.8	+15	54.8	71	21.8	−5	10.6	148	06.3	+21	47.0	37	19.6		
1	278	14.6	230	13.3		55.7	86	23.7		11.0	163	08.2		46.9	52	22.2		
2	293	17.1	245	12.9		56.5	101	25.5		11.3	178	10.2		46.8	67	24.8		
3	308	19.5	260	12.4		57.3	116	27.4		11.6	193	12.1		46.7	82	27.4		
4	323	22.0	275	11.9		58.2	131	29.2		12.0	208	14.0		46.6	97	30.0		
5	338	24.4	290	11.4	+15	59.0	146	31.1	−5	12.3	223	15.9	+21	46.6	112	32.6		
6	353	26.9	305	10.9	+15	59.8	161	32.9	−5	12.7	238	17.8	+21	46.5	127	35.2		
7	8	29.4	320	10.4	+16	00.7	176	34.7		13.0	253	19.7		46.4	142	37.8		
8	23	31.8	335	10.0		01.5	191	36.6		13.3	268	21.6		46.3	157	40.4		
9	38	34.3	350	09.5		02.3	206	38.4		13.7	283	23.5		46.2	172	43.0		
10	53	36.8	5	09.0		03.2	221	40.3		14.0	298	25.4		46.1	187	45.6		
11	68	39.2	20	08.5	+16	04.0	236	42.1	−5	14.4	313	27.4	+21	46.1	202	48.2		
12	83	41.7	35	08.0	+16	04.8	251	43.9	−5	14.7	328	29.3	+21	46.0	217	50.8		
13	98	44.2	50	07.5		05.6	266	45.8		15.0	343	31.2		45.9	232	53.4		
14	113	46.6	65	07.0		06.5	281	47.6		15.4	358	33.1		45.8	247	56.0		
15	128	49.1	80	06.5		07.3	296	49.4		15.7	13	35.0		45.7	262	58.6		
16	143	51.6	95	06.0		08.1	311	51.3		16.1	28	36.9		45.6	278	01.2		
17	158	54.0	110	05.6	+16	08.9	326	53.1	−5	16.4	43	38.8	+21	45.5	293	03.7		
18	173	56.5	125	05.1	+16	09.8	341	54.9	−5	16.7	58	40.7	+21	45.5	308	06.3		
19	188	58.9	140	04.6		10.6	356	56.8		17.1	73	42.6		45.4	323	08.9		
20	204	01.4	155	04.1		11.4	11	58.6		17.4	88	44.6		45.3	338	11.5		
21	219	03.9	170	03.6		12.2	27	00.4		17.8	103	46.5		45.2	353	14.1		
22	234	06.3	185	03.1		13.1	42	02.2		18.1	118	48.4		45.1	8	16.7		
23	249	08.8	200	02.6		13.9	57	04.1		18.4	133	50.3		45.0	23	19.3		
24	264	11.3	215	02.1	+16	14.7	72	05.9	−5	18.8	148	52.2	+21	44.9	38	21.9		
Dif	—		−5		+8		+18		−3		+19		−1		+26			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 18 ^d 2 PHE { 4 ^h : 60 ^m .4 12 ^h : 60 ^m .3 20 ^h : 60 ^m .2														
	PMG: 12 ^h 00 ^m .7				SD: 16 ^d .5 PMG: 2 ^h 50 ^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	179	51.4	+23	20.0	319	02.1			-14	20.3			60 N	** **	0 52	2 36	22 55	22	7 23 88
1	194	51.3		20.1	333	27.4	63			12.2	81		58	** **	1 41	2 56	49 24		31 86
2	209	51.2		20.2	347	52.7	63		-14	03.9	83		56	** **	2 11	3 13	43 27		38 84
3	224	51.0		20.2	2	18.0	63		-13	55.6	83		54	0 48	33	27	38 29		45 8
4	239	50.9		20.3	16	43.5	65			47.2	84		52	1 33	2 51	39	34 30		51 79
5	254	50.8	+23	20.4	31	08.9	64		-13	38.7	85		50	2 00	3 06	3 50	22 29	32	7 56 77
6	269	50.6	+23	20.5	45	34.5	66		-13	30.1	86		45	2 46	3 35	4 13	22 20	36	8 07 74
7	284	50.5		20.6	60	00.1	66			21.4	87		40	3 16	3 58	31	13 39		17 70
8	299	50.4		20.7	74	25.7	66			12.7	87		35	39	4 16	46	06 42		25 68
9	314	50.2		20.8	88	51.4	67		-13	03.8	89		30	3 58	31	4 59	22 01	43	32 66
10	329	50.1		20.9	103	17.2	68		-12	54.9	89		20	4 27	4 56	5 21	21 51	47	44 62
11	344	50.0	+23	21.0	117	43.1	69		-12	45.9	90		10 N	4 49	5 16	5 39	21 42	51	8 54 59
12	359	49.8	+23	21.0	132	09.0	69		-12	36.8	91		0	5 08	5 34	5 57	21 34	54	9 04 56
13	14	49.7		21.1	146	34.9	69			27.7	91		10 S	25	5 52	6 14	25 58		14 52
14	29	49.6		21.2	161	00.9	70			18.5	92		20	41	6 09	33	17 61		24 49
15	44	49.4		21.3	175	27.0	71		-12	09.1	94		30	5 58	28	6 54	06 66		36 45
16	59	49.3		21.4	189	53.2	72		-11	59.8	93		35	6 07	38	7 06	21 01	67	42 44
17	74	49.2	+23	21.5	204	19.4	72		-11	50.3	95		40	6 16	6 50	7 20	20 54	70	9 50 41
18	89	49.0	+23	21.5	218	45.7	73		-11	40.8	95		45	6 26	7 03	7 37	20 46	74	9 59 38
19	104	48.9		21.6	233	12.0	73			31.2	96		50	38	19	7 58	37 77		10 09 35
20	119	48.8		21.7	247	38.4	74			21.5	97		52	43	27	8 08	33 79		14 33
21	134	48.6		21.8	262	04.8	74			11.8	97		54	49	35	19	28 81		20 31
22	149	48.5		21.9	276	31.4	76		-11	02.0	98		56	6 55	44	31	23 83		26 28
23	164	48.4		21.9	290	57.9	75		-10	52.1	99		58	7 02	7 54	8 46	17 85		32 27
24	179	48.2	+23	22.0	305	24.6	77		-10	42.2	99		60 S	7 09	8 06	9 04	20 10	88	10 40 24

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 22 ^m 2		Mag: -3.9 PMG: 9 ^h 40 ^m			Mag: -0.2 PMG: 19 ^h 09 ^m			Mag: -1.9 PMG: 14 ^h 03 ^m			Mag: +0.3 PMG: 21 ^h 23 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	264	11.3	215	02.1	+16	14.7	72	05.9	-5	18.8	148	52.2	+21	44.9	38	21.9	-14	45.7
1	279	13.7	230	01.6		15.5	87	07.7		19.1	163	54.1		44.9	53	24.5		45.6
2	294	16.2	245	01.1		16.3	102	09.5		19.5	178	56.0		44.8	68	27.1		45.6
3	309	18.7	260	00.6		17.2	117	11.4		19.8	193	57.9		44.7	83	29.7		45.6
4	324	21.1	275	00.1		18.0	132	13.2		20.2	208	59.8		44.6	98	32.3		45.6
5	339	23.6	289	59.6	+16	18.8	147	15.0	-5	20.5	224	01.8	+21	44.5	113	34.9	-14	45.5
6	354	26.1	304	59.1	+16	19.6	162	16.8	-5	20.9	239	03.7	+21	44.4	128	37.5	-14	45.5
7	9	28.5	319	58.6		20.4	177	18.7		21.2	254	05.6		44.3	143	40.1		45.5
8	24	31.0	334	58.1		21.2	192	20.5		21.5	269	07.5		44.2	158	42.7		45.4
9	39	33.4	349	57.6		22.1	207	22.3		21.9	284	09.4		44.2	173	45.3		45.4
10	54	35.9	4	57.1		22.9	222	24.1		22.2	299	11.3		44.1	188	47.9		45.4
11	69	38.4	19	56.6	+16	23.7	237	25.9	-5	22.6	314	13.2	+21	44.0	203	50.4	-14	45.4
12	84	40.8	34	56.1	+16	24.5	252	27.7	-5	22.9	329	15.1	+21	43.9	218	53.0	-14	45.3
13	99	43.3	49	55.6		25.3	267	29.6		23.3	344	17.0		43.8	233	55.6		45.3
14	114	45.8	64	55.1		26.1	282	31.4		23.6	359	18.9		43.7	248	58.2		45.3
15	129	48.2	79	54.6		26.9	297	33.2		24.0	14	20.9		43.6	264	00.8		45.3
16	144	50.7	94	54.1		27.7	312	35.0		24.3	29	22.8		43.6	279	03.4		45.2
17	159	53.2	109	53.6	+16	28.6	327	36.8	-5	24.7	44	24.7	+21	43.5	294	06.0	-14	45.2
18	174	55.6	124	53.1	+16	29.4	342	38.6	-5	25.0	59	26.6	+21	43.4	309	08.6	-14	45.2
19	189	58.1	139	52.6		30.2	357	40.4		25.4	74	28.5		43.3	324	11.2		45.1
20	205	00.6	154	52.1		31.0	12	42.2		25.7	89	30.4		43.2	339	13.8		45.1
21	220	03.0	169	51.6		31.8	27	44.1		26.1	104	32.3		43.1	354	16.4		45.1
22	235	05.5	184	51.1		32.6	42	45.9		26.4	119	34.2		43.0	9	19.0		45.1
23	250	07.9	199	50.6		33.4	57	47.7		26.7	134	36.1		42.9	24	21.6		45.0
24	265	10.4	214	50.1	+16	34.2	72	49.5	-5	27.1	149	38.0	+21	42.9	39	24.2	-14	45.0
Dif	—		-5		+8		+18		-3		+19		-1		+26		0	

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: 19 ^d 2 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 8 SD: 16:4 PMG: 3 ^h 47 ^m R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	179	48.2	+23	22.0	305	24.6	-10	42.2	60 N	21 26	23 12	** **	23 17 18	8 51 88
1	194	48.1		22.1	319	51.3	77	32.2	58	21 06	22 21	** **	13 21	8 57 85
2	209	48.0		22.2	334	18.0	77	22.1	56	20 49	21 52	** **	10 23	9 02 82
3	224	47.8		22.2	348	44.9	79	12.0	54	35	29	23 16	07 25	06 80
4	239	47.7		22.3	3	11.8	79	-10 01.9	52	23	21 11	22 30	04 27	10 78
5	254	47.6	+23	22.4	17	38.7	79	-9 51.7	50	20 12	20 56	22 02	23 01 29	9 13 77
6	269	47.4	+23	22.5	32	05.7	80	-9 41.4	45	19 49	20 27	21 16	22 56 33	9 21 73
7	284	47.3		22.5	46	32.8	81	31.1	40	31	20 04	20 46	52 35	27 70
8	299	47.1		22.6	60	59.9	81	20.7	35	16	19 46	23	48 38	33 67
9	314	47.0		22.7	75	27.1	82	-9 10.2	30	19 03	31	20 04	44 41	38 64
10	329	46.9		22.7	89	54.3	82	-8 59.8	20	18 41	19 06	19 35	38 45	46 60
11	344	46.7	+23	22.8	104	21.6	83	-8 49.2	10 N	18 22	18 45	19 12	22 33 48	9 53 57
12	359	46.6	+23	22.9	118	49.0	84	-8 38.7	0	18 05	18 27	18 53	22 28 52	10 00 53
13	14	46.5		22.9	133	16.4	84	28.0	10 S	17 47	18 10	36	23 55	06 50
14	29	46.3		23.0	147	43.9	85	17.4	20	29	17 53	20	18 59	13 47
15	44	46.2		23.1	162	11.4	85	-8 06.7	30	17 07	34	18 04	12 63	21 42
16	59	46.1		23.1	176	39.0	86	-7 55.9	35	16 55	23	17 55	08 66	26 40
17	74	45.9	+23	23.2	191	06.7	87	-7 45.1	40	16 41	17 11	17 46	22 04 69	10 31 37
18	89	45.8	+23	23.3	205	34.4	87	-7 34.3	45	16 24	16 58	17 35	22 00 71	10 37 34
19	104	45.7		23.3	220	02.2	88	23.4	50	16 03	42	23	21 54 76	44 30
20	119	45.5		23.4	234	30.0	88	12.5	52	15 54	34	18	52 77	47 29
21	134	45.4		23.5	248	57.9	89	-7 01.6	54	42	26	12	49 79	51 26
22	149	45.3		23.5	263	25.8	89	-6 50.6	56	30	17	06	46 81	54 25
23	164	45.1		23.6	277	53.8	90	39.6	58	15 15	16 07	17 00	42 84	10 59 22
24	179	45.0	+23	23.6	292	21.8	90	-6 28.6	60 S	14 58	15 55	16 52	21 38 87	11 04 20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 18 ^m 3		Mag: -3.9 PMG: 9 ^h 41 ^m		Mag: -0.2 PMG: 19 ^h 06 ^m		Mag: -1.9 PMG: 14 ^h 00 ^m		Mag: +0.3 PMG: 21 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	265	10.4	214	50.1	+16	34.2	72	49.5	-5	27.1	149	38.0	+21	42.9	39	24.2	-14	45.0
1	280	12.9	229	49.6		35.0	87	51.3		27.4	164	39.9		42.8	54	26.7		45.0
2	295	15.3	244	49.1		35.8	102	53.1		27.8	179	41.9		42.7	69	29.3		45.0
3	310	17.8	259	48.6		36.6	117	54.9		28.1	194	43.8		42.6	84	31.9		44.9
4	325	20.3	274	48.1		37.4	132	56.7		28.5	209	45.7		42.5	99	34.5		44.9
5	340	22.7	289	47.6	+16	38.2	147	58.5	-5	28.9	224	47.6	+21	42.4	114	37.1	-14	44.9
6	355	25.2	304	47.1	+16	39.0	163	00.3	-5	29.2	239	49.5	+21	42.3	129	39.7	-14	44.9
7	10	27.7	319	46.5		39.8	178	02.1		29.6	254	51.4		42.3	144	42.3		44.8
8	25	30.1	334	46.0		40.6	193	03.9		29.9	269	53.3		42.2	159	44.9		44.8
9	40	32.6	349	45.5		41.4	208	05.7		30.3	284	55.2		42.1	174	47.5		44.8
10	55	35.0	4	45.0		42.2	223	07.5		30.6	299	57.1		42.0	189	50.1		44.7
11	70	37.5	19	44.5	+16	43.0	238	09.3	-5	31.0	314	59.0	+21	41.9	204	52.7	-14	44.7
12	85	40.0	34	44.0	+16	43.8	253	11.1	-5	31.3	330	00.9	+21	41.8	219	55.2	-14	44.7
13	100	42.4	49	43.5		44.6	268	12.9		31.7	345	02.8		41.7	234	57.8		44.7
14	115	44.9	64	43.0		45.4	283	14.7		32.0	0	04.8		41.6	250	00.4		44.6
15	130	47.4	79	42.5		46.2	298	16.5		32.4	15	06.7		41.6	265	03.0		44.6
16	145	49.8	94	41.9		47.0	313	18.3		32.7	30	08.6		41.5	280	05.6		44.6
17	160	52.3	109	41.4	+16	47.8	328	20.1	-5	33.1	45	10.5	+21	41.4	295	08.2	-14	44.6
18	175	54.8	124	40.9	+16	48.6	343	21.9	-5	33.4	60	12.4	+21	41.3	310	10.8	-14	44.5
19	190	57.2	139	40.4		49.4	358	23.6		33.8	75	14.3		41.2	325	13.4		44.5
20	205	59.7	154	39.9		50.2	13	25.4		34.1	90	16.2		41.1	340	16.0		44.5
21	221	02.2	169	39.4		51.0	28	27.2		34.5	105	18.1		41.0	355	18.5		44.5
22	236	04.6	184	38.9		51.8	43	29.0		34.9	120	20.0		40.9	10	21.1		44.4
23	251	07.1	199	38.3		52.6	58	30.8		35.2	135	21.9		40.9	25	23.7		44.4
24	266	09.5	214	37.8	+16	53.3	73	32.6	-5	35.6	150	23.8	+21	40.8	40	26.3	-14	44.4
Dif	—		-5		+8		+18		-4		+19		-1		+26			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 20 ^d 2	PHE { 4 ^h : 59 ^h /6 12 ^h : 59 ^h /4 20 ^h : 59 ^h /2									
	PMG: 12 ^h 01 ^m 1					SD: 16 ^h 3		PMG: 4 ^h 40 ^m			R°: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	45.0	+23	23.6	292	21.8	-6	28.6	60 N	** **	0 50	2 36	23 35	18
1	194	44.9		23.7	306	49.9	91	17.5	58	** *	1 40	2 56	34 20	22 83
2	209	44.7		23.8	321	18.0	91	-6 06.4	56	** *	2 10	3 13	33 22	24 81
3	224	44.6		23.8	335	46.2	92	-5 55.3	54	0 46	33	27	32 24	26 79
4	239	44.4		23.9	350	14.5	93	44.2	52	1 32	2 51	39	31 26	28 77
5	254	44.3	+23	23.9	4	42.8	93	-5 33.0	50	2 00	3 06	3 50	23 30	28 10 30 75
6	269	44.2	+23	24.0	19	11.1	93	-5 21.8	45	2 46	3 35	4 13	23 29	31 10 34 71
7	284	44.0		24.0	33	39.5	94	-5 10.6	40	3 16	3 58	31	27 35	37 68
8	299	43.9		24.1	48	07.9	94	-4 59.4	35	39	4 16	46	26 37	40 65
9	314	43.8		24.1	62	36.4	95	48.1	30	3 58	31	4 59	25 39	42 63
10	329	43.6		24.2	77	05.0	96	36.9	20	4 27	4 56	5 21	23 44	46 58
11	344	43.5	+23	24.3	91	33.6	96	-4 25.6	10 N	4 50	5 17	5 40	23 21	48 10 50 54
12	359	43.4	+23	24.3	106	02.2	96	-4 14.3	0	5 09	5 35	5 57	23 20	50 10 53 51
13	14	43.2		24.4	120	30.9	97	-4 03.0	10 S	26	5 52	6 15	18 54	10 56 48
14	29	43.1		24.4	134	59.6	97	-3 51.6	20	42	6 09	33	17 57	11 00 44
15	44	43.0		24.5	149	28.4	98	40.3	30	5 58	28	6 55	15 62	03 40
16	59	42.8		24.5	163	57.2	98	28.9	35	6 07	39	7 07	14 64	06 37
17	74	42.7	+23	24.5	178	26.0	98	-3 17.6	40	6 17	6 51	7 21	23 13	67 11 08 35
18	89	42.5	+23	24.6	192	54.9	99	-3 06.2	45	6 27	7 04	7 38	23 11	71 11 11 32
19	104	42.4		24.6	207	23.9	100	-2 54.8	50	39	20	7 59	10 74	14 29
20	119	42.3		24.7	221	52.8	99	43.4	52	44	28	8 09	09 76	16 26
21	134	42.1		24.7	236	21.9	101	32.0	54	50	36	20	08 78	17 25
22	149	42.0		24.8	250	50.9	100	20.6	56	6 56	45	32	07 80	19 23
23	164	41.9		24.8	265	20.0	101	-2 09.3	58	7 03	7 55	8 47	06 82	21 21
24	179	41.7	+23	24.9	279	49.1	101	-1 57.8	60 S	7 10	8 07	9 05	23 05	85 11 24 18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 14 ^m 3		Mag: -3.9 PMG: 9 ^h 42 ^m		Mag: -0.2 PMG: 19 ^h 04 ^m		Mag: -1.9 PMG: 13 ^h 57 ^m		Mag: +0.3 PMG: 21 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	266	09.5	214	37.8	+16	53.3	73	32.6	-5	35.6	150	23.8	+21	40.8	40	26.3	-14	44.4
1	281	12.0	229	37.3		54.1	88	34.4		35.9	165	25.7		40.7	55	28.9		44.3
2	296	14.5	244	36.8		54.9	103	36.2		36.3	180	27.6		40.6	70	31.5		44.3
3	311	16.9	259	36.3		55.7	118	37.9		36.6	195	29.6		40.5	85	34.1		44.3
4	326	19.4	274	35.7		56.5	133	39.7		37.0	210	31.5		40.4	100	36.7		44.3
5	341	21.9	289	35.2	+16	57.3	148	41.5	-5	37.4	225	33.4	+21	40.3	115	39.3	-14	44.2
6	356	24.3	304	34.7	+16	58.1	163	43.3	-5	37.7	240	35.3	+21	40.2	130	41.8	-14	44.2
7	11	26.8	319	34.2		58.8	178	45.1		38.1	255	37.2		40.1	145	44.4		44.2
8	26	29.3	334	33.7	+16	59.6	193	46.9		38.4	270	39.1		40.1	160	47.0		44.2
9	41	31.7	349	33.1	+17	00.4	208	48.6		38.8	285	41.0		40.0	175	49.6		44.1
10	56	34.2	4	32.6		01.2	223	50.4		39.1	300	42.9		39.9	190	52.2		44.1
11	71	36.7	19	32.1	+17	02.0	238	52.2	-5	39.5	315	44.8	+21	39.8	205	54.8	-14	44.1
12	86	39.1	34	31.6	+17	02.8	253	54.0	-5	39.9	330	46.7	+21	39.7	220	57.4	-14	44.1
13	101	41.6	49	31.0		03.5	268	55.8		40.2	345	48.6		39.6	236	00.0		44.0
14	116	44.0	64	30.5		04.3	283	57.5		40.6	0	50.5		39.5	251	02.5		44.0
15	131	46.5	79	30.0		05.1	298	59.3		40.9	15	52.4		39.4	266	05.1		44.0
16	146	49.0	94	29.5		05.9	314	01.1		41.3	30	54.3		39.3	281	07.7		44.0
17	161	51.4	109	28.9	+17	06.7	329	02.9	-5	41.7	45	56.2	+21	39.3	296	10.3	-14	43.9
18	176	53.9	124	28.4	+17	07.4	344	04.6	-5	42.0	60	58.2	+21	39.2	311	12.9	-14	43.9
19	191	56.4	139	27.9		08.2	359	06.4		42.4	76	00.1		39.1	326	15.5		43.9
20	206	58.8	154	27.4		09.0	14	08.2		42.7	91	02.0		39.0	341	18.1		43.9
21	222	01.3	169	26.8		09.8	29	09.9		43.1	106	03.9		38.9	356	20.6		43.8
22	237	03.8	184	26.3		10.5	44	11.7		43.5	121	05.8		38.8	11	23.2		43.8
23	252	06.2	199	25.8		11.3	59	13.5		43.8	136	07.7		38.7	26	25.8		43.8
24	267	08.7	214	25.3	+17	12.1	74	15.2	-5	44.2	151	09.6	+21	38.6	41	28.4	-14	43.8
Dif	—		-5		+8		+18		-4		+19		-1		+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 21 ^d 2	PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 8 20 ^h : 58 ^m 6											
	PMG: 12 ^h 01 ^m 3					SD: 16 ^h 1			PMG: 5 ^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
0	179	41.7	+23	24.9	279	49.1	-1	57.8	60 N	21 27	23 14	** ** *	23 53 18	11 45 84		
1	194	41.6		24.9	294	18.3 ¹⁰²		46.4 ¹¹⁴	58	21 07	22 23	** ** *	54 20	45 81		
2	209	41.5		24.9	308	47.5 ¹⁰²		35.0 ¹¹⁴	56	20 50	21 53	** ** *	55 23	45 79		
3	224	41.3		25.0	323	16.8 ¹⁰³		23.6 ¹¹⁴	54	36	30	23 18	56 25	45 77		
4	239	41.2		25.0	337	46.1 ¹⁰³		12.3 ¹¹³	52	23	21 12	22 31	57 26	45 75		
5	254	41.0	+23	25.1	352	15.4 ¹⁰³	-1	00.9 ¹¹⁴	50	20 12	20 57	22 03	23 58 28	11 45 73		
6	269	40.9	+23	25.1	6	44.7 ¹⁰³	-0	49.5 ¹¹⁴	45	19 50	20 27	21 17	** ** *	11 45 69		
7	284	40.8		25.1	21	14.1 ¹⁰⁴		38.1 ¹¹⁴	40	32	20 05	20 46	** ** *	45 66		
8	299	40.6		25.2	35	43.5 ¹⁰⁴		26.7 ¹¹⁴	35	17	19 46	23	** ** *	45 63		
9	314	40.5		25.2	50	13.0 ¹⁰⁵		15.3 ¹¹⁴	30	19 04	31	20 05	** ** *	45 61		
10	329	40.4		25.2	64	42.5 ¹⁰⁵	-0	04.0 ¹¹³	20	18 42	19 06	19 35	** ** *	44 57		
11	344	40.2	+23	25.3	79	12.0 ¹⁰⁵	+0	07.4 ¹¹⁴	10 N	18 23	18 46	19 13	** ** *	11 44 54		
12	359	40.1	+23	25.3	93	41.5 ¹⁰⁵	+0	18.7 ¹¹³	0	18 05	18 28	18 54	** ** *	11 44 50		
13	14	40.0		25.3	108	11.1 ¹⁰⁶		30.0 ¹¹³	10 S	17 48	18 10	37	** ** *	44 47		
14	29	39.8		25.4	122	40.7 ¹⁰⁶		41.3 ¹¹³	20	29	17 53	21	** ** *	44 43		
15	44	39.7		25.4	137	10.3 ¹⁰⁶	+0	52.6 ¹¹³	30	17 08	34	18 04	** ** *	43 39		
16	59	39.6		25.4	151	40.0 ¹⁰⁷	+1	03.9 ¹¹³	35	16 55	24	17 55	** ** *	43 37		
17	74	39.4	+23	25.5	166	09.6 ¹⁰⁶	+1	15.2 ¹¹³	40	16 41	17 12	17 46	** ** *	11 43 34		
18	89	39.3	+23	25.5	180	39.3 ¹⁰⁷	+1	26.4 ¹¹²	45	16 24	16 58	17 35	** ** *	11 43 31		
19	104	39.1		25.5	195	09.1 ¹⁰⁸		37.7 ¹¹³	50	16 04	42	24	** ** *	43 27		
20	119	39.0		25.6	209	38.8 ¹⁰⁷	+1	48.9 ¹¹²	52	15 54	35	18	** ** *	42 26		
21	134	38.9		25.6	224	08.6 ¹⁰⁸	+2	00.1 ¹¹²	54	43	26	13	** ** *	42 24		
22	149	38.7		25.6	238	38.4 ¹⁰⁸		11.2 ¹¹¹	56	30	17	07	** ** *	42 22		
23	164	38.6		25.6	253	08.2 ¹⁰⁸		22.4 ¹¹²	58	15 15	16 07	17 00	** ** *	42 20		
24	179	38.5	+23	25.7	267	38.1 ¹⁰⁹	+2	33.5 ¹¹¹	60 S	14 58	15 55	16 52	** ** *	11 42 17		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 10 ^m 4		Mag: -3.9 PMG: 9 ^h 43 ^m		Mag: -0.2 PMG: 19 ^h 01 ^m		Mag: -1.9 PMG: 13 ^h 54 ^m		Mag: +0.3 PMG: 21 ^h 10 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	267	08.7	214	25.3	74	15.2	151	09.6	41	28.4						
1	282	11.1	229	24.7	89	17.0	166	11.5	56	31.0						
2	297	13.6	244	24.2	104	18.8	181	13.4	71	33.6						
3	312	16.1	259	23.7	119	20.5	196	15.3	86	36.2						
4	327	18.5	274	23.1	134	22.3	211	17.2	101	38.7						
5	342	21.0	289	22.6	149	24.1	226	19.1	116	41.3						
6	357	23.5	304	22.1	164	25.8	241	21.0	131	43.9						
7	12	25.9	319	21.5	179	27.6	256	22.9	146	46.5						
8	27	28.4	334	21.0	194	29.4	271	24.8	161	49.1						
9	42	30.9	349	20.5	209	31.1	286	26.7	176	51.7						
10	57	33.3	4	19.9	224	32.9	301	28.6	191	54.3						
11	72	35.8	19	19.4	239	34.6	316	30.5	206	56.8						
12	87	38.3	34	18.9	254	36.4	331	32.4	221	59.4						
13	102	40.7	49	18.3	269	38.2	346	34.4	237	02.0						
14	117	43.2	64	17.8	284	39.9	1	36.3	252	04.6						
15	132	45.6	79	17.3	299	41.7	16	38.2	267	07.2						
16	147	48.1	94	16.7	314	43.4	31	40.1	282	09.8						
17	162	50.6	109	16.2	329	45.2	46	42.0	297	12.3						
18	177	53.0	124	15.6	344	46.9	61	43.9	312	14.9						
19	192	55.5	139	15.1	359	48.7	76	45.8	327	17.5						
20	207	58.0	154	14.6	14	50.4	91	47.7	342	20.1						
21	223	00.4	169	14.0	29	52.2	106	49.6	357	22.7						
22	238	02.9	184	13.5	44	53.9	121	51.5	12	25.3						
23	253	05.4	199	12.9	59	55.7	136	53.4	27	27.8						
24	268	07.8	214	12.4	74	57.4	151	55.3	42	30.4						
Dif	—		-5		+8		+19		-1							

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 ^m PMG: 12 ^h 01 ^m 5 ^s				Edad: 22 ^d 2 ^h PHE { SD: 15 ^h 9 ^m PMG: 6 ^h 22 ^m R°: 50 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	38.5	+23	25.7	267	38.1	+2	33.5	60 N	** **	0 49	2 36	** **	**	13 09	82
1	194	38.3		25.7	282	07.9		44.6 ¹¹¹	58	** **	1 40	2 56	** **	**	06	79
2	209	38.2		25.7	296	37.8	+2	55.7 ¹¹¹	56	** **	2 10	3 13	** **	**	04	77
3	224	38.1		25.7	311	07.7	+3	06.7 ¹¹⁰	54	0 45	33	27	** **	**	02	74
4	239	37.9		25.8	325	37.6		17.8 ¹¹¹	52	1 32	2 51	40	** **	**	13 00	73
5	254	37.8	+23	25.8	340	07.6	+3	28.8 ¹¹⁰	50	2 00	3 06	3 50	** **	**	12 58	71
6	269	37.6	+23	25.8	354	37.5	+3	39.7 ¹⁰⁹	45	2 46	3 36	4 13	0 00	31	12 54	68
7	284	37.5		25.8	9	07.5	+3	50.7 ¹¹⁰	40	3 16	3 58	31	02	34	51	64
8	299	37.4		25.8	23	37.5	+4	01.6 ¹⁰⁹	35	40	4 16	46	03	37	48	62
9	314	37.2		25.9	38	07.5		12.4 ¹⁰⁸	30	3 58	32	4 59	04	39	46	59
10	329	37.1		25.9	52	37.5		23.3 ¹⁰⁹	20	4 27	4 57	5 21	07	42	41	56
11	344	37.0	+23	25.9	67	07.5	+4	34.1 ¹⁰⁸	10 N	4 50	5 17	5 40	0 09	46	12 38	52
12	359	36.8	+23	25.9	81	37.6	+4	44.9 ¹⁰⁸	0	5 09	5 35	5 58	0 10	50	12 34	49
13	14	36.7		25.9	96	07.6	+4	55.6 ¹⁰⁷	10 S	26	5 52	6 15	12	53	31	46
14	29	36.6		25.9	110	37.7	+5	06.3 ¹⁰⁷	20	42	6 10	34	14	57	27	43
15	44	36.4		26.0	125	07.8		17.0 ¹⁰⁷	30	5 59	29	6 55	17	60	22	40
16	59	36.3		26.0	139	37.9		27.6 ¹⁰⁶	35	6 08	39	7 08	18	63	20	37
17	74	36.1	+23	26.0	154	08.0	+5	38.2 ¹⁰⁶	40	6 17	6 51	7 22	0 20	65	12 17	35
18	89	36.0	+23	26.0	168	38.1	+5	48.8 ¹⁰⁶	45	6 27	7 05	7 39	0 21	69	12 14	32
19	104	35.9		26.0	183	08.2	+5	59.3 ¹⁰⁵	50	39	21	7 59	24	72	10	28
20	119	35.7		26.0	197	38.3	+6	09.8 ¹⁰⁵	52	45	28	8 09	25	73	08	27
21	134	35.6		26.0	212	08.5		20.2 ¹⁰⁴	54	50	36	20	26	75	06	25
22	149	35.5		26.0	226	38.6		30.6 ¹⁰⁴	56	6 56	46	33	27	78	04	23
23	164	35.3		26.0	241	08.8		40.9 ¹⁰³	58	7 03	7 56	8 48	28	80	12	02
24	179	35.2	+23	26.1	255	38.9	+6	51.2 ¹⁰³	60 S	7 11	8 08	9 05	0 30	83	11 59	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 06 ^m 5 ^s		Mag: -3.9 PMG: 9 ^h 44 ^m		Mag: -0.1 PMG: 18 ^h 58 ^m		Mag: -1.8 PMG: 13 ^h 51 ^m		Mag: +0.3 PMG: 21 ^h 06 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	268	07.8	214	12.4	74	57.4	151	55.3	42	30.4
1	283	10.3	229	11.9	89	59.2	166	57.2	57	33.0
2	298	12.8	244	11.3	105	00.9	181	59.1	72	35.6
3	313	15.2	259	10.8	120	02.7	197	01.0	87	38.2
4	328	17.7	274	10.2	135	04.4	212	02.9	102	40.8
5	343	20.1	289	09.7	150	06.2	227	04.8	117	43.3
6	358	22.6	304	09.1	165	07.9	242	06.7	132	45.9
7	13	25.1	319	08.6	180	09.7	257	08.6	147	48.5
8	28	27.5	334	08.0	195	11.4	272	10.5	162	51.1
9	43	30.0	349	07.5	210	13.2	287	12.4	177	53.7
10	58	32.5	4	07.0	225	14.9	302	14.3	192	56.2
11	73	34.9	19	06.4	240	16.6	317	16.2	207	58.8
12	88	37.4	34	05.9	255	18.4	332	18.1	223	01.4
13	103	39.9	49	05.3	270	20.1	347	20.1	238	04.0
14	118	42.3	64	04.8	285	21.9	2	22.0	253	06.6
15	133	44.8	79	04.2	300	23.6	17	23.9	268	09.1
16	148	47.2	94	03.7	315	25.3	32	25.8	283	11.7
17	163	49.7	109	03.1	330	27.1	47	27.7	298	14.3
18	178	52.2	124	02.6	345	28.8	62	29.6	313	16.9
19	193	54.6	139	02.0	0	30.5	77	31.5	328	19.5
20	208	57.1	154	01.5	15	32.3	92	33.4	343	22.0
21	223	59.6	169	00.9	30	34.0	107	35.3	358	24.6
22	239	02.0	184	00.4	45	35.7	122	37.2	13	27.2
23	254	04.5	198	59.8	60	37.5	137	39.1	28	29.8
24	269	07.0	213	59.3	75	39.2	152	41.0	43	32.4
Dif	—		-5		+7		+19		+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 23 ^d 2	PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3										
	PMG: 12 ^h 01 ^m 8					SD: 15 ^h 7			PMG: 7 ^h 12 ^m			R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	35.2	+23 26.1	255	38.9	+6 51.2		60 N	21 28	23 14	** **	0 11 19		14 31 78	
1	194	35.1	26.1	270	09.1 ¹¹²	+7 01.5 ¹⁰³		58	21 07	22 23	** **	14 22		25 77	
2	209	34.9	26.1	284	39.3 ¹¹²	11.7 ¹⁰²		56	20 50	21 53	** **	18 24		21 74	
3	224	34.8	26.1	299	09.4 ¹¹¹	21.8 ¹⁰¹		54	36	31	23 18	21 25		16 73	
4	239	34.6	26.1	313	39.6 ¹¹²	32.0 ¹⁰²		52	24	21 13	22 31	23 28		13 70	
5	254	34.5	+23 26.1	328	09.8 ¹¹²	+7 42.0 ¹⁰⁰		50	20 13	20 58	22 03	0 26 29		14 09 69	
6	269	34.4	+23 26.1	342	40.0 ¹¹²	+7 52.0 ¹⁰⁰		45	19 50	20 28	21 18	0 31 33		14 02 65	
7	284	34.2	26.1	357	10.1 ¹¹¹	+8 02.0 ¹⁰⁰		40	32	20 05	20 47	36 35		13 55 63	
8	299	34.1	26.1	11	40.3 ¹¹²	11.9 ⁹⁹		35	17	19 47	24	40 37		50 61	
9	314	34.0	26.1	26	10.5 ¹¹²	21.8 ⁹⁹		30	19 04	32	20 05	43 40		45 59	
10	329	33.8	26.1	40	40.7 ¹¹²	31.6 ⁹⁸		20	18 42	19 07	19 36	49 44		37 56	
11	344	33.7	+23 26.1	55	10.9 ¹¹²	+8 41.4 ⁹⁸		10 N	18 23	18 46	19 13	0 55 46		13 30 52	
12	359	33.5	+23 26.1	69	41.1 ¹¹²	+8 51.1 ⁹⁷		0	18 05	18 28	18 54	1 00 49		13 23 50	
13	14	33.4	26.1	84	11.3 ¹¹²	+9 00.7 ⁹⁶		10 S	17 48	18 11	37	05 52		17 47	
14	29	33.3	26.1	98	41.5 ¹¹²	10.3 ⁹⁶		20	29	17 53	21	11 55		10 43	
15	44	33.1	26.1	113	11.6 ¹¹¹	19.9 ⁹⁶		30	17 08	35	18 04	17 59		13 02 40	
16	59	33.0	26.1	127	41.8 ¹¹²	29.4 ⁹⁵		35	16 56	24	17 56	21 61		12 57 38	
17	74	32.9	+23 26.1	142	12.0 ¹¹²	+9 38.8 ⁹⁴		40	16 42	17 12	17 46	1 25 64		12 52 36	
18	89	32.7	+23 26.1	156	42.2 ¹¹²	+9 48.2 ⁹⁴		45	16 25	16 59	17 36	1 30 66		12 46 33	
19	104	32.6	26.1	171	12.4 ¹¹²	+9 57.5 ⁹³		50	16 04	42	24	36 70		38 31	
20	119	32.5	26.1	185	42.5 ¹¹¹	+10 06.7 ⁹²		52	15 54	35	19	38 72		35 29	
21	134	32.3	26.1	200	12.7 ¹¹²	15.9 ⁹²		54	43	27	13	41 74		31 28	
22	149	32.2	26.1	214	42.9 ¹¹²	25.1 ⁹²		56	30	18	07	45 75		27 26	
23	164	32.0	26.0	229	13.0 ¹¹¹	34.2 ⁹¹		58	15 15	16 07	17 00	48 78		23 23	
24	179	31.9	+23 26.0	243	43.2 ¹¹²	+10 43.2 ⁹⁰		60 S	14 58	15 56	16 53	1 53 80		12 18 21	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 02 ^m 5		Mag: -3.9 PMG: 9 ^h 44 ^m			Mag: -0.1 PMG: 18 ^h 55 ^m			Mag: -1.8 PMG: 13 ^h 48 ^m			Mag: +0.3 PMG: 21 ^h 02 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	269	07.0	213 59.3	+17 48.4	75 39.2	-6 01.9		152 41.0	+21 34.3		43 32.4	-14 42.6			
1	284	09.4	228 58.7	49.1	90 40.9	02.3		167 42.9	34.2		58 34.9	42.6			
2	299	11.9	243 58.2	49.9	105 42.7	02.7		182 44.8	34.1		73 37.5	42.6			
3	314	14.4	258 57.6	50.6	120 44.4	03.0		197 46.7	34.0		88 40.1	42.5			
4	329	16.8	273 57.0	51.4	135 46.1	03.4		212 48.6	34.0		103 42.7	42.5			
5	344	19.3	288 56.5	+17 52.1	150 47.8	-6 03.8		227 50.5	+21 33.9		118 45.3	-14 42.5			
6	359	21.7	303 55.9	+17 52.8	165 49.6	-6 04.2		242 52.4	+21 33.8		133 47.8	-14 42.5			
7	14	24.2	318 55.4	53.6	180 51.3	04.5		257 54.3	33.7		148 50.4	42.4			
8	29	26.7	333 54.8	54.3	195 53.0	04.9		272 56.2	33.6		163 53.0	42.4			
9	44	29.1	348 54.3	55.0	210 54.7	05.3		287 58.1	33.5		178 55.6	42.4			
10	59	31.6	3 53.7	55.8	225 56.5	05.7		303 00.0	33.4		193 58.1	42.4			
11	74	34.1	18 53.1	+17 56.5	240 58.2	-6 06.0		318 01.9	+21 33.3		209 00.7	-14 42.4			
12	89	36.5	33 52.6	+17 57.2	255 59.9	-6 06.4		333 03.8	+21 33.2		224 03.3	-14 42.3			
13	104	39.0	48 52.0	58.0	271 01.6	06.8		348 05.7	33.1		239 05.9	42.3			
14	119	41.5	63 51.5	58.7	286 03.4	07.2		3 07.6	33.0		254 08.5	42.3			
15	134	43.9	78 50.9	+17 59.4	301 05.1	07.6		18 09.5	32.9		269 11.0	42.3			
16	149	46.4	93 50.3	+18 00.1	316 06.8	07.9		33 11.4	32.9		284 13.6	42.2			
17	164	48.9	108 49.8	+18 00.9	331 08.5	-6 08.3		48 13.3	+21 32.8		299 16.2	-14 42.2			
18	179	51.3	123 49.2	+18 01.6	346 10.2	-6 08.7		63 15.2	+21 32.7		314 18.8	-14 42.2			
19	194	53.8	138 48.7	02.3	1 11.9	09.1		78 17.1	32.6		329 21.3	42.2			
20	209	56.2	153 48.1	03.1	16 13.7	09.5		93 19.0	32.5		344 23.9	42.2			
21	224	58.7	168 47.5	03.8	31 15.4	09.8		108 20.9	32.4		359 26.5	42.1			
22	240	01.2	183 47.0	04.5	46 17.1	10.2		123 22.8	32.3		14 29.1	42.1			
23	255	03.6	198 46.4	05.2	61 18.8	10.6		138 24.7	32.2		29 31.7	42.1			
24	270	06.1	213 45.8	+18 05.9	76 20.5	-6 11.0		153 26.6	+21 32.1		44 34.2	-14 42.1			
Dif	—		-6	+7	+17	-4		+19	-1		+26	0			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 0				Edad: 24 ^d 2 PHE { SD: 15 ^h 6 PMG: 8 ^h 01 ^m R ^o : 50 ^m 4 ^h : 57 ^h 1 12 ^h : 56 ^h 9 20 ^h : 56 ^h 7															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	31.9	+23	26.0	243	43.2	+10	43.2	60 N	** **	0 49	2 36	0 30	23	15 49	75				
1	194	31.8		26.0	258	13.3 ¹¹¹	+10	52.1 ⁸⁹	58	** **	1 41	2 57	36	25	42	72				
2	209	31.6		26.0	272	43.5 ¹¹²	+11	01.0 ⁸⁹	56	** **	2 11	3 13	42	27	35	70				
3	224	31.5		26.0	287	13.6 ¹¹¹		09.8 ⁸⁸	54	0 45	33	28	46	29	29	68				
4	239	31.4		26.0	301	43.7 ¹¹¹		18.6 ⁸⁸	52	1 33	2 51	40	51	30	23	67				
5	254	31.2	+23	26.0	316	13.9 ¹¹²	+11	27.3 ⁸⁷	50	2 00	3 06	3 51	0 55	32	15 18	66				
6	269	31.1	+23	26.0	330	44.0 ¹¹¹	+11	35.9 ⁸⁶	45	2 46	3 36	4 13	1 04	34	15 07	63				
7	284	31.0		26.0	345	14.1 ¹¹¹		44.4 ⁸⁵	40	3 17	3 59	31	11	37	14 58	61				
8	299	30.8		25.9	359	44.2 ¹¹¹	+11	52.9 ⁸⁵	35	40	4 17	4 47	17	40	51	59				
9	314	30.7		25.9	14	14.3 ¹¹¹	+12	01.4 ⁸⁵	30	3 59	32	5 00	23	41	44	57				
10	329	30.6		25.9	28	44.4 ¹¹¹		09.7 ⁸³	20	4 28	4 57	22	33	44	33	54				
11	344	30.4	+23	25.9	43	14.5 ¹¹¹	+12	18.0 ⁸³	10 N	4 51	5 18	5 41	1 41	47	14 22	52				
12	359	30.3	+23	25.9	57	44.6 ¹¹¹	+12	26.2 ⁸²	0	5 10	5 36	5 58	1 49	50	14 13	50				
13	14	30.1		25.9	72	14.6 ¹¹⁰		34.4 ⁸²	10 S	27	5 53	6 16	1 57	52	14 04	47				
14	29	30.0		25.8	86	44.7 ¹¹¹		42.4 ⁸⁰	20	43	6 10	34	2 06	55	13 53	46				
15	44	29.9		25.8	101	14.7 ¹¹⁰		50.4 ⁸⁰	30	5 59	29	6 56	16	58	42	42				
16	59	29.7		25.8	115	44.8 ¹¹¹	+12	58.4 ⁸⁰	35	6 08	40	7 08	22	60	35	41				
17	74	29.6	+23	25.8	130	14.8 ¹¹⁰	+13	06.2 ⁷⁸	40	6 17	6 52	7 22	2 29	61	13 28	39				
18	89	29.5	+23	25.7	144	44.8 ¹¹⁰	+13	14.0 ⁷⁸	45	6 28	7 05	7 39	2 36	65	13 19	37				
19	104	29.3		25.7	159	14.8 ¹¹⁰		21.7 ⁷⁷	50	40	21	8 00	46	67	09	33				
20	119	29.2		25.7	173	44.8 ¹¹⁰		29.3 ⁷⁶	52	45	29	10	50	69	13 04	32				
21	134	29.1		25.7	188	14.8 ¹¹⁰		36.9 ⁷⁶	54	51	37	21	2 55	70	12 59	30				
22	149	28.9		25.7	202	44.8 ¹¹⁰		44.4 ⁷⁵	56	6 57	46	34	3 00	72	53	29				
23	164	28.8		25.6	217	14.8 ¹¹⁰		51.8 ⁷⁴	58	7 04	7 56	8 48	06	75	46	27				
24	179	28.6	+23	25.6	231	44.8 ¹¹⁰	+13	59.1 ⁷³	60 S	7 11	8 08	9 06	3 13	77	12 39	25				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 58 ^m 6				Mag: -3.9 PMG: 9 ^h 45 ^m				Mag: -0.1 PMG: 18 ^h 52 ^m				Mag: -1.8 PMG: 13 ^h 44 ^m				Mag: +0.3 PMG: 20 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	270	06.1	213	45.8	+18	05.9	76	20.5	-6	11.0	153	26.6	+21	32.1	44	34.2	-14	42.1		
1	285	08.6	228	45.3		06.7	91	22.2		11.4	168	28.5		32.0	59	36.8		42.0		
2	300	11.0	243	44.7		07.4	106	23.9		11.7	183	30.4		31.9	74	39.4		42.0		
3	315	13.5	258	44.1		08.1	121	25.6		12.1	198	32.3		31.8	89	42.0		42.0		
4	330	16.0	273	43.6		08.8	136	27.4		12.5	213	34.2		31.7	104	44.5		42.0		
5	345	18.4	288	43.0	+18	09.5	151	29.1	-6	12.9	228	36.1	+21	31.7	119	47.1	-14	42.0		
6	0	20.9	303	42.4	+18	10.3	166	30.8	-6	13.3	243	38.0	+21	31.6	134	49.7	-14	41.9		
7	15	23.3	318	41.9		11.0	181	32.5		13.7	258	39.9		31.5	149	52.3		41.9		
8	30	25.8	333	41.3		11.7	196	34.2		14.0	273	41.8		31.4	164	54.8		41.9		
9	45	28.3	348	40.7		12.4	211	35.9		14.4	288	43.7		31.3	179	57.4		41.9		
10	60	30.7	3	40.2		13.1	226	37.6		14.8	303	45.6		31.2	195	00.0		41.8		
11	75	33.2	18	39.6	+18	13.8	241	39.3	-6	15.2	318	47.5	+21	31.1	210	02.6	-14	41.8		
12	90	35.7	33	39.0	+18	14.6	256	41.0	-6	15.6	333	49.4	+21	31.0	225	05.1	-14	41.8		
13	105	38.1	48	38.4		15.3	271	42.7		16.0	348	51.3		30.9	240	07.7		41.8		
14	120	40.6	63	37.9		16.0	286	44.4		16.3	3	53.2		30.8	255	10.3		41.8		
15	135	43.1	78	37.3		16.7	301	46.1		16.7	18	55.1		30.7	270	12.9		41.7		
16	150	45.5	93	36.7		17.4	316	47.8		17.1	33	57.0		30.6	285	15.4		41.7		
17	165	48.0	108	36.2	+18	18.1	331	49.5	-6	17.5	48	58.9	+21	30.5	300	18.0	-14	41.7		
18	180	50.5	123	35.6	+18	18.8	346	51.2	-6	17.9	64	00.8	+21	30.5	315	20.6	-14	41.7		
19	195	52.9	138	35.0		19.5	1	52.9		18.3	79	02.7		30.4	330	23.1		41.7		
20	210	55.4	153	34.4		20.2	16	54.6		18.6	94	04.6		30.3	345	25.7		41.6		
21	225	57.8	168	33.9		20.9	31	56.3		19.0	109	06.5		30.2	0	28.3		41.6		
22	241	00.3	183	33.3		21.6	46	58.0		19.4	124	08.4		30.1	15	30.9		41.6		
23	256	02.8	198	32.7		22.4	61	59.7		19.8	139	10.3		30.0	30	33.4		41.6		
24	271	05.2	213	32.1	+18	23.1	77	01.4	-6	20.2	154	12.2	+21	29.9	45	36.0	-14	41.5		
Dif	—		-6		+7		+17		-4		+19		-1		+26		0			

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: 25 ^d 2 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 3 20 ^h : 56 ^s 1 PMG: 8 ^h 51 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico	Hora R°	Hora R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	28.6	+23	25.6	231	44.8	+13	59.1	60 N	21 28	23 14	** **	0 53 27	17 04 69				
1	194	28.5		25.6	246	14.7 ¹⁰⁹	+14	06.4	58	21 07	22 23	** **	1 01 30	16 54 67				
2	209	28.4		25.5	260	44.7 ¹¹⁰		13.5	56	20 51	21 53	** **	09 31	45 65				
3	224	28.2		25.5	275	14.6 ¹⁰⁹		20.6	54	36	31	23 18	15 33	37 64				
4	239	28.1		25.5	289	44.5 ¹⁰⁹		27.7	52	24	21 13	22 31	21 35	30 63				
5	254	28.0	+23	25.5	304	14.4 ¹⁰⁹	+14	34.6	50	20 13	20 58	22 03	1 27 35	16 24 62				
6	269	27.8	+23	25.4	318	44.3 ¹⁰⁹	+14	41.5	45	19 51	20 28	21 18	1 38 39	16 10 60				
7	284	27.7		25.4	333	14.2 ¹⁰⁹		48.2	40	33	20 05	20 47	48 40	15 59 58				
8	299	27.6		25.4	347	44.1 ¹⁰⁹	+14	54.9	35	18	19 47	24	1 57 42	50 56				
9	314	27.4		25.3	2	14.0 ¹⁰⁹	+15	01.5	30	19 05	32	20 05	2 04 43	41 56				
10	329	27.3		25.3	16	43.9 ¹⁰⁹		08.1	20	18 42	19 07	19 36	17 46	27 54				
11	344	27.2	+23	25.3	31	13.7 ¹⁰⁸	+15	14.5	10 N	18 23	18 47	19 14	2 28 48	15 14 52				
12	359	27.0	+23	25.2	45	43.6 ¹⁰⁹	+15	20.9	0	18 06	18 28	18 55	2 39 50	15 03 50				
13	14	26.9		25.2	60	13.4 ¹⁰⁸		27.2	10 S	17 48	18 11	38	2 49 52	14 51 49				
14	29	26.7		25.2	74	43.2 ¹⁰⁸		33.4	20	30	17 54	21	3 01 54	39 46				
15	44	26.6		25.1	89	13.1 ¹⁰⁹		39.5	30	17 09	35	18 05	14 57	24 45				
16	59	26.5		25.1	103	42.9 ¹⁰⁸		45.5	35	16 56	24	17 56	22 58	16 43				
17	74	26.3	+23	25.0	118	12.7 ¹⁰⁸	+15	51.5	40	16 42	17 13	17 47	3 30 60	14 07 42				
18	89	26.2	+23	25.0	132	42.5 ¹⁰⁸	+15	57.3	45	16 25	16 59	17 36	3 41 61	13 56 40				
19	104	26.1		25.0	147	12.3 ¹⁰⁸	+16	03.1	50	16 04	43	25	53 64	42 38				
20	119	25.9		24.9	161	42.0 ¹⁰⁷		08.8	52	15 55	36	19	3 59 65	36 37				
21	134	25.8		24.9	176	11.8 ¹⁰⁸		14.4	54	43	27	14	4 05 67	29 36				
22	149	25.7		24.8	190	41.6 ¹⁰⁸		19.9	56	31	18	07	12 69	22 34				
23	164	25.5		24.8	205	11.3 ¹⁰⁷		25.4	58	15 16	16 08	17 01	21 69	13 33				
24	179	25.4	+23	24.7	219	41.1 ¹⁰⁸	+16	30.7	60 S	14 59	15 56	16 53	4 30 72	13 04 31				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 54 ^m 7		Mag: -3.9 PMG: 9 ^h 46 ^m				Mag: -0.1 PMG: 18 ^h 50 ^m				Mag: -1.8 PMG: 13 ^h 41 ^m				Mag: +0.3 PMG: 20 ^h 54 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	05.2	213	32.1	+18	23.1	77	01.4	-6	20.2	154	12.2	+21	29.9	45	36.0	-14	41.5
1	286	07.7	228	31.6		23.8	92	03.1		20.6	169	14.1		29.8	60	38.6		41.5
2	301	10.2	243	31.0		24.5	107	04.8		21.0	184	16.0		29.7	75	41.2		41.5
3	316	12.6	258	30.4		25.2	122	06.5		21.4	199	17.9		29.6	90	43.7		41.5
4	331	15.1	273	29.8		25.9	137	08.2		21.7	214	19.8		29.5	105	46.3		41.5
5	346	17.6	288	29.2	+18	26.6	152	09.9	-6	22.1	229	21.7	+21	29.4	120	48.9	-14	41.4
6	1	20.0	303	28.7	+18	27.3	167	11.6	-6	22.5	244	23.6	+21	29.3	135	51.4	-14	41.4
7	16	22.5	318	28.1		28.0	182	13.2		22.9	259	25.5		29.2	150	54.0		41.4
8	31	25.0	333	27.5		28.7	197	14.9		23.3	274	27.4		29.1	165	56.6		41.4
9	46	27.4	348	26.9		29.4	212	16.6		23.7	289	29.3		29.1	180	59.2		41.4
10	61	29.9	3	26.3		30.1	227	18.3		24.1	304	31.2		29.0	196	01.7		41.3
11	76	32.3	18	25.8	+18	30.8	242	20.0	-6	24.5	319	33.1	+21	28.9	211	04.3	-14	41.3
12	91	34.8	33	25.2	+18	31.4	257	21.7	-6	24.9	334	35.0	+21	28.8	226	06.9	-14	41.3
13	106	37.3	48	24.6		32.1	272	23.4		25.2	349	36.9		28.7	241	09.4		41.3
14	121	39.7	63	24.0		32.8	287	25.0		25.6	4	38.8		28.6	256	12.0		41.3
15	136	42.2	78	23.4		33.5	302	26.7		26.0	19	40.7		28.5	271	14.6		41.2
16	151	44.7	93	22.8		34.2	317	28.4		26.4	34	42.6		28.4	286	17.2		41.2
17	166	47.1	108	22.3	+18	34.9	332	30.1	-6	26.8	49	44.5	+21	28.3	301	19.7	-14	41.2
18	181	49.6	123	21.7	+18	35.6	347	31.8	-6	27.2	64	46.4	+21	28.2	316	22.3	-14	41.2
19	196	52.1	138	21.1		36.3	2	33.5		27.6	79	48.3		28.1	331	24.9		41.2
20	211	54.5	153	20.5		37.0	17	35.1		28.0	94	50.2		28.0	346	27.4		41.1
21	226	57.0	168	19.9		37.7	32	36.8		28.4	109	52.1		27.9	1	30.0		41.1
22	241	59.4	183	19.3		38.4	47	38.5		28.8	124	54.0		27.8	16	32.6		41.1
23	257	01.9	198	18.7		39.0	62	40.2		29.2	139	55.9		27.7	31	35.1		41.1
24	272	04.4	213	18.1	+18	39.7	77	41.9	-6	29.5	154	57.8	+21	27.6	46	37.7	-14	41.1
Dif	—		-6		+7		+17		-4		+19		-1		+26		0	

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4				Edad: 26 ^d 2 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^o 8 20 ^h : 55 ^o 6 PMG: 9 ^h 41 ^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	m
0	179	25.4	+23	24.7	219	41.1	+16	30.7	53	60 N	** **	0 51	2 37	1 20	35	18 13	60			
1	194	25.3		24.7	234	10.8 ¹⁰⁷		36.0	53	58	** **	1 41	2 57	31 36		18 01	59			
2	209	25.1		24.7	248	40.6 ¹⁰⁸		41.1	51	56	** **	2 11	3 14	40 38		17 50	59			
3	224	25.0		24.6	263	10.3 ¹⁰⁷		46.2	51	54	0 47	34	28	48 39		41 58				
4	239	24.9		24.6	277	40.0 ¹⁰⁷		51.2	50	52	1 33	2 52	41	1 56	39	33 57				
5	254	24.7	+23	24.5	292	09.7 ¹⁰⁷	+16	56.1	49	50	2 01	3 07	3 51	2 02	41	17 26	56			
6	269	24.6	+23	24.5	306	39.4 ¹⁰⁷	+17	00.9	48	45	2 47	3 37	4 14	2 17	42	17 10	56			
7	284	24.4		24.4	321	09.1 ¹⁰⁷		05.6	47	40	3 17	3 59	32	28	44	16 57	55			
8	299	24.3		24.4	335	38.8 ¹⁰⁷		10.2	46	35	41	4 17	4 47	39 44		46 54				
9	314	24.2		24.3	350	08.5 ¹⁰⁷		14.8	46	30	3 59	33	5 00	2 47	46	37 53				
10	329	24.0		24.3	4	38.2 ¹⁰⁷		19.2	44	20	4 28	4 58	22	3 03	47	21 52				
11	344	23.9	+23	24.2	19	07.9 ¹⁰⁷	+17	23.6	44	10 N	4 51	5 18	5 41	3 16	49	16 06	51			
12	359	23.8	+23	24.2	33	37.6 ¹⁰⁷	+17	27.8	42	0	5 10	5 36	5 59	3 29	50	15 53	50			
13	14	23.6		24.1	48	07.2 ¹⁰⁶		32.0	42	10 S	27	5 53	6 16	41 52		40 49				
14	29	23.5		24.1	62	36.9 ¹⁰⁷		36.1	41	20	5 43	6 11	35	3 55	53	25 49				
15	44	23.4		24.0	77	06.6 ¹⁰⁷		40.0	39	30	6 00	30	6 56	4 11	54	15 09	47			
16	59	23.2		24.0	91	36.2 ¹⁰⁶		43.9	39	35	08	40	7 08	20 55		14 59	47			
17	74	23.1	+23	23.9	106	05.9 ¹⁰⁷	+17	47.7	38	40	6 18	6 52	7 23	4 30	56	14 49	45			
18	89	23.0	+23	23.8	120	35.6 ¹⁰⁷	+17	51.4	37	45	6 28	7 05	7 39	4 42	58	14 36	44			
19	104	22.8		23.8	135	05.2 ¹⁰⁶		55.1	37	50	40	22	8 00	4 57	59	20 44				
20	119	22.7		23.7	149	34.9 ¹⁰⁷	+17	58.6	35	52	45	29	10	5 04	60	13 43				
21	134	22.6		23.7	164	04.6 ¹⁰⁷	+18	02.0	34	54	51	37	21	12 61		14 05	42			
22	149	22.4		23.6	178	34.2 ¹⁰⁶		05.3	33	56	6 57	46	34	21 61		13 56	41			
23	164	22.3		23.5	193	03.9 ¹⁰⁷		08.6	33	58	7 04	7 57	8 48	30 64		46 40				
24	179	22.2	+23	23.5	207	33.5 ¹⁰⁶	+18	11.7	31	60 S	7 11	8 08	9 06	5 42	64	13 35	38			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 50 ^m 7		Mag: -3.9 PMG: 9 ^h 47 ^m				Mag: -0.1 PMG: 18 ^h 47 ^m				Mag: -1.8 PMG: 13 ^h 38 ^m				Mag: +0.3 PMG: 20 ^h 50 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	272	04.4	213	18.1	+18	39.7	77	41.9	-6	29.5	154	57.8	+21	27.6	46	37.7	-14	41.1
1	287	06.8	228	17.6		40.4	92	43.5		29.9	169	59.7		27.6	61	40.3		41.0
2	302	09.3	243	17.0		41.1	107	45.2		30.3	185	01.6		27.5	76	42.9		41.0
3	317	11.8	258	16.4		41.8	122	46.9		30.7	200	03.5		27.4	91	45.4		41.0
4	332	14.2	273	15.8		42.5	137	48.6		31.1	215	05.4		27.3	106	48.0		41.0
5	347	16.7	288	15.2	+18	43.1	152	50.2	-6	31.5	230	07.3	+21	27.2	121	50.6	-14	41.0
6	2	19.2	303	14.6	+18	43.8	167	51.9	-6	31.9	245	09.2	+21	27.1	136	53.1	-14	40.9
7	17	21.6	318	14.0		44.5	182	53.6		32.3	260	11.1		27.0	151	55.7		40.9
8	32	24.1	333	13.4		45.2	197	55.2		32.7	275	13.0		26.9	166	58.3		40.9
9	47	26.6	348	12.8		45.9	212	56.9		33.1	290	14.9		26.8	182	00.8		40.9
10	62	29.0	3	12.2		46.5	227	58.6		33.5	305	16.8		26.7	197	03.4		40.9
11	77	31.5	18	11.6	+18	47.2	243	00.3	-6	33.9	320	18.7	+21	26.6	212	06.0	-14	40.8
12	92	33.9	33	11.1	+18	47.9	258	01.9	-6	34.3	335	20.6	+21	26.5	227	08.5	-14	40.8
13	107	36.4	48	10.5		48.6	273	03.6		34.7	350	22.5		26.4	242	11.1		40.8
14	122	38.9	63	09.9		49.2	288	05.3		35.1	5	24.4		26.3	257	13.7		40.8
15	137	41.3	78	09.3		49.9	303	06.9		35.5	20	26.3		26.2	272	16.2		40.8
16	152	43.8	93	08.7		50.6	318	08.6		35.9	35	28.2		26.1	287	18.8		40.7
17	167	46.3	108	08.1	+18	51.3	333	10.3	-6	36.3	50	30.1	+21	26.0	302	21.4	-14	40.7
18	182	48.7	123	07.5	+18	51.9	348	11.9	-6	36.7	65	32.0	+21	25.9	317	23.9	-14	40.7
19	197	51.2	138	06.9		52.6	3	13.6		37.0	80	33.9		25.9	332	26.5		40.7
20	212	53.7	153	06.3		53.3	18	15.2		37.4	95	35.8		25.8	347	29.1		40.7
21	227	56.1	168	05.7		54.0	33	16.9		37.8	110	37.7		25.7	2	31.6		40.6
22	242	58.6	183	05.1		54.6	48	18.6		38.2	125	39.6		25.6	17	34.2		40.6
23	258	01.1	198	04.5		55.3	63	20.2		38.6	140	41.5		25.5	32	36.8		40.6
24	273	03.5	213	03.9	+18	56.0	78	21.9	-6	39.0	155	43.4	+21	25.4	47	39.3	-14	40.6
Dif	—		-6 +7		+17		-4		+19		-1		+26		0			

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 6				Edad: 27 ^d 2 PHE { 4 ^h : 55/5 12 ^h : 55/3 20 ^h : 55/2 PMG: 10 ^h 31 ^m R°: 50 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	22.2	+23	23.5	207	33.5	+18	11.7	60 N	21 28	23 12	** **	1 55 43		19 13 50		
1	194	22.0		23.4	222	03.2 ¹⁰⁷		14.8	58	21 07	22 23	** **	2 07 44		19 00 50		
2	209	21.9		23.4	236	32.9 ¹⁰⁷		17.7	56	20 51	21 53	** **	18 44		18 49 50		
3	224	21.8		23.3	251	02.5 ¹⁰⁶		20.6	54	36	31	23 17	27 45		39 50		
4	239	21.6		23.2	265	32.2 ¹⁰⁷		23.3	52	24	21 13	22 31	35 46		30 50		
5	254	21.5	+23	23.2	280	01.9 ¹⁰⁷	+18	26.0	50	20 13	20 58	22 03	2 43 46		18 22 50		
6	269	21.4	+23	23.1	294	31.6 ¹⁰⁷	+18	28.6	45	19 51	20 28	21 18	2 59 47		18 06 50		
7	284	21.2		23.0	309	01.2 ¹⁰⁶		31.0	40	33	20 06	20 47	3 12 48		17 52 50		
8	299	21.1		23.0	323	30.9 ¹⁰⁷		33.4	35	18	19 48	24	23 48		40 50		
9	314	21.0		22.9	338	00.6 ¹⁰⁷		35.7	30	19 05	32	20 06	33 49		30 50		
10	329	20.8		22.8	352	30.3 ¹⁰⁷		37.9	20	18 43	19 07	19 37	3 50 49		17 13 50		
11	344	20.7	+23	22.8	7	00.0 ¹⁰⁷	+18	40.0	10 N	18 24	18 47	19 14	4 05 50		16 57 50		
12	359	20.5	+23	22.7	21	29.7 ¹⁰⁷	+18	42.0	0	18 06	18 29	18 55	4 19 50		16 43 50		
13	14	20.4		22.6	35	59.4 ¹⁰⁷		43.9	10 S	17 49	18 12	38	33 50		29 50		
14	29	20.3		22.6	50	29.2 ¹⁰⁸		45.7	20	30	17 54	22	4 48 51		16 14 49		
15	44	20.1		22.5	64	58.9 ¹⁰⁷		47.4	30	17 09	36	18 05	5 05 52		15 56 49		
16	59	20.0		22.4	79	28.6 ¹⁰⁷		49.1	35	16 57	25	17 57	15 52		46 49		
17	74	19.9	+23	22.3	93	58.4 ¹⁰⁸	+18	50.6	40	16 43	17 13	17 47	5 26 53		15 34 49		
18	89	19.7	+23	22.3	108	28.1 ¹⁰⁷	+18	52.0	45	16 26	17 00	17 37	5 40 53		15 20 49		
19	104	19.6		22.2	122	57.9 ¹⁰⁸		53.3	50	16 05	16 44	25	5 56 54		15 04 48		
20	119	19.5		22.1	137	27.7 ¹⁰⁸		54.6	52	15 55	36	20	6 04 54		14 56 48		
21	134	19.3		22.0	151	57.5 ¹⁰⁸		55.7	54	44	28	14	13 54		47 49		
22	149	19.2		22.0	166	27.3 ¹⁰⁸		56.8	56	32	19	08	22 55		37 48		
23	164	19.1		21.9	180	57.1 ¹⁰⁸		57.7	58	15 17	16 09	17 01	34 54		26 48		
24	179	18.9	+23	21.8	195	26.9 ¹⁰⁸	+18	58.6	60 S	14 59	15 57	16 54	6 46 55		14 13 48		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 5 ^h 46 ^m 8		Mag: -3.9 PMG: 9 ^h 48 ^m		Mag: -0.1 PMG: 18 ^h 44 ^m		Mag: -1.8 PMG: 13 ^h 35 ^m		Mag: +0.3 PMG: 20 ^h 46 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	273	03.5	213	03.9	+18	56.0	78	21.9	+21	25.4							
1	288	06.0	228	03.3		56.6	93	23.5		25.3							
2	303	08.4	243	02.7		57.3	108	25.2		25.2							
3	318	10.9	258	02.1		58.0	123	26.9		25.1							
4	333	13.4	273	01.5		58.6	138	28.5		25.0							
5	348	15.8	288	00.9	+18	59.3	153	30.2	+21	24.9							
6	3	18.3	303	00.3	+18	59.9	168	31.8	+21	24.8							
7	18	20.8	317	59.7	+19	00.6	183	33.5		24.7							
8	33	23.2	332	59.1		01.3	198	35.1		24.6							
9	48	25.7	347	58.5		01.9	213	36.8		24.5							
10	63	28.2	2	57.9		02.6	228	38.4		24.4							
11	78	30.6	17	57.3	+19	03.2	243	40.1	+21	24.3							
12	93	33.1	32	56.6	+19	03.9	258	41.7	+21	24.2							
13	108	35.6	47	56.0		04.6	273	43.4		24.1							
14	123	38.0	62	55.4		05.2	288	45.0		24.0							
15	138	40.5	77	54.8		05.9	303	46.7		23.9							
16	153	42.9	92	54.2		06.5	318	48.3		23.8							
17	168	45.4	107	53.6	+19	07.2	333	50.0	+21	23.8							
18	183	47.9	122	53.0	+19	07.8	348	51.6	+21	23.7							
19	198	50.3	137	52.4		08.5	3	53.3		23.6							
20	213	52.8	152	51.8		09.1	18	54.9		23.5							
21	228	55.3	167	51.2		09.8	33	56.6		23.4							
22	243	57.7	182	50.6		10.4	48	58.2		23.3							
23	259	00.2	197	50.0		11.1	63	59.9		23.2							
24	274	02.7	212	49.3	+19	11.7	79	01.5	+21	23.1							
Dif	—		-6		+7		+17		-1								

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: 28 ^d 2 PHE { 4 ^h : 55':1 12 ^h : 54':9 20 ^h : 54':8 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	179	18.9	+23	21.8	195	26.9	+18	58.6	7	60 N	** **	0 53	2 38	2 38	52	20 03	40			
1	194	18.8		21.7	209	56.8 ¹⁰⁹	+18	59.3	7	58	** **	1 43	2 58	2 51	52	19 50	41			
2	209	18.7		21.7	224	26.6 ¹⁰⁸	+19	00.0	6	56	** **	2 13	3 15	3 02	52	39	42			
3	224	18.5		21.6	238	56.5 ¹⁰⁹	+19	00.6	6	54	0 49	35	29	12	52	29	43			
4	239	18.4		21.5	253	26.4 ¹⁰⁹		01.0	4	52	1 35	2 53	41	21	51	20	43			
5	254	18.3	+23	21.4	267	56.3 ¹⁰⁹	+19	01.4	4	50	2 02	3 08	3 52	3 29	51	19 12	44			
6	269	18.2	+23	21.3	282	26.2 ¹⁰⁹	+19	01.7	3	45	2 48	3 37	4 15	3 46	51	18 56	44			
7	284	18.0		21.3	296	56.2 ¹¹⁰		01.9	2	40	3 18	4 00	33	4 00	50	42	45			
8	299	17.9		21.2	311	26.1 ¹⁰⁹		02.0	1	35	3 41	18	4 48	11	51	30	46			
9	314	17.8		21.1	325	56.1 ¹¹⁰		02.0	0	30	4 00	33	5 01	22	50	20	47			
10	329	17.6		21.0	340	26.1 ¹¹⁰		01.9	1	20	29	4 58	23	39	50	18 03	47			
11	344	17.5	+23	20.9	354	56.1 ¹¹⁰	+19	01.7	2	10 N	4 51	5 19	5 42	4 55	49	17 47	48			
12	359	17.4	+23	20.8	9	26.1 ¹¹⁰	+19	01.4	3	0	5 10	5 37	5 59	5 09	49	17 33	49			
13	14	17.2		20.7	23	56.2 ¹¹¹		01.1	3	10 S	27	5 54	6 17	23	49	19	49			
14	29	17.1		20.7	38	26.2 ¹¹⁰	+19	00.6	5	20	5 44	6 11	35	39	49	17 03	50			
15	44	17.0		20.6	52	56.3 ¹¹¹	+19	00.0	6	30	6 00	30	6 56	5 57	48	16 45	51			
16	59	16.8		20.5	67	26.4 ¹¹¹	+18	59.4	6	35	09	40	7 09	6 07	48	35	52			
17	74	16.7	+23	20.4	81	56.6 ¹¹²	+18	58.6	8	40	6 18	6 52	7 23	6 19	47	16 23	52			
18	89	16.6	+23	20.3	96	26.7 ¹¹¹	+18	57.8	8	45	6 28	7 06	7 39	6 33	47	16 09	53			
19	104	16.4		20.2	110	56.9 ¹¹²		56.9	9	50	40	22	8 00	50	47	15 52	54			
20	119	16.3		20.1	125	27.1 ¹¹²		55.8	11	52	45	29	10	6 58	46	44	54			
21	134	16.2		20.0	139	57.3 ¹¹²		54.7	11	54	51	37	21	7 07	46	36	54			
22	149	16.0		19.9	154	27.6 ¹¹³		53.5	12	56	6 57	46	34	17	46	25	55			
23	164	15.9		19.8	168	57.8 ¹¹²		52.2	13	58	7 04	7 57	8 48	28	46	14	55			
24	179	15.8	+23	19.7	183	28.1 ¹¹³	+18	50.8	14	60 S	7 11	8 08	9 06	7 41	45	15 01	56			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 42 ^m 9		Mag: -3.9 PMG: 9 ^h 49 ^m		Mag: 0.0 PMG: 18 ^h 42 ^m		Mag: -1.8 PMG: 13 ^h 32 ^m		Mag: +0.3 PMG: 20 ^h 42 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	274	02.7	212	49.3	+19	11.7	79	01.5	-6	48.7	156	28.9	+21	23.1	48	40.9	-14	40.1
1	289	05.1	227	48.7		12.4	94	03.1		49.1	171	30.8		23.0	63	43.4		40.1
2	304	07.6	242	48.1		13.0	109	04.8		49.5	186	32.7		22.9	78	46.0		40.1
3	319	10.1	257	47.5		13.7	124	06.4		49.9	201	34.6		22.8	93	48.6		40.1
4	334	12.5	272	46.9		14.3	139	08.1		50.3	216	36.5		22.7	108	51.1		40.1
5	349	15.0	287	46.3	+19	14.9	154	09.7	-6	50.7	231	38.4	+21	22.6	123	53.7	-14	40.1
6	4	17.4	302	45.7	+19	15.6	169	11.3	-6	51.1	246	40.3	+21	22.5	138	56.3	-14	40.0
7	19	19.9	317	45.0		16.2	184	13.0		51.5	261	42.2		22.4	153	58.8		40.0
8	34	22.4	332	44.4		16.9	199	14.6		51.9	276	44.1		22.3	169	01.4		40.0
9	49	24.8	347	43.8		17.5	214	16.3		52.3	291	46.0		22.2	184	03.9		40.0
10	64	27.3	2	43.2		18.1	229	17.9		52.7	306	47.9		22.1	199	06.5		40.0
11	79	29.8	17	42.6	+19	18.8	244	19.5	-6	53.1	321	49.8	+21	22.0	214	09.1	-14	39.9
12	94	32.2	32	42.0	+19	19.4	259	21.2	-6	53.5	336	51.7	+21	21.9	229	11.6	-14	39.9
13	109	34.7	47	41.4		20.1	274	22.8		53.9	351	53.5		21.8	244	14.2		39.9
14	124	37.2	62	40.7		20.7	289	24.4		54.3	6	55.4		21.7	259	16.7		39.9
15	139	39.6	77	40.1		21.3	304	26.1		54.7	21	57.3		21.6	274	19.3		39.9
16	154	42.1	92	39.5		22.0	319	27.7		55.1	36	59.2		21.5	289	21.9		39.9
17	169	44.5	107	38.9	+19	22.6	334	29.3	-6	55.5	52	01.1	+21	21.4	304	24.4	-14	39.8
18	184	47.0	122	38.3	+19	23.2	349	30.9	-6	56.0	67	03.0	+21	21.3	319	27.0	-14	39.8
19	199	49.5	137	37.6		23.9	4	32.6		56.4	82	04.9		21.2	334	29.5		39.8
20	214	51.9	152	37.0		24.5	19	34.2		56.8	97	06.8		21.2	349	32.1		39.8
21	229	54.4	167	36.4		25.1	34	35.8		57.2	112	08.7		21.1	4	34.7		39.8
22	244	56.9	182	35.8		25.8	49	37.5		57.6	127	10.6		21.0	19	37.2		39.8
23	259	59.3	197	35.2		26.4	64	39.1		58.0	142	12.5		20.9	34	39.8		39.7
24	275	01.8	212	34.5	+19	27.0	79	40.7	-6	58.4	157	14.4	+21	20.8	49	42.3	-14	39.7
Dif	—		-6		+6		+16		-4		+19		-1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 29 ^d 2	PHE { 4 ^h : 54 ^m /7 12 ^h : 54 ^m /6 20 ^h : 54 ^m /5										
	PMG: 12 ^h 03 ^m 1					SD: 14 ^h 9			PMG: 12 ^h 10 ^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	h m	h m	
0	179	15.8	+23 19.7	183	28.1	+18 50.8	15	60 N	21 27	23 10	** **	3 30 60	20 43 31		
1	194	15.6	19.6	197	58.5 ¹¹⁴	49.3	15	58	21 07	22 22	** **	43 58	31 33		
2	209	15.5	19.5	212	28.8 ¹¹³	47.8	15	56	20 50	21 52	** **	3 54 57	21 34		
3	224	15.4	19.4	226	59.2 ¹¹⁴	46.1	17	54	36	30	23 14	4 04 56	12 35		
4	239	15.2	19.3	241	29.6 ¹¹⁴	44.4	17	52	24	21 13	22 30	12 56	20 03 37		
5	254	15.1	+23 19.2	256	00.0 ¹¹⁴	+18 42.5	19	50	20 13	20 58	22 03	4 20 55	19 56 38		
6	269	15.0	+23 19.1	270	30.5 ¹¹⁵	+18 40.6	19	45	19 51	20 28	21 18	4 37 54	19 40 40		
7	284	14.9	19.0	285	01.0 ¹¹⁵	38.6	20	40	33	20 06	20 47	4 50 53	27 41		
8	299	14.7	18.9	299	31.5 ¹¹⁵	36.5	21	35	18	19 48	24	5 02 52	16 42		
9	314	14.6	18.8	314	02.1 ¹¹⁶	34.3	22	30	19 05	32	20 06	12 51	19 07 43		
10	329	14.5	18.7	328	32.6 ¹¹⁵	32.0	23	20	18 43	19 08	19 37	29 50	18 50 45		
11	344	14.3	+23 18.6	343	03.2 ¹¹⁶	+18 29.6	24	10 N	18 24	18 47	19 14	5 44 49	18 35 47		
12	359	14.2	+23 18.5	357	33.9 ¹¹⁷	+18 27.1	25	0	18 07	18 29	18 55	5 58 48	18 22 47		
13	14	14.1	18.4	12	04.6 ¹¹⁷	24.6	25	10 S	17 49	18 12	39	6 12 48	18 08 49		
14	29	13.9	18.3	26	35.3 ¹¹⁷	22.0	26	20	31	17 55	22	28 46	17 53 51		
15	44	13.8	18.2	41	06.0 ¹¹⁷	19.3	27	30	17 10	36	18 06	45 45	36 52		
16	59	13.7	18.1	55	36.7 ¹¹⁷	16.5	28	35	16 58	26	17 57	6 55 44	27 53		
17	74	13.5	+23 18.0	70	07.5 ¹¹⁸	+18 13.6	29	40	16 43	17 14	17 48	7 06 43	17 15 54		
18	89	13.4	+23 17.9	84	38.4 ¹¹⁹	+18 10.6	30	45	16 27	17 01	17 38	7 20 42	17 02 55		
19	104	13.3	17.8	99	09.2 ¹¹⁸	07.5	31	50	16 06	16 45	26	37 40	16 46 57		
20	119	13.2	17.7	113	40.1 ¹¹⁹	04.4	31	52	15 56	37	21	44 40	38 58		
21	134	13.0	17.6	128	11.1 ¹²⁰	+18 01.2	32	54	45	29	15	7 53 39	30 59		
22	149	12.9	17.5	142	42.0 ¹¹⁹	+17 57.9	33	56	33	20	09	8 03 37	20 60		
23	164	12.8	17.4	157	13.0 ¹²⁰	54.5	34	58	18	16 10	17 02	14 36	16 09 62		
24	179	12.6	+23 17.2	171	44.0 ¹²⁰	+17 51.0	35	60 S	15 01	15 58	16 55	8 26 36	15 57 63		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 39 ^m 0		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: 0.0 PMG: 18 ^h 39 ^m		Mag: -1.8 PMG: 13 ^h 29 ^m		Mag: +0.3 PMG: 20 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	275	01.8	212	34.5	79	40.7	157	14.4	49	42.3
1	290	04.3	227	33.9	94	42.3	172	16.3	64	44.9
2	305	06.7	242	33.3	109	44.0	187	18.2	79	47.5
3	320	09.2	257	32.7	124	45.6	202	20.1	94	50.0
4	335	11.7	272	32.0	139	47.2	217	22.0	109	52.6
5	350	14.1	287	31.4	154	48.8	232	23.9	124	55.1
6	5	16.6	302	30.8	169	50.4	247	25.8	139	57.7
7	20	19.0	317	30.2	184	52.1	262	27.7	155	00.2
8	35	21.5	332	29.5	199	53.7	277	29.6	170	02.8
9	50	24.0	347	28.9	214	55.3	292	31.5	185	05.4
10	65	26.4	2	28.3	229	56.9	307	33.3	200	07.9
11	80	28.9	17	27.6	244	58.5	322	35.2	215	10.5
12	95	31.4	32	27.0	260	00.2	337	37.1	230	13.0
13	110	33.8	47	26.4	275	01.8	352	39.0	245	15.6
14	125	36.3	62	25.8	290	03.4	7	40.9	260	18.1
15	140	38.8	77	25.1	305	05.0	22	42.8	275	20.7
16	155	41.2	92	24.5	320	06.6	37	44.7	290	23.3
17	170	43.7	107	23.9	335	08.2	52	46.6	305	25.8
18	185	46.2	122	23.2	350	09.9	67	48.5	320	28.4
19	200	48.6	137	22.6	5	11.5	82	50.4	335	30.9
20	215	51.1	152	22.0	20	13.1	97	52.3	350	33.5
21	230	53.5	167	21.3	35	14.7	112	54.2	5	36.0
22	245	56.0	182	20.7	50	16.3	127	56.1	20	38.6
23	260	58.5	197	20.1	65	17.9	142	58.0	35	41.2
24	276	00.9	212	19.4	80	19.5	157	59.9	50	43.7
Dif	—		-6	+6	+16	-4	+19	-1	+26	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 3			Edad: 0 ^d 7 SD: 14'8 PMG: 12 ^h 58 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	12.6	+23	17.2	171	44.0	+17	51.0	60 N	** **	0 57	2 39	4 30	65	21 14 25
1	194	12.5		17.1	186	15.1 ¹²¹		47.4 ³⁶	58	** **	1 45	2 59	41	63	21 04 27
2	209	12.4		17.0	200	46.2 ¹²¹		43.8 ³⁶	56	** **	2 14	3 16	4 51	62	20 55 29
3	224	12.3		16.9	215	17.3 ¹²¹		40.1 ³⁷	54	0 52	36	30	5 00	61	47 30
4	239	12.1		16.8	229	48.5 ¹²²		36.3 ³⁸	52	1 36	2 54	42	08	60	40 31
5	254	12.0	+23	16.7	244	19.7 ¹²²	+17	32.4 ³⁹	50	2 04	3 09	3 53	5 15	59	20 34 32
6	269	11.9	+23	16.6	258	51.0 ¹²³	+17	28.5 ³⁹	45	2 49	3 38	4 16	5 31	56	20 20 34
7	284	11.7		16.4	273	22.2 ¹²²		24.4 ⁴¹	40	3 19	4 01	33	43	55	20 08 37
8	299	11.6		16.3	287	53.6 ¹²⁴		20.3 ⁴¹	35	3 42	19	4 48	5 54	53	19 58 38
9	314	11.5		16.2	302	24.9 ¹²³		16.1 ⁴²	30	4 01	34	5 01	6 03	52	50 39
10	329	11.3		16.1	316	56.3 ¹²⁴		11.8 ⁴³	20	30	4 59	23	19	50	35 42
11	344	11.2	+23	16.0	331	27.7 ¹²⁴	+17	07.5 ⁴³	10 N	4 52	5 19	5 42	6 33	49	19 22 44
12	359	11.1	+23	15.8	345	59.2 ¹²⁵	+17	03.1 ⁴⁴	0	5 11	5 37	6 00	6 46	47	19 09 46
13	14	11.0		15.7	0	30.7 ¹²⁵	+16	58.6 ⁴⁵	10 S	28	5 54	17	7 00	45	18 57 48
14	29	10.8		15.6	15	02.2 ¹²⁵		54.0 ⁴⁶	20	5 44	6 11	35	14	43	44 49
15	44	10.7		15.5	29	33.8 ¹²⁶		49.3 ⁴⁷	30	6 00	30	6 56	30	41	28 53
16	59	10.6		15.3	44	05.4 ¹²⁶		44.6 ⁴⁷	35	09	41	7 09	39	40	20 53
17	74	10.4	+23	15.2	58	37.0 ¹²⁶	+16	39.8 ⁴⁸	40	6 18	6 52	7 23	7 49	39	18 09 56
18	89	10.3	+23	15.1	73	08.7 ¹²⁷	+16	34.9 ⁴⁹	45	6 28	7 06	7 39	8 02	37	17 57 58
19	104	10.2		15.0	87	40.4 ¹²⁷		30.0 ⁴⁹	50	40	22	8 00	17	35	43 59
20	119	10.1		14.8	102	12.2 ¹²⁸		25.0 ⁵⁰	52	45	29	10	24	34	36 61
21	134	09.9		14.7	116	44.0 ¹²⁸		19.9 ⁵¹	54	51	37	21	32	32	29 61
22	149	09.8		14.6	131	15.8 ¹²⁸		14.7 ⁵²	56	6 57	46	33	40	32	20 64
23	164	09.7		14.5	145	47.7 ¹²⁹		09.5 ⁵²	58	7 04	7 56	8 48	8 50	30	11 65
24	179	09.6	+23	14.3	160	19.6 ¹²⁹	+16	04.2 ⁵³	60 S	7 11	8 08	9 05	9 02	27	17 00 67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 35 ^m 0		Mag: -3.9 PMG: 9 ^h 51 ^m		Mag: 0.0 PMG: 18 ^h 37 ^m		Mag: -1.8 PMG: 13 ^h 26 ^m		Mag: +0.4 PMG: 20 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	276	00.9	212	19.4	+19	41.8	157	59.9	+21	18.4
1	291	03.4	227	18.8		42.4	173	01.8		18.3
2	306	05.9	242	18.2		43.0	188	03.7		18.2
3	321	08.3	257	17.5		43.6	203	05.5		18.1
4	336	10.8	272	16.9		44.2	218	07.4		18.0
5	351	13.3	287	16.3	+19	44.8	233	09.3	+21	17.9
6	6	15.7	302	15.6	+19	45.5	248	11.2	+21	17.8
7	21	18.2	317	15.0		46.1	263	13.1		17.7
8	36	20.7	332	14.4		46.7	278	15.0		17.6
9	51	23.1	347	13.7		47.3	293	16.9		17.5
10	66	25.6	2	13.1		47.9	308	18.8		17.4
11	81	28.0	17	12.4	+19	48.5	323	20.7	+21	17.3
12	96	30.5	32	11.8	+19	49.0	338	22.6	+21	17.2
13	111	33.0	47	11.2		49.6	353	24.5		17.1
14	126	35.4	62	10.5		50.2	8	26.4		17.0
15	141	37.9	77	09.9		50.8	23	28.3		16.9
16	156	40.4	92	09.2		51.4	38	30.2		16.9
17	171	42.8	107	08.6	+19	52.0	53	32.1	+21	16.8
18	186	45.3	122	08.0	+19	52.6	68	34.0	+21	16.7
19	201	47.8	137	07.3		53.2	83	35.8		16.6
20	216	50.2	152	06.7		53.8	98	37.7		16.5
21	231	52.7	167	06.0		54.4	113	39.6		16.4
22	246	55.2	182	05.4		55.0	128	41.5		16.3
23	261	57.6	197	04.7		55.6	143	43.4		16.2
24	277	00.1	212	04.1	+19	56.1	158	45.3	+21	16.1
Dif	—		-6	+6		+16	-4	+19		-1
										+26
										0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 5			Edad: 1 ^d 7 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /1 20 ^h : 54 ^m /1 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	179	09.6	+23	14.3	160	19.6	+16	04.2	60 N	21 26	23 07	** **	5 35 68	21 39 20				
1	194	09.4		14.2	174	51.6 ¹³⁰	+15	58.8	58	21 06	22 20	** **	44 67	31 22				
2	209	09.3		14.1	189	23.6 ¹³⁰		53.4	56	20 50	21 51	** **	5 53 64	24 24				
3	224	09.2		13.9	203	55.6 ¹³⁰		47.9	54	36	30	23 11	6 01 62	17 26				
4	239	09.0		13.8	218	27.6 ¹³⁰		42.3	52	24	21 12	22 29	08 61	11 27				
5	254	08.9	+23	13.7	232	59.7 ¹³¹	+15	36.6	50	20 13	20 57	22 02	6 14 60	21 06 28				
6	269	08.8	+23	13.5	247	31.9 ¹³²	+15	30.9	45	19 51	20 28	21 17	6 27 57	20 54 31				
7	284	08.7		13.4	262	04.1 ¹³²		25.1	40	33	20 06	20 47	38 55	45 33				
8	299	08.5		13.3	276	36.3 ¹³²		19.3	35	18	19 48	24	47 54	36 36				
9	314	08.4		13.1	291	08.5 ¹³²		13.4	30	19 05	33	20 06	6 55 52	29 37				
10	329	08.3		13.0	305	40.8 ¹³³		07.4	20	18 43	19 08	19 37	7 09 50	17 39				
11	344	08.2	+23	12.9	320	13.1 ¹³³	+15	01.4	10 N	18 25	18 48	19 15	7 22 47	20 06 42				
12	359	08.0	+23	12.7	334	45.5 ¹³⁴	+14	55.3	0	18 07	18 30	18 56	7 33 45	19 55 44				
13	14	07.9		12.6	349	17.9 ¹³⁴		49.1	10 S	17 50	18 13	39	45 43	45 46				
14	29	07.8		12.5	3	50.3 ¹³⁴		42.9	20	32	17 55	23	7 57 40	33 50				
15	44	07.7		12.3	18	22.8 ¹³⁵		36.6	30	17 11	37	18 07	8 11 38	21 52				
16	59	07.5		12.2	32	55.3 ¹³⁵		30.2	35	16 58	26	17 58	19 36	13 54				
17	74	07.4	+23	12.0	47	27.9 ¹³⁶	+14	23.8	40	16 44	17 15	17 49	8 28 35	19 05 55				
18	89	07.3	+23	11.9	62	00.5 ¹³⁶	+14	17.3	45	16 28	17 01	17 39	8 39 32	18 55 57				
19	104	07.1		11.8	76	33.1 ¹³⁶		10.8	50	16 07	16 45	27	52 30	42 61				
20	119	07.0		11.6	91	05.7 ¹³⁶	+14	04.2	52	15 57	38	22	8 58 28	37 62				
21	134	06.9		11.5	105	38.4 ¹³⁷	+13	57.5	54	46	30	16	9 04 28	30 64				
22	149	06.8		11.3	120	11.2 ¹³⁸		50.8	56	34	21	10	12 26	24 65				
23	164	06.6		11.2	134	43.9 ¹³⁷		44.0	58	19	11	17 03	20 24	16 67				
24	179	06.5	+23	11.0	149	16.7 ¹³⁸	+13	37.2	60 S	15 02	16 00	16 56	9 29 22	18 07 69				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 31 ^m 1		Mag: -3.9 PMG: 9 ^h 52 ^m				Mag: 0.0 PMG: 18 ^h 34 ^m				Mag: -1.8 PMG: 13 ^h 23 ^m				Mag: +0.4 PMG: 20 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	277	00.1	212	04.1	+19	56.1	80	57.9	-7	18.3	158	45.3	+21	16.1	51	45.0	-14	39.0
1	292	02.5	227	03.4		56.7	95	59.5		18.7	173	47.2		16.0	66	47.5		39.0
2	307	05.0	242	02.8		57.3	111	01.1		19.1	188	49.1		15.9	81	50.1		38.9
3	322	07.5	257	02.2		57.9	126	02.7		19.5	203	51.0		15.8	96	52.6		38.9
4	337	09.9	272	01.5		58.5	141	04.3		19.9	218	52.9		15.7	111	55.2		38.9
5	352	12.4	287	00.9	+19	59.1	156	05.9	-7	20.4	233	54.8	+21	15.6	126	57.8	-14	38.9
6	7	14.9	302	00.2	+19	59.6	171	07.5	-7	20.8	248	56.7	+21	15.5	142	00.3	-14	38.9
7	22	17.3	316	59.6	+20	00.2	186	09.1		21.2	263	58.6		15.4	157	02.9		38.9
8	37	19.8	331	58.9		00.8	201	10.6		21.6	279	00.5		15.3	172	05.4		38.9
9	52	22.3	346	58.3		01.4	216	12.2		22.0	294	02.3		15.2	187	08.0		38.8
10	67	24.7	1	57.6		02.0	231	13.8		22.5	309	04.2		15.1	202	10.5		38.8
11	82	27.2	16	57.0	+20	02.5	246	15.4	-7	22.9	324	06.1	+21	15.0	217	13.1	-14	38.8
12	97	29.6	31	56.3	+20	03.1	261	17.0	-7	23.3	339	08.0	+21	14.9	232	15.6	-14	38.8
13	112	32.1	46	55.7		03.7	276	18.6		23.7	354	09.9		14.8	247	18.2		38.8
14	127	34.6	61	55.0		04.3	291	20.2		24.1	9	11.8		14.7	262	20.7		38.8
15	142	37.0	76	54.4		04.8	306	21.7		24.6	24	13.7		14.6	277	23.3		38.8
16	157	39.5	91	53.7		05.4	321	23.3		25.0	39	15.6		14.5	292	25.8		38.7
17	172	42.0	106	53.1	+20	06.0	336	24.9	-7	25.4	54	17.5	+21	14.4	307	28.4	-14	38.7
18	187	44.4	121	52.4	+20	06.6	351	26.5	-7	25.8	69	19.4	+21	14.3	322	30.9	-14	38.7
19	202	46.9	136	51.8		07.1	6	28.1		26.3	84	21.3		14.2	337	33.5		38.7
20	217	49.4	151	51.1		07.7	21	29.6		26.7	99	23.2		14.1	352	36.0		38.7
21	232	51.8	166	50.4		08.3	36	31.2		27.1	114	25.1		14.0	7	38.5		38.7
22	247	54.3	181	49.8		08.8	51	32.8		27.5	129	26.9		13.9	22	41.1		38.7
23	262	56.8	196	49.1		09.4	66	34.4		27.9	144	28.8		13.8	37	43.6		38.6
24	277	59.2	211	48.5	+20	10.0	81	35.9	-7	28.4	159	30.7	+21	13.7	52	46.2	-14	38.6
Dif	—		-7		+6		+16		-4		+19		-1		+25			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 7	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0									
	PMG: 12 ^h 03 ^m 7													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m
0	179	06.5	+23	149	16.7	+13	37.2	69	60 N	** *	1 01	2 41	6 43	70
1	194	06.4		163	49.5 ¹³⁸		30.3	69	58	** *	1 47	3 01	51	67
2	209	06.3		178	22.4 ¹³⁹		23.4	69	56	** *	2 16	17	6 57	66
3	224	06.1		192	55.3 ¹³⁹		16.4	70	54	0 56	38	31	7 03	64
4	239	06.0		207	28.3 ¹⁴⁰		09.3	71	52	1 39	2 55	44	09	62
5	254	05.9	+23	222	01.2 ¹³⁹	+13	02.2	71	50	2 05	3 10	3 54	7 14	61
6	269	05.8	+23	236	34.2 ¹⁴⁰	+12	55.1	71	45	2 50	3 39	4 17	7 24	59
7	284	05.6		251	07.3 ¹⁴¹		47.8	73	40	3 20	4 02	34	33	56
8	299	05.5		265	40.3 ¹⁴⁰		40.6	72	35	3 43	20	4 49	41	53
9	314	05.4		280	13.4 ¹⁴¹		33.3	73	30	4 01	35	5 02	47	52
10	329	05.3		294	46.6 ¹⁴²		25.9	74	20	30	4 59	24	7 59	49
11	344	05.1	+23	309	19.7 ¹⁴¹	+12	18.5	74	10 N	4 53	5 20	5 43	8 09	46
12	359	05.0	+23	323	52.9 ¹⁴²	+12	11.0	75	0	5 11	5 37	6 00	8 18	44
13	14	04.9		338	26.2 ¹⁴³	+12	03.5	75	10 S	28	5 54	17	28	41
14	29	04.8		352	59.4 ¹⁴²	+11	55.9	76	20	5 44	6 12	36	37	39
15	44	04.7		7	32.7 ¹⁴³		48.3	76	30	6 00	30	6 57	49	35
16	59	04.5		22	06.1 ¹⁴⁴		40.6	77	35	09	41	7 09	8 55	34
17	74	04.4	+23	36	39.4 ¹⁴³	+11	32.9	77	40	6 18	6 52	7 23	9 03	32
18	89	04.3	+23	51	12.8 ¹⁴⁴	+11	25.1	78	45	6 28	7 06	7 39	9 11	30
19	104	04.2		65	46.2 ¹⁴⁴		17.3	78	50	40	21	8 00	22	26
20	119	04.0		80	19.6 ¹⁴⁴		09.4	79	52	45	29	09	26	26
21	134	03.9		94	53.1 ¹⁴⁵	+11	01.5	79	54	51	37	20	32	24
22	149	03.8		109	26.6 ¹⁴⁵	+10	53.6	79	56	6 57	46	33	38	22
23	164	03.7		124	00.1 ¹⁴⁵		45.6	80	58	7 03	7 56	8 47	44	20
24	179	03.5	+23	138	33.7 ¹⁴⁶	+10	37.6	80	60 S	7 11	8 07	9 04	9 51	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: 0.0		Mag: -1.8		Mag: +0.4	
	5 ^h 27 ^m 2		PMG: 9 ^h 53 ^m		PMG: 18 ^h 32 ^m		PMG: 13 ^h 20 ^m		PMG: 20 ^h 25 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	277	59.2	211	48.5	+20	10.0	159	30.7	+21	13.7
1	293	01.7	226	47.8		10.5	174	32.6		13.6
2	308	04.1	241	47.2		11.1	189	34.5		13.5
3	323	06.6	256	46.5		11.7	204	36.4		13.4
4	338	09.1	271	45.9		12.2	219	38.3		13.3
5	353	11.5	286	45.2	+20	12.8	234	40.2	+21	13.2
6	8	14.0	301	44.5	+20	13.3	249	42.1	+21	13.1
7	23	16.5	316	43.9		13.9	264	44.0		13.0
8	38	18.9	331	43.2		14.5	279	45.9		12.9
9	53	21.4	346	42.6		15.0	294	47.8		12.8
10	68	23.9	1	41.9		15.6	309	49.6		12.7
11	83	26.3	16	41.2	+20	16.1	324	51.5	+21	12.6
12	98	28.8	31	40.6	+20	16.7	339	53.4	+21	12.5
13	113	31.3	46	39.9		17.2	354	55.3		12.4
14	128	33.7	61	39.3		17.8	9	57.2		12.3
15	143	36.2	76	38.6		18.3	24	59.1		12.2
16	158	38.6	91	37.9		18.9	40	01.0		12.1
17	173	41.1	106	37.3	+20	19.4	55	02.9	+21	12.0
18	188	43.6	121	36.6	+20	20.0	70	04.8	+21	11.9
19	203	46.0	136	35.9		20.5	85	06.7		11.8
20	218	48.5	151	35.3		21.1	100	08.6		11.7
21	233	51.0	166	34.6		21.6	115	10.5		11.6
22	248	53.4	181	33.9		22.2	130	12.3		11.5
23	263	55.9	196	33.3		22.7	145	14.2		11.4
24	278	58.4	211	32.6	+20	23.3	160	16.1	+21	11.3
Dif	—		-7	+6		+16	-4	+19		-1
										+25
										0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 3 ^d 7	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1										
	PMG: 12 ^h 03 ^m 9					SD: 14'7			PMG: 15 ^h 12 ^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	179	03.5	+23 07.3	138	33.7	+10 37.6	81	60 N	21 25	23 03	** **	7 53 70	22 16 16		
1	194	03.4	07.1	153	07.3 ¹⁴⁶	29.5	81	58	21 05	22 18	** **	7 58 68	12 18		
2	209	03.3	07.0	167	40.9 ¹⁴⁶	21.4	81	56	20 49	21 50	** **	8 03 66	09 19		
3	224	03.2	06.8	182	14.5 ¹⁴⁶	13.2	82	54	35	29	23 08	07 65	05 21		
4	239	03.1	06.7	196	48.1 ¹⁴⁶	+10 05.0	82	52	23	21 11	22 27	11 63	02 23		
5	254	02.9	+23 06.5	211	21.8 ¹⁴⁷	+9 56.7	83	50	20 13	20 57	22 01	8 15 61	22 00 24		
6	269	02.8	+23 06.3	225	55.5 ¹⁴⁷	+9 48.5	82	45	19 50	20 28	21 17	8 23 58	21 54 27		
7	284	02.7	06.2	240	29.3 ¹⁴⁸	40.1	84	40	33	20 05	20 47	29 56	49 29		
8	299	02.6	06.0	255	03.0 ¹⁴⁷	31.8	83	35	18	19 48	24	34 54	45 31		
9	314	02.4	05.8	269	36.8 ¹⁴⁸	23.4	84	30	19 05	33	20 06	39 52	41 33		
10	329	02.3	05.6	284	10.6 ¹⁴⁸	14.9	85	20	18 43	19 08	19 37	48 48	34 37		
11	344	02.2	+23 05.5	298	44.4 ¹⁴⁸	+9 06.4	85	10 N	18 25	18 48	19 15	8 55 46	21 28 40		
12	359	02.1	+23 05.3	313	18.2 ¹⁴⁸	+8 57.9	85	0	18 08	18 30	18 56	9 02 43	21 23 42		
13	14	02.0	05.1	327	52.1 ¹⁴⁹	49.3	86	10 S	17 50	18 13	39	09 40	17 46		
14	29	01.8	05.0	342	26.0 ¹⁴⁹	40.8	85	20	32	17 56	24	16 37	11 49		
15	44	01.7	04.8	356	59.9 ¹⁴⁹	32.1	87	30	17 11	38	18 07	24 34	04 52		
16	59	01.6	04.6	11	33.8 ¹⁴⁹	23.5	86	35	16 59	27	17 59	29 32	21 00 54		
17	74	01.5	+23 04.4	26	07.7 ¹⁴⁹	+8 14.8	87	40	16 45	17 16	17 50	9 35 30	20 56 56		
18	89	01.4	+23 04.3	40	41.7 ¹⁵⁰	+8 06.0	88	45	16 29	17 02	17 39	9 41 27	20 51 58		
19	104	01.2	04.1	55	15.7 ¹⁵⁰	+7 57.3	87	50	16 08	16 47	28	48 25	44 62		
20	119	01.1	03.9	69	49.7 ¹⁵⁰	48.5	88	52	15 59	39	23	52 23	41 64		
21	134	01.0	03.7	84	23.7 ¹⁵⁰	39.6	89	54	48	31	17	9 56 21	38 65		
22	149	00.9	03.6	98	57.7 ¹⁵⁰	30.8	88	56	35	22	11	10 00 20	35 66		
23	164	00.8	03.4	113	31.7 ¹⁵⁰	21.9	89	58	21	12	17 05	04 19	31 68		
24	179	00.6	+23 03.2	128	05.8 ¹⁵¹	+7 12.9	90	60 S	15 04	16 01	16 57	10 10 16	20 26 71		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 5 ^h 23 ^m 2		Mag: -3.9 PMG: 9 ^h 54 ^m		Mag: 0.0 PMG: 18 ^h 29 ^m		Mag: -1.8 PMG: 13 ^h 17 ^m		Mag: +0.4 PMG: 20 ^h 21 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	'	°	'				
0	278	58.4	211 32.6	+20 23.3	82 13.6	-7 38.6	160 16.1	+21 11.3	53 47.3	-14 38.3					
1	294	00.8	226 31.9	23.8	97 15.1	39.0	175 18.0	11.2	68 49.9	38.3					
2	309	03.3	241 31.3	24.4	112 16.7	39.4	190 19.9	11.1	83 52.4	38.3					
3	324	05.7	256 30.6	24.9	127 18.3	39.9	205 21.8	11.0	98 54.9	38.3					
4	339	08.2	271 29.9	25.4	142 19.8	40.3	220 23.7	10.9	113 57.5	38.3					
5	354	10.7	286 29.3	+20 26.0	157 21.4	-7 40.7	235 25.6	+21 10.8	129 00.0	-14 38.3					
6	9	13.1	301 28.6	+20 26.5	172 22.9	-7 41.2	250 27.5	+21 10.7	144 02.6	-14 38.2					
7	24	15.6	316 27.9	27.1	187 24.5	41.6	265 29.4	10.6	159 05.1	38.2					
8	39	18.1	331 27.3	27.6	202 26.0	42.0	280 31.3	10.5	174 07.7	38.2					
9	54	20.5	346 26.6	28.1	217 27.6	42.4	295 33.2	10.4	189 10.2	38.2					
10	69	23.0	1 25.9	28.7	232 29.2	42.9	310 35.0	10.3	204 12.7	38.2					
11	84	25.5	16 25.2	+20 29.2	247 30.7	-7 43.3	325 36.9	+21 10.2	219 15.3	-14 38.2					
12	99	27.9	31 24.6	+20 29.7	262 32.3	-7 43.7	340 38.8	+21 10.1	234 17.8	-14 38.2					
13	114	30.4	46 23.9	30.3	277 33.8	44.2	355 40.7	09.9	249 20.4	38.2					
14	129	32.9	61 23.2	30.8	292 35.4	44.6	10 42.6	09.8	264 22.9	38.2					
15	144	35.3	76 22.6	31.3	307 36.9	45.0	25 44.5	09.7	279 25.5	38.1					
16	159	37.8	91 21.9	31.9	322 38.5	45.5	40 46.4	09.6	294 28.0	38.1					
17	174	40.2	106 21.2	+20 32.4	337 40.0	-7 45.9	55 48.3	+21 09.5	309 30.5	-14 38.1					
18	189	42.7	121 20.5	+20 32.9	352 41.6	-7 46.3	70 50.2	+21 09.4	324 33.1	-14 38.1					
19	204	45.2	136 19.9	33.4	7 43.1	46.8	85 52.1	09.3	339 35.6	38.1					
20	219	47.6	151 19.2	34.0	22 44.7	47.2	100 53.9	09.2	354 38.2	38.1					
21	234	50.1	166 18.5	34.5	37 46.2	47.6	115 55.8	09.1	9 40.7	38.1					
22	249	52.6	181 17.8	35.0	52 47.8	48.1	130 57.7	09.0	24 43.2	38.1					
23	264	55.0	196 17.2	35.5	67 49.3	48.5	145 59.6	08.9	39 45.8	38.0					
24	279	57.5	211 16.5	+20 36.1	82 50.8	-7 48.9	161 01.5	+21 08.8	54 48.3	-14 38.0					
Dif	—	—	-7	+5	+16	-4	+19	-1	+25	0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 4 ^d 7	PHE	4^h: 54^m1 12^h: 54^m2 20^h: 54^m3		Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 04 ^m 1							SD: 14 ^h 7			PMG: 15 ^h 55 ^m		R°: 43 ^m		Hora
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	00.6	+23 03.2	128	05.8	+7 12.9	89	60 N	** **	1 05	2 43	9 03	71	22 32	14
1	194	00.5	03.0	142	39.8 ¹⁵⁰	+7 04.0	90	58	** **	1 50	3 03	06 69		30 16	
2	209	00.4	02.8	157	13.9 ¹⁵¹	+6 55.0	90	56	** **	2 18	19	09 67		28 19	
3	224	00.3	02.7	171	48.0 ¹⁵¹	46.0	90	54	1 00	39	33	12 65		26 21	
4	239	00.2	02.5	186	22.1 ¹⁵¹	36.9	91	52	1 41	2 57	45	14 64		25 22	
5	254	00.0	+23 02.3	200	56.2 ¹⁵¹	+6 27.9	90	50	2 07	3 11	3 56	9 16	62	22 24	23
6	268	59.9	+23 02.1	215	30.4 ¹⁵²	+6 18.7	92	45	2 51	3 40	4 18	9 21	59	22 21	26
7	283	59.8	01.9	230	04.5 ¹⁵¹	09.6	91	40	3 21	4 03	35	25 56		18 29	
8	298	59.7	01.7	244	38.7 ¹⁵²	+6 00.5	91	35	3 44	20	4 50	28 54		16 31	
9	313	59.6	01.5	259	12.8 ¹⁵¹	+5 51.3	92	30	4 02	4 35	5 03	31 52		14 33	
10	328	59.4	01.4	273	47.0 ¹⁵²	42.1	92	20	31	5 00	24	36 49		11 37	
11	343	59.3	+23 01.2	288	21.1 ¹⁵¹	+5 32.8	93	10 N	4 53	5 20	5 43	9 41	45	22 08	40
12	358	59.2	+23 01.0	302	55.3 ¹⁵²	+5 23.6	92	0	5 12	5 38	6 00	9 45	42	22 05	43
13	13	59.1	00.8	317	29.5 ¹⁵²	14.3	93	10 S	28	5 55	18	49 40		03 45	
14	28	59.0	00.6	332	03.7 ¹⁵²	+5 05.0	93	20	5 44	6 12	36	53 37		22 00	48
15	43	58.9	00.4	346	37.9 ¹⁵²	+4 55.7	93	30	6 00	30	6 57	9 58	34	21 56	52
16	58	58.7	+23 00.2	1	12.1 ¹⁵²	46.3	94	35	09	41	7 09	10 01	32	54	54
17	73	58.6	+23 00.0	15	46.3 ¹⁵²	+4 36.9	94	40	6 18	6 52	7 23	10 05	29	21 52	56
18	88	58.5	+22 59.8	30	20.5 ¹⁵²	+4 27.5	94	45	6 28	7 05	7 39	10 08	27	21 49	59
19	103	58.4	59.6	44	54.7 ¹⁵²	18.1	94	50	40	21	7 59	13 23		46 62	
20	118	58.3	59.5	59	28.9 ¹⁵²	+4 08.7	94	52	45	28	8 09	15 22		45 64	
21	133	58.2	59.3	74	03.1 ¹⁵²	+3 59.2	95	54	50	36	20	17 21		43 66	
22	148	58.0	59.1	88	37.4 ¹⁵³	49.8	94	56	6 56	45	32	20 19		41 68	
23	163	57.9	58.9	103	11.6 ¹⁵²	40.3	95	58	7 03	7 55	8 46	23 17		39 70	
24	178	57.8	+22 58.7	117	45.8 ¹⁵²	+3 30.7	96	60 S	7 10	8 06	9 03	10 26	15	21 37	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +0.1		Mag: -1.8		Mag: +0.4	
	5 ^h 19 ^m 3		PMG: 9 ^h 55 ^m		PMG: 18 ^h 27 ^m		PMG: 13 ^h 14 ^m		PMG: 20 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	279	57.5	211 16.5	+20 36.1	82 50.8	-7 48.9	161 01.5	+21 08.8	54 48.3	-14 38.0
1	295	00.0	226 15.8	36.6	97 52.4	49.3	176 03.4	08.7	69 50.9	38.0
2	310	02.4	241 15.1	37.1	112 53.9	49.8	191 05.3	08.6	84 53.4	38.0
3	325	04.9	256 14.4	37.6	127 55.5	50.2	206 07.2	08.5	99 56.0	38.0
4	340	07.4	271 13.8	38.1	142 57.0	50.6	221 09.1	08.4	114 58.5	38.0
5	355	09.8	286 13.1	+20 38.7	157 58.6	-7 51.1	236 11.0	+21 08.3	130 01.0	-14 38.0
6	10	12.3	301 12.4	+20 39.2	173 00.1	-7 51.5	251 12.9	+21 08.2	145 03.6	-14 38.0
7	25	14.7	316 11.7	39.7	188 01.6	51.9	266 14.7	08.1	160 06.1	38.0
8	40	17.2	331 11.1	40.2	203 03.2	52.4	281 16.6	08.0	175 08.7	37.9
9	55	19.7	346 10.4	40.7	218 04.7	52.8	296 18.5	07.9	190 11.2	37.9
10	70	22.1	1 09.7	41.2	233 06.3	53.3	311 20.4	07.8	205 13.7	37.9
11	85	24.6	16 09.0	+20 41.7	248 07.8	-7 53.7	326 22.3	+21 07.7	220 16.3	-14 37.9
12	100	27.1	31 08.3	+20 42.3	263 09.3	-7 54.1	341 24.2	+21 07.6	235 18.8	-14 37.9
13	115	29.5	46 07.6	42.8	278 10.9	54.6	356 26.1	07.5	250 21.3	37.9
14	130	32.0	61 07.0	43.3	293 12.4	55.0	11 28.0	07.4	265 23.9	37.9
15	145	34.5	76 06.3	43.8	308 13.9	55.4	26 29.9	07.3	280 26.4	37.9
16	160	36.9	91 05.6	44.3	323 15.5	55.9	41 31.8	07.2	295 29.0	37.9
17	175	39.4	106 04.9	+20 44.8	338 17.0	-7 56.3	56 33.6	+21 07.1	310 31.5	-14 37.9
18	190	41.8	121 04.2	+20 45.3	353 18.5	-7 56.7	71 35.5	+21 07.0	325 34.0	-14 37.8
19	205	44.3	136 03.5	45.8	8 20.1	57.2	86 37.4	06.9	340 36.6	37.8
20	220	46.8	151 02.9	46.3	23 21.6	57.6	101 39.3	06.8	355 39.1	37.8
21	235	49.2	166 02.2	46.8	38 23.1	58.0	116 41.2	06.7	10 41.7	37.8
22	250	51.7	181 01.5	47.3	53 24.7	58.5	131 43.1	06.6	25 44.2	37.8
23	265	54.2	196 00.8	47.8	68 26.2	58.9	146 45.0	06.5	40 46.7	37.8
24	280	56.6	211 00.1	+20 48.3	83 27.7	-7 59.3	161 46.9	+21 06.4	55 49.3	-14 37.8
Dif	—		-7	+5	+15	-4	+19	-1	+25	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 7	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'7 R°: 43 ^m									
	PMG: 12 ^h 04 ^m 2	hG ☉	Dec			hG ☾			Dif	Dec	Dif			
h	°	'	°	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	57.8	+22 58.7	117	45.8	+3 30.7	60 N	21 23	22 58	** **	10 14 73	22 46 15		
1	193	57.7	58.5	132	20.0 ¹⁵²	21.2 ⁹⁵	58	21 04	22 16	** **	15 70	46 18		
2	208	57.6	58.3	146	54.2 ¹⁵²	11.7 ⁹⁵	56	20 48	21 48	** **	16 68	47 19		
3	223	57.5	58.1	161	28.4 ¹⁵²	+3 02.1 ⁹⁶	54	34	27	23 04	17 66	47 20		
4	238	57.3	57.9	176	02.6 ¹⁵²	+2 52.5 ⁹⁶	52	22	21 10	22 25	18 64	47 22		
5	253	57.2	+22 57.7	190	36.8 ¹⁵²	+2 42.9 ⁹⁶	50	20 12	20 56	21 59	10 18 63	22 47 24		
6	268	57.1	+22 57.5	205	11.0 ¹⁵²	+2 33.3 ⁹⁶	45	19 50	20 27	21 16	10 20 60	22 47 27		
7	283	57.0	57.3	219	45.2 ¹⁵²	23.7 ⁹⁶	40	32	20 05	20 46	21 57	47 30		
8	298	56.9	57.1	234	19.3 ¹⁵¹	14.0 ⁹⁷	35	18	19 47	24	22 55	47 32		
9	313	56.8	56.9	248	53.5 ¹⁵²	+2 04.4 ⁹⁶	30	19 05	32	20 06	23 53	47 34		
10	328	56.6	56.7	263	27.7 ¹⁵²	+1 54.7 ⁹⁷	20	18 44	19 08	19 37	25 49	48 37		
11	343	56.5	+22 56.5	278	01.8 ¹⁵¹	+1 45.0 ⁹⁷	10 N	18 25	18 48	19 15	10 26 46	22 48 40		
12	358	56.4	+22 56.3	292	36.0 ¹⁵²	+1 35.3 ⁹⁷	0	18 08	18 30	18 56	10 27 43	22 48 43		
13	13	56.3	56.1	307	10.1 ¹⁵¹	25.6 ⁹⁷	10 S	17 51	18 14	40	29 40	48 46		
14	28	56.2	55.9	321	44.2 ¹⁵¹	15.9 ⁹⁷	20	33	17 57	24	30 37	48 50		
15	43	56.1	55.6	336	18.3 ¹⁵¹	+1 06.2 ⁹⁷	30	12	38	08	32 33	48 53		
16	58	56.0	55.4	350	52.4 ¹⁵¹	+0 56.5 ⁹⁷	35	17 00	28	18 00	33 31	48 55		
17	73	55.8	+22 55.2	5	26.5 ¹⁵¹	+0 46.7 ⁹⁸	40	16 46	17 17	17 51	10 34 29	22 48 58		
18	88	55.7	+22 55.0	20	00.5 ¹⁵⁰	+0 37.0 ⁹⁷	45	16 30	17 03	17 41	10 35 26	22 48 61		
19	103	55.6	54.8	34	34.6 ¹⁵¹	27.2 ⁹⁸	50	10	16 48	29	36 24	48 64		
20	118	55.5	54.6	49	08.6 ¹⁵⁰	17.4 ⁹⁸	52	16 00	41	24	37 22	49 65		
21	133	55.4	54.4	63	42.6 ¹⁵⁰	+0 07.7 ⁹⁷	54	15 49	33	19	38 20	49 66		
22	148	55.3	54.2	78	16.6 ¹⁵⁰	-0 02.1 ⁹⁸	56	37	24	13	39 18	49 68		
23	163	55.2	54.0	92	50.6 ¹⁵⁰	11.9 ⁹⁸	58	23	14	17 06	40 16	49 70		
24	178	55.0	+22 53.8	107	24.6 ¹⁵⁰	-0 21.7 ⁹⁸	60 S	15 06	16 03	16 59	10 41 14	22 49 73		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 15 ^m 4	Mag: -3.9 PMG: 9 ^h 56 ^m	Mag: +0.1 PMG: 18 ^h 24 ^m	Mag: -1.8 PMG: 13 ^h 11 ^m	Mag: +0.4 PMG: 20 ^h 13 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	280	56.6	211 00.1	83 27.7	-7 59.3	161 46.9	+21 06.4	55 49.3	-14 37.8	
1	295	59.1	225 59.4	98 29.3	-7 59.8	176 48.8	06.3	70 51.8	37.8	
2	311	01.6	240 58.7	113 30.8	-8 00.2	191 50.7	06.2	85 54.3	37.8	
3	326	04.0	255 58.0	128 32.3	00.7	206 52.5	06.1	100 56.9	37.7	
4	341	06.5	270 57.4	143 33.8	01.1	221 54.4	06.0	115 59.4	37.7	
5	356	09.0	285 56.7	158 35.4	-8 01.5	236 56.3	+21 05.9	131 01.9	-14 37.7	
6	11	11.4	300 56.0	173 36.9	-8 02.0	251 58.2	+21 05.8	146 04.5	-14 37.7	
7	26	13.9	315 55.3	188 38.4	02.4	267 00.1	05.7	161 07.0	37.7	
8	41	16.3	330 54.6	203 39.9	02.8	282 02.0	05.6	176 09.6	37.7	
9	56	18.8	345 53.9	218 41.5	03.3	297 03.9	05.5	191 12.1	37.7	
10	71	21.3	0 53.2	233 43.0	03.7	312 05.8	05.3	206 14.6	37.7	
11	86	23.7	15 52.5	248 44.5	-8 04.2	327 07.7	+21 05.2	221 17.2	-14 37.7	
12	101	26.2	30 51.8	263 46.0	-8 04.6	342 09.5	+21 05.1	236 19.7	-14 37.7	
13	116	28.7	45 51.1	278 47.6	05.0	357 11.4	05.0	251 22.2	37.7	
14	131	31.1	60 50.5	293 49.1	05.5	12 13.3	04.9	266 24.8	37.6	
15	146	33.6	75 49.8	308 50.6	05.9	27 15.2	04.8	281 27.3	37.6	
16	161	36.1	90 49.1	323 52.1	06.4	42 17.1	04.7	296 29.8	37.6	
17	176	38.5	105 48.4	338 53.6	-8 06.8	57 19.0	+21 04.6	311 32.4	-14 37.6	
18	191	41.0	120 47.7	353 55.2	-8 07.2	72 20.9	+21 04.5	326 34.9	-14 37.6	
19	206	43.5	135 47.0	8 56.7	07.7	87 22.8	04.4	341 37.4	37.6	
20	221	45.9	150 46.3	23 58.2	08.1	102 24.7	04.3	356 40.0	37.6	
21	236	48.4	165 45.6	38 59.7	08.6	117 26.5	04.2	11 42.5	37.6	
22	251	50.8	180 44.9	54 01.2	09.0	132 28.4	04.1	26 45.0	37.6	
23	266	53.3	195 44.2	69 02.7	09.4	147 30.3	04.0	41 47.6	37.6	
24	281	55.8	210 43.5	84 04.3	-8 09.9	162 32.2	+21 03.9	56 50.1	-14 37.5	
Dif	—	—	-7 +5	+15	-4	+19	-1	+25	0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 6 ^d 7	PHE { 4 ^h : 54 ^m 8 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2	Náutico		Civil	Hora		R°	Hora	R°			
	PMG: 12 ^h 04 ^m 4													SD: 14 ^h 9		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	55.0	+22 53.8	107	24.6	-0 21.7	98	60 N	** **	1 11	2 46	11 27	74	23 01	17	
1	193	54.9	53.5	121	58.5 ¹⁴⁹	31.5	98	58	** *	1 53	3 05	25 72		04 18		
2	208	54.8	53.3	136	32.4 ¹⁴⁹	41.3	98	56	** *	2 20	21	24 70		06 20		
3	223	54.7	53.1	151	06.3 ¹⁴⁹	-0 51.1	98	54	1 05	41	35	23 68		07 23		
4	238	54.6	52.9	165	40.2 ¹⁴⁹	-1 00.9	98	52	1 44	2 59	47	22 66		09 24		
5	253	54.5	+22 52.7	180	14.1 ¹⁴⁹	-1 10.8	99	50	2 10	3 13	3 57	11 21	65	23 11	25	
6	268	54.4	+22 52.5	194	47.9 ¹⁴⁸	-1 20.6	98	45	2 53	3 42	4 19	11 20	61	23 14	28	
7	283	54.3	52.2	209	21.7 ¹⁴⁸	30.4	98	40	3 23	4 04	36	18 58		17 31		
8	298	54.1	52.0	223	55.5 ¹⁴⁸	40.2	98	35	3 45	21	4 51	17 56		19 34		
9	313	54.0	51.8	238	29.2 ¹⁴⁷	50.0	98	30	4 03	4 36	5 04	16 53		21 36		
10	328	53.9	51.6	253	03.0 ¹⁴⁸	-1 59.8	98	20	32	5 01	25	14 50		25 39		
11	343	53.8	+22 51.4	267	36.7 ¹⁴⁷	-2 09.7	99	10 N	4 54	5 21	5 44	11 12	47	23 28	42	
12	358	53.7	+22 51.1	282	10.3 ¹⁴⁶	-2 19.5	98	0	5 12	5 38	6 01	11 10	44	23 31	45	
13	13	53.6	50.9	296	44.0 ¹⁴⁷	29.3	98	10 S	29	5 55	18	09 41		34 48		
14	28	53.5	50.7	311	17.6 ¹⁴⁶	39.1	98	20	5 45	6 12	36	07 38		38 51		
15	43	53.4	50.5	325	51.2 ¹⁴⁶	48.9	98	30	6 00	30	6 56	05 35		41 55		
16	58	53.3	50.2	340	24.7 ¹⁴⁵	-2 58.7	98	35	09	40	7 08	04 33		43 57		
17	73	53.1	+22 50.0	354	58.2 ¹⁴⁵	-3 08.5	98	40	6 18	6 52	7 22	11 03	30	23 46	59	
18	88	53.0	+22 49.8	9	31.7 ¹⁴⁵	-3 18.3	98	45	6 28	7 05	7 39	11 01	28	23 49	61	
19	103	52.9	49.6	24	05.1 ¹⁴⁴	28.1	98	50	39	21	7 59	11 00	24	52 65		
20	118	52.8	49.3	38	38.5 ¹⁴⁴	37.9	98	52	44	28	8 08	10 59	23	54 66		
21	133	52.7	49.1	53	11.9 ¹⁴⁴	47.6	97	54	50	36	19	58 22		55 69		
22	148	52.6	48.9	67	45.2 ¹⁴³	-3 57.4	98	56	6 56	44	31	57 20		57 70		
23	163	52.5	48.7	82	18.5 ¹⁴³	-4 07.2	98	58	7 02	7 54	8 45	56 18		23 59	73	
24	178	52.4	+22 48.4	96	51.8 ¹⁴³	-4 16.9	97	60 S	7 09	8 05	9 02	10 55	16	** ** *	**	**

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 11 ^m 4			Mag: -3.9 PMG: 9 ^h 58 ^m			Mag: +0.1 PMG: 18 ^h 22 ^m			Mag: -1.8 PMG: 13 ^h 08 ^m			Mag: +0.4 PMG: 20 ^h 09 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	281	55.8	210 43.5	+21 00.0	84 04.3	-8 09.9	162 32.2	+21 03.9	56 50.1	-14 37.5					
1	296	58.2	225 42.8	+21 00.5	99 05.8	10.3	177 34.1	03.8	71 52.6	37.5					
2	312	00.7	240 42.1	01.0	114 07.3	10.8	192 36.0	03.7	86 55.2	37.5					
3	327	03.2	255 41.4	01.5	129 08.8	11.2	207 37.9	03.6	101 57.7	37.5					
4	342	05.6	270 40.7	01.9	144 10.3	11.6	222 39.8	03.5	117 00.2	37.5					
5	357	08.1	285 40.0	+21 02.4	159 11.8	-8 12.1	237 41.7	+21 03.4	132 02.8	-14 37.5					
6	12	10.6	300 39.3	+21 02.9	174 13.3	-8 12.5	252 43.6	+21 03.3	147 05.3	-14 37.5					
7	27	13.0	315 38.6	03.4	189 14.8	13.0	267 45.4	03.2	162 07.8	37.5					
8	42	15.5	330 37.9	03.8	204 16.3	13.4	282 47.3	03.1	177 10.4	37.5					
9	57	17.9	345 37.2	04.3	219 17.9	13.9	297 49.2	03.0	192 12.9	37.5					
10	72	20.4	0 36.5	04.8	234 19.4	14.3	312 51.1	02.9	207 15.4	37.5					
11	87	22.9	15 35.8	+21 05.2	249 20.9	-8 14.7	327 53.0	+21 02.8	222 18.0	-14 37.5					
12	102	25.3	30 35.1	+21 05.7	264 22.4	-8 15.2	342 54.9	+21 02.7	237 20.5	-14 37.4					
13	117	27.8	45 34.4	06.2	279 23.9	15.6	357 56.8	02.6	252 23.0	37.4					
14	132	30.3	60 33.7	06.6	294 25.4	16.1	12 58.7	02.4	267 25.6	37.4					
15	147	32.7	75 33.0	07.1	309 26.9	16.5	28 00.5	02.3	282 28.1	37.4					
16	162	35.2	90 32.3	07.5	324 28.4	17.0	43 02.4	02.2	297 30.6	37.4					
17	177	37.7	105 31.6	+21 08.0	339 29.9	-8 17.4	58 04.3	+21 02.1	312 33.2	-14 37.4					
18	192	40.1	120 30.9	+21 08.5	354 31.4	-8 17.8	73 06.2	+21 02.0	327 35.7	-14 37.4					
19	207	42.6	135 30.2	08.9	9 32.9	18.3	88 08.1	01.9	342 38.2	37.4					
20	222	45.1	150 29.5	09.4	24 34.4	18.7	103 10.0	01.8	357 40.7	37.4					
21	237	47.5	165 28.8	09.8	39 35.9	19.2	118 11.9	01.7	12 43.3	37.4					
22	252	50.0	180 28.1	10.3	54 37.4	19.6	133 13.8	01.6	27 45.8	37.4					
23	267	52.4	195 27.4	10.8	69 38.9	20.1	148 15.7	01.5	42 48.3	37.4					
24	282	54.9	210 26.7	+21 11.2	84 40.4	-8 20.5	163 17.5	+21 01.4	57 50.9	-14 37.3					
Dif	—		-7	+5	+15	-4	+19	-1	+25	0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 7 ^d 7	PHE { 4 ^h : 55 ^h /4 12 ^h : 55 ^h /6 20 ^h : 55 ^h /8 R°: 47 ^m									
	PMG: 12 ^h 04 ^m 6	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	178	52.4	+22 48.4	96	51.8	-4 16.9	98	60 N	21 21	22 53	** **	12 41 75	23 18 19	
1	193	52.3		111	25.0 ¹⁴²		26.7	58	21 02	22 13	** **	37 73	22 22	
2	208	52.1		125	58.2 ¹⁴²		36.4	56	20 47	21 46	** **	34 71	26 24	
3	223	52.0		140	31.3 ¹⁴¹		46.1	54		33	26	22 59	31 69	
4	238	51.9		155	04.4 ¹⁴¹	-4 55.8	97	52	21	21 09	22 22	28 68	33 27	
5	253	51.8	+22 47.3	169	37.5 ¹⁴¹	-5 05.5	97	50	20 11	20 55	21 57	12 26 66	23 36 28	
6	268	51.7	+22 47.0	184	10.5 ¹⁴⁰	-5 15.2	97	45	19 49	20 26	21 15	12 21 62	23 42 32	
7	283	51.6		198	43.5 ¹⁴⁰		24.9	40		32	20 04	20 46	16 60	
8	298	51.5		213	16.4 ¹³⁹		34.5	35		18	19 47	23	13 57	
9	313	51.4		227	49.3 ¹³⁹		44.2	30	19 05	32	20 05	09 56	23 57 38	
10	328	51.3		242	22.1 ¹³⁸	-5 53.8	96	20	18 44	19 08	19 37	12 04 52	** ** *	
11	343	51.2	+22 45.9	256	54.9 ¹³⁸	-6 03.4	96	10 N	18 25	18 48	19 15	11 59 49	** ** *	
12	358	51.1	+22 45.6	271	27.6 ¹³⁷	-6 13.0	96	0	18 08	18 31	18 57	11 54 47	** ** *	
13	13	51.0		286	00.3 ¹³⁷		22.6	10 S	17 51	18 14	40	50 43	** ** *	
14	28	50.8		300	32.9 ¹³⁶		32.1	20		33	17 57	25	45 40	
15	43	50.7		315	05.5 ¹³⁶		41.7	30		13	39	09	40 37	
16	58	50.6		329	38.0 ¹³⁵	-6 51.2	95	35	17 01	29	18 00	37 35	** ** *	
17	73	50.5	+22 44.4	344	10.5 ¹³⁵	-7 00.7	95	40	16 47	17 18	17 51	11 33 33	** ** *	
18	88	50.4	+22 44.2	358	42.9 ¹³⁴	-7 10.2	95	45	16 31	17 05	17 42	11 29 30	** ** *	
19	103	50.3		43.9	13 15.3 ¹³⁴		19.6	50		11	16 49	30	24 27	
20	118	50.2		27	47.6 ¹³³		29.0	52	16 02		42	25	22 26	
21	133	50.1		42	19.9 ¹³³		38.4	54	15 51	34	20	20 24	** ** *	
22	148	50.0		56	52.1 ¹³²		47.8	56		39	26	14	17 22	
23	163	49.9		71	24.2 ¹³¹	-7 57.2	94	58		25	16	08	14 20	
24	178	49.8	+22 42.7	85	56.3 ¹³¹	-8 06.5	93	60 S	15 09	16 05	17 01	11 11 18	0 02 74	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 07 ^m 5		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: +0.1 PMG: 18 ^h 19 ^m		Mag: -1.8 PMG: 13 ^h 05 ^m		Mag: +0.4 PMG: 20 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	54.9	210	26.7	+21 11.2		84	40.4	-8 20.5	
1	297	57.4	225	25.9		11.7	99	41.9	21.0	
2	312	59.8	240	25.2		12.1	114	43.4	21.4	
3	328	02.3	255	24.5		12.6	129	44.9	21.8	
4	343	04.8	270	23.8		13.0	144	46.4	22.3	
5	358	07.2	285	23.1	+21 13.5		159	47.9	-8 22.7	
6	13	09.7	300	22.4	+21 13.9		174	49.4	-8 23.2	
7	28	12.2	315	21.7		14.4	189	50.9	23.6	
8	43	14.6	330	21.0		14.8	204	52.4	24.1	
9	58	17.1	345	20.3		15.3	219	53.9	24.5	
10	73	19.6	0	19.6		15.7	234	55.4	25.0	
11	88	22.0	15	18.9	+21 16.1		249	56.9	-8 25.4	
12	103	24.5	30	18.1	+21 16.6		264	58.4	-8 25.9	
13	118	26.9	45	17.4		17.0	279	59.9	26.3	
14	133	29.4	60	16.7		17.5	295	01.3	26.8	
15	148	31.9	75	16.0		17.9	310	02.8	27.2	
16	163	34.3	90	15.3		18.3	325	04.3	27.6	
17	178	36.8	105	14.6	+21 18.8		340	05.8	-8 28.1	
18	193	39.3	120	13.9	+21 19.2		355	07.3	-8 28.5	
19	208	41.7	135	13.2		19.7	10	08.8	29.0	
20	223	44.2	150	12.4		20.1	25	10.3	29.4	
21	238	46.7	165	11.7		20.5	40	11.8	29.9	
22	253	49.1	180	11.0		21.0	55	13.3	30.3	
23	268	51.6	195	10.3		21.4	70	14.7	30.8	
24	283	54.0	210	09.6	+21 21.8		85	16.2	-8 31.2	
Dif	—		-7		+4		+15		-4	
									+19	
									-1	
										+25

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 8 ^d 7	PHE	SD: 15 ^h 2		PMG: 18 ^h 52 ^m	Rº: 50 ^m		Náutico	Civil	Hora	Rº	Hora	Rº
	hG ☉	Dec														
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	49.8	+22	85	56.3	-8	06.5	60 N	** **	1 16	2 48	13 56	78	23 37	24	
1	193	49.7		100	28.4 ¹³¹		15.8 ⁹³	58	** **	1 56	3 07	50 75		44 26		
2	208	49.6		115	00.3 ¹²⁹		25.1 ⁹³	56	** **	2 23	23	45 73		50 28		
3	223	49.5		129	32.2 ¹²⁹		34.3 ⁹²	54	1 10	2 44	37	40 71		23 55	30	
4	238	49.4		144	04.1 ¹²⁹		43.6 ⁹³	52	1 47	3 01	48	36 69		** **	**	
5	253	49.3	+22	158	35.9 ¹²⁸	-8	52.7 ⁹¹	50	2 12	3 15	3 59	13 32	68	** **	**	
6	268	49.1	+22	173	07.6 ¹²⁷	-9	01.9 ⁹²	45	2 55	3 43	4 20	13 23	65	** **	**	
7	283	49.0		187	39.3 ¹²⁷		11.0 ⁹¹	40	3 24	4 05	37	16 62		** **	**	
8	298	48.9		202	10.9 ¹²⁶		20.1 ⁹¹	35	3 46	23	4 52	10 60		** **	**	
9	313	48.8		216	42.4 ¹²⁵		29.2 ⁹¹	30	4 04	4 37	5 05	13 05	58	** **	**	
10	328	48.7		231	13.9 ¹²⁵		38.2 ⁹⁰	20	32	5 01	26	12 56	55	0 04	42	
11	343	48.6	+22	245	45.3 ¹²⁴	-9	47.2 ⁹⁰	10 N	4 54	5 21	5 44	12 48	52	0 10	45	
12	358	48.5	+22	260	16.6 ¹²³	-9	56.2 ⁹⁰	0	5 13	5 39	6 01	12 41	49	0 16	48	
13	13	48.4		274	47.9 ¹²³	-10	05.1 ⁸⁹	10 S	29	5 55	18	33 47		22 51		
14	28	48.3		289	19.1 ¹²²		14.0 ⁸⁹	20	5 45	6 12	36	25 44		29 53		
15	43	48.2		303	50.2 ¹²¹		22.8 ⁸⁸	30	6 00	30	6 56	17 40		36 57		
16	58	48.1		318	21.3 ¹²¹		31.6 ⁸⁸	35	09	40	7 08	12 38		40 59		
17	73	48.0	+22	332	52.3 ¹²⁰	-10	40.4 ⁸⁸	40	6 18	6 52	7 22	12 06	36	0 45	61	
18	88	47.9	+22	347	23.2 ¹¹⁹	-10	49.1 ⁸⁷	45	6 28	7 04	7 38	11 59	34	0 50	64	
19	103	47.8		379	1 54.0 ¹¹⁸	-10	57.8 ⁸⁷	50	39	20	7 58	51 31		0 57	67	
20	118	47.7		16	24.8 ¹¹⁸	-11	06.4 ⁸⁶	52	44	27	8 07	48 29		1 00	69	
21	133	47.6		30	55.5 ¹¹⁷		15.0 ⁸⁶	54	49	35	18	44 27		04 70		
22	148	47.5		45	26.2 ¹¹⁷		23.6 ⁸⁶	56	6 55	43	30	39 26		07 72		
23	163	47.4		59	56.7 ¹¹⁵		32.1 ⁸⁵	58	7 01	7 53	8 44	34 24		12 74		
24	178	47.3	+22	74	27.2 ¹¹⁵	-11	40.5 ⁸⁴	60 S	7 08	8 04	9 00	11 29	21	1 16	77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 5 ^h 03 ^m 6		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +0.1 PMG: 18 ^h 17 ^m		Mag: -1.8 PMG: 13 ^h 02 ^m		Mag: +0.4 PMG: 20 ^h 01 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	283	54.0	210	09.6	+21	85	16.2	-8	31.2	164	02.9	+20	58.9	58	51.5	-14	37.2
1	298	56.5	225	08.9		100	17.7		31.7	179	04.7		58.8	73	54.1		37.2
2	313	59.0	240	08.1		115	19.2		32.1	194	06.6		58.7	88	56.6		37.2
3	329	01.4	255	07.4		130	20.7		32.6	209	08.5		58.6	103	59.1		37.1
4	344	03.9	270	06.7		145	22.2		33.0	224	10.4		58.5	119	01.6		37.1
5	359	06.4	285	06.0	+21	160	23.6	-8	33.5	239	12.3	+20	58.4	134	04.2	-14	37.1
6	14	08.8	300	05.3	+21	175	25.1	-8	33.9	254	14.2	+20	58.2	149	06.7	-14	37.1
7	29	11.3	315	04.6		190	26.6		34.4	269	16.1		58.1	164	09.2		37.1
8	44	13.8	330	03.8		205	28.1		34.8	284	18.0		58.0	179	11.7		37.1
9	59	16.2	345	03.1		220	29.6		35.3	299	19.9		57.9	194	14.3		37.1
10	74	18.7	0	02.4		235	31.0		35.7	314	21.7		57.8	209	16.8		37.1
11	89	21.2	15	01.7	+21	265	32.5	-8	36.2	329	23.6	+20	57.7	224	19.3	-14	37.1
12	104	23.6	30	01.0	+21	265	34.0	-8	36.6	344	25.5	+20	57.6	239	21.8	-14	37.1
13	119	26.1	45	00.2		280	35.5		37.1	359	27.4		57.5	254	24.3		37.1
14	134	28.5	59	59.5		295	37.0		37.5	14	29.3		57.4	269	26.9		37.1
15	149	31.0	74	58.8		310	38.4		38.0	29	31.2		57.3	284	29.4		37.1
16	164	33.5	89	58.1		325	39.9		38.4	44	33.1		57.2	299	31.9		37.1
17	179	35.9	104	57.3	+21	340	41.4	-8	38.9	59	35.0	+20	57.1	314	34.4	-14	37.1
18	194	38.4	119	56.6	+21	355	42.9	-8	39.3	74	36.8	+20	57.0	329	37.0	-14	37.1
19	209	40.9	134	55.9		10	44.3		39.8	89	38.7		56.9	344	39.5		37.0
20	224	43.3	149	55.2		25	45.8		40.2	104	40.6		56.8	359	42.0		37.0
21	239	45.8	164	54.5		40	47.3		40.7	119	42.5		56.7	14	44.5		37.0
22	254	48.3	179	53.7		55	48.7		41.1	134	44.4		56.6	29	47.1		37.0
23	269	50.7	194	53.0		70	50.2		41.6	149	46.3		56.4	44	49.6		37.0
24	284	53.2	209	52.3	+21	85	51.7	-8	42.0	164	48.2	+20	56.3	59	52.1	-14	37.0
Dif	—		-7		+4	+15		-5		+19		-1		+25			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 7	PHE { 4 ^h : 57 ^m 0 12 ^h : 57 ^m 3 20 ^h : 57 ^m 6	SD: 15 ^h 5			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 04 ^m 9					PMG: 19 ^h 42 ^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	h m	h m	
0	178	47.3	+22 36.6	74	27.2	-11 40.5		60 N	21 19	22 48	** **		15 14 78	** ** **	
1	193	47.2	36.3	88	57.6 ¹¹⁴	48.9 ⁸⁴		58	21 00	22 10	** **		15 05 76	** ** **	
2	208	47.1	36.1	103	27.9 ¹¹³	-11 57.3 ⁸⁴		56	20 45	21 44	** **		14 58 73	** ** **	
3	223	47.0	35.8	117	58.2 ¹¹³	-12 05.6 ⁸³		54	32	24	22 55		51 72	** ** **	
4	238	46.9	35.5	132	28.4 ¹¹²	13.9 ⁸³		52	20	21 07	22 20		45 70	0 00 32	
5	253	46.8	+22 35.3	146	58.5 ¹¹¹	-12 22.1 ⁸²		50	20 10	20 53	21 55		14 40 68	0 04 34	
6	268	46.7	+22 35.0	161	28.5 ¹¹⁰	-12 30.2 ⁸¹		45	19 49	20 25	21 13		14 28 66	0 14 36	
7	283	46.6	34.7	175	58.4 ¹⁰⁹	38.3 ⁸¹		40	31	20 04	20 45		18 64	22 39	
8	298	46.5	34.5	190	28.3 ¹⁰⁹	46.4 ⁸¹		35	17	19 46	23		10 62	29 41	
9	313	46.4	34.2	204	58.1 ¹⁰⁸	-12 54.4 ⁸⁰		30	19 05	32	20 05		14 03 60	35 43	
10	328	46.3	33.9	219	27.8 ¹⁰⁷	-13 02.3 ⁷⁹		20	18 44	19 08	19 37		13 51 57	46 45	
11	343	46.2	+22 33.7	233	57.4 ¹⁰⁶	-13 10.2 ⁷⁹		10 N	18 25	18 48	19 15		13 40 55	0 55 48	
12	358	46.1	+22 33.4	248	26.9 ¹⁰⁵	-13 18.0 ⁷⁸		0	18 09	18 31	18 57		13 30 52	1 04 50	
13	13	46.0	33.1	262	56.4 ¹⁰⁵	25.8 ⁷⁸		10 S	17 52	18 15	41		20 50	13 53	
14	28	45.9	32.9	277	25.8 ¹⁰⁴	33.5 ⁷⁷		20	34	17 58	25		13 09 48	22 56	
15	43	45.8	32.6	291	55.1 ¹⁰³	41.1 ⁷⁶		30	14	40	10		12 57 45	33 58	
16	58	45.7	32.3	306	24.3 ¹⁰²	48.7 ⁷⁶		35	17 02	30	18 01		50 44	39 60	
17	73	45.6	+22 32.0	320	53.4 ¹⁰¹	-13 56.2 ⁷⁵		40	16 48	17 19	17 53		12 42 42	1 46 63	
18	88	45.5	+22 31.8	335	22.5 ¹⁰¹	-14 03.6 ⁷⁴		45	16 32	17 06	17 43		12 33 39	1 54 65	
19	103	45.4	31.5	349	51.4 ⁹⁹	11.0 ⁷⁴		50	13	16 51	32		22 37	2 04 68	
20	118	45.3	31.2	4	20.3 ⁹⁹	18.3 ⁷³		52	16 03	44	27		17 35	09 69	
21	133	45.2	30.9	18	49.1 ⁹⁸	25.6 ⁷³		54	15 53	36	22		11 34	14 71	
22	148	45.1	30.7	33	17.8 ⁹⁷	32.7 ⁷¹		56	41	27	16		12 05 32	19 73	
23	163	45.0	30.4	47	46.5 ⁹⁷	39.8 ⁷¹		58	27	18	10		11 58 31	26 75	
24	178	44.9	+22 30.1	62	15.0 ⁹⁵	-14 46.9 ⁷¹		60 S	15 11	16 07	17 03		11 50 28	2 33 77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 59 ^m 6		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: +0.1 PMG: 18 ^h 15 ^m		Mag: -1.8 PMG: 12 ^h 59 ^m		Mag: +0.4 PMG: 19 ^h 57 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	284	53.2	209	52.3	+21 31.9	85 51.7	-8 42.0	164 48.2	+20 56.3	59 52.1	-14 37.0
1	299	55.6	224	51.6	32.3	100 53.2	42.5	179 50.1	56.2	74 54.6	37.0
2	314	58.1	239	50.8	32.7	115 54.6	42.9	194 51.9	56.1	89 57.1	37.0
3	330	00.6	254	50.1	33.1	130 56.1	43.4	209 53.8	56.0	104 59.7	37.0
4	345	03.0	269	49.4	33.5	145 57.6	43.9	224 55.7	55.9	120 02.2	37.0
5	0	05.5	284	48.7	+21 33.9	160 59.0	-8 44.3	239 57.6	+20 55.8	135 04.7	-14 37.0
6	15	08.0	299	47.9	+21 34.3	176 00.5	-8 44.8	254 59.5	+20 55.7	150 07.2	-14 37.0
7	30	10.4	314	47.2	34.7	191 02.0	45.2	270 01.4	55.6	165 09.7	37.0
8	45	12.9	329	46.5	35.1	206 03.4	45.7	285 03.3	55.5	180 12.3	37.0
9	60	15.4	344	45.7	35.5	221 04.9	46.1	300 05.1	55.4	195 14.8	37.0
10	75	17.8	359	45.0	35.9	236 06.4	46.6	315 07.0	55.3	210 17.3	37.0
11	90	20.3	14	44.3	+21 36.3	251 07.8	-8 47.0	330 08.9	+20 55.2	225 19.8	-14 37.0
12	105	22.8	29	43.6	+21 36.7	266 09.3	-8 47.5	345 10.8	+20 55.1	240 22.3	-14 37.0
13	120	25.2	44	42.8	37.1	281 10.8	47.9	0 12.7	55.0	255 24.9	36.9
14	135	27.7	59	42.1	37.5	296 12.2	48.4	15 14.6	54.8	270 27.4	36.9
15	150	30.1	74	41.4	37.9	311 13.7	48.8	30 16.5	54.7	285 29.9	36.9
16	165	32.6	89	40.6	38.2	326 15.1	49.3	45 18.4	54.6	300 32.4	36.9
17	180	35.1	104	39.9	+21 38.6	341 16.6	-8 49.8	60 20.2	+20 54.5	315 34.9	-14 36.9
18	195	37.5	119	39.2	+21 39.0	356 18.1	-8 50.2	75 22.1	+20 54.4	330 37.5	-14 36.9
19	210	40.0	134	38.4	39.4	11 19.5	50.7	90 24.0	54.3	345 40.0	36.9
20	225	42.5	149	37.7	39.8	26 21.0	51.1	105 25.9	54.2	0 42.5	36.9
21	240	44.9	164	37.0	40.2	41 22.4	51.6	120 27.8	54.1	15 45.0	36.9
22	255	47.4	179	36.2	40.6	56 23.9	52.0	135 29.7	54.0	30 47.5	36.9
23	270	49.9	194	35.5	41.0	71 25.4	52.5	150 31.6	53.9	45 50.1	36.9
24	285	52.3	209	34.8	+21 41.3	86 26.8	-8 52.9	165 33.5	+20 53.8	60 52.6	-14 36.9
Dif	—		-7	+4		+15	-5	+19	-1	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 7	PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 R ^o : 57 ^m									
	PMG: 12 ^h 05 ^m 1					SD: 15 ^h 7 PMG: 20 ^h 35 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	44.9	+22	30.1	62	15.0	-14	46.9	60 N	** **	1 22	2 51	16 32	74
1	193	44.8		29.8	76	43.5	95	-14	53.8	** **	2 00	3 10	21 72	10 34
2	208	44.7		29.5	91	11.8	93	-15	00.7	** **	26	25	11 71	18 36
3	223	44.6		29.3	105	40.1	93	07.5	54	1 16	2 46	39	16 03	69
4	238	44.5		29.0	120	08.3	92	14.3	52	1 51	3 03	3 50	15 55	69
5	253	44.4	+22	28.7	134	36.4	91	-15	20.9	2 15	3 17	4 00	15 48	68
6	268	44.3	+22	28.4	149	04.5	91	-15	27.5	2 57	3 45	4 22	15 34	65
7	283	44.2		28.1	163	32.4	89	34.0	40	3 26	4 06	39	22 64	
8	298	44.1		27.8	178	00.3	89	40.4	35	3 48	24	4 53	12 62	10 46
9	313	44.0		27.6	192	28.1	88	46.8	30	4 05	4 38	5 05	15 03	61
10	328	43.9		27.3	206	55.7	86	53.0	20	33	5 02	27	14 48	59
11	343	43.8	+22	27.0	221	23.3	86	-15	59.2	4 55	5 22	5 45	14 35	57
12	358	43.7	+22	26.7	235	50.9	86	-16	05.3	5 13	5 39	6 01	14 22	57
13	13	43.6		26.4	250	18.3	84	11.3	10 S	29	5 55	18	14 10	55
14	28	43.5		26.1	264	45.6	83	17.2	20	5 45	6 12	36	13 57	53
15	43	43.4		25.8	279	12.9	83	23.0	30	6 00	30	6 56	42 51	31 61
16	58	43.4		25.6	293	40.1	82	28.8	35	08	40	7 08	34 49	39 63
17	73	43.3	+22	25.3	308	07.1	80	-16	34.4	6 17	6 51	7 21	13 24	48
18	88	43.2	+22	25.0	322	34.1	80	-16	40.0	6 27	7 04	7 37	13 12	47
19	103	43.1		24.7	337	01.1	80	45.4	50	38	19	7 57	12 59	44
20	118	43.0		24.4	351	27.9	78	50.8	52	43	26	8 06	52 44	18 69
21	133	42.9		24.1	5	54.6	77	-16	56.1	48	34	16	45 43	25 70
22	148	42.8		23.8	20	21.3	77	-17	01.3	6 54	42	28	37 41	32 72
23	163	42.7		23.5	34	47.9	76	06.4	58	7 00	7 52	42	29 39	41 74
24	178	42.6	+22	23.2	49	14.4	75	-17	11.3	7 07	8 02	8 58	12 18	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 55 ^m 7		Mag: -3.8 PMG: 10 ^h 02 ^m		Mag: +0.1 PMG: 18 ^h 12 ^m		Mag: -1.8 PMG: 12 ^h 56 ^m		Mag: +0.4 PMG: 19 ^h 53 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	285	52.3	209	34.8	+21	86	26.8	-8	52.9	165	33.5			
1	300	54.8	224	34.0		101	28.3		53.4	180	35.3			
2	315	57.3	239	33.3		116	29.7		53.9	195	37.2			
3	330	59.7	254	32.6		131	31.2		54.3	210	39.1			
4	346	02.2	269	31.8		146	32.6		54.8	225	41.0			
5	1	04.6	284	31.1	+21	161	34.1	-8	55.2	240	42.9			
6	16	07.1	299	30.4	+21	176	35.5	-8	55.7	255	44.8			
7	31	09.6	314	29.6		191	37.0		56.1	270	46.7			
8	46	12.0	329	28.9		206	38.4		56.6	285	48.5			
9	61	14.5	344	28.2		221	39.9		57.0	300	50.4			
10	76	17.0	359	27.4		236	41.3		57.5	315	52.3			
11	91	19.4	14	26.7	+21	251	42.8	-8	58.0	330	54.2			
12	106	21.9	29	25.9	+21	266	44.2	-8	58.4	345	56.1			
13	121	24.4	44	25.2		281	45.7		58.9	0	58.0			
14	136	26.8	59	24.5		296	47.1		59.3	15	59.9			
15	151	29.3	74	23.7		311	48.6	-8	59.8	31	01.8			
16	166	31.8	89	23.0		326	50.0	-9	00.3	46	03.6			
17	181	34.2	104	22.2	+21	341	51.5	-9	00.7	61	05.5			
18	196	36.7	119	21.5	+21	356	52.9	-9	01.2	76	07.4			
19	211	39.1	134	20.8		11	54.4		01.6	91	09.3			
20	226	41.6	149	20.0		26	55.8		02.1	106	11.2			
21	241	44.1	164	19.3		41	57.3		02.5	121	13.1			
22	256	46.5	179	18.5		56	58.7		03.0	136	15.0			
23	271	49.0	194	17.8		72	00.2		03.5	151	16.8			
24	286	51.5	209	17.1	+21	87	01.6	-9	03.9	166	18.7			
Dif	—		-7		+4		+14		-5		+19		-1	

0	178	44.9	+22	30.1	62	15.0	-14	46.9	60 N	** **	1 22	2 51	16 32	74	0 01	32
1	193	44.8		29.8	76	43.5	95	-14	53.8	** **	2 00	3 10	21 72	10 34		
2	208	44.7		29.5	91	11.8	93	-15	00.7	** **	26	25	11 71	18 36		
3	223	44.6		29.3	105	40.1	93	07.5	54	1 16	2 46	39	16 03	69	25	38
4	238	44.5		29.0	120	08.3	92	14.3	52	1 51	3 03	3 50	15 55	69	32	39
5	253	44.4	+22	28.7	134	36.4	91	-15	20.9	2 15	3 17	4 00	15 48	68	0 38	40
6	268	44.3	+22	28.4	149	04.5	91	-15	27.5	2 57	3 45	4 22	15 34	65	0 50	43
7	283	44.2		28.1	163	32.4	89	34.0	40	3 26	4 06	39	22 64		1 01	44
8	298	44.1		27.8	178	00.3	89	40.4	35	3 48	24	4 53	12 62	10 46		
9	313	44.0		27.6	192	28.1	88	46.8	30	4 05	4 38	5 05	15 03	61	18	47
10	328	43.9		27.3	206	55.7	86	53.0	20	33	5 02	27	14 48	59	31	51
11	343	43.8	+22	27.0	221	23.3	86	-15	59.2	4 55	5 22	5 45	14 35	57	1 43	53
12	358	43.7	+22	26.7	235	50.9	86	-16	05.3	5 13	5 39	6 01	14 22	57	1 54	55
13	13	43.6		26.4	250	18.3	84	11.3	10 S	29	5 55	18	14 10	55	2 06	56
14	28	43.5		26.1	264	45.6	83	17.2	20	5 45	6 12	36	13 57	53	18	58
15	43	43.4		25.8	279	12.9	83	23.0	30	6 00	30	6 56	42 51	31 61		
16	58	43.4		25.6	293	40.1	82	28.8	35	08	40	7 08	34 49	39 63		
17	73	43.3	+22	25.3	308	07.1	80	-16	34.4	6 17	6 51	7 21	13 24	48	2 49	63
18	88	43.2	+22	25.0	322	34.1	80	-16	40.0	6 27	7 04	7 37	13 12	47	2 59	66
19	103	43.1		24.7	337	01.1	80	45.4	50	38	19	7 57	12 59	44	3 12	68
20	118	43.0		24.4	351	27.9	78	50.8	52	43	26	8 06	52 44	18 69		
21	133	42.9		24.1	5	54.6	77	-16	56.1	48	34	16	45 43	25 70		
22	148	42.8		23.8	20	21.3	77	-17	01.3	6 54	42	28	37 41	32 72		
23	163	42.7		23.5	34	47.9	76	06.4	58	7 00	7 52	42	29 39	41 74		
24	178	42.6	+22	23.2	49	14.4	75	-17	11.3	7 07	8 02	8 58	12 18	38	3 50	76

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 11 ^d 7	PHE {	4 ^h : 58 ^h /8 12 ^h : 59 ^h /1 20 ^h : 59 ^h /4 R°: 60 ^m									
	PMG: 12 ^h 05 ^m 2								SD: 16 ^h 0		PMG: 21 ^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	178	42.6	+22 23.2	49	14.4	-17 11.3	49	60 N	21 17	22 42	** **	17 46	65	0 33	43
1	193	42.5		63	40.8	16.2	49	58	20 58	22 07	** **	33	65	44	45
2	208	42.4		78	07.1	21.0	48	56	43	21 41	** **	22	64	0 54	46
3	223	42.3		92	33.4	25.7	47	54	30	22	22 50	12	64	1 03	47
4	238	42.2		106	59.5	30.3	46	52	19	21 06	22 16	17 04	63	11	48
5	253	42.1	+22 21.7	121	25.6	-17 34.8	45	50	20 09	20 52	21 53	16 56	63	1 18	49
6	268	42.0	+22 21.4	135	51.6	-17 39.1	43	45	19 48	20 24	21 12	16 39	63	1 33	51
7	283	42.0		150	17.6	43.4	43	40	31	20 03	20 44	26	62	45	52
8	298	41.9		164	43.4	47.6	42	35	17	19 46	22	14	62	1 56	53
9	313	41.8		179	09.2	51.6	40	30	19 04	31	20 04	16 04	62	2 05	54
10	328	41.7		193	34.9	55.6	40	20	18 43	19 08	19 37	15 47	61	22	55
11	343	41.6	+22 19.9	208	00.5	-17 59.4	38	10 N	18 26	18 48	19 15	15 32	60	2 36	56
12	358	41.5	+22 19.6	222	26.0	-18 03.1	37	0	18 09	18 31	18 57	15 19	59	2 49	57
13	13	41.4		236	51.5	06.7	36	10 S	17 52	18 15	41	15 05	58	3 02	59
14	28	41.3		251	16.9	10.2	35	20	35	17 59	26	14 50	58	16	60
15	43	41.2		265	42.2	13.6	34	30	15	41	10	33	57	32	62
16	58	41.1		280	07.4	16.9	33	35	17 03	31	18 02	23	57	42	62
17	73	41.0	+22 18.1	294	32.6	-18 20.0	31	40	16 50	17 20	17 54	14 12	56	3 52	63
18	88	40.9	+22 17.8	308	57.7	-18 23.1	31	45	16 34	17 07	17 44	13 59	55	4 05	64
19	103	40.9		323	22.7	26.0	29	50	15	16 52	33	43	55	20	66
20	118	40.8		337	47.7	28.8	28	52	16 05	45	28	36	54	27	67
21	133	40.7		352	12.5	31.5	27	54	15 55	38	23	28	53	35	67
22	148	40.6		6	37.4	34.1	26	56	43	29	18	18	53	44	68
23	163	40.5		21	02.1	36.5	24	58	30	20	12	13 08	52	4 55	68
24	178	40.4	+22 15.9	35	26.8	-18 38.8	23	60 S	15 14	16 09	17 05	12 56	51	5 06	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 51 ^m 8		Mag: -3.8 PMG: 10 ^h 03 ^m		Mag: +0.1 PMG: 18 ^h 10 ^m		Mag: -1.8 PMG: 12 ^h 53 ^m		Mag: +0.4 PMG: 19 ^h 49 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	286	51.5	209	17.1	+21 50.2	87	01.6	-9 03.9	166	18.7	+20 51.2	61	53.0	-14 36.8	
1	301	53.9	224	16.3	50.6	102	03.0	04.4	181	20.6	51.1	76	55.5	36.8	
2	316	56.4	239	15.6	50.9	117	04.5	04.8	196	22.5	51.0	91	58.0	36.8	
3	331	58.9	254	14.8	51.3	132	05.9	05.3	211	24.4	50.9	107	00.5	36.8	
4	347	01.3	269	14.1	51.6	147	07.4	05.8	226	26.3	50.8	122	03.0	36.8	
5	2	03.8	284	13.3	+21 52.0	162	08.8	-9 06.2	241	28.2	+20 50.6	137	05.5	-14 36.8	
6	17	06.2	299	12.6	+21 52.4	177	10.2	-9 06.7	256	30.1	+20 50.5	152	08.0	-14 36.8	
7	32	08.7	314	11.8	52.7	192	11.7	07.1	271	31.9	50.4	167	10.6	36.8	
8	47	11.2	329	11.1	53.1	207	13.1	07.6	286	33.8	50.3	182	13.1	36.8	
9	62	13.6	344	10.4	53.4	222	14.6	08.1	301	35.7	50.2	197	15.6	36.8	
10	77	16.1	359	09.6	53.8	237	16.0	08.5	316	37.6	50.1	212	18.1	36.8	
11	92	18.6	14	08.9	+21 54.1	252	17.4	-9 09.0	331	39.5	+20 50.0	227	20.6	-14 36.8	
12	107	21.0	29	08.1	+21 54.5	267	18.9	-9 09.4	346	41.4	+20 49.9	242	23.1	-14 36.8	
13	122	23.5	44	07.4	54.8	282	20.3	09.9	1	43.3	49.8	257	25.6	36.8	
14	137	26.0	59	06.6	55.1	297	21.7	10.4	16	45.1	49.7	272	28.1	36.8	
15	152	28.4	74	05.9	55.5	312	23.2	10.8	31	47.0	49.6	287	30.7	36.8	
16	167	30.9	89	05.1	55.8	327	24.6	11.3	46	48.9	49.5	302	33.2	36.8	
17	182	33.4	104	04.4	+21 56.2	342	26.0	-9 11.7	61	50.8	+20 49.3	317	35.7	-14 36.8	
18	197	35.8	119	03.6	+21 56.5	357	27.5	-9 12.2	76	52.7	+20 49.2	332	38.2	-14 36.8	
19	212	38.3	134	02.9	56.8	12	28.9	12.7	91	54.6	49.1	347	40.7	36.7	
20	227	40.7	149	02.1	57.2	27	30.3	13.1	106	56.5	49.0	2	43.2	36.7	
21	242	43.2	164	01.4	57.5	42	31.8	13.6	121	58.3	48.9	17	45.7	36.7	
22	257	45.7	179	00.6	57.9	57	33.2	14.1	137	00.2	48.8	32	48.2	36.7	
23	272	48.1	193	59.9	58.2	72	34.6	14.5	152	02.1	48.7	47	50.7	36.7	
24	287	50.6	208	59.1	+21 58.5	87	36.1	-9 15.0	167	04.0	+20 48.6	62	53.3	-14 36.7	
Dif	—		-7		+3	+14		-5	+19		-1	+25			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 4				Edad: 12 ^d 7 PHE { 4 ^h : 59 ^m 7 12 ^h : 60 ^m 0 20 ^h : 60 ^m 2 Rº: 62 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	178	40.4	+22	15.9	35	26.8	-18	38.8	60 N	** **	1 29	2 54	18 51	54	1 16	58
1	193	40.3		15.6	49	51.4		41.0	58	** **	2 04	3 13	38 54		29	58
2	208	40.2		15.3	64	16.0		43.1	56	** **	29	28	26 56		40	59
3	223	40.1		15.0	78	40.5		45.0	54	1 21	2 49	41	16 56		50	59
4	238	40.1		14.7	93	04.9		46.9	52	1 54	3 05	3 52	18 07	57	1 59	59
5	253	40.0	+22	14.4	107	29.3		48.6	50	2 18	3 19	4 02	17 59	57	2 07	59
6	268	39.9	+22	14.1	121	53.6		50.1	45	2 59	3 47	4 23	17 42	58	2 24	59
7	283	39.8		13.7	136	17.8		51.6	40	3 27	4 08	40	28 58		37	60
8	298	39.7		13.4	150	42.0		52.9	35	3 49	25	4 54	16 59		49	60
9	313	39.6		13.1	165	06.2		54.1	30	4 07	4 39	5 06	17 06	59	2 59	60
10	328	39.5		12.8	179	30.3		55.1	20	34	5 03	27	16 48	60	3 17	60
11	343	39.4	+22	12.5	193	54.3		56.1	10 N	4 55	5 22	5 45	16 32	61	3 32	60
12	358	39.4	+22	12.2	208	18.3		56.9	0	5 13	5 39	6 02	16 18	61	3 46	61
13	13	39.3		11.8	222	42.2		57.5	10 S	29	5 56	18	16 03	62	4 01	60
14	28	39.2		11.5	237	06.1		58.1	20	5 45	6 12	36	15 48	62	16	60
15	43	39.1		11.2	251	30.0		58.5	30	6 00	30	6 56	30 63		34	60
16	58	39.0		10.9	265	53.8		58.7	35	08	39	7 07	20 63		44	60
17	73	38.9	+22	10.6	280	17.5		58.9	40	6 17	6 50	7 21	15 08	64	4 55	61
18	88	38.8	+22	10.2	294	41.3		58.9	45	6 26	7 03	7 36	14 54	64	5 09	60
19	103	38.8		09.9	309	04.9		58.7	50	37	18	7 56	38 64		26	60
20	118	38.7		09.6	323	28.6		58.5	52	42	25	8 05	30 64		34	60
21	133	38.6		09.3	337	52.2		58.1	54	47	32	15	21 65		42	60
22	148	38.5		08.9	352	15.7		57.5	56	52	41	26	11 65		5 52	60
23	163	38.4		08.6	6	39.2		56.9	58	6 59	7 50	40	14 00	65	6 03	60
24	178	38.3	+22	08.3	21	02.7		56.1	60 S	7 05	8 01	8 56	13 47	66	6 16	60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 47 ^m 8		Mag: -3.8 PMG: 10 ^h 05 ^m		Mag: +0.2 PMG: 18 ^h 08 ^m		Mag: -1.8 PMG: 12 ^h 50 ^m		Mag: +0.4 PMG: 19 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	287	50.6	208	59.1	+21	58.5	87	36.1	-9	15.0	167	04.0	+20	48.6	62	53.3	-14	36.7
1	302	53.1	223	58.4		58.9	102	37.5		15.4	182	05.9		48.5	77	55.8		36.7
2	317	55.5	238	57.6		59.2	117	38.9		15.9	197	07.8		48.4	92	58.3		36.7
3	332	58.0	253	56.9		59.5	132	40.3		16.4	212	09.7		48.3	108	00.8		36.7
4	348	00.5	268	56.1	+21	59.9	147	41.8		16.8	227	11.5		48.1	123	03.3		36.7
5	3	02.9	283	55.4	+22	00.2	162	43.2	-9	17.3	242	13.4	+20	48.0	138	05.8	-14	36.7
6	18	05.4	298	54.6	+22	00.5	177	44.6	-9	17.8	257	15.3	+20	47.9	153	08.3	-14	36.7
7	33	07.9	313	53.9		00.8	192	46.0		18.2	272	17.2		47.8	168	10.8		36.7
8	48	10.3	328	53.1		01.2	207	47.5		18.7	287	19.1		47.7	183	13.3		36.7
9	63	12.8	343	52.4		01.5	222	48.9		19.1	302	21.0		47.6	198	15.8		36.7
10	78	15.2	358	51.6		01.8	237	50.3		19.6	317	22.9		47.5	213	18.4		36.7
11	93	17.7	13	50.9	+22	02.1	252	51.7	-9	20.1	332	24.8	+20	47.4	228	20.9	-14	36.7
12	108	20.2	28	50.1	+22	02.5	267	53.2	-9	20.5	347	26.6	+20	47.3	243	23.4	-14	36.7
13	123	22.6	43	49.4		02.8	282	54.6		21.0	2	28.5		47.2	258	25.9		36.7
14	138	25.1	58	48.6		03.1	297	56.0		21.5	17	30.4		47.1	273	28.4		36.7
15	153	27.6	73	47.8		03.4	312	57.4		21.9	32	32.3		46.9	288	30.9		36.7
16	168	30.0	88	47.1		03.7	327	58.8		22.4	47	34.2		46.8	303	33.4		36.7
17	183	32.5	103	46.3	+22	04.0	343	00.3	-9	22.9	62	36.1	+20	46.7	318	35.9	-14	36.7
18	198	35.0	118	45.6	+22	04.4	358	01.7	-9	23.3	77	38.0	+20	46.6	333	38.4	-14	36.7
19	213	37.4	133	44.8		04.7	13	03.1		23.8	92	39.8		46.5	348	40.9		36.7
20	228	39.9	148	44.1		05.0	28	04.5		24.3	107	41.7		46.4	3	43.4		36.7
21	243	42.4	163	43.3		05.3	43	05.9		24.7	122	43.6		46.3	18	45.9		36.7
22	258	44.8	178	42.6		05.6	58	07.4		25.2	137	45.5		46.2	33	48.4		36.7
23	273	47.3	193	41.8		05.9	73	08.8		25.6	152	47.4		46.1	48	51.0		36.7
24	288	49.7	208	41.0	+22	06.2	88	10.2	-9	26.1	167	49.3	+20	46.0	63	53.5	-14	36.7
Dif	—		-8		+3		+14		-5		+19		-1		+25			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 13 ^d 7 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 7 20 ^h : 60 ^s 8 R°: 61 ^m										
	PMG: 12 ^h 05 ^m 5			SD: 16 ^h 4 PMG: 23 ^h 34 ^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	38.3	+22 08.3	21	02.7	-18 56.1	10	60 N	21 14	22 37	** **	19 45	41	2 14 73
1	193	38.3	08.0	35	26.2	55.1	45	58	20 56	22 03	** **	32	44	27 72
2	208	38.2	07.6	49	49.6	54.0	11	56	41	21 39	** **	22	45	39 71
3	223	38.1	07.3	64	13.0	52.8	12	54	28	19	22 44	12	46	49 70
4	238	38.0	07.0	78	36.4	51.5	13	52	17	21 04	22 13	19 04	47	2 58 69
5	253	37.9	+22 06.6	92	59.8	50.0	15	50	20 07	20 50	21 50	18 56	49	3 06 69
6	268	37.8	+22 06.3	107	23.1	48.3	17	45	19 47	20 23	21 10	18 40	51	3 23 68
7	283	37.8	06.0	121	46.4	46.6	17	40	30	20 02	20 42	26	53	37 67
8	298	37.7	05.6	136	09.7	44.7	19	35	16	19 45	21	15	54	49 66
9	313	37.6	05.3	150	32.9	42.6	21	30	19 04	31	20 04	18 05	56	3 59 65
10	328	37.5	05.0	164	56.2	40.5	21	20	18 43	19 08	19 36	17 48	58	4 17 64
11	343	37.4	+22 04.6	179	19.4	38.1	24	10 N	18 26	18 48	19 15	17 33	59	4 32 63
12	358	37.3	+22 04.3	193	42.6	35.7	24	0	18 09	18 31	18 57	17 19	61	4 47 61
13	13	37.3	04.0	208	05.9	33.1	26	10 S	17 53	18 15	42	17 05	63	5 01 60
14	28	37.2	03.6	222	29.1	30.4	27	20	36	17 59	27	16 50	65	16 59
15	43	37.1	03.3	236	52.2	27.5	29	30	16	42	11	33	67	34 58
16	58	37.0	03.0	251	15.4	24.5	30	35	17 04	32	18 03	23	68	44 57
17	73	36.9	+22 02.6	265	38.6	21.4	31	40	16 51	17 21	17 55	16 12	69	5 56 55
18	88	36.9	+22 02.3	280	01.8	18.1	33	45	16 36	17 09	17 45	15 58	71	6 09 55
19	103	36.8	01.9	294	24.9	14.7	34	50	16	16 54	35	42	73	26 53
20	118	36.7	01.6	308	48.1	11.2	35	52	16 07	47	30	34	74	34 52
21	133	36.6	01.3	323	11.3	07.5	37	54	15 57	40	25	26	75	42 52
22	148	36.5	00.9	337	34.5	03.7	38	56	46	32	20	16	76	6 52 50
23	163	36.4	00.6	351	57.6	00.0	40	58	33	22	14	15 05	78	7 03 49
24	178	36.4	+22 00.2	6	20.8	55.7	40	60 S	15 17	16 12	17 07	14 53	79	7 16 47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 43 ^m 9		Mag: -3.8 PMG: 10 ^h 06 ^m		Mag: +0.2 PMG: 18 ^h 06 ^m		Mag: -1.8 PMG: 12 ^h 47 ^m		Mag: +0.4 PMG: 19 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	288	49.7	208	41.0	88	10.2	167	49.3	63	53.5
1	303	52.2	223	40.3	103	11.6	182	51.2	78	56.0
2	318	54.7	238	39.5	118	13.0	197	53.0	93	58.5
3	333	57.1	253	38.8	133	14.4	212	54.9	109	01.0
4	348	59.6	268	38.0	148	15.8	227	56.8	124	03.5
5	4	02.1	283	37.2	163	17.3	242	58.7	139	06.0
6	19	04.5	298	36.5	178	18.7	258	00.6	154	08.5
7	34	07.0	313	35.7	193	20.1	273	02.5	169	11.0
8	49	09.5	328	35.0	208	21.5	288	04.4	184	13.5
9	64	11.9	343	34.2	223	22.9	303	06.2	199	16.0
10	79	14.4	358	33.4	238	24.3	318	08.1	214	18.5
11	94	16.9	13	32.7	253	25.7	333	10.0	229	21.0
12	109	19.3	28	31.9	268	27.1	348	11.9	244	23.5
13	124	21.8	43	31.2	283	28.5	3	13.8	259	26.0
14	139	24.2	58	30.4	298	29.9	18	15.7	274	28.5
15	154	26.7	73	29.6	313	31.4	33	17.6	289	31.0
16	169	29.2	88	28.9	328	32.8	48	19.4	304	33.5
17	184	31.6	103	28.1	343	34.2	63	21.3	319	36.0
18	199	34.1	118	27.3	358	35.6	78	23.2	334	38.5
19	214	36.6	133	26.6	13	37.0	93	25.1	349	41.0
20	229	39.0	148	25.8	28	38.4	108	27.0	4	43.6
21	244	41.5	163	25.0	43	39.8	123	28.9	19	46.1
22	259	44.0	178	24.3	58	41.2	138	30.8	34	48.6
23	274	46.4	193	23.5	73	42.6	153	32.6	49	51.1
24	289	48.9	208	22.7	88	44.0	168	34.5	64	53.6
Dif	—		-8	+3	+14	-5	+19	-1	+25	0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 6			Edad: 14 ^d 7 PHE { 4 ^h : 61 ^m 0 12 ^h : 61 ^m 1 20 ^h : 61 ^m 2 R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	36.4	+22 00.2	6	20.8	-17 55.7	43	60 N	** *	1 35	2 58	20 26	31	3 27	85
1	193	36.3	+21 59.9	20	44.0	51.4	43	58	** *	2 09	3 16	16	33	39	83
2	208	36.2	59.6	35	07.2	47.1	43	56	** *	33	30	20 07	36	50	80
3	223	36.1	59.2	49	30.4	42.6	45	54	1 27	2 52	43	19 58	39	3 59	79
4	238	36.1	58.9	63	53.7	38.0	46	52	1 58	3 08	3 54	51	40	4 07	78
5	253	36.0	+21 58.5	78	16.9	-17 33.3	47	50	2 21	3 21	4 04	19 45	41	4 15	76
6	268	35.9	+21 58.2	92	40.2	-17 28.4	49	45	3 01	3 49	4 25	19 31	44	4 31	73
7	283	35.8	57.8	107	03.4	23.4	50	40	29	4 09	41	19	47	44	71
8	298	35.7	57.5	121	26.7	18.3	51	35	3 50	26	4 55	09	50	4 55	69
9	313	35.7	57.1	135	50.0	13.0	53	30	4 08	4 40	5 07	19 01	51	5 04	68
10	328	35.6	56.8	150	13.3	07.6	54	20	35	5 04	28	18 46	54	21	65
11	343	35.5	+21 56.4	164	36.7	-17 02.1	55	10 N	4 56	5 23	5 46	18 32	58	5 35	63
12	358	35.4	+21 56.1	179	00.1	-16 56.5	56	0	5 14	5 40	6 02	18 20	60	5 48	61
13	13	35.4	55.7	193	23.5	50.7	58	10 S	30	5 56	18	18 08	62	6 01	59
14	28	35.3	55.4	207	46.9	44.8	59	20	5 45	6 12	36	17 55	65	15	57
15	43	35.2	55.0	222	10.3	38.8	60	30	6 00	29	6 55	40	68	32	53
16	58	35.1	54.7	236	33.8	32.6	62	35	08	39	7 07	31	70	41	52
17	73	35.0	+21 54.3	250	57.3	-16 26.4	62	40	6 16	6 50	7 20	17 21	72	6 51	50
18	88	35.0	+21 54.0	265	20.9	-16 20.0	64	45	6 25	7 02	7 35	17 09	75	7 04	48
19	103	34.9	53.6	279	44.5	13.5	65	50	36	17	7 54	16 55	78	19	45
20	118	34.8	53.3	294	08.1	06.9	66	52	41	23	8 03	48	80	26	44
21	133	34.7	52.9	308	31.7	-16 00.1	68	54	46	31	13	41	81	34	42
22	148	34.7	52.5	322	55.4	-15 53.3	68	56	51	39	25	32	84	42	41
23	163	34.6	52.2	337	19.1	46.3	70	58	6 57	48	38	23	86	7 52	38
24	178	34.5	+21 51.8	351	42.9	-15 39.2	71	60 S	7 04	7 59	8 53	16 12	88	8 03	36

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 40 ^m 0		Mag: -3.8 PMG: 10 ^h 07 ^m			Mag: +0.2 PMG: 18 ^h 03 ^m			Mag: -1.8 PMG: 12 ^h 44 ^m			Mag: +0.4 PMG: 19 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	289	48.9	208	22.7	+22 13.3	88	44.0	-9 37.3	168	34.5	+20 43.3	64	53.6	-14 36.7	
1	304	51.4	223	22.0	13.6	103	45.4	37.8	183	36.4	43.2	79	56.1	36.7	
2	319	53.8	238	21.2	13.9	118	46.8	38.3	198	38.3	43.1	94	58.6	36.7	
3	334	56.3	253	20.5	14.2	133	48.2	38.7	213	40.2	43.0	110	01.1	36.7	
4	349	58.7	268	19.7	14.5	148	49.6	39.2	228	42.1	42.9	125	03.6	36.7	
5	5	01.2	283	18.9	+22 14.7	163	51.0	-9 39.7	243	43.9	+20 42.8	140	06.1	-14 36.7	
6	20	03.7	298	18.2	+22 15.0	178	52.4	-9 40.1	258	45.8	+20 42.6	155	08.6	-14 36.7	
7	35	06.1	313	17.4	15.3	193	53.8	40.6	273	47.7	42.5	170	11.1	36.7	
8	50	08.6	328	16.6	15.6	208	55.2	41.1	288	49.6	42.4	185	13.6	36.7	
9	65	11.1	343	15.8	15.8	223	56.6	41.5	303	51.5	42.3	200	16.1	36.7	
10	80	13.5	358	15.1	16.1	238	58.0	42.0	318	53.4	42.2	215	18.6	36.7	
11	95	16.0	13	14.3	+22 16.4	253	59.4	-9 42.5	333	55.3	+20 42.1	230	21.1	-14 36.7	
12	110	18.5	28	13.5	+22 16.7	269	00.8	-9 42.9	348	57.1	+20 42.0	245	23.6	-14 36.7	
13	125	20.9	43	12.8	16.9	284	02.2	43.4	3	59.0	41.9	260	26.1	36.7	
14	140	23.4	58	12.0	17.2	299	03.6	43.9	19	00.9	41.8	275	28.6	36.7	
15	155	25.8	73	11.2	17.5	314	05.0	44.4	34	02.8	41.6	290	31.1	36.7	
16	170	28.3	88	10.5	17.7	329	06.4	44.8	49	04.7	41.5	305	33.6	36.7	
17	185	30.8	103	09.7	+22 18.0	344	07.8	-9 45.3	64	06.6	+20 41.4	320	36.1	-14 36.7	
18	200	33.2	118	08.9	+22 18.3	359	09.1	-9 45.8	79	08.5	+20 41.3	335	38.6	-14 36.7	
19	215	35.7	133	08.2	18.5	14	10.5	46.2	94	10.3	41.2	350	41.1	36.7	
20	230	38.2	148	07.4	18.8	29	11.9	46.7	109	12.2	41.1	5	43.6	36.7	
21	245	40.6	163	06.6	19.1	44	13.3	47.2	124	14.1	41.0	20	46.1	36.7	
22	260	43.1	178	05.8	19.3	59	14.7	47.6	139	16.0	40.9	35	48.6	36.7	
23	275	45.6	193	05.1	19.6	74	16.1	48.1	154	17.9	40.8	50	51.1	36.7	
24	290	48.0	208	04.3	+22 19.8	89	17.5	-9 48.6	169	19.8	+20 40.6	65	53.6	-14 36.7	
Dif	—		-8	+3		+14	-5		+19	-1		+25			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 7	PHE { 4 ^h : 61/2 12 ^h : 61/2 20 ^h : 61/2									
	PMG: 12 ^h 05 ^m 8					SD: 16 ^h 7			PMG: 0 ^h 35 ^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
0	178	34.5	+21 51.8	351	42.9	-15 39.2	72	60 N	21 11	22 31	** **	20 57 25	4 52 91	
1	193	34.4	51.5	6	06.7	32.0	72	58	20 53	21 59	** **	49 28	5 02 88	
2	208	34.4	51.1	20	30.5	24.7	73	56	39	35	23 35	43 29	10 86	
3	223	34.3	50.7	34	54.4	17.3	74	54	26	17	22 39	37 31	18 83	
4	238	34.2	50.4	49	18.3	09.8	75	52	15	21 01	22 09	31 34	25 81	
5	253	34.1	+21 50.0	63	42.3	-15 02.1	77	50	20 06	20 48	21 47	20 26 36	5 31 79	
6	268	34.1	+21 49.7	78	06.3	-14 54.4	77	45	19 45	20 21	21 08	20 15 39	5 44 76	
7	283	34.0	49.3	92	30.3	46.5	79	40	29	20 01	20 41	20 06 43	5 55 73	
8	298	33.9	48.9	106	54.5	38.6	79	35	15	19 44	20	19 59 44	6 04 70	
9	313	33.9	48.6	121	18.6	30.5	81	30	19 03	30	20 03	52 47	12 68	
10	328	33.8	48.2	135	42.8	22.3	82	20	18 43	19 07	19 36	40 51	26 65	
11	343	33.7	+21 47.8	150	07.1	-14 14.0	83	10 N	18 26	18 48	19 15	19 30 54	6 38 61	
12	358	33.6	+21 47.5	164	31.4	-14 05.7	83	0	18 09	18 32	18 58	19 20 57	6 49 59	
13	13	33.6	47.1	178	55.7	-13 57.2	85	10 S	17 53	16	42	10 61	7 00 56	
14	28	33.5	46.7	193	20.1	48.6	86	20	36	18 00	27	19 00 64	12 52	
15	43	33.4	46.4	207	44.6	40.0	86	30	17	17 43	12	18 48 68	25 49	
16	58	33.4	46.0	222	09.1	31.2	88	35	17 05	33	18 04	41 70	33 47	
17	73	33.3	+21 45.6	236	33.6	-13 22.4	88	40	16 52	17 22	17 56	18 33 73	7 41 45	
18	88	33.2	+21 45.3	250	58.2	-13 13.4	90	45	16 37	17 10	17 47	18 24 76	7 52 41	
19	103	33.1	44.9	265	22.9	-13 04.4	90	50	18	16 56	37	13 80	8 04 38	
20	118	33.1	44.5	279	47.6	-12 55.3	91	52	10	49	32	08 81	10 36	
21	133	33.0	44.2	294	12.4	46.1	92	54	16 00	42	27	18 02 84	16 35	
22	148	32.9	43.8	308	37.2	36.8	93	56	15 48	34	22	17 56 86	23 32	
23	163	32.9	43.4	323	02.1	27.4	94	58	36	25	16	49 88	30 31	
24	178	32.8	+21 43.0	337	27.1	-12 17.9	95	60 S	15 20	16 15	17 09	17 40 92	8 39 28	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 36 ^m 0		Mag: -3.8 PMG: 10 ^h 08 ^m			Mag: +0.2 PMG: 18 ^h 01 ^m			Mag: -1.8 PMG: 12 ^h 41 ^m			Mag: +0.4 PMG: 19 ^h 33 ^m		
	hG ♈	Dec		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	290	48.0	208 04.3	+22 19.8	89 17.5	-9 48.6	169 19.8	+20 40.6	65 53.6	-14 36.7				
1	305	50.5	223 03.5	20.1	104 18.9	49.1	184 21.7	40.5	80 56.1	36.7				
2	320	53.0	238 02.7	20.3	119 20.3	49.5	199 23.5	40.4	95 58.6	36.7				
3	335	55.4	253 02.0	20.6	134 21.7	50.0	214 25.4	40.3	111 01.1	36.7				
4	350	57.9	268 01.2	20.9	149 23.0	50.5	229 27.3	40.2	126 03.6	36.7				
5	6	00.3	283 00.4	+22 21.1	164 24.4	-9 50.9	244 29.2	+20 40.1	141 06.1	-14 36.7				
6	21	02.8	297 59.7	+22 21.4	179 25.8	-9 51.4	259 31.1	+20 40.0	156 08.6	-14 36.7				
7	36	05.3	312 58.9	21.6	194 27.2	51.9	274 33.0	39.9	171 11.1	36.7				
8	51	07.7	327 58.1	21.9	209 28.6	52.4	289 34.9	39.7	186 13.6	36.7				
9	66	10.2	342 57.3	22.1	224 30.0	52.8	304 36.7	39.6	201 16.1	36.7				
10	81	12.7	357 56.6	22.4	239 31.4	53.3	319 38.6	39.5	216 18.6	36.7				
11	96	15.1	12 55.8	+22 22.6	254 32.7	-9 53.8	334 40.5	+20 39.4	231 21.1	-14 36.7				
12	111	17.6	27 55.0	+22 22.8	269 34.1	-9 54.2	349 42.4	+20 39.3	246 23.5	-14 36.7				
13	126	20.1	42 54.2	23.1	284 35.5	54.7	4 44.3	39.2	261 26.0	36.7				
14	141	22.5	57 53.4	23.3	299 36.9	55.2	19 46.2	39.1	276 28.5	36.7				
15	156	25.0	72 52.7	23.6	314 38.3	55.7	34 48.0	39.0	291 31.0	36.7				
16	171	27.5	87 51.9	23.8	329 39.6	56.1	49 49.9	38.9	306 33.5	36.7				
17	186	29.9	102 51.1	+22 24.1	344 41.0	-9 56.6	64 51.8	+20 38.7	321 36.0	-14 36.7				
18	201	32.4	117 50.3	+22 24.3	359 42.4	-9 57.1	79 53.7	+20 38.6	336 38.5	-14 36.7				
19	216	34.8	132 49.6	24.5	14 43.8	57.6	94 55.6	38.5	351 41.0	36.7				
20	231	37.3	147 48.8	24.8	29 45.2	58.0	109 57.5	38.4	6 43.5	36.7				
21	246	39.8	162 48.0	25.0	44 46.5	58.5	124 59.4	38.3	21 46.0	36.7				
22	261	42.2	177 47.2	25.2	59 47.9	59.0	140 01.2	38.2	36 48.5	36.8				
23	276	44.7	192 46.5	25.5	74 49.3	59.4	155 03.1	38.1	51 51.0	36.8				
24	291	47.2	207 45.7	+22 25.7	89 50.7	-9 59.9	170 05.0	+20 38.0	66 53.5	-14 36.8				
Dif	—		-8	+2	+14	-5	+19	-1	+25	0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 9				Edad: 16 ^d 7 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 0 20 ^h : 60 ^m 9 PMG: 1 ^h 34 ^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				
0	178	32.8	+21	43.0	337	27.1	-12	17.9	60 N	** *	1	41	3	01	21	22	20	6	23	91		
1	193	32.7		42.7	351	52.1	-12	08.4	58	** *	2	13		19		17	23		30	88		
2	208	32.6		42.3	6	17.1	60	-11	58.8	56	0	37		37		12	26		36	86		
3	223	32.6		41.9	20	42.2	61		49.1	54	1	33	2	55	46	08	28		41	84		
4	238	32.5		41.5	35	07.4	62		39.3	52	2	03	3	11	3	57	05	30		46	82	
5	253	32.4	+21	41.2	49	32.6	62	-11	29.4	50	2	25	3	24	4	06	21	02	31	6	50	80
6	268	32.4	+21	40.8	63	57.9	63	-11	19.5	45	3	03	3	50	4	27	20	54	36	7	00	76
7	283	32.3		40.4	78	23.3	64	-11	09.5	40		31	4	11	43	49	38		08	72		
8	298	32.2		40.0	92	48.7	64	-10	59.4	35	3	52		28	4	57	43	42		14	70	
9	313	32.2		39.6	107	14.2	65		49.3	30	4	09	4	42	5	08	39	43		20	68	
10	328	32.1		39.3	121	39.7	65		39.1	20		36	5	05	29	31	48		31	63		
11	343	32.0	+21	38.9	136	05.3	66	-10	28.8	10 N	4	57	5	23	5	46	20	24	51	7	39	60
12	358	32.0	+21	38.5	150	30.9	66	-10	18.4	0	5	14	5	40	6	02	20	17	55	7	48	56
13	13	31.9		38.1	164	56.6	67	-10	08.0	10 S		30	5	56	18		11	58		7	56	53
14	28	31.8		37.7	179	22.4	68	-9	57.6	20		44	6	12	35	20	04	62		8	04	50
15	43	31.8		37.3	193	48.2	68		47.0	30	5	59	29	6	55	19	56	67		14	45	
16	58	31.7		37.0	208	14.1	69		36.4	35	6	07	38	7	06	51	69		20	43		
17	73	31.6	+21	36.6	222	40.1	70	-9	25.8	40	6	15	6	49	7	19	19	46	72	8	26	40
18	88	31.6	+21	36.2	237	06.1	70	-9	15.1	45	6	24	7	01	7	34	19	40	75	8	33	38
19	103	31.5		35.8	251	32.1	70	-9	04.3	50		35	15	7	53	33	79		42	34		
20	118	31.4		35.4	265	58.3	72	-8	53.5	52		39	22	8	01	29	81		46	32		
21	133	31.4		35.0	280	24.4	71		42.7	54		44	29	11		26	83		51	29		
22	148	31.3		34.6	294	50.7	73		31.8	56		49	37	22		22	85		8	55	28	
23	163	31.2		34.3	309	17.0	73		20.8	58	6	55	46	35		17	88		9	01	25	
24	178	31.2	+21	33.9	323	43.4	74	-8	09.8	60 S	7	02	7	56	8	50	19	12	91	9	07	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 32 ^m 1		Mag: -3.8 PMG: 10 ^h 09 ^m		Mag: +0.2 PMG: 17 ^h 59 ^m		Mag: -1.8 PMG: 12 ^h 38 ^m		Mag: +0.4 PMG: 19 ^h 29 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	291	47.2	207	45.7	+22	25.7	89	50.7	-9	59.9	170	05.0	+20	38.0	66	53.5	-14	36.8
1	306	49.6	222	44.9		25.9	104	52.1	-10	00.4	185	06.9		37.8	81	56.0		36.8
2	321	52.1	237	44.1		26.2	119	53.4		00.9	200	08.8		37.7	96	58.5		36.8
3	336	54.6	252	43.3		26.4	134	54.8		01.3	215	10.7		37.6	112	01.0		36.8
4	351	57.0	267	42.6		26.6	149	56.2		01.8	230	12.6		37.5	127	03.5		36.8
5	6	59.5	282	41.8	+22	26.9	164	57.6	-10	02.3	245	14.4	+20	37.4	142	06.0	-14	36.8
6	22	02.0	297	41.0	+22	27.1	179	58.9	-10	02.8	260	16.3	+20	37.3	157	08.5	-14	36.8
7	37	04.4	312	40.2		27.3	195	00.3		03.2	275	18.2		37.2	172	11.0		36.8
8	52	06.9	327	39.4		27.5	210	01.7		03.7	290	20.1		37.1	187	13.4		36.8
9	67	09.3	342	38.7		27.8	225	03.0		04.2	305	22.0		36.9	202	15.9		36.8
10	82	11.8	357	37.9		28.0	240	04.4		04.7	320	23.9		36.8	217	18.4		36.8
11	97	14.3	12	37.1	+22	28.2	255	05.8	-10	05.1	335	25.8	+20	36.7	232	20.9	-14	36.8
12	112	16.7	27	36.3	+22	28.4	270	07.2	-10	05.6	350	27.6	+20	36.6	247	23.4	-14	36.8
13	127	19.2	42	35.5		28.6	285	08.5		06.1	5	29.5		36.5	262	25.9		36.8
14	142	21.7	57	34.7		28.9	300	09.9		06.6	20	31.4		36.4	277	28.4		36.8
15	157	24.1	72	34.0		29.1	315	11.3		07.0	35	33.3		36.3	292	30.9		36.8
16	172	26.6	87	33.2		29.3	330	12.6		07.5	50	35.2		36.2	307	33.4		36.8
17	187	29.1	102	32.4	+22	29.5	345	14.0	-10	08.0	65	37.1	+20	36.0	322	35.9	-14	36.8
18	202	31.5	117	31.6	+22	29.7	0	15.4	-10	08.5	80	38.9	+20	35.9	337	38.4	-14	36.8
19	217	34.0	132	30.8		29.9	15	16.7		08.9	95	40.8		35.8	352	40.9		36.8
20	232	36.4	147	30.0		30.1	30	18.1		09.4	110	42.7		35.7	7	43.4		36.8
21	247	38.9	162	29.3		30.3	45	19.5		09.9	125	44.6		35.6	22	45.8		36.8
22	262	41.4	177	28.5		30.6	60	20.8		10.4	140	46.5		35.5	37	48.3		36.8
23	277	43.8	192	27.7		30.8	75	22.2		10.8	155	48.4		35.4	52	50.8		36.8
24	292	46.3	207	26.9	+22	31.0	90	23.6	-10	11.3	170	50.3	+20	35.2	67	53.3	-14	36.8
Dif	—		-8 +2		+14 -5		+19 -1		+25 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 0				Edad: 17 ^d 7 PHE { 4 ^h : 60:7 12 ^h : 60:5 20 ^h : 60:3 SD: 16:6 PMG: 2 ^h 31 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	178	31.2	+21	33.9	323	43.4	-8	09.8	60 N	21 07	22 25	** **	21 42	19	7 54	90		
1	193	31.1		33.5	338	09.8	74	-7 58.8	58	20 50	21 54	** **	40	21	7 58	87		
2	208	31.0		33.1	352	36.3	75	47.7	56	36	32	23 21	38	23	8 02	84		
3	223	31.0		32.7	7	02.8	75	36.5	54	24	21 14	22 34	36	26	05	82		
4	238	30.9		32.3	21	29.4	76	25.4	52	13	20 59	22 05	35	27	08	80		
5	253	30.9	+21	31.9	35	56.1	77	-7 14.2	50	20 04	20 46	21 44	21 33	29	8 10	79		
6	268	30.8	+21	31.5	50	22.8	77	-7 02.9	45	19 44	20 20	21 06	21 30	33	8 16	74		
7	283	30.7		31.1	64	49.5	77	-6 51.6	40	28	20 00	20 40	27	36	20	71		
8	298	30.7		30.7	79	16.4	79	40.3	35	14	19 43	19	25	38	24	69		
9	313	30.6		30.3	93	43.2	78	29.0	30	19 03	30	20 02	22	42	28	65		
10	328	30.5		29.9	108	10.2	80	17.6	20	18 43	19 07	19 35	19	45	34	61		
11	343	30.5	+21	29.5	122	37.2	80	-6 06.2	10 N	18 26	18 48	19 15	21 15	50	8 39	57		
12	358	30.4	+21	29.1	137	04.2	80	-5 54.7	0	18 10	18 32	18 58	21 12	53	8 44	54		
13	13	30.4		28.8	151	31.4	82	43.2	10 S	17 54	16	42	09	57	49	50		
14	28	30.3		28.4	165	58.5	81	31.7	20	37	18 01	28	06	60	54	46		
15	43	30.2		28.0	180	25.7	82	20.2	30	18	17 44	13	03	64	8 59	43		
16	58	30.2		27.6	194	53.0	83	-5 08.7	35	17 07	34	18 05	21 00	67	9 03	40		
17	73	30.1	+21	27.2	209	20.3	83	-4 57.1	40	16 54	17 24	17 57	20 58	70	9 06	37		
18	88	30.0	+21	26.8	223	47.7	84	-4 45.5	45	16 39	17 12	17 48	20 55	73	9 11	33		
19	103	30.0		26.4	238	15.1	84	33.9	50	21	16 58	38	52	77	16	30		
20	118	29.9		26.0	252	42.6	85	22.3	52	12	51	34	50	79	18	28		
21	133	29.9		25.6	267	10.2	86	-4 10.7	54	16 02	44	29	49	81	20	27		
22	148	29.8		25.1	281	37.8	86	-3 59.0	56	15 51	36	24	47	83	23	25		
23	163	29.7		24.7	296	05.4	86	47.4	58	39	27	18	45	86	26	22		
24	178	29.7	+21	24.3	310	33.1	87	-3 35.7	60 S	15 24	16 17	17 12	20 43	88	9 30	19		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 28 ^m 2		Mag: -3.8 PMG: 10 ^h 11 ^m				Mag: +0.2 PMG: 17 ^h 57 ^m				Mag: -1.8 PMG: 12 ^h 35 ^m				Mag: +0.4 PMG: 19 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	292	46.3	207	26.9	+22	31.0	90	23.6	-10	11.3	170	50.3	+20	35.2	67	53.3	-14	36.8
1	307	48.8	222	26.1		31.2	105	24.9		11.8	185	52.1		35.1	82	55.8		36.8
2	322	51.2	237	25.3		31.4	120	26.3		12.3	200	54.0		35.0	97	58.3		36.8
3	337	53.7	252	24.5		31.6	135	27.6		12.7	215	55.9		34.9	113	00.8		36.8
4	352	56.2	267	23.8		31.8	150	29.0		13.2	230	57.8		34.8	128	03.3		36.8
5	7	58.6	282	23.0	+22	32.0	165	30.4	-10	13.7	245	59.7	+20	34.7	143	05.8	-14	36.8
6	23	01.1	297	22.2	+22	32.2	180	31.7	-10	14.2	261	01.6	+20	34.6	158	08.3	-14	36.9
7	38	03.6	312	21.4		32.4	195	33.1		14.7	276	03.5		34.5	173	10.8		36.9
8	53	06.0	327	20.6		32.6	210	34.4		15.1	291	05.3		34.3	188	13.2		36.9
9	68	08.5	342	19.8		32.8	225	35.8		15.6	306	07.2		34.2	203	15.7		36.9
10	83	10.9	357	19.0		33.0	240	37.2		16.1	321	09.1		34.1	218	18.2		36.9
11	98	13.4	12	18.2	+22	33.2	255	38.5	-10	16.6	336	11.0	+20	34.0	233	20.7	-14	36.9
12	113	15.9	27	17.5	+22	33.4	270	39.9	-10	17.0	351	12.9	+20	33.9	248	23.2	-14	36.9
13	128	18.3	42	16.7		33.6	285	41.2		17.5	6	14.8		33.8	263	25.7		36.9
14	143	20.8	57	15.9		33.7	300	42.6		18.0	21	16.6		33.7	278	28.2		36.9
15	158	23.3	72	15.1		33.9	315	43.9		18.5	36	18.5		33.5	293	30.7		36.9
16	173	25.7	87	14.3		34.1	330	45.3		18.9	51	20.4		33.4	308	33.2		36.9
17	188	28.2	102	13.5	+22	34.3	345	46.7	-10	19.4	66	22.3	+20	33.3	323	35.6	-14	36.9
18	203	30.7	117	12.7	+22	34.5	0	48.0	-10	19.9	81	24.2	+20	33.2	338	38.1	-14	36.9
19	218	33.1	132	11.9		34.7	15	49.4		20.4	96	26.1		33.1	353	40.6		36.9
20	233	35.6	147	11.1		34.9	30	50.7		20.9	111	28.0		33.0	8	43.1		36.9
21	248	38.1	162	10.4		35.1	45	52.1		21.3	126	29.8		32.9	23	45.6		36.9
22	263	40.5	177	09.6		35.2	60	53.4		21.8	141	31.7		32.7	38	48.1		36.9
23	278	43.0	192	08.8		35.4	75	54.8		22.3	156	33.6		32.6	53	50.6		36.9
24	293	45.4	207	08.0	+22	35.6	90	56.1	-10	22.8	171	35.5	+20	32.5	68	53.0	-14	36.9
Dif	—		-8		+2		+14		-5		+19		-1		+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 7	PHE { 4 ^h : 60 ^m 1 12 ^h : 59 ^m 9 20 ^h : 59 ^m 6										
	PMG: 12 ^h 06 ^m 1					SD: 16 ^h 4		R°: 53 ^m			PMG: 3 ^h 25 ^m		R°: 53 ^m		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	h	m	h	m	h	m	m
0	178	29.7	+21 24.3	310	33.1	-3 35.7	60 N	*** **	1 48	3 05	22 01 18	9 24 88			
1	193	29.6	23.9	325	00.8	87 24.0	58	*** **	2 18	22	01 21	25 85			
2	208	29.6	23.5	339	28.6	88 12.4	56	0 52	40	36	01 23	26 82			
3	223	29.5	23.1	353	56.5	89 -3 00.7	54	1 39	2 58	48	02 25	27 80			
4	238	29.4	22.7	8	24.3	88 -2 49.0	52	2 07	3 14	3 59	02 27	28 78			
5	253	29.4	+21 22.3	22	52.3	90 -2 37.2	50	2 28	3 26	4 08	22 02 29	9 29 76			
6	268	29.3	+21 21.9	37	20.3	90 -2 25.5	45	3 06	3 53	4 28	22 03 32	9 30 72			
7	283	29.3	21.5	51	48.3	90 13.8	40	33	4 13	44	03 35	31 69			
8	298	29.2	21.1	66	16.4	91 -2 02.1	35	3 53	29	4 58	03 38	33 66			
9	313	29.2	20.7	80	44.5	91 -1 50.4	30	4 10	4 43	5 10	04 40	33 64			
10	328	29.1	20.3	95	12.6	91 38.7	20	37	5 05	29	04 44	35 59			
11	343	29.0	+21 19.8	109	40.8	92 -1 27.0	10 N	4 57	5 24	5 47	22 05 48	9 36 56			
12	358	29.0	+21 19.4	124	09.1	93 -1 15.3	0	5 14	5 40	6 02	22 05 51	9 38 52			
13	13	28.9	19.0	138	37.4	93 -1 03.6	10 S	30	5 56	18	06 54	39 48			
14	28	28.9	18.6	153	05.7	93 -0 51.9	20	44	6 11	35	06 59	40 45			
15	43	28.8	18.2	167	34.1	94 40.2	30	5 59	28	6 54	07 62	42 40			
16	58	28.8	17.8	182	02.5	94 28.5	35	6 06	38	7 05	07 65	43 38			
17	73	28.7	+21 17.4	196	31.0	95 -0 16.9	40	6 14	6 48	7 18	22 08 68	9 43 36			
18	88	28.6	+21 17.0	210	59.5	95 -0 05.2	45	6 23	7 00	7 33	22 08 71	9 44 33			
19	103	28.6	16.5	225	28.0	95 +0 06.4	50	33	14	51	09 75	46 28			
20	118	28.5	16.1	239	56.6	96 18.0	52	38	20	7 59	09 77	46 27			
21	133	28.5	15.7	254	25.2	96 29.6	54	43	27	8 09	10 78	47 25			
22	148	28.4	15.3	268	53.9	97 41.2	56	48	35	20	10 81	48 23			
23	163	28.4	14.9	283	22.6	97 +0 52.8	58	53	44	32	11 82	48 21			
24	178	28.3	+21 14.4	297	51.3	97 +1 04.3	60 S	6 59	7 54	8 47	22 11 86	9 49 19			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 4 ^h 24 ^m 2		Mag: -3.8 PMG: 10 ^h 12 ^m		Mag: +0.2 PMG: 17 ^h 55 ^m		Mag: -1.8 PMG: 12 ^h 32 ^m		Mag: +0.5 PMG: 19 ^h 21 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	293	45.4	207	08.0	+22 35.6	90 56.1	-10 22.8	171 35.5	+20 32.5	68 53.0	-14 36.9		
1	308	47.9	222	07.2	35.8	105 57.5	23.3	186 37.4	32.4	83 55.5	36.9		
2	323	50.4	237	06.4	36.0	120 58.8	23.7	201 39.3	32.3	98 58.0	36.9		
3	338	52.8	252	05.6	36.1	136 00.2	24.2	216 41.1	32.2	114 00.5	36.9		
4	353	55.3	267	04.8	36.3	151 01.5	24.7	231 43.0	32.1	129 03.0	37.0		
5	8	57.8	282	04.0	+22 36.5	166 02.9	-10 25.2	246 44.9	+20 32.0	144 05.5	-14 37.0		
6	24	00.2	297	03.2	+22 36.7	181 04.2	-10 25.6	261 46.8	+20 31.8	159 08.0	-14 37.0		
7	39	02.7	312	02.4	36.8	196 05.6	26.1	276 48.7	31.7	174 10.5	37.0		
8	54	05.2	327	01.7	37.0	211 06.9	26.6	291 50.6	31.6	189 12.9	37.0		
9	69	07.6	342	00.9	37.2	226 08.3	27.1	306 52.5	31.5	204 15.4	37.0		
10	84	10.1	357	00.1	37.3	241 09.6	27.6	321 54.3	31.4	219 17.9	37.0		
11	99	12.5	11	59.3	+22 37.5	256 10.9	-10 28.0	336 56.2	+20 31.3	234 20.4	-14 37.0		
12	114	15.0	26	58.5	+22 37.7	271 12.3	-10 28.5	351 58.1	+20 31.1	249 22.9	-14 37.0		
13	129	17.5	41	57.7	37.8	286 13.6	29.0	7 00.0	31.0	264 25.4	37.0		
14	144	19.9	56	56.9	38.0	301 15.0	29.5	22 01.9	30.9	279 27.8	37.0		
15	159	22.4	71	56.1	38.2	316 16.3	30.0	37 03.8	30.8	294 30.3	37.0		
16	174	24.9	86	55.3	38.3	331 17.7	30.4	52 05.7	30.7	309 32.8	37.0		
17	189	27.3	101	54.5	+22 38.5	346 19.0	-10 30.9	67 07.5	+20 30.6	324 35.3	-14 37.0		
18	204	29.8	116	53.7	+22 38.7	1 20.3	-10 31.4	82 09.4	+20 30.5	339 37.8	-14 37.0		
19	219	32.3	131	52.9	38.8	16 21.7	31.9	97 11.3	30.3	354 40.3	37.0		
20	234	34.7	146	52.1	39.0	31 23.0	32.4	112 13.2	30.2	9 42.8	37.0		
21	249	37.2	161	51.3	39.1	46 24.4	32.8	127 15.1	30.1	24 45.2	37.0		
22	264	39.7	176	50.5	39.3	61 25.7	33.3	142 17.0	30.0	39 47.7	37.0		
23	279	42.1	191	49.7	39.4	76 27.0	33.8	157 18.8	29.9	54 50.2	37.1		
24	294	44.6	206	48.9	+22 39.6	91 28.4	-10 34.3	172 20.7	+20 29.8	69 52.7	-14 37.1		
Dif	—		-8		+2	+13		+19		-1		+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 19 ^d 7 PHE	SD: 16 ^h 2					Civil	Náutico	Hora	R°	Hora	R°		
	PMG: 12 ^h 06 ^m 2					PMG: 4 ^h 18 ^m												
	hG ☉	Dec			hG ☾	Dif												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m		
0	178	28.3	+21	14.4	297	51.3	+1	04.3	60 N	21 04	22 19	** **	22 19 19	10 52 84				
1	193	28.3		14.0	312	20.1 ⁹⁸		15.9 ¹¹⁶	58	20 47	21 50	** **	22 22	50 82				
2	208	28.2		13.6	326	48.9 ⁹⁸		27.4 ¹¹⁵	56	34	28	23 10	24 24	48 80				
3	223	28.2		13.2	341	17.7 ⁹⁸		38.9 ¹¹⁵	54	22	21 11	22 28	27 25	47 77				
4	238	28.1		12.8	355	46.6 ⁹⁹	+1	50.3 ¹¹⁴	52	11	20 56	22 01	29 27	46 75				
5	253	28.0	+21	12.3	10	15.5 ⁹⁹	+2	01.8 ¹¹⁵	50	20 02	20 44	21 41	22 31 29	10 45 73				
6	268	28.0	+21	11.9	24	44.4 ⁹⁹	+2	13.2 ¹¹⁴	45	19 42	20 18	21 04	22 35 32	10 42 70				
7	283	27.9		11.5	39	13.3 ⁹⁹		24.6 ¹¹⁴	40	27	19 58	20 38	38 36	40 67				
8	298	27.9		11.1	53	42.3 ¹⁰⁰		35.9 ¹¹³	35	13	42	18	41 38	39 64				
9	313	27.8		10.6	68	11.4 ¹⁰¹		47.3 ¹¹⁴	30	19 02	29	20 01	44 40	37 62				
10	328	27.8		10.2	82	40.4 ¹⁰⁰	+2	58.6 ¹¹³	20	18 42	19 06	19 35	48 44	34 58				
11	343	27.7	+21	09.8	97	09.5 ¹⁰¹	+3	09.9 ¹¹³	10 N	18 25	18 48	19 15	22 53 47	10 32 54				
12	358	27.7	+21	09.4	111	38.6 ¹⁰¹	+3	21.1 ¹¹²	0	18 10	18 32	18 58	22 56 51	10 30 50				
13	13	27.6		08.9	126	07.8 ¹⁰²		32.3 ¹¹²	10 S	17 54	17	43	23 00 54	27 48				
14	28	27.6		08.5	140	36.9 ¹⁰¹		43.5 ¹¹²	20	38	18 01	28	05 56	25 44				
15	43	27.5		08.1	155	06.1 ¹⁰²	+3	54.6 ¹¹¹	30	19	17 45	14	09 61	22 40				
16	58	27.5		07.6	169	35.3 ¹⁰²	+4	05.7 ¹¹¹	35	17 08	35	18 07	12 63	21 38				
17	73	27.4	+21	07.2	184	04.6 ¹⁰³	+4	16.8 ¹¹¹	40	16 55	17 25	17 59	23 16 65	10 19 35				
18	88	27.4	+21	06.8	198	33.9 ¹⁰³	+4	27.8 ¹¹⁰	45	16 41	17 14	17 50	23 19 69	10 17 32				
19	103	27.3		06.4	213	03.1 ¹⁰²		38.8 ¹¹⁰	50	23	17 00	40	24 72	14 29				
20	118	27.3		05.9	227	32.5 ¹⁰⁴	+4	49.8 ¹¹⁰	52	14	16 53	36	26 74	13 27				
21	133	27.2		05.5	242	01.8 ¹⁰³	+5	00.7 ¹⁰⁹	54	16 05	46	31	28 76	12 25				
22	148	27.2		05.1	256	31.2 ¹⁰⁴		11.5 ¹⁰⁸	56	15 54	39	26	31 77	11 23				
23	163	27.1		04.6	271	00.6 ¹⁰⁴		22.4 ¹⁰⁹	58	42	30	21	33 80	09 21				
24	178	27.1	+21	04.2	285	30.0 ¹⁰⁴	+5	33.1 ¹⁰⁷	60 S	15 28	16 20	17 15	23 37 82	10 08 18				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 20 ^m 3		Mag: -3.8 PMG: 10 ^h 13 ^m				Mag: +0.2 PMG: 17 ^h 53 ^m				Mag: -1.8 PMG: 12 ^h 29 ^m				Mag: +0.5 PMG: 19 ^h 17 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	44.6	206	48.9	+22	39.6	91	28.4	-10	34.3	172	20.7	+20	29.8	69	52.7	-14	37.1
1	309	47.0	221	48.1		39.7	106	29.7		34.8	187	22.6		29.7	84	55.2		37.1
2	324	49.5	236	47.4		39.9	121	31.1		35.2	202	24.5		29.5	99	57.6		37.1
3	339	52.0	251	46.6		40.0	136	32.4		35.7	217	26.4		29.4	115	00.1		37.1
4	354	54.4	266	45.8		40.2	151	33.7		36.2	232	28.3		29.3	130	02.6		37.1
5	9	56.9	281	45.0	+22	40.3	166	35.1	-10	36.7	247	30.2	+20	29.2	145	05.1	-14	37.1
6	24	59.4	296	44.2	+22	40.5	181	36.4	-10	37.2	262	32.0	+20	29.1	160	07.6	-14	37.1
7	40	01.8	311	43.4		40.6	196	37.7		37.6	277	33.9		29.0	175	10.1		37.1
8	55	04.3	326	42.6		40.8	211	39.1		38.1	292	35.8		28.9	190	12.5		37.1
9	70	06.8	341	41.8		40.9	226	40.4		38.6	307	37.7		28.7	205	15.0		37.1
10	85	09.2	356	41.0		41.1	241	41.7		39.1	322	39.6		28.6	220	17.5		37.1
11	100	11.7	11	40.2	+22	41.2	256	43.1	-10	39.6	337	41.5	+20	28.5	235	20.0	-14	37.1
12	115	14.2	26	39.4	+22	41.4	271	44.4	-10	40.1	352	43.3	+20	28.4	250	22.5	-14	37.1
13	130	16.6	41	38.6		41.5	286	45.7		40.5	7	45.2		28.3	265	24.9		37.1
14	145	19.1	56	37.8		41.6	301	47.1		41.0	22	47.1		28.2	280	27.4		37.1
15	160	21.5	71	37.0		41.8	316	48.4		41.5	37	49.0		28.0	295	29.9		37.2
16	175	24.0	86	36.2		41.9	331	49.7		42.0	52	50.9		27.9	310	32.4		37.2
17	190	26.5	101	35.4	+22	42.0	346	51.1	-10	42.5	67	52.8	+20	27.8	325	34.9	-14	37.2
18	205	28.9	116	34.6	+22	42.2	1	52.4	-10	42.9	82	54.7	+20	27.7	340	37.3	-14	37.2
19	220	31.4	131	33.8		42.3	16	53.7		43.4	97	56.5		27.6	355	39.8		37.2
20	235	33.9	146	33.0		42.4	31	55.0		43.9	112	58.4		27.5	10	42.3		37.2
21	250	36.3	161	32.2		42.6	46	56.4		44.4	128	00.3		27.4	25	44.8		37.2
22	265	38.8	176	31.4		42.7	61	57.7		44.9	143	02.2		27.2	40	47.3		37.2
23	280	41.3	191	30.6		42.8	76	59.0		45.4	158	04.1		27.1	55	49.7		37.2
24	295	43.7	206	29.8	+22	43.0	92	00.3	-10	45.8	173	06.0	+20	27.0	70	52.2	-14	37.2
Dif	—		-8 +1				+13 -5				+19 -1				+25 0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 7	PHE { 4 ^h : 58 ^m /5 12 ^h : 58 ^m /2 20 ^h : 57 ^m /9										
	PMG: 12 ^h 06 ^m 2					SD: 16 ^d 0		PMG: 5 ^h 08 ^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 m	m	h m m	m
0	178	27.1	+21 04.2	285	30.0	+5 33.1		60 N	** ** *	1 54	3 09	22 38 22		12 16 81	
1	193	27.0	03.8	299	59.4 ¹⁰⁴	43.9 ¹⁰⁸		58	** ** *	2 23	25	44 24		12 78	
2	208	27.0	03.3	314	28.8 ¹⁰⁴	+5 54.6 ¹⁰⁷		56	1 03	2 44	39	48 26		08 76	
3	223	26.9	02.9	328	58.3 ¹⁰⁵	+6 05.2 ¹⁰⁶		54	1 45	3 02	3 51	52 28		04 74	
4	238	26.9	02.4	343	27.8 ¹⁰⁵	15.8 ¹⁰⁶		52	2 11	17	4 02	22 56 30	12 01 72		
5	253	26.8	+21 02.0	357	57.3 ¹⁰⁵	+6 26.4 ¹⁰⁶		50	2 32	3 29	4 11	23 00 31	11 58 71		
6	268	26.8	+21 01.6	12	26.8 ¹⁰⁵	+6 36.9 ¹⁰⁵		45	3 09	3 55	4 30	23 07 34	11 52 67		
7	283	26.7	01.1	26	56.4 ¹⁰⁶	47.4 ¹⁰⁵		40	35	4 14	46	14 36	47 64		
8	298	26.7	00.7	41	25.9 ¹⁰⁵	+6 57.8 ¹⁰⁴		35	3 55	30	4 59	19 39	43 61		
9	313	26.6	+21 00.2	55	55.5 ¹⁰⁶	+7 08.1 ¹⁰³		30	4 12	4 44	5 11	24 41	39 59		
10	328	26.6	+20 59.8	70	25.1 ¹⁰⁶	18.4 ¹⁰³		20	38	5 06	30	32 45	32 56		
11	343	26.5	+20 59.4	84	54.7 ¹⁰⁶	+7 28.7 ¹⁰³		10 N	4 58	5 24	5 47	23 40 47	11 26 53		
12	358	26.5	+20 58.9	99	24.3 ¹⁰⁶	+7 38.9 ¹⁰²		0	5 15	5 40	6 03	23 47 50	11 20 51		
13	13	26.5	58.5	113	54.0 ¹⁰⁷	49.0 ¹⁰¹		10 S	30	5 56	18	23 54 52	15 47		
14	28	26.4	58.0	128	23.6 ¹⁰⁶	+7 59.1 ¹⁰¹		20	44	6 11	35	** ** *	09 44		
15	43	26.4	57.6	142	53.3 ¹⁰⁷	+8 09.2 ¹⁰¹		30	5 58	27	6 53	** ** *	11 02 41		
16	58	26.3	57.2	157	22.9 ¹⁰⁶	19.1 ⁹⁹		35	6 06	37	7 04	** ** *	10 59 38		
17	73	26.3	+20 56.7	171	52.6 ¹⁰⁷	+8 29.1 ¹⁰⁰		40	6 13	6 47	7 17	** ** *	10 54 36		
18	88	26.2	+20 56.3	186	22.3 ¹⁰⁷	+8 38.9 ⁹⁸		45	6 22	6 58	7 31	** ** *	10 49 33		
19	103	26.2	55.8	200	52.0 ¹⁰⁷	48.7 ⁹⁸		50	32	7 12	49	** ** *	43 30		
20	118	26.1	55.4	215	21.7 ¹⁰⁷	+8 58.5 ⁹⁸		52	36	18	7 57	** ** *	40 29		
21	133	26.1	54.9	229	51.5 ¹⁰⁸	+9 08.2 ⁹⁷		54	41	25	8 07	** ** *	37 27		
22	148	26.0	54.5	244	21.2 ¹⁰⁷	17.8 ⁹⁶		56	46	33	17	** ** *	34 25		
23	163	26.0	54.0	258	51.0 ¹⁰⁸	27.4 ⁹⁶		58	51	41	29	** ** *	30 23		
24	178	26.0	+20 53.6	273	20.7 ¹⁰⁷	+9 36.9 ⁹⁵		60 S	6 57	7 51	8 44	** ** *	10 26 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 16 ^m 4		Mag: -3.8 PMG: 10 ^h 15 ^m		Mag: +0.3 PMG: 17 ^h 50 ^m		Mag: -1.8 PMG: 12 ^h 26 ^m		Mag: +0.5 PMG: 19 ^h 13 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	295	43.7	206	29.8	+22 43.0	92 00.3	-10 45.8	173 06.0	+20 27.0	70 52.2
1	310	46.2	221	29.0	43.1	107 01.7	46.3	188 07.9	26.9	85 54.7
2	325	48.6	236	28.2	43.2	122 03.0	46.8	203 09.7	26.8	100 57.2
3	340	51.1	251	27.4	43.3	137 04.3	47.3	218 11.6	26.7	115 59.7
4	355	53.6	266	26.6	43.5	152 05.6	47.8	233 13.5	26.5	131 02.1
5	10	56.0	281	25.8	+22 43.6	167 07.0	-10 48.3	248 15.4	+20 26.4	146 04.6
6	25	58.5	296	25.0	+22 43.7	182 08.3	-10 48.7	263 17.3	+20 26.3	161 07.1
7	41	01.0	311	24.2	43.8	197 09.6	49.2	278 19.2	26.2	176 09.6
8	56	03.4	326	23.4	43.9	212 10.9	49.7	293 21.0	26.1	191 12.0
9	71	05.9	341	22.6	44.0	227 12.3	50.2	308 22.9	26.0	206 14.5
10	86	08.4	356	21.8	44.2	242 13.6	50.7	323 24.8	25.8	221 17.0
11	101	10.8	11	21.0	+22 44.3	257 14.9	-10 51.2	338 26.7	+20 25.7	236 19.5
12	116	13.3	26	20.2	+22 44.4	272 16.2	-10 51.6	353 28.6	+20 25.6	251 22.0
13	131	15.8	41	19.4	44.5	287 17.5	52.1	8 30.5	25.5	266 24.4
14	146	18.2	56	18.6	44.6	302 18.9	52.6	23 32.4	25.4	281 26.9
15	161	20.7	71	17.8	44.7	317 20.2	53.1	38 34.2	25.3	296 29.4
16	176	23.1	86	16.9	44.8	332 21.5	53.6	53 36.1	25.2	311 31.9
17	191	25.6	101	16.1	+22 44.9	347 22.8	-10 54.1	68 38.0	+20 25.0	326 34.3
18	206	28.1	116	15.3	+22 45.1	2 24.1	-10 54.5	83 39.9	+20 24.9	341 36.8
19	221	30.5	131	14.5	45.2	17 25.4	55.0	98 41.8	24.8	356 39.3
20	236	33.0	146	13.7	45.3	32 26.8	55.5	113 43.7	24.7	11 41.8
21	251	35.5	161	12.9	45.4	47 28.1	56.0	128 45.5	24.6	26 44.2
22	266	37.9	176	12.1	45.5	62 29.4	56.5	143 47.4	24.5	41 46.7
23	281	40.4	191	11.3	45.6	77 30.7	57.0	158 49.3	24.3	56 49.2
24	296	42.9	206	10.5	+22 45.7	92 32.0	-10 57.4	173 51.2	+20 24.2	71 51.7
Dif	—		-8 +1		+13 -5		+19 -1		+25 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 21 ^d 7	PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 1	SD: 15 ^h 7			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 06 ^m 3					PMG: 5 ^h 59 ^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	178	26.0	+20 53.6	273	20.7	+9 36.9	94	60 N	21 00	22 12	** **	23 00 26	13 37 76		
1	193	25.9	53.1	287	50.5 ¹⁰⁸	46.3	94	58	20 44	21 45	** **	08 28	30 74		
2	208	25.9	52.7	302	20.3 ¹⁰⁸	+9 55.7	94	56	31	25	23 00	14 30	24 72		
3	223	25.8	52.2	316	50.0 ¹⁰⁷	+10 05.0	93	54	19	21 08	22 22	20 32	18 71		
4	238	25.8	51.8	331	19.8 ¹⁰⁸	14.3	93	52	09	20 53	21 57	26 33	13 69		
5	253	25.7	+20 51.3	345	49.6 ¹⁰⁸	+10 23.4	91	50	20 00	20 41	21 38	23 31 34	13 09 67		
6	268	25.7	+20 50.9	0	19.4 ¹⁰⁸	+10 32.6	92	45	19 41	20 16	21 02	23 41 37	12 59 65		
7	283	25.7	50.4	14	49.2 ¹⁰⁸	41.6	90	40	25	19 57	20 36	50 40	51 62		
8	298	25.6	50.0	29	19.0 ¹⁰⁸	50.6	90	35	12	41	16	23 58 41	44 60		
9	313	25.6	49.5	43	48.9 ¹⁰⁹	+10 59.5	89	30	19 01	28	20 00	** * *	38 59		
10	328	25.5	49.0	58	18.7 ¹⁰⁸	+11 08.4	89	20	18 42	19 06	19 34	** * *	28 55		
11	343	25.5	+20 48.6	72	48.5 ¹⁰⁸	+11 17.2	88	10 N	18 25	18 48	19 14	** * *	12 19 52		
12	358	25.5	+20 48.1	87	18.4 ¹⁰⁹	+11 25.9	87	0	18 10	18 32	18 58	** * *	12 11 50		
13	13	25.4	47.7	101	48.2 ¹⁰⁸	34.5	86	10 S	17 55	17	43	** * *	12 02 48		
14	28	25.4	47.2	116	18.0 ¹⁰⁸	43.1	86	20	38	18 02	29	0 01 56	11 53 45		
15	43	25.3	46.8	130	47.9 ¹⁰⁹	+11 51.6	85	30	20	17 46	15	10 59	43 42		
16	58	25.3	46.3	145	17.7 ¹⁰⁸	+12 00.0	84	35	17 09	37	08	15 61	37 40		
17	73	25.3	+20 45.8	159	47.6 ¹⁰⁹	+12 08.4	84	40	16 57	17 27	18 00	0 21 63	11 30 38		
18	88	25.2	+20 45.4	174	17.4 ¹⁰⁸	+12 16.6	82	45	16 43	17 15	17 52	0 28 65	11 22 36		
19	103	25.2	44.9	188	47.3 ¹⁰⁹	24.9	83	50	25	17 02	42	36 69	13 33		
20	118	25.1	44.5	203	17.2 ¹⁰⁹	33.0	81	52	17	16 56	38	39 71	09 31		
21	133	25.1	44.0	217	47.0 ¹⁰⁸	41.1	81	54	16 07	49	33	44 72	11 04 30		
22	148	25.1	43.5	232	16.9 ¹⁰⁹	49.0	79	56	15 57	41	28	48 74	10 59 28		
23	163	25.0	43.1	246	46.7 ¹⁰⁸	+12 56.9	79	58	45	33	23	53 77	53 26		
24	178	25.0	+20 42.6	261	16.6 ¹⁰⁹	+13 04.8	79	60 S	15 31	16 24	17 17	0 59 79	10 47 23		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 12 ^m 5		Mag: -3.8 PMG: 10 ^h 16 ^m		Mag: +0.3 PMG: 17 ^h 48 ^m		Mag: -1.8 PMG: 12 ^h 23 ^m		Mag: +0.5 PMG: 19 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	296	42.9	206	10.5	92	32.0	173	51.2	71	51.7					
1	311	45.3	221	09.7	107	33.3	188	53.1	86	54.1					
2	326	47.8	236	08.9	122	34.6	203	55.0	101	56.6					
3	341	50.2	251	08.1	137	35.9	218	56.9	116	59.1					
4	356	52.7	266	07.3	152	37.3	233	58.7	132	01.6					
5	11	55.2	281	06.5	167	38.6	249	00.6	147	04.0					
6	26	57.6	296	05.7	182	39.9	264	02.5	162	06.5					
7	42	00.1	311	04.9	197	41.2	279	04.4	177	09.0					
8	57	02.6	326	04.1	212	42.5	294	06.3	192	11.5					
9	72	05.0	341	03.3	227	43.8	309	08.2	207	13.9					
10	87	07.5	356	02.5	242	45.1	324	10.0	222	16.4					
11	102	10.0	11	01.7	257	46.4	339	11.9	237	18.9					
12	117	12.4	26	00.8	272	47.7	354	13.8	252	21.4					
13	132	14.9	41	00.0	287	49.0	9	15.7	267	23.8					
14	147	17.4	55	59.2	302	50.3	24	17.6	282	26.3					
15	162	19.8	70	58.4	317	51.7	39	19.5	297	28.8					
16	177	22.3	85	57.6	332	53.0	54	21.4	312	31.2					
17	192	24.7	100	56.8	347	54.3	69	23.2	327	33.7					
18	207	27.2	115	56.0	2	55.6	84	25.1	342	36.2					
19	222	29.7	130	55.2	17	56.9	99	27.0	357	38.7					
20	237	32.1	145	54.4	32	58.2	114	28.9	12	41.1					
21	252	34.6	160	53.6	47	59.5	129	30.8	27	43.6					
22	267	37.1	175	52.8	63	00.8	144	32.7	42	46.1					
23	282	39.5	190	52.0	78	02.1	159	34.6	57	48.5					
24	297	42.0	205	51.2	93	03.4	174	36.4	72	51.0					
Dif	—		-8	+1	+13	-5	+19	-1	+25	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 4				Edad: 22 ^d 7 PHE { 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'4 SD: 15'5 PMG: 6 ^h 49 ^m R°: 49 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	25.0	+20	42.6	261	16.6	+13	04.8	60 N	** **	2 01	3 13	23 26	32	14 53	71	
1	193	24.9		42.1	275	46.5 ¹⁰⁹		12.5 ⁷⁷	58	** **	28	29	36	34	44	69	
2	208	24.9		41.7	290	16.3 ¹⁰⁸		20.2 ⁷⁶	56	1 13	2 49	42	44	36	36	67	
3	223	24.9		41.2	304	46.2 ¹⁰⁹		27.8 ⁷⁷	54	1 51	3 05	3 54	52	37	29	65	
4	238	24.8		40.7	319	16.1 ¹⁰⁹		35.3 ⁷⁵	52	2 16	20	4 04	23 59	38	22	64	
5	253	24.8	+20	40.3	333	46.0 ¹⁰⁹	+13	42.8 ⁷⁵	50	2 35	3 32	4 13	** **	** **	14 16	63	
6	268	24.8	+20	39.8	348	15.8 ¹⁰⁸	+13	50.2 ⁷⁴	45	3 11	3 57	4 32	** **	** **	14 04	60	
7	283	24.7		39.3	2	45.7 ¹⁰⁹	+13	57.5 ⁷²	40	37	4 16	4 48	** **	** **	13 53	59	
8	298	24.7		38.9	17	15.6 ¹⁰⁹	+14	04.7 ⁷³	35	3 57	32	5 01	** **	** **	44	58	
9	313	24.6		38.4	31	45.4 ¹⁰⁸		11.8 ⁷¹	30	4 13	4 45	12	0 05	42	37	56	
10	328	24.6		37.9	46	15.3 ¹⁰⁹		18.8 ⁷⁰	20	39	5 07	31	17	45	23	54	
11	343	24.6	+20	37.5	60	45.2 ¹⁰⁹	+14	25.8 ⁷⁰	10 N	4 58	5 25	5 47	0 27	48	13 11	52	
12	358	24.5	+20	37.0	75	15.0 ¹⁰⁸	+14	32.7 ⁶⁹	0	5 15	5 41	6 03	0 37	49	13 01	49	
13	13	24.5		36.5	89	44.9 ¹⁰⁹		39.5 ⁶⁸	10 S	30	5 56	18	46	52	12 50	48	
14	28	24.5		36.0	104	14.8 ¹⁰⁹		46.2 ⁶⁷	20	44	6 11	34	0 57	54	38	46	
15	43	24.4		35.6	118	44.6 ¹⁰⁸		52.9 ⁶⁷	30	5 57	27	6 52	1 09	57	25	43	
16	58	24.4		35.1	133	14.5 ¹⁰⁹	+14	59.4 ⁶⁵	35	6 05	36	7 03	16	59	17	42	
17	73	24.4	+20	34.6	147	44.4 ¹⁰⁹	+15	05.9 ⁶⁵	40	6 12	6 46	7 15	1 24	60	12 08	41	
18	88	24.3	+20	34.2	162	14.2 ¹⁰⁸	+15	12.3 ⁶⁴	45	6 21	6 57	7 30	1 33	63	11 58	39	
19	103	24.3		33.7	176	44.1 ¹⁰⁹		18.6 ⁶³	50	30	7 10	47	45	65	46	36	
20	118	24.3		33.2	191	14.0 ¹⁰⁹		24.8 ⁶²	52	34	16	7 55	50	67	40	35	
21	133	24.2		32.7	205	43.8 ¹⁰⁸		30.9 ⁶¹	54	39	23	8 04	1 56	68	34	34	
22	148	24.2		32.2	220	13.7 ¹⁰⁹		37.0 ⁶¹	56	44	31	15	2 02	70	27	32	
23	163	24.2		31.8	234	43.6 ¹⁰⁹		42.9 ⁵⁹	58	49	39	26	10	71	19	31	
24	178	24.1	+20	31.3	249	13.4 ¹⁰⁸	+15	48.8 ⁵⁹	60 S	6 55	7 48	8 40	2 18	74	11 10	29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 08 ^m 5		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: +0.3 PMG: 17 ^h 46 ^m		Mag: -1.8 PMG: 12 ^h 20 ^m		Mag: +0.5 PMG: 19 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	297	42.0	205	51.2	+22	47.8	93	03.4	-11	09.1	174	36.4	+20	21.4	72	51.0	-14	37.6
1	312	44.5	220	50.3		47.8	108	04.7		09.6	189	38.3		21.3	87	53.5		37.6
2	327	46.9	235	49.5		47.9	123	06.0		10.1	204	40.2		21.2	102	56.0		37.6
3	342	49.4	250	48.7		48.0	138	07.3		10.6	219	42.1		21.1	117	58.4		37.6
4	357	51.9	265	47.9		48.0	153	08.6		11.1	234	44.0		20.9	133	00.9		37.7
5	12	54.3	280	47.1	+22	48.1	168	09.9	-11	11.5	249	45.9	+20	20.8	148	03.4	-14	37.7
6	27	56.8	295	46.3	+22	48.2	183	11.2	-11	12.0	264	47.7	+20	20.7	163	05.8	-14	37.7
7	42	59.2	310	45.5		48.2	198	12.5		12.5	279	49.6		20.6	178	08.3		37.7
8	58	01.7	325	44.7		48.3	213	13.8		13.0	294	51.5		20.5	193	10.8		37.7
9	73	04.2	340	43.9		48.4	228	15.1		13.5	309	53.4		20.4	208	13.2		37.7
10	88	06.6	355	43.1		48.4	243	16.4		14.0	324	55.3		20.2	223	15.7		37.7
11	103	09.1	10	42.2	+22	48.5	258	17.7	-11	14.5	339	57.2	+20	20.1	238	18.2	-14	37.7
12	118	11.6	25	41.4	+22	48.5	273	19.0	-11	14.9	354	59.1	+20	20.0	253	20.6	-14	37.7
13	133	14.0	40	40.6		48.6	288	20.2		15.4	10	00.9		19.9	268	23.1		37.7
14	148	16.5	55	39.8		48.7	303	21.5		15.9	25	02.8		19.8	283	25.6		37.8
15	163	19.0	70	39.0		48.7	318	22.8		16.4	40	04.7		19.7	298	28.1		37.8
16	178	21.4	85	38.2		48.8	333	24.1		16.9	55	06.6		19.5	313	30.5		37.8
17	193	23.9	100	37.4	+22	48.8	348	25.4	-11	17.4	70	08.5	+20	19.4	328	33.0	-14	37.8
18	208	26.3	115	36.6	+22	48.9	3	26.7	-11	17.9	85	10.4	+20	19.3	343	35.5	-14	37.8
19	223	28.8	130	35.8		48.9	18	28.0		18.4	100	12.3		19.2	358	37.9		37.8
20	238	31.3	145	35.0		49.0	33	29.3		18.8	115	14.1		19.1	13	40.4		37.8
21	253	33.7	160	34.1		49.0	48	30.6		19.3	130	16.0		18.9	28	42.9		37.8
22	268	36.2	175	33.3		49.1	63	31.9		19.8	145	17.9		18.8	43	45.3		37.8
23	283	38.7	190	32.5		49.1	78	33.2		20.3	160	19.8		18.7	58	47.8		37.8
24	298	41.1	205	31.7	+22	49.2	93	34.4	-11	20.8	175	21.7	+20	18.6	73	50.3	-14	37.9
Dif	—		-8		+1		+13		-5		+19		-1		+25			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 4				Edad: 23 ^d 7 PHE { 4 ^h : 56/2 12 ^h : 55/9 20 ^h : 55/7 PMG: 7 ^h 38 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	24.1	+20	31.3	249	13.4	+15	48.8	60 N	20 56	22 06	** **	23 58 40		16 04 63			
1	193	24.1		30.8	263	43.3 ¹⁰⁹	+15	54.6 ⁵⁸	58	41	21 40	** **	** ** *		15 53 61			
2	208	24.1		30.3	278	13.1 ¹⁰⁸	+16	00.3 ⁵⁷	56	28	21	22 51	** ** *		43 60			
3	223	24.0		29.9	292	43.0 ¹⁰⁹		05.9 ⁵⁶	54	16	21 04	22 17	** ** *		34 60			
4	238	24.0		29.4	307	12.8 ¹⁰⁸		11.4 ⁵⁵	52	20 06	20 50	21 53	** ** *		26 59			
5	253	24.0	+20	28.9	321	42.7 ¹⁰⁹	+16	16.9 ⁵⁵	50	19 58	20 38	21 34	0 05 39		15 19 58			
6	268	23.9	+20	28.4	336	12.6 ¹⁰⁹	+16	22.2 ⁵³	45	19 39	20 14	20 59	0 18 41		15 04 57			
7	283	23.9		27.9	350	42.4 ¹⁰⁸		27.5 ⁵³	40	24	19 55	34	30 42		14 52 56			
8	298	23.9		27.4	5	12.3 ¹⁰⁹		32.7 ⁵²	35	11	40	20 15	39 44		42 54			
9	313	23.8		27.0	19	42.1 ¹⁰⁸		37.8 ⁵¹	30	19 00	27	19 59	0 47 45		33 53			
10	328	23.8		26.5	34	12.0 ¹⁰⁹		42.8 ⁵⁰	20	18 41	19 05	34	1 02 47		17 52			
11	343	23.8	+20	26.0	48	41.9 ¹⁰⁹	+16	47.7 ⁴⁹	10 N	18 25	18 48	19 14	1 15 48		14 03 51			
12	358	23.8	+20	25.5	63	11.7 ¹⁰⁸	+16	52.5 ⁴⁸	0	18 10	18 32	18 58	1 26 50		13 50 50			
13	13	23.7		25.0	77	41.6 ¹⁰⁹	+16	57.2 ⁴⁷	10 S	17 55	17	43	38 52		38 48			
14	28	23.7		24.5	92	11.4 ¹⁰⁸	+17	01.9 ⁴⁷	20	39	18 03	30	1 51 53		24 47			
15	43	23.7		24.0	106	41.3 ¹⁰⁹		06.4 ⁴⁵	30	21	17 47	16	2 06 55		13 08 46			
16	58	23.6		23.6	121	11.2 ¹⁰⁹		10.9 ⁴⁵	35	17 11	38	09	15 56		12 59 45			
17	73	23.6	+20	23.1	135	41.0 ¹⁰⁸	+17	15.2 ⁴³	40	16 59	17 28	18 01	2 24 58		12 49 44			
18	88	23.6	+20	22.6	150	10.9 ¹⁰⁹	+17	19.5 ⁴³	45	16 45	17 17	17 53	2 36 59		12 37 43			
19	103	23.6		22.1	164	40.7 ¹⁰⁸		23.7 ⁴²	50	27	17 04	44	50 61		22 41			
20	118	23.5		21.6	179	10.6 ¹⁰⁹		27.8 ⁴¹	52	19	16 58	40	2 57 61		15 41			
21	133	23.5		21.1	193	40.5 ¹⁰⁹		31.8 ⁴⁰	54	10	51	36	3 04 62		12 08 39			
22	148	23.5		20.6	208	10.4 ¹⁰⁹		35.7 ³⁹	56	16 00	44	31	12 64		11 59 39			
23	163	23.4		20.1	222	40.2 ¹⁰⁸		39.5 ³⁸	58	15 49	36	26	21 65		50 37			
24	178	23.4	+20	19.6	237	10.1 ¹⁰⁹	+17	43.3 ³⁸	60 S	15 35	16 27	17 20	3 32 67		11 39 35			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 04 ^m 6		Mag: -3.8 PMG: 10 ^h 18 ^m				Mag: +0.3 PMG: 17 ^h 44 ^m				Mag: -1.8 PMG: 12 ^h 17 ^m				Mag: +0.5 PMG: 19 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	298	41.1	205	31.7	+22	49.2	93	34.4	-11	20.8	175	21.7	+20	18.6	73	50.3	-14	37.9
1	313	43.6	220	30.9		49.2	108	35.7		21.3	190	23.6		18.5	88	52.7		37.9
2	328	46.1	235	30.1		49.3	123	37.0		21.8	205	25.4		18.4	103	55.2		37.9
3	343	48.5	250	29.3		49.3	138	38.3		22.3	220	27.3		18.2	118	57.7		37.9
4	358	51.0	265	28.5		49.4	153	39.6		22.8	235	29.2		18.1	134	00.1		37.9
5	13	53.5	280	27.6	+22	49.4	168	40.9	-11	23.2	250	31.1	+20	18.0	149	02.6	-14	37.9
6	28	55.9	295	26.8	+22	49.4	183	42.2	-11	23.7	265	33.0	+20	17.9	164	05.1	-14	37.9
7	43	58.4	310	26.0		49.5	198	43.5		24.2	280	34.9		17.8	179	07.5		37.9
8	59	00.8	325	25.2		49.5	213	44.7		24.7	295	36.8		17.6	194	10.0		37.9
9	74	03.3	340	24.4		49.6	228	46.0		25.2	310	38.6		17.5	209	12.5		38.0
10	89	05.8	355	23.6		49.6	243	47.3		25.7	325	40.5		17.4	224	14.9		38.0
11	104	08.2	10	22.8	+22	49.6	258	48.6	-11	26.2	340	42.4	+20	17.3	239	17.4	-14	38.0
12	119	10.7	25	22.0	+22	49.7	273	49.9	-11	26.7	355	44.3	+20	17.2	254	19.9	-14	38.0
13	134	13.2	40	21.1		49.7	288	51.2		27.2	10	46.2		17.1	269	22.3		38.0
14	149	15.6	55	20.3		49.7	303	52.4		27.6	25	48.1		16.9	284	24.8		38.0
15	164	18.1	70	19.5		49.7	318	53.7		28.1	40	50.0		16.8	299	27.2		38.0
16	179	20.6	85	18.7		49.8	333	55.0		28.6	55	51.8		16.7	314	29.7		38.0
17	194	23.0	100	17.9	+22	49.8	348	56.3	-11	29.1	70	53.7	+20	16.6	329	32.2	-14	38.0
18	209	25.5	115	17.1	+22	49.8	3	57.6	-11	29.6	85	55.6	+20	16.5	344	34.6	-14	38.1
19	224	28.0	130	16.3		49.9	18	58.8		30.1	100	57.5		16.3	359	37.1		38.1
20	239	30.4	145	15.5		49.9	34	00.1		30.6	115	59.4		16.2	14	39.6		38.1
21	254	32.9	160	14.6		49.9	49	01.4		31.1	131	01.3		16.1	29	42.0		38.1
22	269	35.3	175	13.8		49.9	64	02.7		31.6	146	03.1		16.0	44	44.5		38.1
23	284	37.8	190	13.0		49.9	79	04.0		32.0	161	05.0		15.9	59	47.0		38.1
24	299	40.3	205	12.2	+22	50.0	94	05.2	-11	32.5	176	06.9	+20	15.8	74	49.4	-14	38.1
Dif	—		-8		0		+13		-5		+19		-1		+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 24 ^d 7	PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /4 20 ^h : 55 ^m /2	SD: 15 ^h 2		R ^o : 50 ^m	R ^o		R ^o					
	PMG: 12 ^h 06 ^m 5					PMG: 8 ^h 28 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m		
0	178	23.4	+20	19.6	237	10.1	+17	43.3	36	60 N	2 07	3 18	** ** *	17 07 53		
1	193	23.4		19.1	251	40.0	109	46.9	36	58	** ** *	33	33	0 10 40		
2	208	23.4		18.6	266	09.9	109	50.5	36	56	1 23	2 53	46	20 41		
3	223	23.3		18.1	280	39.8	109	53.9	34	54	1 57	3 09	3 57	29 42		
4	238	23.3		17.7	295	09.7	109	+17	57.3	52	2 20	23	4 07	37 43		
5	253	23.3	+20	17.2	309	39.6	109	+18	00.5	50	2 39	3 35	4 16	0 44 43		
6	268	23.3	+20	16.7	324	09.5	109	+18	03.7	45	3 14	3 59	4 34	0 59 45		
7	283	23.2		16.2	338	39.4	109	06.8	30	40	39	4 18	4 49	1 12 46		
8	298	23.2		15.7	353	09.3	109	09.8	30	35	3 59	33	5 02	23 46		
9	313	23.2		15.2	7	39.2	109	12.7	29	30	4 14	4 46	13	32 47		
10	328	23.2		14.7	22	09.1	109	15.5	28	20	39	5 08	32	1 49 48		
11	343	23.1	+20	14.2	36	39.1	110	+18	18.2	10 N	4 59	5 25	5 48	2 03 49		
12	358	23.1	+20	13.7	51	09.0	109	+18	20.8	0	5 15	5 41	6 03	2 16 50		
13	13	23.1		13.2	65	38.9	109	23.3	25	10 S	30	5 55	18	30 50		
14	28	23.1		12.7	80	08.9	110	25.7	24	20	43	6 10	34	2 44 52		
15	43	23.0		12.2	94	38.9	110	28.1	24	30	5 57	26	6 52	3 01 52		
16	58	23.0		11.7	109	08.8	109	30.3	22	35	6 04	35	7 02	11 52		
17	73	23.0	+20	11.2	123	38.8	110	+18	32.4	40	6 11	6 44	7 14	3 22 53		
18	88	23.0	+20	10.7	138	08.8	110	+18	34.5	45	6 19	6 55	7 28	3 35 54		
19	103	23.0		10.2	152	38.8	110	36.5	20	50	28	7 08	45	51 55		
20	118	22.9		09.6	167	08.8	110	38.3	18	52	32	14	7 53	3 58 56		
21	133	22.9		09.1	181	38.8	110	40.1	18	54	37	21	8 02	4 06 56		
22	148	22.9		08.6	196	08.8	110	41.8	17	56	41	28	12	16 56		
23	163	22.9		08.1	210	38.8	110	43.4	16	58	46	36	23	26 58		
24	178	22.8	+20	07.6	225	08.9	111	+18	44.8	60 S	6 52	7 45	8 36	4 39 58		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO	
	PMG: 4 ^h 00 ^m 7		Mag: -3.8 PMG: 10 ^h 20 ^m				Mag: +0.3 PMG: 17 ^h 42 ^m				Mag: -1.8 PMG: 12 ^h 14 ^m				Mag: +0.5 PMG: 18 ^h 58 ^m	
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	299	40.3	205	12.2	+22	50.0	94	05.2	-11	32.5	176	06.9	+20	15.8	74	49.4
1	314	42.7	220	11.4		50.0	109	06.5		33.0	191	08.8		15.6	89	51.9
2	329	45.2	235	10.6		50.0	124	07.8		33.5	206	10.7		15.5	104	54.3
3	344	47.7	250	09.8		50.0	139	09.1		34.0	221	12.6		15.4	119	56.8
4	359	50.1	265	08.9		50.0	154	10.3		34.5	236	14.5		15.3	134	59.3
5	14	52.6	280	08.1	+22	50.0	169	11.6	-11	35.0	251	16.3	+20	15.2	150	01.7
6	29	55.1	295	07.3	+22	50.1	184	12.9	-11	35.5	266	18.2	+20	15.0	165	04.2
7	44	57.5	310	06.5		50.1	199	14.1		36.0	281	20.1		14.9	180	06.7
8	60	00.0	325	05.7		50.1	214	15.4		36.5	296	22.0		14.8	195	09.1
9	75	02.5	340	04.9		50.1	229	16.7		36.9	311	23.9		14.7	210	11.6
10	90	04.9	355	04.0		50.1	244	18.0		37.4	326	25.8		14.6	225	14.0
11	105	07.4	10	03.2	+22	50.1	259	19.2	-11	37.9	341	27.7	+20	14.4	240	16.5
12	120	09.8	25	02.4	+22	50.1	274	20.5	-11	38.4	356	29.5	+20	14.3	255	19.0
13	135	12.3	40	01.6		50.1	289	21.8		38.9	11	31.4		14.2	270	21.4
14	150	14.8	55	00.8		50.1	304	23.0		39.4	26	33.3		14.1	285	23.9
15	165	17.2	70	00.0		50.1	319	24.3		39.9	41	35.2		14.0	300	26.3
16	180	19.7	84	59.2		50.1	334	25.6		40.4	56	37.1		13.8	315	28.8
17	195	22.2	99	58.3	+22	50.1	349	26.9	-11	40.9	71	39.0	+20	13.7	330	31.3
18	210	24.6	114	57.5	+22	50.1	4	28.1	-11	41.4	86	40.9	+20	13.6	345	33.7
19	225	27.1	129	56.7		50.1	19	29.4		41.9	101	42.7		13.5	0	36.2
20	240	29.6	144	55.9		50.1	34	30.7		42.3	116	44.6		13.4	15	38.6
21	255	32.0	159	55.1		50.1	49	31.9		42.8	131	46.5		13.3	30	41.1
22	270	34.5	174	54.3		50.1	64	33.2		43.3	146	48.4		13.1	45	43.6
23	285	36.9	189	53.4		50.1	79	34.4		43.8	161	50.3		13.0	60	46.0
24	300	39.4	204	52.6	+22	50.1	94	35.7	-11	44.3	176	52.2	+20	12.9	75	48.5
Dif	—		-8		0		+13		-5		+19		-1		+25	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 25 ^d 7	PHE {	4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'8			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 5								SD: 15'0			PMG: 9 ^h 18 ^m			Rº: 49 ^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	178	22.8	+20 07.6	225	08.9	+18 44.8	14	60 N	20 52	22 00	** **	0 38 48	18 00 43		
1	193	22.8	07.1	239	38.9 ¹¹⁰	46.2	14	58	37	21 35	** **	0 50 49	17 47 44		
2	208	22.8	06.6	254	09.0 ¹¹¹	47.5	13	56	24	16	22 42	1 01 49	36 44		
3	223	22.8	06.1	268	39.1 ¹¹¹	48.8	13	54	13	21 01	22 11	11 49	26 45		
4	238	22.8	05.6	283	09.2 ¹¹¹	49.9	11	52	20 04	20 47	21 48	20 48	17 45		
5	253	22.7	+20 05.1	297	39.3 ¹¹¹	+18 50.9	10	50	19 55	20 36	21 30	1 27 49	17 09 46		
6	268	22.7	+20 04.6	312	09.4 ¹¹¹	+18 51.8	9	45	19 37	20 12	20 57	1 44 49	16 53 46		
7	283	22.7	04.1	326	39.5 ¹¹¹	52.7	9	40	22	19 53	32	1 58 49	39 47		
8	298	22.7	03.5	341	09.7 ¹¹²	53.4	7	35	19 10	38	20 13	2 09 49	27 47		
9	313	22.7	03.0	355	39.8 ¹¹¹	54.1	7	30	18 59	26	19 57	19 49	16 17 47		
10	328	22.7	02.5	10	10.0 ¹¹²	54.6	5	20	41	19 05	33	37 49	15 59 48		
11	343	22.6	+20 02.0	24	40.2 ¹¹²	+18 55.1	5	10 N	18 25	18 47	19 14	2 52 49	15 44 49		
12	358	22.6	+20 01.5	39	10.4 ¹¹²	+18 55.4	3	0	18 10	18 32	18 58	3 06 49	15 30 49		
13	13	22.6	01.0	53	40.6 ¹¹²	55.7	3	10 S	17 55	18	43	20 49	15 50		
14	28	22.6	+20 00.5	68	10.8 ¹¹²	55.9	2	20	40	18 03	30	36 49	15 00 50		
15	43	22.6	+20 00.0	82	41.1 ¹¹³	56.0	1	30	22	17 48	17	3 53 49	14 43 49		
16	58	22.5	+19 59.4	97	11.4 ¹¹³	56.0	0	35	12	39	10	4 03 49	32 50		
17	73	22.5	+19 58.9	111	41.6 ¹¹²	+18 55.9	1	40	17 00	17 30	18 03	4 15 49	14 20 51		
18	88	22.5	+19 58.4	126	11.9 ¹¹³	+18 55.7	2	45	16 47	17 19	17 55	4 29 49	14 07 51		
19	103	22.5	57.9	140	42.3 ¹¹⁴	55.5	2	50	30	06	46	46 48	13 50 51		
20	118	22.5	57.4	155	12.6 ¹¹³	55.1	4	52	22	17 00	42	4 54 48	42 51		
21	133	22.5	56.8	169	43.0 ¹¹⁴	54.6	5	54	13	16 54	38	5 02 49	33 52		
22	148	22.4	56.3	184	13.3 ¹¹³	54.1	5	56	16 03	47	34	12 49	23 52		
23	163	22.4	55.8	198	43.7 ¹¹⁴	53.4	7	58	15 52	39	29	24 48	13 12 52		
24	178	22.4	+19 55.3	213	14.2 ¹¹⁵	+18 52.7	7	60 S	15 39	16 30	17 23	5 37 48	12 58 53		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 3 ^h 56 ^m 7		Mag: -3.8 PMG: 10 ^h 21 ^m		Mag: +0.3 PMG: 17 ^h 40 ^m		Mag: -1.8 PMG: 12 ^h 11 ^m		Mag: +0.5 PMG: 18 ^h 54 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	300	39.4	204	52.6	+22 50.1	94	35.7	-11 44.3	176	52.2	+20 12.9	75	48.5	-14 38.4	
1	315	41.9	219	51.8	50.1	109	37.0	44.8	191	54.1	12.8	90	50.9	38.4	
2	330	44.3	234	51.0	50.1	124	38.2	45.3	206	55.9	12.7	105	53.4	38.4	
3	345	46.8	249	50.2	50.1	139	39.5	45.8	221	57.8	12.5	120	55.8	38.5	
4	0	49.3	264	49.4	50.0	154	40.8	46.3	236	59.7	12.4	135	58.3	38.5	
5	15	51.7	279	48.5	+22 50.0	169	42.0	-11 46.8	252	01.6	+20 12.3	151	00.8	-14 38.5	
6	30	54.2	294	47.7	+22 50.0	184	43.3	-11 47.3	267	03.5	+20 12.2	166	03.2	-14 38.5	
7	45	56.7	309	46.9	50.0	199	44.6	47.8	282	05.4	12.1	181	05.7	38.5	
8	60	59.1	324	46.1	50.0	214	45.8	48.2	297	07.2	11.9	196	08.1	38.5	
9	76	01.6	339	45.3	50.0	229	47.1	48.7	312	09.1	11.8	211	10.6	38.5	
10	91	04.1	354	44.5	50.0	244	48.3	49.2	327	11.0	11.7	226	13.1	38.6	
11	106	06.5	9	43.6	+22 49.9	259	49.6	-11 49.7	342	12.9	+20 11.6	241	15.5	-14 38.6	
12	121	09.0	24	42.8	+22 49.9	274	50.8	-11 50.2	357	14.8	+20 11.5	256	18.0	-14 38.6	
13	136	11.4	39	42.0	49.9	289	52.1	50.7	12	16.7	11.3	271	20.4	38.6	
14	151	13.9	54	41.2	49.9	304	53.4	51.2	27	18.6	11.2	286	22.9	38.6	
15	166	16.4	69	40.4	49.8	319	54.6	51.7	42	20.4	11.1	301	25.3	38.6	
16	181	18.8	84	39.6	49.8	334	55.9	52.2	57	22.3	11.0	316	27.8	38.6	
17	196	21.3	99	38.7	+22 49.8	349	57.1	-11 52.7	72	24.2	+20 10.9	331	30.2	-14 38.6	
18	211	23.8	114	37.9	+22 49.8	4	58.4	-11 53.2	87	26.1	+20 10.7	346	32.7	-14 38.7	
19	226	26.2	129	37.1	49.7	19	59.6	53.7	102	28.0	10.6	1	35.2	38.7	
20	241	28.7	144	36.3	49.7	35	00.9	54.2	117	29.9	10.5	16	37.6	38.7	
21	256	31.2	159	35.5	49.7	50	02.2	54.6	132	31.8	10.4	31	40.1	38.7	
22	271	33.6	174	34.7	49.6	65	03.4	55.1	147	33.6	10.3	46	42.5	38.7	
23	286	36.1	189	33.8	49.6	80	04.7	55.6	162	35.5	10.1	61	45.0	38.7	
24	301	38.6	204	33.0	+22 49.6	95	05.9	-11 56.1	177	37.4	+20 10.0	76	47.4	-14 38.7	
Dif	—		-8	0		+13	-5		+19		-1		+25		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 5			Edad: 26 ^d 7 PHE { SD: 14'9 PMG: 10 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	22.4	+19 55.3	213	14.2	+18 52.7	8	60 N	** **	2 14	3 22	1 26	56	18 43 35
1	193	22.4	54.8	227	44.6 ¹¹⁴	51.9	9	58	0 24	38	37	39	55	31 36
2	208	22.4	54.2	242	15.1 ¹¹⁵	51.0	10	56	1 31	2 57	3 49	1 50	55	20 37
3	223	22.4	53.7	256	45.6 ¹¹⁵	50.0	10	54	2 03	3 13	4 00	2 00	54	11 38
4	238	22.4	53.2	271	16.1 ¹¹⁵	48.9	11	52	25	26	10	08	54	18 02 39
5	253	22.3	+19 52.7	285	46.6 ¹¹⁵	+18 47.7	12	50	2 43	3 38	4 18	2 16	54	17 55 39
6	268	22.3	+19 52.1	300	17.1 ¹¹⁵	+18 46.4	13	45	3 17	4 01	4 36	2 33	52	17 39 41
7	283	22.3	51.6	314	47.7 ¹¹⁶	45.1	13	40	3 41	20	4 51	47	51	26 42
8	298	22.3	51.1	329	18.3 ¹¹⁶	43.6	15	35	4 00	35	5 03	2 58	51	14 43
9	313	22.3	50.6	343	48.9 ¹¹⁶	42.1	15	30	16	4 48	14	3 08	51	17 04 44
10	328	22.3	50.0	358	19.6 ¹¹⁷	40.5	16	20	40	5 09	32	26	49	16 47 46
11	343	22.3	+19 49.5	12	50.3 ¹¹⁷	+18 38.7	18	10 N	4 59	5 26	5 48	3 41	49	16 33 46
12	358	22.3	+19 49.0	27	20.9 ¹¹⁶	+18 36.9	18	0	5 15	5 41	6 03	3 55	48	16 19 47
13	13	22.2	48.5	41	51.7 ¹¹⁸	35.1	18	10 S	30	5 55	18	4 09	48	16 05 48
14	28	22.2	47.9	56	22.4 ¹¹⁷	33.1	20	20	43	6 10	33	25	46	15 50 50
15	43	22.2	47.4	70	53.2 ¹¹⁸	31.0	21	30	5 56	25	6 50	42	46	32 52
16	58	22.2	46.9	85	24.0 ¹¹⁸	28.9	21	35	6 03	33	7 01	4 52	45	22 53
17	73	22.2	+19 46.3	99	54.8 ¹¹⁸	+18 26.6	23	40	6 10	6 43	7 12	5 04	44	15 11 53
18	88	22.2	+19 45.8	114	25.6 ¹¹⁸	+18 24.3	23	45	6 18	6 54	7 26	5 18	43	14 58 54
19	103	22.2	45.3	128	56.5 ¹¹⁹	21.9	24	50	26	7 06	42	34	43	41 55
20	118	22.2	44.7	143	27.4 ¹¹⁹	19.4	25	52	30	12	50	42	42	33 56
21	133	22.2	44.2	157	58.4 ¹²⁰	16.8	26	54	34	18	7 59	5 51	41	25 56
22	148	22.2	43.7	172	29.3 ¹¹⁹	14.2	26	56	39	25	8 09	6 01	40	15 58
23	163	22.1	43.1	187	00.3 ¹²⁰	11.4	28	58	44	33	20	12	39	14 04 59
24	178	22.1	+19 42.6	201	31.3 ¹²⁰	+18 08.6	28	60 S	6 49	7 42	8 32	6 25	38	13 51 60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 52 ^m 8		Mag: -3.8 PMG: 10 ^h 22 ^m		Mag: +0.3 PMG: 17 ^h 38 ^m		Mag: -1.8 PMG: 12 ^h 08 ^m		Mag: +0.5 PMG: 18 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	301	38.6	204	33.0	95	05.9	-11	56.1	177	37.4	+20	10.0	76	47.4	-14	38.7		
1	316	41.0	219	32.2	110	07.2	-11	56.6	192	39.3	09.9		91	49.9		38.8		
2	331	43.5	234	31.4	125	08.4		57.1	207	41.2	09.8		106	52.3		38.8		
3	346	45.9	249	30.6	140	09.7		57.6	222	43.1	09.7		121	54.8		38.8		
4	1	48.4	264	29.8	155	10.9		58.1	237	45.0	09.5		136	57.2		38.8		
5	16	50.9	279	28.9	+22	49.4	170	12.2	-11	58.6	252	46.8	+20	09.4	151	59.7	-14	38.8
6	31	53.3	294	28.1	+22	49.3	185	13.4	-11	59.1	267	48.7	+20	09.3	167	02.2	-14	38.8
7	46	55.8	309	27.3		49.3	200	14.7	-11	59.6	282	50.6		09.2	182	04.6		38.8
8	61	58.3	324	26.5		49.2	215	15.9	-12	00.1	297	52.5		09.1	197	07.1		38.9
9	77	00.7	339	25.7		49.2	230	17.2		00.6	312	54.4		08.9	212	09.5		38.9
10	92	03.2	354	24.8		49.2	245	18.4		01.1	327	56.3		08.8	227	12.0		38.9
11	107	05.7	9	24.0	+22	49.1	260	19.7	-12	01.5	342	58.2	+20	08.7	242	14.4	-14	38.9
12	122	08.1	24	23.2	+22	49.1	275	20.9	-12	02.0	358	00.0	+20	08.6	257	16.9	-14	38.9
13	137	10.6	39	22.4		49.0	290	22.1		02.5	13	01.9		08.5	272	19.3		38.9
14	152	13.1	54	21.6		49.0	305	23.4		03.0	28	03.8		08.3	287	21.8		38.9
15	167	15.5	69	20.8		48.9	320	24.6		03.5	43	05.7		08.2	302	24.2		39.0
16	182	18.0	84	19.9		48.9	335	25.9		04.0	58	07.6		08.1	317	26.7		39.0
17	197	20.4	99	19.1	+22	48.8	350	27.1	-12	04.5	73	09.5	+20	08.0	332	29.1	-14	39.0
18	212	22.9	114	18.3	+22	48.7	5	28.4	-12	05.0	88	11.4	+20	07.9	347	31.6	-14	39.0
19	227	25.4	129	17.5		48.7	20	29.6		05.5	103	13.3		07.7	2	34.0		39.0
20	242	27.8	144	16.7		48.6	35	30.9		06.0	118	15.1		07.6	17	36.5		39.0
21	257	30.3	159	15.8		48.6	50	32.1		06.5	133	17.0		07.5	32	38.9		39.1
22	272	32.8	174	15.0		48.5	65	33.3		07.0	148	18.9		07.4	47	41.4		39.1
23	287	35.2	189	14.2		48.4	80	34.6		07.5	163	20.8		07.3	62	43.8		39.1
24	302	37.7	204	13.4	+22	48.4	95	35.8	-12	08.0	178	22.7	+20	07.1	77	46.3	-14	39.1
Dif	—		-8	0		+12	-5		+19		-1		+25					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 27 ^d 7 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 R°: 47 ^m											
	PMG: 12 ^h 06 ^m 5			SD: 14 ^h 8 PMG: 10 ^h 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	178	22.1	+19 42.6	201	31.3	+18 08.6		60 N	20 47	21 53	** **	2 22 63		19 18 27	
1	193	22.1		216	02.4 ¹²¹	05.7 ²⁹		58	33	30	23 24	34 61		19 07 29	
2	208	22.1		230	33.5 ¹²¹	+18 02.7 ³⁰		56	21	21 12	22 34	45 60		18 57 31	
3	223	22.1		245	04.6 ¹²¹	+17 59.6 ³¹		54	10	20 57	22 05	2 54 59		49 32	
4	238	22.1		259	35.7 ¹²¹	56.4 ³²		52	20 01	44	21 44	3 02 58		41 33	
5	253	22.1	+19 39.9	274	06.9 ¹²²	+17 53.2 ³²		50	19 53	20 33	21 26	3 10 57		18 34 34	
6	268	22.1	+19 39.4	288	38.1 ¹²²	+17 49.8 ³⁴		45	19 35	20 10	20 54	3 25 56		18 20 36	
7	283	22.1		303	09.3 ¹²²	46.4 ³⁴		40	21	19 52	30	38 54		18 08 38	
8	298	22.1		317	40.5 ¹²²	42.9 ³⁵		35	19 09	37	20 11	49 53		17 57 40	
9	313	22.1		332	11.8 ¹²³	39.4 ³⁵		30	18 58	24	19 56	3 59 52		48 41	
10	328	22.1		346	43.1 ¹²³	35.7 ³⁷		20	40	19 04	32	4 15 50		33 43	
11	343	22.0	+19 36.7	1	14.5 ¹²⁴	+17 32.0 ³⁷		10 N	18 24	18 47	19 13	4 30 48		17 19 45	
12	358	22.0	+19 36.2	15	45.9 ¹²⁴	+17 28.2 ³⁸		0	18 10	18 32	18 58	4 43 47		17 06 47	
13	13	22.0		30	17.3 ¹²⁴	24.3 ³⁹		10 S	17 56	18	44	4 57 45		16 53 48	
14	28	22.0		44	48.7 ¹²⁴	20.3 ⁴⁰		20	41	18 04	31	5 11 44		40 49	
15	43	22.0		59	20.2 ¹²⁵	16.3 ⁴⁰		30	23	17 49	18	28 42		24 52	
16	58	22.0		73	51.7 ¹²⁵	12.2 ⁴¹		35	13	41	11	37 42		15 53	
17	73	22.0	+19 33.4	88	23.2 ¹²⁵	+17 08.0 ⁴²		40	17 02	17 31	18 04	5 48 40		16 04 54	
18	88	22.0	+19 32.9	102	54.8 ¹²⁶	+17 03.7 ⁴³		45	16 49	17 21	17 57	6 01 39		15 52 56	
19	103	22.0		117	26.4 ¹²⁶	+16 59.3 ⁴⁴		50	32	08	48	17 36		36 59	
20	118	22.0		131	58.1 ¹²⁷	54.9 ⁴⁴		52	25	17 03	44	24 36		29 60	
21	133	22.0		146	29.7 ¹²⁶	50.4 ⁴⁵		54	16	16 57	40	32 35		21 61	
22	148	22.0		30.7	161 01.4 ¹²⁷	45.8 ⁴⁶		56	16 07	50	36	41 34		13 61	
23	163	22.0		30.2	175 33.2 ¹²⁸	41.2 ⁴⁶		58	15 56	42	32	6 51 32		15 03 63	
24	178	22.0	+19 29.6	190	05.0 ¹²⁸	+16 36.5 ⁴⁷		60 S	15 43	16 34	17 26	7 03 31		14 51 65	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 3 ^h 48 ^m 9		Mag: -3.8 PMG: 10 ^h 24 ^m			Mag: +0.3 PMG: 17 ^h 36 ^m			Mag: -1.8 PMG: 12 ^h 05 ^m			Mag: +0.5 PMG: 18 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	'
0	302	37.7	204 13.4	+22 48.4		95 35.8	-12 08.0		178 22.7	+20 07.1		77 46.3	-14 39.1		
1	317	40.2	219 12.6	48.3		110 37.1	08.5		193 24.6	07.0		92 48.7	39.1		
2	332	42.6	234 11.7	48.3		125 38.3	08.9		208 26.5	06.9		107 51.2	39.1		
3	347	45.1	249 10.9	48.2		140 39.5	09.4		223 28.4	06.8		122 53.6	39.1		
4	2	47.6	264 10.1	48.1		155 40.8	09.9		238 30.2	06.7		137 56.1	39.2		
5	17	50.0	279 09.3	+22 48.1		170 42.0	-12 10.4		253 32.1	+20 06.5		152 58.5	-14 39.2		
6	32	52.5	294 08.5	+22 48.0		185 43.3	-12 10.9		268 34.0	+20 06.4		168 01.0	-14 39.2		
7	47	54.9	309 07.7	47.9		200 44.5	11.4		283 35.9	06.3		183 03.4	39.2		
8	62	57.4	324 06.8	47.8		215 45.7	11.9		298 37.8	06.2		198 05.9	39.2		
9	77	59.9	339 06.0	47.8		230 47.0	12.4		313 39.7	06.0		213 08.3	39.2		
10	93	02.3	354 05.2	47.7		245 48.2	12.9		328 41.6	05.9		228 10.8	39.3		
11	108	04.8	9 04.4	+22 47.6		260 49.4	-12 13.4		343 43.4	+20 05.8		243 13.2	-14 39.3		
12	123	07.3	24 03.6	+22 47.5		275 50.7	-12 13.9		358 45.3	+20 05.7		258 15.7	-14 39.3		
13	138	09.7	39 02.7	47.5		290 51.9	14.4		13 47.2	05.6		273 18.1	39.3		
14	153	12.2	54 01.9	47.4		305 53.1	14.9		28 49.1	05.4		288 20.6	39.3		
15	168	14.7	69 01.1	47.3		320 54.4	15.4		43 51.0	05.3		303 23.0	39.3		
16	183	17.1	84 00.3	47.2		335 55.6	15.9		58 52.9	05.2		318 25.5	39.4		
17	198	19.6	98 59.5	+22 47.2		350 56.8	-12 16.4		73 54.8	+20 05.1		333 27.9	-14 39.4		
18	213	22.0	113 58.6	+22 47.1		5 58.1	-12 16.9		88 56.7	+20 04.9		348 30.4	-14 39.4		
19	228	24.5	128 57.8	47.0		20 59.3	17.4		103 58.5	04.8		3 32.8	39.4		
20	243	27.0	143 57.0	46.9		36 00.5	17.8		119 00.4	04.7		18 35.3	39.4		
21	258	29.4	158 56.2	46.8		51 01.8	18.3		134 02.3	04.6		33 37.7	39.4		
22	273	31.9	173 55.4	46.7		66 03.0	18.8		149 04.2	04.5		48 40.2	39.4		
23	288	34.4	188 54.6	46.6		81 04.2	19.3		164 06.1	04.3		63 42.6	39.5		
24	303	36.8	203 53.7	+22 46.5		96 05.4	-12 19.8		179 08.0	+20 04.2		78 45.1	-14 39.5		
Dif	—		-8		-1	+12		-5	+19		-1	+24			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h /7				Edad: 28 ^d 7	PHE {	4 ^h : 54 ^m /1 12 ^h : 54 ^m /1 20 ^h : 54 ^m /0	SD: 14 ^h /7		PMG: 11 ^h 42 ^m	R°: 45 ^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					
0	178	22.0	+19	29.6	190	05.0	+16	36.5	60 N	**	**	2	20	3	26	3	25	67					
1	193	22.0		29.1	204	36.8 ¹²⁸		31.7 ⁴⁸	58	0	50	2	43		41	35	65	36	23				
2	208	22.0		28.5	219	08.6 ¹²⁸		26.8 ⁴⁹	56	1	40	3	02	3	53	45	63	28	25				
3	223	22.0		28.0	233	40.5 ¹²⁹		21.8 ⁵⁰	54	2	08		17	4	03	3	53	61	21	22			
4	238	22.0		27.4	248	12.4 ¹²⁹		16.8 ⁵⁰	52		30		30		13	4	00	60	14	29			
5	253	22.0	+19	26.9	262	44.3 ¹²⁹	+16	11.7 ⁵¹	50	2	47	3	41	4	21	4	07	59	19	08	30		
6	268	22.0	+19	26.3	277	16.3 ¹³⁰	+16	06.6 ⁵¹	45	3	20	4	04	4	38	4	21	56	18	56	32		
7	283	22.0		25.8	291	48.3 ¹³⁰	+16	01.4 ⁵²	40	3	44		22	4	53	32	55	46	34				
8	298	22.0		25.2	306	20.3 ¹³⁰	+15	56.1 ⁵³	35	4	02		37	5	05	42	53	37	36				
9	313	22.0		24.7	320	52.4 ¹³¹		50.7 ⁵⁴	30		17	4	49		15	4	51	51	29	38			
10	328	22.0		24.1	335	24.5 ¹³¹		45.3 ⁵⁴	20	4	41	5	09		33	5	05	50	16	40			
11	343	22.0	+19	23.5	349	56.7 ¹³²	+15	39.7 ⁵⁶	10 N	5	00	5	26	5	49	5	18	48	18	04	42		
12	358	22.0	+19	23.0	4	28.8 ¹³¹	+15	34.2 ⁵⁵	0	5	16	5	41	6	03	5	30	46	17	53	44		
13	13	22.0		22.4	19	01.0 ¹³²		28.5 ⁵⁷	10 S		29	5	55		17	42	44		41	47			
14	28	22.0		21.9	33	33.3 ¹³³		22.8 ⁵⁷	20		42	6	09		32	5	55	42	29	50			
15	43	22.0		21.3	48	05.6 ¹³³		17.1 ⁵⁷	30	5	55		24		49	6	10	39	16	52			
16	58	22.0		20.8	62	37.9 ¹³³		11.2 ⁵⁹	35	6	01		32	6	59	19	37	17	08	53			
17	73	22.0	+19	20.2	77	10.2 ¹³³	+15	05.3 ⁵⁹	40	6	08	6	41	7	11	6	28	36	16	58	56		
18	88	22.0	+19	19.7	91	42.6 ¹³⁴	+14	59.3 ⁶⁰	45	6	16	6	52	7	24	6	40	34	16	48	57		
19	103	22.0		19.1	106	15.0 ¹³⁴		53.3 ⁶⁰	50		24	7	04		40	6	53	32	35	60			
20	118	22.0		18.5	120	47.5 ¹³⁵		47.2 ⁶¹	52		28		10		47	7	00	30	29	61			
21	133	22.0		18.0	135	19.9 ¹³⁴		41.1 ⁶¹	54		32		16	7	56	07	29	22	63				
22	148	22.0		17.4	149	52.5 ¹³⁶		34.8 ⁶³	56		36		22	8	05	15	27	14	65				
23	163	22.0		16.9	164	25.0 ¹³⁵		28.6 ⁶²	58		41		30		16	23	27	16	06	66			
24	178	22.0	+19	16.3	178	57.6 ¹³⁶	+14	22.2 ⁶⁴	60 S	6	46	7	38	8	28	7	34	24	15	56	69		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 44 ^m 9		Mag: -3.8 PMG: 10 ^h 25 ^m		Mag: +0.3 PMG: 17 ^h 34 ^m		Mag: -1.8 PMG: 12 ^h 02 ^m		Mag: +0.5 PMG: 18 ^h 42 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	303	36.8	203	53.7	+22	46.5	179	08.0	+20	04.2
1	318	39.3	218	52.9		46.5	194	09.9		04.1
2	333	41.8	233	52.1		46.4	209	11.7		04.0
3	348	44.2	248	51.3		46.3	224	13.6		03.9
4	3	46.7	263	50.5		46.2	239	15.5		03.7
5	18	49.2	278	49.6	+22	46.1	254	17.4	+20	03.6
6	33	51.6	293	48.8	+22	46.0	269	19.3	+20	03.5
7	48	54.1	308	48.0		45.9	284	21.2		03.4
8	63	56.5	323	47.2		45.8	299	23.1		03.2
9	78	59.0	338	46.4		45.7	314	24.9		03.1
10	94	01.5	353	45.5		45.6	329	26.8		03.0
11	109	03.9	8	44.7	+22	45.5	344	28.7	+20	02.9
12	124	06.4	23	43.9	+22	45.4	359	30.6	+20	02.8
13	139	08.9	38	43.1		45.3	14	32.5		02.6
14	154	11.3	53	42.3		45.2	29	34.4		02.5
15	169	13.8	68	41.5		45.1	44	36.3		02.4
16	184	16.3	83	40.6		45.0	59	38.2		02.3
17	199	18.7	98	39.8	+22	44.8	74	40.0	+20	02.1
18	214	21.2	113	39.0	+22	44.7	89	41.9	+20	02.0
19	229	23.7	128	38.2		44.6	104	43.8		01.9
20	244	26.1	143	37.4		44.5	119	45.7		01.8
21	259	28.6	158	36.5		44.4	134	47.6		01.7
22	274	31.0	173	35.7		44.3	149	49.5		01.5
23	289	33.5	188	34.9		44.2	164	51.4		01.4
24	304	36.0	203	34.1	+22	44.1	179	53.3	+20	01.3
Dif	—		-8		-1		+19		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 29 ^d 7 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 53 ^h 9 R°: 44 ^m												
	PMG: 12 ^h 06 ^m 5			SD: 14 ^h 7 PMG: 12 ^h 27 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	22.0	+19	16.3	178	57.6	+14	22.2	60 N	20 43	21 47	** **	4 32	69	20 06	19
1	193	22.0		15.7	193	30.2 ¹³⁶		15.8 ⁶⁴	58	29	25	23 08	40	67	19 59	21
2	208	22.0		15.2	208	02.8 ¹³⁶		09.3 ⁶⁵	56	17	21 08	22 26	48	65	53	23
3	223	22.0		14.6	222	35.5 ¹³⁷	+14	02.8 ⁶⁵	54	20 07	20 53	21 59	4 54	64	48	22
4	238	22.0		14.0	237	08.2 ¹³⁷	+13	56.2 ⁶⁶	52	19 58	40	39	5 00	62	43	25
5	253	22.0	+19	13.5	251	41.0 ¹³⁸	+13	49.6 ⁶⁶	50	19 50	20 30	21 22	5 06	60	19 38	27
6	268	22.0	+19	12.9	266	13.8 ¹³⁸	+13	42.9 ⁶⁷	45	19 33	20 07	20 51	5 17	58	19 28	30
7	283	22.0		12.3	280	46.6 ¹³⁸		36.1 ⁶⁸	40	19	19 50	28	27	56	20	32
8	298	22.0		11.8	295	19.4 ¹³⁸		29.3 ⁶⁸	35	19 07	35	20 09	35	54	13	34
9	313	22.0		11.2	309	52.3 ¹³⁹		22.4 ⁶⁹	30	18 57	23	19 54	42	52	19 07	35
10	328	22.0		10.6	324	25.2 ¹³⁹		15.5 ⁶⁹	20	39	19 03	31	5 55	49	18 56	39
11	343	22.1	+19	10.1	338	58.1 ¹³⁹	+13	08.5 ⁷⁰	10 N	18 24	18 46	19 13	6 06	46	18 46	42
12	358	22.1	+19	09.5	353	31.1 ¹⁴⁰	+13	01.5 ⁷⁰	0	18 10	18 32	18 57	6 16	44	18 37	44
13	13	22.1		08.9	8	04.1 ¹⁴⁰	+12	54.4 ⁷¹	10 S	17 56	18	44	26	42	28	47
14	28	22.1		08.4	22	37.1 ¹⁴⁰		47.2 ⁷²	20	41	18 05	31	37	39	19	49
15	43	22.1		07.8	37	10.2 ¹⁴¹		40.0 ⁷²	30	25	17 50	19	49	37	08	51
16	58	22.1		07.2	51	43.3 ¹⁴¹		32.8 ⁷²	35	15	42	13	6 56	35	18 01	54
17	73	22.1	+19	06.7	66	16.4 ¹⁴¹	+12	25.5 ⁷³	40	17 04	17 33	18 06	7 04	33	17 54	55
18	88	22.1	+19	06.1	80	49.6 ¹⁴²	+12	18.1 ⁷⁴	45	16 51	17 23	17 58	7 14	30	17 45	58
19	103	22.1		05.5	95	22.7 ¹⁴¹		10.7 ⁷⁴	50	35	11	50	25	28	35	61
20	118	22.1		04.9	109	55.9 ¹⁴²	+12	03.3 ⁷⁴	52	28	17 05	47	30	27	30	62
21	133	22.1		04.4	124	29.2 ¹⁴³	+11	55.8 ⁷⁵	54	19	16 59	43	36	25	25	64
22	148	22.1		03.8	139	02.5 ¹⁴³		48.2 ⁷⁶	56	10	53	39	42	24	19	65
23	163	22.1		03.2	153	35.8 ¹⁴³		40.6 ⁷⁶	58	16 00	46	35	50	21	12	68
24	178	22.2	+19	02.7	168	09.1 ¹⁴³	+11	32.9 ⁷⁷	60 S	15 48	16 37	17 30	7 58	19	17 05	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: +0.4		Mag: -1.8		Mag: +0.5	
	3 ^h 41 ^m 0		PMG: 10 ^h 26 ^m		PMG: 17 ^h 32 ^m		PMG: 11 ^h 59 ^m		PMG: 18 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	304	36.0	203	34.1	96	34.8	179	53.3	79	43.7
1	319	38.4	218	33.3	111	36.0	194	55.1	94	46.2
2	334	40.9	233	32.4	126	37.2	209	57.0	109	48.6
3	349	43.4	248	31.6	141	38.4	224	58.9	124	51.1
4	4	45.8	263	30.8	156	39.6	240	00.8	139	53.5
5	19	48.3	278	30.0	171	40.9	255	02.7	154	55.9
6	34	50.8	293	29.2	186	42.1	270	04.6	169	58.4
7	49	53.2	308	28.4	201	43.3	285	06.5	185	00.8
8	64	55.7	323	27.5	216	44.5	300	08.3	200	03.3
9	79	58.1	338	26.7	231	45.7	315	10.2	215	05.7
10	95	00.6	353	25.9	246	46.9	330	12.1	230	08.1
11	110	03.1	8	25.1	261	48.1	345	14.0	245	10.6
12	125	05.5	23	24.3	276	49.3	0	15.9	260	13.0
13	140	08.0	38	23.4	291	50.6	15	17.8	275	15.5
14	155	10.5	53	22.6	306	51.8	30	19.7	290	17.9
15	170	12.9	68	21.8	321	53.0	45	21.6	305	20.3
16	185	15.4	83	21.0	336	54.2	60	23.4	320	22.8
17	200	17.9	98	20.2	351	55.4	75	25.3	335	25.2
18	215	20.3	113	19.4	6	56.6	90	27.2	350	27.7
19	230	22.8	128	18.5	21	57.8	105	29.1	5	30.1
20	245	25.3	143	17.7	36	59.0	120	31.0	20	32.5
21	260	27.7	158	16.9	52	00.2	135	32.9	35	35.0
22	275	30.2	173	16.1	67	01.4	150	34.8	50	37.4
23	290	32.6	188	15.3	82	02.6	165	36.7	65	39.9
24	305	35.1	203	14.4	97	03.8	180	38.5	80	42.3
Dif	—		-8		-1		+19		+24	

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: 1 ^d 1 PHE { 4 ^h : 53 ^m 9 12 ^h : 53 ^m 9 20 ^h : 54 ^m 0 Rº: 43 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.2	+19	02.7	168	09.1	+11	32.9	60 N	**	**	2	27	3	31	5	41
1	193	22.2		02.1	182	42.4 ¹⁴³		25.2 ⁷⁷	58	1	05	2	49		45	47	68
2	208	22.2		01.5	197	15.8 ¹⁴⁴		17.5 ⁷⁷	56	1	47	3	06		3	56	53
3	223	22.2		00.9	211	49.2 ¹⁴⁴		09.7 ⁷⁸	54	2	14		21	4	06	5	58
4	238	22.2	+19	00.4	226	22.7 ¹⁴⁵	+11	01.8 ⁷⁹	52		35		33		15	6	02
5	253	22.2	+18	59.8	240	56.1 ¹⁴⁴	+10	54.0 ⁷⁸	50	2	51	3	44	4	24	6	06
6	268	22.2	+18	59.2	255	29.6 ¹⁴⁵	+10	46.0 ⁸⁰	45	3	23	4	06	4	41	6	15
7	283	22.2		58.6	270	03.1 ¹⁴⁵		38.1 ⁷⁹	40	3	46		24	4	55	23	55
8	298	22.2		58.0	284	36.7 ¹⁴⁶		30.0 ⁸¹	35	4	04		38	5	06	29	54
9	313	22.3		57.5	299	10.2 ¹⁴⁵		22.0 ⁸⁰	30		19	4	50	17		34	52
10	328	22.3		56.9	313	43.8 ¹⁴⁶		13.9 ⁸¹	20	4	42	5	10	34		44	49
11	343	22.3	+18	56.3	328	17.4 ¹⁴⁶	+10	05.7 ⁸²	10 N	5	01	5	27	5	49	6	52
12	358	22.3	+18	55.7	342	51.1 ¹⁴⁷	+9	57.5 ⁸²	0	5	16	5	41	6	03	7	00
13	13	22.3		55.1	357	24.8 ¹⁴⁷		49.3 ⁸²	10 S		29	5	55		17	08	41
14	28	22.3		54.6	11	58.4 ¹⁴⁶		41.0 ⁸³	20		42	6	08		32	16	38
15	43	22.3		54.0	26	32.2 ¹⁴⁸		32.7 ⁸³	30	5	54		23		48	26	34
16	58	22.3		53.4	41	05.9 ¹⁴⁷		24.4 ⁸³	35	6	00		31	6	58	31	33
17	73	22.4	+18	52.8	55	39.6 ¹⁴⁷	+9	16.0 ⁸⁴	40	6	07	6	40	7	09	7	37
18	88	22.4	+18	52.2	70	13.4 ¹⁴⁸	+9	07.6 ⁸⁴	45	6	14	6	50	7	22	7	44
19	103	22.4		51.6	84	47.2 ¹⁴⁸	+8	59.1 ⁸⁵	50		22	7	02	37		53	25
20	118	22.4		51.0	99	21.0 ¹⁴⁸		50.6 ⁸⁵	52		26		07		45	7	57
21	133	22.4		50.5	113	54.9 ¹⁴⁹		42.1 ⁸⁵	54		29		13	7	53	8	01
22	148	22.4		49.9	128	28.7 ¹⁴⁸		33.5 ⁸⁶	56		33		19	8	02	06	21
23	163	22.5		49.3	143	02.6 ¹⁴⁹		24.9 ⁸⁶	58		38		26		12	11	19
24	178	22.5	+18	48.7	157	36.5 ¹⁴⁹	+8	16.3 ⁸⁶	60 S	6	42	7	34	8	24	8	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 37 ^m 1		Mag: -3.8 PMG: 10 ^h 28 ^m		Mag: +0.4 PMG: 17 ^h 30 ^m		Mag: -1.8 PMG: 11 ^h 56 ^m		Mag: +0.5 PMG: 18 ^h 34 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	305	35.1	203	14.4	+22	40.9	180	38.5	+19	58.3
1	320	37.6	218	13.6		40.8	195	40.4		58.2
2	335	40.0	233	12.8		40.6	210	42.3		58.1
3	350	42.5	248	12.0		40.5	225	44.2		58.0
4	5	45.0	263	11.2		40.3	240	46.1		57.9
5	20	47.4	278	10.4	+22	40.2	255	48.0	+19	57.7
6	35	49.9	293	09.5	+22	40.0	270	49.9	+19	57.6
7	50	52.4	308	08.7		39.9	285	51.8		57.5
8	65	54.8	323	07.9		39.7	300	53.6		57.4
9	80	57.3	338	07.1		39.6	315	55.5		57.2
10	95	59.8	353	06.3		39.4	330	57.4		57.1
11	111	02.2	8	05.5	+22	39.2	345	59.3	+19	57.0
12	126	04.7	23	04.6	+22	39.1	1	01.2	+19	56.9
13	141	07.1	38	03.8		38.9	16	03.1		56.7
14	156	09.6	53	03.0		38.8	31	05.0		56.6
15	171	12.1	68	02.2		38.6	46	06.9		56.5
16	186	14.5	83	01.4		38.4	61	08.7		56.4
17	201	17.0	98	00.6	+22	38.3	76	10.6	+19	56.3
18	216	19.5	112	59.7	+22	38.1	91	12.5	+19	56.1
19	231	21.9	127	58.9		37.9	106	14.4		56.0
20	246	24.4	142	58.1		37.8	121	16.3		55.9
21	261	26.9	157	57.3		37.6	136	18.2		55.8
22	276	29.3	172	56.5		37.4	151	20.1		55.6
23	291	31.8	187	55.7		37.3	166	22.0		55.5
24	306	34.2	202	54.8	+22	37.1	181	23.9	+19	55.4
Dif	—		-8		-2		+12		-5	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 2 ^d 1 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 R°: 42 ^m										
	PMG: 12 ^h 06 ^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	178	22.5	+18 48.7	157	36.5	+8 16.3	87	60 N	20 38	21 40	** **	6 51 71	20 41 15	
1	193	22.5	48.1	172	10.4 ¹⁴⁹	+8 07.6	87	58	25	20	22 55	55 69	38 17	
2	208	22.5	47.5	186	44.4 ¹⁵⁰	+7 58.9	87	56	14	21 03	22 18	6 59 66	35 19	
3	223	22.5	46.9	201	18.3 ¹⁴⁹	50.1	88	54	20 04	20 49	21 53	7 02 65	33 22	
4	238	22.5	46.3	215	52.3 ¹⁵⁰	41.4	87	52	19 55	37	34	05 63	31 22	
5	253	22.6	+18 45.8	230	26.3 ¹⁵⁰	+7 32.6	88	50	19 47	20 26	21 18	7 08 61	20 29 24	
6	268	22.6	+18 45.2	245	00.3 ¹⁵⁰	+7 23.7	89	45	19 31	20 05	20 48	7 14 58	20 25 27	
7	283	22.6	44.6	259	34.3 ¹⁵⁰	14.9	88	40	17	19 47	25	18 56	22 29	
8	298	22.6	44.0	274	08.4 ¹⁵¹	+7 06.0	89	35	19 05	33	20 07	23 53	19 31	
9	313	22.6	43.4	288	42.4 ¹⁵⁰	+6 57.0	90	30	18 56	22	19 53	26 52	16 34	
10	328	22.6	42.8	303	16.5 ¹⁵¹	48.1	89	20	38	19 02	30	33 48	12 36	
11	343	22.7	+18 42.2	317	50.6 ¹⁵¹	+6 39.1	90	10 N	18 24	18 46	19 12	7 38 45	20 08 39	
12	358	22.7	+18 41.6	332	24.7 ¹⁵¹	+6 30.1	90	0	18 10	18 32	18 57	7 43 43	20 04 42	
13	13	22.7	41.0	346	58.8 ¹⁵¹	21.1	90	10 S	17 56	19	44	49 39	20 00 45	
14	28	22.7	40.4	1	32.9 ¹⁵¹	12.0	91	20	42	18 05	32	7 54 37	19 56 48	
15	43	22.7	39.8	16	07.0 ¹⁵¹	+6 02.9	91	30	26	17 51	20	8 00 34	51 52	
16	58	22.8	39.2	30	41.1 ¹⁵¹	+5 53.8	91	35	16	43	14	04 32	48 54	
17	73	22.8	+18 38.6	45	15.3 ¹⁵²	+5 44.6	92	40	17 05	17 35	18 07	8 08 29	19 45 56	
18	88	22.8	+18 38.0	59	49.5 ¹⁵²	+5 35.5	92	45	16 53	17 25	18 00	8 13 27	19 42 58	
19	103	22.8	37.4	74	23.6 ¹⁵¹	26.3	92	50	38	13	17 53	18 24	37 62	
20	118	22.8	36.8	88	57.8 ¹⁵²	17.1	92	52	30	08	49	21 23	35 64	
21	133	22.9	36.2	103	32.0 ¹⁵²	+5 07.8	93	54	22	17 02	46	24 21	33 65	
22	148	22.9	35.6	118	06.2 ¹⁵²	+4 58.6	92	56	14	16 56	42	27 19	31 66	
23	163	22.9	35.0	132	40.4 ¹⁵²	49.3	93	58	16 03	49	38	30 18	28 69	
24	178	22.9	+18 34.4	147	14.6 ¹⁵²	+4 40.0	93	60 S	15 52	16 41	17 33	8 34 16	19 25 71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 33 ^m 1		Mag: -3.8 PMG: 10 ^h 29 ^m			Mag: +0.4 PMG: 17 ^h 28 ^m			Mag: -1.8 PMG: 11 ^h 53 ^m			Mag: +0.5 PMG: 18 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	306	34.2	202	54.8	+22 37.1	97	32.6	-12 55.6	181	23.9	+19 55.4	81	40.8	-14 40.8
1	321	36.7	217	54.0	36.9	112	33.8	56.0	196	25.7	55.3	96	43.2	40.8
2	336	39.2	232	53.2	36.8	127	35.0	56.5	211	27.6	55.1	111	45.6	40.8
3	351	41.6	247	52.4	36.6	142	36.2	57.0	226	29.5	55.0	126	48.1	40.8
4	6	44.1	262	51.6	36.4	157	37.4	57.5	241	31.4	54.9	141	50.5	40.9
5	21	46.6	277	50.8	+22 36.2	172	38.6	-12 58.0	256	33.3	+19 54.8	156	52.9	-14 40.9
6	36	49.0	292	49.9	+22 36.0	187	39.8	-12 58.5	271	35.2	+19 54.6	171	55.4	-14 40.9
7	51	51.5	307	49.1	35.9	202	41.0	59.0	286	37.1	54.5	186	57.8	40.9
8	66	54.0	322	48.3	35.7	217	42.2	-12 59.5	301	39.0	54.4	202	00.2	40.9
9	81	56.4	337	47.5	35.5	232	43.3	-13 00.0	316	40.8	54.3	217	02.7	41.0
10	96	58.9	352	46.7	35.3	247	44.5	-13 00.5	331	42.7	54.1	232	05.1	41.0
11	112	01.4	7	45.9	+22 35.1	262	45.7	-13 01.0	346	44.6	+19 54.0	247	07.5	-14 41.0
12	127	03.8	22	45.0	+22 35.0	277	46.9	-13 01.5	1	46.5	+19 53.9	262	10.0	-14 41.0
13	142	06.3	37	44.2	34.8	292	48.1	02.0	16	48.4	53.8	277	12.4	41.1
14	157	08.7	52	43.4	34.6	307	49.3	02.5	31	50.3	53.7	292	14.8	41.1
15	172	11.2	67	42.6	34.4	322	50.5	03.0	46	52.2	53.5	307	17.3	41.1
16	187	13.7	82	41.8	34.2	337	51.7	03.5	61	54.1	53.4	322	19.7	41.1
17	202	16.1	97	41.0	+22 34.0	352	52.8	-13 04.0	76	56.0	+19 53.3	337	22.1	-14 41.1
18	217	18.6	112	40.2	+22 33.8	7	54.0	-13 04.5	91	57.8	+19 53.2	352	24.6	-14 41.2
19	232	21.1	127	39.3	33.6	22	55.2	05.0	106	59.7	53.0	7	27.0	41.2
20	247	23.5	142	38.5	33.4	37	56.4	05.5	122	01.6	52.9	22	29.4	41.2
21	262	26.0	157	37.7	33.2	52	57.6	06.0	137	03.5	52.8	37	31.9	41.2
22	277	28.5	172	36.9	33.0	67	58.8	06.5	152	05.4	52.7	52	34.3	41.2
23	292	30.9	187	36.1	32.8	82	59.9	07.0	167	07.3	52.5	67	36.7	41.3
24	307	33.4	202	35.3	+22 32.6	98	01.1	-13 07.5	182	09.2	+19 52.4	82	39.1	-14 41.3
Dif	—		-8		-2	+12		-5	+19		-1	+24		

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: 3 ^d 1 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 3 R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	22.9	+18	34.4	147	14.6	+4	40.0	60 N	** **	2 33	3 36	8 02	71	20 56	14
1	193	23.0		33.8	161	48.8 ¹⁵²		30.7 ⁹³	58	1 18	2 54	3 49	04	69	55	17
2	208	23.0		33.2	176	23.1 ¹⁵³		21.3 ⁹⁴	56	1 55	3 11	4 00	05	67	54	19
3	223	23.0		32.6	190	57.3 ¹⁵²		12.0 ⁹³	54	2 20	25	10	07	65	54	20
4	238	23.0		32.0	205	31.5 ¹⁵²	+4	02.6 ⁹⁴	52	39	37	18	08	64	53	22
5	253	23.0	+18	31.4	220	05.8 ¹⁵³	+3	53.2 ⁹⁴	50	2 55	3 47	4 26	8 09	63	20 53	23
6	268	23.1	+18	30.8	234	40.0 ¹⁵²	+3	43.8 ⁹⁴	45	3 26	4 09	4 43	8 12	59	20 52	26
7	283	23.1		30.2	249	14.2 ¹⁵²		34.4 ⁹⁴	40	3 48	26	4 56	14	57	51	29
8	298	23.1		29.6	263	48.5 ¹⁵³		24.9 ⁹⁵	35	4 06	40	5 08	16	54	50	32
9	313	23.1		29.0	278	22.7 ¹⁵²		15.4 ⁹⁵	30	20	4 52	18	18	52	50	33
10	328	23.2		28.4	292	57.0 ¹⁵³	+3	06.0 ⁹⁴	20	4 43	5 11	35	21	48	48	37
11	343	23.2	+18	27.8	307	31.2 ¹⁵²	+2	56.5 ⁹⁵	10 N	5 01	5 27	5 49	8 23	46	20 47	40
12	358	23.2	+18	27.2	322	05.5 ¹⁵³	+2	47.0 ⁹⁵	0	5 16	5 41	6 03	8 26	42	20 46	43
13	13	23.2		26.6	336	39.7 ¹⁵²		37.4 ⁹⁶	10 S	29	5 54	16	28	40	45	46
14	28	23.3		26.0	351	14.0 ¹⁵³		27.9 ⁹⁵	20	41	6 08	31	31	37	44	49
15	43	23.3		25.4	5	48.2 ¹⁵²		18.3 ⁹⁶	30	53	22	47	34	33	43	52
16	58	23.3		24.8	20	22.4 ¹⁵²	+2	08.8 ⁹⁵	35	5 59	29	6 56	36	31	42	55
17	73	23.4	+18	24.2	34	56.7 ¹⁵³	+1	59.2 ⁹⁶	40	6 05	6 38	7 07	8 37	29	20 41	57
18	88	23.4	+18	23.5	49	30.9 ¹⁵²	+1	49.6 ⁹⁶	45	6 12	6 48	7 19	8 40	26	20 40	60
19	103	23.4		22.9	64	05.1 ¹⁵²		40.0 ⁹⁶	50	20	6 59	35	42	24	39	63
20	118	23.4		22.3	78	39.4 ¹⁵³		30.4 ⁹⁶	52	23	7 04	42	44	21	39	64
21	133	23.5		21.7	93	13.6 ¹⁵²		20.8 ⁹⁶	54	27	10	49	45	20	38	66
22	148	23.5		21.1	107	47.8 ¹⁵²		11.2 ⁹⁶	56	30	16	7 58	46	19	37	68
23	163	23.5		20.5	122	22.0 ¹⁵²	+1	01.6 ⁹⁶	58	34	23	8 08	48	17	37	69
24	178	23.5	+18	19.9	136	56.2 ¹⁵²	+0	51.9 ⁹⁷	60 S	6 39	7 31	8 20	8 50	15	20 36	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 29 ^m 2		Mag: -3.8 PMG: 10 ^h 30 ^m		Mag: +0.4 PMG: 17 ^h 27 ^m		Mag: -1.8 PMG: 11 ^h 50 ^m		Mag: +0.5 PMG: 18 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	307	33.4	202	35.3	+22	32.6	182	09.2	+19	52.4
1	322	35.9	217	34.4		32.4	197	11.1		52.3
2	337	38.3	232	33.6		32.2	212	13.0		52.2
3	352	40.8	247	32.8		32.0	227	14.8		52.0
4	7	43.2	262	32.0		31.8	242	16.7		51.9
5	22	45.7	277	31.2	+22	31.6	257	18.6	+19	51.8
6	37	48.2	292	30.4	+22	31.4	272	20.5	+19	51.7
7	52	50.6	307	29.6		31.2	287	22.4		51.5
8	67	53.1	322	28.7		31.0	302	24.3		51.4
9	82	55.6	337	27.9		30.8	317	26.2		51.3
10	97	58.0	352	27.1		30.6	332	28.1		51.2
11	113	00.5	7	26.3	+22	30.4	347	30.0	+19	51.0
12	128	03.0	22	25.5	+22	30.2	278	15.3	+19	50.9
13	143	05.4	37	24.7		30.0	293	16.5		50.8
14	158	07.9	52	23.9		29.7	308	17.6		50.7
15	173	10.3	67	23.1		29.5	323	18.8		50.5
16	188	12.8	82	22.2		29.3	338	20.0		50.4
17	203	15.3	97	21.4	+22	29.1	353	21.2	+19	50.3
18	218	17.7	112	20.6	+22	28.9	8	22.3	+19	50.2
19	233	20.2	127	19.8		28.6	23	23.5		50.0
20	248	22.7	142	19.0		28.4	38	24.7		49.9
21	263	25.1	157	18.2		28.2	53	25.8		49.8
22	278	27.6	172	17.4		28.0	68	27.0		49.7
23	293	30.1	187	16.6		27.8	83	28.2		49.5
24	308	32.5	202	15.7	+22	27.5	98	29.4	+19	49.4
Dif	—		-8		-2		+12		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 4 ^d 1	PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/7										
	PMG: 12 ^h 06 ^m 4					SD: 14 ^h 8			PMG: 15 ^h 19 ^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	178	23.5	+18 19.9	136	56.2	+0 51.9		60 N	20 33	21 34	** **	9 13 73		21 10 16	
1	193	23.6		151	30.3 ¹⁵¹	42.3 ⁹⁶		58	21	21 14	22 44	13 70		12 18	
2	208	23.6		166	04.5 ¹⁵²	32.6 ⁹⁶		56	10	20 58	22 11	12 68		13 20	
3	223	23.6		180	38.7 ¹⁵²	23.0 ⁹⁶		54	20 00	45	21 48	12 66		14 22	
4	238	23.7		195	12.8 ¹⁵¹	13.3 ⁹⁷		52	19 52	33	29	12 64		15 23	
5	253	23.7	+18 16.8	209	47.0 ¹⁵²	+0 03.6 ⁹⁷		50	19 44	20 23	21 14	9 12 63		21 16 25	
6	268	23.7	+18 16.2	224	21.1 ¹⁵¹	-0 06.0 ⁹⁶		45	19 28	20 02	20 45	9 11 60		21 18 28	
7	283	23.8		238	55.2 ¹⁵¹	15.7 ⁹⁷		40	15	19 45	23	11 57		20 30	
8	298	23.8		253	29.3 ¹⁵¹	25.4 ⁹⁷		35	19 04	32	20 05	10 55		22 32	
9	313	23.8		268	03.4 ¹⁵¹	35.1 ⁹⁷		30	18 54	20	19 51	10 53		23 34	
10	328	23.9		282	37.5 ¹⁵¹	44.8 ⁹⁷		20	38	19 01	29	09 50		25 38	
11	343	23.9	+18 13.1	297	11.5 ¹⁵⁰	-0 54.4 ⁹⁶		10 N	18 23	18 45	19 11	9 09 46		21 27 41	
12	358	23.9	+18 12.5	311	45.6 ¹⁵¹	-1 04.1 ⁹⁷		0	18 10	18 32	18 57	9 08 44		21 29 44	
13	13	23.9		326	19.6 ¹⁵⁰	13.8 ⁹⁷		10 S	17 57	19	44	08 40		31 47	
14	28	24.0		340	53.6 ¹⁵⁰	23.5 ⁹⁷		20	43	18 06	32	08 37		33 50	
15	43	24.0		355	27.6 ¹⁵⁰	33.2 ⁹⁷		30	27	17 52	21	07 34		35 53	
16	58	24.0		10	01.6 ¹⁵⁰	42.9 ⁹⁷		35	18	45	15	07 31		37 55	
17	73	24.1	+18 09.4	24	35.5 ¹⁴⁹	-1 52.5 ⁹⁶		40	17 07	17 36	18 09	9 06 30		21 38 58	
18	88	24.1	+18 08.8	39	09.4 ¹⁴⁹	-2 02.2 ⁹⁷		45	16 55	17 27	18 02	9 06 27		21 40 60	
19	103	24.1		53	43.3 ¹⁴⁹	11.9 ⁹⁷		50	40	16	17 55	06 23		42 63	
20	118	24.2		68	17.2 ¹⁴⁹	21.6 ⁹⁷		52	33	11	52	05 23		43 65	
21	133	24.2		82	51.1 ¹⁴⁹	31.2 ⁹⁶		54	26	17 05	48	05 21		44 66	
22	148	24.3		97	24.9 ¹⁴⁸	40.9 ⁹⁷		56	17	16 59	45	05 19		45 68	
23	163	24.3		111	58.7 ¹⁴⁸	-2 50.5 ⁹⁶		58	16 07	52	41	05 17		46 71	
24	178	24.3	+18 05.0	126	32.5 ¹⁴⁸	-3 00.2 ⁹⁷		60 S	15 56	16 45	17 36	9 05 15		21 48 72	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 25 ^m 3		Mag: -3.8 PMG: 10 ^h 32 ^m			Mag: +0.4 PMG: 17 ^h 25 ^m			Mag: -1.8 PMG: 11 ^h 47 ^m			Mag: +0.5 PMG: 18 ^h 23 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	308	32.5	202	15.7	+22 27.5	98 29.4	-13 19.4		182 54.5	+19 49.4		83 37.4	-14 41.8		
1	323	35.0	217	14.9		113 30.5		19.9	197 56.4		49.3	98 39.9		41.8	
2	338	37.5	232	14.1		128 31.7		20.4	212 58.3		49.2	113 42.3		41.8	
3	353	39.9	247	13.3		143 32.9		20.9	228 00.2		49.1	128 44.7		41.9	
4	8	42.4	262	12.5		158 34.0		21.4	243 02.1		48.9	143 47.1		41.9	
5	23	44.8	277	11.7	+22 26.4	173 35.2	-13 21.9		258 04.0	+19 48.8		158 49.6	-14 41.9		
6	38	47.3	292	10.9	+22 26.1	188 36.4	-13 22.4		273 05.9	+19 48.7		173 52.0	-14 41.9		
7	53	49.8	307	10.1		203 37.5		22.9	288 07.7		48.6	188 54.4		42.0	
8	68	52.2	322	09.2		218 38.7		23.4	303 09.6		48.4	203 56.8		42.0	
9	83	54.7	337	08.4		233 39.9		23.9	318 11.5		48.3	218 59.3		42.0	
10	98	57.2	352	07.6		248 41.0		24.4	333 13.4		48.2	234 01.7		42.0	
11	113	59.6	7	06.8	+22 25.0	263 42.2	-13 24.9		348 15.3	+19 48.1		249 04.1	-14 42.0		
12	129	02.1	22	06.0	+22 24.7	278 43.4	-13 25.4		3 17.2	+19 47.9		264 06.5	-14 42.1		
13	144	04.6	37	05.2		293 44.5		25.9	18 19.1		47.8	279 09.0		42.1	
14	159	07.0	52	04.4		308 45.7		26.4	33 21.0		47.7	294 11.4		42.1	
15	174	09.5	67	03.6		323 46.9		26.9	48 22.9		47.5	309 13.8		42.1	
16	189	11.9	82	02.8		338 48.0		27.4	63 24.7		47.4	324 16.2		42.2	
17	204	14.4	97	01.9	+22 23.5	353 49.2	-13 27.9		78 26.6	+19 47.3		339 18.6	-14 42.2		
18	219	16.9	112	01.1	+22 23.3	8 50.4	-13 28.4		93 28.5	+19 47.2		354 21.1	-14 42.2		
19	234	19.3	127	00.3		23 51.5		28.9	108 30.4		47.0	9 23.5		42.2	
20	249	21.8	141	59.5		38 52.7		29.4	123 32.3		46.9	24 25.9		42.2	
21	264	24.3	156	58.7		53 53.8		29.9	138 34.2		46.8	39 28.3		42.3	
22	279	26.7	171	57.9		68 55.0		30.4	153 36.1		46.7	54 30.8		42.3	
23	294	29.2	186	57.1		83 56.2		30.9	168 38.0		46.5	69 33.2		42.3	
24	309	31.7	201	56.3	+22 21.8	98 57.3	-13 31.4		183 39.9	+19 46.4		84 35.6	-14 42.3		
Dif	—		-8		-2	+12		-5	+19		-1	+24		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 5 ^d 1	PHE { 4 ^h : 54 ^m 8 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2 R°: 45 ^m										
	PMG: 12 ^h 06 ^m 3					SD: 14 ^h 9		PMG: 16 ^h 02 ^m							
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	24.3	+18	05.0	126	32.5	-3 00.2	60 N	** *	2	40	3	40	10	26
1	193	24.4		04.4	141	06.3	09.8	58	1	30	2	59	3	53	23
2	208	24.4		03.8	155	40.0	19.5	56	2	02	3	15	4	04	20
3	223	24.4		03.1	170	13.7	29.1	54		26	29	13	18	68	36
4	238	24.5		02.5	184	47.4	38.7	52		44	40	22	16	66	38
5	253	24.5	+18	01.9	199	21.1	-3 48.3	50	2	59	3	50	4	29	10
6	268	24.5	+18	01.2	213	54.7	-3 57.9	45	3	29	4	11	4	45	10
7	283	24.6	+18	00.6	228	28.3	-4 07.5	40	3	50		28	4	58	08
8	298	24.6	+18	00.0	243	01.8	17.1	35	4	08	41	5	09	05	56
9	313	24.7	+17	59.4	257	35.4	26.6	30		22	4	53	19	10	03
10	328	24.7		58.7	272	08.9	36.2	20	4	44	5	12	35	9	59
11	343	24.7	+17	58.1	286	42.3	-4 45.7	10 N	5	01	5	27	5	50	9
12	358	24.8	+17	57.5	301	15.8	-4 55.2	0	5	16	5	41	6	03	9
13	13	24.8		56.8	315	49.2	-5 04.7	10 S		28	5	54	16	48	42
14	28	24.8		56.2	330	22.5	14.2	20		40	6	07	30	45	38
15	43	24.9		55.6	344	55.9	23.7	30		52	20		46	41	35
16	58	24.9		54.9	359	29.2	33.2	35	5	57	28	6	55	38	34
17	73	25.0	+17	54.3	14	02.4	-5 42.6	40	6	04	6	36	7	05	9
18	88	25.0	+17	53.7	28	35.6	-5 52.0	45	6	10	6	45	7	17	9
19	103	25.0		53.0	43	08.8	-6 01.5	50		17	6	56	32	29	26
20	118	25.1		52.4	57	41.9	10.8	52		20	7	01	38	28	24
21	133	25.1		51.8	72	15.0	20.2	54		24	07		46	26	23
22	148	25.2		51.1	86	48.1	29.6	56		27	13	7	54	24	21
23	163	25.2		50.5	101	21.1	38.9	58		31	19	8	04	22	19
24	178	25.3	+17	49.8	115	54.1	-6 48.2	60 S	6	35	7	27	8	15	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 21 ^m 3		Mag: -3.8 PMG: 10 ^h 33 ^m		Mag: +0.4 PMG: 17 ^h 23 ^m		Mag: -1.8 PMG: 11 ^h 44 ^m		Mag: +0.5 PMG: 18 ^h 19 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	309	31.7	201	56.3	+22	21.8	183	39.9	+19	46.4
1	324	34.1	216	55.5		21.5	198	41.8		46.3
2	339	36.6	231	54.7		21.3	213	43.6		46.2
3	354	39.1	246	53.9		21.0	228	45.5		46.0
4	9	41.5	261	53.0		20.7	243	47.4		45.9
5	24	44.0	276	52.2	+22	20.5	258	49.3	+19	45.8
6	39	46.4	291	51.4	+22	20.2	273	51.2	+19	45.7
7	54	48.9	306	50.6		20.0	288	53.1		45.5
8	69	51.4	321	49.8		19.7	303	55.0		45.4
9	84	53.8	336	49.0		19.4	318	56.9		45.3
10	99	56.3	351	48.2		19.2	333	58.8		45.2
11	114	58.8	6	47.4	+22	18.9	349	00.7	+19	45.0
12	130	01.2	21	46.6	+22	18.6	4	02.6	+19	44.9
13	145	03.7	36	45.8		18.4	19	04.4		44.8
14	160	06.2	51	45.0		18.1	34	06.3		44.7
15	175	08.6	66	44.2		17.8	49	08.2		44.5
16	190	11.1	81	43.3		17.6	64	10.1		44.4
17	205	13.6	96	42.5	+22	17.3	79	12.0	+19	44.3
18	220	16.0	111	41.7	+22	17.0	94	13.9	+19	44.2
19	235	18.5	126	40.9		16.7	109	15.8		44.0
20	250	20.9	141	40.1		16.5	124	17.7		43.9
21	265	23.4	156	39.3		16.2	139	19.6		43.8
22	280	25.9	171	38.5		15.9	154	21.5		43.7
23	295	28.3	186	37.7		15.6	169	23.4		43.5
24	310	30.8	201	36.9	+22	15.3	184	25.2	+19	43.4
Dif	—		-8		-3		+12		-5	
							+19		-1	
									+24	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 6 ^d 1	PHE { 4 ^h : 55/3 12 ^h : 55/6 20 ^h : 55/8	Civil			Náutico	Hora	R°	Hora	R°		
	PMG: 12 ^h 06 ^m 3	hG ☉	Dec			hG ☾								Dif	Dec
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	25.3	+17 49.8	115	54.1	-6 48.2	93	60 N	20 28	21 27	23 26	11 39	75	21 44	21
1	193	25.3	49.2	130	27.0 ¹³⁹	-6 57.5	93	58	16	21 09	22 33	34	73	50	23
2	208	25.3	48.6	144	59.9 ¹³⁹	-7 06.7	92	56	20 06	20 53	22 04	30	70	55	25
3	223	25.4	47.9	159	32.7 ¹³⁸	16.0	93	54	19 57	41	21 42	26	68	21 59	28
4	238	25.4	47.3	174	05.5 ¹³⁸	25.2	92	52	48	29	24	22	67	22 03	29
5	253	25.5	+17 46.7	188	38.3 ¹³⁸	-7 34.4	92	50	19 41	20 19	21 10	11 19	65	22 07	31
6	268	25.5	+17 46.0	203	11.0 ¹³⁷	-7 43.5	91	45	19 26	19 59	20 41	11 12	62	22 15	34
7	283	25.6	45.4	217	43.6 ¹³⁶	-7 52.7	92	40	13	43	20	06	60	22	36
8	298	25.6	44.7	232	16.2 ¹³⁶	-8 01.8	91	35	19 02	30	20 03	11 01	57	28	38
9	313	25.6	44.1	246	48.8 ¹³⁶	10.9	91	30	18 53	19	19 49	10 57	55	34	39
10	328	25.7	43.4	261	21.3 ¹³⁵	19.9	90	20	37	19 00	28	49	52	43	42
11	343	25.7	+17 42.8	275	53.8 ¹³⁵	-8 28.9	90	10 N	18 23	18 45	19 11	10 42	50	22 51	45
12	358	25.8	+17 42.2	290	26.2 ¹³⁴	-8 37.9	90	0	18 10	18 31	18 57	10 36	47	22 58	48
13	13	25.8	41.5	304	58.5 ¹³³	46.9	90	10 S	17 57	19	44	30	44	23 06	50
14	28	25.9	40.9	319	30.8 ¹³³	-8 55.8	89	20	43	18 06	33	23	42	14	53
15	43	25.9	40.2	334	03.1 ¹³³	-9 04.7	89	30	28	17 53	22	16	38	23	56
16	58	26.0	39.6	348	35.3 ¹³²	13.6	89	35	19	46	16	12	36	28	58
17	73	26.0	+17 38.9	3	07.4 ¹³¹	-9 22.4	88	40	17 09	17 38	18 10	10 07	34	23 34	61
18	88	26.0	+17 38.3	17	39.5 ¹³¹	-9 31.2	88	45	16 57	17 29	18 04	10 02	31	23 41	63
19	103	26.1	37.6	32	11.5 ¹³⁰	39.9	87	50	43	18	17 57	9 55	28	50	66
20	118	26.1	37.0	46	43.5 ¹³⁰	48.7	88	52	36	13	54	52	27	54	67
21	133	26.2	36.3	61	15.4 ¹²⁹	-9 57.4	87	54	29	08	51	49	25	23 58	69
22	148	26.2	35.7	75	47.3 ¹²⁹	-10 06.0	86	56	21	17 02	48	45	24	** ** *	**
23	163	26.3	35.0	90	19.1 ¹²⁸	14.6	86	58	11	16 56	44	41	22	** ** *	**
24	178	26.3	+17 34.4	104	50.8 ¹²⁷	-10 23.2	86	60 S	16 01	16 49	17 40	9 36	20	** ** *	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 3 ^h 17 ^m 4		Mag: -3.8		Mag: +0.4		Mag: -1.8		Mag: +0.5		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	310	30.8	201	36.9	+22 15.3	99 25.0	-13 43.4	184 25.2	+19 43.4	85 33.7	-14 42.9
1	325	33.3	216	36.1	15.1	114 26.2	43.9	199 27.1	43.3	100 36.1	42.9
2	340	35.7	231	35.3	14.8	129 27.3	44.4	214 29.0	43.2	115 38.5	43.0
3	355	38.2	246	34.5	14.5	144 28.4	44.9	229 30.9	43.0	130 40.9	43.0
4	10	40.7	261	33.7	14.2	159 29.6	45.4	244 32.8	42.9	145 43.4	43.0
5	25	43.1	276	32.9	+22 13.9	174 30.7	-13 45.9	259 34.7	+19 42.8	160 45.8	-14 43.0
6	40	45.6	291	32.1	+22 13.6	189 31.9	-13 46.4	274 36.6	+19 42.6	175 48.2	-14 43.1
7	55	48.0	306	31.3	13.4	204 33.0	46.9	289 38.5	42.5	190 50.6	43.1
8	70	50.5	321	30.5	13.1	219 34.2	47.4	304 40.4	42.4	205 53.0	43.1
9	85	53.0	336	29.7	12.8	234 35.3	47.9	319 42.3	42.3	220 55.5	43.1
10	100	55.4	351	28.8	12.5	249 36.5	48.4	334 44.2	42.1	235 57.9	43.2
11	115	57.9	6	28.0	+22 12.2	264 37.6	-13 48.9	349 46.0	+19 42.0	251 00.3	-14 43.2
12	131	00.4	21	27.2	+22 11.9	279 38.7	-13 49.3	4 47.9	+19 41.9	266 02.7	-14 43.2
13	146	02.8	36	26.4	11.6	294 39.9	49.8	19 49.8	41.8	281 05.1	43.2
14	161	05.3	51	25.6	11.3	309 41.0	50.3	34 51.7	41.6	296 07.5	43.3
15	176	07.8	66	24.8	11.0	324 42.2	50.8	49 53.6	41.5	311 10.0	43.3
16	191	10.2	81	24.0	10.7	339 43.3	51.3	64 55.5	41.4	326 12.4	43.3
17	206	12.7	96	23.2	+22 10.4	354 44.5	-13 51.8	79 57.4	+19 41.3	341 14.8	-14 43.3
18	221	15.2	111	22.4	+22 10.1	9 45.6	-13 52.3	94 59.3	+19 41.1	356 17.2	-14 43.4
19	236	17.6	126	21.6	09.8	24 46.7	52.8	110 01.2	41.0	11 19.6	43.4
20	251	20.1	141	20.8	09.5	39 47.9	53.3	125 03.1	40.9	26 22.0	43.4
21	266	22.5	156	20.0	09.2	54 49.0	53.8	140 05.0	40.8	41 24.4	43.4
22	281	25.0	171	19.2	08.9	69 50.2	54.3	155 06.9	40.6	56 26.9	43.5
23	296	27.5	186	18.4	08.6	84 51.3	54.8	170 08.7	40.5	71 29.3	43.5
24	311	29.9	201	17.6	+22 08.3	99 52.4	-13 55.3	185 10.6	+19 40.4	86 31.7	-14 43.5
Dif	—	-8	-3	-3	+11	-5	-5	+19	-1	+24	0

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 06 ^m 2			Edad: 7 ^d 1 PHE { 4 ^h : 56/0 12 ^h : 56/3 20 ^h : 56/5 PMG: 17 ^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	178	26.3	+17	34.4	104	50.8	-10	23.2	85	60 N	0 47	2 46	3 45	12 54	75	22 05	27
1	193	26.4		33.7	119	22.5 ¹²⁷		31.7	85	58	1 40	3 04	3 57	47 73		13 30	
2	208	26.4		33.1	133	54.2 ¹²⁷		40.2	85	56	2 09	20	4 07	40 71		20 32	
3	223	26.5		32.4	148	25.7 ¹²⁵		48.6	84	54	31	33	17	34 69		27 33	
4	238	26.5		31.8	162	57.2 ¹²⁵	-10	57.1	85	52	2 49	44	25	29 68		32 35	
5	253	26.6	+17	31.1	177	28.7 ¹²⁵	-11	05.4	83	50	3 03	3 54	4 32	12 24	67	22 38	35
6	268	26.6	+17	30.5	192	00.0 ¹²³	-11	13.7	83	45	3 32	4 14	4 47	12 14	63	22 49	38
7	283	26.7		29.8	206	31.3 ¹²³		22.0	83	40	3 53	30	5 00	12 06	61	22 58	41
8	298	26.7		29.2	221	02.6 ¹²³		30.2	82	35	4 10	43	11	11 58	59	23 06	42
9	313	26.8		28.5	235	33.8 ¹²²		38.4	82	30	23	4 54	20	52 57		13 44	
10	328	26.8		27.9	250	04.9 ¹²¹		46.5	81	20	4 45	5 13	36	41 55		25 47	
11	343	26.9	+17	27.2	264	35.9 ¹²⁰	-11	54.6	81	10 N	5 02	5 28	5 50	11 32	52	23 36	49
12	358	26.9	+17	26.6	279	06.9 ¹²⁰	-12	02.7	81	0	5 16	5 41	6 03	11 23	49	23 46	51
13	13	27.0		25.9	293	37.8 ¹¹⁹		10.7	80	10 S	28	5 53	15	14 47		23 56	53
14	28	27.0		25.3	308	08.7 ¹¹⁹		18.6	79	20	39	6 06	29	11 05	44	** ** *	**
15	43	27.1		24.6	322	39.5 ¹¹⁸		26.5	79	30	50	19	44	10 54	42	** ** *	**
16	58	27.1		23.9	337	10.2 ¹¹⁷		34.3	78	35	5 56	26	6 53	48 40		** ** *	**
17	73	27.2	+17	23.3	351	40.8 ¹¹⁶	-12	42.1	78	40	6 02	6 34	7 03	10 41	38	** ** *	**
18	88	27.3	+17	22.6	6	11.4 ¹¹⁶	-12	49.8	77	45	6 08	6 43	7 15	10 33	36	** ** *	**
19	103	27.3		22.0	20	41.9 ¹¹⁵	-12	57.5	77	50	15	54	29	23 33		** ** *	**
20	118	27.4		21.3	35	12.3 ¹¹⁴	-13	05.1	76	52	18	6 58	35	19 32		** ** *	**
21	133	27.4		20.6	49	42.7 ¹¹⁴		12.6	75	54	21	7 04	42	14 30		** ** *	**
22	148	27.5		20.0	64	13.0 ¹¹³		20.1	75	56	24	09	7 51	09 28		0 03	71
23	163	27.5		19.3	78	43.2 ¹¹²		27.6	75	58	28	15	8 00	10 03	26	08 73	
24	178	27.6	+17	18.7	93	13.4 ¹¹²	-13	35.0	74	60 S	6 32	7 22	8 10	9 56	24	0 14	75

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 3 ^h 13 ^m 5		Mag: -3.8 PMG: 10 ^h 35 ^m			Mag: +0.4 PMG: 17 ^h 19 ^m			Mag: -1.8 PMG: 11 ^h 38 ^m			Mag: +0.5 PMG: 18 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	311	29.9	201	17.6	+22	08.3	99	52.4	-13	55.3	185	10.6	+19	40.4	86	31.7	-14	43.5
1	326	32.4	216	16.8		08.0	114	53.6		55.8	200	12.5		40.2	101	34.1		43.5
2	341	34.9	231	16.0		07.7	129	54.7		56.3	215	14.4		40.1	116	36.5		43.6
3	356	37.3	246	15.2		07.4	144	55.8		56.8	230	16.3		40.0	131	38.9		43.6
4	11	39.8	261	14.4		07.0	159	57.0		57.3	245	18.2		39.9	146	41.3		43.6
5	26	42.3	276	13.6	+22	06.7	174	58.1	-13	57.8	260	20.1	+19	39.7	161	43.8	-14	43.6
6	41	44.7	291	12.8	+22	06.4	189	59.2	-13	58.3	275	22.0	+19	39.6	176	46.2	-14	43.7
7	56	47.2	306	12.0		06.1	205	00.4		58.8	290	23.9		39.5	191	48.6		43.7
8	71	49.7	321	11.2		05.8	220	01.5		59.3	305	25.8		39.4	206	51.0		43.7
9	86	52.1	336	10.4		05.5	235	02.6	-13	59.8	320	27.7		39.2	221	53.4		43.7
10	101	54.6	351	09.6		05.2	250	03.8	-14	00.3	335	29.6		39.1	236	55.8		43.8
11	116	57.0	6	08.8	+22	04.8	265	04.9	-14	00.8	350	31.5	+19	39.0	251	58.2	-14	43.8
12	131	59.5	21	08.0	+22	04.5	280	06.0	-14	01.3	5	33.3	+19	38.9	267	00.6	-14	43.8
13	147	02.0	36	07.2		04.2	295	07.2		01.8	20	35.2		38.7	282	03.1		43.8
14	162	04.4	51	06.4		03.9	310	08.3		02.3	35	37.1		38.6	297	05.5		43.9
15	177	06.9	66	05.6		03.5	325	09.4		02.8	50	39.0		38.5	312	07.9		43.9
16	192	09.4	81	04.8		03.2	340	10.6		03.3	65	40.9		38.3	327	10.3		43.9
17	207	11.8	96	04.0	+22	02.9	355	11.7	-14	03.8	80	42.8	+19	38.2	342	12.7	-14	44.0
18	222	14.3	111	03.2	+22	02.6	10	12.8	-14	04.3	95	44.7	+19	38.1	357	15.1	-14	44.0
19	237	16.8	126	02.4		02.2	25	13.9		04.8	110	46.6		38.0	12	17.5		44.0
20	252	19.2	141	01.6		01.9	40	15.1		05.3	125	48.5		37.8	27	19.9		44.0
21	267	21.7	156	00.8		01.6	55	16.2		05.8	140	50.4		37.7	42	22.3		44.1
22	282	24.1	171	00.0		01.3	70	17.3		06.3	155	52.3		37.6	57	24.8		44.1
23	297	26.6	185	59.2		00.9	85	18.5		06.8	170	54.2		37.5	72	27.2		44.1
24	312	29.1	200	58.4	+22	00.6	100	19.6	-14	07.3	185	56.1	+19	37.3	87	29.6	-14	44.1
Dif	—		-8 -3			+11 -5			+19 -1			+24 0						

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1				Edad: 8 ^d 1 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 1 20 ^h : 57 ^m 4 R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif				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	27.6	+17	18.7	93	13.4	-13	35.0	60 N	20 23	21 21	23 06	14 09 74	22 32 37				
1	193	27.6		18.0	107	43.4 ¹¹⁰		42.3 ⁷³	58	12	21 03	22 24	14 00 71	43 38				
2	208	27.7		17.3	122	13.4 ¹¹⁰		49.5 ⁷²	56	20 02	20 49	21 56	13 51 70	22 52 39				
3	223	27.7		16.7	136	43.4 ¹¹⁰	-13	56.7 ⁷²	54	19 53	36	36	43 69	23 00 41				
4	238	27.8		16.0	151	13.2 ¹⁰⁸	-14	03.9 ⁷²	52	45	25	19	37 67	07 42				
5	253	27.9	+17	15.4	165	43.0 ¹⁰⁸	-14	10.9 ⁷⁰	50	19 38	20 16	21 05	13 31 66	23 13 43				
6	268	27.9	+17	14.7	180	12.7 ¹⁰⁷	-14	17.9 ⁷⁰	45	19 23	19 56	20 38	13 17 64	23 27 45				
7	283	28.0		14.0	194	42.3 ¹⁰⁶		24.9 ⁷⁰	40	11	41	17	13 07 61	39 46				
8	298	28.0		13.4	209	11.9 ¹⁰⁶		31.7 ⁶⁸	35	19 00	28	20 01	12 57 61	48 49				
9	313	28.1		12.7	223	41.4 ¹⁰⁵		38.5 ⁶⁸	30	18 51	19 17	19 48	49 59	23 57 49				
10	328	28.1		12.0	238	10.8 ¹⁰⁴		45.3 ⁶⁸	20	36	18 59	26	36 56	** ** *				
11	343	28.2	+17	11.4	252	40.1 ¹⁰³	-14	51.9 ⁶⁶	10 N	18 22	18 44	19 10	12 24 54	** ** *				
12	358	28.3	+17	10.7	267	09.3 ¹⁰²	-14	58.5 ⁶⁶	0	18 10	18 31	18 56	12 12 53	** ** *				
13	13	28.3		10.0	281	38.5 ¹⁰²	-15	05.0 ⁶⁵	10 S	17 57	19	44	12 01 51	** ** *				
14	28	28.4		09.4	296	07.6 ¹⁰¹		11.5 ⁶⁵	20	44	18 07	34	11 49 49	0 07 55				
15	43	28.4		08.7	310	36.6 ¹⁰⁰		17.9 ⁶⁴	30	29	17 54	23	36 46	19 58				
16	58	28.5		08.0	325	05.5 ⁹⁹		24.2 ⁶³	35	21	47	18	28 45	26 60				
17	73	28.5	+17	07.4	339	34.4 ⁹⁹	-15	30.4 ⁶²	40	17 11	17 40	18 12	11 19 44	0 35 61				
18	88	28.6	+17	06.7	354	03.2 ⁹⁸	-15	36.5 ⁶¹	45	16 59	17 31	18 06	11 09 42	0 44 64				
19	103	28.7		06.0	8	31.9 ⁹⁷		42.6 ⁶¹	50	46	21	18 00	10 56 40	0 56 66				
20	118	28.7		05.3	23	00.5 ⁹⁶		48.6 ⁶⁰	52	39	16	17 57	51 38	1 01 67				
21	133	28.8		04.7	37	29.1 ⁹⁶	-15	54.5 ⁵⁹	54	32	11	54	44 37	07 69				
22	148	28.9		04.0	51	57.5 ⁹⁴	-16	00.3 ⁵⁸	56	24	17 06	51	37 36	14 70				
23	163	28.9		03.3	66	25.9 ⁹⁴		06.1 ⁵⁸	58	15	16 59	47	29 34	21 72				
24	178	29.0	+17	02.7	80	54.2 ⁹³	-16	11.8 ⁵⁷	60 S	16 05	16 53	17 44	10 20 32	1 29 75				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 09 ^m 5		Mag: -3.8 PMG: 10 ^h 37 ^m				Mag: +0.4 PMG: 17 ^h 17 ^m				Mag: -1.8 PMG: 11 ^h 35 ^m				Mag: +0.5 PMG: 18 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	29.1	200	58.4	+22	00.6	100	19.6	-14	07.3	185	56.1	+19	37.3	87	29.6	-14	44.1
1	327	31.5	215	57.6	+22	00.3	115	20.7		07.8	200	57.9		37.2	102	32.0		44.2
2	342	34.0	230	56.8	+21	59.9	130	21.8		08.3	215	59.8		37.1	117	34.4		44.2
3	357	36.5	245	56.0		59.6	145	23.0		08.8	231	01.7		36.9	132	36.8		44.2
4	12	38.9	260	55.2		59.2	160	24.1		09.3	246	03.6		36.8	147	39.2		44.2
5	27	41.4	275	54.4	+21	58.9	175	25.2	-14	09.8	261	05.5	+19	36.7	162	41.6	-14	44.3
6	42	43.9	290	53.6	+21	58.6	190	26.3	-14	10.3	276	07.4	+19	36.6	177	44.0	-14	44.3
7	57	46.3	305	52.8		58.2	205	27.5		10.8	291	09.3		36.4	192	46.4		44.3
8	72	48.8	320	52.0		57.9	220	28.6		11.3	306	11.2		36.3	207	48.9		44.4
9	87	51.3	335	51.2		57.5	235	29.7		11.8	321	13.1		36.2	222	51.3		44.4
10	102	53.7	350	50.4		57.2	250	30.8		12.3	336	15.0		36.1	237	53.7		44.4
11	117	56.2	5	49.6	+21	56.8	265	31.9	-14	12.8	351	16.9	+19	35.9	252	56.1	-14	44.4
12	132	58.6	20	48.9	+21	56.5	280	33.1	-14	13.3	6	18.8	+19	35.8	267	58.5	-14	44.5
13	148	01.1	35	48.1		56.1	295	34.2		13.8	21	20.7		35.7	283	00.9		44.5
14	163	03.6	50	47.3		55.8	310	35.3		14.3	36	22.6		35.5	298	03.3		44.5
15	178	06.0	65	46.5		55.4	325	36.4		14.8	51	24.5		35.4	313	05.7		44.5
16	193	08.5	80	45.7		55.1	340	37.5		15.3	66	26.3		35.3	328	08.1		44.6
17	208	11.0	95	44.9	+21	54.7	355	38.7	-14	15.8	81	28.2	+19	35.2	343	10.5	-14	44.6
18	223	13.4	110	44.1	+21	54.4	10	39.8	-14	16.3	96	30.1	+19	35.0	358	12.9	-14	44.6
19	238	15.9	125	43.3		54.0	25	40.9		16.8	111	32.0		34.9	13	15.3		44.7
20	253	18.4	140	42.5		53.7	40	42.0		17.3	126	33.9		34.8	28	17.8		44.7
21	268	20.8	155	41.7		53.3	55	43.1		17.8	141	35.8		34.7	43	20.2		44.7
22	283	23.3	170	40.9		53.0	70	44.2		18.2	156	37.7		34.5	58	22.6		44.7
23	298	25.8	185	40.1		52.6	85	45.4		18.7	171	39.6		34.4	73	25.0		44.8
24	313	28.2	200	39.3	+21	52.2	100	46.5	-14	19.2	186	41.5	+19	34.3	88	27.4	-14	44.8
Dif	—		-8		-3		+11		-5		+19		-1		+24			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 0				Edad: 9 ^d 1 PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	178	29.0	+17	02.7	80	54.2	-16	11.8	55	58	60 N	1 06	2 52	3 50	15 23 68	23 09 48		
1	193	29.0		02.0	95	22.4	92	17.3	55	58		1 49	3 10	4 01	11 67	21 50		
2	208	29.1		01.3	109	50.6	92	22.8	55	56		2 16	24	11	15 01 66	31 51		
3	223	29.2	+17	00.6	124	18.7	91	28.3	55	54		37	37	20	14 52 65	41 51		
4	238	29.2	+17	00.0	138	46.7	90	33.6	53	52		2 54	47	28	44 64	49 52		
5	253	29.3	+16	59.3	153	14.6	89	-16 38.8	52	50		3 07	3 57	4 35	14 37 63	23 56 53		
6	268	29.3	+16	58.6	167	42.4	88	-16 44.0	52	45		3 35	4 16	4 50	14 21 63	*** ** *		
7	283	29.4		57.9	182	10.2	88	49.0	50	40		3 55	32	5 02	14 08 62	*** ** *		
8	298	29.5		57.3	196	37.8	86	54.0	50	35		4 11	45	12	13 58 60	*** ** *		
9	313	29.5		56.6	211	05.4	86	-16 58.9	49	30		25	4 56	21	48 60	*** ** *		
10	328	29.6		55.9	225	32.9	85	-17 03.7	48	20		4 46	5 13	37	32 59	0 12 51		
11	343	29.7	+16	55.2	240	00.4	85	-17 08.4	47	10 N		5 02	5 28	5 50	13 18 57	0 25 53		
12	358	29.7	+16	54.5	254	27.8	84	-17 13.0	46	0		5 16	5 41	6 03	13 05 56	0 37 54		
13	13	29.8		53.9	268	55.0	82	17.5	45	10 S		28	5 53	15	12 52 55	0 49 56		
14	28	29.9		53.2	283	22.2	82	21.9	44	20		38	6 05	28	38 54	1 02 58		
15	43	29.9		52.5	297	49.4	82	26.2	43	30		49	18	43	22 53	17 60		
16	58	30.0		51.8	312	16.4	80	30.4	42	35		5 54	24	6 51	13 52	26 60		
17	73	30.1	+16	51.1	326	43.4	80	-17 34.5	41	40		6 00	6 32	7 01	12 03 50	1 36 62		
18	88	30.1	+16	50.5	341	10.3	79	-17 38.6	41	45		6 06	6 41	7 12	11 51 49	1 48 63		
19	103	30.2		49.8	355	37.1	78	42.5	39	50		12	51	25	36 47	2 02 65		
20	118	30.3		49.1	10	03.9	78	46.3	38	52		15	6 55	32	29 47	08 66		
21	133	30.3		48.4	24	30.5	76	50.0	37	54		18	7 00	39	21 46	16 67		
22	148	30.4		47.7	38	57.1	76	53.6	36	56		21	06	47	13 45	24 68		
23	163	30.5		47.0	53	23.7	76	-17 57.1	35	58		24	12	7 55	11 03 44	33 70		
24	178	30.5	+16	46.4	67	50.1	74	-18 00.5	34	60 S		6 28	7 18	8 05	10 52 42	2 44 71		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 05 ^m 6		Mag: -3.8 PMG: 10 ^h 38 ^m				Mag: +0.4 PMG: 17 ^h 16 ^m				Mag: -1.8 PMG: 11 ^h 32 ^m				Mag: +0.5 PMG: 18 ^h 03 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	313	28.2	200	39.3	+21	52.2	100	46.5	-14	19.2	186	41.5	+19	34.3	88	27.4	-14	44.8
1	328	30.7	215	38.5		51.9	115	47.6		19.7	201	43.4		34.1	103	29.8		44.8
2	343	33.1	230	37.7		51.5	130	48.7		20.2	216	45.3		34.0	118	32.2		44.8
3	358	35.6	245	36.9		51.2	145	49.8		20.7	231	47.2		33.9	133	34.6		44.9
4	13	38.1	260	36.2		50.8	160	50.9		21.2	246	49.1		33.8	148	37.0		44.9
5	28	40.5	275	35.4	+21	50.4	175	52.1	-14	21.7	261	51.0	+19	33.6	163	39.4	-14	44.9
6	43	43.0	290	34.6	+21	50.1	190	53.2	-14	22.2	276	52.9	+19	33.5	178	41.8	-14	45.0
7	58	45.5	305	33.8		49.7	205	54.3		22.7	291	54.7		33.4	193	44.2		45.0
8	73	47.9	320	33.0		49.3	220	55.4		23.2	306	56.6		33.2	208	46.6		45.0
9	88	50.4	335	32.2		49.0	235	56.5		23.7	321	58.5		33.1	223	49.0		45.0
10	103	52.9	350	31.4		48.6	250	57.6		24.2	337	00.4		33.0	238	51.4		45.1
11	118	55.3	5	30.6	+21	48.2	265	58.7	-14	24.7	352	02.3	+19	32.9	253	53.8	-14	45.1
12	133	57.8	20	29.8	+21	47.8	280	59.8	-14	25.2	7	04.2	+19	32.7	268	56.2	-14	45.1
13	149	00.2	35	29.0		47.5	296	00.9		25.7	22	06.1		32.6	283	58.6		45.2
14	164	02.7	50	28.2		47.1	311	02.0		26.2	37	08.0		32.5	299	01.1		45.2
15	179	05.2	65	27.5		46.7	326	03.2		26.7	52	09.9		32.4	314	03.5		45.2
16	194	07.6	80	26.7		46.3	341	04.3		27.2	67	11.8		32.2	329	05.9		45.2
17	209	10.1	95	25.9	+21	45.9	356	05.4	-14	27.7	82	13.7	+19	32.1	344	08.3	-14	45.3
18	224	12.6	110	25.1	+21	45.6	11	06.5	-14	28.2	97	15.6	+19	32.0	359	10.7	-14	45.3
19	239	15.0	125	24.3		45.2	26	07.6		28.7	112	17.5		31.8	14	13.1		45.3
20	254	17.5	140	23.5		44.8	41	08.7		29.2	127	19.4		31.7	29	15.5		45.4
21	269	20.0	155	22.7		44.4	56	09.8		29.7	142	21.3		31.6	44	17.9		45.4
22	284	22.4	170	21.9		44.0	71	10.9		30.2	157	23.2		31.5	59	20.3		45.4
23	299	24.9	185	21.1		43.7	86	12.0		30.7	172	25.1		31.3	74	22.7		45.4
24	314	27.4	200	20.4	+21	43.3	101	13.1	-14	31.2	187	27.0	+19	31.2	89	25.1	-14	45.5
Dif	—		-8		-4		+11		-5		+19		-1		+24			

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: 10 ^d 1 PHE { 4 ^h : 58 ^m 6 12 ^h : 59 ^m 0 20 ^h : 59 ^m 3 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									
0	178	30.5	+16	46.4	67	50.1	-18	00.5	60 N	20 18	21 14	22 51	16 31 59		23 57 64									
1	193	30.6		45.7	82	16.5		03.8	58	20 07	20 57	22 14	18 59		** ** *	**								
2	208	30.7		45.0	96	42.8		07.0	56	19 57		44	21 49	16 07 59	** ** *	**								
3	223	30.7		44.3	111	09.0		10.1	54		49	32	30	15 57 59	** ** *	**								
4	238	30.8		43.6	125	35.2		13.0	52		41	21	14	48 59	** ** *	**								
5	253	30.9	+16	42.9	140	01.3	-18	15.9	50	19 35	20 12	21 01	15 40 59		** ** *	**								
6	268	30.9	+16	42.3	154	27.3	-18	18.6	45	19 20	19 53	20 34	15 24 59		0 12 54									
7	283	31.0		41.6	168	53.2		21.3	40	19 08		38	20 15	15 10 59	25 54									
8	298	31.1		40.9	183	19.1		23.8	35	18 58		26	19 59	14 58 59	37 54									
9	313	31.1		40.2	197	44.9		26.2	30		49	19 15	46	48 59	0 46 56									
10	328	31.2		39.5	212	10.6		28.5	20		34	18 58	25	31 58	1 03 56									
11	343	31.3	+16	38.8	226	36.3	-18	30.7	10 N	18 21	18 43	19 09	14 15 59	1 18 57										
12	358	31.4	+16	38.1	241	01.9	-18	32.8	0	18 09	18 31	18 56	14 01 59	1 31 58										
13	13	31.4		37.4	255	27.4		34.7	10 S	17 57		19	45	13 47 59	1 45 58									
14	28	31.5		36.7	269	52.9		36.5	20		45	18 08	34	32 58	2 00 59									
15	43	31.6		36.0	284	18.3		38.3	30		30	17 55	24	15 58	17 59									
16	58	31.6		35.4	298	43.7		39.9	35		22	49	19	13 05 58	26 60									
17	73	31.7	+16	34.7	313	09.0	-18	41.3	40	17 13	17 41	18 14	12 53 58	2 38 60										
18	88	31.8	+16	34.0	327	34.2	-18	42.7	45	17 02	17 33	18 08	12 40 58	2 51 61										
19	103	31.9		33.3	341	59.3		43.9	50	16 49		23	18 02	23 58	3 07 61									
20	118	31.9		32.6	356	24.4		45.0	52		42	19	17 59	16 57	14 62									
21	133	32.0		31.9	10	49.5		46.0	54		36	14	57	12 07 58	23 62									
22	148	32.1		31.2	25	14.5		46.9	56		28	09	54	11 58 57	32 63									
23	163	32.2		30.5	39	39.4		47.7	58		19	17 03	51	47 57	43 63									
24	178	32.2	+16	29.8	54	04.3	-18	48.3	60 S	16 10	16 57	17 47	11 34 57	3 55 64										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 3 ^h 01 ^m 7			Mag: -3.8 PMG: 10 ^h 39 ^m			Mag: +0.5 PMG: 17 ^h 14 ^m			Mag: -1.8 PMG: 11 ^h 29 ^m			Mag: +0.5 PMG: 17 ^h 59 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	314	27.4	200	20.4	+21	43.3	101	13.1	-14	31.2	187	27.0	+19	31.2	89	25.1	-14	45.5						
1	329	29.8	215	19.6		42.9	116	14.2		31.7	202	28.8		31.1	104	27.5		45.5						
2	344	32.3	230	18.8		42.5	131	15.3		32.2	217	30.7		30.9	119	29.9		45.5						
3	359	34.7	245	18.0		42.1	146	16.4		32.7	232	32.6		30.8	134	32.3		45.6						
4	14	37.2	260	17.2		41.7	161	17.5		33.2	247	34.5		30.7	149	34.7		45.6						
5	29	39.7	275	16.4	+21	41.3	176	18.6	-14	33.7	262	36.4	+19	30.6	164	37.1	-14	45.6						
6	44	42.1	290	15.6	+21	40.9	191	19.7	-14	34.2	277	38.3	+19	30.4	179	39.5	-14	45.6						
7	59	44.6	305	14.9		40.5	206	20.8		34.7	292	40.2		30.3	194	41.9		45.7						
8	74	47.1	320	14.1		40.1	221	21.9		35.2	307	42.1		30.2	209	44.3		45.7						
9	89	49.5	335	13.3		39.7	236	23.0		35.7	322	44.0		30.0	224	46.7		45.7						
10	104	52.0	350	12.5		39.3	251	24.1		36.2	337	45.9		29.9	239	49.1		45.8						
11	119	54.5	5	11.7	+21	38.9	266	25.2	-14	36.7	352	47.8	+19	29.8	254	51.5	-14	45.8						
12	134	56.9	20	10.9	+21	38.5	281	26.3	-14	37.2	7	49.7	+19	29.7	269	53.9	-14	45.8						
13	149	59.4	35	10.1		38.1	296	27.4		37.7	22	51.6		29.5	284	56.3		45.8						
14	165	01.9	50	09.4		37.7	311	28.5		38.2	37	53.5		29.4	299	58.7		45.9						
15	180	04.3	65	08.6		37.3	326	29.6		38.6	52	55.4		29.3	315	01.1		45.9						
16	195	06.8	80	07.8		36.9	341	30.7		39.1	67	57.3		29.1	330	03.5		45.9						
17	210	09.2	95	07.0	+21	36.5	356	31.8	-14	39.6	82	59.2	+19	29.0	345	05.9	-14	46.0						
18	225	11.7	110	06.2	+21	36.1	11	32.9	-14	40.1	98	01.1	+19	28.9	0	08.3	-14	46.0						
19	240	14.2	125	05.4		35.7	26	34.0		40.6	113	03.0		28.8	15	10.7		46.0						
20	255	16.6	140	04.7		35.3	41	35.1		41.1	128	04.9		28.6	30	13.1		46.1						
21	270	19.1	155	03.9		34.9	56	36.2		41.6	143	06.8		28.5	45	15.5		46.1						
22	285	21.6	170	03.1		34.5	71	37.3		42.1	158	08.6		28.4	60	17.9		46.1						
23	300	24.0	185	02.3		34.1	86	38.4		42.6	173	10.5		28.2	75	20.3		46.1						
24	315	26.5	200	01.5	+21	33.7	101	39.5	-14	43.1	188	12.4	+19	28.1	90	22.7	-14	46.2						
Dif	—			-8			-4			+11			-5			+19			-1			+24		

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			Edad: 11 ^d 1 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 9 20 ^h : 60 ^m 1 Rº: 61 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	m	
0	178	32.2	+16	29.8	54	04.3	-18	48.3	5	60 N	1 21	2 58	3 55	17 30	47	**	**	**	
1	193	32.3		29.1	68	29.1	58	48.8	3	58	1 58	3 15	4 06	17 49		0	11	63	
2	208	32.4		28.4	82	53.9	58	49.1	3	56	2 23	29	15	17 06	50	22	63		
3	223	32.5		27.7	97	18.6	57	49.4	3	54	42	41	23	16 56	51	32	63		
4	238	32.5		27.0	111	43.2	56	49.5	1	52	2 58	3 51	31	16 47	52	41	62		
5	253	32.6	+16	26.3	126	07.8	56	-18	49.5	0	50	3 12	4 00	4 38	16 39	53	0	49	62
6	268	32.7	+16	25.6	140	32.4	56	-18	49.4	1	45	3 38	4 19	4 52	16 23	53	1	06	62
7	283	32.8		24.9	154	56.9	55	49.1	3	40	3 58	34	5 04	16 09	55	19	62		
8	298	32.8		24.2	169	21.4	55	48.7	4	35	4 13	46	14	15 57	56	31	62		
9	313	32.9		23.5	183	45.8	54	48.2	5	30	26	4 57	23	15 47	57	42	61		
10	328	33.0		22.8	198	10.2	54	47.6	6	20	4 47	5 14	37	15 29	59	1	59	61	
11	343	33.1	+16	22.1	212	34.5	53	-18	46.8	8	10 N	5 03	5 28	5 50	15 14	59	2	15	60
12	358	33.1	+16	21.4	226	58.8	53	-18	45.9	9	0	5 16	5 41	6 02	15 00	60	2	29	60
13	13	33.2		20.7	241	23.0	52	44.8	11	10 S	27	5 52	14	14 46	61	43	59		
14	28	33.3		20.0	255	47.2	52	43.7	11	20	37	6 04	27	14 30	63	2	59	58	
15	43	33.4		19.3	270	11.4	52	42.4	13	30	47	16	41	13 13	64	3	16	58	
16	58	33.5		18.6	284	35.6	52	40.9	15	35	52	23	49	12 14	03	64	26	58	
17	73	33.5	+16	17.9	298	59.7	51	-18	39.4	15	40	5 58	6 30	6 58	13 51	65	3	38	57
18	88	33.6	+16	17.2	313	23.7	50	-18	37.7	17	45	6 03	6 38	7 09	13 38	66	3	52	56
19	103	33.7		16.5	327	47.8	51	35.9	18	50	09	48	22	13 21	67	4	08	56	
20	118	33.8		15.8	342	11.8	50	33.9	20	52	12	52	28	12 13	68	16	55		
21	133	33.8		15.1	356	35.7	49	31.8	21	54	14	6 57	35	11 13	05	68	25	55	
22	148	33.9		14.4	10	59.7	50	29.6	22	56	17	7 02	42	10 12	55	69	35	54	
23	163	34.0		13.7	25	23.6	49	27.3	23	58	20	07	7 51	09 44	70	46	53		
24	178	34.1	+16	13.0	39	47.5	49	-18	24.8	25	60 S	6 23	7 14	8 00	12 31	71	4	59	52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 57 ^m 7		Mag: -3.8 PMG: 10 ^h 40 ^m		Mag: +0.5 PMG: 17 ^h 12 ^m		Mag: -1.8 PMG: 11 ^h 26 ^m		Mag: +0.6 PMG: 17 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	315	26.5	200	01.5	+21	33.7	101	39.5	-14	43.1	188	12.4	+19	28.1	90	22.7	-14	46.2
1	330	29.0	215	00.7		33.2	116	40.6		43.6	203	14.3		28.0	105	25.1		46.2
2	345	31.4	230	00.0		32.8	131	41.7		44.1	218	16.2		27.9	120	27.5		46.2
3	0	33.9	244	59.2		32.4	146	42.8		44.6	233	18.1		27.7	135	29.9		46.3
4	15	36.4	259	58.4		32.0	161	43.9		45.1	248	20.0		27.6	150	32.3		46.3
5	30	38.8	274	57.6	+21	31.6	176	45.0	-14	45.6	263	21.9	+19	27.5	165	34.7	-14	46.3
6	45	41.3	289	56.8	+21	31.2	191	46.0	-14	46.1	278	23.8	+19	27.3	180	37.1	-14	46.3
7	60	43.7	304	56.1		30.7	206	47.1		46.6	293	25.7		27.2	195	39.5		46.4
8	75	46.2	319	55.3		30.3	221	48.2		47.1	308	27.6		27.1	210	41.9		46.4
9	90	48.7	334	54.5		29.9	236	49.3		47.6	323	29.5		27.0	225	44.3		46.4
10	105	51.1	349	53.7		29.5	251	50.4		48.1	338	31.4		26.8	240	46.7		46.5
11	120	53.6	4	52.9	+21	29.0	266	51.5	-14	48.6	353	33.3	+19	26.7	255	49.1	-14	46.5
12	135	56.1	19	52.2	+21	28.6	281	52.6	-14	49.1	8	35.2	+19	26.6	270	51.5	-14	46.5
13	150	58.5	34	51.4		28.2	296	53.7		49.6	23	37.1		26.4	285	53.9		46.6
14	166	01.0	49	50.6		27.8	311	54.8		50.1	38	39.0		26.3	300	56.3		46.6
15	181	03.5	64	49.8		27.3	326	55.9		50.6	53	40.9		26.2	315	58.6		46.6
16	196	05.9	79	49.1		26.9	341	56.9		51.1	68	42.8		26.1	331	01.0		46.7
17	211	08.4	94	48.3	+21	26.5	356	58.0	-14	51.6	83	44.7	+19	25.9	346	03.4	-14	46.7
18	226	10.8	109	47.5	+21	26.0	11	59.1	-14	52.1	98	46.6	+19	25.8	1	05.8	-14	46.7
19	241	13.3	124	46.7		25.6	27	00.2		52.6	113	48.5		25.7	16	08.2		46.7
20	256	15.8	139	45.9		25.2	42	01.3		53.1	128	50.4		25.5	31	10.6		46.8
21	271	18.2	154	45.2		24.7	57	02.4		53.5	143	52.3		25.4	46	13.0		46.8
22	286	20.7	169	44.4		24.3	72	03.5		54.0	158	54.2		25.3	61	15.4		46.8
23	301	23.2	184	43.6		23.9	87	04.5		54.5	173	56.1		25.2	76	17.8		46.9
24	316	25.6	199	42.8	+21	23.4	102	05.6	-14	55.0	188	58.0	+19	25.0	91	20.2	-14	46.9
Dif	—		-8		-4		+11		-5		+19		-1		+24			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 7				Edad: 12 ^d 1 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'8 Rº: 60 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	º	h	m	h	m	h	m	h	m	m
0	178	34.1	+16	13.0	39	47.5	-18	24.8	60 N	20	13	21	08	22	38	18	17	37
1	193	34.2		12.3	54	11.3 48		22.2 26	58	20	02	20	52	22	05	18	06	38
2	208	34.2		11.6	68	35.2 49		19.4 28	56	19	53	39	21	42		17	56	40
3	223	34.3		10.9	82	59.0 48		16.5 29	54	45		27	24			47	42	
4	238	34.4		10.2	97	22.8 48		13.5 30	52	38		17	21	09		39	44	
5	253	34.5	+16	09.4	111	46.5 47	-18	10.4 31	50	19	31	20	08	20	56	17	32	45
6	268	34.6	+16	08.7	126	10.3 48	-18	07.1 33	45	19	17	19	50	20	31	17	16	49
7	283	34.7		08.0	140	34.0 47		03.7 34	40	19	06	36	20	12		17	04	50
8	298	34.7		07.3	154	57.8 48	-18	00.1 36	35	18	56	24	19	56		16	53	52
9	313	34.8		06.6	169	21.5 47	-17	56.5 36	30	48	19	13	44			44	53	
10	328	34.9		05.9	183	45.2 47		52.6 39	20	33	18	56	24			28	56	
11	343	35.0	+16	05.2	198	08.9 47	-17	48.7 39	10 N	18	21	18	43	19	08	16	13	59
12	358	35.1	+16	04.5	212	32.5 46	-17	44.6 42	0	18	09	18	31	18	56	16	00	61
13	13	35.2		03.8	226	56.2 47		40.4 41	10 S	17	58	19	45			15	47	63
14	28	35.2		03.1	241	19.9 47		36.1 43	20	45	18	08	35			33	65	
15	43	35.3		02.3	255	43.5 46		31.6 45	30	32	17	56	25			17	67	
16	58	35.4		01.6	270	07.2 47		27.1 45	35	24		50	20			15	07	69
17	73	35.5	+16	00.9	284	30.8 46	-17	22.3 48	40	17	15	17	43	18	15	14	56	71
18	88	35.6	+16	00.2	298	54.5 47	-17	17.5 48	45	17	04	17	35	18	10	14	44	72
19	103	35.7	+15	59.5	313	18.1 46		12.5 50	50	16	51	26	04			28	75	
20	118	35.7		58.8	327	41.8 47		07.4 51	52	45		22	18	02		21	76	
21	133	35.8		58.1	342	05.4 46	-17	02.2 52	54	39	17	17	59			13	78	
22	148	35.9		57.3	356	29.1 47	-16	56.8 54	56	32		12	57			14	04	79
23	163	36.0		56.6	10	52.7 46		51.3 55	58	24		07	54			13	54	81
24	178	36.1	+15	55.9	25	16.4 47	-16	45.7 56	60 S	16	14	17	01	17	51	13	42	84

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 2 ^h 53 ^m 8		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +0.5 PMG: 17 ^h 10 ^m		Mag: -1.8 PMG: 11 ^h 23 ^m			Mag: +0.6 PMG: 17 ^h 52 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	316	25.6	199	42.8	+21	23.4	102	05.6	-14	55.0	188	58.0
1	331	28.1	214	42.1		23.0	117	06.7		55.5	203	59.8
2	346	30.6	229	41.3		22.5	132	07.8		56.0	219	01.7
3	1	33.0	244	40.5		22.1	147	08.9		56.5	234	03.6
4	16	35.5	259	39.7		21.7	162	09.9		57.0	249	05.5
5	31	38.0	274	39.0	+21	21.2	177	11.0	-14	57.5	264	07.4
6	46	40.4	289	38.2	+21	20.8	192	12.1	-14	58.0	279	09.3
7	61	42.9	304	37.4		20.3	207	13.2		58.5	294	11.2
8	76	45.3	319	36.6		19.9	222	14.3		59.0	309	13.1
9	91	47.8	334	35.9		19.4	237	15.3	-14	59.5	324	15.0
10	106	50.3	349	35.1		19.0	252	16.4	-15	00.0	339	16.9
11	121	52.7	4	34.3	+21	18.5	267	17.5	-15	00.5	354	18.8
12	136	55.2	19	33.6	+21	18.1	282	18.6	-15	01.0	9	20.7
13	151	57.7	34	32.8		17.6	297	19.7		01.5	24	22.6
14	167	00.1	49	32.0		17.2	312	20.7		02.0	39	24.5
15	182	02.6	64	31.2		16.7	327	21.8		02.5	54	26.4
16	197	05.1	79	30.5		16.3	342	22.9		03.0	69	28.3
17	212	07.5	94	29.7	+21	15.8	357	24.0	-15	03.5	84	30.2
18	227	10.0	109	28.9	+21	15.3	12	25.0	-15	04.0	99	32.1
19	242	12.5	124	28.1		14.9	27	26.1		04.5	114	34.0
20	257	14.9	139	27.4		14.4	42	27.2		04.9	129	35.9
21	272	17.4	154	26.6		14.0	57	28.3		05.4	144	37.8
22	287	19.8	169	25.8		13.5	72	29.3		05.9	159	39.7
23	302	22.3	184	25.1		13.0	87	30.4		06.4	174	41.6
24	317	24.8	199	24.3	+21	12.6	102	31.5	-15	06.9	189	43.5
Dif	—		-8		-5		+11		-5		+19	
											-1	
											+24	
											0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 5			Edad: 13 ^d 1 PHE { 4 ^h : 61 ^m 0 12 ^h : 61 ^m 2 20 ^h : 61 ^m 3 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	178	36.1	+15 55.9	25	16.4	-16 45.7	57	60 N	1 34	3 04	3 59	18 54	28	2 19	88	
1	193	36.2	55.2	39	40.1	40.0	59	58	2 06	20	4 10	44	32	30	85	
2	208	36.3	54.5	54	03.8	34.1	60	56	30	33	19	36	34	40	83	
3	223	36.4	53.8	68	27.4	28.1	61	54	2 48	45	27	29	36	48	81	
4	238	36.4	53.0	82	51.2	22.0	61	52	3 03	3 55	34	23	37	2 56	79	
5	253	36.5	+15 52.3	97	14.9	-16 15.8	62	50	3 16	4 03	4 41	18 17	39	3 03	77	
6	268	36.6	+15 51.6	111	38.6	-16 09.5	63	45	3 41	4 22	4 54	18 05	42	3 17	75	
7	283	36.7	50.9	126	02.3	-16 03.0	65	40	4 00	36	5 06	17 54	45	29	72	
8	298	36.8	50.2	140	26.1	-15 56.4	66	35	15	48	15	45	48	39	70	
9	313	36.9	49.4	154	49.9	49.7	67	30	28	4 58	24	37	50	3 48	68	
10	328	37.0	48.7	169	13.7	42.9	68	20	4 48	5 15	38	24	53	4 03	66	
11	343	37.1	+15 48.0	183	37.5	-15 35.9	70	10 N	5 03	5 29	5 51	17 12	56	4 17	62	
12	358	37.2	+15 47.3	198	01.3	-15 28.8	71	0	5 16	5 41	6 02	17 01	59	4 29	60	
13	13	37.2	46.5	212	25.2	21.7	71	10 S	27	5 52	14	16 50	62	41	58	
14	28	37.3	45.8	226	49.0	14.4	73	20	36	6 03	26	38	65	4 54	55	
15	43	37.4	45.1	241	12.9	-15 07.0	74	30	46	14	39	24	69	5 09	52	
16	58	37.5	44.4	255	36.8	-14 59.4	76	35	51	21	47	16	71	18	50	
17	73	37.6	+15 43.7	270	00.8	-14 51.8	76	40	5 56	6 28	6 56	16 07	73	5 28	47	
18	88	37.7	+15 42.9	284	24.8	-14 44.1	77	45	6 01	6 36	7 06	15 56	77	5 39	45	
19	103	37.8	42.2	298	48.8	36.2	79	50	06	45	19	43	80	53	42	
20	118	37.9	41.5	313	12.8	28.3	79	52	08	49	25	37	82	5 59	41	
21	133	38.0	40.8	327	36.9	20.2	81	54	11	53	31	31	83	6 06	39	
22	148	38.1	40.0	342	01.0	12.0	82	56	13	6 58	38	23	86	14	37	
23	163	38.2	39.3	356	25.1	-14 03.8	82	58	16	7 03	46	15	88	23	35	
24	178	38.3	+15 38.6	10	49.2	-13 55.4	84	60 S	6 19	7 09	7 55	15 06	90	6 33	32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 2 ^h 49 ^m 9		Mag: -3.8 PMG: 10 ^h 43 ^m		Mag: +0.5 PMG: 17 ^h 09 ^m		Mag: -1.8 PMG: 11 ^h 20 ^m		Mag: +0.6 PMG: 17 ^h 48 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	317	24.8	199	24.3	+21 12.6	102	31.5	-15 06.9	189	43.5	+19 21.9	92	17.6	-14 47.7		
1	332	27.2	214	23.5	12.1	117	32.6	07.4	204	45.4	21.8	107	20.0	47.7		
2	347	29.7	229	22.8	11.6	132	33.6	07.9	219	47.3	21.7	122	22.4	47.7		
3	2	32.2	244	22.0	11.2	147	34.7	08.4	234	49.2	21.5	137	24.8	47.8		
4	17	34.6	259	21.2	10.7	162	35.8	08.9	249	51.1	21.4	152	27.2	47.8		
5	32	37.1	274	20.5	+21 10.2	177	36.8	-15 09.4	264	53.0	+19 21.3	167	29.6	-14 47.8		
6	47	39.6	289	19.7	+21 09.8	192	37.9	-15 09.9	279	54.9	+19 21.1	182	32.0	-14 47.8		
7	62	42.0	304	18.9	09.3	207	39.0	10.4	294	56.8	21.0	197	34.4	47.9		
8	77	44.5	319	18.2	08.8	222	40.1	10.9	309	58.7	20.9	212	36.7	47.9		
9	92	47.0	334	17.4	08.3	237	41.1	11.4	325	00.6	20.8	227	39.1	47.9		
10	107	49.4	349	16.6	07.9	252	42.2	11.9	340	02.5	20.6	242	41.5	48.0		
11	122	51.9	4	15.9	+21 07.4	267	43.3	-15 12.4	355	04.4	+19 20.5	257	43.9	-14 48.0		
12	137	54.3	19	15.1	+21 06.9	282	44.3	-15 12.9	10	06.3	+19 20.4	272	46.3	-14 48.0		
13	152	56.8	34	14.3	06.4	297	45.4	13.4	25	08.2	20.2	287	48.7	48.1		
14	167	59.3	49	13.6	06.0	312	46.5	13.9	40	10.1	20.1	302	51.1	48.1		
15	183	01.7	64	12.8	05.5	327	47.5	14.4	55	12.0	20.0	317	53.5	48.1		
16	198	04.2	79	12.0	05.0	342	48.6	14.8	70	13.9	19.8	332	55.9	48.2		
17	213	06.7	94	11.3	+21 04.5	357	49.7	-15 15.3	85	15.8	+19 19.7	347	58.2	-14 48.2		
18	228	09.1	109	10.5	+21 04.0	12	50.7	-15 15.8	100	17.7	+19 19.6	3	00.6	-14 48.2		
19	243	11.6	124	09.7	03.5	27	51.8	16.3	115	19.6	19.5	18	03.0	48.3		
20	258	14.1	139	09.0	03.1	42	52.9	16.8	130	21.5	19.3	33	05.4	48.3		
21	273	16.5	154	08.2	02.6	57	53.9	17.3	145	23.4	19.2	48	07.8	48.3		
22	288	19.0	169	07.4	02.1	72	55.0	17.8	160	25.3	19.1	63	10.2	48.4		
23	303	21.5	184	06.7	01.6	87	56.0	18.3	175	27.2	18.9	78	12.6	48.4		
24	318	23.9	199	05.9	+21 01.1	102	57.1	-15 18.8	190	29.1	+19 18.8	93	15.0	-14 48.4		
Dif	—		-8		-5	+11		-5	+19		-1	+24		0		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8			Edad: 15 ^d 1	PHE {	4 ^h : 61 ^m 4		12 ^h : 61 ^m 3	20 ^h : 61 ^m 2		SD: 16 ^h 7	PMG: 0 ^h 14 ^m	R ^o : 57 ^m					
	hG ☉	Dec														hG ☾	Dif	Dec
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	178	40.6	+15	21.0	356	40.2	-10	06.6	60 N	1	46	3	10	4	04	19	45	21
1	193	40.7		20.2	11	05.4	62	-9	56.1	58	2	14	25	14	42	23	25	90
2	208	40.7		19.5	25	30.6	62		45.5	56	36	38	23		39	25	30	87
3	223	40.8		18.8	39	55.8	62		34.9	54	2	53	49	30	36	27	34	85
4	238	40.9		18.0	54	21.1	63		24.1	52	3	07	3	58	37	33	29	83
5	253	41.0	+15	17.3	68	46.4	63	-9	13.4	50	3	20	4	07	4	43	19	82
6	268	41.1	+15	16.5	83	11.8	64	-9	02.5	45	3	44	4	24	4	57	19	77
7	283	41.2		15.8	97	37.2	64	-8	51.6	40	4	02	38	5	08	21	38	74
8	298	41.3		15.1	112	02.7	65		40.6	35	17	4	50	17	17	41	6	71
9	313	41.5		14.3	126	28.2	65		29.6	30	29	5	00	25	14	43	06	68
10	328	41.6		13.6	140	53.8	66		18.5	20	4	48	16	39	08	48	14	64
11	343	41.7	+15	12.8	155	19.4	66	-8	07.4	10 N	5	03	5	29	5	51	19	60
12	358	41.8	+15	12.1	169	45.1	67	-7	56.2	0	5	15	5	40	6	02	18	56
13	13	41.9		11.4	184	10.8	67		45.0	10 S	26	5	51	13	53	59	34	53
14	28	42.0		10.6	198	36.6	68		33.7	20	35	6	02	24	47	63	41	49
15	43	42.1		09.9	213	02.4	68		22.4	30	44	13	37	42	67	49	45	
16	58	42.2		09.1	227	28.2	68	-7	11.1	35	49	19	45	38	70	54	42	
17	73	42.3	+15	08.4	241	54.1	69	-6	59.7	40	5	53	6	25	6	54	18	39
18	88	42.4	+15	07.6	256	20.1	70	-6	48.2	45	5	58	6	33	7	04	18	30
19	103	42.5		06.9	270	46.1	70		36.7	50	6	03	41	15	24	81	11	33
20	118	42.6		06.1	285	12.1	70		25.2	52	05	45	21	22	82	15	31	
21	133	42.7		05.4	299	38.2	71		13.6	54	07	49	27	19	85	18	29	
22	148	42.8		04.6	314	04.3	71	-6	02.0	56	10	54	34	16	87	22	27	
23	163	42.9		03.9	328	30.5	72	-5	50.4	58	12	6	59	42	13	89	26	25
24	178	43.0	+15	03.2	342	56.7	72	-5	38.8	60 S	6	15	7	05	7	50	18	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.8		Mag: +0.5		Mag: -1.8		Mag: +0.6									
	2 ^h 42 ^m 0		PMG: 10 ^h 45 ^m		PMG: 17 ^h 05 ^m		PMG: 11 ^h 14 ^m		PMG: 17 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	319	23.1	198	47.7	+20	49.0	103	22.5	-15	30.6	191	14.6	+19	15.7	94	12.2	-14	49.2
1	334	25.5	213	46.9		48.5	118	23.5		31.1	206	16.5		15.5	109	14.6		49.3
2	349	28.0	228	46.2		48.0	133	24.6		31.6	221	18.4		15.4	124	17.0		49.3
3	4	30.4	243	45.4		47.5	148	25.6		32.1	236	20.3		15.3	139	19.3		49.3
4	19	32.9	258	44.7		46.9	163	26.7		32.6	251	22.2		15.2	154	21.7		49.4
5	34	35.4	273	43.9	+20	46.4	178	27.7	-15	33.1	266	24.2	+19	15.0	169	24.1	-14	49.4
6	49	37.8	288	43.2	+20	45.9	193	28.8	-15	33.6	281	26.1	+19	14.9	184	26.5	-14	49.4
7	64	40.3	303	42.4		45.4	208	29.8		34.1	296	28.0		14.8	199	28.9		49.5
8	79	42.8	318	41.7		44.9	223	30.9		34.6	311	29.9		14.6	214	31.3		49.5
9	94	45.2	333	40.9		44.3	238	31.9		35.1	326	31.8		14.5	229	33.6		49.6
10	109	47.7	348	40.2		43.8	253	33.0		35.6	341	33.7		14.4	244	36.0		49.6
11	124	50.2	3	39.4	+20	43.3	268	34.0	-15	36.1	356	35.6	+19	14.2	259	38.4	-14	49.6
12	139	52.6	18	38.7	+20	42.8	283	35.1	-15	36.6	11	37.5	+19	14.1	274	40.8	-14	49.7
13	154	55.1	33	37.9		42.2	298	36.1		37.0	26	39.4		14.0	289	43.2		49.7
14	169	57.6	48	37.2		41.7	313	37.2		37.5	41	41.3		13.8	304	45.5		49.7
15	185	00.0	63	36.4		41.2	328	38.2		38.0	56	43.2		13.7	319	47.9		49.8
16	200	02.5	78	35.7		40.6	343	39.3		38.5	71	45.1		13.6	334	50.3		49.8
17	215	04.9	93	34.9	+20	40.1	358	40.3	-15	39.0	86	47.0	+19	13.5	349	52.7	-14	49.8
18	230	07.4	108	34.2	+20	39.6	13	41.3	-15	39.5	101	48.9	+19	13.3	4	55.1	-14	49.9
19	245	09.9	123	33.4		39.0	28	42.4		40.0	116	50.8		13.2	19	57.4		49.9
20	260	12.3	138	32.7		38.5	43	43.4		40.5	131	52.7		13.1	34	59.8		49.9
21	275	14.8	153	31.9		38.0	58	44.5		41.0	146	54.6		12.9	50	02.2		50.0
22	290	17.3	168	31.2		37.4	73	45.5		41.5	161	56.5		12.8	65	04.6		50.0
23	305	19.7	183	30.4		36.9	88	46.6		42.0	176	58.4		12.7	80	07.0		50.0
24	320	22.2	198	29.7	+20	36.3	103	47.6	-15	42.5	192	00.3	+19	12.5	95	09.3	-14	50.1
Dif	—		-8		-5		+10		-5		+19		-1		+24			

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: 16 ^d 1 PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'7 PMG: 1 ^h 11 ^m 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	178	43.0	+15	03.2	342	56.7	-5 38.8	60 N	20 02	20 54	22 15	20 06 19	6 52 92	
1	193	43.1		02.4	357	23.0	27.1 ¹¹⁷	58	19 52	40	21 49	05 22	55 88	
2	208	43.2		01.7	11	49.3	15.3 ¹¹⁸	56	44	28	28	04 24	57 86	
3	223	43.3		00.9	26	15.7	74 -5 03.6 ¹¹⁷	54	37	18	21 12	03 26	6 59 84	
4	238	43.4	+15	00.2	40	42.1	74 -4 51.8 ¹¹⁸	52	30	09	20 59	02 29	7 01 81	
5	253	43.5	+14	59.4	55	08.5	74 -4 40.0 ¹¹⁸	50	19 24	20 01	20 47	20 02 30	7 03 79	
6	268	43.6	+14	58.7	69	35.0	75 -4 28.2 ¹¹⁸	45	19 11	19 44	20 24	20 00 34	7 06 76	
7	283	43.7		57.9	84	01.6	76 16.4 ¹¹⁸	40	19 01	30	20 06	19 59 37	09 72	
8	298	43.8		57.2	98	28.2	76 -4 04.5 ¹¹⁹	35	18 52	19	19 51	58 40	12 69	
9	313	43.9		56.4	112	54.8	76 -3 52.7 ¹¹⁸	30	44	19 09	40	57 42	14 66	
10	328	44.1		55.7	127	21.5	77 40.8 ¹¹⁹	20	31	18 54	21	56 46	18 62	
11	343	44.2	+14	54.9	141	48.2	77 -3 28.9 ¹¹⁹	10 N	18 19	18 41	19 06	19 54 51	7 21 58	
12	358	44.3	+14	54.1	156	14.9	77 -3 16.9 ¹²⁰	0	18 08	18 30	18 55	19 53 54	7 24 55	
13	13	44.4		53.4	170	41.7	78 -3 05.0 ¹¹⁹	10 S	17 58	19	45	52 57	27 51	
14	28	44.5		52.6	185	08.6	79 -2 53.1 ¹¹⁹	20	47	18 09	35	50 62	30 48	
15	43	44.6		51.9	199	35.5	79 41.1 ¹²⁰	30	34	17 59	27	49 66	34 43	
16	58	44.7		51.1	214	02.4	79 29.2 ¹¹⁹	35	27	53	23	48 68	36 40	
17	73	44.8	+14	50.4	228	29.4	80 -2 17.2 ¹²⁰	40	17 18	17 46	18 18	19 47 71	7 38 38	
18	88	44.9	+14	49.6	242	56.4	80 -2 05.3 ¹¹⁹	45	17 09	17 39	18 14	19 46 75	7 41 34	
19	103	45.0		48.9	257	23.5	81 -1 53.3 ¹²⁰	50	16 57	31	09	45 78	44 31	
20	118	45.1		48.1	271	50.6	81 41.4 ¹¹⁹	52	52	27	07	44 81	46 28	
21	133	45.2		47.4	286	17.7	81 29.4 ¹²⁰	54	46	23	05	44 82	47 27	
22	148	45.4		46.6	300	44.9	82 17.4 ¹²⁰	56	39	19	03	43 84	49 25	
23	163	45.5		45.8	315	12.1	82 -1 05.5 ¹¹⁹	58	32	14	18 01	42 87	51 22	
24	178	45.6	+14	45.1	329	39.4	83 -0 53.5 ¹²⁰	60 S	16 23	17 09	17 59	19 41 90	7 53 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -3.8		Mag: +0.5		Mag: -1.8		Mag: +0.6		
	2 ^h 38 ^m 1		PMG: 10 ^h 47 ^m		PMG: 17 ^h 04 ^m		PMG: 11 ^h 11 ^m		PMG: 17 ^h 37 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	320	22.2	198	29.7	+20	36.3	103	47.6	-15	42.5	
1	335	24.7	213	28.9		35.8	118	48.6		42.9	
2	350	27.1	228	28.2		35.3	133	49.7		43.4	
3	5	29.6	243	27.4		34.7	148	50.7		43.9	
4	20	32.0	258	26.7		34.2	163	51.8		44.4	
5	35	34.5	273	25.9	+20	33.6	178	52.8	-15	44.9	
6	50	37.0	288	25.2	+20	33.1	193	53.8	-15	45.4	
7	65	39.4	303	24.4		32.5	208	54.9		45.9	
8	80	41.9	318	23.7		32.0	223	55.9		46.4	
9	95	44.4	333	22.9		31.4	238	57.0		46.9	
10	110	46.8	348	22.2		30.9	253	58.0		47.4	
11	125	49.3	3	21.5	+20	30.3	268	59.0	-15	47.9	
12	140	51.8	18	20.7	+20	29.8	284	00.1	-15	48.3	
13	155	54.2	33	20.0		29.2	299	01.1		48.8	
14	170	56.7	48	19.2		28.7	314	02.1		49.3	
15	185	59.2	63	18.5		28.1	329	03.2		49.8	
16	201	01.6	78	17.7		27.6	344	04.2		50.3	
17	216	04.1	93	17.0	+20	27.0	359	05.2	-15	50.8	
18	231	06.5	108	16.2	+20	26.4	14	06.3	-15	51.3	
19	246	09.0	123	15.5		25.9	29	07.3		51.8	
20	261	11.5	138	14.8		25.3	44	08.3		52.3	
21	276	13.9	153	14.0		24.8	59	09.4		52.8	
22	291	16.4	168	13.3		24.2	74	10.4		53.3	
23	306	18.9	183	12.5		23.6	89	11.4		53.7	
24	321	21.3	198	11.8	+20	23.1	104	12.5	-15	54.2	
Dif	—		-7	-6		+10	-5	+19	-1	+24	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 9				Edad: 17 ^d 1 PHE { 4 ^h : 60/5 12 ^h : 60/3 20 ^h : 60/0 PMG: 2 ^h 06 ^m R°: 53 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	45.6	+14	45.1	329	39.4	-0	53.5	60 N	1	56	3	16	4	09	20	25
1	193	45.7		44.3	344	06.7	83	41.6	58	2	22		31	18	27	22	8
2	208	45.8		43.6	358	34.0	83	29.6	56		42		42	27	28	25	23
3	223	45.9		42.8	13	01.4	84	17.7	54	2	58	3	53	34	29	27	23
4	238	46.0		42.0	27	28.8	84	-0	52	3	12	4	02	41	31	28	22
5	253	46.1	+14	41.3	41	56.2	84	+0	50	3	24	4	10	4	46	20	32
6	268	46.2	+14	40.5	56	23.7	85	+0	45	3	47	4	27	4	59	20	34
7	283	46.4		39.8	70	51.2	85	29.9	40	4	05		40	5	09	36	37
8	298	46.5		39.0	85	18.8	86	41.7	35		19	4	51	18	38	39	21
9	313	46.6		38.2	99	46.4	86	+0	30		31	5	01	26	39	42	20
10	328	46.7		37.5	114	14.0	86	+1	20	4	49		16	39	42	46	20
11	343	46.8	+14	36.7	128	41.7	87	+1	10 N	5	04	5	29	5	51	20	45
12	358	46.9	+14	36.0	143	09.4	87	+1	0	5	15	5	40	6	01	20	47
13	13	47.0		35.2	157	37.1	87	40.7	10 S		25	5	50	12	49	56	18
14	28	47.1		34.4	172	04.9	88	+1	20		34	6	00	23	52	59	18
15	43	47.3		33.7	186	32.6	87	+2	30		43		11	36	55	63	17
16	58	47.4		32.9	201	00.5	89	15.8	35		47		17	43	56	66	16
17	73	47.5	+14	32.1	215	28.3	88	+2	40	5	51	6	23	6	51	20	58
18	88	47.6	+14	31.4	229	56.2	89	+2	45	5	55	6	30	7	01	21	01
19	103	47.7		30.6	244	24.1	89	+2	50	6	00		38	12	03	76	15
20	118	47.8		29.8	258	52.1	90	+3	52		02		42	17	05	77	14
21	133	47.9		29.1	273	20.1	90	13.8	54		04		46	23	06	79	14
22	148	48.1		28.3	287	48.1	90	25.3	56		06		50	30	07	82	14
23	163	48.2		27.5	302	16.1	90	36.7	58		08	6	55	37	09	84	13
24	178	48.3	+14	26.8	316	44.2	91	+3	60 S	6	10	7	00	7	45	21	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 34 ^m 2		Mag: -3.8 PMG: 10 ^h 48 ^m		Mag: +0.5 PMG: 17 ^h 02 ^m		Mag: -1.8 PMG: 11 ^h 08 ^m		Mag: +0.6 PMG: 17 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	321	21.3	198	11.8	+20	23.1	104	12.5	+19	09.4
1	336	23.8	213	11.1		22.5	119	13.5		09.3
2	351	26.3	228	10.3		21.9	134	14.5		09.1
3	6	28.7	243	09.6		21.4	149	15.6		09.0
4	21	31.2	258	08.8		20.8	164	16.6		08.9
5	36	33.6	273	08.1	+20	20.2	179	17.6	+19	08.7
6	51	36.1	288	07.4	+20	19.6	194	18.7	+19	08.6
7	66	38.6	303	06.6		19.1	209	19.7		08.5
8	81	41.0	318	05.9		18.5	224	20.7		08.3
9	96	43.5	333	05.2		17.9	239	21.7		08.2
10	111	46.0	348	04.4		17.4	254	22.8		08.1
11	126	48.4	3	03.7	+20	16.8	269	23.8	+19	07.9
12	141	50.9	18	02.9	+20	16.2	284	24.8	+19	07.8
13	156	53.4	33	02.2		15.6	299	25.8		07.7
14	171	55.8	48	01.5		15.0	314	26.9		07.5
15	186	58.3	63	00.7		14.5	329	27.9		07.4
16	202	00.8	78	00.0		13.9	344	28.9		07.3
17	217	03.2	92	59.3	+20	13.3	359	29.9	+19	07.2
18	232	05.7	107	58.5	+20	12.7	14	31.0	+19	07.0
19	247	08.1	122	57.8		12.1	29	32.0		06.9
20	262	10.6	137	57.1		11.5	44	33.0		06.8
21	277	13.1	152	56.3		11.0	59	34.0		06.6
22	292	15.5	167	55.6		10.4	74	35.1		06.5
23	307	18.0	182	54.9		09.8	89	36.1		06.4
24	322	20.5	197	54.1	+20	09.2	104	37.1	+19	06.2
Dif	—		-7	-6		+10	-5		+19	-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 18 ^d 1 PHE	SD: 16 ^h 3					R°: 53 ^m							
	PMG: 12 ^h 04 ^m 7					PMG: 2 ^h 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	178	48.3	+14	26.8	316	44.2	+3	48.2	60 N	19 56	20 48	22 05	20 45 21		9 52 85			
1	193	48.4		26.0	331	12.3	+3	59.6 ¹¹⁴	58	47	34	21 40	49 24		49 82			
2	208	48.5		25.2	345	40.4	+4	10.9 ¹¹³	56	39	23	22	53 26		46 80			
3	223	48.6		24.5	0	08.6		22.2 ¹¹³	54	32	13	21 06	56 28		44 78			
4	238	48.8		23.7	14	36.8		33.5 ¹¹³	52	26	20 04	20 53	20 59 30		41 76			
5	253	48.9	+14	22.9	29	05.0	+4	44.7 ¹¹²	50	19 20	19 57	20 42	21 02 31		9 39 75			
6	268	49.0	+14	22.2	43	33.2	+4	55.9 ¹¹²	45	19 08	19 40	20 20	21 08 34		9 35 70			
7	283	49.1		21.4	58	01.5	+5	07.0 ¹¹¹	40	18 58	27	20 03	13 37		31 68			
8	298	49.2		20.6	72	29.8		18.1 ¹¹¹	35	50	17	19 49	17 40		28 65			
9	313	49.3		19.8	86	58.1		29.2 ¹¹¹	30	42	19 07	37	21 42		25 63			
10	328	49.5		19.1	101	26.4		40.2 ¹¹⁰	20	29	18 52	19	28 45		20 59			
11	343	49.6	+14	18.3	115	54.8	+5	51.1 ¹⁰⁹	10 N	18 18	18 40	19 05	21 34 48		9 16 55			
12	358	49.7	+14	17.5	130	23.1	+6	02.0 ¹⁰⁹	0	18 08	18 29	18 54	21 39 52		9 12 52			
13	13	49.8		16.8	144	51.5		12.9 ¹⁰⁹	10 S	17 58	20	45	45 55		08 49			
14	28	49.9		16.0	159	20.0		23.7 ¹⁰⁸	20	47	10	36	51 58		9 04 45			
15	43	50.1		15.2	173	48.4		34.4 ¹⁰⁷	30	35	18 00	28	21 58 62		8 59 41			
16	58	50.2		14.4	188	16.9		45.1 ¹⁰⁷	35	28	17 54	24	22 02 64		56 39			
17	73	50.3	+14	13.7	202	45.4	+6	55.7 ¹⁰⁶	40	17 20	17 48	18 20	22 07 66		8 53 37			
18	88	50.4	+14	12.9	217	13.9	+7	06.3 ¹⁰⁶	45	17 11	17 41	18 16	22 12 69		8 49 34			
19	103	50.5		12.1	231	42.4		16.9 ¹⁰⁶	50	17 00	34	12	19 72		45 30			
20	118	50.7		11.3	246	11.0		27.3 ¹⁰⁴	52	16 55	30	10	22 74		43 28			
21	133	50.8		10.6	260	39.6		37.7 ¹⁰⁴	54	49	27	08	25 76		40 27			
22	148	50.9		09.8	275	08.2		48.1 ¹⁰⁴	56	43	22	06	29 78		38 25			
23	163	51.0		09.0	289	36.8	+7	58.4 ¹⁰³	58	36	18	04	33 80		35 23			
24	178	51.1	+14	08.2	304	05.4	+8	08.6 ¹⁰²	60 S	16 28	17 13	18 02	22 38 82		8 32 21			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 30 ^m 2		Mag: -3.8 PMG: 10 ^h 49 ^m				Mag: +0.5 PMG: 17 ^h 00 ^m				Mag: -1.8 PMG: 11 ^h 04 ^m				Mag: +0.6 PMG: 17 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	20.5	197	54.1	+20	09.2	104	37.1	-16	06.0	193	31.6	+19	06.2	97	03.3	-14	51.8
1	337	22.9	212	53.4		08.6	119	38.1		06.5	208	33.5		06.1	112	05.7		51.8
2	352	25.4	227	52.7		08.0	134	39.1		06.9	223	35.4		06.0	127	08.1		51.9
3	7	27.9	242	51.9		07.4	149	40.2		07.4	238	37.3		05.8	142	10.5		51.9
4	22	30.3	257	51.2		06.8	164	41.2		07.9	253	39.2		05.7	157	12.8		52.0
5	37	32.8	272	50.5	+20	06.2	179	42.2	-16	08.4	268	41.1	+19	05.6	172	15.2	-14	52.0
6	52	35.2	287	49.7	+20	05.6	194	43.2	-16	08.9	283	43.0	+19	05.4	187	17.6	-14	52.0
7	67	37.7	302	49.0		05.0	209	44.2		09.4	298	44.9		05.3	202	19.9		52.1
8	82	40.2	317	48.3		04.4	224	45.3		09.9	313	46.8		05.2	217	22.3		52.1
9	97	42.6	332	47.6		03.8	239	46.3		10.4	328	48.8		05.0	232	24.7		52.1
10	112	45.1	347	46.8		03.2	254	47.3		10.9	343	50.7		04.9	247	27.1		52.2
11	127	47.6	2	46.1	+20	02.6	269	48.3	-16	11.3	358	52.6	+19	04.8	262	29.4	-14	52.2
12	142	50.0	17	45.4	+20	02.0	284	49.3	-16	11.8	13	54.5	+19	04.7	277	31.8	-14	52.3
13	157	52.5	32	44.6		01.4	299	50.3		12.3	28	56.4		04.5	292	34.2		52.3
14	172	55.0	47	43.9		00.8	314	51.3		12.8	43	58.3		04.4	307	36.5		52.3
15	187	57.4	62	43.2	+20	00.2	329	52.4		13.3	59	00.2		04.3	322	38.9		52.4
16	202	59.9	77	42.5	+19	59.6	344	53.4		13.8	74	02.1		04.1	337	41.3		52.4
17	218	02.4	92	41.7	+19	59.0	359	54.4	-16	14.3	89	04.0	+19	04.0	352	43.6	-14	52.4
18	233	04.8	107	41.0	+19	58.4	14	55.4	-16	14.8	104	05.9	+19	03.9	7	46.0	-14	52.5
19	248	07.3	122	40.3		57.8	29	56.4		15.2	119	07.8		03.7	22	48.4		52.5
20	263	09.7	137	39.6		57.2	44	57.4		15.7	134	09.7		03.6	37	50.7		52.6
21	278	12.2	152	38.8		56.6	59	58.4		16.2	149	11.6		03.5	52	53.1		52.6
22	293	14.7	167	38.1		56.0	74	59.5		16.7	164	13.5		03.3	67	55.5		52.6
23	308	17.1	182	37.4		55.4	90	00.5		17.2	179	15.4		03.2	82	57.8		52.7
24	323	19.6	197	36.7	+19	54.7	105	01.5	-16	17.7	194	17.3	+19	03.1	98	00.2	-14	52.7
Dif	—		-7		-6		+10		-5		+19		-1		+24		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 5				Edad: 19 ^d 1 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 5 20 ^h : 58 ^m 1 PMG: 3 ^h 52 ^m R ^o : 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	51.1	+14	08.2	304	05.4	+8	08.6	60 N	2 05	3 22	4 14	21 06	25	11 17	80		
1	193	51.3		07.5	318	34.1		18.8	58	29	36	23	13 27		11 78			
2	208	51.4		06.7	333	02.7		28.9	56	2 48	47	31	19 29		06 76			
3	223	51.5		05.9	347	31.4		39.0	54	3 04	3 57	38	24 31		11 02	73		
4	238	51.6		05.1	2	00.1		49.0	52	16	4 06	44	29 32		10 57	72		
5	253	51.8	+14	04.3	16	28.9	+8	58.9	50	3 28	4 13	4 49	21 33	34	10 54	70		
6	268	51.9	+14	03.6	30	57.6	+9	08.7	45	3 50	4 29	5 01	21 42	37	10 45	68		
7	283	52.0		02.8	45	26.4		18.5	40	4 07	42	11	50 39		39 64			
8	298	52.1		02.0	59	55.1		28.3	35	21	4 53	20	21 57	41	33 62			
9	313	52.2		01.2	74	23.9		37.9	30	32	5 02	27	22 03	43	28 60			
10	328	52.4	+14	00.4	88	52.7		47.5	20	4 50	17	40	13 46		19 57			
11	343	52.5	+13	59.7	103	21.5	+9	57.0	10 N	5 04	5 29	5 51	22 22	49	10 11	54		
12	358	52.6	+13	58.9	117	50.4	+10	06.5	0	5 15	5 40	6 01	22 31	51	10 04	51		
13	13	52.7		58.1	132	19.2		15.9	10 S	25	50	11	40 53		9 57	49		
14	28	52.9		57.3	146	48.1		25.2	20	33	5 59	22	22 49	56	49 46			
15	43	53.0		56.5	161	17.0		34.4	30	41	6 09	34	23 00	59	40 43			
16	58	53.1		55.7	175	45.9		43.6	35	45	15	41	06 61		35 41			
17	73	53.2	+13	55.0	190	14.8	+10	52.7	40	5 49	6 20	6 48	23 13	63	9 30	38		
18	88	53.4	+13	54.2	204	43.7	+11	01.7	45	5 52	6 27	6 57	23 21	66	9 23	36		
19	103	53.5		53.4	219	12.6		10.6	50	57	35	7 08	31 69		15 33			
20	118	53.6		52.6	233	41.6		19.5	52	5 58	38	13	36 70		11 32			
21	133	53.7		51.8	248	10.5		28.3	54	6 00	42	19	41 71		07 30			
22	148	53.9		51.0	262	39.5		37.0	56	02	46	25	47 73		9 03	28		
23	163	54.0		50.3	277	08.5		45.6	58	04	50	32	23 53	75	8 58	26		
24	178	54.1	+13	49.5	291	37.5	+11	54.2	60 S	6 06	6 55	7 40	** ** *		8 53	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 26 ^m 3		Mag: -3.8 PMG: 10 ^h 50 ^m				Mag: +0.5 PMG: 16 ^h 59 ^m				Mag: -1.8 PMG: 11 ^h 01 ^m				Mag: +0.6 PMG: 17 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	323	19.6	197	36.7	+19	54.7	105	01.5	-16	17.7	194	17.3	+19	03.1	98	00.2	-14	52.7
1	338	22.1	212	35.9		54.1	120	02.5		18.2	209	19.2		02.9	113	02.6		52.7
2	353	24.5	227	35.2		53.5	135	03.5		18.6	224	21.1		02.8	128	05.0		52.8
3	8	27.0	242	34.5		52.9	150	04.5		19.1	239	23.0		02.7	143	07.3		52.8
4	23	29.5	257	33.8		52.3	165	05.5		19.6	254	25.0		02.5	158	09.7		52.9
5	38	31.9	272	33.0	+19	51.7	180	06.5	-16	20.1	269	26.9	+19	02.4	173	12.1	-14	52.9
6	53	34.4	287	32.3	+19	51.0	195	07.5	-16	20.6	284	28.8	+19	02.3	188	14.4	-14	52.9
7	68	36.9	302	31.6		50.4	210	08.5		21.1	299	30.7		02.1	203	16.8		53.0
8	83	39.3	317	30.9		49.8	225	09.5		21.6	314	32.6		02.0	218	19.2		53.0
9	98	41.8	332	30.1		49.2	240	10.6		22.0	329	34.5		01.9	233	21.5		53.1
10	113	44.2	347	29.4		48.6	255	11.6		22.5	344	36.4		01.7	248	23.9		53.1
11	128	46.7	2	28.7	+19	47.9	270	12.6	-16	23.0	359	38.3	+19	01.6	263	26.3	-14	53.1
12	143	49.2	17	28.0	+19	47.3	285	13.6	-16	23.5	14	40.2	+19	01.5	278	28.6	-14	53.2
13	158	51.6	32	27.3		46.7	300	14.6		24.0	29	42.1		01.3	293	31.0		53.2
14	173	54.1	47	26.5		46.0	315	15.6		24.5	44	44.0		01.2	308	33.3		53.2
15	188	56.6	62	25.8		45.4	330	16.6		25.0	59	45.9		01.1	323	35.7		53.3
16	203	59.0	77	25.1		44.8	345	17.6		25.4	74	47.8		00.9	338	38.1		53.3
17	219	01.5	92	24.4	+19	44.2	0	18.6	-16	25.9	89	49.7	+19	00.8	353	40.4	-14	53.4
18	234	04.0	107	23.7	+19	43.5	15	19.6	-16	26.4	104	51.6	+19	00.7	8	42.8	-14	53.4
19	249	06.4	122	23.0		42.9	30	20.6		26.9	119	53.5		00.6	23	45.2		53.4
20	264	08.9	137	22.2		42.3	45	21.6		27.4	134	55.5		00.4	38	47.5		53.5
21	279	11.3	152	21.5		41.6	60	22.6		27.9	149	57.4		00.3	53	49.9		53.5
22	294	13.8	167	20.8		41.0	75	23.6		28.4	164	59.3	+19	00.2	68	52.3		53.6
23	309	16.3	182	20.1		40.4	90	24.6		28.8	180	01.2	+19	00.0	83	54.6		53.6
24	324	18.7	197	19.4	+19	39.7	105	25.6	-16	29.3	195	03.1	+18	59.9	98	57.0	-14	53.6
Dif	—		-7		-6		+10		-5		+19		-1		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 04 ^m 3			Edad: 20 ^d 1 PHE { 4 ^h : 57/8 12 ^h : 57/5 20 ^h : 57/2 SD: 15°8 PMG: 4 ^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	h m m
0	178	54.1	+13 49.5	291	37.5	+11 54.2	85	60 N	19 51	20 41	21 55	21 31 31	12 37 75	
1	193	54.2		306	06.5 ¹⁰⁰	+12 02.7	85	58	42	28	33	40 32	29 72	
2	208	54.4		320	35.5 ¹⁰⁰		84	56	35	18	15	48 34	22 70	
3	223	54.5		335	04.6 ¹⁰¹		83	54	28	08	21 00	21 55 35	15 69	
4	238	54.6		349	33.6 ¹⁰⁰		83	52	22	20 00	20 48	22 01 37	09 68	
5	253	54.8	+13 45.5	4	02.6 ¹⁰⁰	+12 35.8	81	50	19 17	19 52	20 37	22 07 38	12 04 66	
6	268	54.9	+13 44.7	18	31.7 ¹⁰¹	+12 43.9	81	45	19 05	19 37	20 16	22 19 40	11 53 63	
7	283	55.0		33	00.8 ¹⁰¹		80	40	18 56	24	19 59	29 42	43 62	
8	298	55.1		47	29.9 ¹⁰¹	+12 59.9	80	35	47	14	46	38 44	35 60	
9	313	55.3		61	59.0 ¹⁰¹	+13 07.7	78	30	40	19 05	35	46 45	28 58	
10	328	55.4		76	28.1 ¹⁰¹		78	20	28	18 51	18	22 59 47	16 55	
11	343	55.5	+13 40.8	90	57.2 ¹⁰¹	+13 23.2	77	10 N	18 17	18 39	19 04	23 11 49	11 05 54	
12	358	55.7	+13 40.0	105	26.3 ¹⁰¹	+13 30.8	76	0	18 08	18 29	18 54	23 22 51	10 55 51	
13	13	55.8		119	55.5 ¹⁰²		75	10 S	17 58	20	44	33 53	46 48	
14	28	55.9		134	24.6 ¹⁰¹		74	20	48	10	36	45 55	35 47	
15	43	56.0		148	53.8 ¹⁰²	+13 53.0	73	30	36	18 01	29	23 59 56	23 44	
16	58	56.2		163	23.0 ¹⁰²	+14 00.3	73	35	29	17 56	25	** ** *	16 42	
17	73	56.3	+13 36.0	177	52.1 ¹⁰¹	+14 07.5	72	40	17 22	17 50	18 22	** ** *	10 08 41	
18	88	56.4	+13 35.2	192	21.3 ¹⁰²	+14 14.6	71	45	17 13	17 44	18 18	** ** *	9 59 38	
19	103	56.6		206	50.5 ¹⁰²		70	50	17 03	36	15	** ** *	48 36	
20	118	56.7		221	19.7 ¹⁰²		69	52	16 58	33	13	** ** *	43 34	
21	133	56.8		235	49.0 ¹⁰³		68	54	53	30	11	** ** *	37 33	
22	148	57.0		250	18.2 ¹⁰²		67	56	47	26	10	** ** *	31 31	
23	163	57.1		264	47.4 ¹⁰²		67	58	40	22	08	** ** *	24 29	
24	178	57.2	+13 30.5	279	16.7 ¹⁰³	+14 55.2	65	60 S	16 33	17 17	18 06	0 00 78	9 16 27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 22 ^m 4		Mag: -3.8 PMG: 10 ^h 51 ^m			Mag: +0.5 PMG: 16 ^h 57 ^m			Mag: -1.8 PMG: 10 ^h 58 ^m			Mag: +0.6 PMG: 17 ^h 21 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	324	18.7	197 19.4	+19 39.7		105 25.6	-16 29.3		195 03.1	+18 59.9		98 57.0	-14 53.6	
1	339	21.2	212 18.7		39.1	120 26.6	29.8		210 05.0		59.8	113 59.4		53.7
2	354	23.7	227 17.9		38.4	135 27.6	30.3		225 06.9		59.6	129 01.7		53.7
3	9	26.1	242 17.2		37.8	150 28.6	30.8		240 08.8		59.5	144 04.1		53.8
4	24	28.6	257 16.5		37.2	165 29.6	31.3		255 10.7		59.4	159 06.4		53.8
5	39	31.1	272 15.8	+19 36.5		180 30.6	-16 31.8		270 12.6	+18 59.2		174 08.8	-14 53.8	
6	54	33.5	287 15.1	+19 35.9		195 31.6	-16 32.2		285 14.5	+18 59.1		189 11.2	-14 53.9	
7	69	36.0	302 14.4		35.2	210 32.6	32.7		300 16.4		59.0	204 13.5		53.9
8	84	38.5	317 13.7		34.6	225 33.6	33.2		315 18.3		58.8	219 15.9		53.9
9	99	40.9	332 12.9		33.9	240 34.6	33.7		330 20.2		58.7	234 18.3		54.0
10	114	43.4	347 12.2		33.3	255 35.6	34.2		345 22.2		58.6	249 20.6		54.0
11	129	45.8	2 11.5	+19 32.6		270 36.6	-16 34.7		0 24.1	+18 58.4		264 23.0	-14 54.1	
12	144	48.3	17 10.8	+19 32.0		285 37.6	-16 35.1		15 26.0	+18 58.3		279 25.4	-14 54.1	
13	159	50.8	32 10.1		31.3	300 38.6	35.6		30 27.9		58.2	294 27.7		54.1
14	174	53.2	47 09.4		30.7	315 39.6	36.1		45 29.8		58.0	309 30.1		54.2
15	189	55.7	62 08.7		30.0	330 40.6	36.6		60 31.7		57.9	324 32.4		54.2
16	204	58.2	77 08.0		29.4	345 41.6	37.1		75 33.6		57.8	339 34.8		54.3
17	220	00.6	92 07.3	+19 28.7		0 42.5	-16 37.6		90 35.5	+18 57.6		354 37.2	-14 54.3	
18	235	03.1	107 06.6	+19 28.1		15 43.5	-16 38.0		105 37.4	+18 57.5		9 39.5	-14 54.3	
19	250	05.6	122 05.8		27.4	30 44.5	38.5		120 39.3		57.4	24 41.9		54.4
20	265	08.0	137 05.1		26.8	45 45.5	39.0		135 41.2		57.2	39 44.2		54.4
21	280	10.5	152 04.4		26.1	60 46.5	39.5		150 43.1		57.1	54 46.6		54.5
22	295	13.0	167 03.7		25.5	75 47.5	40.0		165 45.0		57.0	69 49.0		54.5
23	310	15.4	182 03.0		24.8	90 48.5	40.5		180 47.0		56.8	84 51.3		54.5
24	325	17.9	197 02.3	+19 24.1		105 49.5	-16 40.9		195 48.9	+18 56.7		99 53.7	-14 54.6	
Dif	—		-7		-6	+10		-5	+19		-1	+24		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 1			Edad: 21 ^d 1 PHE { 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'4 SD: 15'5 PMG: 5 ^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	178	57.2	+13	30.5	279	16.7	+14	55.2	60 N	2 14	3 28	4 19	22 02	37	13 52	66
1	193	57.4		29.7	293	45.9	+15	01.7	58	37	41	27	12 39		41 65	
2	208	57.5		28.9	308	15.2		08.1	56	2 54	3 52	35	22 40		32 64	
3	223	57.6		28.1	322	44.5		14.4	54	3 09	4 01	41	30 41		24 62	
4	238	57.8		27.3	337	13.8		20.6	52	21	09	47	38 41		17 61	
5	253	57.9	+13	26.5	351	43.1	+15	26.7	50	3 32	4 17	4 52	22 45	42	13 10	61
6	268	58.0	+13	25.7	6	12.4	+15	32.8	45	3 53	4 32	5 04	22 59	44	12 56	59
7	283	58.2		24.9	20	41.7		38.7	40	4 09	44	13	23 11	45	45 57	
8	298	58.3		24.1	35	11.0		44.6	35	23	4 55	21	22 45		35 56	
9	313	58.4		23.3	49	40.4		50.3	30	34	5 03	28	31 46		26 55	
10	328	58.6		22.5	64	09.7	+15	56.0	20	4 51	18	41	23 46	48	12 11	54
11	343	58.7	+13	21.7	78	39.1	+16	01.6	10 N	5 04	5 29	5 51	** ** *	**	11 59	52
12	358	58.8	+13	20.9	93	08.4	+16	07.0	0	5 15	5 39	6 01	** ** *	**	11 46	51
13	13	59.0		20.1	107	37.8		12.4	10 S	24	49	10	** ** *	**	34 50	
14	28	59.1		19.3	122	07.2		17.7	20	32	5 58	20	** ** *	**	22 47	
15	43	59.2		18.5	136	36.6		22.9	30	39	6 07	32	** ** *	**	11 07	46
16	58	59.4		17.7	151	06.0		28.1	35	43	12	38	0 07	58	10 58	45
17	73	59.5	+13	16.9	165	35.4	+16	33.1	40	5 46	6 18	6 46	0 16	59	10 49	43
18	88	59.6	+13	16.1	180	04.9	+16	38.0	45	5 50	6 24	6 54	0 27	61	10 37	42
19	103	59.8		15.3	194	34.3		42.8	50	53	31	7 05	40 63		24 40	
20	118	59.9		14.5	209	03.8		47.6	52	55	34	09	46 64		17 39	
21	134	00.0		13.7	223	33.2		52.2	54	56	38	15	0 52	66	10 38	
22	149	00.2		12.9	238	02.7	+16	56.8	56	58	41	20	1 00	67	10 02	37
23	164	00.3		12.1	252	32.2	+17	01.3	58	5 59	45	27	08 69		9 53	36
24	179	00.5	+13	11.3	267	01.7	+17	05.6	60 S	6 01	6 50	7 34	1 18	70	9 43	34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 2 ^h 18 ^m 4		Mag: -3.8 PMG: 10 ^h 52 ^m		Mag: +0.5 PMG: 16 ^h 56 ^m		Mag: -1.8 PMG: 10 ^h 55 ^m		Mag: +0.6 PMG: 17 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	325	17.9	197	02.3	+19	24.1	105	49.5	-16	40.9	195	48.9	+18	56.7	99	53.7	-14	54.6
1	340	20.3	212	01.6		23.5	120	50.5		41.4	210	50.8		56.6	114	56.0		54.6
2	355	22.8	227	00.9		22.8	135	51.5		41.9	225	52.7		56.4	129	58.4		54.7
3	10	25.3	242	00.2		22.1	150	52.5		42.4	240	54.6		56.3	145	00.8		54.7
4	25	27.7	256	59.5		21.5	165	53.4		42.9	255	56.5		56.2	160	03.1		54.7
5	40	30.2	271	58.8	+19	20.8	180	54.4	-16	43.4	270	58.4	+18	56.0	175	05.5	-14	54.8
6	55	32.7	286	58.1	+19	20.1	195	55.4	-16	43.8	286	00.3	+18	55.9	190	07.8	-14	54.8
7	70	35.1	301	57.4		19.5	210	56.4		44.3	301	02.2		55.8	205	10.2		54.9
8	85	37.6	316	56.7		18.8	225	57.4		44.8	316	04.1		55.6	220	12.6		54.9
9	100	40.1	331	56.0		18.1	240	58.4		45.3	331	06.0		55.5	235	14.9		54.9
10	115	42.5	346	55.3		17.5	255	59.4		45.8	346	08.0		55.4	250	17.3		55.0
11	130	45.0	1	54.6	+19	16.8	271	00.3	-16	46.2	1	09.9	+18	55.2	265	19.6	-14	55.0
12	145	47.4	16	53.8	+19	16.1	286	01.3	-16	46.7	16	11.8	+18	55.1	280	22.0	-14	55.1
13	160	49.9	31	53.1		15.5	301	02.3		47.2	31	13.7		55.0	295	24.4		55.1
14	175	52.4	46	52.4		14.8	316	03.3		47.7	46	15.6		54.8	310	26.7		55.1
15	190	54.8	61	51.7		14.1	331	04.3		48.2	61	17.5		54.7	325	29.1		55.2
16	205	57.3	76	51.0		13.4	346	05.3		48.7	76	19.4		54.6	340	31.4		55.2
17	220	59.8	91	50.3	+19	12.8	1	06.2	-16	49.1	91	21.3	+18	54.4	355	33.8	-14	55.3
18	236	02.2	106	49.6	+19	12.1	16	07.2	-16	49.6	106	23.2	+18	54.3	10	36.1	-14	55.3
19	251	04.7	121	48.9		11.4	31	08.2		50.1	121	25.1		54.2	25	38.5		55.4
20	266	07.2	136	48.2		10.7	46	09.2		50.6	136	27.0		54.0	40	40.9		55.4
21	281	09.6	151	47.5		10.0	61	10.2		51.1	151	29.0		53.9	55	43.2		55.4
22	296	12.1	166	46.8		09.4	76	11.2		51.5	166	30.9		53.8	70	45.6		55.5
23	311	14.6	181	46.1		08.7	91	12.1		52.0	181	32.8		53.6	85	47.9		55.5
24	326	17.0	196	45.4	+19	08.0	106	13.1	-16	52.5	196	34.7	+18	53.5	100	50.3	-14	55.6
Dif	—		-7		-7		+10		-5		+19		-1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15/8 PMG: 12 ^h 03 ^m 9			Edad: 22 ^d 1 PHE { 4 ^h : 56/1 12 ^h : 55/9 20 ^h : 55/6 SD: 15/3 PMG: 6 ^h 25 ^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	179	00.5	+13	11.3	267	01.7	+17	05.6	60 N	19 45	20 35	21 45	22 39 45	14 58 57					
1	194	00.6		10.5	281	31.2 ¹⁰⁵		09.9 ⁴³	58	37	23	25	22 51 46	46 56					
2	209	00.7		09.7	296	00.7 ¹⁰⁵		14.1 ⁴²	56	30	12	21 08	23 02 46	36 55					
3	224	00.9		08.9	310	30.2 ¹⁰⁵		18.2 ⁴¹	54	24	20 03	20 55	11 47	26 56					
4	239	01.0		08.1	324	59.8 ¹⁰⁶		22.2 ⁴⁰	52	18	19 55	43	19 47	18 55					
5	254	01.1	+13	07.2	339	29.3 ¹⁰⁵	+17	26.1 ³⁹	50	19 13	19 48	20 33	23 27 47	14 11 54					
6	269	01.3	+13	06.4	353	58.9 ¹⁰⁶	+17	29.9 ³⁸	45	19 02	19 33	20 12	23 43 48	13 55 54					
7	284	01.4		05.6	8	28.5 ¹⁰⁶		33.6 ³⁷	40	18 53	21	19 56	23 56 48	42 53					
8	299	01.6		04.8	22	58.1 ¹⁰⁶		37.2 ³⁶	35	45	12	43	** ** *	31 53					
9	314	01.7		04.0	37	27.7 ¹⁰⁶		40.8 ³⁶	30	38	19 03	33	** ** *	21 52					
10	329	01.8		03.2	51	57.3 ¹⁰⁶		44.2 ³⁴	20	27	18 49	16	** ** *	13 05 51					
11	344	02.0	+13	02.4	66	27.0 ¹⁰⁷	+17	47.5 ³³	10 N	18 17	18 38	19 03	0 00 49	12 51 50					
12	359	02.1	+13	01.6	80	56.6 ¹⁰⁶	+17	50.8 ³³	0	18 07	18 28	18 53	0 13 50	12 37 50					
13	14	02.3	+13	00.8	95	26.3 ¹⁰⁷		53.9 ³¹	10 S	17 58	19	44	26 51	24 49					
14	29	02.4	+13	00.0	109	56.0 ¹⁰⁷		57.0 ³¹	20	48	11	37	40 52	12 09 49					
15	44	02.5	+12	59.2	124	25.7 ¹⁰⁷	+17	59.9 ²⁹	30	37	18 02	30	0 55 54	11 53 47					
16	59	02.7		58.4	138	55.4 ¹⁰⁷	+18	02.8 ²⁹	35	31	17 57	27	1 05 54	43 47					
17	74	02.8	+12	57.5	153	25.1 ¹⁰⁷	+18	05.6 ²⁸	40	17 24	17 52	18 23	1 15 55	11 32 47					
18	89	03.0	+12	56.7	167	54.8 ¹⁰⁷	+18	08.3 ²⁷	45	17 16	17 46	18 20	1 28 56	11 19 46					
19	104	03.1		55.9	182	24.6 ¹⁰⁸		10.8 ²⁵	50	06	39	17	43 57	11 04 44					
20	119	03.2		55.1	196	54.4 ¹⁰⁸		13.3 ²⁵	52	17 01	36	16	50 58	10 56 45					
21	134	03.4		54.3	211	24.2 ¹⁰⁸		15.7 ²⁴	54	16 56	33	14	1 58 59	48 44					
22	149	03.5		53.5	225	54.0 ¹⁰⁸		18.0 ²³	56	50	29	13	2 07 59	39 43					
23	164	03.7		52.7	240	23.8 ¹⁰⁸		20.2 ²²	58	44	26	12	17 60	29 42					
24	179	03.8	+12	51.9	254	53.6 ¹⁰⁸	+18	22.3 ²¹	60 S	16 37	17 21	18 10	2 28 62	10 17 41					
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 2 ^h 14 ^m 5		Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +0.6 PMG: 16 ^h 54 ^m			Mag: -1.8 PMG: 10 ^h 52 ^m				Mag: +0.6 PMG: 17 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	326	17.0	196	45.4	+19	08.0	106	13.1	-16	52.5	196	34.7	+18	53.5	100	50.3	-14	55.6	
1	341	19.5	211	44.7		07.3	121	14.1		53.0	211	36.6		53.4	115	52.6		55.6	
2	356	21.9	226	44.1		06.6	136	15.1		53.5	226	38.5		53.2	130	55.0		55.6	
3	11	24.4	241	43.4		05.9	151	16.1		53.9	241	40.4		53.1	145	57.3		55.7	
4	26	26.9	256	42.7		05.2	166	17.0		54.4	256	42.3		53.0	160	59.7		55.7	
5	41	29.3	271	42.0	+19	04.6	181	18.0	-16	54.9	271	44.2	+18	52.8	176	02.1	-14	55.8	
6	56	31.8	286	41.3	+19	03.9	196	19.0	-16	55.4	286	46.1	+18	52.7	191	04.4	-14	55.8	
7	71	34.3	301	40.6		03.2	211	20.0		55.9	301	48.1		52.6	206	06.8		55.8	
8	86	36.7	316	39.9		02.5	226	20.9		56.3	316	50.0		52.4	221	09.1		55.9	
9	101	39.2	331	39.2		01.8	241	21.9		56.8	331	51.9		52.3	236	11.5		55.9	
10	116	41.7	346	38.5		01.1	256	22.9		57.3	346	53.8		52.2	251	13.8		56.0	
11	131	44.1	1	37.8	+19	00.4	271	23.9	-16	57.8	1	55.7	+18	52.0	266	16.2	-14	56.0	
12	146	46.6	16	37.1	+18	59.7	286	24.8	-16	58.3	16	57.6	+18	51.9	281	18.5	-14	56.1	
13	161	49.1	31	36.4		59.0	301	25.8		58.7	31	59.5		51.8	296	20.9		56.1	
14	176	51.5	46	35.7		58.3	316	26.8		59.2	47	01.4		51.6	311	23.3		56.1	
15	191	54.0	61	35.0		57.6	331	27.8	-16	59.7	62	03.3		51.5	326	25.6		56.2	
16	206	56.4	76	34.3		56.9	346	28.7	-17	00.2	77	05.3		51.4	341	28.0		56.2	
17	221	58.9	91	33.6	+18	56.2	1	29.7	-17	00.7	92	07.2	+18	51.2	356	30.3	-14	56.3	
18	237	01.4	106	32.9	+18	55.5	16	30.7	-17	01.1	107	09.1	+18	51.1	11	32.7	-14	56.3	
19	252	03.8	121	32.3		54.8	31	31.6		01.6	122	11.0		51.0	26	35.0		56.3	
20	267	06.3	136	31.6		54.1	46	32.6		02.1	137	12.9		50.8	41	37.4		56.4	
21	282	08.8	151	30.9		53.4	61	33.6		02.6	152	14.8		50.7	56	39.7		56.4	
22	297	11.2	166	30.2		52.7	76	34.6		03.1	167	16.7		50.6	71	42.1		56.5	
23	312	13.7	181	29.5		52.0	91	35.5		03.5	182	18.6		50.4	86	44.4		56.5	
24	327	16.2	196	28.8	+18	51.3	106	36.5	-17	04.0	197	20.5	+18	50.3	101	46.8	-14	56.6	
Dif	—		-7			-7	+10			-5		+19		-1		+24			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: 23 ^d 1 PHE { 4 ^h : 55°4 12 ^h : 55°2 20 ^h : 55°0 SD: 15°1 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
0	179	03.8	+12	51.9	254	53.6	+18	22.3	20	60 N	2 23	3 34	4 23	23 24	54	15 55	47	
1	194	03.9		51.1	269	23.5	109	24.3	20	58	2 43	46	31	37	53	42	47	
2	209	04.1		50.2	283	53.4	109	26.3	20	56	3 00	3 56	38	48	53	31	47	
3	224	04.2		49.4	298	23.2	108	28.1	18	54	14	4 05	45	23	58	52	22	47
4	239	04.4		48.6	312	53.1	109	29.8	17	52	25	13	50	**	**	**	13	48
5	254	04.5	+12	47.8	327	23.1	110	+18	31.4	16	50	3 35	4 20	4 55	**	**	**	15 05 48
6	269	04.7	+12	47.0	341	53.0	109	+18	33.0	16	45	3 56	4 35	5 06	**	**	**	14 49 48
7	284	04.8		46.2	356	23.0	110		34.4	14	40	4 12	46	15	**	**	**	35 48
8	299	05.0		45.3	10	53.0	110		35.8	14	35	25	4 56	23	0 07	49	24	48
9	314	05.1		44.5	25	23.0	110		37.1	13	30	35	5 05	30	17	49	14	13 49
10	329	05.2		43.7	39	53.0	110		38.2	11	20	4 52	18	41	34	49	13	56 49
11	344	05.4	+12	42.9	54	23.0	110	+18	39.3	11	10 N	5 04	5 29	5 51	0 49	49	13	41 49
12	359	05.5	+12	42.1	68	53.1	111	+18	40.3	10	0	5 14	5 39	6 00	1 03	49	13	27 49
13	14	05.7		41.3	83	23.2	111		41.2	9	10 S	23	48	09	17	50	13	13 49
14	29	05.8		40.4	97	53.3	111		42.0	8	20	31	5 56	19	32	50	12	58 49
15	44	06.0		39.6	112	23.4	111		42.7	7	30	37	6 05	30	49	50	40	50
16	59	06.1		38.8	126	53.5	111		43.3	6	35	40	10	36	1 59	50	30	50
17	74	06.3	+12	38.0	141	23.7	112	+18	43.8	5	40	5 44	6 15	6 43	2 10	51	12	19 49
18	89	06.4	+12	37.2	155	53.9	112	+18	44.2	4	45	5 47	6 21	6 51	2 24	51	12	05 49
19	104	06.5		36.4	170	24.1	112		44.6	4	50	50	27	7 01	40	51	11	48 50
20	119	06.7		35.5	184	54.3	112		44.8	2	52	51	30	05	48	51	41	49
21	134	06.8		34.7	199	24.5	112		44.9	1	54	52	34	10	2 57	51	32	49
22	149	07.0		33.9	213	54.8	113		45.0	1	56	53	37	16	3 06	52	22	50
23	164	07.1		33.1	228	25.1	113		45.0	0	58	55	41	22	17	52	11	11 50
24	179	07.3	+12	32.2	242	55.4	113	+18	44.8	2	60 S	5 56	6 45	7 29	3 30	52	10	58 50
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 10 ^m 6			Mag: -3.8 PMG: 10 ^h 55 ^m			Mag: +0.6 PMG: 16 ^h 52 ^m			Mag: -1.8 PMG: 10 ^h 49 ^m			Mag: +0.6 PMG: 17 ^h 10 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	327	16.2	196	28.8	+18	51.3	106	36.5	-17	04.0	197	20.5	+18	50.3	101	46.8	-14	56.6
1	342	18.6	211	28.1		50.6	121	37.5		04.5	212	22.5		50.2	116	49.1		56.6
2	357	21.1	226	27.4		49.9	136	38.4		05.0	227	24.4		50.0	131	51.5		56.6
3	12	23.5	241	26.7		49.2	151	39.4		05.4	242	26.3		49.9	146	53.8		56.7
4	27	26.0	256	26.1		48.5	166	40.4		05.9	257	28.2		49.8	161	56.2		56.7
5	42	28.5	271	25.4	+18	47.7	181	41.3	-17	06.4	272	30.1	+18	49.6	176	58.5	-14	56.8
6	57	30.9	286	24.7	+18	47.0	196	42.3	-17	06.9	287	32.0	+18	49.5	192	00.9	-14	56.8
7	72	33.4	301	24.0		46.3	211	43.3		07.4	302	33.9		49.4	207	03.3		56.9
8	87	35.9	316	23.3		45.6	226	44.2		07.8	317	35.8		49.2	222	05.6		56.9
9	102	38.3	331	22.6		44.9	241	45.2		08.3	332	37.8		49.1	237	08.0		56.9
10	117	40.8	346	21.9		44.2	256	46.2		08.8	347	39.7		49.0	252	10.3		57.0
11	132	43.3	1	21.3	+18	43.5	271	47.1	-17	09.3	2	41.6	+18	48.8	267	12.7	-14	57.0
12	147	45.7	16	20.6	+18	42.7	286	48.1	-17	09.7	17	43.5	+18	48.7	282	15.0	-14	57.1
13	162	48.2	31	19.9		42.0	301	49.1		10.2	32	45.4		48.6	297	17.4		57.1
14	177	50.7	46	19.2		41.3	316	50.0		10.7	47	47.3		48.4	312	19.7		57.1
15	192	53.1	61	18.5		40.6	331	51.0		11.2	62	49.2		48.3	327	22.1		57.2
16	207	55.6	76	17.8		39.9	346	52.0		11.7	77	51.1		48.2	342	24.4		57.2
17	222	58.0	91	17.2	+18	39.1	1	52.9	-17	12.1	92	53.1	+18	48.0	357	26.8	-14	57.3
18	238	00.5	106	16.5	+18	38.4	16	53.9	-17	12.6	107	55.0	+18	47.9	12	29.1	-14	57.3
19	253	03.0	121	15.8		37.7	31	54.8		13.1	122	56.9		47.8	27	31.5		57.4
20	268	05.4	136	15.1		37.0	46	55.8		13.6	137	58.8		47.6	42	33.8		57.4
21	283	07.9	151	14.4		36.2	61	56.8		14.0	153	00.7		47.5	57	36.2		57.4
22	298	10.4	166	13.7		35.5	76	57.7		14.5	168	02.6		47.4	72	38.5		57.5
23	313	12.8	181	13.1		34.8	91	58.7		15.0	183	04.5		47.2	87	40.9		57.5
24	328	15.3	196	12.4	+18	34.1	106	59.6	-17	15.5	198	06.4	+18	47.1	102	43.2	-14	57.6
Dif	—		-7		-7		+10		-5		+19		-1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 24 ^d 1 PHE	SD: 15 ^h 0				R°: 48 ^m							
	PMG: 12 ^h 03 ^m 4				PMG: 8 ^h 04 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	179	07.3	+12 32.2	242	55.4	+18 44.8	2	60 N	19 39	20 28	21 36	** ** *		16 42	37	
1	194	07.4	31.4	257	25.8 ¹¹⁴	44.6	2	58	32	17	17	** ** *		29 39		
2	209	07.6	30.6	271	56.1 ¹¹³	44.3	3	56	25	20 07	21 02	** ** *		18 40		
3	224	07.7	29.8	286	26.5 ¹¹⁴	43.9	4	54	19	19 58	20 49	** ** *		09 40		
4	239	07.9	29.0	300	57.0 ¹¹⁵	43.4	5	52	14	51	38		0 06	52	16 01 40	
5	254	08.0	+12 28.1	315	27.4 ¹¹⁴	+18 42.8	6	50	19 09	19 44	20 28	0 14	52	15 53	41	
6	269	08.2	+12 27.3	329	57.9 ¹¹⁵	+18 42.2	6	45	18 59	19 30	20 08	0 31	51	15 37	42	
7	284	08.3	26.5	344	28.3 ¹¹⁴	41.4	8	40	50	18	19 53	44	51	23	44	
8	299	08.5	25.7	358	58.9 ¹¹⁶	40.6	8	35	43	09	41	0 56	50	12	44	
9	314	08.6	24.8	13	29.4 ¹¹⁵	39.6	10	30	36	19 01	30	1 06	50	15 02	45	
10	329	08.8	24.0	28	00.0 ¹¹⁶	38.6	10	20	25	18 48	15	23	50	14 45	46	
11	344	08.9	+12 23.2	42	30.6 ¹¹⁶	+18 37.5	11	10 N	18 16	18 37	19 02	1 38	49	14 30	47	
12	359	09.1	+12 22.4	57	01.2 ¹¹⁶	+18 36.3	12	0	18 07	18 28	18 52	1 52	49	14 16	48	
13	14	09.2	21.5	71	31.8 ¹¹⁶	35.0	13	10 S	17 58	19	44	2 07	48	14 02	49	
14	29	09.4	20.7	86	02.5 ¹¹⁷	33.6	14	20	49	11	37	22	47	13 47	50	
15	44	09.5	19.9	100	33.2 ¹¹⁷	32.1	15	30	38	18 03	31	39	47	30	50	
16	59	09.7	19.1	115	03.9 ¹¹⁷	30.6	15	35	32	17 58	28	2 49	47	20	51	
17	74	09.8	+12 18.2	129	34.7 ¹¹⁸	+18 28.9	17	40	17 26	17 53	18 25	3 01	46	13 08	52	
18	89	10.0	+12 17.4	144	05.5 ¹¹⁸	+18 27.2	17	45	17 18	17 48	18 22	3 15	45	12 54	53	
19	104	10.1	16.6	158	36.3 ¹¹⁸	25.4	18	50	09	42	20	31	45	38	54	
20	119	10.3	15.7	173	07.1 ¹¹⁸	23.5	19	52	04	39	19	39	44	30	54	
21	134	10.4	14.9	187	38.0 ¹¹⁹	21.5	20	54	17 00	36	18	48	43	21	55	
22	149	10.6	14.1	202	08.9 ¹¹⁹	19.4	21	56	16 54	33	17	3 58	43	12	55	
23	164	10.7	13.3	216	39.8 ¹¹⁹	17.3	21	58	48	30	15	4 09	42	12 01	56	
24	179	10.9	+12 12.4	231	10.7 ¹¹⁹	+18 15.0	23	60 S	16 42	17 26	18 14	4 22	41	11 48	57	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 06 ^m 6			Mag: -3.8 PMG: 10 ^h 56 ^m			Mag: +0.6 PMG: 16 ^h 51 ^m			Mag: -1.8 PMG: 10 ^h 46 ^m			Mag: +0.6 PMG: 17 ^h 06 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	
0	328	15.3	196	12.4	+18 34.1	106	59.6	-17 15.5	198	06.4	+18 47.1	102	43.2	-14 57.6		
1	343	17.8	211	11.7	33.3	122	00.6	15.9	213	08.4	47.0	117	45.6	57.6		
2	358	20.2	226	11.0	32.6	137	01.6	16.4	228	10.3	46.8	132	47.9	57.7		
3	13	22.7	241	10.3	31.9	152	02.5	16.9	243	12.2	46.7	147	50.3	57.7		
4	28	25.2	256	09.7	31.1	167	03.5	17.4	258	14.1	46.6	162	52.6	57.7		
5	43	27.6	271	09.0	+18 30.4	182	04.4	-17 17.8	273	16.0	+18 46.4	177	54.9	-14 57.8		
6	58	30.1	286	08.3	+18 29.7	197	05.4	-17 18.3	288	17.9	+18 46.3	192	57.3	-14 57.8		
7	73	32.5	301	07.6	28.9	212	06.3	18.8	303	19.8	46.2	207	59.6	57.9		
8	88	35.0	316	07.0	28.2	227	07.3	19.3	318	21.7	46.0	223	02.0	57.9		
9	103	37.5	331	06.3	27.5	242	08.3	19.7	333	23.7	45.9	238	04.3	58.0		
10	118	39.9	346	05.6	26.7	257	09.2	20.2	348	25.6	45.8	253	06.7	58.0		
11	133	42.4	1	04.9	+18 26.0	272	10.2	-17 20.7	3	27.5	+18 45.6	268	09.0	-14 58.1		
12	148	44.9	16	04.3	+18 25.2	287	11.1	-17 21.2	18	29.4	+18 45.5	283	11.4	-14 58.1		
13	163	47.3	31	03.6	24.5	302	12.1	21.6	33	31.3	45.4	298	13.7	58.1		
14	178	49.8	46	02.9	23.8	317	13.0	22.1	48	33.2	45.2	313	16.1	58.2		
15	193	52.3	61	02.2	23.0	332	14.0	22.6	63	35.1	45.1	328	18.4	58.2		
16	208	54.7	76	01.6	22.3	347	14.9	23.1	78	37.1	45.0	343	20.8	58.3		
17	223	57.2	91	00.9	+18 21.5	2	15.9	-17 23.5	93	39.0	+18 44.8	358	23.1	-14 58.3		
18	238	59.7	106	00.2	+18 20.8	17	16.8	-17 24.0	108	40.9	+18 44.7	13	25.5	-14 58.4		
19	254	02.1	120	59.5	20.0	32	17.8	24.5	123	42.8	44.6	28	27.8	58.4		
20	269	04.6	135	58.9	19.3	47	18.7	25.0	138	44.7	44.4	43	30.2	58.4		
21	284	07.0	150	58.2	18.5	62	19.7	25.4	153	46.6	44.3	58	32.5	58.5		
22	299	09.5	165	57.5	17.8	77	20.6	25.9	168	48.5	44.2	73	34.8	58.5		
23	314	12.0	180	56.9	17.0	92	21.6	26.4	183	50.5	44.0	88	37.2	58.6		
24	329	14.4	195	56.2	+18 16.3	107	22.5	-17 26.9	198	52.4	+18 43.9	103	39.5	-14 58.6		
Dif	—		-7	-7		+10	-5		+19	-1		+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 2			Edad: 25 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 8 ^h 52 ^m R°: 47 ^m							Hora R°		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	10.9	+12	12.4	231	10.7	+18	15.0	60 N	2 31	3 39	4 28	0 18	60	17 19	29
1	194	11.0		11.6	245	41.7 ¹²⁰		12.7 ²³	58	2 50	3 51	36	30	59	17 08	31
2	209	11.2		10.8	260	12.7 ¹²⁰		10.3 ²⁴	56	3 06	4 00	42	41	57	16 58	32
3	224	11.3		09.9	274	43.7 ¹²⁰		07.8 ²⁵	54	19	09	48	50	57	49	34
4	239	11.5		09.1	289	14.8 ¹²¹		05.2 ²⁶	52	30	16	54	0 58	56	41	35
5	254	11.6	+12	08.3	303	45.9 ¹²¹	+18	02.6 ²⁶	50	3 39	4 23	4 58	1 06	55	16 34	36
6	269	11.8	+12	07.4	318	17.0 ¹²¹	+17	59.8 ²⁸	45	3 59	4 37	5 09	1 22	54	16 19	38
7	284	11.9		06.6	332	48.2 ¹²²		57.0 ²⁸	40	4 14	49	17	35	53	16 07	39
8	299	12.1		05.8	347	19.4 ¹²²		54.1 ²⁹	35	26	4 58	24	46	52	15 56	41
9	314	12.2		05.0	1	50.6 ¹²²		51.1 ³⁰	30	36	5 06	31	1 56	51	47	42
10	329	12.4		04.1	16	21.8 ¹²²		48.0 ³¹	20	4 52	19	42	2 13	49	31	44
11	344	12.5	+12	03.3	30	53.1 ¹²³	+17	44.9 ³¹	10 N	5 04	5 30	5 51	2 27	49	15 17	45
12	359	12.7	+12	02.5	45	24.4 ¹²³	+17	41.6 ³³	0	5 14	5 39	6 00	2 41	47	15 04	46
13	14	12.9		01.6	59	55.8 ¹²⁴		38.3 ³³	10 S	22	47	08	2 55	46	14 51	48
14	29	13.0	+12	00.8	74	27.1 ¹²³		34.9 ³⁴	20	29	5 55	18	3 09	45	37	49
15	44	13.2	+11	59.9	88	58.5 ¹²⁴		31.4 ³⁵	30	35	6 03	28	26	43	20	52
16	59	13.3		59.1	103	30.0 ¹²⁵		27.9 ³⁵	35	38	08	34	36	42	11	52
17	74	13.5	+11	58.3	118	01.4 ¹²⁴	+17	24.3 ³⁶	40	5 41	6 13	6 40	3 47	41	14 00	54
18	89	13.6	+11	57.4	132	32.9 ¹²⁵	+17	20.5 ³⁸	45	5 44	6 18	6 48	4 00	40	13 47	55
19	104	13.8		56.6	147	04.5 ¹²⁶		16.8 ³⁷	50	46	24	6 57	16	38	32	57
20	119	13.9		55.8	161	36.0 ¹²⁵		12.9 ³⁹	52	47	26	7 01	23	38	24	58
21	134	14.1		54.9	176	07.6 ¹²⁶		09.0 ³⁹	54	48	29	06	31	37	16	59
22	149	14.2		54.1	190	39.2 ¹²⁶		04.9 ⁴¹	56	49	32	11	41	35	13 07	60
23	164	14.4		53.3	205	10.9 ¹²⁷	+17	00.8 ⁴¹	58	50	36	17	4 51	35	12 57	61
24	179	14.6	+11	52.4	219	42.6 ¹²⁷	+16	56.7 ⁴¹	60 S	5 51	6 40	7 23	5 03	33	12 45	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 02 ^m 7		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: +0.6 PMG: 16 ^h 49 ^m		Mag: -1.8 PMG: 10 ^h 43 ^m		Mag: +0.6 PMG: 17 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	329	14.4	195	56.2	107	22.5	198	52.4	103	39.5
1	344	16.9	210	55.5	122	23.5	213	54.3	118	41.9
2	359	19.4	225	54.8	137	24.4	228	56.2	133	44.2
3	14	21.8	240	54.2	152	25.4	243	58.1	148	46.6
4	29	24.3	255	53.5	167	26.3	259	00.0	163	48.9
5	44	26.8	270	52.8	182	27.3	274	02.0	178	51.3
6	59	29.2	285	52.2	197	28.2	289	03.9	193	53.6
7	74	31.7	300	51.5	212	29.2	304	05.8	208	55.9
8	89	34.1	315	50.8	227	30.1	319	07.7	223	58.3
9	104	36.6	330	50.2	242	31.0	334	09.6	239	00.6
10	119	39.1	345	49.5	257	32.0	349	11.5	254	03.0
11	134	41.5	0	48.8	272	32.9	4	13.4	269	05.3
12	149	44.0	15	48.2	287	33.9	19	15.4	284	07.7
13	164	46.5	30	47.5	302	34.8	34	17.3	299	10.0
14	179	48.9	45	46.8	317	35.8	49	19.2	314	12.4
15	194	51.4	60	46.2	332	36.7	64	21.1	329	14.7
16	209	53.9	75	45.5	347	37.7	79	23.0	344	17.0
17	224	56.3	90	44.9	2	38.6	94	24.9	359	19.4
18	239	58.8	105	44.2	17	39.5	109	26.9	14	21.7
19	255	01.3	120	43.5	32	40.5	124	28.8	29	24.1
20	270	03.7	135	42.9	47	41.4	139	30.7	44	26.4
21	285	06.2	150	42.2	62	42.4	154	32.6	59	28.8
22	300	08.6	165	41.5	77	43.3	169	34.5	74	31.1
23	315	11.1	180	40.9	92	44.2	184	36.4	89	33.4
24	330	13.6	195	40.2	107	45.2	199	38.4	104	35.8
Dif	—		-7	-8	+9	-5	+19	-1	+23	0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 02 ^m 9				Edad: 26 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'0 SD: 14'8 PMG: 9 ^h 39 ^m R°: 46 ^m												
	hG ☉	Dec			hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	14.6	+11	52.4	219	42.6	+16	56.7	60 N	19 33	20 21	21 28	1 18 65	17 48 24			
1	194	14.7		51.6	234	14.3 ¹²⁷		52.4 ⁴³	58	26	11	21 10	29 63	39 26			
2	209	14.9		50.7	248	46.0 ¹²⁷		48.1 ⁴⁴	56	20	20 01	20 55	38 62	30 28			
3	224	15.0		49.9	263	17.8 ¹²⁸		43.7 ⁴³	54	15	19 53	43	47 60	23 29			
4	239	15.2		49.1	277	49.6 ¹²⁸		39.2 ⁴⁵	52	10	46	32	1 54 60	16 30			
5	254	15.3	+11	48.2	292	21.5 ¹²⁹	+16	34.7 ⁴⁵	50	19 05	19 40	20 23	2 01 58	17 10 31			
6	269	15.5	+11	47.4	306	53.3 ¹²⁸	+16	30.1 ⁴⁶	45	18 55	19 26	20 04	2 16 56	16 57 34			
7	284	15.7		46.6	321	25.2 ¹²⁹		25.4 ⁴⁷	40	47	15	19 50	28 54	46 36			
8	299	15.8		45.7	335	57.2 ¹³⁰		20.6 ⁴⁸	35	40	19 06	38	38 53	37 37			
9	314	16.0		44.9	350	29.1 ¹²⁹		15.8 ⁴⁸	30	34	18 59	28	2 47 51	29 38			
10	329	16.1		44.0	5	01.1 ¹³⁰		10.9 ⁴⁹	20	24	46	13	3 02 50	15 41			
11	344	16.3	+11	43.2	19	33.2 ¹³¹	+16	05.9 ⁵⁰	10 N	18 15	18 36	19 01	3 16 47	16 02 43			
12	359	16.5	+11	42.3	34	05.2 ¹³⁰	+16	00.9 ⁵⁰	0	18 06	18 27	18 52	3 28 46	15 50 46			
13	14	16.6		41.5	48	37.3 ¹³¹	+15	55.8 ⁵¹	10 S	17 58	19	44	41 44	39 47			
14	29	16.8		40.7	63	09.5 ¹³²		50.6 ⁵²	20	49	12	38	3 54 42	26 49			
15	44	16.9		39.8	77	41.6 ¹³¹		45.3 ⁵³	30	40	04	32	4 09 40	12 51			
16	59	17.1		39.0	92	13.8 ¹³²		40.0 ⁵³	35	34	18 00	29	18 39	15 03 54			
17	74	17.2	+11	38.1	106	46.1 ¹³³	+15	34.6 ⁵⁴	40	17 28	17 55	18 27	4 28 37	14 54 55			
18	89	17.4	+11	37.3	121	18.3 ¹³²	+15	29.2 ⁵⁴	45	17 20	17 50	18 25	4 40 35	14 42 57			
19	104	17.6		36.4	135	50.6 ¹³³		23.7 ⁵⁵	50	11	45	22	4 54 34	29 59			
20	119	17.7		35.6	150	22.9 ¹³³		18.1 ⁵⁶	52	07	42	22	5 01 32	22 61			
21	134	17.9		34.8	164	55.3 ¹³⁴		12.4 ⁵⁷	54	17 03	40	21	08 31	15 62			
22	149	18.0		33.9	179	27.7 ¹³⁴		06.7 ⁵⁷	56	16 58	37	20	16 30	14 07 64			
23	164	18.2		33.1	194	00.1 ¹³⁴	+15	00.9 ⁵⁸	58	53	33	19	26 28	13 58 65			
24	179	18.4	+11	32.2	208	32.5 ¹³⁴	+14	55.1 ⁵⁸	60 S	16 46	17 30	18 19	5 36 27	13 48 67			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG		Mag: -3.9		Mag: +0.6		Mag: -1.8		Mag: +0.6								
	1 ^h 58 ^m 8		PMG: 10 ^h 58 ^m		PMG: 16 ^h 48 ^m		PMG: 10 ^h 40 ^m		PMG: 16 ^h 59 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	330	13.6	195	40.2	+17	58.0	199	38.4	+18	40.7							
1	345	16.0	210	39.6		57.2	214	40.3		40.5							
2	0	18.5	225	38.9		56.5	229	42.2		40.4							
3	15	21.0	240	38.2		55.7	244	44.1		40.3							
4	30	23.4	255	37.6		54.9	259	46.0		40.1							
5	45	25.9	270	36.9	+17	54.1	274	47.9	+18	40.0							
6	60	28.4	285	36.3	+17	53.4	289	49.9	+18	39.9							
7	75	30.8	300	35.6		52.6	304	51.8		39.7							
8	90	33.3	315	35.0		51.8	319	53.7		39.6							
9	105	35.8	330	34.3		51.0	334	55.6		39.5							
10	120	38.2	345	33.6		50.2	349	57.5		39.3							
11	135	40.7	0	33.0	+17	49.5	4	59.4	+18	39.2							
12	150	43.1	15	32.3	+17	48.7	287	56.4	+18	39.1							
13	165	45.6	30	31.7		47.9	302	57.3		38.9							
14	180	48.1	45	31.0		47.1	317	58.3		38.8							
15	195	50.5	60	30.4		46.3	332	59.2		38.7							
16	210	53.0	75	29.7		45.5	348	00.1		38.5							
17	225	55.5	90	29.1	+17	44.7	3	01.1	+18	38.4							
18	240	57.9	105	28.4	+17	44.0	18	02.0	+18	38.3							
19	256	00.4	120	27.7		43.2	33	02.9		38.1							
20	271	02.9	135	27.1		42.4	48	03.9		38.0							
21	286	05.3	150	26.4		41.6	63	04.8		37.9							
22	301	07.8	165	25.8		40.8	78	05.7		37.7							
23	316	10.2	180	25.1		40.0	93	06.6		37.6							
24	331	12.7	195	24.5	+17	39.2	108	07.6	+18	37.5							
Dif	—		-7	-8	+9	-5	+19	-1	+23	0							

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 6				Edad: 27 ^d 1 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 53 ^o 9 R ^o : 44 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	18.4	+11	32.2	208	32.5	+14	55.1	60 N	2	39	3	45	4	33	2	23			
1	194	18.5		31.4	223	05.0 ¹³⁵		49.1 ⁶⁰	58	2	57	3	56		40	32	66			
2	209	18.7		30.5	237	37.5 ¹³⁵		43.2 ⁵⁹	56	3	11	4	05		46	40	64			
3	224	18.9		29.7	252	10.0 ¹³⁵		37.1 ⁶¹	54		23		13		52	47	63			
4	239	19.0		28.8	266	42.6 ¹³⁶		31.0 ⁶¹	52		34		20		4	57	54			
5	254	19.2	+11	28.0	281	15.2 ¹³⁶	+14	24.8 ⁶²	50	3	43	4	26	5	01	2	59			
6	269	19.3	+11	27.1	295	47.8 ¹³⁶	+14	18.6 ⁶²	45	4	02	4	40	5	11	3	12			
7	284	19.5		26.3	310	20.5 ¹³⁷		12.3 ⁶³	40		16		51		19	22	55			
8	299	19.7		25.5	324	53.2 ¹³⁷	+14	06.0 ⁶³	35		28	5	00		26	31	53			
9	314	19.8		24.6	339	25.9 ¹³⁷	+13	59.6 ⁶⁴	30		38		07		32	38	52			
10	329	20.0		23.8	353	58.7 ¹³⁸		53.1 ⁶⁵	20	4	53		20		42	3	52			
11	344	20.2	+11	22.9	8	31.4 ¹³⁷	+13	46.6 ⁶⁵	10 N	5	05	5	30	5	51	4	03			
12	359	20.3	+11	22.1	23	04.3 ¹³⁹	+13	40.0 ⁶⁶	0	5	14	5	38	5	59	4	14			
13	14	20.5		21.2	37	37.1 ¹³⁸		33.3 ⁶⁷	10 S		21		46		6	25	42			
14	29	20.6		20.4	52	10.0 ¹³⁹		26.6 ⁶⁷	20		28	5	54		16	36	40			
15	44	20.8		19.5	66	42.9 ¹³⁹		19.9 ⁶⁷	30		33	6	01		26	49	38			
16	59	21.0		18.7	81	15.8 ¹³⁹		13.1 ⁶⁸	35		36		05		31	4	57			
17	74	21.1	+11	17.8	95	48.7 ¹³⁹	+13	06.2 ⁶⁹	40	5	38	6	10	6	37	5	05			
18	89	21.3	+11	17.0	110	21.7 ¹⁴⁰	+12	59.3 ⁶⁹	45	5	40	6	15	6	45	5	15			
19	104	21.5		16.1	124	54.7 ¹⁴⁰		52.3 ⁷⁰	50		42		20		53	28	29			
20	119	21.6		15.3	139	27.8 ¹⁴¹		45.3 ⁷⁰	52		43		22		6	33	28			
21	134	21.8		14.4	154	00.8 ¹⁴⁰		38.2 ⁷¹	54		44		25	7	01	39	27			
22	149	22.0		13.5	168	33.9 ¹⁴¹		31.0 ⁷²	56		45		28		06	46	25			
23	164	22.1		12.7	183	07.0 ¹⁴¹		23.8 ⁷²	58		45		31		11	5	54			
24	179	22.3	+11	11.8	197	40.2 ¹⁴²	+12	16.6 ⁷²	60 S	5	46	6	34	7	18	6	03			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 54 ^m 8				Mag: -3.9 PMG: 10 ^h 59 ^m				Mag: +0.6 PMG: 16 ^h 46 ^m				Mag: -1.8 PMG: 10 ^h 37 ^m				Mag: +0.6 PMG: 16 ^h 55 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	12.7	195	24.5	+17	39.2	108	07.6	-17	49.5	200	24.4	+18	37.5	105	31.9	-15	00.8		
1	346	15.2	210	23.8		38.4	123	08.5		49.9	215	26.3		37.3	120	34.3		00.8		
2	1	17.6	225	23.2		37.6	138	09.4		50.4	230	28.2		37.2	135	36.6		00.9		
3	16	20.1	240	22.5		36.8	153	10.4		50.9	245	30.1		37.1	150	38.9		00.9		
4	31	22.6	255	21.9		36.0	168	11.3		51.3	260	32.1		36.9	165	41.3		01.0		
5	46	25.0	270	21.2	+17	35.2	183	12.2	-17	51.8	275	34.0	+18	36.8	180	43.6	-15	01.0		
6	61	27.5	285	20.6	+17	34.4	198	13.1	-17	52.3	290	35.9	+18	36.7	195	46.0	-15	01.0		
7	76	30.0	300	19.9		33.6	213	14.1		52.7	305	37.8		36.5	210	48.3		01.1		
8	91	32.4	315	19.3		32.8	228	15.0		53.2	320	39.7		36.4	225	50.6		01.1		
9	106	34.9	330	18.6		32.0	243	15.9		53.7	335	41.6		36.2	240	53.0		01.2		
10	121	37.4	345	18.0		31.2	258	16.8		54.1	350	43.6		36.1	255	55.3		01.2		
11	136	39.8	0	17.4	+17	30.4	273	17.8	-17	54.6	5	45.5	+18	36.0	270	57.6	-15	01.3		
12	151	42.3	15	16.7	+17	29.6	288	18.7	-17	55.1	20	47.4	+18	35.8	286	00.0	-15	01.3		
13	166	44.7	30	16.1		28.8	303	19.6		55.5	35	49.3		35.7	301	02.3		01.4		
14	181	47.2	45	15.4		28.0	318	20.5		56.0	50	51.2		35.6	316	04.6		01.4		
15	196	49.7	60	14.8		27.2	333	21.4		56.5	65	53.2		35.4	331	07.0		01.5		
16	211	52.1	75	14.1		26.4	348	22.4		56.9	80	55.1		35.3	346	09.3		01.5		
17	226	54.6	90	13.5	+17	25.6	3	23.3	-17	57.4	95	57.0	+18	35.2	1	11.7	-15	01.6		
18	241	57.1	105	12.8	+17	24.8	18	24.2	-17	57.9	110	58.9	+18	35.0	16	14.0	-15	01.6		
19	256	59.5	120	12.2		24.0	33	25.1		58.3	126	00.8		34.9	31	16.3		01.7		
20	272	02.0	135	11.6		23.2	48	26.0		58.8	141	02.8		34.8	46	18.7		01.7		
21	287	04.5	150	10.9		22.3	63	27.0		59.3	156	04.7		34.6	61	21.0		01.7		
22	302	06.9	165	10.3		21.5	78	27.9	-17	59.7	171	06.6		34.5	76	23.3		01.8		
23	317	09.4	180	09.6		20.7	93	28.8	-18	00.2	186	08.5		34.4	91	25.7		01.8		
24	332	11.9	195	09.0	+17	19.9	108	29.7	-18	00.6	201	10.4	+18	34.2	106	28.0	-15	01.9		
Dif	—				-6 -8				+9 -5				+19 -1				+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 02 ^m 4			Edad: 28 ^d 1 PHE { 4 ^h : 53 ⁹ 12 ^h : 53 ⁹ 20 ^h : 54 ⁰ R°: 44 ^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	179	22.3	+11	11.8	197	40.2	+12 16.6	60 N	19 28	20 15	21 19	3 31 70	18 32 17		
1	194	22.5		11.0	212	13.4 ¹⁴²	09.3 ⁷³	58	21	20 05	21 02	38 68	26 19		
2	209	22.6		10.1	226	46.6 ¹⁴²	+12 01.9 ⁷⁴	56	15	19 56	20 49	44 66	21 21		
3	224	22.8		09.3	241	19.8 ¹⁴²	+11 54.5 ⁷⁴	54	10	48	37	50 64	17 22		
4	239	23.0		08.4	255	53.0 ¹⁴²	47.1 ⁷⁴	52	05	42	27	55 62	13 24		
5	254	23.1	+11	07.6	270	26.3 ¹⁴³	+11 39.6 ⁷⁵	50	19 01	19 35	20 18	3 59 61	18 09 26		
6	269	23.3	+11	06.7	284	59.6 ¹⁴³	+11 32.0 ⁷⁶	45	18 52	19 23	20 00	4 09 58	18 01 29		
7	284	23.5		05.9	299	32.9 ¹⁴³	24.4 ⁷⁶	40	44	12	19 46	17 56	17 55 30		
8	299	23.6		05.0	314	06.3 ¹⁴⁴	16.8 ⁷⁶	35	38	19 04	35	24 54	49 33		
9	314	23.8		04.2	328	39.7 ¹⁴⁴	09.1 ⁷⁷	30	32	18 57	26	30 52	44 34		
10	329	24.0		03.3	343	13.1 ¹⁴⁴	+11 01.3 ⁷⁸	20	22	45	11	41 49	35 38		
11	344	24.1	+11	02.4	357	46.5 ¹⁴⁴	+10 53.6 ⁷⁷	10 N	18 14	18 35	19 00	4 50 46	17 27 41		
12	359	24.3	+11	01.6	12	19.9 ¹⁴⁴	+10 45.7 ⁷⁹	0	18 06	18 27	18 51	4 59 43	17 20 43		
13	14	24.5	+11	00.7	26	53.4 ¹⁴⁵	37.8 ⁷⁹	10 S	17 58	19	44	5 07 41	12 46		
14	29	24.6	+10	59.9	41	26.9 ¹⁴⁵	29.9 ⁷⁹	20	50	12	38	16 39	17 04 49		
15	44	24.8		59.0	56	00.4 ¹⁴⁵	22.0 ⁷⁹	30	41	05	33	27 35	16 55 52		
16	59	25.0		58.2	70	33.9 ¹⁴⁵	14.0 ⁸⁰	35	35	18 01	31	33 33	50 54		
17	74	25.1	+10	57.3	85	07.5 ¹⁴⁶	+10 05.9 ⁸¹	40	17 29	17 57	18 29	5 39 32	16 44 56		
18	89	25.3	+10	56.4	99	41.1 ¹⁴⁶	+9 57.8 ⁸¹	45	17 23	17 53	18 27	5 47 30	16 37 58		
19	104	25.5		55.6	114	14.7 ¹⁴⁶	49.7 ⁸¹	50	14	47	25	5 57 26	29 61		
20	119	25.6		54.7	128	48.3 ¹⁴⁶	41.5 ⁸²	52	11	45	24	6 01 25	25 62		
21	134	25.8		53.9	143	21.9 ¹⁴⁶	33.3 ⁸²	54	06	43	24	06 24	20 65		
22	149	26.0		53.0	157	55.6 ¹⁴⁷	25.0 ⁸³	56	17 02	40	23	11 22	16 66		
23	164	26.1		52.1	172	29.3 ¹⁴⁷	16.7 ⁸³	58	16 57	37	23	17 20	10 68		
24	179	26.3	+10	51.3	187	03.0 ¹⁴⁷	+9 08.4 ⁸³	60 S	16 51	17 34	18 23	6 24 18	16 04 71		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 50 ^m 9		Mag: -3.9 PMG: 11 ^h 00 ^m		Mag: +0.6 PMG: 16 ^h 45 ^m		Mag: -1.8 PMG: 10 ^h 34 ^m		Mag: +0.6 PMG: 16 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	332	11.9	195	09.0	108	29.7	201	10.4	106	28.0
1	347	14.3	210	08.3	123	30.6	216	12.4	121	30.3
2	2	16.8	225	07.7	138	31.6	231	14.3	136	32.7
3	17	19.2	240	07.1	153	32.5	246	16.2	151	35.0
4	32	21.7	255	06.4	168	33.4	261	18.1	166	37.3
5	47	24.2	270	05.8	183	34.3	276	20.0	181	39.7
6	62	26.6	285	05.2	198	35.2	291	22.0	196	42.0
7	77	29.1	300	04.5	213	36.1	306	23.9	211	44.3
8	92	31.6	315	03.9	228	37.1	321	25.8	226	46.7
9	107	34.0	330	03.2	243	38.0	336	27.7	241	49.0
10	122	36.5	345	02.6	258	38.9	351	29.6	256	51.3
11	137	39.0	0	02.0	273	39.8	6	31.6	271	53.7
12	152	41.4	15	01.3	288	40.7	21	33.5	286	56.0
13	167	43.9	30	00.7	303	41.6	36	35.4	301	58.3
14	182	46.3	45	00.1	318	42.5	51	37.3	317	00.7
15	197	48.8	59	59.4	333	43.4	66	39.3	332	03.0
16	212	51.3	74	58.8	348	44.4	81	41.2	347	05.3
17	227	53.7	89	58.2	3	45.3	96	43.1	2	07.7
18	242	56.2	104	57.5	18	46.2	111	45.0	17	10.0
19	257	58.7	119	56.9	33	47.1	126	46.9	32	12.3
20	273	01.1	134	56.3	48	48.0	141	48.9	47	14.7
21	288	03.6	149	55.6	63	48.9	156	50.8	62	17.0
22	303	06.1	164	55.0	78	49.8	171	52.7	77	19.3
23	318	08.5	179	54.4	93	50.7	186	54.6	92	21.6
24	333	11.0	194	53.7	108	51.6	201	56.6	107	24.0
Dif	—		-6		+9		+19		+23	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 1			Edad: 29 ^d 1 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	26.3	+10 51.3	187	03.0	+9 08.4	60 N	2 46	3 51	4 38	4 41 70	18 49 15		
1	194	26.5	50.4	201	36.7 ¹⁴⁷	+9 00.0 ⁸⁴	58	3 03	4 01	44	46 68	45 18		
2	209	26.7	49.6	216	10.4 ¹⁴⁷	+8 51.6 ⁸⁵	56	17	09	50	50 66	42 20		
3	224	26.8	48.7	230	44.2 ¹⁴⁸	43.1 ⁸⁵	54	28	17	4 55	54 64	39 22		
4	239	27.0	47.8	245	18.0 ¹⁴⁸	34.7 ⁸⁴	52	38	24	5 00	4 57 63	37 23		
5	254	27.2	+10 47.0	259	51.8 ¹⁴⁸	+8 26.1 ⁸⁶	50	3 47	4 30	5 04	5 00 62	18 35 24		
6	269	27.3	+10 46.1	274	25.6 ¹⁴⁸	+8 17.6 ⁸⁵	45	4 05	4 42	5 13	5 07 59	18 30 27		
7	284	27.5	45.3	288	59.4 ¹⁴⁸	09.0 ⁸⁶	40	19	4 53	21	13 56	25 30		
8	299	27.7	44.4	303	33.2 ¹⁴⁸	+8 00.3 ⁸⁷	35	30	5 01	27	18 54	22 31		
9	314	27.8	43.5	318	07.1 ¹⁴⁹	+7 51.7 ⁸⁶	30	39	08	33	22 52	18 34		
10	329	28.0	42.7	332	41.0 ¹⁴⁹	43.0 ⁸⁷	20	4 54	20	43	30 48	13 37		
11	344	28.2	+10 41.8	347	14.8 ¹⁴⁸	+7 34.3 ⁸⁷	10 N	5 05	5 30	5 51	5 36 46	18 08 40		
12	359	28.4	+10 40.9	1	48.7 ¹⁴⁹	+7 25.5 ⁸⁸	0	5 13	5 38	5 59	5 42 43	18 03 43		
13	14	28.5	40.1	16	22.6 ¹⁴⁹	16.7 ⁸⁸	10 S	20	45	6 06	48 40	17 58 46		
14	29	28.7	39.2	30	56.6 ¹⁵⁰	+7 07.9 ⁸⁸	20	26	52	14	5 55 37	53 48		
15	44	28.9	38.3	45	30.5 ¹⁴⁹	+6 59.0 ⁸⁹	30	31	5 59	23	6 02 34	47 52		
16	59	29.1	37.5	60	04.5 ¹⁵⁰	50.1 ⁸⁹	35	33	6 03	29	06 32	44 54		
17	74	29.2	+10 36.6	74	38.4 ¹⁴⁹	+6 41.2 ⁸⁹	40	5 35	6 07	6 34	6 11 30	17 40 56		
18	89	29.4	+10 35.8	89	12.4 ¹⁵⁰	+6 32.3 ⁸⁹	45	5 37	6 11	6 41	6 17 27	17 35 59		
19	104	29.6	34.9	103	46.4 ¹⁵⁰	23.3 ⁹⁰	50	39	16	49	23 25	30 62		
20	119	29.7	34.0	118	20.4 ¹⁵⁰	14.3 ⁹⁰	52	39	18	53	26 24	27 64		
21	134	29.9	33.2	132	54.4 ¹⁵⁰	+6 05.3 ⁹⁰	54	40	21	6 57	30 21	25 65		
22	149	30.1	32.3	147	28.4 ¹⁵⁰	+5 56.2 ⁹¹	56	40	23	7 01	33 20	22 66		
23	164	30.3	31.4	162	02.4 ¹⁵⁰	47.2 ⁹⁰	58	40	26	06	37 19	18 69		
24	179	30.4	+10 30.6	176	36.5 ¹⁵¹	+5 38.1 ⁹¹	60 S	5 41	6 29	7 12	6 42 16	17 15 70		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 47 ^m 0		Mag: -3.9 PMG: 11 ^h 01 ^m			Mag: +0.6 PMG: 16 ^h 44 ^m			Mag: -1.8 PMG: 10 ^h 31 ^m			Mag: +0.6 PMG: 16 ^h 48 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	333	11.0	194	53.7	+17 00.1	108	51.6	-18 11.8	201	56.6	+18 31.0	107	24.0	-15 03.0
1	348	13.5	209	53.1	+16 59.3	123	52.5	12.2	216	58.5	30.9	122	26.3	03.1
2	3	15.9	224	52.5	58.4	138	53.4	12.7	232	00.4	30.7	137	28.6	03.1
3	18	18.4	239	51.8	57.6	153	54.4	13.2	247	02.3	30.6	152	31.0	03.2
4	33	20.8	254	51.2	56.8	168	55.3	13.6	262	04.2	30.5	167	33.3	03.2
5	48	23.3	269	50.6	+16 55.9	183	56.2	-18 14.1	277	06.2	+18 30.3	182	35.6	-15 03.3
6	63	25.8	284	49.9	+16 55.1	198	57.1	-18 14.5	292	08.1	+18 30.2	197	38.0	-15 03.3
7	78	28.2	299	49.3	54.3	213	58.0	15.0	307	10.0	30.1	212	40.3	03.3
8	93	30.7	314	48.7	53.4	228	58.9	15.5	322	11.9	29.9	227	42.6	03.4
9	108	33.2	329	48.1	52.6	243	59.8	15.9	337	13.9	29.8	242	44.9	03.4
10	123	35.6	344	47.4	51.7	259	00.7	16.4	352	15.8	29.7	257	47.3	03.5
11	138	38.1	359	46.8	+16 50.9	274	01.6	-18 16.8	7	17.7	+18 29.5	272	49.6	-15 03.5
12	153	40.6	14	46.2	+16 50.0	289	02.5	-18 17.3	22	19.6	+18 29.4	287	51.9	-15 03.6
13	168	43.0	29	45.6	49.2	304	03.4	17.8	37	21.5	29.2	302	54.3	03.6
14	183	45.5	44	44.9	48.4	319	04.3	18.2	52	23.5	29.1	317	56.6	03.7
15	198	48.0	59	44.3	47.5	334	05.2	18.7	67	25.4	29.0	332	58.9	03.7
16	213	50.4	74	43.7	46.7	349	06.1	19.1	82	27.3	28.8	348	01.3	03.8
17	228	52.9	89	43.1	+16 45.8	4	07.0	-18 19.6	97	29.2	+18 28.7	3	03.6	-15 03.8
18	243	55.3	104	42.4	+16 45.0	19	07.9	-18 20.1	112	31.2	+18 28.6	18	05.9	-15 03.9
19	258	57.8	119	41.8	44.1	34	08.8	20.5	127	33.1	28.4	33	08.2	03.9
20	274	00.3	134	41.2	43.3	49	09.7	21.0	142	35.0	28.3	48	10.6	04.0
21	289	02.7	149	40.6	42.4	64	10.6	21.4	157	36.9	28.2	63	12.9	04.0
22	304	05.2	164	39.9	41.6	79	11.5	21.9	172	38.9	28.0	78	15.2	04.1
23	319	07.7	179	39.3	40.7	94	12.4	22.4	187	40.8	27.9	93	17.5	04.1
24	334	10.1	194	38.7	+16 39.9	109	13.3	-18 22.8	202	42.7	+18 27.8	108	19.9	-15 04.2
Dif	—		-6 -8			+9 -5			+19 -1			+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: 30 ^d 1 PHE { 4 ^h : 54 ¹ / ₁ 12 ^h : 54 ² / ₂ 20 ^h : 54 ² / ₂ PMG: 12 ^h 35 ^m R°: 43 ^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	30.4	+10	30.6	176	36.5	+5	38.1	60 N	19 22	20 08	21 11	5 51 72	19 04 15													
1	194	30.6		29.7	191	10.5 ¹⁵⁰		28.9 ⁹²	58	16	19 59	20 55	54 69	03 17													
2	209	30.8		28.8	205	44.6 ¹⁵¹		19.8 ⁹¹	56	10		51	42	56 67	02 19												
3	224	31.0		28.0	220	18.6 ¹⁵⁰		10.6 ⁹²	54	05	43	31	5 58 66	01 20													
4	239	31.1		27.1	234	52.7 ¹⁵¹	+5	01.4 ⁹²	52	19 01	37	22	6 00 64	19 00 22													
5	254	31.3	+10	26.2	249	26.8 ¹⁵¹	+4	52.2 ⁹²	50	18 57	19 31	20 13	6 02 62	18 59 23													
6	269	31.5	+10	25.3	264	00.8 ¹⁵⁰	+4	42.9 ⁹³	45	18 48	19 19	19 56	6 06 59	18 57 26													
7	284	31.7		24.5	278	34.9 ¹⁵¹		33.7 ⁹²	40	41	09	43	09 56	55 29													
8	299	31.8		23.6	293	09.0 ¹⁵¹		24.4 ⁹³	35	35	19 01	32	12 54	53 32													
9	314	32.0		22.7	307	43.1 ¹⁵¹		15.1 ⁹³	30	30	18 54	23	14 52	52 33													
10	329	32.2		21.9	322	17.2 ¹⁵¹	+4	05.8 ⁹³	20	20		43	19 09	50 37													
11	344	32.4	+10	21.0	336	51.3 ¹⁵¹	+3	56.4 ⁹⁴	10 N	18 13	18 34	18 59	6 22 45	18 48 39													
12	359	32.5	+10	20.1	351	25.4 ¹⁵¹	+3	47.1 ⁹³	0	18 05	18 26	18 51	6 25 43	18 46 42													
13	14	32.7		19.3	5	59.5 ¹⁵¹		37.7 ⁹⁴	10 S	17 58	19	44	28 40	44 45													
14	29	32.9		18.4	20	33.6 ¹⁵¹		28.3 ⁹⁴	20	50	13	38	32 37	41 49													
15	44	33.1		17.5	35	07.7 ¹⁵¹		18.9 ⁹⁴	30	42	06	34	36 34	39 52													
16	59	33.2		16.6	49	41.8 ¹⁵¹	+3	09.5 ⁹⁴	35	37	18 02	32	38 32	38 54													
17	74	33.4	+10	15.8	64	15.9 ¹⁵¹	+3	00.0 ⁹⁵	40	17 31	17 59	18 30	6 41 29	18 36 57													
18	89	33.6	+10	14.9	78	50.0 ¹⁵¹	+2	50.6 ⁹⁴	45	17 25	17 55	18 29	6 44 27	18 34 59													
19	104	33.8		14.0	93	24.1 ¹⁵¹		41.1 ⁹⁵	50	17	50	28	48 24	32 62													
20	119	34.0		13.2	107	58.3 ¹⁵²		31.6 ⁹⁵	52	14	48	27	50 22	31 64													
21	134	34.1		12.3	122	32.4 ¹⁵¹		22.1 ⁹⁵	54	10	46	27	51 21	30 65													
22	149	34.3		11.4	137	06.5 ¹⁵¹		12.6 ⁹⁵	56	06	44	27	53 20	28 68													
23	164	34.5		10.5	151	40.6 ¹⁵¹	+2	03.1 ⁹⁵	58	17 01	41	27	56 17	27 69													
24	179	34.7	+10	09.7	166	14.6 ¹⁵⁰	+1	53.5 ⁹⁶	60 S	16 56	17 39	18 27	6 58 15	18 25 72													
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 1 ^h 43 ^m 0			Mag: -3.9 PMG: 11 ^h 02 ^m			Mag: +0.6 PMG: 16 ^h 42 ^m			Mag: -1.8 PMG: 10 ^h 28 ^m			Mag: +0.6 PMG: 16 ^h 44 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'												
0	334	10.1		194	38.7	+16	109	13.3	-18	202	42.7	+18	108	19.9	-15												
1	349	12.6		209	38.1		124	14.2		217	44.6		123	22.2													
2	4	15.1		224	37.5		139	15.1		232	46.6		138	24.5													
3	19	17.5		239	36.8		154	16.0		247	48.5		153	26.9													
4	34	20.0		254	36.2		169	16.9		262	50.4		168	29.2													
5	49	22.4		269	35.6	+16	184	17.8	-18	277	52.3	+18	183	31.5	-15												
6	64	24.9		284	35.0	+16	199	18.7	-18	292	54.3	+18	198	33.8	-15												
7	79	27.4		299	34.4		214	19.6		307	56.2		213	36.2													
8	94	29.8		314	33.7		229	20.5		322	58.1		228	38.5													
9	109	32.3		329	33.1		244	21.4		338	00.0		243	40.8													
10	124	34.8		344	32.5		259	22.2		353	02.0		258	43.1													
11	139	37.2		359	31.9	+16	274	23.1	-18	8	03.9	+18	273	45.5	-15												
12	154	39.7		14	31.3	+16	289	24.0	-18	23	05.8	+18	288	47.8	-15												
13	169	42.2		29	30.7		304	24.9		38	07.7		303	50.1													
14	184	44.6		44	30.0		319	25.8		53	09.7		318	52.4													
15	199	47.1		59	29.4		334	26.7		68	11.6		333	54.8													
16	214	49.6		74	28.8		349	27.6		83	13.5		348	57.1													
17	229	52.0		89	28.2	+16	4	28.5	-18	98	15.4	+18	3	59.4	-15												
18	244	54.5		104	27.6	+16	19	29.4	-18	113	17.4	+18	19	01.7	-15												
19	259	56.9		119	27.0		34	30.3		128	19.3		34	04.1													
20	274	59.4		134	26.4		49	31.2		143	21.2		49	06.4													
21	290	01.9		149	25.7		64	32.1		158	23.1		64	08.7													
22	305	04.3		164	25.1		79	32.9		173	25.1		79	11.0													
23	320	06.8		179	24.5		94	33.8		188	27.0		94	13.4													
24	335	09.3		194	23.9	+16	109	34.7	-18	203	28.9	+18	109	15.7	-15												
Dif	—			-6			-9			+9			-5			+19			-1			+23			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 5			Edad: 1 ^d 4 PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /4 20 ^h : 54 ^m /5 R°: 43 ^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	34.7	+10	09.7	166	14.6	+1	53.5	60 N	2	54	3	56	4	43	7	03	72	19	19	16		
1	194	34.8		08.8	180	48.7 ¹⁵¹		44.0	58	3	09	4	05	49		03	70		20	18			
2	209	35.0		07.9	195	22.8 ¹⁵¹		34.4	56		22		14	54		03	68		21	19			
3	224	35.2		07.0	209	56.9 ¹⁵¹		24.9	54		33		21	4	59	04	66		21	22			
4	239	35.4		06.2	224	31.0 ¹⁵¹		15.3	52		42		27	5	03	04	64		22	23			
5	254	35.6	+10	05.3	239	05.0 ¹⁵⁰	+1	05.7	50	3	51	4	33	5	07	7	04	63	19	22	24		
6	269	35.7	+10	04.4	253	39.1 ¹⁵¹	+0	56.1	45	4	08	4	45	5	16	7	05	59	19	23	27		
7	284	35.9		03.5	268	13.2 ¹⁵¹		46.5	40		21		4	55	23	05	57		24	30			
8	299	36.1		02.7	282	47.2 ¹⁵⁰		36.9	35		32		5	03	29	06	54		25	32			
9	314	36.3		01.8	297	21.2 ¹⁵⁰		27.3	30		41		10		34	06	53		25	34			
10	329	36.5	+10	00.9	311	55.3 ¹⁵¹		17.7	20	4	54		21		43	07	49		27	37			
11	344	36.6	+10	00.0	326	29.3 ¹⁵⁰	+0	08.1	10 N	5	05		5	30	5	51	7	07	46	19	27	41	
12	359	36.8	+9	59.2	341	03.3 ¹⁵⁰	-0	01.5	0	5	13		5	37	5	58	7	08	43	19	28	44	
13	14	37.0		58.3	355	37.3 ¹⁵⁰		11.1	10 S		19		44		6	05	08	40		29	47		
14	29	37.2		57.4	10	11.3 ¹⁵⁰		20.8	20		25		51		13	09	37		30	50			
15	44	37.4		56.5	24	45.2 ¹⁴⁹		30.4	30		29		5	57	21	10	33		31	53			
16	59	37.5		55.6	39	19.2 ¹⁵⁰		40.0	35		31		6	00	26	10	32		32	55			
17	74	37.7	+9	54.8	53	53.2 ¹⁵⁰	-0	49.7	40	5	33		6	04	6	31	7	10	30	19	33	57	
18	89	37.9	+9	53.9	68	27.1 ¹⁴⁹	-0	59.3	45	5	34		6	08	6	38	7	11	27	19	33	60	
19	104	38.1		53.0	83	01.0 ¹⁴⁹	-1	08.9	50		35		12		45	12	23		34	63			
20	119	38.3		52.1	97	34.9 ¹⁴⁹		18.6	52		35		14		48	12	22		35	64			
21	134	38.4		51.2	112	08.8 ¹⁴⁹		28.2	54		35		16		52	12	21		35	66			
22	149	38.6		50.4	126	42.7 ¹⁴⁹		37.8	56		35		18		6	56	13	19		36	68		
23	164	38.8		49.5	141	16.5 ¹⁴⁸		47.4	58		35		21		7	01	13	17		36	70		
24	179	39.0	+9	48.6	155	50.4 ¹⁴⁹	-1	57.0	60 S	5	35		6	23	7	06	7	13	16	19	37	72	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 1 ^h 39 ^m 1			Mag: -3.9 PMG: 11 ^h 03 ^m			Mag: +0.6 PMG: 16 ^h 41 ^m			Mag: -1.8 PMG: 10 ^h 25 ^m			Mag: +0.6 PMG: 16 ^h 40 ^m										
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	335	09.3	194	23.9	+16	19.1	109	34.7	-18	33.8	203	28.9	+18	24.5	109	15.7	-15	05.3					
1	350	11.7	209	23.3		18.2	124	35.6		34.2	218	30.8		24.4	124	18.0		05.4					
2	5	14.2	224	22.7		17.4	139	36.5		34.7	233	32.8		24.3	139	20.3		05.4					
3	20	16.7	239	22.1		16.5	154	37.4		35.2	248	34.7		24.1	154	22.7		05.5					
4	35	19.1	254	21.5		15.6	169	38.3		35.6	263	36.6		24.0	169	25.0		05.5					
5	50	21.6	269	20.9	+16	14.7	184	39.1	-18	36.1	278	38.5	+18	23.9	184	27.3	-15	05.6					
6	65	24.0	284	20.3	+16	13.9	199	40.0	-18	36.5	293	40.5	+18	23.7	199	29.6	-15	05.6					
7	80	26.5	299	19.6		13.0	214	40.9		37.0	308	42.4		23.6	214	31.9		05.7					
8	95	29.0	314	19.0		12.1	229	41.8		37.4	323	44.3		23.5	229	34.3		05.7					
9	110	31.4	329	18.4		11.2	244	42.7		37.9	338	46.2		23.3	244	36.6		05.8					
10	125	33.9	344	17.8		10.3	259	43.6		38.3	353	48.2		23.2	259	38.9		05.8					
11	140	36.4	359	17.2	+16	09.5	274	44.5	-18	38.8	8	50.1	+18	23.0	274	41.2	-15	05.9					
12	155	38.8	14	16.6	+16	08.6	289	45.3	-18	39.2	23	52.0	+18	22.9	289	43.6	-15	05.9					
13	170	41.3	29	16.0		07.7	304	46.2		39.7	38	54.0		22.8	304	45.9		06.0					
14	185	43.8	44	15.4		06.8	319	47.1		40.1	53	55.9		22.6	319	48.2		06.0					
15	200	46.2	59	14.8		05.9	334	48.0		40.6	68	57.8		22.5	334	50.5		06.1					
16	215	48.7	74	14.2		05.0	349	48.9		41.1	83	59.7		22.4	349	52.8		06.1					
17	230	51.2	89	13.6	+16	04.1	4	49.7	-18	41.5	99	01.7	+18	22.2	4	55.2	-15	06.2					
18	245	53.6	104	13.0	+16	03.3	19	50.6	-18	42.0	114	03.6	+18	22.1	19	57.5	-15	06.2					
19	260	56.1	119	12.4		02.4	34	51.5		42.4	129	05.5		22.0	34	59.8		06.3					
20	275	58.5	134	11.8		01.5	49	52.4		42.9	144	07.5		21.8	50	02.1		06.3					
21	291	01.0	149	11.2	+16	00.6	64	53.3		43.3	159	09.4		21.7	65	04.4		06.4					
22	306	03.5	164	10.6	+15	59.7	79	54.1		43.8	174	11.3		21.6	80	06.8		06.4					
23	321	05.9	179	10.0		58.8	94	55.0		44.2	189	13.2		21.4	95	09.1		06.5					
24	336	08.4	194	09.4	+15	57.9	109	55.9	-18	44.7	204	15.2	+18	21.3	110	11.4	-15	06.5					
Dif	—			-6 -9			+9 -5			+19 -1			-1			+23							

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 3		Edad: 2 ^d 4 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9 R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	39.0	+9 48.6	155	50.4	-1 57.0	60 N	19 16	20 02	21 03	8 15 72	19 35 17		
1	194	39.2		170	24.2 ¹⁴⁸	-2 06.7	58	10	19 53	20 48	13 70	38 19		
2	209	39.4	46.8	184	58.0 ¹⁴⁸	16.3	56	05	45	36	11 69	40 21		
3	224	39.5	46.0	199	31.8 ¹⁴⁸	25.9	54	19 01	38	26	10 66	43 22		
4	239	39.7	45.1	214	05.5 ¹⁴⁷	35.5	52	18 56	32	17	08 65	45 24		
5	254	39.9	+9 44.2	228	39.3 ¹⁴⁸	-2 45.1	50	18 53	19 27	20 09	8 07 64	19 46 26		
6	269	40.1	+9 43.3	243	13.0 ¹⁴⁷	-2 54.6	45	18 45	19 15	19 52	8 04 61	19 50 29		
7	284	40.3	42.4	257	46.7 ¹⁴⁷	-3 04.2	40	38	19 06	39	02 58	54 31		
8	299	40.5	41.6	272	20.4 ¹⁴⁷	13.8	35	32	18 58	29	8 00 56	57 34		
9	314	40.6	40.7	286	54.0 ¹⁴⁶	23.3	30	27	52	21	7 59 53	19 59 36		
10	329	40.8	39.8	301	27.7 ¹⁴⁷	32.9	20	19	41	19 08	56 50	20 04 39		
11	344	41.0	+9 38.9	316	01.3 ¹⁴⁶	-3 42.4	10 N	18 11	18 33	18 58	7 53 47	20 08 42		
12	359	41.2	+9 38.0	330	34.8 ¹⁴⁵	-3 52.0	0	18 05	18 26	18 50	7 51 44	20 12 44		
13	14	41.4	37.1	345	08.4 ¹⁴⁶	-4 01.5	10 S	17 58	19	44	48 42	16 47		
14	29	41.6	36.3	359	41.9 ¹⁴⁵	11.0	20	51	13	39	46 38	20 50		
15	44	41.7	35.4	14	15.4 ¹⁴⁵	20.5	30	43	07	35	43 35	24 54		
16	59	41.9	34.5	28	48.9 ¹⁴⁵	29.9	35	38	04	33	42 32	27 56		
17	74	42.1	+9 33.6	43	22.4 ¹⁴⁵	-4 39.4	40	17 33	18 01	18 32	7 40 30	20 30 58		
18	89	42.3	+9 32.7	57	55.8 ¹⁴⁴	-4 48.8	45	17 27	17 57	18 31	7 38 28	20 33 61		
19	104	42.5	31.8	72	29.2 ¹⁴⁴	-4 58.3	50	20	53	31	35 25	37 64		
20	119	42.7	30.9	87	02.5 ¹⁴³	-5 07.7	52	17	51	30	34 24	39 66		
21	134	42.9	30.1	101	35.9 ¹⁴⁴	17.1	54	13	49	30	33 22	41 67		
22	149	43.0	29.2	116	09.2 ¹⁴³	26.4	56	10	47	31	32 20	44 68		
23	164	43.2	28.3	130	42.5 ¹⁴³	35.8	58	05	45	31	30 19	46 71		
24	179	43.4	+9 27.4	145	15.7 ¹⁴²	-5 45.1	60 S	17 00	17 43	18 31	7 29 16	20 49 73		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 35 ^m 2		Mag: -3.9 PMG: 11 ^h 04 ^m		Mag: +0.6 PMG: 16 ^h 39 ^m		Mag: -1.8 PMG: 10 ^h 22 ^m			Mag: +0.6 PMG: 16 ^h 37 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	336	08.4	194 09.4	+15 57.9	109 55.9	-18 44.7	204 15.2	+18 21.3	110 11.4	-15 06.5				
1	351	10.9	209 08.8	57.0	124 56.8	45.1	219 17.1	21.2	125 13.7	06.6				
2	6	13.3	224 08.2	56.1	139 57.6	45.6	234 19.0	21.0	140 16.0	06.6				
3	21	15.8	239 07.6	55.2	154 58.5	46.0	249 20.9	20.9	155 18.4	06.7				
4	36	18.3	254 07.0	54.3	169 59.4	46.5	264 22.9	20.8	170 20.7	06.7				
5	51	20.7	269 06.4	+15 53.4	185 00.3	-18 46.9	279 24.8	+18 20.6	185 23.0	-15 06.8				
6	66	23.2	284 05.8	+15 52.5	200 01.2	-18 47.4	294 26.7	+18 20.5	200 25.3	-15 06.8				
7	81	25.6	299 05.2	51.6	215 02.0	47.8	309 28.7	20.3	215 27.6	06.9				
8	96	28.1	314 04.6	50.7	230 02.9	48.3	324 30.6	20.2	230 30.0	06.9				
9	111	30.6	329 04.0	49.8	245 03.8	48.7	339 32.5	20.1	245 32.3	07.0				
10	126	33.0	344 03.4	48.9	260 04.6	49.2	354 34.5	19.9	260 34.6	07.0				
11	141	35.5	359 02.8	+15 48.0	275 05.5	-18 49.6	9 36.4	+18 19.8	275 36.9	-15 07.1				
12	156	38.0	14 02.2	+15 47.1	290 06.4	-18 50.1	24 38.3	+18 19.7	290 39.2	-15 07.1				
13	171	40.4	29 01.6	46.2	305 07.3	50.5	39 40.2	19.5	305 41.6	07.2				
14	186	42.9	44 01.0	45.3	320 08.1	51.0	54 42.2	19.4	320 43.9	07.2				
15	201	45.4	59 00.4	44.4	335 09.0	51.4	69 44.1	19.3	335 46.2	07.3				
16	216	47.8	73 59.8	43.5	350 09.9	51.9	84 46.0	19.1	350 48.5	07.3				
17	231	50.3	88 59.2	+15 42.6	5 10.8	-18 52.3	99 48.0	+18 19.0	5 50.8	-15 07.4				
18	246	52.8	103 58.6	+15 41.7	20 11.6	-18 52.8	114 49.9	+18 18.9	20 53.1	-15 07.4				
19	261	55.2	118 58.0	40.8	35 12.5	53.2	129 51.8	18.7	35 55.5	07.5				
20	276	57.7	133 57.4	39.9	50 13.4	53.7	144 53.7	18.6	50 57.8	07.5				
21	292	00.1	148 56.8	39.0	65 14.2	54.1	159 55.7	18.5	66 00.1	07.6				
22	307	02.6	163 56.2	38.1	80 15.1	54.6	174 57.6	18.3	81 02.4	07.6				
23	322	05.1	178 55.6	37.2	95 16.0	55.0	189 59.5	18.2	96 04.7	07.7				
24	337	07.5	193 55.1	+15 36.3	110 16.8	-18 55.5	205 01.5	+18 18.0	111 07.0	-15 07.7				
Dif	—		-6	-9	+9	-4	+19	-1	+23	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 0			Edad: 3 ^d 4 PHE { 4 ^h : 55 ^h 0 12 ^h : 55 ^h 2 20 ^h : 55 ^h 3 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	43.4	+9 27.4	145	15.7	-5 45.1	60 N	3 01	4 01	4 47	9 27	74	19 52	20	
1	194	43.6	26.5	159	48.9 ¹⁴²	-5 54.5 ⁹⁴	58	15	10	53	23	72	19 57	22	
2	209	43.8	25.6	174	22.1 ¹⁴²	-6 03.8 ⁹³	56	27	18	4 58	20	69	20 01	25	
3	224	44.0	24.7	188	55.2 ¹⁴¹	13.0 ⁹²	54	37	25	5 03	16	68	05	26	
4	239	44.2	23.8	203	28.3 ¹⁴¹	22.3 ⁹³	52	46	31	07	13	66	09	27	
5	254	44.3	+9 23.0	218	01.4 ¹⁴¹	-6 31.5 ⁹²	50	3 54	4 36	5 10	9 11	64	20 12	29	
6	269	44.5	+9 22.1	232	34.4 ¹⁴⁰	-6 40.7 ⁹²	45	4 11	4 48	5 18	9 05	61	20 19	32	
7	284	44.7	21.2	247	07.4 ¹⁴⁰	49.9 ⁹²	40	23	4 57	25	9 00	58	25	34	
8	299	44.9	20.3	261	40.4 ¹⁴⁰	-6 59.1 ⁹²	35	33	5 04	30	8 56	56	31	36	
9	314	45.1	19.4	276	13.3 ¹³⁹	-7 08.2 ⁹¹	30	42	11	35	52	54	35	38	
10	329	45.3	18.5	290	46.2 ¹³⁹	17.3 ⁹¹	20	4 55	21	44	46	51	43	41	
11	344	45.5	+9 17.6	305	19.1 ¹³⁹	-7 26.4 ⁹¹	10 N	5 05	5 30	5 51	8 40	48	20 50	44	
12	359	45.7	+9 16.7	319	51.9 ¹³⁸	-7 35.5 ⁹¹	0	5 12	5 37	5 58	8 35	45	20 56	47	
13	14	45.8	15.8	334	24.7 ¹³⁸	44.5 ⁹⁰	10 S	18	43	6 04	30	42	21 03	49	
14	29	46.0	15.0	348	57.4 ¹³⁷	-7 53.5 ⁹⁰	20	23	49	11	24	40	10	52	
15	44	46.2	14.1	3	30.1 ¹³⁷	-8 02.5 ⁹⁰	30	27	55	19	18	37	18	55	
16	59	46.4	13.2	18	02.7 ¹³⁶	11.4 ⁸⁹	35	28	5 58	23	14	35	23	56	
17	74	46.6	+9 12.3	32	35.4 ¹³⁷	-8 20.3 ⁸⁹	40	5 30	6 01	6 28	8 10	33	21 28	59	
18	89	46.8	+9 11.4	47	07.9 ¹³⁵	-8 29.2 ⁸⁹	45	5 30	6 04	6 34	8 06	30	21 34	61	
19	104	47.0	10.5	61	40.4 ¹³⁵	38.0 ⁸⁸	50	31	08	41	8 00	28	41	65	
20	119	47.2	09.6	76	12.9 ¹³⁵	46.9 ⁸⁹	52	31	10	44	7 58	26	45	66	
21	134	47.3	08.7	90	45.4 ¹³⁵	-8 55.6 ⁸⁷	54	31	12	48	55	24	48	68	
22	149	47.5	07.8	105	17.8 ¹³⁴	-9 04.4 ⁸⁸	56	31	14	51	52	23	52	70	
23	164	47.7	06.9	119	50.1 ¹³³	13.1 ⁸⁷	58	30	16	6 56	49	20	21 57	71	
24	179	47.9	+9 06.0	134	22.4 ¹³³	-9 21.8 ⁸⁷	60 S	5 30	6 18	7 00	7 45	18	22 02	74	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 31 ^m 2		Mag: -3.9 PMG: 11 ^h 05 ^m			Mag: +0.6 PMG: 16 ^h 38 ^m			Mag: -1.8 PMG: 10 ^h 19 ^m			Mag: +0.6 PMG: 16 ^h 33 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	337	07.5	193	55.1	+15 36.3	110	16.8	-18 55.5	205	01.5	+18 18.0	111	07.0	-15 07.7
1	352	10.0	208	54.5	35.4	125	17.7	55.9	220	03.4	17.9	126	09.4	07.8
2	7	12.5	223	53.9	34.4	140	18.6	56.4	235	05.3	17.8	141	11.7	07.9
3	22	14.9	238	53.3	33.5	155	19.4	56.8	250	07.3	17.6	156	14.0	07.9
4	37	17.4	253	52.7	32.6	170	20.3	57.3	265	09.2	17.5	171	16.3	08.0
5	52	19.9	268	52.1	+15 31.7	185	21.2	-18 57.7	280	11.1	+18 17.4	186	18.6	-15 08.0
6	67	22.3	283	51.5	+15 30.8	200	22.0	-18 58.2	295	13.1	+18 17.2	201	20.9	-15 08.1
7	82	24.8	298	50.9	29.9	215	22.9	58.6	310	15.0	17.1	216	23.3	08.1
8	97	27.2	313	50.3	29.0	230	23.8	59.0	325	16.9	17.0	231	25.6	08.2
9	112	29.7	328	49.7	28.0	245	24.6	59.5	340	18.8	16.8	246	27.9	08.2
10	127	32.2	343	49.2	27.1	260	25.5	-18 59.9	355	20.8	16.7	261	30.2	08.3
11	142	34.6	358	48.6	+15 26.2	275	26.4	-19 00.4	10	22.7	+18 16.6	276	32.5	-15 08.3
12	157	37.1	13	48.0	+15 25.3	290	27.2	-19 00.8	25	24.6	+18 16.4	291	34.8	-15 08.4
13	172	39.6	28	47.4	24.4	305	28.1	01.3	40	26.6	16.3	306	37.2	08.4
14	187	42.0	43	46.8	23.4	320	28.9	01.7	55	28.5	16.2	321	39.5	08.5
15	202	44.5	58	46.2	22.5	335	29.8	02.2	70	30.4	16.0	336	41.8	08.5
16	217	47.0	73	45.6	21.6	350	30.7	02.6	85	32.4	15.9	351	44.1	08.6
17	232	49.4	88	45.1	+15 20.7	5	31.5	-19 03.1	100	34.3	+18 15.8	6	46.4	-15 08.6
18	247	51.9	103	44.5	+15 19.7	20	32.4	-19 03.5	115	36.2	+18 15.6	21	48.7	-15 08.7
19	262	54.4	118	43.9	18.8	35	33.2	04.0	130	38.2	15.5	36	51.0	08.7
20	277	56.8	133	43.3	17.9	50	34.1	04.4	145	40.1	15.3	51	53.4	08.8
21	292	59.3	148	42.7	17.0	65	35.0	04.8	160	42.0	15.2	66	55.7	08.8
22	308	01.7	163	42.1	16.0	80	35.8	05.3	175	44.0	15.1	81	58.0	08.9
23	323	04.2	178	41.6	15.1	95	36.7	05.7	190	45.9	14.9	97	00.3	08.9
24	338	06.7	193	41.0	+15 14.2	110	37.5	-19 06.2	205	47.8	+18 14.8	112	02.6	-15 09.0
Dif	—		-6	-9		+9	-4		+19	-1		+23	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 7			Edad: 4 ^d 4 PHE { 4 ^h : 55/5 12 ^h : 55/7 20 ^h : 55/9 Rº: 48 ^m	Dec	Dif								
	hG ☉	Dec							hG ☾	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	47.9	+9 06.0	134	22.4	-9 21.8	86	60 N	19 10	19 55	20 55	10 41 74	20 12 25	
1	194	48.1	05.1	148	54.7 ¹³³	30.4	86	58	05	47	41	35 71	19 27	
2	209	48.3	04.2	163	26.9 ¹³²	39.0	86	56	19 00	40	30	29 69	26 28	
3	224	48.5	03.4	177	59.0 ¹³¹	47.5	85	54	18 56	33	20	24 68	31 31	
4	239	48.7	02.5	192	31.2 ¹³²	-9 56.1	86	52	52	27	11	19 66	36 32	
5	254	48.9	+9 01.6	207	03.2 ¹³⁰	-10 04.5	84	50	18 49	19 22	20 04	10 15 65	20 41 33	
6	269	49.1	+9 00.7	221	35.2 ¹³⁰	-10 13.0	85	45	18 41	19 12	19 48	10 06 62	20 51 36	
7	284	49.2	+8 59.8	236	07.2 ¹³⁰	21.4	84	40	35	19 03	36	9 58 60	20 59 39	
8	299	49.4	58.9	250	39.1 ¹²⁹	29.7	83	35	30	18 56	26	52 58	21 07 40	
9	314	49.6	58.0	265	11.0 ¹²⁹	38.1	84	30	25	49	18	46 56	13 42	
10	329	49.8	57.1	279	42.8 ¹²⁸	46.3	82	20	17	39	19 06	37 52	24 44	
11	344	50.0	+8 56.2	294	14.6 ¹²⁸	-10 54.6	83	10 N	18 10	18 32	18 56	9 28 50	21 34 47	
12	359	50.2	+8 55.3	308	46.3 ¹²⁷	-11 02.7	81	0	18 04	18 25	18 49	9 20 48	21 43 49	
13	14	50.4	54.4	323	18.0 ¹²⁷	10.9	82	10 S	17 58	19	44	12 46	21 52 51	
14	29	50.6	53.5	337	49.6 ¹²⁶	19.0	81	20	51	13	39	9 04 43	22 02 53	
15	44	50.8	52.6	352	21.1 ¹²⁵	27.0	80	30	44	08	36	8 55 39	13 56	
16	59	51.0	51.7	6	52.6 ¹²⁵	35.0	80	35	40	05	35	49 38	19 58	
17	74	51.2	+8 50.8	21	24.1 ¹²⁵	-11 43.0	80	40	17 35	18 02	18 34	8 43 36	22 27 60	
18	89	51.4	+8 49.9	35	55.5 ¹²⁴	-11 50.9	79	45	17 30	17 59	18 33	8 36 34	22 35 62	
19	104	51.5	49.0	50	26.8 ¹²³	-11 58.7	78	50	23	56	33	28 30	46 64	
20	119	51.7	48.1	64	58.1 ¹²³	-12 06.5	78	52	20	54	33	24 29	51 66	
21	134	51.9	47.2	79	29.3 ¹²²	14.2	77	54	17	53	34	19 28	22 56 67	
22	149	52.1	46.3	94	00.5 ¹²²	21.9	77	56	13	51	34	15 26	23 02 69	
23	164	52.3	45.4	108	31.6 ¹²¹	29.6	77	58	09	49	35	09 25	08 71	
24	179	52.5	+8 44.5	123	02.6 ¹²⁰	-12 37.2	76	60 S	17 05	17 47	18 36	8 03 23	23 16 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 27 ^m 3		Mag: -3.9 PMG: 11 ^h 06 ^m			Mag: +0.6 PMG: 16 ^h 37 ^m			Mag: -1.8 PMG: 10 ^h 15 ^m			Mag: +0.6 PMG: 16 ^h 29 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'
0	338	06.7	193	41.0	+15 14.2	110	37.5	-19 06.2	205	47.8	+18 14.8	112	02.6	-15 09.0
1	353	09.1	208	40.4	13.2	125	38.4	06.6	220	49.8	14.7	127	04.9	09.0
2	8	11.6	223	39.8	12.3	140	39.3	07.1	235	51.7	14.5	142	07.2	09.1
3	23	14.1	238	39.2	11.4	155	40.1	07.5	250	53.6	14.4	157	09.5	09.1
4	38	16.5	253	38.7	10.5	170	41.0	07.9	265	55.6	14.3	172	11.9	09.2
5	53	19.0	268	38.1	+15 09.5	185	41.8	-19 08.4	280	57.5	+18 14.1	187	14.2	-15 09.2
6	68	21.5	283	37.5	+15 08.6	200	42.7	-19 08.8	295	59.4	+18 14.0	202	16.5	-15 09.3
7	83	23.9	298	36.9	07.7	215	43.5	09.3	311	01.4	13.9	217	18.8	09.3
8	98	26.4	313	36.3	06.7	230	44.4	09.7	326	03.3	13.7	232	21.1	09.4
9	113	28.9	328	35.8	05.8	245	45.2	10.2	341	05.2	13.6	247	23.4	09.4
10	128	31.3	343	35.2	04.9	260	46.1	10.6	356	07.2	13.5	262	25.7	09.5
11	143	33.8	358	34.6	+15 03.9	275	46.9	-19 11.1	11	09.1	+18 13.3	277	28.0	-15 09.6
12	158	36.2	13	34.0	+15 03.0	290	47.8	-19 11.5	26	11.0	+18 13.2	292	30.4	-15 09.6
13	173	38.7	28	33.5	02.0	305	48.7	11.9	41	13.0	13.1	307	32.7	09.7
14	188	41.2	43	32.9	01.1	320	49.5	12.4	56	14.9	12.9	322	35.0	09.7
15	203	43.6	58	32.3	+15 00.2	335	50.4	12.8	71	16.8	12.8	337	37.3	09.8
16	218	46.1	73	31.7	+14 59.2	350	51.2	13.3	86	18.8	12.6	352	39.6	09.8
17	233	48.6	88	31.2	+14 58.3	5	52.1	-19 13.7	101	20.7	+18 12.5	7	41.9	-15 09.9
18	248	51.0	103	30.6	+14 57.3	20	52.9	-19 14.1	116	22.6	+18 12.4	22	44.2	-15 09.9
19	263	53.5	118	30.0	56.4	35	53.8	14.6	131	24.6	12.2	37	46.5	10.0
20	278	56.0	133	29.4	55.4	50	54.6	15.0	146	26.5	12.1	52	48.8	10.0
21	293	58.4	148	28.9	54.5	65	55.5	15.5	161	28.4	12.0	67	51.2	10.1
22	309	00.9	163	28.3	53.6	80	56.3	15.9	176	30.4	11.8	82	53.5	10.1
23	324	03.3	178	27.7	52.6	95	57.2	16.3	191	32.3	11.7	97	55.8	10.2
24	339	05.8	193	27.1	+14 51.7	110	58.0	-19 16.8	206	34.2	+18 11.6	112	58.1	-15 10.2
Dif	—		-6	-9		+9	-4		+19	-1		+23	-1	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 3			Edad: 5 ^d 4 PHE { 4 ^h : 56 ^m 1 12 ^h : 56 ^m 3 20 ^h : 56 ^m 5 R°: 51 ^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	52.5	+8	44.5	123	02.6	-12	37.2	75	60 N	3	07	4	07	4	52	11	55	72
1	194	52.7		43.6	137	33.6		44.7	75	58	21	15	4	57	46	71	20	37	32
2	209	52.9		42.7	152	04.6		52.2	75	56	32	22	5	02	38	69	20	54	36
3	224	53.1		41.8	166	35.5		59.6	74	54	42	29	06	32	67	21	02	36	
4	239	53.3		40.9	181	06.3		06.9	73	52	50	34	10	25	66	08	38	38	
5	254	53.5	+8	40.0	195	37.1		14.2	73	50	3	58	4	39	5	13	11	20	64
6	269	53.7	+8	39.1	210	07.8		21.5	73	45	4	13	4	50	5	21	11	08	62
7	284	53.9		38.2	224	38.4		28.6	72	40	25	4	59	27	10	58	60	38	43
8	299	54.1		37.3	239	09.0		35.8	71	35	35	5	06	32	50	58	47	44	
9	314	54.3		36.4	253	39.5		42.8	70	30	43	12	36	42	57	21	55	45	
10	329	54.5		35.5	268	10.0		49.8	70	20	4	56	22	44	29	55	22	08	48
11	344	54.6	+8	34.6	282	40.4		56.8	70	10 N	5	05	5	30	5	51	10	18	53
12	359	54.8	+8	33.7	297	10.7		03.6	68	0	5	12	5	36	5	57	10	08	50
13	14	55.0		32.8	311	41.0		10.4	68	10 S	17	42	6	03	9	58	48	43	54
14	29	55.2		31.9	326	11.2		17.2	68	20	22	47	10	47	46	22	55	56	
15	44	55.4		31.0	340	41.3		23.9	67	30	25	53	17	34	44	23	09	58	
16	59	55.6		30.1	355	11.4		30.5	66	35	26	55	21	27	43	17	59		
17	74	55.8	+8	29.2	9	41.5		37.0	65	40	5	27	5	58	6	25	9	19	41
18	89	56.0	+8	28.3	24	11.4		43.5	65	45	5	27	6	01	6	31	9	10	38
19	104	56.2		27.4	38	41.3		49.9	64	50	27	04	37	8	58	37	50	64	
20	119	56.4		26.5	53	11.2		56.2	63	52	27	06	40	53	35	23	57	64	
21	134	56.6		25.6	67	40.9		02.5	63	54	26	07	43	47	34	**	**	**	
22	149	56.8		24.7	82	10.6		08.6	61	56	26	09	46	41	32	**	**	**	
23	164	57.0		23.8	96	40.3		14.8	62	58	25	10	50	34	30	**	**	**	
24	179	57.2	+8	22.9	111	09.9		20.8	60	60 S	5	24	6	12	6	54	8	26	28
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 1 ^h 23 ^m 4		Mag: -3.9 PMG: 11 ^h 07 ^m				Mag: +0.6 PMG: 16 ^h 35 ^m				Mag: -1.8 PMG: 10 ^h 12 ^m				Mag: +0.6 PMG: 16 ^h 26 ^m				
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	339	05.8	193	27.1	+14	51.7	110	58.0	-19	16.8	206	34.2	+18	11.6	112	58.1	-15	10.2	
1	354	08.3	208	26.6		50.7	125	58.8		17.2	221	36.2		11.4	128	00.4		10.3	
2	9	10.7	223	26.0		49.8	140	59.7		17.7	236	38.1		11.3	143	02.7		10.3	
3	24	13.2	238	25.4		48.8	156	00.5		18.1	251	40.0		11.2	158	05.0		10.4	
4	39	15.7	253	24.9		47.9	171	01.4		18.5	266	42.0		11.0	173	07.3		10.4	
5	54	18.1	268	24.3	+14	46.9	186	02.2	-19	19.0	281	43.9	+18	10.9	188	09.6	-15	10.5	
6	69	20.6	283	23.7	+14	46.0	201	03.1	-19	19.4	296	45.8	+18	10.8	203	11.9	-15	10.6	
7	84	23.1	298	23.2		45.0	216	03.9		19.9	311	47.8		10.6	218	14.2		10.6	
8	99	25.5	313	22.6		44.1	231	04.8		20.3	326	49.7		10.5	233	16.6		10.7	
9	114	28.0	328	22.0		43.1	246	05.6		20.7	341	51.7		10.3	248	18.9		10.7	
10	129	30.5	343	21.4		42.2	261	06.5		21.2	356	53.6		10.2	263	21.2		10.8	
11	144	32.9	358	20.9	+14	41.2	276	07.3	-19	21.6	11	55.5	+18	10.1	278	23.5	-15	10.8	
12	159	35.4	13	20.3	+14	40.3	291	08.1	-19	22.1	26	57.5	+18	09.9	293	25.8	-15	10.9	
13	174	37.8	28	19.7		39.3	306	09.0		22.5	41	59.4		09.8	308	28.1		10.9	
14	189	40.3	43	19.2		38.3	321	09.8		22.9	57	01.3		09.7	323	30.4		11.0	
15	204	42.8	58	18.6		37.4	336	10.7		23.4	72	03.3		09.5	338	32.7		11.0	
16	219	45.2	73	18.1		36.4	351	11.5		23.8	87	05.2		09.4	353	35.0		11.1	
17	234	47.7	88	17.5	+14	35.5	6	12.4	-19	24.2	102	07.1	+18	09.3	8	37.3	-15	11.1	
18	249	50.2	103	16.9	+14	34.5	21	13.2	-19	24.7	117	09.1	+18	09.1	23	39.6	-15	11.2	
19	264	52.6	118	16.4		33.5	36	14.0		25.1	132	11.0		09.0	38	41.9		11.2	
20	279	55.1	133	15.8		32.6	51	14.9		25.6	147	13.0		08.9	53	44.2		11.3	
21	294	57.6	148	15.2		31.6	66	15.7		26.0	162	14.9		08.7	68	46.6		11.3	
22	310	00.0	163	14.7		30.7	81	16.6		26.4	177	16.8		08.6	83	48.9		11.4	
23	325	02.5	178	14.1		29.7	96	17.4		26.9	192	18.8		08.5	98	51.2		11.5	
24	340	05.0	193	13.5	+14	28.7	111	18.2	-19	27.3	207	20.7	+18	08.3	113	53.5	-15	11.5	
Dif	—		-6		-10		+8		-4		+19		-1		+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 0		Edad: 6 ^d 4 PHE { 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/3 R°: 54 ^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	179	57.2	+8 22.9	111	09.9	-15 20.8	60 N	19 04	19 49	20 47	13 07 69	21 09 42			
1	194	57.4		125	39.4 ¹⁰⁵	26.8	58	18 59	41	34	12 57 66	20 43			
2	209	57.6	21.1	140	08.8 ¹⁰⁴	32.7	56	55	34	23	47 66	30 44			
3	224	57.8	20.2	154	38.2 ¹⁰⁴	38.5	54	51	28	14	39 64	38 46			
4	239	58.0	19.3	169	07.5 ¹⁰³	44.2	52	47	23	20 06	31 64	46 46			
5	254	58.2	+8 18.4	183	36.8 ¹⁰³	-15 49.9	50	18 44	19 18	19 59	12 24 63	21 53 47			
6	269	58.4	+8 17.5	198	06.0 ¹⁰²	-15 55.4	45	18 37	19 08	19 44	12 10 61	22 08 49			
7	284	58.6	16.5	212	35.1 ¹⁰¹	-16 00.9	40	32	19 00	33	11 58 60	21 49			
8	299	58.8	15.6	227	04.2 ¹⁰¹	06.4	35	27	18 53	23	48 58	31 51			
9	314	59.0	14.7	241	33.2 ¹⁰⁰	11.7	30	23	47	16	39 58	40 52			
10	329	59.2	13.8	256	02.1 ⁹⁹	17.0	20	15	38	19 04	24 56	22 56 53			
11	344	59.4	+8 12.9	270	31.0 ⁹⁹	-16 22.1	10 N	18 09	18 30	18 55	11 11 54	23 10 54			
12	359	59.6	+8 12.0	284	59.8 ⁹⁸	-16 27.2	0	18 03	18 24	18 48	10 58 53	23 23 55			
13	14	59.8	11.1	299	28.5 ⁹⁷	32.2	10 S	17 58	19	43	46 52	37 55			
14	30	00.0	10.2	313	57.2 ⁹⁷	37.2	20	52	14	39	33 50	23 51 56			
15	45	00.2	09.3	328	25.8 ⁹⁶	42.0	30	45	09	37	18 49	*** ** *			
16	60	00.4	08.4	342	54.3 ⁹⁵	46.7	35	41	07	36	10 47	*** ** *			
17	75	00.6	+8 07.5	357	22.8 ⁹⁵	-16 51.4	40	17 37	18 04	18 36	10 00 46	*** ** *			
18	90	00.8	+8 06.6	11	51.2 ⁹⁴	-16 56.0	45	17 32	18 02	18 36	9 48 45	*** ** *			
19	105	01.0	05.7	26	19.5 ⁹³	-17 00.5	50	26	17 59	36	35 43	*** ** *			
20	120	01.2	04.7	40	47.8 ⁹³	04.9	52	23	57	37	28 42	*** ** *			
21	135	01.4	03.8	55	16.0 ⁹²	09.2	54	20	56	37	21 41	0 03 66			
22	150	01.6	02.9	69	44.2 ⁹²	13.4	56	17	55	38	13 40	11 67			
23	165	01.8	02.0	84	12.2 ⁹⁰	17.5	58	14	53	39	9 04 39	19 69			
24	180	02.0	+8 01.1	98	40.3 ⁹¹	-17 21.5	60 S	17 10	17 52	18 40	8 54 37	0 29 71			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 19 ^m 5		Mag: -3.9 PMG: 11 ^h 08 ^m		Mag: +0.6 PMG: 16 ^h 34 ^m		Mag: -1.8 PMG: 10 ^h 09 ^m		Mag: +0.6 PMG: 16 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h	°	'	°	'	°	'	°	'	°	'
0	340	05.0	193 13.5	+14 28.7	111 18.2	-19 27.3	207 20.7	+18 08.3	113 53.5	-15 11.5
1	355	07.4	208 13.0	27.8	126 19.1	27.7	222 22.6	08.2	128 55.8	11.6
2	10	09.9	223 12.4	26.8	141 19.9	28.2	237 24.6	08.0	143 58.1	11.6
3	25	12.3	238 11.9	25.8	156 20.7	28.6	252 26.5	07.9	159 00.4	11.7
4	40	14.8	253 11.3	24.9	171 21.6	29.0	267 28.4	07.8	174 02.7	11.7
5	55	17.3	268 10.7	+14 23.9	186 22.4	-19 29.5	282 30.4	+18 07.6	189 05.0	-15 11.8
6	70	19.7	283 10.2	+14 22.9	201 23.3	-19 29.9	297 32.3	+18 07.5	204 07.3	-15 11.8
7	85	22.2	298 09.6	22.0	216 24.1	30.4	312 34.3	07.4	219 09.6	11.9
8	100	24.7	313 09.1	21.0	231 24.9	30.8	327 36.2	07.2	234 11.9	11.9
9	115	27.1	328 08.5	20.0	246 25.8	31.2	342 38.1	07.1	249 14.2	12.0
10	130	29.6	343 07.9	19.1	261 26.6	31.7	357 40.1	07.0	264 16.5	12.0
11	145	32.1	358 07.4	+14 18.1	276 27.4	-19 32.1	12 42.0	+18 06.8	279 18.8	-15 12.1
12	160	34.5	13 06.8	+14 17.1	291 28.3	-19 32.5	27 44.0	+18 06.7	294 21.1	-15 12.2
13	175	37.0	28 06.3	16.1	306 29.1	33.0	42 45.9	06.6	309 23.4	12.2
14	190	39.4	43 05.7	15.2	321 29.9	33.4	57 47.8	06.4	324 25.8	12.3
15	205	41.9	58 05.2	14.2	336 30.8	33.8	72 49.8	06.3	339 28.1	12.3
16	220	44.4	73 04.6	13.2	351 31.6	34.3	87 51.7	06.2	354 30.4	12.4
17	235	46.8	88 04.0	+14 12.3	6 32.4	-19 34.7	102 53.6	+18 06.0	9 32.7	-15 12.4
18	250	49.3	103 03.5	+14 11.3	21 33.2	-19 35.1	117 55.6	+18 05.9	24 35.0	-15 12.5
19	265	51.8	118 02.9	10.3	36 34.1	35.6	132 57.5	05.8	39 37.3	12.5
20	280	54.2	133 02.4	09.3	51 34.9	36.0	147 59.5	05.6	54 39.6	12.6
21	295	56.7	148 01.8	08.3	66 35.7	36.4	163 01.4	05.5	69 41.9	12.6
22	310	59.2	163 01.3	07.4	81 36.6	36.9	178 03.3	05.3	84 44.2	12.7
23	326	01.6	178 00.7	06.4	96 37.4	37.3	193 05.3	05.2	99 46.5	12.7
24	341	04.1	193 00.2	+14 05.4	111 38.2	-19 37.7	208 07.2	+18 05.1	114 48.8	-15 12.8
Dif	—		-6	-10	+8	-4	+19	-1	+23	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 4	PHE {	4 ^h : 57 ^m 5 12 ^h : 57 ^m 8 20 ^h : 58 ^m 1		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 59 ^m 7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m
0	180	02.0	+8 01.1	98	40.3	89	−17 21.5	40	60 N	3 14	4 12	4 57	14 16	61
1	195	02.2	+8 00.2	113	08.2	89	25.5	40	58	27	20	5 02	14 03	61
2	210	02.4	+7 59.3	127	36.1	89	29.3	38	56	37	27	06	13 53	60
3	225	02.6	58.4	142	03.9	88	33.0	37	54	46	33	10	43 60	24 55
4	240	02.8	57.5	156	31.7	88	36.7	37	52	3 55	38	13	35 59	32 56
5	255	03.0	+7 56.6	170	59.4	87	−17 40.2	35	50	4 02	4 43	5 16	13 27	59
6	270	03.2	+7 55.6	185	27.0	86	−17 43.7	35	45	4 16	4 53	5 23	13 11	58
7	285	03.4	54.7	199	54.6	86	47.0	33	40	28	5 01	29	12 58	58
8	300	03.6	53.8	214	22.1	85	50.3	33	35	37	07	33	46 58	22 56
9	315	03.8	52.9	228	49.6	85	53.4	31	30	44	13	37	37 57	32 56
10	330	04.0	52.0	243	17.0	84	56.5	31	20	4 56	22	45	20 56	23 49
11	345	04.2	+7 51.1	257	44.3	83	−17 59.4	29	10 N	5 05	5 30	5 51	12 05	56
12	0	04.4	+7 50.2	272	11.6	83	−18 02.3	29	0	5 11	5 36	5 56	11 51	56
13	15	04.6	49.3	286	38.8	82	05.0	27	10 S	16	41	6 02	38 55	** ** *
14	30	04.8	48.3	301	05.9	81	07.7	27	20	20	46	08	23 55	** ** *
15	45	05.0	47.4	315	33.0	81	10.2	25	30	23	50	14	11 07	54
16	60	05.2	46.5	330	00.1	81	12.6	24	35	23	53	18	10 57	53
17	75	05.4	+7 45.6	344	27.0	79	−18 15.0	24	40	5 24	5 55	6 22	10 46	53
18	90	05.6	+7 44.7	358	53.9	79	−18 17.2	22	45	5 24	5 58	6 27	10 33	52
19	105	05.8	43.8	13	20.8	79	19.3	21	50	23	6 00	33	18 51	0 54
20	120	06.0	42.9	27	47.6	78	21.3	20	52	22	01	35	10 51	1 01
21	135	06.2	41.9	42	14.3	77	23.2	19	54	22	03	38	10 02	51
22	150	06.4	41.0	56	41.0	77	25.0	18	56	21	04	41	9 53	50
23	165	06.6	40.1	71	07.7	77	26.7	17	58	20	05	45	43 49	28 64
24	180	06.8	+7 39.2	85	34.2	75	−18 28.2	15	60 S	5 19	6 07	6 49	9 31	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 15 ^m 5		Mag: −3.9 PMG: 11 ^h 08 ^m		Mag: +0.7 PMG: 16 ^h 33 ^m		Mag: −1.8 PMG: 10 ^h 06 ^m		Mag: +0.6 PMG: 16 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	341	04.1	193	00.2	+14 05.4	111	38.2	−19 37.7	208	07.2
1	356	06.6	207	59.6	04.4	126	39.1	38.1	223	09.2
2	11	09.0	222	59.1	03.4	141	39.9	38.6	238	11.1
3	26	11.5	237	58.5	02.5	156	40.7	39.0	253	13.0
4	41	13.9	252	58.0	01.5	171	41.5	39.4	268	15.0
5	56	16.4	267	57.4	+14 00.5	186	42.4	−19 39.9	283	16.9
6	71	18.9	282	56.9	+13 59.5	201	43.2	−19 40.3	298	18.9
7	86	21.3	297	56.3	58.5	216	44.0	40.7	313	20.8
8	101	23.8	312	55.8	57.5	231	44.8	41.2	328	22.7
9	116	26.3	327	55.2	56.6	246	45.7	41.6	343	24.7
10	131	28.7	342	54.7	55.6	261	46.5	42.0	358	26.6
11	146	31.2	357	54.1	+13 54.6	276	47.3	−19 42.5	13	28.6
12	161	33.7	12	53.6	+13 53.6	291	48.1	−19 42.9	28	30.5
13	176	36.1	27	53.0	52.6	306	49.0	43.3	43	32.4
14	191	38.6	42	52.5	51.6	321	49.8	43.7	58	34.4
15	206	41.1	57	51.9	50.6	336	50.6	44.2	73	36.3
16	221	43.5	72	51.4	49.6	351	51.4	44.6	88	38.3
17	236	46.0	87	50.8	+13 48.6	6	52.2	−19 45.0	103	40.2
18	251	48.4	102	50.3	+13 47.6	21	53.1	−19 45.5	118	42.1
19	266	50.9	117	49.8	46.7	36	53.9	45.9	133	44.1
20	281	53.4	132	49.2	45.7	51	54.7	46.3	148	46.0
21	296	55.8	147	48.7	44.7	66	55.5	46.7	163	48.0
22	311	58.3	162	48.1	43.7	81	56.3	47.2	178	49.9
23	327	00.8	177	47.6	42.7	96	57.2	47.6	193	51.9
24	342	03.2	192	47.0	+13 41.7	111	58.0	−19 48.0	208	53.8

Dif	—	−5	−10	+8	−4	+19	−1	+23	−1

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 59 ^m 4		Edad: 8 ^d 4	PHE { 4 ^h : 58/3 12 ^h : 58/6 20 ^h : 58/9 R°: 58 ^m										
	hG ☉	Dec	hG ☾		Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	06.8	+7	39.2	85	34.2	-18	28.2	18 58	19 42	20 39	15 17 50	22 46 68	
1	195	07.0		38.3	100	00.8	76	29.7	54	35	27	15 04 51	22 59 67	
2	210	07.2		37.4	114	27.2	74	31.0	50	29	17	14 53 52	23 10 67	
3	225	07.4		36.5	128	53.7	75	32.3	46	23	08	43 52	19 67	
4	240	07.6		35.5	143	20.0	73	33.4	43	18	20 01	34 53	28 66	
5	255	07.8	+7	34.6	157	46.3	73	-18	34.4	19 13	19 54	14 26 54	23 36 65	
6	270	08.0	+7	33.7	172	12.6	73	-18	35.3	19 04	19 40	14 09 55	23 53 63	
7	285	08.2		32.8	186	38.8	72	36.1	29	18 56	29	13 56 55	*** ** *	
8	300	08.4		31.9	201	05.0	72	36.7	24	50	20	44 56	*** ** *	
9	315	08.6		31.0	215	31.1	71	37.3	20	45	13	34 56	*** ** *	
10	330	08.8		30.0	229	57.2	71	37.7	14	36	19 02	16 57	*** ** *	
11	345	09.0	+7	29.1	244	23.2	70	-18	38.0	18 08	18 29	18 54	13 01 57	0 04 56
12	0	09.2	+7	28.2	258	49.1	69	-18	38.2	18 03	18 23	18 48	12 47 58	0 18 56
13	15	09.4		27.3	273	15.1	70	38.3	17 57	19	43	33 58	32 56	
14	30	09.6		26.4	287	41.0	69	38.3	52	14	40	18 58	0 47 56	
15	45	09.8		25.5	302	06.8	68	38.1	46	10	38	12 01 59	1 04 57	
16	60	10.1		24.5	316	32.6	68	37.9	43	08	37	11 50 60	14 56	
17	75	10.3	+7	23.6	330	58.3	67	-18	37.5	17 39	18 06	18 37	11 39 60	1 25 57
18	90	10.5	+7	22.7	345	24.1	68	-18	37.0	17 34	18 04	18 38	11 25 61	1 39 56
19	105	10.7		21.8	359	49.7	66	36.3	29	02	39	09 61	1 55 56	
20	120	10.9		20.9	14	15.4	67	35.6	27	01	40	11 01 61	2 03 56	
21	135	11.1		19.9	28	40.9	65	34.7	24	18 00	40	10 53 61	11 56	
22	150	11.3		19.0	43	06.5	66	33.7	21	17 58	42	43 62	21 56	
23	165	11.5		18.1	57	32.0	65	32.6	18	57	43	32 62	32 56	
24	180	11.7	+7	17.2	71	57.5	65	-18	31.4	17 14	17 56	18 44	10 19 63	2 44 56
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 11 ^m 6		Mag: -3.9 PMG: 11 ^h 09 ^m			Mag: +0.7 PMG: 16 ^h 31 ^m			Mag: -1.8 PMG: 10 ^h 03 ^m			Mag: +0.6 PMG: 16 ^h 15 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	342	03.2	192	47.0	+13	41.7	111	58.0	-19	48.0	208	53.8	+18	01.8
1	357	05.7	207	46.5		40.7	126	58.8		48.5	223	55.7		01.7
2	12	08.2	222	45.9		39.7	141	59.6		48.9	238	57.7		01.6
3	27	10.6	237	45.4		38.7	157	00.4		49.3	253	59.6		01.4
4	42	13.1	252	44.9		37.7	172	01.3		49.7	269	01.6		01.3
5	57	15.5	267	44.3	+13	36.7	187	02.1	-19	50.2	284	03.5	+18	01.2
6	72	18.0	282	43.8	+13	35.7	202	02.9	-19	50.6	299	05.4	+18	01.0
7	87	20.5	297	43.2		34.7	217	03.7		51.0	314	07.4		00.9
8	102	22.9	312	42.7		33.7	232	04.5		51.4	329	09.3		00.8
9	117	25.4	327	42.2		32.7	247	05.3		51.9	344	11.3		00.6
10	132	27.9	342	41.6		31.7	262	06.2		52.3	359	13.2		00.5
11	147	30.3	357	41.1	+13	30.7	277	07.0	-19	52.7	14	15.2	+18	00.3
12	162	32.8	12	40.5	+13	29.7	292	07.8	-19	53.1	29	17.1	+18	00.2
13	177	35.3	27	40.0		28.7	307	08.6		53.6	44	19.1	+18	00.1
14	192	37.7	42	39.5		27.7	322	09.4		54.0	59	21.0	+17	59.9
15	207	40.2	57	38.9		26.7	337	10.2		54.4	74	22.9		59.8
16	222	42.7	72	38.4		25.6	352	11.0		54.8	89	24.9		59.7
17	237	45.1	87	37.9	+13	24.6	7	11.8	-19	55.3	104	26.8	+17	59.5
18	252	47.6	102	37.3	+13	23.6	22	12.7	-19	55.7	119	28.8	+17	59.4
19	267	50.0	117	36.8		22.6	37	13.5		56.1	134	30.7		59.3
20	282	52.5	132	36.3		21.6	52	14.3		56.5	149	32.7		59.1
21	297	55.0	147	35.7		20.6	67	15.1		57.0	164	34.6		59.0
22	312	57.4	162	35.2		19.6	82	15.9		57.4	179	36.5		58.9
23	327	59.9	177	34.7		18.6	97	16.7		57.8	194	38.5		58.7
24	343	02.4	192	34.1	+13	17.6	112	17.5	-19	58.2	209	40.4	+17	58.6
Dif	—		-5 -10		-10		+8 -4		-4		+19 -1		-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 {	SD: 16 ^h 1	4 ^h : 59 ^m /2 12 ^h : 59 ^m /4 20 ^h : 59 ^m /7	R°: 58 ^m		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 11 ^h 59 ^m 1	PMG: 19 ^h 59 ^m	Dec														Dif	Dec
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	11.7	+7	17.2	71	57.5	-18	31.4	60 N	3	20	4	17	5	02	16	07	41
1	195	11.9		16.3	86	22.9	64	30.0	58	32	24	06		15	55	42	***	***
2	210	12.1		15.3	100	48.3	64	28.6	56	42	31	10		45	43	***	***	
3	225	12.3		14.4	115	13.7	64	27.0	54	51	36	13		35	46	***	***	
4	240	12.5		13.5	129	39.1	64	25.2	52	3	58	41	16	27	46	***	***	
5	255	12.7	+7	12.6	144	04.4	63	-18	50	4	05	4	46	5	19	15	20	47
6	270	12.9	+7	11.7	158	29.6	62	-18	45	4	19	4	55	5	25	15	04	49
7	285	13.1		10.7	172	54.9	63	19.3	40	30	5	03	30	14	51	51	0	06
8	300	13.3		09.8	187	20.1	62	17.1	35	39	09	35		40	52	18	62	
9	315	13.6		08.9	201	45.3	62	14.8	30	46	14	39		30	53	28	61	
10	330	13.8		08.0	216	10.5	62	12.3	20	4	57	23	45	14	13	55	0	45
11	345	14.0	+7	07.0	230	35.6	61	-18	10 N	5	05	5	29	5	51	13	58	57
12	0	14.2	+7	06.1	245	00.7	61	-18	0	5	11	5	35	5	56	13	45	58
13	15	14.4		05.2	259	25.8	61	04.2	10 S	15	40	6	01	31	60	28	58	
14	30	14.6		04.3	273	50.9	61	-18	20	18	44	06		16	62	1	43	
15	45	14.8		03.4	288	15.9	60	-17	30	20	48	12		13	00	63	2	01
16	60	15.0		02.4	302	40.9	60	55.0	35	21	50	15		12	50	64	10	54
17	75	15.2	+7	01.5	317	05.9	60	-17	40	5	21	5	52	6	19	12	39	65
18	90	15.4	+7	00.6	331	30.9	60	-17	45	5	20	5	54	6	23	12	26	67
19	105	15.6	+6	59.7	345	55.9	60	44.7	50	19	56	28		10	69	51	51	
20	120	15.8		58.7	0	20.8	59	41.0	52	18	57	31		12	02	70	2	59
21	135	16.0		57.8	14	45.8	60	37.2	54	17	58	33		11	54	71	3	07
22	150	16.3		56.9	29	10.7	59	33.3	56	16	5	59	36	45	72	17	48	
23	165	16.5		56.0	43	35.6	59	29.2	58	15	6	00	39	34	73	28	46	
24	180	16.7	+6	55.0	58	00.5	59	-17	60 S	5	13	6	01	6	43	11	22	75

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 07 ^m 7		Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +0.7 PMG: 16 ^h 30 ^m			Mag: -1.8 PMG: 10 ^h 00 ^m			Mag: +0.6 PMG: 16 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	343	02.4	192	34.1	+13	17.6	112	17.5	-19	58.2	209	40.4	+17	58.6				
1	358	04.8	207	33.6		16.6	127	18.3		58.7	224	42.4		58.5				
2	13	07.3	222	33.1		15.5	142	19.1		59.1	239	44.3		58.3				
3	28	09.8	237	32.5		14.5	157	19.9		59.5	254	46.3		58.2				
4	43	12.2	252	32.0		13.5	172	20.8	-19	59.9	269	48.2		58.1				
5	58	14.7	267	31.5	+13	12.5	187	21.6	-20	00.3	284	50.2	+17	57.9				
6	73	17.2	282	30.9	+13	11.5	202	22.4	-20	00.8	299	52.1	+17	57.8				
7	88	19.6	297	30.4		10.5	217	23.2		01.2	314	54.0		57.6				
8	103	22.1	312	29.9		09.4	232	24.0		01.6	329	56.0		57.5				
9	118	24.5	327	29.3		08.4	247	24.8		02.0	344	57.9		57.4				
10	133	27.0	342	28.8		07.4	262	25.6		02.5	359	59.9		57.2				
11	148	29.5	357	28.3	+13	06.4	277	26.4	-20	02.9	15	01.8	+17	57.1				
12	163	31.9	12	27.7	+13	05.4	292	27.2	-20	03.3	30	03.8	+17	57.0				
13	178	34.4	27	27.2		04.4	307	28.0		03.7	45	05.7		56.8				
14	193	36.9	42	26.7		03.3	322	28.8		04.1	60	07.7		56.7				
15	208	39.3	57	26.2		02.3	337	29.6		04.6	75	09.6		56.6				
16	223	41.8	72	25.6		01.3	352	30.4		05.0	90	11.6		56.4				
17	238	44.3	87	25.1	+13	00.3	7	31.2	-20	05.4	105	13.5	+17	56.3				
18	253	46.7	102	24.6	+12	59.2	22	32.0	-20	05.8	120	15.4	+17	56.2				
19	268	49.2	117	24.1		58.2	37	32.8		06.2	135	17.4		56.0				
20	283	51.7	132	23.5		57.2	52	33.6		06.6	150	19.3		55.9				
21	298	54.1	147	23.0		56.2	67	34.4		07.1	165	21.3		55.8				
22	313	56.6	162	22.5		55.1	82	35.2		07.5	180	23.2		55.6				
23	328	59.0	177	21.9		54.1	97	36.0		07.9	195	25.2		55.5				
24	344	01.5	192	21.4	+12	53.1	112	36.8	-20	08.3	210	27.1	+17	55.4				
Dif	—		-5			-10	+8			-4	+19			-1	+23			-1

UT	SOL		LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 10 ^d 4	PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'4	SD: 16'3	PMG: 20 ^h 57 ^m	R°: 58 ^m									
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	16.7	+6	55.0	58	00.5	-17	25.1	60 N	18 52	19 36	20 32	16 48 31	**	**	**
1	195	16.9		54.1	72	25.3	58	20.8	58	48	29	20	37 35	0	06	79
2	210	17.1		53.2	86	50.2	59	16.3	56	44	23	11	28 37			76
3	225	17.3		52.3	101	15.1	59	11.8	54	41	18	20 03	21 38			75
4	240	17.5		51.3	115	39.9	58	07.1	52	38	13	19 56	13 40			73
5	255	17.7	+6	50.4	130	04.7	58	-17 02.4	50	18 36	19 09	19 49	16 07 41	0	41	72
6	270	17.9	+6	49.5	144	29.6	59	-16 57.5	45	18 30	19 00	19 36	15 53 44	0	56	70
7	285	18.1		48.6	158	54.4	58	52.4	40	25	18 53	26	42 46	1	09	68
8	300	18.3		47.6	173	19.2	58	47.3	35	21	47	17	32 49			66
9	315	18.6		46.7	187	44.0	58	42.0	30	18	42	11	23 51			65
10	330	18.8		45.8	202	08.8	58	36.7	20	12	34	19 00	15 08 54			63
11	345	19.0	+6	44.8	216	33.6	58	-16 31.2	10 N	18 07	18 28	18 53	14 55 56	1	59	61
12	0	19.2	+6	43.9	230	58.4	58	-16 25.5	0	18 02	18 23	18 47	14 43 59	2	12	59
13	15	19.4		43.0	245	23.2	58	19.8	10 S	17 57	18	43	31 61			56
14	30	19.6		42.1	259	48.0	58	14.0	20	52	15	40	18 63			55
15	45	19.8		41.1	274	12.8	58	08.0	30	47	11	39	14 03 66	2	55	52
16	60	20.0		40.2	288	37.6	58	-16 01.9	35	44	09	39	13 54 69	3	04	51
17	75	20.2	+6	39.3	303	02.4	58	-15 55.7	40	17 41	18 08	18 39	13 44 71	3	15	49
18	90	20.4	+6	38.4	317	27.2	58	-15 49.4	45	17 37	18 06	18 40	13 33 72	3	27	47
19	105	20.7		37.4	331	52.0	58	43.0	50	32	04	42	19 75			44
20	120	20.9		36.5	346	16.8	58	36.4	52	30	04	43	12 77			43
21	135	21.1		35.6	0	41.6	58	29.8	54	27	03	44	13 05 78	3	56	42
22	150	21.3		34.6	15	06.5	59	23.0	56	25	02	45	12 57 80	4	05	40
23	165	21.5		33.7	29	31.3	58	16.1	58	22	01	47	47 83			38
24	180	21.7	+6	32.8	43	56.1	58	-15 09.1	60 S	17 19	18 01	18 49	12 37 85	4	25	36
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 03 ^m 7		Mag: -3.9 PMG: 11 ^h 11 ^m			Mag: +0.7 PMG: 16 ^h 29 ^m			Mag: -1.9 PMG: 9 ^h 57 ^m			Mag: +0.6 PMG: 16 ^h 07 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	344	01.5	192	21.4	+12	53.1	112	36.8	-20	08.3	210	27.1	+17	55.4	117	34.3
1	359	04.0	207	20.9		52.1	127	37.6		08.7	225	29.1		55.2	132	36.5
2	14	06.4	222	20.4		51.0	142	38.4		09.2	240	31.0		55.1	147	38.8
3	29	08.9	237	19.9		50.0	157	39.2		09.6	255	33.0		55.0	162	41.1
4	44	11.4	252	19.3		49.0	172	40.0		10.0	270	34.9		54.8	177	43.4
5	59	13.8	267	18.8	+12	47.9	187	40.8	-20	10.4	285	36.9	+17	54.7	192	45.7
6	74	16.3	282	18.3	+12	46.9	202	41.6	-20	10.8	300	38.8	+17	54.5	207	48.0
7	89	18.8	297	17.8		45.9	217	42.4		11.2	315	40.8		54.4	222	50.3
8	104	21.2	312	17.2		44.8	232	43.2		11.7	330	42.7		54.3	237	52.6
9	119	23.7	327	16.7		43.8	247	44.0		12.1	345	44.7		54.1	252	54.9
10	134	26.1	342	16.2		42.8	262	44.8		12.5	0	46.6		54.0	267	57.2
11	149	28.6	357	15.7	+12	41.7	277	45.6	-20	12.9	15	48.5	+17	53.9	282	59.5
12	164	31.1	12	15.2	+12	40.7	292	46.4	-20	13.3	30	50.5	+17	53.7	298	01.8
13	179	33.5	27	14.6		39.7	307	47.2		13.7	45	52.4		53.6	313	04.1
14	194	36.0	42	14.1		38.6	322	48.0		14.2	60	54.4		53.5	328	06.3
15	209	38.5	57	13.6		37.6	337	48.8		14.6	75	56.3		53.3	343	08.6
16	224	40.9	72	13.1		36.6	352	49.6		15.0	90	58.3		53.2	358	10.9
17	239	43.4	87	12.6	+12	35.5	7	50.4	-20	15.4	106	00.2	+17	53.1	13	13.2
18	254	45.9	102	12.0	+12	34.5	22	51.2	-20	15.8	121	02.2	+17	52.9	28	15.5
19	269	48.3	117	11.5		33.5	37	51.9		16.2	136	04.1		52.8	43	17.8
20	284	50.8	132	11.0		32.4	52	52.7		16.6	151	06.1		52.7	58	20.1
21	299	53.3	147	10.5		31.4	67	53.5		17.1	166	08.0		52.5	73	22.4
22	314	55.7	162	10.0		30.3	82	54.3		17.5	181	10.0		52.4	88	24.7
23	329	58.2	177	09.5		29.3	97	55.1		17.9	196	11.9		52.3	103	27.0
24	345	00.6	192	08.9	+12	28.2	112	55.9	-20	18.3	211	13.9	+17	52.1	118	29.3
Dif	—		-5 -10			+8 -4			+19 -1			+23 -1				

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 4			Edad: 11 ^d 4 PHE { 4 ^h : 60'6 12 ^h : 60'8 20 ^h : 60'9 Rº: 58 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	21.7	+6 32.8	43	56.1	59	-15 09.1	70	60 N	3 27	4 22	5 06	17 19	26	1 15	88	
1	195	21.9		58	21.0	59	-15 02.1	73	58	38	29	10	12	28	25	85	
2	210	22.1		72	45.9	59	-14 54.8	73	56	47	35	14	17 05	31	33	83	
3	225	22.3		87	10.7	58	47.5	73	54	3 55	40	17	16 59	33	41	81	
4	240	22.6		101	35.6	59	40.1	74	52	4 02	45	20	53	35	47	80	
5	255	22.8	+6 28.1	116	00.5	59	-14 32.6	75	50	4 09	4 49	5 22	16 48	37	1 53	78	
6	270	23.0	+6 27.2	130	25.4	59	-14 24.9	77	45	4 22	4 58	5 28	16 37	40	2 06	75	
7	285	23.2		144	50.3	59	17.2	77	40	32	5 05	32	28	43	17	72	
8	300	23.4		159	15.3	60	09.4	78	35	40	11	36	21	45	26	70	
9	315	23.6		173	40.2	59	-14 01.4	80	30	47	15	40	14	47	34	68	
10	330	23.8		188	05.2	60	-13 53.4	80	20	4 57	23	45	16 02	51	2 48	64	
11	345	24.0	+6 22.5	202	30.1	59	-13 45.2	82	10 N	5 05	5 29	5 50	15 51	55	3 00	61	
12	0	24.3	+6 21.6	216	55.1	60	-13 37.0	82	0	5 10	5 34	5 55	15 42	57	3 11	58	
13	15	24.5		231	20.1	60	28.6	84	10 S	14	39	6 00	32	61	22	55	
14	30	24.7		245	45.2	61	20.2	84	20	17	42	04	21	64	34	52	
15	45	24.9		260	10.2	60	11.6	86	30	18	46	10	09	68	47	49	
16	60	25.1		274	35.3	61	-13 03.0	86	35	18	47	13	15 03	70	3 55	47	
17	75	25.3	+6 17.0	289	00.4	61	-12 54.3	87	40	5 17	5 49	6 16	14 55	72	4 04	44	
18	90	25.5	+6 16.0	303	25.5	61	-12 45.4	89	45	5 16	5 50	6 20	14 45	76	4 14	42	
19	105	25.7		317	50.6	61	36.5	89	50	15	52	24	34	80	26	39	
20	120	26.0		332	15.7	61	27.5	90	52	14	52	26	29	81	32	37	
21	135	26.2		346	40.9	62	18.4	91	54	12	53	28	23	83	38	35	
22	150	26.4		1	06.1	62	-12 09.2	92	56	11	54	31	17	85	45	33	
23	165	26.6		15	31.3	62	-11 59.9	93	58	09	54	34	10	87	4 52	32	
24	180	26.8	+6 10.4	29	56.5	62	-11 50.6	93	60 S	5 07	5 55	6 37	14 02	90	5 01	29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 59 ^m 8		Mag: -3.9 PMG: 11 ^h 12 ^m		Mag: +0.7 PMG: 16 ^h 27 ^m		Mag: -1.9 PMG: 9 ^h 54 ^m		Mag: +0.6 PMG: 16 ^h 04 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	345	00.6	192	08.9	+12 28.2	112	55.9	-20 18.3	211	13.9	+17 52.1	118	29.3	-15 18.2
1	0	03.1	207	08.4		127	56.7	18.7	226	15.8	52.0	133	31.5	18.2
2	15	05.6	222	07.9		142	57.5	19.1	241	17.8	51.9	148	33.8	18.3
3	30	08.0	237	07.4		157	58.3	19.5	256	19.7	51.7	163	36.1	18.3
4	45	10.5	252	06.9		172	59.1	20.0	271	21.7	51.6	178	38.4	18.4
5	60	13.0	267	06.4	+12 23.0	187	59.9	-20 20.4	286	23.6	+17 51.4	193	40.7	-15 18.4
6	75	15.4	282	05.9	+12 22.0	203	00.6	-20 20.8	301	25.6	+17 51.3	208	43.0	-15 18.5
7	90	17.9	297	05.4		218	01.4	21.2	316	27.5	51.2	223	45.3	18.6
8	105	20.4	312	04.8		233	02.2	21.6	331	29.5	51.0	238	47.6	18.6
9	120	22.8	327	04.3		248	03.0	22.0	346	31.4	50.9	253	49.9	18.7
10	135	25.3	342	03.8		263	03.8	22.4	1	33.4	50.8	268	52.1	18.7
11	150	27.8	357	03.3	+12 16.7	278	04.6	-20 22.8	16	35.3	+17 50.6	283	54.4	-15 18.8
12	165	30.2	12	02.8	+12 15.7	293	05.4	-20 23.2	31	37.3	+17 50.5	298	56.7	-15 18.8
13	180	32.7	27	02.3		308	06.1	23.7	46	39.2	50.4	313	59.0	18.9
14	195	35.1	42	01.8		323	06.9	24.1	61	41.2	50.2	329	01.3	19.0
15	210	37.6	57	01.3		338	07.7	24.5	76	43.1	50.1	344	03.6	19.0
16	225	40.1	72	00.8		353	08.5	24.9	91	45.1	50.0	359	05.9	19.1
17	240	42.5	87	00.2	+12 10.4	8	09.3	-20 25.3	106	47.0	+17 49.8	14	08.2	-15 19.1
18	255	45.0	101	59.7	+12 09.4	23	10.1	-20 25.7	121	49.0	+17 49.7	29	10.5	-15 19.2
19	270	47.5	116	59.2		38	10.9	26.1	136	50.9	49.6	44	12.7	19.2
20	285	49.9	131	58.7		53	11.6	26.5	151	52.9	49.4	59	15.0	19.3
21	300	52.4	146	58.2		68	12.4	26.9	166	54.8	49.3	74	17.3	19.4
22	315	54.9	161	57.7		83	13.2	27.3	181	56.8	49.2	89	19.6	19.4
23	330	57.3	176	57.2		98	14.0	27.7	196	58.7	49.0	104	21.9	19.5
24	345	59.8	191	56.7	+12 03.1	113	14.8	-20 28.2	212	00.7	+17 48.9	119	24.2	-15 19.5
Dif	—		-5 -10		+8 -4		+20 -1		+23 -1		+23 -1		-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 0		Edad: 12 ^d 4 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'2 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	180	26.8	+6	10.4	29	56.5	-11	50.6	60 N	18 46	19 29	20 24	17 45 22	2 43 92
1	195	27.0		09.5	44	21.8 63		41.1 95	58	42	23	14	40 25	50 89
2	210	27.2		08.6	58	47.0 62		31.6 95	56	39	18	20 05	36 27	2 56 87
3	225	27.4		07.6	73	12.3 63		21.9 97	54	36	13	19 57	32 29	3 02 84
4	240	27.7		06.7	87	37.7 64		12.2 97	52	34	08	50	28 31	07 82
5	255	27.9	+6	05.7	102	03.0 63	-11	02.5 97	50	18 31	19 04	19 44	17 25 32	3 11 80
6	270	28.1	+6	04.8	116	28.4 64	-10	52.6 99	45	18 26	18 56	19 32	17 17 37	3 21 76
7	285	28.3		03.9	130	53.8 64		42.7 99	40	22	50	22	11 40	29 73
8	300	28.5		02.9	145	19.2 64		32.6 101	35	19	44	14	06 43	36 70
9	315	28.7		02.0	159	44.7 65		22.5 101	30	15	40	19 08	17 01 45	42 68
10	330	28.9		01.1	174	10.2 65		12.4 101	20	10	32	18 58	16 53 49	3 52 64
11	345	29.2	+6	00.1	188	35.7 65	-10	02.1 103	10 N	18 06	18 27	18 51	16 46 53	4 01 60
12	0	29.4	+5	59.2	203	01.2 65	-9	51.8 103	0	18 01	18 22	18 46	16 39 57	4 09 57
13	15	29.6		58.3	217	26.7 65		41.4 104	10 S	17 57	18	43	33 60	17 54
14	30	29.8		57.3	231	52.3 66		31.0 104	20	53	15	41	25 64	26 50
15	45	30.0		56.4	246	17.9 66		20.5 105	30	48	12	40	17 68	36 46
16	60	30.2		55.5	260	43.6 67	-9	09.9 106	35	45	11	40	13 70	42 44
17	75	30.4	+5	54.5	275	09.2 66	-8	59.2 107	40	17 42	18 10	18 41	16 07 74	4 48 41
18	90	30.7	+5	53.6	289	34.9 67	-8	48.5 107	45	17 39	18 08	18 42	16 01 77	4 56 38
19	105	30.9		52.6	304	00.6 67		37.8 107	50	35	07	45	15 54 80	5 05 34
20	120	31.1		51.7	318	26.4 68		26.9 109	52	33	07	46	50 83	09 32
21	135	31.3		50.8	332	52.2 68		16.0 109	54	31	06	47	46 85	13 31
22	150	31.5		49.8	347	18.0 68	-8	05.1 109	56	29	06	49	42 87	18 29
23	165	31.7		48.9	1 43.8 68		-7	54.1 110	58	26	06	51	37 90	24 26
24	180	32.0	+5	48.0	16	09.7 69	-7	43.0 111	60 S	17 23	18 05	18 53	15 32 92	5 30 24
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 55 ^m 9		Mag: -3.9 PMG: 11 ^h 13 ^m			Mag: +0.7 PMG: 16 ^h 26 ^m			Mag: -1.9 PMG: 9 ^h 51 ^m			Mag: +0.6 PMG: 16 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	345	59.8	191	56.7	+12	03.1	113	14.8	-20	28.2	212	00.7	+17	48.9
1	1	02.2	206	56.2		02.0	128	15.5		28.6	227	02.7		48.8
2	16	04.7	221	55.7	+12	00.9	143	16.3		29.0	242	04.6		48.6
3	31	07.2	236	55.2	+11	59.9	158	17.1		29.4	257	06.6		48.5
4	46	09.6	251	54.7		58.8	173	17.9		29.8	272	08.5		48.4
5	61	12.1	266	54.2	+11	57.8	188	18.7	-20	30.2	287	10.5	+17	48.2
6	76	14.6	281	53.7	+11	56.7	203	19.4	-20	30.6	302	12.4	+17	48.1
7	91	17.0	296	53.1		55.7	218	20.2		31.0	317	14.4		47.9
8	106	19.5	311	52.6		54.6	233	21.0		31.4	332	16.3		47.8
9	121	22.0	326	52.1		53.5	248	21.8		31.8	347	18.3		47.7
10	136	24.4	341	51.6		52.5	263	22.6		32.2	2	20.2		47.5
11	151	26.9	356	51.1	+11	51.4	278	23.3	-20	32.6	17	22.2	+17	47.4
12	166	29.4	11	50.6	+11	50.3	293	24.1	-20	33.0	32	24.1	+17	47.3
13	181	31.8	26	50.1		49.3	308	24.9		33.4	47	26.1		47.1
14	196	34.3	41	49.6		48.2	323	25.7		33.8	62	28.0		47.0
15	211	36.7	56	49.1		47.1	338	26.4		34.3	77	30.0		46.9
16	226	39.2	71	48.6		46.1	353	27.2		34.7	92	31.9		46.7
17	241	41.7	86	48.1	+11	45.0	8	28.0	-20	35.1	107	33.9	+17	46.6
18	256	44.1	101	47.6	+11	44.0	23	28.8	-20	35.5	122	35.9	+17	46.5
19	271	46.6	116	47.1		42.9	38	29.5		35.9	137	37.8		46.3
20	286	49.1	131	46.6		41.8	53	30.3		36.3	152	39.8		46.2
21	301	51.5	146	46.1		40.7	68	31.1		36.7	167	41.7		46.1
22	316	54.0	161	45.6		39.7	83	31.8		37.1	182	43.7		45.9
23	331	56.5	176	45.1		38.6	98	32.6		37.5	197	45.6		45.8
24	346	58.9	191	44.6	+11	37.5	113	33.4	-20	37.9	212	47.6	+17	45.7
Dif	—		-5		-11		+8		-4		+20		-1	
													+23	
													-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 13 ^d 4 PHE { 4 ^h : 61 ^m /2 12 ^h : 61 ^m /2 20 ^h : 61 ^m /1 Rº: 55 ^m													
	PMG: 11 ^h 57 ^m 7			SD: 16 ^h 7 PMG: 23 ^h 49 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	180	32.0	+5 48.0	16	09.7	-7 43.0	60 N	3 33	4 28	5 11	18 07	21	4 15	92			
1	195	32.2		30	35.6	31.9 ¹¹¹	58	43	34	14	05	23	19	90			
2	210	32.4		45	01.5	20.8 ¹¹¹	56	52	39	18	03	25	23	87			
3	225	32.6		59	27.4	69	54	3 59	44	20	18 01	27	26	85			
4	240	32.8		73	53.4	70	52	4 06	48	23	17 59	29	29	82			
5	255	33.0	+5 43.3	88	19.4	70	50	4 12	4 52	5 25	17 57	32	4 31	81			
6	270	33.2	+5 42.3	102	45.4	70	45	4 25	5 00	5 30	17 54	35	4 37	77			
7	285	33.5		117	11.5	71	40	34	07	34	51	38	42	73			
8	300	33.7		131	37.6	71	35	42	12	38	49	41	46	70			
9	315	33.9		146	03.7	71	30	48	17	41	46	44	50	67			
10	330	34.1		160	29.8	71	20	4 58	24	46	42	48	4 56	63			
11	345	34.3	+5 37.6	174	56.0	72	10 N	5 05	5 29	5 50	17 39	52	5 01	60			
12	0	34.5	+5 36.7	189	22.2	72	0	5 10	5 34	5 54	17 36	55	5 06	56			
13	15	34.8		203	48.4	72	10 S	13	37	5 58	33	59	11	53			
14	30	35.0		218	14.7	73	20	15	40	6 03	29	63	16	49			
15	45	35.2		232	41.0	73	30	16	43	07	25	68	22	45			
16	60	35.4		247	07.3	73	35	15	44	10	23	70	26	41			
17	75	35.6	+5 32.0	261	33.6	73	40	5 14	5 46	6 13	17 21	72	5 29	39			
18	90	35.8	+5 31.1	276	00.0	74	45	5 13	5 47	6 16	17 18	76	5 34	36			
19	105	36.1		290	26.4	74	50	10	48	20	14	81	39	32			
20	120	36.3		304	52.8	74	52	09	48	22	13	82	41	31			
21	135	36.5		319	19.3	75	54	08	48	24	11	84	44	28			
22	150	36.7		333	45.8	75	56	06	49	26	09	86	47	26			
23	165	36.9		348	12.3	75	58	04	49	28	07	89	50	24			
24	180	37.1	+5 25.4	2	38.8	75	60 S	5 01	5 49	6 31	17 04	92	5 54	21			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 51 ^m 9		Mag: -3.9 PMG: 11 ^h 13 ^m			Mag: +0.7 PMG: 16 ^h 25 ^m			Mag: -1.9 PMG: 9 ^h 48 ^m			Mag: +0.6 PMG: 15 ^h 56 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	346	58.9	191 44.6	+11 37.5	113 33.4	-20 37.9	212 47.6	+17 45.7	120 19.0	-15 20.9				
1	2	01.4	206 44.1	36.5	128 34.2	38.3	227 49.5	45.5	135 21.3	21.0				
2	17	03.9	221 43.6	35.4	143 34.9	38.7	242 51.5	45.4	150 23.6	21.1				
3	32	06.3	236 43.1	34.3	158 35.7	39.1	257 53.4	45.3	165 25.9	21.1				
4	47	08.8	251 42.6	33.3	173 36.5	39.5	272 55.4	45.1	180 28.2	21.2				
5	62	11.2	266 42.1	+11 32.2	188 37.2	-20 39.9	287 57.4	+17 45.0	195 30.4	-15 21.2				
6	77	13.7	281 41.6	+11 31.1	203 38.0	-20 40.3	302 59.3	+17 44.9	210 32.7	-15 21.3				
7	92	16.2	296 41.1	30.0	218 38.8	40.7	318 01.3	44.7	225 35.0	21.3				
8	107	18.6	311 40.7	29.0	233 39.6	41.1	333 03.2	44.6	240 37.3	21.4				
9	122	21.1	326 40.2	27.9	248 40.3	41.5	348 05.2	44.5	255 39.6	21.5				
10	137	23.6	341 39.7	26.8	263 41.1	41.9	3 07.1	44.3	270 41.9	21.5				
11	152	26.0	356 39.2	+11 25.7	278 41.9	-20 42.3	18 09.1	+17 44.2	285 44.1	-15 21.6				
12	167	28.5	11 38.7	+11 24.7	293 42.6	-20 42.7	33 11.0	+17 44.0	300 46.4	-15 21.6				
13	182	31.0	26 38.2	23.6	308 43.4	43.1	48 13.0	43.9	315 48.7	21.7				
14	197	33.4	41 37.7	22.5	323 44.2	43.5	63 15.0	43.8	330 51.0	21.8				
15	212	35.9	56 37.2	21.4	338 44.9	43.9	78 16.9	43.6	345 53.3	21.8				
16	227	38.3	71 36.7	20.3	353 45.7	44.3	93 18.9	43.5	0 55.6	21.9				
17	242	40.8	86 36.2	+11 19.3	8 46.5	-20 44.7	108 20.8	+17 43.4	15 57.8	-15 21.9				
18	257	43.3	101 35.7	+11 18.2	23 47.2	-20 45.1	123 22.8	+17 43.2	31 00.1	-15 22.0				
19	272	45.7	116 35.2	17.1	38 48.0	45.5	138 24.7	43.1	46 02.4	22.1				
20	287	48.2	131 34.7	16.0	53 48.8	45.9	153 26.7	43.0	61 04.7	22.1				
21	302	50.7	146 34.2	14.9	68 49.5	46.3	168 28.7	42.8	76 07.0	22.2				
22	317	53.1	161 33.8	13.9	83 50.3	46.7	183 30.6	42.7	91 09.2	22.2				
23	332	55.6	176 33.3	12.8	98 51.0	47.1	198 32.6	42.6	106 11.5	22.3				
24	347	58.1	191 32.8	+11 11.7	113 51.8	-20 47.5	213 34.5	+17 42.4	121 13.8	-15 22.4				
Dif	—		-5	-11	+8		-4	+20	-1	+23		-1		

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 3		Edad: 14 ^d 4 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'7 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	180	37.1	+5 25.4	2	38.8	-3 05.4	75	60 N	18 40	19 23	20 17	18 28 20	5 47 92	
1	195	37.4	24.5	17	05.3	-2 53.4	120	58	37	17	20 07	28 22	49 88	
2	210	37.6	23.5	31	31.9	41.5	119	56	34	12	19 59	28 25	50 86	
3	225	37.8	22.6	45	58.5	29.6	119	54	31	08	52	28 27	51 83	
4	240	38.0	21.6	60	25.2	17.6	120	52	29	04	45	28 29	51 82	
5	255	38.2	+5 20.7	74	51.8	-2 05.7	119	50	18 27	19 00	19 39	18 29 30	5 52 80	
6	270	38.5	+5 19.7	89	18.5	-1 53.7	120	45	18 23	18 52	19 28	18 29 34	5 54 76	
7	285	38.7	18.8	103	45.2	41.7	120	40	19	46	19	29 38	55 73	
8	300	38.9	17.9	118	12.0	29.7	120	35	16	41	11	30 40	56 70	
9	315	39.1	16.9	132	38.7	17.8	119	30	13	37	19 05	30 43	57 67	
10	330	39.3	16.0	147	05.5	-1 05.8	120	20	08	30	18 56	30 47	5 59 63	
11	345	39.5	+5 15.0	161	32.3	-0 53.8	120	10 N	18 04	18 25	18 50	18 31 50	6 01 58	
12	0	39.8	+5 14.1	175	59.2	-0 41.8	120	0	18 01	18 21	18 45	18 31 54	6 02 55	
13	15	40.0	13.1	190	26.0	29.8	120	10 S	17 57	18	42	32 57	04 51	
14	30	40.2	12.2	204	52.9	17.9	119	20	53	15	41	32 62	05 47	
15	45	40.4	11.3	219	19.8	-0 05.9	120	30	49	13	41	33 66	07 43	
16	60	40.6	10.3	233	46.7	+0 06.1	120	35	47	12	42	33 69	07 41	
17	75	40.9	+5 09.4	248	13.7	+0 18.0	119	40	17 44	18 11	18 43	18 33 72	6 08 38	
18	90	41.1	+5 08.4	262	40.7	+0 30.0	120	45	17 41	18 11	18 45	18 34 75	6 10 34	
19	105	41.3	07.5	277	07.7	41.9	119	50	38	10	48	35 78	11 31	
20	120	41.5	06.5	291	34.7	+0 53.8	119	52	36	10	49	35 80	12 29	
21	135	41.7	05.6	306	01.7	+1 05.7	119	54	35	10	51	35 83	12 27	
22	150	41.9	04.6	320	28.8	17.6	119	56	33	10	53	35 85	13 25	
23	165	42.2	03.7	334	55.9	29.5	119	58	30	10	55	36 87	14 23	
24	180	42.4	+5 02.8	349	23.0	+1 41.3	118	60 S	17 28	18 10	18 58	18 36 90	6 15 20	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 48 ^m 0		Mag: -3.9 PMG: 11 ^h 14 ^m		Mag: +0.7 PMG: 16 ^h 24 ^m		Mag: -1.9 PMG: 9 ^h 44 ^m		Mag: +0.6 PMG: 15 ^h 53 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	347	58.1	191	32.8	+11 11.7	113	51.8	-20 47.5	213	34.5	+17 42.4	121	13.8	-15 22.4
1	3	00.5	206	32.3	10.6	128	52.6	47.9	228	36.5	42.3	136	16.1	22.4
2	18	03.0	221	31.8	09.5	143	53.3	48.3	243	38.4	42.2	151	18.4	22.5
3	33	05.5	236	31.3	08.4	158	54.1	48.7	258	40.4	42.0	166	20.6	22.5
4	48	07.9	251	30.8	07.4	173	54.8	49.1	273	42.4	41.9	181	22.9	22.6
5	63	10.4	266	30.3	+11 06.3	188	55.6	-20 49.5	288	44.3	+17 41.8	196	25.2	-15 22.7
6	78	12.8	281	29.8	+11 05.2	203	56.4	-20 49.9	303	46.3	+17 41.6	211	27.5	-15 22.7
7	93	15.3	296	29.3	04.1	218	57.1	50.3	318	48.2	41.5	226	29.8	22.8
8	108	17.8	311	28.9	03.0	233	57.9	50.7	333	50.2	41.4	241	32.0	22.8
9	123	20.2	326	28.4	01.9	248	58.6	51.1	348	52.1	41.2	256	34.3	22.9
10	138	22.7	341	27.9	+11 00.8	263	59.4	51.5	3	54.1	41.1	271	36.6	22.9
11	153	25.2	356	27.4	+10 59.7	279	00.2	-20 51.9	18	56.1	+17 41.0	286	38.9	-15 23.0
12	168	27.6	11	26.9	+10 58.6	294	00.9	-20 52.3	33	58.0	+17 40.8	301	41.2	-15 23.1
13	183	30.1	26	26.4	57.6	309	01.7	52.6	49	00.0	40.7	316	43.4	23.1
14	198	32.6	41	25.9	56.5	324	02.4	53.0	64	01.9	40.6	331	45.7	23.2
15	213	35.0	56	25.5	55.4	339	03.2	53.4	79	03.9	40.4	346	48.0	23.2
16	228	37.5	71	25.0	54.3	354	04.0	53.8	94	05.9	40.3	1	50.3	23.3
17	243	39.9	86	24.5	+10 53.2	9	04.7	-20 54.2	109	07.8	+17 40.2	16	52.6	-15 23.4
18	258	42.4	101	24.0	+10 52.1	24	05.5	-20 54.6	124	09.8	+17 40.0	31	54.8	-15 23.4
19	273	44.9	116	23.5	51.0	39	06.2	55.0	139	11.7	39.9	46	57.1	23.5
20	288	47.3	131	23.0	49.9	54	07.0	55.4	154	13.7	39.8	61	59.4	23.5
21	303	49.8	146	22.6	48.8	69	07.7	55.8	169	15.7	39.6	77	01.7	23.6
22	318	52.3	161	22.1	47.7	84	08.5	56.2	184	17.6	39.5	92	03.9	23.7
23	333	54.7	176	21.6	46.6	99	09.2	56.6	199	19.6	39.4	107	06.2	23.7
24	348	57.2	191	21.1	+10 45.5	114	10.0	-20 57.0	214	21.5	+17 39.2	122	08.5	-15 23.8
Dif	—		-5 -11		+8 -4		+20 -1		+23 -1		+23 -1		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 0			Edad: 15 ^d 4 PHE { 4 ^h : 60'6 12 ^h : 60'3 20 ^h : 60'1 PMG: 0 ^h 44 ^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
0	180	42.4	+5	02.8	349	23.0	+1	41.3	60 N	3	39	4	33	5	16	18	48
1	195	42.6		01.8	3	50.1	+1	53.2	58	48	38	19	50	24	17	89	86
2	210	42.8	+5	00.9	18	17.3	+2	05.0	56	3	56	43	21	53	26	16	83
3	225	43.0	+4	59.9	32	44.4		16.8	54	4	04	48	24	55	29	14	82
4	240	43.3		59.0	47	11.6		28.5	52	10	52	26	57	30	13	80	80
5	255	43.5	+4	58.0	61	38.8	+2	40.3	50	4	16	4	55	5	28	18	59
6	270	43.7	+4	57.1	76	06.1	+2	52.0	45	4	27	5	03	5	32	19	03
7	285	43.9		56.1	90	33.3	+3	03.7	40	36	09	36	07	38	08	70	73
8	300	44.1		55.2	105	00.6		15.3	35	43	14	39	10	41	06	68	70
9	315	44.4		54.2	119	27.9		26.9	30	49	18	42	13	43	04	66	68
10	330	44.6		53.3	133	55.2		38.5	20	4	58	24	46	17	47	7	02
11	345	44.8	+4	52.3	148	22.5	+3	50.1	10 N	5	05	5	29	5	50	19	21
12	0	45.0	+4	51.4	162	49.8	+4	01.6	0	5	09	5	33	5	54	19	25
13	15	45.2		50.4	177	17.2		13.1	10 S	12	36	5	57	29	57	55	50
14	30	45.5		49.5	191	44.6		24.5	20	13	39	6	01	34	60	52	47
15	45	45.7		48.6	206	12.0		35.9	30	13	41	05	39	64	50	43	54
16	60	45.9		47.6	220	39.4		47.3	35	12	42	07	42	66	48	41	41
17	75	46.1	+4	46.7	235	06.8	+4	58.6	40	5	11	5	42	6	09	19	45
18	90	46.3	+4	45.7	249	34.3	+5	09.9	45	5	09	5	43	6	12	19	49
19	105	46.6		44.8	264	01.7		21.1	50	06	43	16	53	76	42	31	35
20	120	46.8		43.8	278	29.2		32.3	52	04	43	17	55	78	41	29	31
21	135	47.0		42.9	292	56.7		43.4	54	03	44	19	19	58	80	39	28
22	150	47.2		41.9	307	24.2	+5	54.5	56	5	01	44	21	20	00	82	38
23	165	47.4		41.0	321	51.7	+6	05.6	58	4	58	44	23	03	85	37	23
24	180	47.7	+4	40.0	336	19.3	+6	16.5	60 S	4	55	5	43	6	25	20	06

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 44 ^m 1		Mag: -3.9 PMG: 11 ^h 15 ^m			Mag: +0.7 PMG: 16 ^h 23 ^m			Mag: -1.9 PMG: 9 ^h 41 ^m			Mag: +0.6 PMG: 15 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	348	57.2	191	21.1	+10	45.5	114	10.0	-20	57.0	214	21.5	+17	39.2				
1	3	59.7	206	20.6		44.4	129	10.7		57.4	229	23.5		39.1				
2	19	02.1	221	20.1		43.3	144	11.5		57.8	244	25.5		39.0				
3	34	04.6	236	19.7		42.2	159	12.3		58.2	259	27.4		38.8				
4	49	07.1	251	19.2		41.1	174	13.0		58.5	274	29.4		38.7				
5	64	09.5	266	18.7	+10	40.0	189	13.8	-20	58.9	289	31.3	+17	38.6				
6	79	12.0	281	18.2	+10	38.9	204	14.5	-20	59.3	304	33.3	+17	38.4				
7	94	14.4	296	17.7		37.8	219	15.3	-20	59.7	319	35.3		38.3				
8	109	16.9	311	17.3		36.7	234	16.0	-21	00.1	334	37.2		38.1				
9	124	19.4	326	16.8		35.6	249	16.8		00.5	349	39.2		38.0				
10	139	21.8	341	16.3		34.5	264	17.5		00.9	4	41.1		37.9				
11	154	24.3	356	15.8	+10	33.4	279	18.3	-21	01.3	19	43.1	+17	37.7				
12	169	26.8	11	15.3	+10	32.3	294	19.0	-21	01.7	34	45.1	+17	37.6				
13	184	29.2	26	14.9		31.2	309	19.8		02.1	49	47.0		37.5				
14	199	31.7	41	14.4		30.1	324	20.5		02.4	64	49.0		37.3				
15	214	34.2	56	13.9		29.0	339	21.2		02.8	79	50.9		37.2				
16	229	36.6	71	13.4		27.9	354	22.0		03.2	94	52.9		37.1				
17	244	39.1	86	13.0	+10	26.8	9	22.7	-21	03.6	109	54.9	+17	36.9				
18	259	41.5	101	12.5	+10	25.7	24	23.5	-21	04.0	124	56.8	+17	36.8				
19	274	44.0	116	12.0		24.6	39	24.2		04.4	139	58.8		36.7				
20	289	46.5	131	11.5		23.5	54	25.0		04.8	155	00.8		36.5				
21	304	48.9	146	11.1		22.4	69	25.7		05.2	170	02.7		36.4				
22	319	51.4	161	10.6		21.3	84	26.5		05.5	185	04.7		36.3				
23	334	53.9	176	10.1		20.2	99	27.2		05.9	200	06.6		36.1				
24	349	56.3	191	09.6	+10	19.1	114	28.0	-21	06.3	215	08.6	+17	36.0				
Dif	—		-5		-11		+7		-4		+20		-1		+23		-	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 6		Edad: 16 ^d 4 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'3 PMG: 1 ^h 38 ^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			
0	180	47.7	+4	40.0	336	19.3	+6 16.5	60 N	18 34	19 16	20 10	19 09 24	8 48 85					
1	195	47.9		39.1	350	46.8 ⁸⁵	27.5 ¹¹⁰	58	31	11	20 01	14 27	43 83					
2	210	48.1		38.1	5	14.4 ⁸⁶	38.4 ¹⁰⁹	56	29	07	19 53	19 29	39 80					
3	225	48.3		37.2	19	42.0 ⁸⁶	+6 49.2 ¹⁰⁸	54	26	19 02	46	24 30	36 78					
4	240	48.5		36.2	34	09.6 ⁸⁶	+7 00.0 ¹⁰⁸	52	24	18 59	40	27 33	33 76					
5	255	48.8	+4	35.3	48	37.2 ⁸⁶	+7 10.7 ¹⁰⁷	50	18 23	18 55	19 35	19 31 34	8 30 74					
6	270	49.0	+4	34.3	63	04.8 ⁸⁶	+7 21.4 ¹⁰⁷	45	18 19	18 48	19 24	19 39 37	8 23 71					
7	285	49.2		33.4	77	32.5 ⁸⁷	32.0 ¹⁰⁶	40	16	43	15	45 40	18 68					
8	300	49.4		32.4	92	00.1 ⁸⁶	42.6 ¹⁰⁶	35	13	38	08	51 42	14 65					
9	315	49.6		31.5	106	27.8 ⁸⁷	+7 53.1 ¹⁰⁵	30	11	35	19 03	19 56 44	10 63					
10	330	49.9		30.5	120	55.5 ⁸⁷	+8 03.5 ¹⁰⁴	20	07	29	18 54	20 04 48	8 03 59					
11	345	50.1	+4	29.6	135	23.2 ⁸⁷	+8 13.9 ¹⁰⁴	10 N	18 03	18 24	18 49	20 12 50	7 57 56					
12	0	50.3	+4	28.6	149	50.9 ⁸⁷	+8 24.2 ¹⁰³	0	18 00	18 21	18 45	20 19 53	7 51 53					
13	15	50.5		27.7	164	18.6 ⁸⁷	34.4 ¹⁰²	10 S	17 57	18	42	26 56	45 51					
14	30	50.7		26.7	178	46.4 ⁸⁸	44.6 ¹⁰²	20	54	16	41	34 59	39 48					
15	45	51.0		25.8	193	14.1 ⁸⁷	+8 54.7 ¹⁰¹	30	50	14	42	43 62	33 43					
16	60	51.2		24.8	207	41.9 ⁸⁸	+9 04.7 ¹⁰⁰	35	48	14	43	48 64	29 41					
17	75	51.4	+4	23.9	222	09.7 ⁸⁸	+9 14.7 ¹⁰⁰	40	17 46	18 13	18 45	20 54 67	7 24 39					
18	90	51.6	+4	22.9	236	37.5 ⁸⁸	+9 24.6 ⁹⁹	45	17 44	18 13	18 47	21 01 69	7 19 36					
19	105	51.8		22.0	251	05.3 ⁸⁸	34.5 ⁹⁹	50	41	13	51	09 73	13 33					
20	120	52.1		21.0	265	33.1 ⁸⁸	44.2 ⁹⁷	52	39	13	52	13 74	10 31					
21	135	52.3		20.1	280	00.9 ⁸⁸	+9 53.9 ⁹⁷	54	38	13	54	18 75	07 29					
22	150	52.5		19.1	294	28.8 ⁸⁹	+10 03.6 ⁹⁷	56	36	14	18 57	22 78	04 27					
23	165	52.7		18.2	308	56.6 ⁸⁸	13.1 ⁹⁵	58	35	14	19 00	28 79	7 00 25					
24	180	52.9	+4	17.2	323	24.5 ⁸⁹	+10 22.6 ⁹⁵	60 S	17 33	18 14	19 03	21 33 83	6 55 23					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 40 ^m 1		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +0.7 PMG: 16 ^h 21 ^m			Mag: -1.9 PMG: 9 ^h 38 ^m			Mag: +0.6 PMG: 15 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	349	56.3	191	09.6	+10	19.1	114	28.0	-21	06.3	215	08.6	+17	36.0	123	03.1	-15	25.2
1	4	58.8	206	09.2		18.0	129	28.7		06.7	230	10.6		35.9	138	05.4		25.3
2	20	01.3	221	08.7		16.8	144	29.4		07.1	245	12.5		35.7	153	07.7		25.4
3	35	03.7	236	08.2		15.7	159	30.2		07.5	260	14.5		35.6	168	10.0		25.4
4	50	06.2	251	07.7		14.6	174	30.9		07.9	275	16.5		35.5	183	12.2		25.5
5	65	08.7	266	07.3	+10	13.5	189	31.7	-21	08.2	290	18.4	+17	35.3	198	14.5	-15	25.5
6	80	11.1	281	06.8	+10	12.4	204	32.4	-21	08.6	305	20.4	+17	35.2	213	16.8	-15	25.6
7	95	13.6	296	06.3		11.3	219	33.2		09.0	320	22.4		35.1	228	19.0		25.7
8	110	16.0	311	05.8		10.2	234	33.9		09.4	335	24.3		34.9	243	21.3		25.7
9	125	18.5	326	05.4		09.1	249	34.6		09.8	350	26.3		34.8	258	23.6		25.8
10	140	21.0	341	04.9		08.0	264	35.4		10.2	5	28.2		34.7	273	25.9		25.8
11	155	23.4	356	04.4	+10	06.8	279	36.1	-21	10.6	20	30.2	+17	34.5	288	28.1	-15	25.9
12	170	25.9	11	04.0	+10	05.7	294	36.9	-21	10.9	35	32.2	+17	34.4	303	30.4	-15	26.0
13	185	28.4	26	03.5		04.6	309	37.6		11.3	50	34.1		34.3	318	32.7		26.0
14	200	30.8	41	03.0		03.5	324	38.3		11.7	65	36.1		34.1	333	35.0		26.1
15	215	33.3	56	02.5		02.4	339	39.1		12.1	80	38.1		34.0	348	37.2		26.1
16	230	35.8	71	02.1		01.3	354	39.8		12.5	95	40.0		33.9	3	39.5		26.2
17	245	38.2	86	01.6	+10	00.1	9	40.6	-21	12.9	110	42.0	+17	33.7	18	41.8	-15	26.3
18	260	40.7	101	01.1	+9	59.0	24	41.3	-21	13.2	125	44.0	+17	33.6	33	44.1	-15	26.3
19	275	43.2	116	00.7		57.9	39	42.0		13.6	140	45.9		33.5	48	46.3		26.4
20	290	45.6	131	00.2		56.8	54	42.8		14.0	155	47.9		33.3	63	48.6		26.5
21	305	48.1	145	59.7		55.7	69	43.5		14.4	170	49.9		33.2	78	50.9		26.5
22	320	50.5	160	59.3		54.6	84	44.2		14.8	185	51.8		33.1	93	53.1		26.6
23	335	53.0	175	58.8		53.4	99	45.0		15.1	200	53.8		32.9	108	55.4		26.6
24	350	55.5	190	58.3	+9	52.3	114	45.7	-21	15.5	215	55.8	+17	32.8	123	57.7	-15	26.7
Dif	—		-5		-11		+7		-4		+20		-1		+23		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 17 ^d 4 PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 6 20 ^h : 58 ^m 3													
	PMG: 11 ^h 56 ^m 3			SD: 16 ^d 1 PMG: 2 ^h 32 ^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	180	52.9	+4 17.2	323	24.5	+10 22.6	94	60 N	3 44	4 38	5 20	19 33	29	10 13	79		
1	195	53.2	16.2	337	52.4 89	32.0 94	58	3 53	43	23	41	31	10 06	77			
2	210	53.4	15.3	352	20.3 89	41.3 93	56	4 01	47	25	48	33	9 59	75			
3	225	53.6	14.3	6	48.2 89	50.6 93	54	08	51	27	19 54	35	54	73			
4	240	53.8	13.4	21	16.1 89	+10 59.7 91	52	14	55	29	20 00	36	49	71			
5	255	54.1	+4 12.4	35	44.0 89	+11 08.8 91	50	4 19	4 58	5 31	20 05	37	9 44	70			
6	270	54.3	+4 11.5	50	12.0 90	+11 17.9 91	45	4 30	5 05	5 35	20 16	40	9 34	68			
7	285	54.5	10.5	64	39.9 89	26.8 88	40	38	11	38	25	42	26	65			
8	300	54.7	09.6	79	07.9 90	35.6 89	35	45	15	41	33	44	19	63			
9	315	54.9	08.6	93	35.9 90	44.4 88	30	51	19	43	40	45	13	61			
10	330	55.2	07.7	108	03.9 90	+11 53.1 87	20	4 59	25	47	20 52	48	9 02	58			
11	345	55.4	+4 06.7	122	31.9 90	+12 01.7 86	10 N	5 04	5 29	5 50	21 02	51	8 53	55			
12	0	55.6	+4 05.8	136	59.9 90	+12 10.3 86	0	5 08	5 32	5 53	21 12	53	8 44	53			
13	15	55.8	04.8	151	27.9 90	18.7 84	10 S	11	35	56	22 55		36	50			
14	30	56.1	03.9	165	56.0 91	27.1 84	20	11	37	5 59	33 57		27	47			
15	45	56.3	02.9	180	24.0 90	35.4 83	30	11	38	6 02	45 60		16	45			
16	60	56.5	01.9	194	52.1 91	43.6 82	35	10	39	04	21 52	61	10	43			
17	75	56.7	+4 01.0	209	20.1 90	+12 51.7 81	40	5 08	5 39	6 06	22 01	62	8 03	41			
18	90	56.9	+4 00.0	223	48.2 91	+12 59.7 80	45	5 05	5 39	6 08	22 10	65	7 55	39			
19	105	57.2	+3 59.1	238	16.3 91	+13 07.6 79	50	02	39	11	22 67		46	35			
20	120	57.4	58.1	252	44.5 92	15.5 79	52	5 00	39	12	27 69		41	34			
21	135	57.6	57.2	267	12.6 91	23.2 77	54	4 58	39	14	33 70		36	33			
22	150	57.8	56.2	281	40.7 91	30.9 77	56	55	38	15	40 72		31	31			
23	165	58.0	55.3	296	08.9 92	38.5 76	58	52	38	17	47 74		25	29			
24	180	58.3	+3 54.3	310	37.0 91	+13 46.0 75	60 S	4 49	5 37	6 19	22 56	76	7 18	27			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 0 ^h 36 ^m 2		Mag: -3.9 PMG: 11 ^h 16 ^m		Mag: +0.7 PMG: 16 ^h 20 ^m		Mag: -1.9 PMG: 9 ^h 35 ^m		Mag: +0.6 PMG: 15 ^h 42 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	350	55.5	190	58.3	+9 52.3	114	45.7	-21 15.5	215	55.8	+17 32.8				
1	5	57.9	205	57.9	51.2	129	46.4	15.9	230	57.7	32.7				
2	21	00.4	220	57.4	50.1	144	47.2	16.3	245	59.7	32.5				
3	36	02.9	235	56.9	48.9	159	47.9	16.7	261	01.7	32.4				
4	51	05.3	250	56.5	47.8	174	48.6	17.0	276	03.6	32.3				
5	66	07.8	265	56.0	+9 46.7	189	49.4	-21 17.4	291	05.6	+17 32.1				
6	81	10.3	280	55.5	+9 45.6	204	50.1	-21 17.8	306	07.5	+17 32.0				
7	96	12.7	295	55.1	44.5	219	50.8	18.2	321	09.5	31.9				
8	111	15.2	310	54.6	43.3	234	51.6	18.6	336	11.5	31.7				
9	126	17.6	325	54.1	42.2	249	52.3	18.9	351	13.4	31.6				
10	141	20.1	340	53.7	41.1	264	53.0	19.3	6	15.4	31.5				
11	156	22.6	355	53.2	+9 40.0	279	53.8	-21 19.7	21	17.4	+17 31.3				
12	171	25.0	10	52.7	+9 38.8	294	54.5	-21 20.1	36	19.3	+17 31.2				
13	186	27.5	25	52.3	37.7	309	55.2	20.5	51	21.3	31.1				
14	201	30.0	40	51.8	36.6	324	56.0	20.8	66	23.3	30.9				
15	216	32.4	55	51.4	35.4	339	56.7	21.2	81	25.3	30.8				
16	231	34.9	70	50.9	34.3	354	57.4	21.6	96	27.2	30.7				
17	246	37.4	85	50.4	+9 33.2	9	58.2	-21 22.0	111	29.2	+17 30.5				
18	261	39.8	100	50.0	+9 32.1	24	58.9	-21 22.3	126	31.2	+17 30.4				
19	276	42.3	115	49.5	30.9	39	59.6	22.7	141	33.1	30.3				
20	291	44.8	130	49.0	29.8	55	00.3	23.1	156	35.1	30.1				
21	306	47.2	145	48.6	28.7	70	01.1	23.5	171	37.1	30.0				
22	321	49.7	160	48.1	27.5	85	01.8	23.8	186	39.0	29.9				
23	336	52.1	175	47.7	26.4	100	02.5	24.2	201	41.0	29.7				
24	351	54.6	190	47.2	+9 25.3	115	03.2	-21 24.6	216	43.0	+17 29.6				
Dif	—		-5		-11	+7		-4	+20		-1	+23		-	

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: 18 ^d 4 PHE { 4 ^h : 58'0 12 ^h : 57'7 SD: 15'8 20 ^h : 57'4 PMG: 3 ^h 25 ^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	
0	180	58.3	+3	54.3	310	37.0	+13	46.0	60 N	18	28	19	10	20	02	36	11	32
1	195	58.5		53.4	325	05.2	92	+13	53.4	58	25		05	19	12	37		23
2	210	58.7		52.4	339	33.4	92	+14	00.7	56	23	19	01		21	39		14
3	225	58.9		51.4	354	01.6	92		07.9	54	21	18	57	40	29	40		07
4	240	59.2		50.5	8	29.8	92		15.0	52	20		54	35	36	41	11	00
5	255	59.4	+3	49.5	22	58.1	93	+14	22.1	50	18	18	18	51	19	30	20	42
6	270	59.6	+3	48.6	37	26.3	92	+14	29.0	45	18	15	18	45	19	20	20	56
7	285	59.8		47.6	51	54.6	93		35.9	40	12		40	12	21	07	45	31
8	301	00.0		46.7	66	22.9	93		42.6	35	10		35	05	17	46		22
9	316	00.3		45.7	80	51.1	92		49.3	30	08		32	19	00	25	47	14
10	331	00.5		44.7	95	19.4	93	+14	55.9	20	05		27	18	52	40	49	10
11	346	00.7	+3	43.8	109	47.8	94	+15	02.4	10 N	18	02	18	23	18	47	21	53
12	1	00.9	+3	42.8	124	16.1	93	+15	08.8	0	17	59	18	20	18	44	22	05
13	16	01.2		41.9	138	44.4	93		15.0	10 S	57		18		42		17	53
14	31	01.4		40.9	153	12.8	94		21.2	20	54		16		42	30	54	14
15	46	01.6		40.0	167	41.2	94		27.3	30	51		15		43	45	56	9
16	61	01.8		39.0	182	09.6	94		33.4	35	50		15		44	22	53	8
17	76	02.0	+3	38.1	196	38.0	94	+15	39.3	40	17	48	18	15	18	46	23	03
18	91	02.3	+3	37.1	211	06.4	94	+15	45.1	45	17	46	18	15	18	49	23	15
19	106	02.5		36.1	225	34.9	95		50.8	50	44		16		54	29	62	21
20	121	02.7		35.2	240	03.3	94	+15	56.4	52	43		16		56	36	62	15
21	136	02.9		34.2	254	31.8	95	+16	01.9	54	42		17	18	58	43	63	09
22	151	03.2		33.3	269	00.3	95		07.4	56	40		17	19	01	23	52	64
23	166	03.4		32.3	283	28.8	95		12.7	58	39		18		04	** ** *	** ** *	7
24	181	03.6	+3	31.3	297	57.3	95	+16	17.9	60 S	17	37	18	19	19	08	** ** *	** ** *
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 32 ^m 3		Mag: -3.9 PMG: 11 ^h 17 ^m			Mag: +0.7 PMG: 16 ^h 19 ^m			Mag: -1.9 PMG: 9 ^h 32 ^m			Mag: +0.6 PMG: 15 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	351	54.6	190	47.2	+9	25.3	115	03.2	-21	24.6	216	43.0	+17	29.6	124	52.2		
1	6	57.1	205	46.7		24.1	130	04.0		25.0	231	44.9		29.5	139	54.4		
2	21	59.5	220	46.3		23.0	145	04.7		25.3	246	46.9		29.3	154	56.7		
3	37	02.0	235	45.8		21.9	160	05.4		25.7	261	48.9		29.2	169	59.0		
4	52	04.5	250	45.4		20.7	175	06.1		26.1	276	50.8		29.1	185	01.2		
5	67	06.9	265	44.9	+9	19.6	190	06.9	-21	26.5	291	52.8	+17	28.9	200	03.5		
6	82	09.4	280	44.5	+9	18.5	205	07.6	-21	26.8	306	54.8	+17	28.8	215	05.8		
7	97	11.9	295	44.0		17.3	220	08.3		27.2	321	56.7		28.7	230	08.0		
8	112	14.3	310	43.5		16.2	235	09.0		27.6	336	58.7		28.5	245	10.3		
9	127	16.8	325	43.1		15.1	250	09.8		28.0	352	00.7		28.4	260	12.6		
10	142	19.2	340	42.6		13.9	265	10.5		28.3	7	02.7		28.3	275	14.8		
11	157	21.7	355	42.2	+9	12.8	280	11.2	-21	28.7	22	04.6	+17	28.1	290	17.1		
12	172	24.2	10	41.7	+9	11.7	295	11.9	-21	29.1	37	06.6	+17	28.0	305	19.4		
13	187	26.6	25	41.2		10.5	310	12.6		29.4	52	08.6		27.9	320	21.6		
14	202	29.1	40	40.8		09.4	325	13.4		29.8	67	10.5		27.7	335	23.9		
15	217	31.6	55	40.3		08.2	340	14.1		30.2	82	12.5		27.6	350	26.2		
16	232	34.0	70	39.9		07.1	355	14.8		30.6	97	14.5		27.5	5	28.4		
17	247	36.5	85	39.4	+9	06.0	10	15.5	-21	30.9	112	16.4	+17	27.3	20	30.7		
18	262	39.0	100	39.0	+9	04.8	25	16.2	-21	31.3	127	18.4	+17	27.2	35	33.0		
19	277	41.4	115	38.5		03.7	40	17.0		31.7	142	20.4		27.1	50	35.2		
20	292	43.9	130	38.1		02.5	55	17.7		32.0	157	22.4		26.9	65	37.5		
21	307	46.4	145	37.6		01.4	70	18.4		32.4	172	24.3		26.8	80	39.8		
22	322	48.8	160	37.2	+9	00.3	85	19.1		32.8	187	26.3		26.7	95	42.0		
23	337	51.3	175	36.7	+8	59.1	100	19.8		33.1	202	28.3		26.5	110	44.3		
24	352	53.7	190	36.2	+8	58.0	115	20.6	-21	33.5	217	30.2	+17	26.4	125	46.6		
Dif	—	—	-5	-11			+7	-4			+20	-1			+23	-1		

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 55 ^m 6			Edad: 19 ^d 4 PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'5 SD: 15'6 PMG: 4 ^h 17 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	181	03.6	+3	31.3	297	57.3	+16	17.9	60 N	3	50	4	43	5	25	20 38 43
1	196	03.8		30.4	312	25.9	96	23.1	58	3	58	47	27	20	49	44 32 61
2	211	04.1		29.4	326	54.5	96	28.1	56	4	06	51	29	21	00	44 23 60
3	226	04.3		28.5	341	23.0	95	33.0	54	12	55	31	09	45	14	59
4	241	04.5		27.5	355	51.6	96	37.9	52	17	4	58	33	17	45	12 06 59
5	256	04.7	+3	26.6	10	20.3	97	+16	50	4	22	5	01	5	34	21 24 46
6	271	04.9	+3	25.6	24	48.9	96	+16	45	4	33	5	08	5	37	21 39 47
7	286	05.2		24.6	39	17.6	97	51.8	40	40	13	40	21	52	48	32 56
8	301	05.4		23.7	53	46.2	96	+16	35	47	17	42	22	03	48	21 55
9	316	05.6		22.7	68	14.9	97	+17	30	52	20	44	12	49	11	12 55
10	331	05.8		21.8	82	43.6	97	04.9	20	4	59	25	47	29	49	10 56 54
11	346	06.1	+3	20.8	97	12.4	98	+17	10 N	5	04	5	29	5	50	22 43 50
12	1	06.3	+3	19.8	111	41.1	97	+17	0	5	08	5	32	5	52	22 56 51
13	16	06.5		18.9	126	09.9	98	17.0	10 S	09	34	55	23	10	51	17 50
14	31	06.7		17.9	140	38.7	98	20.9	20	10	35	5	57	24	52	10 03 49
15	46	06.9		17.0	155	07.5	98	24.6	37	30	08	36	6	00	41	53
16	61	07.2		16.0	169	36.4	99	28.3	37	35	07	36	01	23	51	53
17	76	07.4	+3	15.0	184	05.3	99	+17	40	5	05	5	36	6	03	** ** *
18	91	07.6	+3	14.1	198	34.1	98	+17	45	5	01	5	35	6	05	** ** *
19	106	07.8		13.1	213	03.1	100	38.7	50	4	57	35	07	**	** ** *	9 15 46
20	121	08.1		12.2	227	32.0	99	41.9	32	52	55	34	08	**	** ** *	9 01 44
21	136	08.3		11.2	242	00.9	99	45.1	32	54	53	34	09	**	** ** *	8 54 43
22	151	08.5		10.2	256	29.9	100	48.2	31	56	50	33	10	**	** ** *	46 43
23	166	08.7		09.3	270	58.9	100	51.1	29	58	47	32	11	**	** ** *	37 42
24	181	09.0	+3	08.3	285	28.0	101	+17	60 S	4	43	5	31	6	13	0 01 65
																28 40
																8 17 39
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 28 ^m 3		Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: +0.7 PMG: 16 ^h 18 ^m			Mag: -1.9 PMG: 9 ^h 29 ^m			Mag: +0.6 PMG: 15 ^h 35 ^m				
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	352	53.7	190	36.2	+8	115	20.6	-21	217	30.2	+17	125	46.6	-15		
1	7	56.2	205	35.8		130	21.3		232	32.2		140	48.8			
2	22	58.7	220	35.3		145	22.0		247	34.2		155	51.1			
3	38	01.1	235	34.9		160	22.7		262	36.2		170	53.4			
4	53	03.6	250	34.4		175	23.4		277	38.1		185	55.6			
5	68	06.1	265	34.0	+8	190	24.1	-21	292	40.1	+17	200	57.9	-15		
6	83	08.5	280	33.5	+8	205	24.8	-21	307	42.1	+17	216	00.2	-15		
7	98	11.0	295	33.1		220	25.6		322	44.0		231	02.4			
8	113	13.5	310	32.6		235	26.3		337	46.0		246	04.7			
9	128	15.9	325	32.2		250	27.0		352	48.0		261	07.0			
10	143	18.4	340	31.7		265	27.7		7	50.0		276	09.2			
11	158	20.9	355	31.3	+8	280	28.4	-21	22	51.9	+17	291	11.5	-15		
12	173	23.3	10	30.8	+8	295	29.1	-21	37	53.9	+17	306	13.8	-15		
13	188	25.8	25	30.4		310	29.8		52	55.9		321	16.0			
14	203	28.2	40	29.9		325	30.6		67	57.9		336	18.3			
15	218	30.7	55	29.5		340	31.3		82	59.8		351	20.5			
16	233	33.2	70	29.0		355	32.0		98	01.8		6	22.8			
17	248	35.6	85	28.6	+8	10	32.7	-21	113	03.8	+17	21	25.1	-15		
18	263	38.1	100	28.1	+8	25	33.4	-21	128	05.8	+17	36	27.3	-15		
19	278	40.6	115	27.7		40	34.1		143	07.7		51	29.6			
20	293	43.0	130	27.2		55	34.8		158	09.7		66	31.9			
21	308	45.5	145	26.8		70	35.5		173	11.7		81	34.1			
22	323	48.0	160	26.3		85	36.2		188	13.6		96	36.4			
23	338	50.4	175	25.9		100	36.9		203	15.6		111	38.7			
24	353	52.9	190	25.4	+8	115	37.7	-21	218	17.6	+17	126	40.9	-15		
Dif	—		-5	-11		+7	-4		+20	-1		+23	-1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 55 ^m 2			Edad: 20 ^d 4 PHE { 4 ^h : 56/2 12 ^h : 55/9 20 ^h : 55/7 PMG: 5 ^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	h m m	h m m	
0	181	09.0	+3 08.3	285	28.0	+17 54.0	28	60 N	18 22	19 04	19 56	21 21 51	13 46 51		
1	196	09.2		299	57.0 ¹⁰⁰	56.8	28	58	20	18 59	48	33 52	33 52		
2	211	09.4	06.4	314	26.1 ¹⁰¹	+17 59.4	26	56	18	56	41	44 51	23 51		
3	226	09.6	05.4	328	55.2 ¹⁰¹	+18 02.0	26	54	17	52	35	21 54 51	13 51		
4	241	09.8	04.5	343	24.3 ¹⁰¹	04.5	25	52	15	49	30	22 02 51	13 05 51		
5	256	10.1	+3 03.5	357	53.5 ¹⁰²	+18 06.8	23	50	18 14	18 46	19 25	22 10 51	12 57 51		
6	271	10.3	+3 02.5	12	22.7 ¹⁰²	+18 09.1	23	45	18 11	18 41	19 16	22 26 51	12 41 51		
7	286	10.5	01.6	26	51.9 ¹⁰²	11.3	22	40	09	36	08	40 50	28 51		
8	301	10.7	+3 00.6	41	21.1 ¹⁰²	13.4	21	35	07	33	19 02	22 51 50	16 51		
9	316	11.0	+2 59.7	55	50.4 ¹⁰³	15.4	20	30	06	30	18 58	23 01 50	12 07 50		
10	331	11.2	58.7	70	19.6 ¹⁰²	17.2	18	20	03	25	51	18 50	11 50 50		
11	346	11.4	+2 57.7	84	49.0 ¹⁰⁴	+18 19.0	18	10 N	18 01	18 22	18 46	23 33 50	11 35 50		
12	1	11.6	+2 56.8	99	18.3 ¹⁰³	+18 20.7	17	0	17 58	18 19	18 43	23 47 50	11 21 50		
13	16	11.9	55.8	113	47.7 ¹⁰⁴	22.3	16	10 S	57	18	42	** ** *	11 07 50		
14	31	12.1	54.9	128	17.1 ¹⁰⁴	23.8	15	20	55	17	42	** ** *	10 52 50		
15	46	12.3	53.9	142	46.5 ¹⁰⁴	25.2	14	30	52	16	44	** ** *	35 50		
16	61	12.5	52.9	157	15.9 ¹⁰⁴	26.5	13	35	51	16	46	** ** *	25 50		
17	76	12.7	+2 52.0	171	45.4 ¹⁰⁵	+18 27.7	12	40	17 50	18 17	18 48	0 02 53	10 14 49		
18	91	13.0	+2 51.0	186	14.9 ¹⁰⁵	+18 28.8	11	45	17 48	18 18	18 52	0 15 54	10 01 49		
19	106	13.2	50.0	200	44.5 ¹⁰⁶	29.8	10	50	47	19	57	31 54	9 45 48		
20	121	13.4	49.1	215	14.1 ¹⁰⁶	30.8	10	52	46	20	58 59	38 55	37 49		
21	136	13.6	48.1	229	43.7 ¹⁰⁶	31.6	8	54	45	20	19 02	46 56	29 48		
22	151	13.9	47.2	244	13.3 ¹⁰⁶	32.3	7	56	44	21	05	0 56 55	19 48		
23	166	14.1	46.2	258	42.9 ¹⁰⁶	32.9	6	58	43	22	08	1 06 56	9 08 48		
24	181	14.3	+2 45.2	273	12.6 ¹⁰⁷	+18 33.5	6	60 S	17 42	18 23	19 12	1 19 56	8 56 47		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 0 ^h 24 ^m 4		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +0.7 PMG: 16 ^h 17 ^m		Mag: -1.9 PMG: 9 ^h 26 ^m		Mag: +0.6 PMG: 15 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	353	52.9	190 25.4	+8 30.4	115 37.7	-21 42.3	218 17.6	+17 23.2	126 40.9	-15 31.2					
1	8	55.3	205 25.0	29.3	130 38.4	42.7	233 19.6	23.1	141 43.2	31.2					
2	23	57.8	220 24.6	28.1	145 39.1	43.0	248 21.5	23.0	156 45.4	31.3					
3	39	00.3	235 24.1	27.0	160 39.8	43.4	263 23.5	22.8	171 47.7	31.4					
4	54	02.7	250 23.7	25.8	175 40.5	43.7	278 25.5	22.7	186 50.0	31.4					
5	69	05.2	265 23.2	+8 24.7	190 41.2	-21 44.1	293 27.5	+17 22.6	201 52.2	-15 31.5					
6	84	07.7	280 22.8	+8 23.5	205 41.9	-21 44.5	308 29.4	+17 22.4	216 54.5	-15 31.6					
7	99	10.1	295 22.3	22.3	220 42.6	44.8	323 31.4	22.3	231 56.8	31.6					
8	114	12.6	310 21.9	21.2	235 43.3	45.2	338 33.4	22.2	246 59.0	31.7					
9	129	15.1	325 21.4	20.0	250 44.0	45.6	353 35.4	22.0	262 01.3	31.7					
10	144	17.5	340 21.0	18.9	265 44.7	45.9	8 37.3	21.9	277 03.5	31.8					
11	159	20.0	355 20.5	+8 17.7	280 45.4	-21 46.3	23 39.3	+17 21.8	292 05.8	-15 31.9					
12	174	22.5	10 20.1	+8 16.6	295 46.1	-21 46.6	38 41.3	+17 21.6	307 08.1	-15 31.9					
13	189	24.9	25 19.7	15.4	310 46.8	47.0	53 43.3	21.5	322 10.3	32.0					
14	204	27.4	40 19.2	14.2	325 47.5	47.3	68 45.3	21.4	337 12.6	32.1					
15	219	29.8	55 18.8	13.1	340 48.2	47.7	83 47.2	21.2	352 14.8	32.1					
16	234	32.3	70 18.3	11.9	355 48.9	48.1	98 49.2	21.1	7 17.1	32.2					
17	249	34.8	85 17.9	+8 10.8	10 49.6	-21 48.4	113 51.2	+17 21.0	22 19.4	-15 32.3					
18	264	37.2	100 17.4	+8 09.6	25 50.3	-21 48.8	128 53.2	+17 20.8	37 21.6	-15 32.3					
19	279	39.7	115 17.0	08.4	40 51.0	49.1	143 55.1	20.7	52 23.9	32.4					
20	294	42.2	130 16.6	07.3	55 51.7	49.5	158 57.1	20.6	67 26.1	32.4					
21	309	44.6	145 16.1	06.1	70 52.4	49.9	173 59.1	20.4	82 28.4	32.5					
22	324	47.1	160 15.7	05.0	85 53.1	50.2	189 01.1	20.3	97 30.7	32.6					
23	339	49.6	175 15.2	03.8	100 53.8	50.6	204 03.0	20.2	112 32.9	32.6					
24	354	52.0	190 14.8	+8 02.6	115 54.5	-21 50.9	219 05.0	+17 20.0	127 35.2	-15 32.7					
Dif	—		-4	-12	+7	-4	+20	-1	+23	-1					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 54 ^m 9			Edad: 21 ^d 4 PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 PMG: 5 ^h 59 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	14.3	+2	45.2	273	12.6	+18	33.5	60 N	3 56	4 47	5 30	22 12	58	14 37	41
1	196	14.5		44.3	287	42.4 ¹⁰⁸		33.9	58	4 03	52	32	25 57	25	42	42
2	211	14.8		43.3	302	12.1 ¹⁰⁷		34.3	56	10	56	33	35 57	14	44	42
3	226	15.0		42.3	316	41.9 ¹⁰⁸		34.5	54	16	4 59	35	45 55	14	04	44
4	241	15.2		41.4	331	11.7 ¹⁰⁸		34.7	52	21	5 02	36	22 53	55	13 56	44
5	256	15.4	+2	40.4	345	41.6 ¹⁰⁹	+18	34.7	50	4 26	5 05	5 37	23 01	54	13 48	44
6	271	15.6	+2	39.4	0	11.5 ¹⁰⁹	+18	34.7	45	4 35	5 10	5 40	23 17	53	13 32	45
7	286	15.9		38.5	14	41.4 ¹⁰⁹		34.6	40	43	14	42	30 52	19	45	
8	301	16.1		37.5	29	11.3 ¹⁰⁹		34.4	35	48	18	43	41 52	13	07	46
9	316	16.3		36.6	43	41.3 ¹¹⁰		34.1	30	4 53	21	45	23 51	51	12 57	47
10	331	16.5		35.6	58	11.3 ¹¹⁰		33.7	20	5 00	25	48	** ** *	**	40	48
11	346	16.8	+2	34.6	72	41.4 ¹¹¹	+18	33.2	10 N	5 04	5 29	5 50	** ** *	**	12 25	48
12	1	17.0	+2	33.7	87	11.5 ¹¹¹	+18	32.6	0	5 07	5 31	5 52	** ** *	**	12 11	49
13	16	17.2		32.7	101	41.6 ¹¹¹		31.9	10 S	08	32	53	0 01	49	11 57	49
14	31	17.4		31.7	116	11.7 ¹¹¹		31.2	20	08	33	55	16 49	42	50	
15	46	17.7		30.8	130	41.9 ¹¹²		30.3	30	06	33	57	34 48	25	51	
16	61	17.9		29.8	145	12.1 ¹¹²		29.4	35	04	33	5 58	44 48	15	51	
17	76	18.1	+2	28.8	159	42.4 ¹¹³	+18	28.3	40	5 01	5 33	6 00	0 55	48	11 03	52
18	91	18.3	+2	27.9	174	12.7 ¹¹³	+18	27.2	45	4 58	5 32	6 01	1 09	47	10 50	52
19	106	18.5		26.9	188	43.0 ¹¹³		26.0	50	53	30	02	25 48	33	53	
20	121	18.8		25.9	203	13.3 ¹¹³		24.7	52	50	30	03	33 47	26	53	
21	136	19.0		25.0	217	43.7 ¹¹⁴		23.3	54	48	29	04	42 47	17	53	
22	151	19.2		24.0	232	14.2 ¹¹⁵		21.8	56	44	28	05	1 51	47	10 07	54
23	166	19.4		23.1	246	44.6 ¹¹⁴		20.3	58	41	27	06	2 02	47	9 56	55
24	181	19.7	+2	22.1	261	15.1 ¹¹⁵	+18	18.6	60 S	4 37	5 25	6 07	2 15	46	9 43	55
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 20 ^m 5		Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: +0.7 PMG: 16 ^h 16 ^m			Mag: -1.9 PMG: 9 ^h 22 ^m			Mag: +0.6 PMG: 15 ^h 27 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	354	52.0	190	14.8	+8	02.6	115	54.5	-21	50.9	219	05.0	+17	20.0	127	35.2
1	9	54.5	205	14.4		01.5	130	55.2		51.3	234	07.0		19.9	142	37.4
2	24	57.0	220	13.9	+8	00.3	145	55.9		51.6	249	09.0		19.8	157	39.7
3	39	59.4	235	13.5	+7	59.1	160	56.6		52.0	264	11.0		19.6	172	42.0
4	55	01.9	250	13.0		58.0	175	57.3		52.3	279	12.9		19.5	187	44.2
5	70	04.3	265	12.6	+7	56.8	190	58.0	-21	52.7	294	14.9	+17	19.4	202	46.5
6	85	06.8	280	12.2	+7	55.6	205	58.7	-21	53.1	309	16.9	+17	19.3	217	48.7
7	100	09.3	295	11.7		54.5	220	59.4		53.4	324	18.9		19.1	232	51.0
8	115	11.7	310	11.3		53.3	236	00.1		53.8	339	20.8		19.0	247	53.3
9	130	14.2	325	10.8		52.1	251	00.8		54.1	354	22.8		18.9	262	55.5
10	145	16.7	340	10.4		51.0	266	01.5		54.5	9	24.8		18.7	277	57.8
11	160	19.1	355	10.0	+7	49.8	281	02.2	-21	54.8	24	26.8	+17	18.6	293	00.0
12	175	21.6	10	09.5	+7	48.6	296	02.9	-21	55.2	39	28.8	+17	18.5	308	02.3
13	190	24.1	25	09.1		47.5	311	03.6		55.5	54	30.7		18.3	323	04.6
14	205	26.5	40	08.6		46.3	326	04.3		55.9	69	32.7		18.2	338	06.8
15	220	29.0	55	08.2		45.1	341	05.0		56.2	84	34.7		18.1	353	09.1
16	235	31.5	70	07.8		44.0	356	05.7		56.6	99	36.7		17.9	8	11.3
17	250	33.9	85	07.3	+7	42.8	11	06.4	-21	56.9	114	38.7	+17	17.8	23	13.6
18	265	36.4	100	06.9	+7	41.6	26	07.0	-21	57.3	129	40.6	+17	17.7	38	15.8
19	280	38.8	115	06.5		40.5	41	07.7		57.6	144	42.6		17.5	53	18.1
20	295	41.3	130	06.0		39.3	56	08.4		58.0	159	44.6		17.4	68	20.4
21	310	43.8	145	05.6		38.1	71	09.1		58.4	174	46.6		17.3	83	22.6
22	325	46.2	160	05.2		36.9	86	09.8		58.7	189	48.6		17.1	98	24.9
23	340	48.7	175	04.7		35.8	101	10.5		59.1	204	50.5		17.0	113	27.1
24	355	51.2	190	04.3	+7	34.6	116	11.2	-21	59.4	219	52.5	+17	16.9	128	29.4
Dif	—		-4		-12		+7		-4		+20		-1		+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 22 ^d 4 PHE	SD: 15°0				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 54 ^m 5				PMG: 6 ^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	181	19.7	+2 22.1	261	15.1	+18 18.6		60 N	18 15	18 57	19 49	23 10 64		15 18 32	
1	196	19.9		275	45.7 ¹¹⁶	16.9	17	58	14	54	41	22 62		15 07 33	
2	211	20.1		290	16.2 ¹¹⁵	15.0	19	56	13	50	35	32 60		14 56 36	
3	226	20.3		304	46.8 ¹¹⁶	13.1	19	54	12	47	30	40 60		48 36	
4	241	20.6		319	17.5 ¹¹⁷	11.1	20	52	10	44	25	48 58		40 37	
5	256	20.8	+2 17.3	333	48.2 ¹¹⁷	+18 09.0	21	50	18 10	18 42	19 20	23 55 58		14 32 38	
6	271	21.0	+2 16.3	348	18.9 ¹¹⁷	+18 06.8	22	45	18 07	18 37	19 12	** ** *		14 17 40	
7	286	21.2		2	49.6 ¹¹⁷	04.6	22	40	06	33	19 05	** ** *		14 04 41	
8	301	21.4		17	20.4 ¹¹⁸	+18 02.2	24	35	04	30	18 59	** ** *		13 53 43	
9	316	21.7		31	51.2 ¹¹⁸	+17 59.8	24	30	03	27	55	** ** *		44 43	
10	331	21.9		46	22.1 ¹¹⁹	57.3	25	20	18 01	23	49	0 08 50		28 44	
11	346	22.1	+2 11.5	60	53.0 ¹¹⁹	+17 54.7	26	10 N	17 59	18 20	18 45	0 23 49		13 13 46	
12	1	22.3	+2 10.5	75	23.9 ¹¹⁹	+17 52.0	27	0	17 58	18 18	18 42	0 37 48		13 00 47	
13	16	22.6		89	54.9 ¹²⁰	49.3	27	10 S	56	17	42	0 50 47		12 46 49	
14	31	22.8		104	25.9 ¹²⁰	46.4	29	20	55	17	42	1 05 46		32 50	
15	46	23.0		118	56.9 ¹²⁰	43.5	29	30	53	17	45	22 45		16 51	
16	61	23.2		133	28.0 ¹²¹	40.5	30	35	53	18	47	32 44		12 06 52	
17	76	23.5	+2 05.7	147	59.1 ¹²¹	+17 37.4	31	40	17 52	18 19	18 50	1 43 43		11 55 53	
18	91	23.7	+2 04.7	162	30.3 ¹²²	+17 34.3	31	45	17 51	18 20	18 54	1 56 43		11 42 55	
19	106	23.9		177	01.5 ¹²²	31.0	33	50	50	22	19 00	2 13 40		26 56	
20	121	24.1		191	32.7 ¹²²	27.7	33	52	49	23	02	20 40		19 57	
21	136	24.3		206	04.0 ¹²³	24.3	34	54	49	24	05	29 39		10 58	
22	151	24.6	+2 00.8	220	35.3 ¹²³	20.8	35	56	48	25	09	38 38		11 01 59	
23	166	24.8	+1 59.9	235	06.6 ¹²³	17.3	35	58	47	26	13	2 49 37		10 51 60	
24	181	25.0	+1 58.9	249	38.0 ¹²⁴	+17 13.6	37	60 S	17 47	18 28	19 17	3 01 36		10 38 62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 16 ^m 5		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: +0.7 PMG: 16 ^h 15 ^m		Mag: -1.9 PMG: 9 ^h 19 ^m		Mag: +0.6 PMG: 15 ^h 24 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	355	51.2	190	04.3	+7 34.6	116	11.2	-21 59.4	219	52.5	+17 16.9	128	29.4	-15 34.2
1	10	53.6	205	03.9	33.4	131	11.9	-21 59.8	234	54.5	16.7	143	31.6	34.3
2	25	56.1	220	03.4	32.3	146	12.6	-22 00.1	249	56.5	16.6	158	33.9	34.4
3	40	58.6	235	03.0	31.1	161	13.3	00.4	264	58.5	16.5	173	36.2	34.4
4	56	01.0	250	02.5	29.9	176	13.9	00.8	280	00.4	16.3	188	38.4	34.5
5	71	03.5	265	02.1	+7 28.7	191	14.6	-22 01.1	295	02.4	+17 16.2	203	40.7	-15 34.6
6	86	05.9	280	01.7	+7 27.6	206	15.3	-22 01.5	310	04.4	+17 16.1	218	42.9	-15 34.6
7	101	08.4	295	01.2	26.4	221	16.0	01.8	325	06.4	16.0	233	45.2	34.7
8	116	10.9	310	00.8	25.2	236	16.7	02.2	340	08.4	15.8	248	47.4	34.7
9	131	13.3	325	00.4	24.0	251	17.4	02.5	355	10.3	15.7	263	49.7	34.8
10	146	15.8	339	59.9	22.9	266	18.1	02.9	10	12.3	15.6	278	52.0	34.9
11	161	18.3	354	59.5	+7 21.7	281	18.8	-22 03.2	25	14.3	+17 15.4	293	54.2	-15 34.9
12	176	20.7	9	59.1	+7 20.5	296	19.4	-22 03.6	40	16.3	+17 15.3	308	56.5	-15 35.0
13	191	23.2	24	58.7	19.3	311	20.1	03.9	55	18.3	15.2	323	58.7	35.1
14	206	25.7	39	58.2	18.1	326	20.8	04.3	70	20.3	15.0	339	01.0	35.1
15	221	28.1	54	57.8	17.0	341	21.5	04.6	85	22.2	14.9	354	03.2	35.2
16	236	30.6	69	57.4	15.8	356	22.2	05.0	100	24.2	14.8	9	05.5	35.3
17	251	33.1	84	56.9	+7 14.6	11	22.9	-22 05.3	115	26.2	+17 14.6	24	07.7	-15 35.3
18	266	35.5	99	56.5	+7 13.4	26	23.5	-22 05.7	130	28.2	+17 14.5	39	10.0	-15 35.4
19	281	38.0	114	56.1	12.3	41	24.2	06.0	145	30.2	14.4	54	12.3	35.5
20	296	40.4	129	55.6	11.1	56	24.9	06.3	160	32.2	14.2	69	14.5	35.5
21	311	42.9	144	55.2	09.9	71	25.6	06.7	175	34.1	14.1	84	16.8	35.6
22	326	45.4	159	54.8	08.7	86	26.3	07.0	190	36.1	14.0	99	19.0	35.7
23	341	47.8	174	54.3	07.5	101	27.0	07.4	205	38.1	13.9	114	21.3	35.7
24	356	50.3	189	53.9	+7 06.4	116	27.6	-22 07.7	220	40.1	+17 13.7	129	23.5	-15 35.8
Dif	—		-4	-12		+7	-3		+20		-1	+23		-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 54 ^m 2			Edad: 23 ^d 4	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2	SD: 14'8		PMG: 7 ^h 36 ^m	R°: 46 ^m		Hora			R°	Hora			R°
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	181	25.0	+1 58.9	249	38.0	+17 13.6	37	60 N	4 01	4 52	5 34	** ** *		15 50	26			
1	196	25.2		264	09.4 ¹²⁴	09.9	37	58	08	4 56	36	** ** *		40 28				
2	211	25.5		278	40.8 ¹²⁴	06.1	38	56	15	5 00	37	** ** *		32 29				
3	226	25.7		293	12.3 ¹²⁵	+17 02.2	39	54	20	03	38	** ** *		24 30				
4	241	25.9		307	43.8 ¹²⁵	+16 58.3	39	52	25	05	39	** ** *		17 31				
5	256	26.1	+1 54.1	322	15.4 ¹²⁶	+16 54.3	40	50	4 29	5 08	5 40	** ** *		15 10	33			
6	271	26.4	+1 53.1	336	47.0 ¹²⁶	+16 50.2	41	45	4 38	5 13	5 42	0 10	56	14 57	35			
7	286	26.6		351	18.6 ¹²⁶	46.0	42	40	45	16	44	22	54	45	37			
8	301	26.8		5	50.3 ¹²⁷	41.7	43	35	50	20	45	33	53	36	38			
9	316	27.0		20	22.0 ¹²⁷	37.4	43	30	4 54	22	46	42	52	27	40			
10	331	27.2		34	53.7 ¹²⁷	33.0	44	20	5 00	26	48	0 58	49	14 12	42			
11	346	27.5	+1 48.2	49	25.5 ¹²⁸	+16 28.6	44	10 N	5 04	5 29	5 50	1 12	48	13 59	44			
12	1	27.7	+1 47.3	63	57.3 ¹²⁸	+16 24.0	46	0	5 06	5 30	5 51	1 25	46	13 47	46			
13	16	27.9		78	29.2 ¹²⁹	19.4	46	10 S	07	31	52	37	45	35	47			
14	31	28.1		93	01.0 ¹²⁸	14.7	47	20	06	31	53	1 51	43	22	49			
15	46	28.4		107	33.0 ¹³⁰	10.0	47	30	03	31	55	2 07	41	13 07	52			
16	61	28.6		122	04.9 ¹²⁹	05.2	48	35	5 01	30	55	16	40	12 58	53			
17	76	28.8	+1 42.4	136	36.9 ¹³⁰	+16 00.3	49	40	4 58	5 29	5 56	2 26	39	12 48	55			
18	91	29.0	+1 41.5	151	08.9 ¹³⁰	+15 55.3	50	45	4 54	5 28	5 57	2 39	37	12 37	56			
19	106	29.3		165	41.0 ¹³¹	50.3	50	50	48	26	58	2 53	36	22	59			
20	121	29.5		180	13.1 ¹³¹	45.2	51	52	46	25	58	3 00	34	16	59			
21	136	29.7		194	45.2 ¹³¹	40.0	52	54	42	24	59	08	33	08	61			
22	151	29.9		209	17.4 ¹³²	34.8	52	56	39	23	59	16	32	12 00	62			
23	166	30.1		223	49.6 ¹³²	29.4	54	58	35	21	6 00	26	30	11 51	63			
24	181	30.4	+1 35.7	238	21.8 ¹³²	+15 24.1	53	60 S	4 30	5 19	6 01	3 37	29	11 40	65			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 0 ^h 12 ^m 6		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: +0.7 PMG: 16 ^h 13 ^m		Mag: -1.9 PMG: 9 ^h 16 ^m		Mag: +0.6 PMG: 15 ^h 20 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	356	50.3	189	53.9	+7 06.4	116 27.6	-22 07.7	220 40.1	+17 13.7	129 23.5	-15 35.8
1	11	52.8	204	53.5	05.2	131 28.3	08.1	235 42.1	13.6	144 25.8	35.8
2	26	55.2	219	53.1	04.0	146 29.0	08.4	250 44.1	13.5	159 28.0	35.9
3	41	57.7	234	52.6	02.8	161 29.7	08.7	265 46.0	13.3	174 30.3	36.0
4	57	00.2	249	52.2	01.6	176 30.4	09.1	280 48.0	13.2	189 32.5	36.0
5	72	02.6	264	51.8	+7 00.4	191 31.0	-22 09.4	295 50.0	+17 13.1	204 34.8	-15 36.1
6	87	05.1	279	51.3	+6 59.3	206 31.7	-22 09.8	310 52.0	+17 12.9	219 37.0	-15 36.2
7	102	07.6	294	50.9	58.1	221 32.4	10.1	325 54.0	12.8	234 39.3	36.2
8	117	10.0	309	50.5	56.9	236 33.1	10.5	340 56.0	12.7	249 41.6	36.3
9	132	12.5	324	50.1	55.7	251 33.8	10.8	355 58.0	12.5	264 43.8	36.4
10	147	14.9	339	49.6	54.5	266 34.4	11.1	10 59.9	12.4	279 46.1	36.4
11	162	17.4	354	49.2	+6 53.3	281 35.1	-22 11.5	26 01.9	+17 12.3	294 48.3	-15 36.5
12	177	19.9	9	48.8	+6 52.2	296 35.8	-22 11.8	41 03.9	+17 12.1	309 50.6	-15 36.6
13	192	22.3	24	48.3	51.0	311 36.5	12.2	56 05.9	12.0	324 52.8	36.6
14	207	24.8	39	47.9	49.8	326 37.1	12.5	71 07.9	11.9	339 55.1	36.7
15	222	27.3	54	47.5	48.6	341 37.8	12.8	86 09.9	11.8	354 57.3	36.8
16	237	29.7	69	47.1	47.4	356 38.5	13.2	101 11.8	11.6	9 59.6	36.8
17	252	32.2	84	46.6	+6 46.2	11 39.2	-22 13.5	116 13.8	+17 11.5	25 01.8	-15 36.9
18	267	34.7	99	46.2	+6 45.0	26 39.8	-22 13.9	131 15.8	+17 11.4	40 04.1	-15 37.0
19	282	37.1	114	45.8	43.8	41 40.5	14.2	146 17.8	11.2	55 06.3	37.0
20	297	39.6	129	45.4	42.7	56 41.2	14.5	161 19.8	11.1	70 08.6	37.1
21	312	42.0	144	44.9	41.5	71 41.9	14.9	176 21.8	11.0	85 10.8	37.2
22	327	44.5	159	44.5	40.3	86 42.5	15.2	191 23.8	10.8	100 13.1	37.2
23	342	47.0	174	44.1	39.1	101 43.2	15.5	206 25.8	10.7	115 15.3	37.3
24	357	49.4	189	43.7	+6 37.9	116 43.9	-22 15.9	221 27.7	+17 10.6	130 17.6	-15 37.3
Dif	—		-4	-12	+7	-3		+20	-1	+23	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 24 ^d 4 PHE { 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1											
	PMG: 11 ^h 53 ^m 8			SD: 14°8 PMG: 8 ^h 22 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	181	30.4	+1 35.7	238	21.8	+15 24.1	55	60 N	18 09	18 51	19 42	0 14 67		16 16 21	
1	196	30.6	34.7	252	54.1 ¹³³	18.6	55	58	08	48	35	24 65		08 23	
2	211	30.8	33.7	267	26.4 ¹³³	13.1	55	56	07	45	29	32 63		16 01 25	
3	226	31.0	32.8	281	58.7 ¹³³	07.6	55	54	07	42	24	40 61		15 54 27	
4	241	31.3	31.8	296	31.1 ¹³⁴	+15 01.9	57	52	06	40	20	46 61		48 28	
5	256	31.5	+1 30.8	311	03.5 ¹³⁴	+14 56.2	57	50	18 05	18 37	19 16	0 53 59		15 43 29	
6	271	31.7	+1 29.8	325	35.9 ¹³⁴	+14 50.5	57	45	18 04	18 33	19 08	1 06 56		15 32 31	
7	286	31.9	28.9	340	08.4 ¹³⁵	44.6	59	40	02	29	19 01	16 55		22 34	
8	301	32.1	27.9	354	40.9 ¹³⁵	38.7	59	35	01	27	18 56	26 53		14 35	
9	316	32.4	26.9	9	13.4 ¹³⁵	32.8	59	30	18 01	24	52	34 51		15 07 37	
10	331	32.6	26.0	23	46.0 ¹³⁶	26.8	60	20	17 59	21	47	1 47 50		14 54 40	
11	346	32.8	+1 25.0	38	18.6 ¹³⁶	+14 20.7	61	10 N	17 58	18 19	18 43	2 00 47		14 43 42	
12	1	33.0	+1 24.0	52	51.2 ¹³⁶	+14 14.5	62	0	17 57	18 18	18 42	2 11 45		14 33 44	
13	16	33.3	23.1	67	23.9 ¹³⁷	08.3	62	10 S	56	17	42	22 43		22 47	
14	31	33.5	22.1	81	56.5 ¹³⁶	+14 02.1	62	20	55	17	43	34 41		14 11 49	
15	46	33.7	21.1	96	29.3 ¹³⁸	+13 55.8	63	30	55	18	46	48 38		13 59 51	
16	61	33.9	20.1	111	02.0 ¹³⁷	49.4	64	35	54	19	49	2 56 37		51 53	
17	76	34.1	+1 19.2	125	34.8 ¹³⁸	+13 42.9	65	40	17 54	18 21	18 52	3 05 35		13 43 55	
18	91	34.4	+1 18.2	140	07.6 ¹³⁸	+13 36.4	65	45	17 53	18 22	18 57	3 16 33		13 33 57	
19	106	34.6	17.2	154	40.5 ¹³⁹	29.9	65	50	53	25	19 03	29 30		21 60	
20	121	34.8	16.3	169	13.3 ¹³⁸	23.3	66	52	52	26	06	34 30		15 61	
21	136	35.0	15.3	183	46.2 ¹³⁹	16.6	67	54	52	27	09	41 28		09 63	
22	151	35.3	14.3	198	19.2 ¹⁴⁰	09.9	67	56	52	29	13	48 27		13 02 64	
23	166	35.5	13.4	212	52.1 ¹³⁹	+13 03.1	68	58	52	31	17	3 56 26		12 54 66	
24	181	35.7	+1 12.4	227	25.1 ¹⁴⁰	+12 56.3	68	60 S	17 51	18 33	19 22	4 06 23		12 45 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 08 ^m 7		Mag: -3.9 PMG: 11 ^h 21 ^m			Mag: +0.7 PMG: 16 ^h 12 ^m			Mag: -1.9 PMG: 9 ^h 13 ^m			Mag: +0.6 PMG: 15 ^h 17 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	°	°	°	°	°	°	°	°	°	°	°	°		
0	357	49.4	189 43.7	+6 37.9	116 43.9	-22 15.9	221 27.7	+17 10.6	130 17.6	-15 37.3					
1	12	51.9	204 43.2	36.7	131 44.5	16.2	236 29.7	10.4	145 19.8	37.4					
2	27	54.4	219 42.8	35.5	146 45.2	16.6	251 31.7	10.3	160 22.1	37.5					
3	42	56.8	234 42.4	34.3	161 45.9	16.9	266 33.7	10.2	175 24.3	37.5					
4	57	59.3	249 42.0	33.1	176 46.6	17.2	281 35.7	10.1	190 26.6	37.6					
5	73	01.8	264 41.5	+6 31.9	191 47.2	-22 17.6	296 37.7	+17 09.9	205 28.8	-15 37.7					
6	88	04.2	279 41.1	+6 30.8	206 47.9	-22 17.9	311 39.7	+17 09.8	220 31.1	-15 37.7					
7	103	06.7	294 40.7	29.6	221 48.6	18.2	326 41.7	09.7	235 33.4	37.8					
8	118	09.2	309 40.3	28.4	236 49.2	18.6	341 43.6	09.5	250 35.6	37.9					
9	133	11.6	324 39.9	27.2	251 49.9	18.9	356 45.6	09.4	265 37.9	37.9					
10	148	14.1	339 39.4	26.0	266 50.6	19.2	11 47.6	09.3	280 40.1	38.0					
11	163	16.5	354 39.0	+6 24.8	281 51.2	-22 19.6	26 49.6	+17 09.1	295 42.4	-15 38.1					
12	178	19.0	9 38.6	+6 23.6	296 51.9	-22 19.9	41 51.6	+17 09.0	310 44.6	-15 38.1					
13	193	21.5	24 38.2	22.4	311 52.6	20.2	56 53.6	08.9	325 46.9	38.2					
14	208	23.9	39 37.7	21.2	326 53.2	20.6	71 55.6	08.7	340 49.1	38.3					
15	223	26.4	54 37.3	20.0	341 53.9	20.9	86 57.6	08.6	355 51.4	38.3					
16	238	28.9	69 36.9	18.8	356 54.6	21.2	101 59.6	08.5	10 53.6	38.4					
17	253	31.3	84 36.5	+6 17.6	11 55.2	-22 21.6	117 01.5	+17 08.4	25 55.9	-15 38.5					
18	268	33.8	99 36.1	+6 16.4	26 55.9	-22 21.9	132 03.5	+17 08.2	40 58.1	-15 38.5					
19	283	36.3	114 35.6	15.2	41 56.6	22.2	147 05.5	08.1	56 00.3	38.6					
20	298	38.7	129 35.2	14.0	56 57.2	22.6	162 07.5	08.0	71 02.6	38.7					
21	313	41.2	144 34.8	12.8	71 57.9	22.9	177 09.5	07.8	86 04.8	38.7					
22	328	43.7	159 34.4	11.6	86 58.6	23.2	192 11.5	07.7	101 07.1	38.8					
23	343	46.1	174 34.0	10.4	101 59.2	23.5	207 13.5	07.6	116 09.3	38.9					
24	358	48.6	189 33.5	+6 09.3	116 59.9	-22 23.9	222 15.5	+17 07.4	131 11.6	-15 38.9					
Dif	—	—	-4	-12	+7	-3	+20	-1	+23	-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53 ^m 4			Edad: 25 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 9 ^h 07 ^m R ^o : 43 ^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	35.7	+1 12.4	227	25.1	+12 56.3	60 N	4 06	4 57	5 39	1 21	69	16 37	18	
1	196	35.9		241	58.1 ¹⁴⁰	49.4 ⁶⁹	58	13	5 01	40	29	66	31	20	
2	211	36.1		256	31.2 ¹⁴¹	42.4 ⁷⁰	56	19	04	41	35	65	26	22	
3	226	36.4		271	04.2 ¹⁴⁰	35.4 ⁷⁰	54	24	06	42	41	64	21	23	
4	241	36.6		285	37.3 ¹⁴¹	28.4 ⁷⁰	52	28	09	42	47	62	16	25	
5	256	36.8	+1 07.5	300	10.4 ¹⁴¹	+12 21.3 ⁷¹	50	4 32	5 11	5 43	1 52	60	16 12	26	
6	271	37.0	+1 06.6	314	43.6 ¹⁴²	+12 14.1 ⁷²	45	4 40	5 15	5 44	2 02	58	16 03	29	
7	286	37.2		329	16.8 ¹⁴²	+12 06.9 ⁷²	40	47	18	45	11	56	15 56	31	
8	301	37.5		343	50.0 ¹⁴²	+11 59.7 ⁷²	35	51	21	46	19	53	49	34	
9	316	37.7		358	23.2 ¹⁴²	52.4 ⁷³	30	4 55	23	47	25	52	44	35	
10	331	37.9		12	56.5 ¹⁴³	45.0 ⁷⁴	20	5 01	26	48	37	49	34	38	
11	346	38.1	+1 01.7	27	29.7 ¹⁴²	+11 37.6 ⁷⁴	10 N	5 04	5 28	5 49	2 47	46	15 25	41	
12	1	38.4	+1 00.7	42	03.0 ¹⁴³	+11 30.1 ⁷⁵	0	5 06	5 30	5 50	2 56	44	15 17	44	
13	16	38.6	+0 59.8	56	36.4 ¹⁴⁴	22.6 ⁷⁵	10 S	06	30	51	3 05	42	09	46	
14	31	38.8		71	09.7 ¹⁴³	15.1 ⁷⁵	20	04	30	52	15	39	15 00	49	
15	46	39.0		85	43.1 ¹⁴⁴	+11 07.5 ⁷⁶	30	5 01	28	52	26	37	14 50	52	
16	61	39.2		100	16.5 ¹⁴⁴	+10 59.8 ⁷⁷	35	4 58	27	53	33	34	44	54	
17	76	39.5	+0 55.9	114	49.9 ¹⁴⁴	+10 52.1 ⁷⁷	40	4 54	5 26	5 53	3 40	33	14 38	55	
18	91	39.7	+0 54.9	129	23.3 ¹⁴⁴	+10 44.4 ⁷⁷	45	4 50	5 24	5 53	3 49	30	14 30	58	
19	106	39.9		143	56.8 ¹⁴⁵	36.6 ⁷⁸	50	44	21	54	3 59	28	21	61	
20	121	40.1		158	30.2 ¹⁴⁴	28.7 ⁷⁹	52	41	20	54	4 04	26	16	63	
21	136	40.3		173	03.7 ¹⁴⁵	20.9 ⁸⁰	54	37	19	54	09	25	12	64	
22	151	40.6		187	37.3 ¹⁴⁶	12.9 ⁸⁰	56	33	17	54	15	23	06	66	
23	166	40.8		202	10.8 ¹⁴⁵	+10 05.0 ⁷⁹	58	29	15	54	22	21	14 00	68	
24	181	41.0	+0 49.1	216	44.4 ¹⁴⁶	+9 57.0 ⁸⁰	60 S	4 24	5 13	5 55	4 29	19	13 54	69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 0 ^h 04 ^m 7		Mag: -3.9 PMG: 11 ^h 22 ^m		Mag: +0.7 PMG: 16 ^h 11 ^m		Mag: -1.9 PMG: 9 ^h 10 ^m		Mag: +0.6 PMG: 15 ^h 13 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	358	48.6	189	33.5	+6 09.3	116 59.9	-22 23.9	222 15.5	+17 07.4	131 11.6	-15 38.9	
1	13	51.0	204	33.1	08.1	132 00.6	24.2	237 17.5	07.3	146 13.8	39.0	
2	28	53.5	219	32.7	06.9	147 01.2	24.5	252 19.5	07.2	161 16.1	39.1	
3	43	56.0	234	32.3	05.7	162 01.9	24.9	267 21.4	07.1	176 18.3	39.1	
4	58	58.4	249	31.9	04.5	177 02.5	25.2	282 23.4	06.9	191 20.6	39.2	
5	74	00.9	264	31.4	+6 03.3	192 03.2	-22 25.5	297 25.4	+17 06.8	206 22.8	-15 39.3	
6	89	03.4	279	31.0	+6 02.1	207 03.9	-22 25.8	312 27.4	+17 06.7	221 25.1	-15 39.3	
7	104	05.8	294	30.6	+6 00.9	222 04.5	26.2	327 29.4	06.5	236 27.3	39.4	
8	119	08.3	309	30.2	+5 59.7	237 05.2	26.5	342 31.4	06.4	251 29.6	39.5	
9	134	10.8	324	29.8	58.5	252 05.8	26.8	357 33.4	06.3	266 31.8	39.5	
10	149	13.2	339	29.4	57.3	267 06.5	27.2	12 35.4	06.1	281 34.1	39.6	
11	164	15.7	354	28.9	+5 56.1	282 07.2	-22 27.5	27 37.4	+17 06.0	296 36.3	-15 39.6	
12	179	18.1	9	28.5	+5 54.9	297 07.8	-22 27.8	42 39.4	+17 05.9	311 38.6	-15 39.7	
13	194	20.6	24	28.1	53.7	312 08.5	28.1	57 41.4	05.7	326 40.8	39.8	
14	209	23.1	39	27.7	52.5	327 09.1	28.5	72 43.4	05.6	341 43.1	39.8	
15	224	25.5	54	27.3	51.3	342 09.8	28.8	87 45.3	05.5	356 45.3	39.9	
16	239	28.0	69	26.9	50.1	357 10.5	29.1	102 47.3	05.4	11 47.6	40.0	
17	254	30.5	84	26.4	+5 48.8	12 11.1	-22 29.4	117 49.3	+17 05.2	26 49.8	-15 40.0	
18	269	32.9	99	26.0	+5 47.6	27 11.8	-22 29.8	132 51.3	+17 05.1	41 52.1	-15 40.1	
19	284	35.4	114	25.6	46.4	42 12.4	30.1	147 53.3	05.0	56 54.3	40.2	
20	299	37.9	129	25.2	45.2	57 13.1	30.4	162 55.3	04.8	71 56.5	40.2	
21	314	40.3	144	24.8	44.0	72 13.7	30.7	177 57.3	04.7	86 58.8	40.3	
22	329	42.8	159	24.4	42.8	87 14.4	31.1	192 59.3	04.6	102 01.0	40.4	
23	344	45.3	174	23.9	41.6	102 15.1	31.4	208 01.3	04.5	117 03.3	40.4	
24	359	47.7	189	23.5	+5 40.4	117 15.7	-22 31.7	223 03.3	+17 04.3	132 05.5	-15 40.5	
Dif	—		-4	-12		+7	-3	+20	-1		+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 26 ^d 4 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 53 ^m 1			SD: 14 ^h 7 PMG: 9 ^h 50 ^m R°: 43 ^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	h m m	
0	181	41.0	+0 49.1	216	44.4	+9 57.0		60 N	18 03	18 45	19 35	2 30 70	16 55 17			
1	196	41.2		231	17.9 ¹⁴⁵	48.9 ⁸¹		58	03	42	29	35 68	51 18			
2	211	41.5		245	51.5 ¹⁴⁶	40.8 ⁸¹		56	02	39	24	40 66	48 20			
3	226	41.7		260	25.2 ¹⁴⁷	32.7 ⁸¹		54	02	37	19	45 64	44 22			
4	241	41.9		274	58.8 ¹⁴⁶	24.5 ⁸²		52	01	35	15	49 63	41 23			
5	256	42.1	+0 44.2	289	32.4 ¹⁴⁶	+9 16.3 ⁸²		50	18 01	18 33	19 11	2 52 62	16 38 25			
6	271	42.3	+0 43.3	304	06.1 ¹⁴⁷	+9 08.0 ⁸³		45	18 00	18 29	19 04	3 00 58	16 32 28			
7	286	42.6		318	39.8 ¹⁴⁷	+8 59.7 ⁸³		40	17 59	26	18 58	07 55	27 30			
8	301	42.8		333	13.5 ¹⁴⁷	51.4 ⁸³		35	59	24	53	12 54	23 32			
9	316	43.0		347	47.2 ¹⁴⁷	43.0 ⁸⁴		30	58	22	50	17 52	19 34			
10	331	43.2		2	20.9 ¹⁴⁷	34.6 ⁸⁴		20	57	19	45	26 48	12 38			
11	346	43.4	+0 38.4	16	54.7 ¹⁴⁸	+8 26.2 ⁸⁴		10 N	17 57	18 18	18 42	3 33 46	16 06 41			
12	1	43.7	+0 37.4	31	28.4 ¹⁴⁷	+8 17.7 ⁸⁵		0	17 56	18 17	18 41	3 40 43	16 01 43			
13	16	43.9		36.5	46 02.2 ¹⁴⁸	09.2 ⁸⁵		10 S	56	17	41	47 40	15 55 46			
14	31	44.1		35.5	60 36.0 ¹⁴⁸	+8 00.6 ⁸⁶		20	56	18	43	3 54 38	49 49			
15	46	44.3		34.5	75 09.8 ¹⁴⁸	+7 52.0 ⁸⁶		30	56	20	47	4 03 34	42 52			
16	61	44.5		33.5	89 43.6 ¹⁴⁸	43.4 ⁸⁶		35	56	21	50	07 33	38 54			
17	76	44.8	+0 32.6	104	17.4 ¹⁴⁸	+7 34.7 ⁸⁷		40	17 56	18 23	18 54	4 13 30	15 33 57			
18	91	45.0	+0 31.6	118	51.3 ¹⁴⁹	+7 26.0 ⁸⁷		45	17 56	18 25	18 59	4 19 28	15 28 59			
19	106	45.2		30.6	133 25.1 ¹⁴⁸	17.3 ⁸⁷		50	56	28	19 06	27 25	22 62			
20	121	45.4		29.6	147 59.0 ¹⁴⁹	+7 08.6 ⁸⁷		52	56	29	09	30 24	19 63			
21	136	45.6		28.7	162 32.8 ¹⁴⁸	+6 59.8 ⁸⁸		54	56	31	13	34 22	16 64			
22	151	45.9		27.7	177 06.7 ¹⁴⁹	51.0 ⁸⁸		56	56	33	17	38 21	12 66			
23	166	46.1		26.7	191 40.6 ¹⁴⁹	42.1 ⁸⁹		58	56	35	22	43 19	08 68			
24	181	46.3	+0 25.8	206	14.5 ¹⁴⁹	+6 33.2 ⁸⁹		60 S	17 56	18 38	19 27	4 48 17	15 03 71			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 00 ^m 8		Mag: -3.9 PMG: 11 ^h 23 ^m			Mag: +0.8 PMG: 16 ^h 10 ^m			Mag: -1.9 PMG: 9 ^h 07 ^m			Mag: +0.6 PMG: 15 ^h 09 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	359	47.7	189	23.5	+5 40.4	117	15.7	-22 31.7	223	03.3	+17 04.3	132	05.5	-15 40.5		
1	14	50.2	204	23.1	39.2	132	16.4	32.0	238	05.3	04.2	147	07.8	40.6		
2	29	52.6	219	22.7	38.0	147	17.0	32.4	253	07.3	04.1	162	10.0	40.6		
3	44	55.1	234	22.3	36.8	162	17.7	32.7	268	09.3	03.9	177	12.3	40.7		
4	59	57.6	249	21.9	35.6	177	18.3	33.0	283	11.3	03.8	192	14.5	40.8		
5	75	00.0	264	21.5	+5 34.4	192	19.0	-22 33.3	298	13.3	+17 03.7	207	16.8	-15 40.8		
6	90	02.5	279	21.0	+5 33.2	207	19.6	-22 33.6	313	15.2	+17 03.5	222	19.0	-15 40.9		
7	105	05.0	294	20.6	32.0	222	20.3	34.0	328	17.2	03.4	237	21.2	41.0		
8	120	07.4	309	20.2	30.8	237	20.9	34.3	343	19.2	03.3	252	23.5	41.0		
9	135	09.9	324	19.8	29.6	252	21.6	34.6	358	21.2	03.2	267	25.7	41.1		
10	150	12.4	339	19.4	28.4	267	22.2	34.9	13	23.2	03.0	282	28.0	41.2		
11	165	14.8	354	19.0	+5 27.2	282	22.9	-22 35.2	28	25.2	+17 02.9	297	30.2	-15 41.2		
12	180	17.3	9	18.6	+5 25.9	297	23.5	-22 35.6	43	27.2	+17 02.8	312	32.5	-15 41.3		
13	195	19.7	24	18.1	24.7	312	24.2	35.9	58	29.2	02.6	327	34.7	41.4		
14	210	22.2	39	17.7	23.5	327	24.8	36.2	73	31.2	02.5	342	37.0	41.4		
15	225	24.7	54	17.3	22.3	342	25.5	36.5	88	33.2	02.4	357	39.2	41.5		
16	240	27.1	69	16.9	21.1	357	26.1	36.8	103	35.2	02.2	12	41.5	41.6		
17	255	29.6	84	16.5	+5 19.9	12	26.8	-22 37.1	118	37.2	+17 02.1	27	43.7	-15 41.6		
18	270	32.1	99	16.1	+5 18.7	27	27.4	-22 37.5	133	39.2	+17 02.0	42	45.9	-15 41.7		
19	285	34.5	114	15.7	17.5	42	28.1	37.8	148	41.2	01.9	57	48.2	41.8		
20	300	37.0	129	15.3	16.3	57	28.7	38.1	163	43.2	01.7	72	50.4	41.8		
21	315	39.5	144	14.8	15.1	72	29.4	38.4	178	45.2	01.6	87	52.7	41.9		
22	330	41.9	159	14.4	13.8	87	30.0	38.7	193	47.2	01.5	102	54.9	42.0		
23	345	44.4	174	14.0	12.6	102	30.7	39.0	208	49.2	01.3	117	57.2	42.0		
24	0	46.9	189	13.6	+5 11.4	117	31.3	-22 39.4	223	51.2	+17 01.2	132	59.4	-15 42.1		
Dif	—		-4		-12	+7		-3	+20		-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 52 ^m 7			Edad: 27 ^d 4 PHE { 4 ^h : 54'2 12 ^h : 54'2 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	h	m
0	181	46.3	+0	25.8	206	14.5	+6	33.2	60 N	4	12	5	02	5	44	3	40
1	196	46.5		24.8	220	48.4 ¹⁴⁹		24.3 ⁸⁹	58	18	05	44	43	69	09	18	
2	211	46.7		23.8	235	22.3 ¹⁴⁹		15.4 ⁸⁹	56	23	08	45	46	67	08	19	
3	226	47.0		22.8	249	56.2 ¹⁴⁹	+6	06.4 ¹⁴⁹	54	28	10	45	49	65	06	22	
4	241	47.2		21.9	264	30.1 ¹⁴⁹	+5	57.4 ⁹⁰	52	32	12	46	52	63	04	23	
5	256	47.4	+0	20.9	279	04.1 ¹⁵⁰	+5	48.4 ⁹⁰	50	4	36	5	14	5	46	3	54
6	271	47.6	+0	19.9	293	38.0 ¹⁴⁹	+5	39.3 ⁹¹	45	4	43	5	17	5	47	3	58
7	286	47.8		19.0	308	12.0 ¹⁵⁰		30.3 ⁹⁰	40	49	20	47	4	02	57	16	57
8	301	48.1		18.0	322	45.9 ¹⁴⁹		21.2 ⁹¹	35	53	23	48	06	54	55	32	
9	316	48.3		17.0	337	19.8 ¹⁴⁹		12.0 ⁹²	30	4	56	24	48	09	52	53	34
10	331	48.5		16.0	351	53.8 ¹⁵⁰	+5	02.9 ⁹¹	20	5	01	27	49	14	49	50	37
11	346	48.7	+0	15.1	6	27.8 ¹⁵⁰	+4	53.7 ⁹²	10 N	5	04	5	28	5	49	4	19
12	1	48.9	+0	14.1	21	01.7 ¹⁴⁹	+4	44.5 ⁹²	0	5	05	5	29	5	49	4	23
13	16	49.2		13.1	35	35.7 ¹⁵⁰		35.3 ⁹²	10 S	04	29	50	27	40	41	46	
14	31	49.4		12.1	50	09.6 ¹⁴⁹		26.0 ⁹³	20	5	02	28	50	32	37	38	49
15	46	49.6		11.2	64	43.6 ¹⁵⁰		16.8 ⁹²	30	4	58	26	50	37	34	34	52
16	61	49.8		10.2	79	17.6 ¹⁵⁰	+4	07.5 ⁹³	35	55	24	50	40	32	32	54	
17	76	50.0	+0	09.2	93	51.5 ¹⁴⁹	+3	58.2 ⁹³	40	4	51	5	23	5	50	4	43
18	91	50.3	+0	08.3	108	25.5 ¹⁵⁰	+3	48.9 ⁹³	45	4	46	5	20	5	49	4	47
19	106	50.5		07.3	122	59.4 ¹⁴⁹		39.5 ⁹⁴	50	39	17	49	52	24	24	62	
20	121	50.7		06.3	137	33.4 ¹⁵⁰		30.1 ⁹⁴	52	36	16	49	54	23	22	64	
21	136	50.9		05.3	152	07.4 ¹⁵⁰		20.8 ⁹³	54	32	14	49	56	22	20	66	
22	151	51.1		04.4	166	41.3 ¹⁴⁹		11.4 ⁹⁴	56	28	12	49	4	59	20	18	
23	166	51.4		03.4	181	15.3 ¹⁵⁰	+3	01.9 ⁹⁵	58	23	10	49	5	02	18	16	
24	181	51.6	+0	02.4	195	49.2 ¹⁴⁹	+2	52.5 ⁹⁴	60 S	4	17	5	07	5	48	5	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 53 ^m 0		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +0.8 PMG: 16 ^h 09 ^m		Mag: -1.9 PMG: 9 ^h 03 ^m		Mag: +0.6 PMG: 15 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	0	46.9	189	13.6	+5	11.4	223	51.2	+17	01.2
1	15	49.3	204	13.2		10.2	238	53.2		01.1
2	30	51.8	219	12.8		09.0	253	55.2		01.0
3	45	54.2	234	12.4		07.8	268	57.2		00.8
4	60	56.7	249	12.0		06.6	283	59.2		00.7
5	75	59.2	264	11.6	+5	05.4	299	01.2	+17	00.6
6	91	01.6	279	11.1	+5	04.1	314	03.2	+17	00.4
7	106	04.1	294	10.7		02.9	329	05.2		00.3
8	121	06.6	309	10.3		01.7	344	07.2		00.2
9	136	09.0	324	09.9	+5	00.5	359	09.2	+17	00.1
10	151	11.5	339	09.5	+4	59.3	14	11.2	+16	59.9
11	166	14.0	354	09.1	+4	58.1	29	13.2	+16	59.8
12	181	16.4	9	08.7	+4	56.9	297	39.0	-22	43.1
13	196	18.9	24	08.3		55.6	312	39.7		43.4
14	211	21.4	39	07.9		54.4	327	40.3		43.8
15	226	23.8	54	07.5		53.2	342	41.0		44.1
16	241	26.3	69	07.1		52.0	357	41.6		44.4
17	256	28.7	84	06.6	+4	50.8	12	42.2	-22	44.7
18	271	31.2	99	06.2	+4	49.6	27	42.9	-22	45.0
19	286	33.7	114	05.8		48.4	42	43.5		45.3
20	301	36.1	129	05.4		47.1	57	44.2		45.6
21	316	38.6	144	05.0		45.9	72	44.8		45.9
22	331	41.1	159	04.6		44.7	87	45.4		46.2
23	346	43.5	174	04.2		43.5	102	46.1		46.5
24	1	46.0	189	03.8	+4	42.3	117	46.7	-22	46.9
Dif	—		-4		-12		+6		-3	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 28 ^d 4 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6						Civil		Náutico		Hora R°	
	PMG: 11 ^h 52 ^m 4		SD: 14'8 PMG: 11 ^h 16 ^m R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m m
0	181	51.6	+0	02.4	195	49.2	+2 52.5	60 N	17 57	18 39	19 28	4 51	72	17 27 16
1	196	51.8		01.4	210	23.2 ¹⁵⁰	43.1 ⁹⁴	58	57	36	23	52	70	27 18
2	211	52.0	+0	00.5	224	57.1 ¹⁴⁹	33.6 ⁹⁵	56	57	34	18	53	68	27 20
3	226	52.2	-0	00.5	239	31.0 ¹⁴⁹	24.1 ⁹⁵	54	57	32	14	54	66	27 22
4	241	52.4		01.5	254	05.0 ¹⁵⁰	14.6 ⁹⁵	52	56	30	10	55	65	27 23
5	256	52.7	-0	02.5	268	38.9 ¹⁴⁹	+2 05.1 ⁹⁵	50	17 56	18 28	19 06	4 56	63	17 27 24
6	271	52.9	-0	03.4	283	12.8 ¹⁴⁹	+1 55.6 ⁹⁵	45	17 56	18 25	19 00	4 57	60	17 27 27
7	286	53.1		04.4	297	46.7 ¹⁴⁹	46.1 ⁹⁶	40	56	23	18 54	4 59	57	27 30
8	301	53.3		05.4	312	20.6 ¹⁴⁹	36.5 ⁹⁵	35	56	21	50	5 00	55	27 32
9	316	53.5		06.3	326	54.5 ¹⁴⁹	27.0 ⁹⁵	30	56	19	47	01	53	27 34
10	331	53.8		07.3	341	28.4 ¹⁴⁹	17.4 ⁹⁶	20	55	17	43	03	49	27 37
11	346	54.0	-0	08.3	356	02.3 ¹⁴⁹	+1 07.8 ⁹⁶	10 N	17 56	18 16	18 41	5 04	47	17 27 40
12	1	54.2	-0	09.3	10	36.1 ¹⁴⁸	+0 58.3 ⁹⁵	0	17 56	18 16	18 40	5 06	43	17 27 43
13	16	54.4		10.2	25	10.0 ¹⁴⁹	48.7 ⁹⁶	10 S	56	17	41	07	41	27 46
14	31	54.6		11.2	39	43.8 ¹⁴⁸	39.1 ⁹⁶	20	56	18	44	09	37	27 49
15	46	54.8		12.2	54	17.6 ¹⁴⁸	29.5 ⁹⁶	30	57	21	48	11	34	26 53
16	61	55.1		13.2	68	51.5 ¹⁴⁹	19.9 ⁹⁶	35	57	22	52	12	32	26 55
17	76	55.3	-0	14.1	83	25.3 ¹⁴⁸	+0 10.2 ⁹⁷	40	17 57	18 25	18 56	5 13	30	17 26 58
18	91	55.5	-0	15.1	97	59.1 ¹⁴⁸	+0 00.6 ⁹⁶	45	17 58	18 27	19 02	5 15	27	17 26 60
19	106	55.7		16.1	112	32.8 ¹⁴⁷	-0 09.0 ⁹⁶	50	59	31	09	16	24	26 63
20	121	55.9		17.1	127	06.6 ¹⁴⁸	18.6 ⁹⁶	52	59	33	13	17	23	26 65
21	136	56.2		18.0	141	40.4 ¹⁴⁸	28.3 ⁹⁷	54	17 59	35	17	18	21	26 66
22	151	56.4		19.0	156	14.1 ¹⁴⁷	37.9 ⁹⁶	56	18 00	37	21	19	19	26 68
23	166	56.6		20.0	170	47.8 ¹⁴⁷	47.5 ⁹⁶	58	00	40	27	20	17	26 70
24	181	56.8	-0	20.9	185	21.5 ¹⁴⁷	-0 57.2 ⁹⁷	60 S	18 01	18 42	19 33	5 21	15	17 26 72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 49 ^m 0		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: +0.8 PMG: 16 ^h 08 ^m		Mag: -1.9 PMG: 9 ^h 00 ^m		Mag: +0.6 PMG: 15 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	1	46.0	189	03.8	+4	42.3	117	46.7	-22	46.9	224	39.1	+16	58.1	133	53.2	-15	43.7
1	16	48.5	204	03.4		41.0	132	47.3		47.2	239	41.1		58.0	148	55.4		43.8
2	31	50.9	219	03.0		39.8	147	48.0		47.5	254	43.1		57.9	163	57.7		43.9
3	46	53.4	234	02.6		38.6	162	48.6		47.8	269	45.1		57.7	178	59.9		43.9
4	61	55.8	249	02.2		37.4	177	49.3		48.1	284	47.2		57.6	194	02.2		44.0
5	76	58.3	264	01.8	+4	36.2	192	49.9	-22	48.4	299	49.2	+16	57.5	209	04.4	-15	44.1
6	92	00.8	279	01.3	+4	35.0	207	50.5	-22	48.7	314	51.2	+16	57.3	224	06.6	-15	44.1
7	107	03.2	294	00.9		33.7	222	51.2		49.0	329	53.2		57.2	239	08.9		44.2
8	122	05.7	309	00.5		32.5	237	51.8		49.3	344	55.2		57.1	254	11.1		44.3
9	137	08.2	324	00.1		31.3	252	52.4		49.6	359	57.2		57.0	269	13.4		44.3
10	152	10.6	338	59.7		30.1	267	53.1		49.9	14	59.2		56.8	284	15.6		44.4
11	167	13.1	353	59.3	+4	28.9	282	53.7	-22	50.2	30	01.2	+16	56.7	299	17.8	-15	44.5
12	182	15.6	8	58.9	+4	27.6	297	54.3	-22	50.5	45	03.2	+16	56.6	314	20.1	-15	44.5
13	197	18.0	23	58.5		26.4	312	55.0		50.8	60	05.2		56.4	329	22.3		44.6
14	212	20.5	38	58.1		25.2	327	55.6		51.1	75	07.2		56.3	344	24.6		44.7
15	227	23.0	53	57.7		24.0	342	56.2		51.4	90	09.2		56.2	359	26.8		44.7
16	242	25.4	68	57.3		22.7	357	56.9		51.7	105	11.2		56.1	14	29.0		44.8
17	257	27.9	83	56.9	+4	21.5	12	57.5	-22	52.0	120	13.2	+16	55.9	29	31.3	-15	44.9
18	272	30.3	98	56.5	+4	20.3	27	58.1	-22	52.4	135	15.2	+16	55.8	44	33.5	-15	44.9
19	287	32.8	113	56.1		19.1	42	58.8		52.7	150	17.2		55.7	59	35.8		45.0
20	302	35.3	128	55.7		17.9	57	59.4		53.0	165	19.2		55.6	74	38.0		45.1
21	317	37.7	143	55.3		16.6	73	00.0		53.3	180	21.2		55.4	89	40.2		45.1
22	332	40.2	158	54.9		15.4	88	00.6		53.6	195	23.2		55.3	104	42.5		45.2
23	347	42.7	173	54.5		14.2	103	01.3		53.9	210	25.2		55.2	119	44.7		45.3
24	2	45.1	188	54.1	+4	13.0	118	01.9	-22	54.2	225	27.2	+16	55.0	134	47.0	-15	45.3
Dif	—		-4		-12		+6		-3		+20		-1		+22		-	

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: 29 ^d 4 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9 R°: 44 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m						
0	181	56.8	-0	20.9	185	21.5	-0	57.2	60 N	4	17	5	07	5	49	6	03	73	17	43	17
1	196	57.0		21.9	199	55.2 ¹⁴⁷	-1	06.8 ⁹⁶	58	23	09	49		02	71	45	19				
2	211	57.2		22.9	214	28.9 ¹⁴⁷		16.5 ⁹⁷	56	28	12	49		01	69	47	21				
3	226	57.5		23.9	229	02.5 ¹⁴⁶		26.1 ⁹⁶	54	32	14	49		00	67	48	23				
4	241	57.7		24.8	243	36.1 ¹⁴⁶		35.7 ⁹⁶	52	35	15	49		6	00	65	50	24			
5	256	57.9	-0	25.8	258	09.7 ¹⁴⁶	-1	45.4 ⁹⁷	50	4	39	5	17	5	49	5	59	64	17	51	26
6	271	58.1	-0	26.8	272	43.3 ¹⁴⁶	-1	55.0 ⁹⁶	45	4	46	5	20	5	49	5	57	61	17	54	29
7	286	58.3		27.8	287	16.9 ¹⁴⁶	-2	04.6 ⁹⁶	40	51	22	49		56	58	57	31				
8	301	58.5		28.7	301	50.5 ¹⁴⁶		14.3 ⁹⁷	35	55	24	49		55	55	17	59	34			
9	316	58.8		29.7	316	24.0 ¹⁴⁵		23.9 ⁹⁶	30	4	58	25	49	54	53	18	01	35			
10	331	59.0		30.7	330	57.5 ¹⁴⁵		33.5 ⁹⁶	20	5	02	27	49	52	50	04	39				
11	346	59.2	-0	31.7	345	31.0 ¹⁴⁵	-2	43.1 ⁹⁶	10 N	5	04	5	28	5	49	5	51	47	18	07	42
12	1	59.4	-0	32.6	0	04.4 ¹⁴⁴	-2	52.7 ⁹⁶	0	5	04	5	28	5	49	5	49	44	18	10	45
13	16	59.6		33.6	14	37.9 ¹⁴⁵	-3	02.3 ⁹⁶	10 S	03	27	48		48	41	13	48				
14	31	59.8		34.6	29	11.3 ¹⁴⁴		11.9 ⁹⁶	20	5	00	26	48	46	39	16	51				
15	47	00.1		35.6	43	44.7 ¹⁴⁴		21.5 ⁹⁶	30	4	56	23	47	45	35	19	54				
16	62	00.3		36.5	58	18.0 ¹⁴³		31.0 ⁹⁵	35	52	22	47		44	33	21	56				
17	77	00.5	-0	37.5	72	51.4 ¹⁴⁴	-3	40.6 ⁹⁶	40	4	48	5	19	5	46	5	43	30	18	24	58
18	92	00.7	-0	38.5	87	24.7 ¹⁴³	-3	50.1 ⁹⁵	45	4	42	5	16	5	46	5	42	28	18	26	61
19	107	00.9		39.4	101	58.0 ¹⁴³	-3	59.7 ⁹⁶	50	35	13	45		40	25	29	64				
20	122	01.1		40.4	116	31.2 ¹⁴²	-4	09.2 ⁹⁵	52	31	11	44		40	23	31	65				
21	137	01.4		41.4	131	04.5 ¹⁴³		18.7 ⁹⁵	54	27	09	44		39	22	32	68				
22	152	01.6		42.4	145	37.7 ¹⁴²		28.2 ⁹⁵	56	22	06	44		38	20	34	69				
23	167	01.8		43.3	160	10.8 ¹⁴¹		37.7 ⁹⁵	58	17	04	43		37	19	36	71				
24	182	02.0	-0	44.3	174	44.0 ¹⁴²	-4	47.2 ⁹⁵	60 S	4	11	5	01	5	42	5	36	17	18	38	73
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 45 ^m 1			Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +0.8 PMG: 16 ^h 07 ^m			Mag: -1.9 PMG: 8 ^h 57 ^m			Mag: +0.6 PMG: 14 ^h 59 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	2	45.1	188	54.1	+4	13.0	118	01.9	-22	54.2	225	27.2	+16	55.0	134	47.0	-15	45.3			
1	17	47.6	203	53.6		11.7	133	02.5		54.5	240	29.2		54.9	149	49.2		45.4			
2	32	50.1	218	53.2		10.5	148	03.2		54.8	255	31.2		54.8	164	51.4		45.5			
3	47	52.5	233	52.8		09.3	163	03.8		55.1	270	33.2		54.7	179	53.7		45.6			
4	62	55.0	248	52.4		08.1	178	04.4		55.4	285	35.2		54.5	194	55.9		45.6			
5	77	57.4	263	52.0	+4	06.8	193	05.0	-22	55.7	300	37.2	+16	54.4	209	58.1	-15	45.7			
6	92	59.9	278	51.6	+4	05.6	208	05.7	-22	56.0	315	39.2	+16	54.3	225	00.4	-15	45.8			
7	108	02.4	293	51.2		04.4	223	06.3		56.3	330	41.2		54.1	240	02.6		45.8			
8	123	04.8	308	50.8		03.2	238	06.9		56.6	345	43.2		54.0	255	04.9		45.9			
9	138	07.3	323	50.4		01.9	253	07.5		56.9	0	45.3		53.9	270	07.1		46.0			
10	153	09.8	338	50.0	+4	00.7	268	08.2		57.2	15	47.3		53.8	285	09.3		46.0			
11	168	12.2	353	49.6	+3	59.5	283	08.8	-22	57.5	30	49.3	+16	53.6	300	11.6	-15	46.1			
12	183	14.7	8	49.2	+3	58.3	298	09.4	-22	57.7	45	51.3	+16	53.5	315	13.8	-15	46.2			
13	198	17.2	23	48.8		57.0	313	10.0		58.0	60	53.3		53.4	330	16.0		46.2			
14	213	19.6	38	48.4		55.8	328	10.7		58.3	75	55.3		53.3	345	18.3		46.3			
15	228	22.1	53	48.0		54.6	343	11.3		58.6	90	57.3		53.1	0	20.5		46.4			
16	243	24.6	68	47.6		53.4	358	11.9		58.9	105	59.3		53.0	15	22.7		46.4			
17	258	27.0	83	47.2	+3	52.1	13	12.5	-22	59.2	121	01.3	+16	52.9	30	25.0	-15	46.5			
18	273	29.5	98	46.8	+3	50.9	28	13.2	-22	59.5	136	03.3	+16	52.7	45	27.2	-15	46.6			
19	288	31.9	113	46.4		49.7	43	13.8	-22	59.8	151	05.3		52.6	60	29.5		46.6			
20	303	34.4	128	46.0		48.4	58	14.4	-23	00.1	166	07.3		52.5	75	31.7		46.7			
21	318	36.9	143	45.6		47.2	73	15.0		00.4	181	09.3		52.4	90	33.9		46.8			
22	333	39.3	158	45.2		46.0	88	15.7		00.7	196	11.3		52.2	105	36.2		46.8			
23	348	41.8	173	44.8		44.8	103	16.3		01.0	211	13.3		52.1	120	38.4		46.9			
24	3	44.3	188	44.4	+3	43.5	118	16.9	-23	01.3	226	15.4	+16	52.0	135	40.6	-15	47.0			
Dif	—		-4	-12			+6	-3			+20	-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 51 ^m 7		Edad: 30 ^d 4 PHE { 4 ^h : 55°0 12 ^h : 55°2 20 ^h : 55°3 PMG: 12 ^h 44 ^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	R°
0	182	02.0	-0 44.3	174	44.0	-4 47.2	60 N	17 51	18 33	19 22	7 16 74	18 00 19		
1	197	02.2	45.3	189	17.1 ¹⁴¹	-4 56.6 ⁹⁴	58	51	30	17	13 72	04 21		
2	212	02.4	46.3	203	50.2 ¹⁴¹	-5 06.1 ⁹⁵	56	51	28	12	10 70	08 23		
3	227	02.7	47.2	218	23.3 ¹⁴⁰	15.5 ⁹⁴	54	52	27	08	07 68	11 25		
4	242	02.9	48.2	232	56.3 ¹⁴¹	24.9 ⁹⁴	52	52	25	05	05 66	14 27		
5	257	03.1	-0 49.2	247	29.2 ¹³⁹	-5 34.3 ⁹⁴	50	17 52	18 24	19 02	7 03 64	18 17 28		
6	272	03.3	-0 50.2	262	02.2 ¹⁴⁰	-5 43.6 ⁹³	45	17 52	18 21	18 56	6 58 61	18 23 31		
7	287	03.5	51.1	276	35.1 ¹³⁹	-5 53.0 ⁹⁴	40	53	19	51	54 59	28 34		
8	302	03.7	52.1	291	08.0 ¹³⁹	-6 02.3 ⁹³	35	53	18	47	50 57	33 35		
9	317	04.0	53.1	305	40.9 ¹³⁹	11.6 ⁹³	30	53	17	45	47 55	36 38		
10	332	04.2	54.1	320	13.7 ¹³⁸	20.9 ⁹³	20	54	16	41	42 51	43 41		
11	347	04.4	-0 55.0	334	46.5 ¹³⁸	-6 30.1 ⁹²	10 N	17 54	18 15	18 40	6 38 48	18 49 44		
12	2	04.6	-0 56.0	349	19.2 ¹³⁷	-6 39.4 ⁹³	0	17 55	18 16	18 40	6 33 46	18 55 46		
13	17	04.8	57.0	3	52.0 ¹³⁸	48.6 ⁹²	10 S	56	17	41	29 43	19 01 49		
14	32	05.0	58.0	18	24.6 ¹³⁶	-6 57.7 ⁹¹	20	57	19	44	25 39	07 51		
15	47	05.2	58.9	32	57.3 ¹³⁷	-7 06.9 ⁹²	30	58	22	50	20 36	13 56		
16	62	05.5	-0 59.9	47	29.9 ¹³⁶	16.0 ⁹¹	35	59	24	53	17 34	17 57		
17	77	05.7	-1 00.9	62	02.5 ¹³⁶	-7 25.1 ⁹¹	40	17 59	18 26	18 58	6 13 33	19 22 59		
18	92	05.9	-1 01.8	76	35.0 ¹³⁵	-7 34.2 ⁹¹	45	18 00	18 30	19 04	6 10 29	19 27 62		
19	107	06.1	02.8	91	07.5 ¹³⁵	43.3 ⁹¹	50	02	34	12	05 27	33 65		
20	122	06.3	03.8	105	40.0 ¹³⁵	-7 52.3 ⁹⁰	52	02	36	16	03 25	36 67		
21	137	06.5	04.8	120	12.4 ¹³⁴	-8 01.3 ⁹⁰	54	03	38	21	6 01 24	40 67		
22	152	06.7	05.7	134	44.7 ¹³³	10.2 ⁸⁹	56	04	41	26	5 58 22	43 70		
23	167	07.0	06.7	149	17.1 ¹³⁴	19.1 ⁸⁹	58	05	44	31	56 20	47 72		
24	182	07.2	-1 07.7	163	49.4 ¹³³	-8 28.0 ⁸⁹	60 S	18 05	18 47	19 38	5 53 18	19 51 74		
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 23 ^h 41 ^m 2		Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +0.8 PMG: 16 ^h 06 ^m			Mag: -1.9 PMG: 8 ^h 54 ^m		Mag: +0.6 PMG: 14 ^h 55 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	3	44.3	188	44.4	+3 43.5	118	16.9	-23 01.3	226	15.4	+16 52.0	135	40.6	-15 47.0
1	18	46.7	203	44.0	42.3	133	17.5	01.6	241	17.4	51.8	150	42.9	47.1
2	33	49.2	218	43.6	41.1	148	18.1	01.9	256	19.4	51.7	165	45.1	47.1
3	48	51.7	233	43.2	39.8	163	18.8	02.2	271	21.4	51.6	180	47.3	47.2
4	63	54.1	248	42.8	38.6	178	19.4	02.5	286	23.4	51.5	195	49.6	47.3
5	78	56.6	263	42.4	+3 37.4	193	20.0	-23 02.8	301	25.4	+16 51.3	210	51.8	-15 47.3
6	93	59.0	278	42.0	+3 36.1	208	20.6	-23 03.0	316	27.4	+16 51.2	225	54.0	-15 47.4
7	109	01.5	293	41.6	34.9	223	21.2	03.3	331	29.4	51.1	240	56.3	47.5
8	124	04.0	308	41.2	33.7	238	21.8	03.6	346	31.4	51.0	255	58.5	47.5
9	139	06.4	323	40.8	32.5	253	22.5	03.9	1	33.4	50.8	271	00.7	47.6
10	154	08.9	338	40.4	31.2	268	23.1	04.2	16	35.4	50.7	286	03.0	47.7
11	169	11.4	353	40.0	+3 30.0	283	23.7	-23 04.5	31	37.4	+16 50.6	301	05.2	-15 47.7
12	184	13.8	8	39.6	+3 28.8	298	24.3	-23 04.8	46	39.5	+16 50.5	316	07.5	-15 47.8
13	199	16.3	23	39.2	27.5	313	24.9	05.1	61	41.5	50.3	331	09.7	47.9
14	214	18.8	38	38.8	26.3	328	25.5	05.4	76	43.5	50.2	346	11.9	47.9
15	229	21.2	53	38.4	25.1	343	26.2	05.7	91	45.5	50.1	1	14.2	48.0
16	244	23.7	68	38.0	23.8	358	26.8	05.9	106	47.5	49.9	16	16.4	48.1
17	259	26.2	83	37.6	+3 22.6	13	27.4	-23 06.2	121	49.5	+16 49.8	31	18.6	-15 48.1
18	274	28.6	98	37.2	+3 21.4	28	28.0	-23 06.5	136	51.5	+16 49.7	46	20.9	-15 48.2
19	289	31.1	113	36.8	20.1	43	28.6	06.8	151	53.5	49.6	61	23.1	48.3
20	304	33.5	128	36.4	18.9	58	29.2	07.1	166	55.5	49.4	76	25.3	48.4
21	319	36.0	143	36.0	17.7	73	29.8	07.4	181	57.6	49.3	91	27.6	48.4
22	334	38.5	158	35.6	16.4	88	30.5	07.7	196	59.6	49.2	106	29.8	48.5
23	349	40.9	173	35.2	15.2	103	31.1	08.0	212	01.6	49.1	121	32.0	48.6
24	4	43.4	188	34.8	+3 14.0	118	31.7	-23 08.2	227	03.6	+16 48.9	136	34.3	-15 48.6
Dif	—		-4 -12		+6 -3				+20 -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 51 ^m 4			Edad: 1 ^d 7 SD: 15°1 PMG: 13 ^h 30 ^m	PHE { 4 ^h : 55°5 12 ^h : 55°6 20 ^h : 55°8 R°: 48 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	182	07.2	-1	07.7	163	49.4	-8 28.0	60 N	4 22	5 12	5 53	8 30	75	18 19	23			
1	197	07.4		08.7	178	21.6 ¹³²	36.9 ⁸⁹	58	27	14	53	25	72	25	26			
2	212	07.6		09.6	192	53.8 ¹³²	45.7 ⁸⁸	56	32	16	53	20	69	31	27			
3	227	07.8		10.6	207	26.0 ¹³²	-8 54.5 ⁸⁸	54	36	17	53	15	68	36	27			
4	242	08.0		11.6	221	58.1 ¹³¹	-9 03.2 ⁸⁷	52	39	19	52	11	66	41	30			
5	257	08.2	-1	12.6	236	30.2 ¹³¹	-9 12.0 ⁸⁸	50	4 42	5 20	5 52	8 07	65	18 45	32			
6	272	08.5	-1	13.5	251	02.3 ¹³¹	-9 20.6 ⁸⁶	45	4 48	5 22	5 52	7 59	62	18 54	35			
7	287	08.7		14.5	265	34.3 ¹³⁰	29.3 ⁸⁷	40	53	24	51	53	59	19 02	37			
8	302	08.9		15.5	280	06.2 ¹²⁹	37.9 ⁸⁶	35	56	26	51	47	57	08	39			
9	317	09.1		16.5	294	38.1 ¹²⁹	46.4 ⁸⁵	30	4 59	27	50	42	56	14	41			
10	332	09.3		17.4	309	10.0 ¹²⁹	-9 55.0 ⁸⁶	20	5 02	28	50	33	53	24	44			
11	347	09.5	-1	18.4	323	41.8 ¹²⁸	-10 03.4 ⁸⁴	10 N	5 04	5 28	5 49	7 26	50	19 33	46			
12	2	09.7	-1	19.4	338	13.6 ¹²⁸	-10 11.9 ⁸⁵	0	5 03	5 27	5 48	7 19	47	19 41	49			
13	17	10.0		20.3	352	45.3 ¹²⁷	20.3 ⁸⁴	10 S	5 02	26	47	12	45	50	50			
14	32	10.2		21.3	7	17.0 ¹²⁷	28.6 ⁸³	20	4 59	24	46	7 04	42	19 58	54			
15	47	10.4		22.3	21	48.6 ¹²⁶	36.9 ⁸³	30	53	21	45	6 56	39	20 09	56			
16	62	10.6		23.3	36	20.2 ¹²⁶	45.2 ⁸³	35	49	19	44	51	37	14	58			
17	77	10.8	-1	24.2	50	51.7 ¹²⁵	-10 53.4 ⁸²	40	4 44	5 16	5 43	6 46	35	20 21	60			
18	92	11.0	-1	25.2	65	23.2 ¹²⁵	-11 01.6 ⁸²	45	4 38	5 13	5 42	6 39	33	20 29	62			
19	107	11.2		26.2	79	54.7 ¹²⁵	09.7 ⁸¹	50	30	08	40	32	30	38	65			
20	122	11.4		27.2	94	26.1 ¹²⁴	17.8 ⁸¹	52	26	06	40	28	29	43	66			
21	137	11.7		28.1	108	57.4 ¹²³	25.8 ⁸⁰	54	21	04	39	25	27	47	68			
22	152	11.9		29.1	123	28.7 ¹²³	33.8 ⁸⁰	56	16	5 01	38	20	26	53	69			
23	167	12.1		30.1	137	59.9 ¹²²	41.7 ⁷⁹	58	11	4 58	37	16	23	20 59	71			
24	182	12.3	-1	31.1	152	31.1 ¹²²	-11 49.6 ⁷⁹	60 S	4 04	4 55	5 36	6 11	21	21 05	74			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 23 ^h 37 ^m 2			Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: +0.8 PMG: 16 ^h 05 ^m			Mag: -1.9 PMG: 8 ^h 51 ^m			Mag: +0.6 PMG: 14 ^h 52 ^m					
	hG ♊			hG ♎	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	4	43.4	188	34.8	+3	14.0	118	31.7	-23	08.2	227	03.6	+16	48.9	136	34.3	-15	48.6
1	19	45.9	203	34.4		12.7	133	32.3		08.5	242	05.6		48.8	151	36.5		48.7
2	34	48.3	218	34.0		11.5	148	32.9		08.8	257	07.6		48.7	166	38.7		48.8
3	49	50.8	233	33.6		10.3	163	33.5		09.1	272	09.6		48.5	181	41.0		48.8
4	64	53.3	248	33.2		09.0	178	34.1		09.4	287	11.6		48.4	196	43.2		48.9
5	79	55.7	263	32.8	+3	07.8	193	34.7	-23	09.7	302	13.6	+16	48.3	211	45.4	-15	49.0
6	94	58.2	278	32.4	+3	06.6	208	35.4	-23	09.9	317	15.7	+16	48.2	226	47.7	-15	49.0
7	110	00.6	293	32.0		05.3	223	36.0		10.2	332	17.7		48.0	241	49.9		49.1
8	125	03.1	308	31.6		04.1	238	36.6		10.5	347	19.7		47.9	256	52.1		49.2
9	140	05.6	323	31.2		02.9	253	37.2		10.8	2	21.7		47.8	271	54.3		49.2
10	155	08.0	338	30.8		01.6	268	37.8		11.1	17	23.7		47.7	286	56.6		49.3
11	170	10.5	353	30.4	+3	00.4	283	38.4	-23	11.4	32	25.7	+16	47.5	301	58.8	-15	49.4
12	185	13.0	8	30.0	+2	59.1	298	39.0	-23	11.6	47	27.7	+16	47.4	317	01.0	-15	49.5
13	200	15.4	23	29.6		57.9	313	39.6		11.9	62	29.8		47.3	332	03.3		49.5
14	215	17.9	38	29.2		56.7	328	40.2		12.2	77	31.8		47.2	347	05.5		49.6
15	230	20.4	53	28.8		55.4	343	40.8		12.5	92	33.8		47.0	2	07.7		49.7
16	245	22.8	68	28.4		54.2	358	41.4		12.8	107	35.8		46.9	17	10.0		49.7
17	260	25.3	83	28.0	+2	53.0	13	42.0	-23	13.0	122	37.8	+16	46.8	32	12.2	-15	49.8
18	275	27.8	98	27.6	+2	51.7	28	42.7	-23	13.3	137	39.8	+16	46.7	47	14.4	-15	49.9
19	290	30.2	113	27.2		50.5	43	43.3		13.6	152	41.8		46.5	62	16.7		49.9
20	305	32.7	128	26.8		49.3	58	43.9		13.9	167	43.9		46.4	77	18.9		50.0
21	320	35.1	143	26.5		48.0	73	44.5		14.2	182	45.9		46.3	92	21.1		50.1
22	335	37.6	158	26.1		46.8	88	45.1		14.4	197	47.9		46.1	107	23.4		50.1
23	350	40.1	173	25.7		45.5	103	45.7		14.7	212	49.9		46.0	122	25.6		50.2
24	5	42.5	188	25.3	+2	44.3	118	46.3	-23	15.0	227	51.9	+16	45.9	137	27.8	-15	50.3
Dif	—			-4 -12			+6 -3			+20 -1			+22 -1					

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 51 ^m 0		Edad: 2 ^d 7 PHE { 4 ^h : 55'9 12 ^h : 56'1 20 ^h : 56'3 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	182	12.3	-1	31.1	152	31.1	-11 49.6	60 N	17 45	18 26	19 15	9 45 73	18 42 30	
1	197	12.5		32.0	167	02.3 ¹²²	-11 57.4 ⁷⁸	58	46	25	11	37 70	51 31	
2	212	12.7		33.0	181	33.4 ¹²¹	-12 05.2 ⁷⁸	56	46	23	07	29 69	18 58 34	
3	227	12.9		34.0	196	04.4 ¹²⁰	12.9 ⁷⁷	54	47	22	03	23 67	19 05 35	
4	242	13.1		34.9	210	35.4 ¹²⁰	20.5 ⁷⁶	52	47	21	19 00	17 66	11 36	
5	257	13.4	-1	35.9	225	06.4 ¹²⁰	-12 28.2 ⁷⁷	50	17 48	18 20	18 57	9 12 65	19 17 37	
6	272	13.6	-1	36.9	239	37.2 ¹¹⁸	-12 35.7 ⁷⁵	45	17 48	18 18	18 52	9 01 62	19 29 39	
7	287	13.8		37.9	254	08.1 ¹¹⁹	43.2 ⁷⁵	40	49	16	48	8 52 60	39 41	
8	302	14.0		38.8	268	38.9 ¹¹⁸	50.6 ⁷⁴	35	50	15	44	44 59	47 43	
9	317	14.2		39.8	283	09.6 ¹¹⁷	-12 58.0 ⁷⁴	30	51	14	42	38 56	19 55 44	
10	332	14.4		40.8	297	40.3 ¹¹⁷	-13 05.3 ⁷³	20	52	14	39	26 54	20 08 46	
11	347	14.6	-1	41.8	312	10.9 ¹¹⁶	-13 12.6 ⁷³	10 N	17 53	18 14	18 38	8 16 51	20 19 49	
12	2	14.8	-1	42.7	326	41.5 ¹¹⁶	-13 19.8 ⁷²	0	17 54	18 15	18 39	8 06 50	20 30 50	
13	17	15.0		43.7	341	12.0 ¹¹⁵	26.9 ⁷¹	10 S	56	17	41	7 57 47	40 53	
14	32	15.3		44.7	355	42.5 ¹¹⁵	34.0 ⁷¹	20	57	19	45	46 46	20 52 54	
15	47	15.5		45.7	10	12.9 ¹¹⁴	41.0 ⁷⁰	30	17 59	23	51	35 42	21 05 56	
16	62	15.7		46.6	24	43.3 ¹¹⁴	47.9 ⁶⁹	35	18 00	25	18 55	28 41	12 58	
17	77	15.9	-1	47.6	39	13.6 ¹¹³	-13 54.8 ⁶⁹	40	18 01	18 28	19 00	7 21 39	21 21 60	
18	92	16.1	-1	48.6	53	43.9 ¹¹³	-14 01.6 ⁶⁸	45	18 03	18 32	19 07	7 12 37	21 31 61	
19	107	16.3		49.5	68	14.1 ¹¹²	08.3 ⁶⁷	50	05	37	16	7 02 34	43 64	
20	122	16.5		50.5	82	44.2 ¹¹¹	15.0 ⁶⁷	52	06	40	20	6 57 33	49 65	
21	137	16.7		51.5	97	14.3 ¹¹¹	21.6 ⁶⁶	54	07	42	25	52 32	21 55 66	
22	152	16.9		52.5	111	44.4 ¹¹¹	28.2 ⁶⁶	56	08	45	30	46 30	22 02 68	
23	167	17.2		53.4	126	14.4 ¹¹⁰	34.6 ⁶⁴	58	09	48	36	39 29	10 69	
24	182	17.4	-1	54.4	140	44.3 ¹⁰⁹	-14 41.0 ⁶⁴	60 S	18 10	18 52	19 43	6 32 26	22 19 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 33 ^m 3		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: +0.8 PMG: 16 ^h 04 ^m		Mag: -1.9 PMG: 8 ^h 47 ^m		Mag: +0.6 PMG: 14 ^h 48 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	5 42.5	188 25.3	+2 44.3	118 46.3	-23 15.0	227 51.9	+16 45.9	137 27.8	-15 50.3					
1	20 45.0	203 24.9	43.1	133 46.9	15.3	242 53.9	45.8	152 30.0	50.4					
2	35 47.5	218 24.5	41.8	148 47.5	15.6	257 55.9	45.6	167 32.3	50.4					
3	50 49.9	233 24.1	40.6	163 48.1	15.8	272 58.0	45.5	182 34.5	50.5					
4	65 52.4	248 23.7	39.3	178 48.7	16.1	288 00.0	45.4	197 36.7	50.6					
5	80 54.9	263 23.3	+2 38.1	193 49.3	-23 16.4	303 02.0	+16 45.3	212 39.0	-15 50.6					
6	95 57.3	278 22.9	+2 36.9	208 49.9	-23 16.7	318 04.0	+16 45.1	227 41.2	-15 50.7					
7	110 59.8	293 22.5	35.6	223 50.5	16.9	333 06.0	45.0	242 43.4	50.8					
8	126 02.3	308 22.1	34.4	238 51.1	17.2	348 08.0	44.9	257 45.7	50.8					
9	141 04.7	323 21.7	33.2	253 51.7	17.5	3 10.1	44.8	272 47.9	50.9					
10	156 07.2	338 21.3	31.9	268 52.3	17.8	18 12.1	44.6	287 50.1	51.0					
11	171 09.6	353 20.9	+2 30.7	283 52.9	-23 18.0	33 14.1	+16 44.5	302 52.3	-15 51.0					
12	186 12.1	8 20.5	+2 29.4	298 53.5	-23 18.3	48 16.1	+16 44.4	317 54.6	-15 51.1					
13	201 14.6	23 20.1	28.2	313 54.1	18.6	63 18.1	44.3	332 56.8	51.2					
14	216 17.0	38 19.7	27.0	328 54.7	18.9	78 20.1	44.1	347 59.0	51.3					
15	231 19.5	53 19.3	25.7	343 55.3	19.1	93 22.2	44.0	3 01.3	51.3					
16	246 22.0	68 18.9	24.5	358 55.9	19.4	108 24.2	43.9	18 03.5	51.4					
17	261 24.4	83 18.5	+2 23.2	13 56.5	-23 19.7	123 26.2	+16 43.8	33 05.7	-15 51.5					
18	276 26.9	98 18.1	+2 22.0	28 57.1	-23 19.9	138 28.2	+16 43.6	48 08.0	-15 51.5					
19	291 29.4	113 17.7	20.7	43 57.7	20.2	153 30.2	43.5	63 10.2	51.6					
20	306 31.8	128 17.4	19.5	58 58.3	20.5	168 32.3	43.4	78 12.4	51.7					
21	321 34.3	143 17.0	18.3	73 58.9	20.8	183 34.3	43.3	93 14.6	51.7					
22	336 36.7	158 16.6	17.0	88 59.5	21.0	198 36.3	43.1	108 16.9	51.8					
23	351 39.2	173 16.2	15.8	104 00.1	21.3	213 38.3	43.0	123 19.1	51.9					
24	6 41.7	188 15.8	+2 14.5	119 00.7	-23 21.6	228 40.3	+16 42.9	138 21.3	-15 51.9					
Dif	—	-4	-12	+6	-3	+20	-1	+22	-1					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 7			Edad: 3 ^d 7 SD: 15'3 PMG: 15 ^h 08 ^m	PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 Rº: 52 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	17.4	-1	54.4	140	44.3	-14	41.0	60 N	4 27	5 17	5 58	10 58	69	19 12
1	197	17.6		55.4	155	14.2		47.4	58	32	18	57	47	68	22 40
2	212	17.8		56.4	169	44.0		53.6	56	36	20	57	38	66	32 41
3	227	18.0		57.3	184	13.8	-14	59.8	54	39	21	56	30	65	40 44
4	242	18.2		58.3	198	43.5	-15	05.9	52	42	22	56	23	64	47 43
5	257	18.4	-1	59.3	213	13.2	-15	12.0	50	4 45	5 23	5 55	10 17	63	19 54
6	272	18.6	-2	00.2	227	42.8	-15	17.9	45	4 51	5 25	5 54	10 03	61	20 08
7	287	18.8		01.2	242	12.3		23.8	40	55	26	53	9 52	60	20 47
8	302	19.0		02.2	256	41.8		29.6	35	4 58	27	52	43	58	30 48
9	317	19.3		03.2	271	11.3		35.4	30	5 00	28	52	34	57	39 49
10	332	19.5		04.1	285	40.7		41.0	20	03	28	50	20 55	20 54	51
11	347	19.7	-2	05.1	300	10.0	-15	46.6	10 N	5 03	5 28	5 49	9 07	54	21 08
12	2	19.9	-2	06.1	314	39.3	-15	52.1	0	5 03	5 27	5 47	8 56	51	21 20
13	17	20.1		07.1	329	08.5	-15	57.5	10 S	5 01	25	46	44	50	33 54
14	32	20.3		08.0	343	37.7	-16	02.8	20	4 57	22	44	32	48	21 46
15	47	20.5		09.0	358	06.8		08.1	30	50	18	42	17	47	22 01
16	62	20.7		10.0	12	35.9		13.2	35	46	16	41	09	46	10 58
17	77	20.9	-2	10.9	27	04.9	-16	18.3	40	4 41	5 13	5 40	8 00	44	22 21
18	92	21.1	-2	11.9	41	33.9	-16	23.3	45	4 34	5 09	5 38	7 49	43	22 32
19	107	21.3		12.9	56	02.8		28.2	50	25	04	36	36	41	47 61
20	122	21.6		13.9	70	31.6		33.1	52	21	5 01	35	30	40	22 54
21	137	21.8		14.8	85	00.4		37.8	54	16	4 59	34	24	38	23 01
22	152	22.0		15.8	99	29.2		42.5	56	11	56	33	16	37	10 63
23	167	22.2		16.8	113	57.9		47.0	58	4 04	52	32	7 08	35	19 65
24	182	22.4	-2	17.8	128	26.5	-16	51.5	60 S	3 57	4 48	5 30	6 58	34	23 30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 29 ^m 4		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: +0.8 PMG: 16 ^h 03 ^m		Mag: -1.9 PMG: 8 ^h 44 ^m		Mag: +0.6 PMG: 14 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	41.7	188	15.8	+2	14.5	119	00.7	-23	21.6
1	21	44.1	203	15.4		13.3	134	01.3		21.8
2	36	46.6	218	15.0		12.1	149	01.9		22.1
3	51	49.1	233	14.6		10.8	164	02.5		22.4
4	66	51.5	248	14.2		09.6	179	03.1		22.6
5	81	54.0	263	13.8	+2	08.3	194	03.7	-23	22.9
6	96	56.5	278	13.4	+2	07.1	209	04.3	-23	23.2
7	111	58.9	293	13.0		05.8	224	04.8		23.5
8	127	01.4	308	12.6		04.6	239	05.4		23.7
9	142	03.9	323	12.2		03.4	254	06.0		24.0
10	157	06.3	338	11.8		02.1	269	06.6		24.3
11	172	08.8	353	11.4	+2	00.9	284	07.2	-23	24.5
12	187	11.2	8	11.0	+1	59.6	299	07.8	-23	24.8
13	202	13.7	23	10.7		58.4	314	08.4		25.0
14	217	16.2	38	10.3		57.1	329	09.0		25.3
15	232	18.6	53	09.9		55.9	344	09.6		25.6
16	247	21.1	68	09.5		54.7	359	10.2		25.8
17	262	23.6	83	09.1	+1	53.4	14	10.8	-23	26.1
18	277	26.0	98	08.7	+1	52.2	29	11.4	-23	26.4
19	292	28.5	113	08.3		50.9	44	12.0		26.6
20	307	31.0	128	07.9		49.7	59	12.5		26.9
21	322	33.4	143	07.5		48.4	74	13.1		27.2
22	337	35.9	158	07.1		47.2	89	13.7		27.4
23	352	38.3	173	06.7		45.9	104	14.3		27.7
24	7	40.8	188	06.3	+1	44.7	119	14.9	-23	27.9
Dif	—		-4	-12		+6	-3		+20	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 50 ^m 3			Edad: 4 ^d 7 PHE { SD: 15'5 PMG: 16 ^h 00 ^m					4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'4 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	182	22.4	-2	17.8	128	26.5	-16	51.5	60 N	17 39	18 20	19 09	12 07 62	19 50 49				
1	197	22.6			142	55.1	96	-16	55.9	58	40	19 05	11 55 61	20 02 50				
2	212	22.8			157	23.6	95	-17	00.2	43	41	18 01	44 61	13 50				
3	227	23.0			171	52.1	95		04.4	42	42	17 18 58	35 61	22 55				
4	242	23.2			186	20.6	95		08.5	41	52	42 16 55	27 60	30 52				
5	257	23.4	-2	22.6	200	49.0	94	-17	12.6	41	50	17 43 18 15 18 53	11 20 59	20 38 51				
6	272	23.6	-2	23.6	215	17.3	93	-17	16.5	39	45	17 45 18 14 18 48	11 04 59	20 54 52				
7	287	23.8			229	45.6	93		20.3	38	40	46 13 44	10 52 57	21 07 53				
8	302	24.0			244	13.8	92		24.1	38	35	47 12 42	41 57	18 53				
9	317	24.3			265	58.2	90		27.7	36	30	48 12 40	31 57	28 53				
10	332	24.5			275	10.1	91		31.3	36	20	50 12 38	15 55	45 54				
11	347	24.7	-2	28.4	287	38.2	91	-17	34.8	35	10 N	17 52 18 13 18 37	10 01 54	21 59 55				
12	2	24.9	-2	29.4	302	06.3	91	-17	38.1	33	0	17 54 18 14 18 38	9 47 54	22 13 55				
13	17	25.1			316	34.2	89		41.4	33	10 S	55 16 41	34 53	27 55				
14	32	25.3			331	02.2	90		44.6	32	20	17 58 20 45	20 52	41 56				
15	47	25.5			345	30.1	89		47.6	30	30	18 00 24 52	9 04 51	22 58 56				
16	62	25.7			359	57.9	88		50.6	30	35	02 27 18 57	8 55 50	23 08 56				
17	77	25.9	-2	34.3	14	25.7	88	-17	53.5	29	40	18 03 18 30 19 02	8 44 50	23 19 56				
18	92	26.1	-2	35.2	28	53.5	88	-17	56.3	28	45	18 05 18 35 19 10	8 32 49	23 32 57				
19	107	26.3			43	21.2	87	-17	58.9	26	50	08 40 19	17 48	48 57				
20	122	26.5			57	48.8	86	-18	01.5	26	52	09 43 24	10 47	23 56 57				
21	137	26.7			72	16.5	87		04.0	25	54	10 46 29	8 02 47	** ** *				
22	152	26.9			86	44.0	85		06.3	23	56	12 49 35	7 53 46	** ** *				
23	167	27.1			101	11.6	86		08.6	23	58	13 53 41	43 45	** ** *				
24	182	27.3	-2	41.1	115	39.0	84	-18	10.8	22	60 S	18 15 18 57 19 49	7 32 44	** ** *				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 25 ^m 4		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: +0.8 PMG: 16 ^h 02 ^m			Mag: -1.9 PMG: 8 ^h 41 ^m			Mag: +0.6 PMG: 14 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	7	40.8	188	06.3	+1	44.7	119	14.9	-23	27.9	229	28.8	+16	39.9	139	14.8	-15	53.6
1	22	43.3	203	05.9		43.4	134	15.5		28.2	244	30.9		39.8	154	17.0		53.7
2	37	45.7	218	05.5		42.2	149	16.1		28.5	259	32.9		39.6	169	19.2		53.8
3	52	48.2	233	05.1		41.0	164	16.7		28.7	274	34.9		39.5	184	21.4		53.8
4	67	50.7	248	04.8		39.7	179	17.2		29.0	289	36.9		39.4	199	23.7		53.9
5	82	53.1	263	04.4	+1	38.5	194	17.8	-23	29.3	304	39.0	+16	39.3	214	25.9	-15	54.0
6	97	55.6	278	04.0	+1	37.2	209	18.4	-23	29.5	319	41.0	+16	39.1	229	28.1	-15	54.0
7	112	58.1	293	03.6		36.0	224	19.0		29.8	334	43.0		39.0	244	30.3		54.1
8	128	00.5	308	03.2		34.7	239	19.6		30.0	349	45.0		38.9	259	32.6		54.2
9	143	03.0	323	02.8		33.5	254	20.2		30.3	4	47.1		38.8	274	34.8		54.3
10	158	05.5	338	02.4		32.0	269	20.8		30.5	19	49.1		38.6	289	37.0		54.3
11	173	07.9	353	02.0	+1	31.0	284	21.3	-23	30.8	34	51.1	+16	38.5	304	39.2	-15	54.4
12	188	10.4	8	01.6	+1	29.7	299	21.9	-23	31.1	49	53.1	+16	38.4	319	41.5	-15	54.5
13	203	12.8	23	01.2		28.5	314	22.5		31.3	64	55.2		38.3	334	43.7		54.5
14	218	15.3	38	00.8		27.2	329	23.1		31.6	79	57.2		38.1	349	45.9		54.6
15	233	17.8	53	00.4		26.0	344	23.7		31.8	94	59.2		38.0	4	48.1		54.7
16	248	20.2	68	00.0		24.8	359	24.3		32.1	110	01.2		37.9	19	50.4		54.7
17	263	22.7	82	59.7	+1	23.5	14	24.9	-23	32.3	125	03.3	+16	37.8	34	52.6	-15	54.8
18	278	25.2	97	59.3	+1	22.3	29	25.4	-23	32.6	140	05.3	+16	37.7	49	54.8	-15	54.9
19	293	27.6	112	58.9		21.0	44	26.0		32.9	155	07.3		37.5	64	57.0		55.0
20	308	30.1	127	58.5		19.8	59	26.6		33.1	170	09.3		37.4	79	59.3		55.0
21	323	32.6	142	58.1		18.5	74	27.2		33.4	185	11.4		37.3	95	01.5		55.1
22	338	35.0	157	57.7		17.3	89	27.8		33.6	200	13.4		37.2	110	03.7		55.2
23	353	37.5	172	57.3		16.0	104	28.3		33.9	215	15.4		37.0	125	05.9		55.2
24	8	40.0	187	56.9	+1	14.8	119	28.9	-23	34.1	230	17.4	+16	36.9	140	08.2	-15	55.3
Dif	—		-4		-12		+6		-3		+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: 11 ^h 50 ^m 0			Edad: 5 ^d 7 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 58 ^m 0 PMG: 16 ^h 54 ^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	182	27.3	-2	41.1	115	39.0	-18	10.8	20	60 N	4	32	5	21	6	03	
1	197	27.6		42.0	130	06.5	85	12.8	20	58	37	23	02	12	56	54	
2	212	27.8		43.0	144	33.9	84	14.8	20	56	40	24	01	45	54	21	
3	227	28.0		44.0	159	01.2	83	16.6	18	54	43	25	6	00	36	53	
4	242	28.2		45.0	173	28.6	84	18.4	18	52	46	25	5	59	27	54	
5	257	28.4	-2	45.9	187	55.8	82	-18	20.0	16	50	4	48	5	58	12	
6	272	28.6	-2	46.9	202	23.1	83	-18	21.5	15	45	4	53	5	57	12	
7	287	28.8		47.9	216	50.3	82	23.0	15	40	57	28	55	11	49	55	
8	302	29.0		48.8	231	17.4	81	24.3	13	35	4	59	29	54	38	54	
9	317	29.2		49.8	245	44.5	81	25.5	12	30	5	01	29	53	28	54	
10	332	29.4		50.8	260	11.6	81	26.6	11	20	03	29	51	11	10	55	
11	347	29.6	-2	51.7	274	38.7	81	-18	27.6	10	10 N	5	03	5	28	10	
12	2	29.8	-2	52.7	289	05.7	80	-18	28.5	9	0	5	02	5	26	10	
13	17	30.0		53.7	303	32.7	80	29.2	7	10 S	4	59	24	45	27	56	
14	32	30.2		54.7	317	59.6	79	29.9	7	20	55	20	43	10	12	56	
15	47	30.4		55.6	332	26.5	79	30.5	6	30	48	16	40	9	55	56	
16	62	30.6		56.6	346	53.4	79	30.9	4	35	43	13	38	45	56	**	
17	77	30.8	-2	57.6	1	20.2	78	-18	31.2	3	40	4	37	5	09	9	
18	92	31.0	-2	58.5	15	47.0	78	-18	31.5	3	45	4	30	5	05	9	
19	107	31.2	-2	59.5	30	13.8	78	31.6	1	50	20	4	59	32	9	05	
20	122	31.4	-3	00.5	44	40.5	77	31.6	0	52	16	57	30	8	57	56	
21	137	31.6		01.5	59	07.2	77	31.4	2	54	11	54	29	49	56	0	
22	152	31.8		02.4	73	33.9	77	31.2	2	56	4	05	50	28	39	56	
23	167	32.0		03.4	88	00.5	76	30.9	3	58	3	58	46	26	28	56	
24	182	32.2	-3	04.4	102	27.2	77	-18	30.4	5	60 S	3	50	4	42	8	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 21 ^m 5			Mag: -3.9 PMG: 11 ^h 29 ^m			Mag: +0.8 PMG: 16 ^h 01 ^m			Mag: -1.9 PMG: 8 ^h 38 ^m			Mag: +0.6 PMG: 14 ^h 37 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	8	40.0		187	56.9	+1	14.8	119	28.9	-23	34.1	230	17.4	+16	36.9	140	08.2
1	23	42.4		202	56.5		13.5	134	29.5		34.4	245	19.5		36.8	155	10.4
2	38	44.9		217	56.1		12.3	149	30.1		34.6	260	21.5		36.7	170	12.6
3	53	47.3		232	55.7		11.0	164	30.7		34.9	275	23.5		36.5	185	14.8
4	68	49.8		247	55.3		09.8	179	31.2		35.1	290	25.5		36.4	200	17.0
5	83	52.3		262	54.9	+1	08.5	194	31.8	-23	35.4	305	27.6	+16	36.3	215	19.3
6	98	54.7		277	54.6	+1	07.3	209	32.4	-23	35.6	320	29.6	+16	36.2	230	21.5
7	113	57.2		292	54.2		06.0	224	33.0		35.9	335	31.6		36.0	245	23.7
8	128	59.7		307	53.8		04.8	239	33.6		36.1	350	33.7		35.9	260	25.9
9	144	02.1		322	53.4		03.5	254	34.1		36.4	5	35.7		35.8	275	28.2
10	159	04.6		337	53.0		02.3	269	34.7		36.6	20	37.7		35.7	290	30.4
11	174	07.1		352	52.6	+1	01.0	284	35.3	-23	36.9	35	39.7	+16	35.6	305	32.6
12	189	09.5		7	52.2	+0	59.8	299	35.9	-23	37.1	50	41.8	+16	35.4	320	34.8
13	204	12.0		22	51.8		58.5	314	36.4		37.4	65	43.8		35.3	335	37.0
14	219	14.5		37	51.4		57.3	329	37.0		37.6	80	45.8		35.2	350	39.3
15	234	16.9		52	51.0		56.0	344	37.6		37.9	95	47.9		35.1	5	41.5
16	249	19.4		67	50.6		54.8	359	38.2		38.1	110	49.9		34.9	20	43.7
17	264	21.8		82	50.2	+0	53.5	14	38.7	-23	38.4	125	51.9	+16	34.8	35	45.9
18	279	24.3		97	49.9	+0	52.3	29	39.3	-23	38.6	140	54.0	+16	34.7	50	48.2
19	294	26.8		112	49.5		51.0	44	39.9		38.9	155	56.0		34.6	65	50.4
20	309	29.2		127	49.1		49.8	59	40.5		39.1	170	58.0		34.4	80	52.6
21	324	31.7		142	48.7		48.5	74	41.0		39.4	186	00.0		34.3	95	54.8
22	339	34.2		157	48.3		47.3	89	41.6		39.6	201	02.1		34.2	110	57.0
23	354	36.6		172	47.9		46.0	104	42.2		39.9	216	04.1		34.1	125	59.3
24	9	39.1		187	47.5	+0	44.8	119	42.8	-23	40.1	231	06.1	+16	34.0	141	01.5
Dif	—			-4		-12		+6		-2		+20		-1		+22	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 49 ^m 7		Edad: 6 ^d 7 PHE { 4 ^h : 58/2 12 ^h : 58/4 20 ^h : 58/6 R°: 56 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	32.2	-3 04.4	102	27.2	-18 30.4	76	60 N	17 33	18 14	19 03	14 02 43	21 42 73	
1	197	32.5	05.3	116	53.8	29.9	5	58	34	13	18 59	13 50 44	21 54 72	
2	212	32.7	06.3	131	20.3	29.2	7	56	36	13	56	39 45	22 04 71	
3	227	32.9	07.3	145	46.9	28.4	8	54	37	12	53	29 47	14 69	
4	242	33.1	08.2	160	13.4	27.5	9	52	38	11	51	21 47	22 68	
5	257	33.3	-3 09.2	174	39.9	-18 26.5	10	50	17 39	18 11	18 48	13 13 48	22 29 68	
6	272	33.5	-3 10.2	189	06.3	-18 25.3	12	45	17 41	18 10	18 44	12 57 50	22 45 66	
7	287	33.7	11.1	203	32.8	24.1	12	40	43	10	41	44 50	22 58 64	
8	302	33.9	12.1	217	59.2	22.7	14	35	44	09	39	32 52	23 09 63	
9	317	34.1	13.1	232	25.6	21.3	14	30	46	10	37	22 53	19 62	
10	332	34.3	14.1	246	51.9	19.7	16	20	48	10	36	12 05 54	36 59	
11	347	34.5	-3 15.0	261	18.3	-18 18.0	17	10 N	17 51	18 12	18 36	11 51 55	23 50 58	
12	2	34.7	-3 16.0	275	44.6	-18 16.1	19	0	17 53	18 14	18 38	11 37 56	*** ** *	
13	17	34.9	17.0	290	11.0	14.2	19	10 S	55	16	41	23 57	*** ** *	
14	32	35.1	17.9	304	37.2	12.2	20	20	17 58	20	46	11 08 59	*** ** *	
15	47	35.3	18.9	319	03.5	10.0	22	30	18 01	25	53	10 51 60	*** ** *	
16	62	35.5	19.9	333	29.8	07.7	23	35	03	29	18 58	41 61	0 04 53	
17	77	35.7	-3 20.8	347	56.0	-18 05.3	24	40	18 05	18 33	19 05	10 30 61	0 15 53	
18	92	35.9	-3 21.8	2	22.3	-18 02.8	25	45	18 08	18 37	19 12	10 17 62	0 29 52	
19	107	36.1	22.8	16	48.5	-18 00.2	26	50	11	44	23	10 01 63	45 51	
20	122	36.3	23.7	31	14.7	-17 57.4	28	52	12	46	27	9 53 64	0 53 50	
21	137	36.5	24.7	45	40.9	54.6	28	54	14	50	33	45 65	1 01 50	
22	152	36.7	25.7	60	07.1	51.6	30	56	16	53	39	35 66	11 49	
23	167	36.9	26.7	74	33.2	48.5	31	58	18	18 58	46	24 67	21 49	
24	182	37.1	-3 27.6	88	59.4	-17 45.3	32	60 S	18 20	19 02	19 55	9 12 68	1 34 47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 17 ^m 6		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: +0.8 PMG: 16 ^h 01 ^m		Mag: -1.9 PMG: 8 ^h 34 ^m		Mag: +0.6 PMG: 14 ^h 34 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	9	39.1	187	47.5	+0 44.8	119	42.8	-23 40.1	231	06.1	+16 34.0	141	01.5	-15 57.0
1	24	41.6	202	47.1	43.5	134	43.3	40.4	246	08.2	33.8	156	03.7	57.1
2	39	44.0	217	46.7	42.3	149	43.9	40.6	261	10.2	33.7	171	05.9	57.1
3	54	46.5	232	46.3	41.0	164	44.5	40.9	276	12.2	33.6	186	08.1	57.2
4	69	48.9	247	45.9	39.8	179	45.1	41.1	291	14.3	33.5	201	10.4	57.3
5	84	51.4	262	45.6	+0 38.5	194	45.6	-23 41.3	306	16.3	+16 33.3	216	12.6	-15 57.4
6	99	53.9	277	45.2	+0 37.3	209	46.2	-23 41.6	321	18.3	+16 33.2	231	14.8	-15 57.4
7	114	56.3	292	44.8	36.0	224	46.8	41.8	336	20.4	33.1	246	17.0	57.5
8	129	58.8	307	44.4	34.8	239	47.3	42.1	351	22.4	33.0	261	19.3	57.6
9	145	01.3	322	44.0	33.5	254	47.9	42.3	6	24.4	32.9	276	21.5	57.6
10	160	03.7	337	43.6	32.3	269	48.5	42.6	21	26.5	32.7	291	23.7	57.7
11	175	06.2	352	43.2	+0 31.0	284	49.1	-23 42.8	36	28.5	+16 32.6	306	25.9	-15 57.8
12	190	08.7	7	42.8	+0 29.8	299	49.6	-23 43.0	51	30.5	+16 32.5	321	28.1	-15 57.9
13	205	11.1	22	42.4	28.5	314	50.2	43.3	66	32.6	32.4	336	30.4	57.9
14	220	13.6	37	42.0	27.3	329	50.8	43.5	81	34.6	32.2	351	32.6	58.0
15	235	16.1	52	41.6	26.0	344	51.3	43.8	96	36.6	32.1	6	34.8	58.1
16	250	18.5	67	41.2	24.8	359	51.9	44.0	111	38.7	32.0	21	37.0	58.1
17	265	21.0	82	40.9	+0 23.5	14	52.5	-23 44.2	126	40.7	+16 31.9	36	39.2	-15 58.2
18	280	23.4	97	40.5	+0 22.3	29	53.0	-23 44.5	141	42.7	+16 31.8	51	41.5	-15 58.3
19	295	25.9	112	40.1	21.0	44	53.6	44.7	156	44.8	31.6	66	43.7	58.3
20	310	28.4	127	39.7	19.8	59	54.2	45.0	171	46.8	31.5	81	45.9	58.4
21	325	30.8	142	39.3	18.5	74	54.7	45.2	186	48.8	31.4	96	48.1	58.5
22	340	33.3	157	38.9	17.3	89	55.3	45.4	201	50.9	31.3	111	50.3	58.6
23	355	35.8	172	38.5	16.0	104	55.9	45.7	216	52.9	31.1	126	52.5	58.6
24	10	38.2	187	38.1	+0 14.8	119	56.4	-23 45.9	231	54.9	+16 31.0	141	54.8	-15 58.7
Dif	—	—	-4	-13	—	+6	-2	—	+20	-1	—	+22	-1	—

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16'0 PMG: 11 ^h 49 ^m 4			Edad: 7 ^d 7 PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'2 R°: 57 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m					
0	182	37.1	-3	27.6	88	59.4	-17	45.3	60 N	4	37	5	26	6	07	14	45	33	22	55	82		
1	197	37.3		28.6	103	25.5	71	42.0	33	58	41	27	06			34	36		23	06	79		
2	212	37.5		29.6	117	51.6	71	38.6	34	56	44	28	05			24	38		15	77			
3	227	37.7		30.5	132	17.8	72	35.1	35	54	47	28	03			16	39		23	77			
4	242	37.9		31.5	146	43.9	71	31.4	37	52	49	29	02			08	41		30	74			
5	257	38.1	-3	32.5	161	10.0	71	-17	27.7	37	50	4	51	5	29	6	01	14	01	42	23	37	73
6	272	38.3	-3	33.4	175	36.1	71	-17	23.8	39	45	4	56	5	30	5	59	13	47	44	23	51	70
7	287	38.5		34.4	190	02.2	71	19.8	40	40	4	59	30	57			34	47		**	**	**	
8	302	38.7		35.4	204	28.3	71	15.7	41	35	5	01	30	55			24	48		**	**	**	
9	317	38.9		36.3	218	54.4	71	11.5	42	30	02	30	54			13	15	50		**	**	**	
10	332	39.1		37.3	233	20.5	71	07.1	44	20	04	29	51			12	59	53		**	**	**	
11	347	39.3	-3	38.3	247	46.5	70	-17	02.7	44	10 N	5	03	5	28	5	49	12	46	54	**	**	**
12	2	39.5	-3	39.2	262	12.6	71	-16	58.1	46	0	5	01	5	25	5	46	12	33	56	0	04	56
13	17	39.7		40.2	276	38.7	71	53.5	46	10 S	4	58	23	44			20	59		17	55		
14	32	39.9		41.2	291	04.8	71	48.7	48	20	53	19	41			12	07	60		31	53		
15	47	40.1		42.1	305	30.8	70	43.8	49	30	45	13	37			11	51	63		48	51		
16	62	40.3		43.1	319	56.9	71	38.8	50	35	40	10	35			42	64		0	57	50		
17	77	40.5	-3	44.1	334	23.0	71	-16	33.7	51	40	4	34	5	06	5	33	11	31	66	1	08	48
18	92	40.7	-3	45.0	348	49.0	70	-16	28.5	52	45	4	26	5	01	5	30	11	19	68	1	21	46
19	107	40.9		46.0	3	15.1	71	23.1	54	50	16	4	55	27			11	04	71		36	45	
20	122	41.1		47.0	17	41.2	71	17.7	54	52	11	52	26			10	57	72		43	44		
21	137	41.3		47.9	32	07.3	71	12.1	56	54	4	05	48	24			50	73		1	51	43	
22	152	41.5		48.9	46	33.3	70	06.5	56	56	3	59	45	22			41	75		2	00	41	
23	167	41.7		49.9	60	59.4	71	-16	00.7	58	58	52	40	20			31	76		10	40		
24	182	41.9	-3	50.8	75	25.5	71	-15	54.9	58	60 S	3	43	4	36	5	18	10	20	78	2	21	38
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 23 ^h 13 ^m 6		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: +0.8 PMG: 16 ^h 00 ^m			Mag: -1.9 PMG: 8 ^h 31 ^m			Mag: +0.6 PMG: 14 ^h 30 ^m											
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'									
0	10	38.2	187	38.1	+0	14.8	119	56.4	-23	45.9	231	54.9	+16	31.0	141	54.8	-15	58.7					
1	25	40.7	202	37.7		13.5	134	57.0		46.1	246	57.0		30.9	156	57.0		58.8					
2	40	43.2	217	37.3		12.3	149	57.6		46.4	261	59.0		30.8	171	59.2		58.8					
3	55	45.6	232	36.9		11.0	164	58.1		46.6	277	01.0		30.7	187	01.4		58.9					
4	70	48.1	247	36.6		09.8	179	58.7		46.8	292	03.1		30.5	202	03.6		59.0					
5	85	50.6	262	36.2	+0	08.5	194	59.3	-23	47.1	307	05.1	+16	30.4	217	05.9	-15	59.1					
6	100	53.0	277	35.8	+0	07.3	209	59.8	-23	47.3	322	07.1	+16	30.3	232	08.1	-15	59.1					
7	115	55.5	292	35.4		06.0	225	00.4		47.5	337	09.2		30.2	247	10.3		59.2					
8	130	57.9	307	35.0		04.8	240	00.9		47.8	352	11.2		30.0	262	12.5		59.3					
9	146	00.4	322	34.6		03.5	255	01.5		48.0	7	13.3		29.9	277	14.7		59.3					
10	161	02.9	337	34.2		02.2	270	02.1		48.2	22	15.3		29.8	292	16.9		59.4					
11	176	05.3	352	33.8	+0	01.0	285	02.6	-23	48.5	37	17.3	+16	29.7	307	19.2	-15	59.5					
12	191	07.8	7	33.4	-0	00.3	300	03.2	-23	48.7	52	19.4	+16	29.6	322	21.4	-15	59.6					
13	206	10.3	22	33.0		01.5	315	03.8		48.9	67	21.4		29.4	337	23.6		59.6					
14	221	12.7	37	32.6		02.8	330	04.3		49.2	82	23.4		29.3	352	25.8		59.7					
15	236	15.2	52	32.3		04.0	345	04.9		49.4	97	25.5		29.2	7	28.0		59.8					
16	251	17.7	67	31.9		05.3	0	05.4		49.6	112	27.5		29.1	22	30.3		59.8					
17	266	20.1	82	31.5	-0	06.5	15	06.0	-23	49.9	127	29.6	+16	29.0	37	32.5	-15	59.9					
18	281	22.6	97	31.1	-0	07.8	30	06.6	-23	50.1	142	31.6	+16	28.8	52	34.7	-16	00.0					
19	296	25.1	112	30.7		09.0	45	07.1		50.3	157	33.6		28.7	67	36.9	-16	00.1					
20	311	27.5	127	30.3		10.3	60	07.7		50.6	172	35.7		28.6	82	39.1		00.1					
21	326	30.0	142	29.9		11.5	75	08.2		50.8	187	37.7		28.5	97	41.3		00.2					
22	341	32.4	157	29.5		12.8	90	08.8		51.0	202	39.7		28.3	112	43.6		00.3					
23	356	34.9	172	29.1		14.0	105	09.4		51.2	217	41.8		28.2	127	45.8		00.3					
24	11	37.4	187	28.7	-0	15.3	120	09.9	-23	51.5	232	43.8	+16	28.1	142	48.0	-16	00.4					
Dif	—		-4		-13	+6		-2			+20		-1			+22		-1					

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 1			Edad: 8 ^d 7 PHE { 4 ^h : 59'4 12 ^h : 59'6 20 ^h : 59'8 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	182	41.9	-3	50.8	75	25.5	-15	54.9	60 N	17 27	18 08	18 57	15 18 27	** ** *	
1	197	42.0		51.8	89	51.6		48.9	60	29	08	53	10 29	** ** *	
2	212	42.2		52.8	104	17.7		42.8	61	30	07	50	15 02 32	** ** *	
3	227	42.4		53.7	118	43.8		36.6	62	32	07	48	14 55 34	** ** *	
4	242	42.6		54.7	133	09.9		30.3	63	33	07	46	49 35	** ** *	
5	257	42.8	-3	55.7	147	36.1	-15	23.9	64	17 34	18 07	18 44	14 43 37	** ** *	
6	272	43.0	-3	56.6	162	02.2	-15	17.4	65	17 37	18 06	18 40	14 31 40	** ** *	
7	287	43.2		57.6	176	28.3		10.8	66	39	06	38	21 43	0 02 68	
8	302	43.4		58.6	190	54.5	-15	04.1	67	41	07	36	12 45	12 66	
9	317	43.6	-3	59.5	205	20.6	-14	57.3	68	43	07	35	14 05 47	21 63	
10	332	43.8	-4	00.5	219	46.8		50.4	69	47	09	34	13 52 50	35 61	
11	347	44.0	-4	01.5	234	12.9	-14	43.4	70	17 49	18 10	18 35	13 40 53	0 48 59	
12	2	44.2	-4	02.4	248	39.1	-14	36.3	71	17 52	18 13	18 37	13 29 56	1 00 56	
13	17	44.4		03.4	263	05.3		29.1	72	55	16	41	19 58	12 54	
14	32	44.6		04.4	277	31.5		21.8	73	17 59	21	46	13 07 62	24 52	
15	47	44.8		05.3	291	57.7		14.4	74	18 02	26	18 55	12 54 65	39 48	
16	62	45.0		06.3	306	24.0	-14	06.9	75	35	05	30	19 00	46 67	
17	77	45.2	-4	07.3	320	50.2	-13	59.3	76	18 07	18 35	19 07	12 37 69	1 56 45	
18	92	45.4	-4	08.2	335	16.5	-13	51.6	77	18 10	18 40	19 15	12 27 72	2 07 43	
19	107	45.6		09.2	349	42.7		43.8	78	14	47	26	15 75	21 39	
20	122	45.8		10.1	4	09.0		35.9	79	16	50	31	09 76	27 38	
21	137	46.0		11.1	18	35.3		28.0	79	18	54	37	12 03 78	34 36	
22	152	46.2		12.1	33	01.6		19.9	81	20	18 58	44	11 56 80	41 35	
23	167	46.3		13.0	47	27.9		11.7	82	22	19 02	19 52	47 83	50 32	
24	182	46.5	-4	14.0	61	54.2	-13	03.5	82	18 25	19 07	20 01	11 38 85	2 59 31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 09 ^m 7		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: +0.8 PMG: 15 ^h 59 ^m		Mag: -2.0 PMG: 8 ^h 28 ^m		Mag: +0.6 PMG: 14 ^h 27 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	11	37.4	187	28.7	-0	15.3	120	09.9	-23	51.5
1	26	39.8	202	28.3		16.5	135	10.5		51.7
2	41	42.3	217	27.9		17.8	150	11.0		51.9
3	56	44.8	232	27.6		19.1	165	11.6		52.2
4	71	47.2	247	27.2		20.3	180	12.1		52.4
5	86	49.7	262	26.8	-0	21.6	195	12.7	-23	52.6
6	101	52.2	277	26.4	-0	22.8	210	13.3	-23	52.8
7	116	54.6	292	26.0		24.1	225	13.8		53.1
8	131	57.1	307	25.6		25.3	240	14.4		53.3
9	146	59.5	322	25.2		26.6	255	14.9		53.5
10	162	02.0	337	24.8		27.8	270	15.5		53.7
11	177	04.5	352	24.4	-0	29.1	285	16.0	-23	54.0
12	192	06.9	7	24.0	-0	30.3	300	16.6	-23	54.2
13	207	09.4	22	23.6		31.6	315	17.1		54.4
14	222	11.9	37	23.2		32.8	330	17.7		54.6
15	237	14.3	52	22.9		34.1	345	18.3		54.9
16	252	16.8	67	22.5		35.3	0	18.8		55.1
17	267	19.3	82	22.1	-0	36.6	15	19.4	-23	55.3
18	282	21.7	97	21.7	-0	37.9	30	19.9	-23	55.5
19	297	24.2	112	21.3		39.1	45	20.5		55.7
20	312	26.7	127	20.9		40.4	60	21.0		56.0
21	327	29.1	142	20.5		41.6	75	21.6		56.2
22	342	31.6	157	20.1		42.9	90	22.1		56.4
23	357	34.0	172	19.7		44.1	105	22.7		56.6
24	12	36.5	187	19.3	-0	45.4	120	23.2	-23	56.8
Dif	—		-4		-13		+6		-2	
								+20		-1
									+22	
										-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 7			Edad: 9 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 60'1 20 ^h : 60'2 Rº: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	46.5	-4	14.0	61	54.2	-13	03.5	60 N	4	42	5	31	6	12	15	45
1	197	46.7		15.0	76	20.6	74	-12	55.2	58	45		31	10		39	26
2	212	46.9		15.9	90	46.9	73		46.7	56	48		32	09		34	28
3	227	47.1		16.9	105	13.3	74		38.2	54	51		32	07		29	30
4	242	47.3		17.9	119	39.7	74		29.6	52	53		32	06		24	32
5	257	47.5	-4	18.8	134	06.1	74	-12	20.9	50	4	55	5	32	6	04	15
6	272	47.7	-4	19.8	148	32.5	74	-12	12.2	45	4	58	5	32	6	01	15
7	287	47.9		20.8	162	59.0	75	-12	03.3	40	5	01		32	5	59	15
8	302	48.1		21.7	177	25.4	74	-11	54.4	35		02		32	57	14	57
9	317	48.3		22.7	191	51.9	75		45.4	30		03		31	55	52	45
10	332	48.5		23.6	206	18.4	75		36.3	20		04		30	52	42	49
11	347	48.7	-4	24.6	220	44.9	75	-11	27.1	10 N	5	03	5	27	5	48	14
12	2	48.9	-4	25.6	235	11.4	75	-11	17.8	0	5	01	5	25	5	45	14
13	17	49.0		26.5	249	37.9	75	-11	08.5	10 S	4	57		21	42	17	59
14	32	49.2		27.5	264	04.4	75	-10	59.1	20		51		17	39	14	09
15	47	49.4		28.5	278	31.0	76		49.6	30		43		11	35	13	59
16	62	49.6		29.4	292	57.6	76		40.0	35		37		07	33	53	68
17	77	49.8	-4	30.4	307	24.2	76	-10	30.4	40	4	30	5	03	5	30	13
18	92	50.0	-4	31.4	321	50.8	76	-10	20.7	45	4	22	4	57	5	27	13
19	107	50.2		32.3	336	17.4	76		10.9	50		11		50	23	30	77
20	122	50.4		33.3	350	44.1	77	-10	01.0	52		06		47	21	25	80
21	137	50.6		34.2	5	10.8	77	-9	51.1	54	4	00		43	19	21	81
22	152	50.8		35.2	19	37.4	76		41.1	56	3	53		39	17	16	83
23	167	51.0		36.2	34	04.1	77		31.1	58		45		35	15	10	86
24	182	51.2	-4	37.1	48	30.9	78	-9	21.0	60 S	3	36	4	29	5	12	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 05 ^m 8		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: +0.8 PMG: 15 ^h 58 ^m		Mag: -2.0 PMG: 8 ^h 25 ^m		Mag: +0.6 PMG: 14 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	12	36.5	187	19.3	-0	45.4	120	23.2	-23	56.8
1	27	39.0	202	18.9		46.6	135	23.8		57.1
2	42	41.4	217	18.5		47.9	150	24.3		57.3
3	57	43.9	232	18.2		49.1	165	24.9		57.5
4	72	46.4	247	17.8		50.4	180	25.4		57.7
5	87	48.8	262	17.4	-0	51.6	195	26.0	-23	57.9
6	102	51.3	277	17.0	-0	52.9	210	26.5	-23	58.2
7	117	53.8	292	16.6		54.2	225	27.1		58.4
8	132	56.2	307	16.2		55.4	240	27.6		58.6
9	147	58.7	322	15.8		56.7	255	28.2		58.8
10	163	01.2	337	15.4		57.9	270	28.7		59.0
11	178	03.6	352	15.0	-0	59.2	285	29.3	-23	59.2
12	193	06.1	7	14.6	-1	00.4	300	29.8	-23	59.5
13	208	08.5	22	14.2		01.7	315	30.4		59.7
14	223	11.0	37	13.8		02.9	330	30.9	-23	59.9
15	238	13.5	52	13.4		04.2	345	31.5	-24	00.1
16	253	15.9	67	13.1		05.4	0	32.0		00.3
17	268	18.4	82	12.7	-1	06.7	15	32.6	-24	00.5
18	283	20.9	97	12.3	-1	07.9	30	33.1	-24	00.7
19	298	23.3	112	11.9		09.2	45	33.7		01.0
20	313	25.8	127	11.5		10.5	60	34.2		01.2
21	328	28.3	142	11.1		11.7	75	34.7		01.4
22	343	30.7	157	10.7		13.0	90	35.3		01.6
23	358	33.2	172	10.3		14.2	105	35.8		01.8
24	13	35.6	187	09.9	-1	15.5	120	36.4	-24	02.0

Dif	—	-4	-13	+5	-2	+20	-1	+22	-

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: 10 ^d 7 PHE { SD: 16'4 PMG: 21 ^h 34 ^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	182	51.2	-4	37.1	48	30.9	-9 21.0	60 N	17 21	18 02	18 51	16 08 21	1 44 90					
1	197	51.3		38.1	62	57.6	77 10.8	58	23	02	48	05 23	50 86					
2	212	51.5		39.0	77	24.3	77 -9 00.5	56	25	02	45	16 02 25	54 85					
3	227	51.7		40.0	91	51.1	78 -8 50.2	54	27	02	43	15 59 27	1 59 82					
4	242	51.9		41.0	106	17.9	78 39.8	52	29	02	41	56 29	2 03 80					
5	257	52.1	-4	41.9	120	44.7	78 -8 29.4	50	17 30	18 02	18 40	15 54 31	2 06 78					
6	272	52.3	-4	42.9	135	11.5	78 -8 18.9	45	17 33	18 03	18 37	15 48 35	2 14 74					
7	287	52.5		43.9	149	38.3	78 -8 08.4	40	36	03	35	44 38	20 71					
8	302	52.7		44.8	164	05.2	79 -7 57.8	35	39	04	33	40 41	25 69					
9	317	52.9		45.8	178	32.0	78 47.1	30	41	05	32	37 43	30 66					
10	332	53.0		46.7	192	58.9	79 36.4	20	45	07	32	31 47	38 62					
11	347	53.2	-4	47.7	207	25.8	79 -7 25.6	10 N	17 48	18 09	18 34	15 25 51	2 45 58					
12	2	53.4	-4	48.7	221	52.7	79 -7 14.8	0	17 52	18 12	18 37	15 21 54	2 52 54					
13	17	53.6		49.6	236	19.7	80 -7 03.9	10 S	55	16	41	16 58	2 58 52					
14	32	53.8		50.6	250	46.6	79 -6 53.0	20	17 59	21	47	10 62	3 05 48					
15	47	54.0		51.5	265	13.6	80 42.0	30	18 04	28	18 56	05 66	13 44					
16	62	54.2		52.5	279	40.5	79 31.0	35	06	32	19 02	15 01 69	17 42					
17	77	54.4	-4	53.5	294	07.5	80 -6 20.0	40	18 09	18 37	19 09	14 57 72	3 22 39					
18	92	54.6	-4	54.4	308	34.5	80 -6 08.9	45	18 13	18 43	19 18	14 53 74	3 28 36					
19	107	54.7		55.4	323	01.5	80 -5 57.7	50	17	50	30	47 79	35 32					
20	122	54.9		56.3	337	28.6	81 46.6	52	19	54	35	45 80	38 31					
21	137	55.1		57.3	351	55.6	80 35.3	54	21	18 57	41	42 83	42 28					
22	152	55.3		58.3	6	22.7	81 24.1	56	24	19 02	49	39 85	46 26					
23	167	55.5	-4	59.2	20	49.8	81 12.8	58	26	07	19 57	36 87	50 24					
24	182	55.7	-5	00.2	35	16.8	80 -5 01.5	60 S	18 29	19 13	20 07	14 32 90	3 55 21					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 01 ^m 8		Mag: -3.9 PMG: 11 ^h 32 ^m			Mag: +0.8 PMG: 15 ^h 57 ^m			Mag: -2.0 PMG: 8 ^h 21 ^m			Mag: +0.6 PMG: 14 ^h 20 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	13	35.6	187	09.9	-1	15.5	120	36.4	-24	02.0	234	21.9	+16	22.3	144	34.3	-16	03.9
1	28	38.1	202	09.5		16.7	135	36.9		02.2	249	24.0		22.2	159	36.5		03.9
2	43	40.6	217	09.1		18.0	150	37.5		02.4	264	26.0		22.1	174	38.7		04.0
3	58	43.0	232	08.7		19.2	165	38.0		02.6	279	28.1		22.0	189	40.9		04.1
4	73	45.5	247	08.3		20.5	180	38.6		02.8	294	30.1		21.9	204	43.1		04.1
5	88	48.0	262	07.9	-1	21.7	195	39.1	-24	03.1	309	32.2	+16	21.7	219	45.3	-16	04.2
6	103	50.4	277	07.5	-1	23.0	210	39.6	-24	03.3	324	34.2	+16	21.6	234	47.6	-16	04.3
7	118	52.9	292	07.2		24.3	225	40.2		03.5	339	36.3		21.5	249	49.8		04.4
8	133	55.4	307	06.8		25.5	240	40.7		03.7	354	38.3		21.4	264	52.0		04.4
9	148	57.8	322	06.4		26.8	255	41.3		03.9	9	40.3		21.3	279	54.2		04.5
10	164	00.3	337	06.0		28.0	270	41.8		04.1	24	42.4		21.2	294	56.4		04.6
11	179	02.8	352	05.6	-1	29.3	285	42.3	-24	04.3	39	44.4	+16	21.0	309	58.6	-16	04.6
12	194	05.2	7	05.2	-1	30.5	300	42.9	-24	04.5	54	46.5	+16	20.9	325	00.8	-16	04.7
13	209	07.7	22	04.8		31.8	315	43.4		04.7	69	48.5		20.8	340	03.0		04.8
14	224	10.1	37	04.4		33.0	330	44.0		04.9	84	50.6		20.7	355	05.2		04.9
15	239	12.6	52	04.0		34.3	345	44.5		05.1	99	52.6		20.6	10	07.5		04.9
16	254	15.1	67	03.6		35.5	0	45.1		05.3	114	54.7		20.4	25	09.7		05.0
17	269	17.5	82	03.2	-1	36.8	15	45.6	-24	05.5	129	56.7	+16	20.3	40	11.9	-16	05.1
18	284	20.0	97	02.8	-1	38.0	30	46.1	-24	05.7	144	58.8	+16	20.2	55	14.1	-16	05.2
19	299	22.5	112	02.4		39.3	45	46.7		05.9	160	00.9		20.1	70	16.3		05.2
20	314	24.9	127	02.0		40.6	60	47.2		06.1	175	02.9		20.0	85	18.5		05.3
21	329	27.4	142	01.6		41.8	75	47.7		06.3	190	05.0		19.9	100	20.7		05.4
22	344	29.9	157	01.2		43.1	90	48.3		06.6	205	07.0		19.7	115	22.9		05.4
23	359	32.3	172	00.8		44.3	105	48.8		06.8	220	09.1		19.6	130	25.1		05.5
24	14	34.8	187	00.5	-1	45.6	120	49.4	-24	07.0	235	11.1	+16	19.5	145	27.4	-16	05.6
Dif	—		-4	-13		+5	-2		+20	-1		+22		-1				-1

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 1			Edad: 11 ^d 7 PHE { 4 ^h : 60'5 12 ^h : 60'5 20 ^h : 60'5 Rº: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	55.7	-5	00.2	35	16.8	-5	01.5	60 N	4 47	5 35	6 17	16 29	20	3 14	90	
1	197	55.9		01.1	49	43.9	81	-4 50.1	114 58	50	36	15	28	23	16	88	
2	212	56.0		02.1	64	11.1	82	38.7	114 56	52	35	13	27	25	19	85	
3	227	56.2		03.1	78	38.2	81	27.3	114 54	54	35	11	26	27	21	82	
4	242	56.4		04.0	93	05.3	81	15.8	115 52	56	35	09	25	29	23	80	
5	257	56.6	-5	05.0	107	32.5	82	-4 04.3	115 50	4 58	5 35	6 07	16 25	30	3 24	79	
6	272	56.8	-5	05.9	121	59.7	82	-3 52.8	115 45	5 01	5 35	6 04	16 23	34	3 28	75	
7	287	57.0		06.9	136	26.8	81	41.3	115 40	03	34	6 01	22	37	31	72	
8	302	57.2		07.9	150	54.0	82	29.7	116 35	04	33	5 58	21	40	34	68	
9	317	57.3		08.8	165	21.2	82	18.1	116 30	04	32	56	20	42	36	66	
10	332	57.5		09.8	179	48.4	82	-3 06.5	116 20	04	30	52	18	47	40	62	
11	347	57.7	-5	10.7	194	15.7	83	-2 54.9	116 10 N	5 03	5 27	5 48	16 16	51	3 43	58	
12	2	57.9	-5	11.7	208	42.9	82	-2 43.3	116 0	5 00	5 24	5 45	16 15	54	3 46	55	
13	17	58.1		12.7	223	10.1	82	31.6	117 10 S	4 56	20	41	14	57	50	50	
14	32	58.3		13.6	237	37.4	83	19.9	117 20	49	15	37	12	62	53	47	
15	47	58.5		14.6	252	04.7	83	-2 08.2	117 30	40	08	33	11	66	57	42	
16	62	58.6		15.5	266	31.9	82	-1 56.5	117 35	34	5 04	30	10	68	3 59	40	
17	77	58.8	-5	16.5	280	59.2	83	-1 44.8	117 40	4 27	4 59	5 27	16 09	71	4 01	38	
18	92	59.0	-5	17.4	295	26.5	83	-1 33.1	117 45	4 18	4 53	5 23	16 07	75	4 04	34	
19	107	59.2		18.4	309	53.8	83	21.3	118 50	06	46	19	06	79	07	31	
20	122	59.4		19.4	324	21.1	83	-1 09.6	117 52	4 01	42	17	05	81	09	29	
21	137	59.6		20.3	338	48.4	83	-0 57.8	118 54	3 54	38	14	05	82	10	27	
22	152	59.7		21.3	353	15.8	84	46.1	117 56	47	34	12	04	84	12	25	
23	167	59.9		22.2	7	43.1	83	34.3	118 58	39	29	09	03	87	14	23	
24	183	00.1	-5	23.2	22	10.4	83	-0 22.5	118 60 S	3 29	4 23	5 06	16 02	90	4 16	20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 57 ^m 9		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: +0.8 PMG: 15 ^h 56 ^m		Mag: -2.0 PMG: 8 ^h 18 ^m		Mag: +0.6 PMG: 14 ^h 16 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	14	34.8	187	00.5	120	49.4	235	11.1	145	27.4
1	29	37.2	202	00.1	135	49.9	250	13.2	160	29.6
2	44	39.7	216	59.7	150	50.4	265	15.2	175	31.8
3	59	42.2	231	59.3	165	51.0	280	17.3	190	34.0
4	74	44.6	246	58.9	180	51.5	295	19.3	205	36.2
5	89	47.1	261	58.5	195	52.0	310	21.4	220	38.4
6	104	49.6	276	58.1	210	52.6	325	23.4	235	40.6
7	119	52.0	291	57.7	225	53.1	340	25.5	250	42.8
8	134	54.5	306	57.3	240	53.7	355	27.5	265	45.0
9	149	57.0	321	56.9	255	54.2	10	29.6	280	47.2
10	164	59.4	336	56.5	270	54.7	25	31.6	295	49.5
11	180	01.9	351	56.1	285	55.3	40	33.7	310	51.7
12	195	04.4	6	55.7	300	55.8	55	35.7	325	53.9
13	210	06.8	21	55.3	315	56.3	70	37.8	340	56.1
14	225	09.3	36	54.9	330	56.9	85	39.9	355	58.3
15	240	11.7	51	54.5	345	57.4	100	41.9	11	00.5
16	255	14.2	66	54.1	0	57.9	115	44.0	26	02.7
17	270	16.7	81	53.7	15	58.5	130	46.0	41	04.9
18	285	19.1	96	53.3	30	59.0	145	48.1	56	07.1
19	300	21.6	111	52.9	45	59.5	160	50.1	71	09.3
20	315	24.1	126	52.5	60	00.1	175	52.2	86	11.5
21	330	26.5	141	52.1	75	00.6	190	54.2	101	13.8
22	345	29.0	156	51.8	90	01.1	205	56.3	116	16.0
23	0	31.5	171	51.4	105	01.6	220	58.4	131	18.2
24	15	33.9	186	51.0	120	02.2	235	00.4	146	20.4
Dif	—		-4	-13	+5	-2	+21	-1	+22	-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 47 ^m 9		Edad: 12 ^d 7 PHE { 4 ^h : 60'4 12 ^h : 60'3 20 ^h : 60'2 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	183	00.1	-5 23.2	22	10.4	-0 22.5	84	60 N	17 15	17 57	18 45	16 49 21	4 44 90					
1	198	00.3	24.1	36	37.8	-0 10.8	117	58	18	57	42	51 23	44 87					
2	213	00.5	25.1	51	05.1	+0 01.0	118	56	20	57	40	52 25	44 84					
3	228	00.7	26.1	65	32.5	12.7	117	54	22	57	38	53 28	43 83					
4	243	00.8	27.0	79	59.9	24.5	118	52	24	58	37	54 30	43 80					
5	258	01.0	-5 28.0	94	27.3	+0 36.2	117	50	17 26	17 58	18 35	16 55 31	4 43 78					
6	273	01.2	-5 28.9	108	54.6	+0 48.0	118	45	17 30	17 59	18 33	16 57 35	4 43 74					
7	288	01.4	29.9	123	22.0	+0 59.7	117	40	33	18 00	31	16 59 38	43 71					
8	303	01.6	30.8	137	49.4	+1 11.4	117	35	36	01	31	17 01 40	42 68					
9	318	01.7	31.8	152	16.8	23.2	118	30	39	02	30	02 43	42 66					
10	333	01.9	32.7	166	44.2	34.9	117	20	43	05	31	05 47	42 61					
11	348	02.1	-5 33.7	181	11.6	+1 46.5	116	10 N	17 47	18 08	18 33	17 07 51	4 41 58					
12	3	02.3	-5 34.7	195	39.0	+1 58.2	117	0	17 51	18 12	18 36	17 09 54	4 41 54					
13	18	02.5	35.6	210	06.5	+2 09.9	117	10 S	17 55	16	41	11 58	40 51					
14	33	02.6	36.6	224	33.9	21.5	116	20	18 00	22	48	14 61	40 47					
15	48	02.8	37.5	239	01.3	33.1	116	30	05	29	18 57	17 65	39 43					
16	63	03.0	38.5	253	28.7	44.7	116	35	08	33	19 04	18 68	39 40					
17	78	03.2	-5 39.4	267	56.2	+2 56.3	116	40	18 11	18 39	19 11	17 20 70	4 39 37					
18	93	03.4	-5 40.4	282	23.6	+3 07.9	116	45	18 15	18 45	19 21	17 22 74	4 38 35					
19	108	03.5	41.3	296	51.0	19.4	115	50	20	53	33	25 77	38 30					
20	123	03.7	42.3	311	18.5	30.9	115	52	23	18 57	39	26 79	38 29					
21	138	03.9	43.3	325	45.9	42.4	115	54	25	19 01	46	27 81	37 27					
22	153	04.1	44.2	340	13.3	+3 53.8	114	56	28	06	19 54	28 84	37 25					
23	168	04.3	45.2	354	40.8	+4 05.2	114	58	31	12	20 02	30 86	37 22					
24	183	04.4	-5 46.1	9	08.2	+4 16.6	114	60 S	18 34	19 18	20 13	17 32 89	4 36 21					
UT	ARIES PMG 22 ^h 54 ^m 0		VENUS Mag: -3.9 PMG: 11 ^h 33 ^m		MARTE Mag: +0.8 PMG: 15 ^h 55 ^m		JÚPITER Mag: -2.0 PMG: 8 ^h 15 ^m			SATURNO Mag: +0.6 PMG: 14 ^h 13 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	15	33.9	186	51.0	-2	15.6	121	02.2	-24	11.7	236	00.4	+16	16.7	146	20.4	-16	07.3
1	30	36.4	201	50.6		16.9	136	02.7		11.9	251	02.5		16.6	161	22.6		07.4
2	45	38.8	216	50.2		18.2	151	03.2		12.1	266	04.5		16.4	176	24.8		07.5
3	60	41.3	231	49.8		19.4	166	03.8		12.3	281	06.6		16.3	191	27.0		07.5
4	75	43.8	246	49.4		20.7	181	04.3		12.4	296	08.6		16.2	206	29.2		07.6
5	90	46.2	261	49.0	-2	21.9	196	04.8	-24	12.6	311	10.7	+16	16.1	221	31.4	-16	07.7
6	105	48.7	276	48.6	-2	23.2	211	05.4	-24	12.8	326	12.8	+16	16.0	236	33.6	-16	07.8
7	120	51.2	291	48.2		24.4	226	05.9		13.0	341	14.8		15.9	251	35.8		07.8
8	135	53.6	306	47.8		25.7	241	06.4		13.2	356	16.9		15.7	266	38.0		07.9
9	150	56.1	321	47.4		26.9	256	06.9		13.4	11	18.9		15.6	281	40.2		08.0
10	165	58.6	336	47.0		28.2	271	07.5		13.6	26	21.0		15.5	296	42.5		08.1
11	181	01.0	351	46.6	-2	29.4	286	08.0	-24	13.8	41	23.0	+16	15.4	311	44.7	-16	08.1
12	196	03.5	6	46.2	-2	30.7	301	08.5	-24	14.0	56	25.1	+16	15.3	326	46.9	-16	08.2
13	211	06.0	21	45.8		31.9	316	09.1		14.2	71	27.2		15.2	341	49.1		08.3
14	226	08.4	36	45.4		33.2	331	09.6		14.3	86	29.2		15.0	356	51.3		08.3
15	241	10.9	51	45.0		34.4	346	10.1		14.5	101	31.3		14.9	11	53.5		08.4
16	256	13.3	66	44.6		35.7	1	10.6		14.7	116	33.3		14.8	26	55.7		08.5
17	271	15.8	81	44.2	-2	36.9	16	11.2	-24	14.9	131	35.4	+16	14.7	41	57.9	-16	08.6
18	286	18.3	96	43.8	-2	38.2	31	11.7	-24	15.1	146	37.5	+16	14.6	57	00.1	-16	08.6
19	301	20.7	111	43.4		39.4	46	12.2		15.3	161	39.5		14.5	72	02.3		08.7
20	316	23.2	126	43.0		40.7	61	12.7		15.5	176	41.6		14.3	87	04.5		08.8
21	331	25.7	141	42.6		41.9	76	13.3		15.6	191	43.6		14.2	102	06.7		08.9
22	346	28.1	156	42.2		43.2	91	13.8		15.8	206	45.7		14.1	117	08.9		08.9
23	1	30.6	171	41.8		44.4	106	14.3		16.0	221	47.8		14.0	132	11.1		09.0
24	16	33.1	186	41.4	-2	45.7	121	14.8	-24	16.2	236	49.8	+16	13.9	147	13.3	-16	09.1
Dif	—		-4	-13		+5	-2		+21	-1		+22		-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 6			Edad: 13 ^d 7 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'8 R°: **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	183	04.4	-5 46.1	9	08.2	+4 16.6	60 N	4 52	5 40	6 22	17 10	23	6 14	87	
1	198	04.6	47.1	23	35.7 ⁸⁵	28.0 ¹¹⁴	58	54	40	19	14	25	11	85	
2	213	04.8	48.0	38	03.1 ⁸⁴	39.3 ¹¹³	56	56	39	17	17	28	08	82	
3	228	05.0	49.0	52	30.6 ⁸⁵	+4 50.6 ¹¹³	54	4 58	39	14	21	29	06	80	
4	243	05.1	49.9	66	58.0 ⁸⁴	+5 01.8 ¹¹²	52	5 00	39	12	24	31	03	79	
5	258	05.3	-5 50.9	81	25.5 ⁸⁵	+5 13.0 ¹¹²	50	5 01	5 38	6 11	17 26	33	6 01	77	
6	273	05.5	-5 51.8	95	52.9 ⁸⁴	+5 24.2 ¹¹²	45	5 03	5 37	6 06	17 32	37	5 57	73	
7	288	05.7	52.8	110	20.4 ⁸⁵	35.3 ¹¹¹	40	05	36	03	37	40	54	69	
8	303	05.9	53.7	124	47.9 ⁸⁵	46.4 ¹¹¹	35	05	35	6 00	41	42	50	68	
9	318	06.0	54.7	139	15.3 ⁸⁴	+5 57.5 ¹¹¹	30	06	33	5 57	45	44	48	65	
10	333	06.2	55.6	153	42.8 ⁸⁵	+6 08.5 ¹¹⁰	20	05	31	53	52	48	43	61	
11	348	06.4	-5 56.6	168	10.2 ⁸⁴	+6 19.4 ¹⁰⁹	10 N	5 03	5 27	5 48	17 58	51	5 39	57	
12	3	06.6	-5 57.5	182	37.7 ⁸⁵	+6 30.3 ¹⁰⁹	0	4 59	5 24	5 44	18 03	54	5 35	54	
13	18	06.7	58.5	197	05.1 ⁸⁴	41.2 ¹⁰⁹	10 S	54	19	40	09	57	31	51	
14	33	06.9	-5 59.5	211	32.6 ⁸⁵	+6 52.0 ¹⁰⁸	20	47	13	36	15	60	27	47	
15	48	07.1	-6 00.4	226	00.0 ⁸⁴	+7 02.8 ¹⁰⁸	30	38	06	30	22	64	22	44	
16	63	07.3	01.4	240	27.5 ⁸⁵	13.5 ¹⁰⁷	35	31	5 01	27	26	66	19	42	
17	78	07.4	-6 02.3	254	54.9 ⁸⁴	+7 24.1 ¹⁰⁶	40	4 24	4 56	5 24	18 30	69	5 16	39	
18	93	07.6	-6 03.3	269	22.4 ⁸⁵	+7 34.7 ¹⁰⁶	45	4 14	4 50	5 19	18 36	71	5 13	35	
19	108	07.8	04.2	283	49.9 ⁸⁵	45.3 ¹⁰⁶	50	4 01	41	14	42	75	08	32	
20	123	08.0	05.2	298	17.3 ⁸⁴	+7 55.8 ¹⁰⁵	52	3 55	37	12	45	77	07	30	
21	138	08.1	06.1	312	44.8 ⁸⁵	+8 06.2 ¹⁰⁴	54	49	33	09	48	79	04	29	
22	153	08.3	07.1	327	12.2 ⁸⁴	16.6 ¹⁰⁴	56	41	28	07	52	81	5 02	27	
23	168	08.5	08.0	341	39.7 ⁸⁵	26.9 ¹⁰³	58	32	23	03	18 56	83	4 59	25	
24	183	08.7	-6 09.0	356	07.1 ⁸⁴	+8 37.2 ¹⁰³	60 S	3 22	4 17	5 00	19 01	86	4 57	21	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 22 ^h 50 ^m 0		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +0.8 PMG: 15 ^h 54 ^m		Mag: -2.0 PMG: 8 ^h 12 ^m			Mag: +0.6 PMG: 14 ^h 09 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	16	33.1	186	41.4	-2	45.7	121	14.8	-24	16.2	236	49.8	+16	13.9	147	13.3	-16	09.1
1	31	35.5	201	41.0		47.0	136	15.4		16.4	251	51.9		13.8	162	15.6		09.1
2	46	38.0	216	40.6		48.2	151	15.9		16.6	266	53.9		13.6	177	17.8		09.2
3	61	40.5	231	40.2		49.5	166	16.4		16.7	281	56.0		13.5	192	20.0		09.3
4	76	42.9	246	39.8		50.7	181	16.9		16.9	296	58.1		13.4	207	22.2		09.4
5	91	45.4	261	39.4	-2	52.0	196	17.5	-24	17.1	312	00.1	+16	13.3	222	24.4	-16	09.4
6	106	47.8	276	39.0	-2	53.2	211	18.0	-24	17.3	327	02.2	+16	13.2	237	26.6	-16	09.5
7	121	50.3	291	38.6		54.5	226	18.5		17.5	342	04.2		13.1	252	28.8		09.6
8	136	52.8	306	38.2		55.7	241	19.0		17.6	357	06.3		12.9	267	31.0		09.7
9	151	55.2	321	37.8		57.0	256	19.6		17.8	12	08.4		12.8	282	33.2		09.7
10	166	57.7	336	37.4		58.2	271	20.1		18.0	27	10.4		12.7	297	35.4		09.8
11	182	00.2	351	37.0	-2	59.5	286	20.6	-24	18.2	42	12.5	+16	12.6	312	37.6	-16	09.9
12	197	02.6	6	36.6	-3	00.7	301	21.1	-24	18.4	57	14.6	+16	12.5	327	39.8	-16	09.9
13	212	05.1	21	36.2		02.0	316	21.6		18.5	72	16.6		12.4	342	42.0		10.0
14	227	07.6	36	35.8		03.2	331	22.2		18.7	87	18.7		12.3	357	44.2		10.1
15	242	10.0	51	35.4		04.5	346	22.7		18.9	102	20.7		12.1	12	46.4		10.2
16	257	12.5	66	35.0		05.7	1	23.2		19.1	117	22.8		12.0	27	48.6		10.2
17	272	14.9	81	34.6	-3	07.0	16	23.7	-24	19.3	132	24.9	+16	11.9	42	50.8	-16	10.3
18	287	17.4	96	34.2	-3	08.2	31	24.2	-24	19.4	147	26.9	+16	11.8	57	53.0	-16	10.4
19	302	19.9	111	33.8		09.5	46	24.8		19.6	162	29.0		11.7	72	55.3		10.5
20	317	22.3	126	33.4		10.7	61	25.3		19.8	177	31.1		11.6	87	57.5		10.5
21	332	24.8	141	33.0		12.0	76	25.8		20.0	192	33.1		11.4	102	59.7		10.6
22	347	27.3	156	32.6		13.2	91	26.3		20.1	207	35.2		11.3	118	01.9		10.7
23	2	29.7	171	32.2		14.5	106	26.8		20.3	222	37.3		11.2	133	04.1		10.7
24	17	32.2	186	31.8	-3	15.7	121	27.3	-24	20.5	237	39.3	+16	11.1	148	06.3	-16	10.8
Dif	—		-4		-13		+5		-2		+21		-1		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 3			Edad: 14 ^d 7 PHE { 4 ^h : 59'6 12 ^h : 59'3 20 ^h : 59'1 PMG: 0 ^h 16 ^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	
0	183	08.7	-6	09.0	356	07.1	+8 37.2	60 N	17	09	17	51	18	39	17	33
1	198	08.8		09.9	10	34.6	85 47.3 ¹⁰¹	58	12	51	37	39	30	7	41	
2	213	09.0		10.9	25	02.0	84 +8 57.5 ¹⁰²	56	15	52	35	45	32	30	79	
3	228	09.2		11.8	39	29.4	84 +9 07.5 ¹⁰⁰	54	17	53	33	50	34	26	77	
4	243	09.4		12.8	53	56.9	85 17.5 ¹⁰⁰	52	20	53	32	55	35	22	75	
5	258	09.5	-6	13.7	68	24.3	84 +9 27.5 ¹⁰⁰	50	17	22	17	54	18	31	17	59
6	273	09.7	-6	14.7	82	51.8	85 +9 37.3 ⁹⁸	45	17	26	17	55	18	29	18	09
7	288	09.9		15.6	97	19.2	84 47.1 ⁹⁸	40	30	57	28	17	41	7	10	
8	303	10.0		16.6	111	46.7	85 +9 56.9 ⁹⁸	35	33	17	59	28	23	44	6	58
9	318	10.2		17.5	126	14.1	84 +10 06.5 ⁹⁶	30	36	18	00	28	29	46	53	63
10	333	10.4		18.5	140	41.6	85 16.1 ⁹⁶	20	41	03	29	40	48	44	60	
11	348	10.6	-6	19.4	155	09.0	84 +10 25.6 ⁹⁵	10 N	17	46	18	07	18	32	6	36
12	3	10.7	-6	20.4	169	36.5	85 +10 35.1 ⁹⁵	0	17	51	18	11	18	36	18	57
13	18	10.9		21.3	184	03.9	84 44.4 ⁹³	10 S	17	55	16	41	19	06	56	22
14	33	11.1		22.3	198	31.3	84 +10 53.7 ⁹³	20	18	00	22	48	15	59	14	48
15	48	11.3		23.2	212	58.8	85 +11 03.0 ⁹³	30	06	30	18	59	26	62	06	44
16	63	11.4		24.2	227	26.2	84 12.1 ⁹¹	35	09	35	19	05	32	64	6	01
17	78	11.6	-6	25.1	241	53.7	85 +11 21.2 ⁹¹	40	18	13	18	41	19	14	19	39
18	93	11.8	-6	26.1	256	21.1	84 +11 30.1 ⁸⁹	45	18	18	18	48	19	24	19	47
19	108	11.9		27.0	270	48.6	85 39.0 ⁸⁹	50	23	18	57	37	19	57	72	40
20	123	12.1		28.0	285	16.0	84 47.9 ⁸⁹	52	26	19	01	43	20	02	73	37
21	138	12.3		28.9	299	43.5	85 +11 56.6 ⁸⁷	54	29	05	50	07	75	33	31	
22	153	12.4		29.8	314	10.9	84 +12 05.3 ⁸⁷	56	32	11	19	59	13	76	29	29
23	168	12.6		30.8	328	38.4	85 13.9 ⁸⁶	58	35	16	20	08	19	79	24	27
24	183	12.8	-6	31.7	343	05.9	85 +12 22.4 ⁸⁵	60 S	18	39	19	23	20	19	20	27
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 46 ^m 1		Mag: -3.9 PMG: 11 ^h 34 ^m			Mag: +0.8 PMG: 15 ^h 54 ^m			Mag: -2.0 PMG: 8 ^h 08 ^m			Mag: +0.6 PMG: 14 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	17	32.2	186	31.8	-3	15.7	121	27.3	-24	20.5	237	39.3	+16	11.1	148	06.3
1	32	34.7	201	31.4		17.0	136	27.9		20.7	252	41.4		11.0	163	08.5
2	47	37.1	216	31.0		18.2	151	28.4		20.8	267	43.5		10.9	178	10.7
3	62	39.6	231	30.6		19.5	166	28.9		21.0	282	45.5		10.8	193	12.9
4	77	42.1	246	30.2		20.7	181	29.4		21.2	297	47.6		10.6	208	15.1
5	92	44.5	261	29.8	-3	22.0	196	29.9	-24	21.3	312	49.7	+16	10.5	223	17.3
6	107	47.0	276	29.4	-3	23.2	211	30.5	-24	21.5	327	51.7	+16	10.4	238	19.5
7	122	49.4	291	29.0		24.5	226	31.0		21.7	342	53.8		10.3	253	21.7
8	137	51.9	306	28.6		25.7	241	31.5		21.9	357	55.9		10.2	268	23.9
9	152	54.4	321	28.2		27.0	256	32.0		22.0	12	57.9		10.1	283	26.1
10	167	56.8	336	27.8		28.2	271	32.5		22.2	28	00.0		10.0	298	28.3
11	182	59.3	351	27.4	-3	29.5	286	33.0	-24	22.4	43	02.1	+16	09.8	313	30.5
12	198	01.8	6	27.0	-3	30.7	301	33.5	-24	22.5	58	04.1	+16	09.7	328	32.7
13	213	04.2	21	26.6		32.0	316	34.1		22.7	73	06.2		09.6	343	34.9
14	228	06.7	36	26.2		33.2	331	34.6		22.9	88	08.3		09.5	358	37.1
15	243	09.2	51	25.7		34.4	346	35.1		23.0	103	10.3		09.4	13	39.3
16	258	11.6	66	25.3		35.7	1	35.6		23.2	118	12.4		09.3	28	41.5
17	273	14.1	81	24.9	-3	36.9	16	36.1	-24	23.4	133	14.5	+16	09.2	43	43.7
18	288	16.5	96	24.5	-3	38.2	31	36.6	-24	23.5	148	16.5	+16	09.0	58	45.9
19	303	19.0	111	24.1		39.4	46	37.1		23.7	163	18.6		08.9	73	48.1
20	318	21.5	126	23.7		40.7	61	37.7		23.9	178	20.7		08.8	88	50.3
21	333	23.9	141	23.3		41.9	76	38.2		24.0	193	22.7		08.7	103	52.5
22	348	26.4	156	22.9		43.2	91	38.7		24.2	208	24.8		08.6	118	54.7
23	3	28.9	171	22.5		44.4	106	39.2		24.4	223	26.9		08.5	133	56.9
24	18	31.3	186	22.1	-3	45.7	121	39.7	-24	24.5	238	28.9	+16	08.4	148	59.2
Dif	—		-4		-12		+5		-2		+21		-1		+22	

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: 15 ^d 7 PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'3 R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	12.8	-6	31.7	343	05.9	+12	22.4	60 N	4 57	5 45	6 27	18 00	33	9 05	77	
1	198	13.0		32.7	357	33.3	84	30.8	58	4 59	44	24	09	35	8 57	75	
2	213	13.1		33.6	12	00.8	85	39.1	56	5 00	43	21	17	37	49	74	
3	228	13.3		34.6	26	28.2	84	47.3	54	02	43	18	24	38	43	72	
4	243	13.5		35.5	40	55.7	85	+12	55.5	52	03	42	16	30	40	37	
5	258	13.6	-6	36.5	55	23.2	85	+13	03.5	50	5 04	5 41	6 14	18 36	40	8 32	
6	273	13.8	-6	37.4	69	50.7	85	+13	11.5	45	5 06	5 40	6 09	18 48	43	8 20	
7	288	14.0		38.4	84	18.1	84	19.4	40	07	38	05	18 58	45	11	64	
8	303	14.1		39.3	98	45.6	85	27.2	35	07	36	6 02	19 07	46	8 03	62	
9	318	14.3		40.3	113	13.1	85	34.9	30	07	35	5 59	15 47	56	7	61	
10	333	14.5		41.2	127	40.6	85	42.5	20	05	31	53	28	50	44	58	
11	348	14.6	-6	42.2	142	08.1	85	+13	50.1	10 N	5 03	5 27	5 48	19 40	52	7 33	
12	3	14.8	-6	43.1	156	35.6	85	+13	57.5	0	4 59	5 23	5 44	19 51	54	7 23	
13	18	15.0		44.0	171	03.1	85	+14	04.9	10 S	53	18	39	20 02	56	13	
14	33	15.1		45.0	185	30.6	85	12.1	72	20	46	12	34	14 58	7	02	
15	48	15.3		45.9	199	58.2	86	19.3	72	30	35	5 04	28	28 59	6	50	
16	63	15.5		46.9	214	25.7	85	26.3	70	35	28	4 59	24	36 61	43	46	
17	78	15.6	-6	47.8	228	53.2	85	+14	33.3	40	4 20	4 53	5 20	20 45	62	6 35	
18	93	15.8	-6	48.8	243	20.8	86	+14	40.2	45	4 10	4 46	5 16	20 56	64	6 26	
19	108	16.0		49.7	257	48.3	85	47.0	68	50	3 57	37	10	21 09	66	15	
20	123	16.1		50.7	272	15.9	86	+14	53.6	52	50	33	07	15 67	10	37	
21	138	16.3		51.6	286	43.5	86	+15	00.2	54	43	28	05	22 68	6	04	
22	153	16.5		52.5	301	11.0	85	06.7	65	56	35	23	5 01	29 70	5	58	
23	168	16.6		53.5	315	38.6	86	13.1	64	58	25	17	4 58	38 71	51	32	
24	183	16.8	-6	54.4	330	06.2	86	+15	19.4	60 S	3 14	4 10	4 54	21 47	74	5 43	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 22 ^h 42 ^m 2		Mag: -4.0 PMG: 11 ^h 35 ^m			Mag: +0.8 PMG: 15 ^h 53 ^m			Mag: -2.0 PMG: 8 ^h 05 ^m			Mag: +0.6 PMG: 14 ^h 02 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	18	31.3	186	22.1	-3	45.7	121	39.7	-24	24.5	238	28.9	+16	08.4	148	59.2	
1	33	33.8	201	21.7		46.9	136	40.2		24.7	253	31.0		08.2	164	01.4	
2	48	36.3	216	21.3		48.2	151	40.7		24.9	268	33.1		08.1	179	03.6	
3	63	38.7	231	20.9		49.4	166	41.2		25.0	283	35.2		08.0	194	05.8	
4	78	41.2	246	20.5		50.7	181	41.7		25.2	298	37.2		07.9	209	08.0	
5	93	43.7	261	20.1	-3	51.9	196	42.3	-24	25.4	313	39.3	+16	07.8	224	10.2	
6	108	46.1	276	19.7	-3	53.2	211	42.8	-24	25.5	328	41.4	+16	07.7	239	12.4	
7	123	48.6	291	19.3		54.4	226	43.3		25.7	343	43.4		07.6	254	14.6	
8	138	51.0	306	18.9		55.7	241	43.8		25.8	358	45.5		07.4	269	16.8	
9	153	53.5	321	18.4		56.9	256	44.3		26.0	13	47.6		07.3	284	19.0	
10	168	56.0	336	18.0		58.1	271	44.8		26.2	28	49.7		07.2	299	21.2	
11	183	58.4	351	17.6	-3	59.4	286	45.3	-24	26.3	43	51.7	+16	07.1	314	23.4	
12	199	00.9	6	17.2	-4	00.6	301	45.8	-24	26.5	58	53.8	+16	07.0	329	25.6	
13	214	03.4	21	16.8		01.9	316	46.3		26.6	73	55.9		06.9	344	27.8	
14	229	05.8	36	16.4		03.1	331	46.8		26.8	88	57.9		06.8	359	30.0	
15	244	08.3	51	16.0		04.4	346	47.4		27.0	104	00.0		06.7	14	32.2	
16	259	10.8	66	15.6		05.6	1	47.9		27.1	119	02.1		06.5	29	34.4	
17	274	13.2	81	15.2	-4	06.9	16	48.4	-24	27.3	134	04.2	+16	06.4	44	36.6	
18	289	15.7	96	14.8	-4	08.1	31	48.9	-24	27.4	149	06.2	+16	06.3	59	38.8	
19	304	18.2	111	14.4		09.4	46	49.4		27.6	164	08.3		06.2	74	41.0	
20	319	20.6	126	14.0		10.6	61	49.9		27.7	179	10.4		06.1	89	43.2	
21	334	23.1	141	13.6		11.8	76	50.4		27.9	194	12.5		06.0	104	45.4	
22	349	25.5	156	13.1		13.1	91	50.9		28.1	209	14.5		05.9	119	47.6	
23	4	28.0	171	12.7		14.3	106	51.4		28.2	224	16.6		05.8	134	49.8	
24	19	30.5	186	12.3	-4	15.6	121	51.9	-24	28.4	239	18.7	+16	05.6	149	52.0	
Dif	—		-4 -12			+5 -2			+21 -1			-1			+22 -1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 8			Edad: 16 ^d 7 PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4 SD: 15'8 PMG: 2 ^h 04 ^m R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	16.8	-6	54.4	330	06.2	+15 19.4	60 N	17 03	17 45	18 33	18 33 41	10 22 69	
1	198	16.9		55.4	344	33.8	86 25.6	62 58	07	46	31	44 42	12 67	
2	213	17.1		56.3	359	01.5	87 31.7	61 56	10	47	30	18 54 43	10 03 65	
3	228	17.3		57.3	13	29.1	86 37.7	60 54	13	48	29	19 02 44	9 55 64	
4	243	17.4		58.2	27	56.7	86 43.6	59 52	15	49	28	10 44	47 64	
5	258	17.6	-6	59.1	42	24.4	87 +15 49.4	58 50	17 17	17 50	18 27	19 16 46	9 41 63	
6	273	17.8	-7	00.1	56	52.1	87 +15 55.1	57 45	17 23	17 52	18 26	19 31 47	9 27 61	
7	288	17.9		01.0	71	19.8	87 +16 00.7	56 40	27	54	25	43 48	15 60	
8	303	18.1		02.0	85	47.5	87 06.2	55 35	31	56	25	19 53 49	9 05 59	
9	318	18.2		02.9	100	15.2	87 11.6	54 30	34	17 58	26	20 02 50	8 57 58	
10	333	18.4		03.9	114	42.9	87 16.9	53 20	40	18 02	27	18 51	42 56	
11	348	18.6	-7	04.8	129	10.7	88 +16 22.1	52 10 N	17 45	18 06	18 31	20 32 52	8 29 55	
12	3	18.7	-7	05.7	143	38.4	88 +16 27.2	51 0	17 50	18 11	18 35	20 45 52	8 17 53	
13	18	18.9		06.7	158	06.2	88 32.2	50 10 S	17 55	16	41	20 58 53	8 05 52	
14	33	19.1		07.6	172	34.0	88 37.0	48 20	18 01	23	18 49	21 12 54	7 52 50	
15	48	19.2		08.6	187	01.8	88 41.8	48 30	07	32	19 00	27 56	37 49	
16	63	19.4		09.5	201	29.6	88 46.5	47 35	11	37	07	37 56	29 47	
17	78	19.5	-7	10.4	215	57.5	89 +16 51.1	46 40	18 15	18 43	19 16	21 47 57	7 19 46	
18	93	19.7	-7	11.4	230	25.3	88 +16 55.6	45 45	18 20	18 51	19 27	22 00 58	7 07 45	
19	108	19.9		12.3	244	53.2	89 +16 59.9	43 50	27	19 00	41	15 59	6 54 43	
20	123	20.0		13.3	259	21.1	89 +17 04.2	43 52	29	04	47	22 60	47 42	
21	138	20.2		14.2	273	49.0	89 08.4	42 54	33	09	19 55	30 60	40 41	
22	153	20.3		15.1	288	17.0	90 12.5	41 56	36	15	20 04	39 61	32 40	
23	168	20.5		16.1	302	45.0	90 16.4	39 58	40	21	14	22 49 62	23 39	
24	183	20.7	-7	17.0	317	12.9	89 +17 20.3	39 60 S	18 44	19 29	20 25	23 01 63	6 13 37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 38 ^m 2		Mag: -4.0 PMG: 11 ^h 35 ^m		Mag: +0.8 PMG: 15 ^h 52 ^m		Mag: -2.0 PMG: 8 ^h 02 ^m		Mag: +0.6 PMG: 13 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	30.5	186	12.3	-4	15.6	121	51.9	-24	28.4
1	34	32.9	201	11.9		16.8	136	52.4		28.5
2	49	35.4	216	11.5		18.1	151	52.9		28.7
3	64	37.9	231	11.1		19.3	166	53.4		28.8
4	79	40.3	246	10.7		20.6	181	53.9		29.0
5	94	42.8	261	10.3	-4	21.8	196	54.4	-24	29.1
6	109	45.3	276	09.9	-4	23.0	211	54.9	-24	29.3
7	124	47.7	291	09.5		24.3	226	55.4		29.4
8	139	50.2	306	09.0		25.5	241	55.9		29.6
9	154	52.6	321	08.6		26.8	256	56.4		29.8
10	169	55.1	336	08.2		28.0	271	57.0		29.9
11	184	57.6	351	07.8	-4	29.3	286	57.5	-24	30.1
12	200	00.0	6	07.4	-4	30.5	301	58.0	-24	30.2
13	215	02.5	21	07.0		31.7	316	58.5		30.4
14	230	05.0	36	06.6		33.0	331	59.0		30.5
15	245	07.4	51	06.2		34.2	346	59.5		30.7
16	260	09.9	66	05.8		35.5	2	00.0		30.8
17	275	12.4	81	05.3	-4	36.7	17	00.5	-24	30.9
18	290	14.8	96	04.9	-4	38.0	32	01.0	-24	31.1
19	305	17.3	111	04.5		39.2	47	01.5		31.2
20	320	19.8	126	04.1		40.4	62	02.0		31.4
21	335	22.2	141	03.7		41.7	77	02.5		31.5
22	350	24.7	156	03.3		42.9	92	03.0		31.7
23	5	27.1	171	02.9		44.2	107	03.5		31.8
24	20	29.6	186	02.5	-4	45.4	122	04.0	-24	32.0
Dif	—		-4	-12		+5	-2	-2	+21	-1

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: 17 ^d 7 PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'6 SD: 15'6 PMG: 2 ^h 57 ^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	20.7	-7	17.0	317	12.9	+17	20.3	37	60 N	5	01	5	50	6	32	19	14
1	198	20.8		18.0	331	41.0		24.0	37	58		03		48	28		26	49
2	213	21.0		18.9	346	09.0		27.7	37	56		04		47	25		37	49
3	228	21.1		19.8	0	37.0		31.2	35	54		05		46	22		46	50
4	243	21.3		20.8	15	05.1		34.7	35	52		06		45	19		19	54
5	258	21.5	-7	21.7	29	33.2	+17	38.0	33	50	5	07	5	44	6	17	20	02
6	273	21.6	-7	22.7	44	01.4	+17	41.3	33	45	5	08	5	42	6	12	20	18
7	288	21.8		23.6	58	29.5		44.4	31	40		09		40	07		31	50
8	303	21.9		24.5	72	57.7		47.4	30	35		08		38	03		42	51
9	318	22.1		25.5	87	25.9		50.4	30	30		08		36	6	00	20	52
10	333	22.2		26.4	101	54.1		53.2	28	20		06		32	5	54	21	09
11	348	22.4	-7	27.3	116	22.4	+17	55.9	27	10 N	5	03	5	27	5	48	21	24
12	3	22.5	-7	28.3	130	50.7	+17	58.5	26	0	4	58	5	22	5	43	21	37
13	18	22.7		29.2	145	19.0	+18	01.1	26	10 S		52		17	38		21	51
14	33	22.9		30.2	159	47.4		03.5	24	20		44		10	32		22	06
15	48	23.0		31.1	174	15.7		05.8	23	30		33	5	01	26		23	52
16	63	23.2		32.0	188	44.1		08.0	22	35		26	4	56	22		33	52
17	78	23.3	-7	33.0	203	12.6	+18	10.1	21	40	4	17	4	50	5	17	22	44
18	93	23.5	-7	33.9	217	41.0	+18	12.1	20	45	4	06	4	42	5	12	22	58
19	108	23.6		34.8	232	09.5		14.0	19	50	3	52	32	06			23	14
20	123	23.8		35.8	246	38.1		15.8	18	52		45	28	03			22	51
21	138	23.9		36.7	261	06.6		17.5	17	54		37	23	5	00		30	52
22	153	24.1		37.7	275	35.2		19.1	16	56		29	17	4	56		40	52
23	168	24.3		38.6	290	03.9		20.6	15	58		19	11	52			23	51
24	183	24.4	-7	39.5	304	32.5	+18	22.0	14	60 S	3	07	4	04	4	48	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 34 ^m 3		Mag: -4.0 PMG: 11 ^h 36 ^m		Mag: +0.8 PMG: 15 ^h 51 ^m		Mag: -2.0 PMG: 7 ^h 58 ^m		Mag: +0.6 PMG: 13 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	20	29.6	186	02.5	-4	45.4	122	04.0	-24	32.0
1	35	32.1	201	02.0		46.6	137	04.5		32.1
2	50	34.5	216	01.6		47.9	152	05.0		32.3
3	65	37.0	231	01.2		49.1	167	05.5		32.4
4	80	39.5	246	00.8		50.4	182	06.0		32.6
5	95	41.9	261	00.4	-4	51.6	197	06.5	-24	32.7
6	110	44.4	276	00.0	-4	52.9	212	07.0	-24	32.8
7	125	46.9	290	59.6		54.1	227	07.5		33.0
8	140	49.3	305	59.1		55.3	242	08.0		33.1
9	155	51.8	320	58.7		56.6	257	08.5		33.3
10	170	54.3	335	58.3		57.8	272	09.0		33.4
11	185	56.7	350	57.9	-4	59.1	287	09.4	-24	33.6
12	200	59.2	5	57.5	-5	00.3	302	09.9	-24	33.7
13	216	01.6	20	57.1		01.5	317	10.4		33.8
14	231	04.1	35	56.6		02.8	332	10.9		34.0
15	246	06.6	50	56.2		04.0	347	11.4		34.1
16	261	09.0	65	55.8		05.2	2	11.9		34.3
17	276	11.5	80	55.4	-5	06.5	17	12.4	-24	34.4
18	291	14.0	95	55.0	-5	07.7	32	12.9	-24	34.5
19	306	16.4	110	54.6		09.0	47	13.4		34.7
20	321	18.9	125	54.1		10.2	62	13.9		34.8
21	336	21.4	140	53.7		11.4	77	14.4		34.9
22	351	23.8	155	53.3		12.7	92	14.9		35.1
23	6	26.3	170	52.9		13.9	107	15.4		35.2
24	21	28.7	185	52.5	-5	15.1	122	15.9	-24	35.3
Dif	—		-4		-12		+5		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 18 ^d 7 PHE { 4 ^h : 56'3 12 ^h : 56'0 20 ^h : 55'8	SD: 15'4				R°: 51 ^m						
	PMG: 11 ^h 46 ^m 3				PMG: 3 ^h 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	183	24.4	-7 39.5	304	32.5	+18 22.0	13	60 N	16 57	17 39	18 27	20 03 56	12 28 46		
1	198	24.6	40.5	319	01.2	97	23.3	58	17 01	41	26	15 56	16 46		
2	213	24.7	41.4	333	29.9	97	24.5	56	05	42	25	26 56	12 05 47		
3	228	24.9	42.3	347	58.7	98	25.6	54	08	43	24	36 55	11 55 48		
4	243	25.0	43.3	2	27.5	98	26.5	52	11	45	24	44 55	47 48		
5	258	25.2	-7 44.2	16	56.3	98	+18 27.4	50	17 13	17 46	18 23	20 52 54	11 39 48		
6	273	25.3	-7 45.1	31	25.2	99	+18 28.2	45	17 19	17 48	18 22	21 08 53	11 23 48		
7	288	25.5	46.1	45	54.1	99	28.9	40	24	51	22	21 53	11 10 48		
8	303	25.6	47.0	60	23.1	100	29.5	35	28	53	23	33 52	10 58 49		
9	318	25.8	47.9	74	52.1	100	30.0	30	32	17 56	23	21 43 51	48 50		
10	333	25.9	48.9	89	21.1	100	30.4	20	38	18 00	26	22 00 51	31 50		
11	348	26.1	-7 49.8	103	50.1	100	+18 30.7	10 N	17 44	18 05	18 30	22 15 50	10 16 50		
12	3	26.2	-7 50.7	118	19.2	101	+18 30.9	0	17 50	18 10	18 35	22 29 49	10 02 51		
13	18	26.4	51.7	132	48.4	102	31.0	10 S	17 55	16	41	43 48	9 48 51		
14	33	26.5	52.6	147	17.5	101	31.0	20	18 01	24	18 50	22 58 48	33 51		
15	48	26.7	53.5	161	46.7	102	30.9	30	09	33	19 02	23 15 47	16 51		
16	63	26.8	54.5	176	16.0	103	30.7	35	13	39	09	25 46	9 06 52		
17	78	27.0	-7 55.4	190	45.3	103	+18 30.4	40	18 18	18 45	19 18	23 36 46	8 54 52		
18	93	27.1	-7 56.3	205	14.6	103	+18 30.0	45	18 23	18 53	19 30	23 49 46	8 41 52		
19	108	27.3	57.3	219	44.0	104	29.6	50	30	19 03	44	*** ** *	25 52		
20	123	27.4	58.2	234	13.4	104	29.0	52	33	08	19 52	*** ** *	17 52		
21	138	27.6	-7 59.1	248	42.9	105	28.3	54	36	14	20 00	*** ** *	8 08 53		
22	153	27.7	-8 00.1	263	12.4	105	27.6	56	40	20	09	*** ** *	7 59 52		
23	168	27.9	01.0	277	41.9	105	26.7	58	44	26	20	*** ** *	48 53		
24	183	28.0	-8 01.9	292	11.5	106	+18 25.8	60 S	18 49	19 34	20 32	0 04 51	7 35 53		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 30 ^m 4		Mag: -4.0		Mag: +0.8		Mag: -2.0		Mag: +0.6	
	PMG: 11 ^h 37 ^m		PMG: 15 ^h 50 ^m		PMG: 7 ^h 55 ^m		PMG: 13 ^h 51 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	21	28.7	185 52.5	-5 15.1	122 15.9	-24 35.3	240 58.5	+16 00.3	151 37.5	-16 17.9
1	36	31.2	200 52.1	16.4	137 16.4	35.5	256 00.5	00.2	166 39.7	17.9
2	51	33.7	215 51.6	17.6	152 16.9	35.6	271 02.6	+16 00.1	181 41.9	18.0
3	66	36.1	230 51.2	18.9	167 17.4	35.8	286 04.7	+16 00.0	196 44.1	18.1
4	81	38.6	245 50.8	20.1	182 17.9	35.9	301 06.8	+15 59.8	211 46.3	18.2
5	96	41.1	260 50.4	-5 21.3	197 18.3	-24 36.0	316 08.9	+15 59.7	226 48.5	-16 18.2
6	111	43.5	275 50.0	-5 22.6	212 18.8	-24 36.2	331 11.0	+15 59.6	241 50.7	-16 18.3
7	126	46.0	290 49.5	23.8	227 19.3	36.3	346 13.1	59.5	256 52.9	18.4
8	141	48.5	305 49.1	25.0	242 19.8	36.4	1 15.1	59.4	271 55.1	18.5
9	156	50.9	320 48.7	26.3	257 20.3	36.6	16 17.2	59.3	286 57.3	18.5
10	171	53.4	335 48.3	27.5	272 20.8	36.7	31 19.3	59.2	301 59.5	18.6
11	186	55.9	350 47.9	-5 28.7	287 21.3	-24 36.8	46 21.4	+15 59.1	317 01.7	-16 18.7
12	201	58.3	5 47.4	-5 30.0	302 21.8	-24 36.9	61 23.5	+15 59.0	332 03.9	-16 18.8
13	217	00.8	20 47.0	31.2	317 22.3	37.1	76 25.6	58.9	347 06.1	18.8
14	232	03.2	35 46.6	32.4	332 22.8	37.2	91 27.7	58.7	2 08.3	18.9
15	247	05.7	50 46.2	33.7	347 23.3	37.3	106 29.7	58.6	17 10.5	19.0
16	262	08.2	65 45.8	34.9	2 23.8	37.5	121 31.8	58.5	32 12.7	19.1
17	277	10.6	80 45.3	-5 36.2	17 24.2	-24 37.6	136 33.9	+15 58.4	47 14.8	-16 19.1
18	292	13.1	95 44.9	-5 37.4	32 24.7	-24 37.7	151 36.0	+15 58.3	62 17.0	-16 19.2
19	307	15.6	110 44.5	38.6	47 25.2	37.9	166 38.1	58.2	77 19.2	19.3
20	322	18.0	125 44.1	39.9	62 25.7	38.0	181 40.2	58.1	92 21.4	19.3
21	337	20.5	140 43.6	41.1	77 26.2	38.1	196 42.3	58.0	107 23.6	19.4
22	352	23.0	155 43.2	42.3	92 26.7	38.2	211 44.4	57.9	122 25.8	19.5
23	7	25.4	170 42.8	43.6	107 27.2	38.4	226 46.4	57.8	137 28.0	19.6
24	22	27.9	185 42.4	-5 44.8	122 27.7	-24 38.5	241 48.5	+15 57.7	152 30.2	-16 19.6
Dif	—		-4	-12	+5	-1	+21	-1	+22	-1

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: 19 ^d 7 PHE { 4 ^h : 55'6 12 ^h : 55'3 20 ^h : 55'1 PMG: 4 ^h 41 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	183	28.0	-8	01.9	292	11.5	+18	25.8	60 N	5	06	5	54	6	36	20	59
1	198	28.2		02.8	306	41.1 ¹⁰⁶		24.7 ¹¹	58	07	53		32	21	11	61	13
2	213	28.3		03.8	321	10.8 ¹⁰⁷		23.6 ¹²	56	08	51		29	22	59	12	52
3	228	28.5		04.7	335	40.5 ¹⁰⁷		22.4 ¹²	54	09	50		26	31	58		43
4	243	28.6		05.6	350	10.2 ¹⁰⁷		21.0 ¹⁴	52	10	49		23	39	57		35
5	258	28.8	-8	06.6	4	40.0 ¹⁰⁸	+18	19.6 ¹⁴	50	5	10	5	47	6	20	21	46
6	273	28.9	-8	07.5	19	09.9 ¹⁰⁹	+18	18.1 ¹⁵	45	5	11	5	45	6	14	22	01
7	288	29.1		08.4	33	39.8 ¹⁰⁹		16.5 ¹⁶	40	11	42		09	14	54	11	58
8	303	29.2		09.4	48	09.7 ¹⁰⁹		14.9 ¹⁶	35	10	39		05	25	53		47
9	318	29.3		10.3	62	39.7 ¹¹⁰		13.1 ¹⁸	30	09	37	6	01	34	52		38
10	333	29.5		11.2	77	09.7 ¹¹⁰		11.2 ¹⁹	20	07	32	5	54	22	51	50	21
11	348	29.6	-8	12.1	91	39.7 ¹¹⁰	+18	09.3 ¹⁹	10 N	5	03	5	27	5	48	23	05
12	3	29.8	-8	13.1	106	09.8 ¹¹¹	+18	07.2 ²¹	0	4	58	5	22	5	43	23	18
13	18	29.9		14.0	120	40.0 ¹¹²		05.1 ²¹	10 S	51	16		37	31	47		39
14	33	30.1		14.9	135	10.2 ¹¹²		02.9 ²²	20	42	5	08	31	23	46	44	24
15	48	30.2		15.9	149	40.4 ¹¹²	+18	00.6 ²³	30	30	4	59	23	**	**	**	10
16	63	30.4		16.8	164	10.7 ¹¹³	+17	58.2 ²⁴	35	23	53		19	**	**	**	9
17	78	30.5	-8	17.7	178	41.0 ¹¹³	+17	55.7 ²⁵	40	4	13	4	46	5	14	**	**
18	93	30.6	-8	18.6	193	11.4 ¹¹⁴	+17	53.2 ²⁵	45	4	02	4	38	5	08	**	**
19	108	30.8		19.6	207	41.8 ¹¹⁴		50.5 ²⁷	50	3	47	28	5	02	0	06	44
20	123	30.9		20.5	222	12.3 ¹¹⁵		47.8 ²⁷	52	40	23		58	13	44		09
21	138	31.1		21.4	236	42.8 ¹¹⁵		45.0 ²⁸	54	32	18		55	22	43		9
22	153	31.2		22.3	251	13.3 ¹¹⁵		42.1 ²⁹	56	23	12		51	32	42		8
23	168	31.4		23.3	265	43.9 ¹¹⁶		39.1 ³⁰	58	3	12	4	05	47	42	42	41
24	183	31.5	-8	24.2	280	14.6 ¹¹⁷	+17	36.1 ³⁰	60 S	2	59	3	57	4	42	0	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 26 ^m 5		Mag: -4.0 PMG: 11 ^h 38 ^m		Mag: +0.9 PMG: 15 ^h 50 ^m		Mag: -2.0 PMG: 7 ^h 52 ^m		Mag: +0.6 PMG: 13 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	22	27.9	185	42.4	-5	44.8	122	27.7	-24	38.5
1	37	30.4	200	42.0		46.0	137	28.1		38.6
2	52	32.8	215	41.5		47.3	152	28.6		38.7
3	67	35.3	230	41.1		48.5	167	29.1		38.9
4	82	37.7	245	40.7		49.7	182	29.6		39.0
5	97	40.2	260	40.3	-5	50.9	197	30.1	-24	39.1
6	112	42.7	275	39.8	-5	52.2	212	30.6	-24	39.2
7	127	45.1	290	39.4		53.4	227	31.1		39.4
8	142	47.6	305	39.0		54.6	242	31.6		39.5
9	157	50.1	320	38.6		55.9	257	32.0		39.6
10	172	52.5	335	38.1		57.1	272	32.5		39.7
11	187	55.0	350	37.7	-5	58.3	287	33.0	-24	39.8
12	202	57.5	5	37.3	-5	59.6	302	33.5	-24	40.0
13	217	59.9	20	36.9	-6	00.8	317	34.0		40.1
14	233	02.4	35	36.4		02.0	332	34.5		40.2
15	248	04.8	50	36.0		03.3	347	35.0		40.3
16	263	07.3	65	35.6		04.5	2	35.4		40.4
17	278	09.8	80	35.2	-6	05.7	17	35.9	-24	40.6
18	293	12.2	95	34.7	-6	06.9	32	36.4	-24	40.7
19	308	14.7	110	34.3		08.2	47	36.9		40.8
20	323	17.2	125	33.9		09.4	62	37.4		40.9
21	338	19.6	140	33.4		10.6	77	37.9		41.0
22	353	22.1	155	33.0		11.9	92	38.3		41.2
23	8	24.6	170	32.6		13.1	107	38.8		41.3
24	23	27.0	185	32.2	-6	14.3	122	39.3	-24	41.4
Dif	—		-4		-12		+5		-1	
								+21		-1
									+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 11 ^h 45 ^m 8			Edad: 20 ^d 7 PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°6 SD: 15°0 PMG: 5 ^h 30 ^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	183	31.5	-8 24.2	280	14.6	+17 36.1	32	60 N	16 52	17 34	18 22	22 02 66	13 51 28	
1	198	31.6	25.1	294	45.3 ¹¹⁷	32.9	32	58	16 56	36	21	12 65	40 30	
2	213	31.8	26.1	309	16.0 ¹¹⁷	29.7	32	56	17 00	37	20	21 63	31 31	
3	228	31.9	27.0	323	46.8 ¹¹⁸	26.4	33	54	03	39	20	29 62	22 33	
4	243	32.1	27.9	338	17.6 ¹¹⁸	23.0	34	52	06	40	19	36 61	15 34	
5	258	32.2	-8 28.8	352	48.5 ¹¹⁹	+17 19.5	35	50	17 09	17 42	18 19	22 43 59	13 08 35	
6	273	32.3	-8 29.8	7	19.4 ¹¹⁹	+17 16.0	35	45	17 15	17 45	18 19	22 57 56	12 54 37	
7	288	32.5	30.7	21	50.3 ¹¹⁹	12.4	36	40	21	48	19	23 08 55	42 39	
8	303	32.6	31.6	36	21.3 ¹²⁰	08.7	37	35	25	51	20	18 53	32 40	
9	318	32.8	32.5	50	52.4 ¹²¹	04.9	38	30	29	54	21	26 52	23 41	
10	333	32.9	33.5	65	23.5 ¹²¹	+17 01.0	39	20	37	17 59	24	41 50	12 07 44	
11	348	33.0	-8 34.4	79	54.6 ¹²¹	+16 57.1	39	10 N	17 43	18 04	18 29	23 54 47	11 54 45	
12	3	33.2	-8 35.3	94	25.8 ¹²²	+16 53.1	40	0	17 49	18 10	18 34	** ** *	11 41 47	
13	18	33.3	36.2	108	57.1 ¹²³	49.0	41	10 S	17 55	17	41	** ** *	29 48	
14	33	33.5	37.1	123	28.3 ¹²²	44.8	42	20	18 02	24	18 51	** ** *	11 15 50	
15	48	33.6	38.1	137	59.6 ¹²³	40.6	43	30	10	34	19 03	0 02 43	10 59 52	
16	63	33.7	39.0	152	31.0 ¹²⁴	36.3	43	35	14	40	11	11 42	50 53	
17	78	33.9	-8 39.9	167	02.4 ¹²⁴	+16 31.9	44	40	18 20	18 48	19 21	0 22 41	10 40 54	
18	93	34.0	-8 40.8	181	33.9 ¹²⁵	+16 27.4	45	45	18 26	18 56	19 33	0 35 39	10 28 56	
19	108	34.2	41.8	196	05.4 ¹²⁵	22.9	45	50	33	19 07	48	50 38	13 58	
20	123	34.3	42.7	210	36.9 ¹²⁵	18.3	46	52	36	12	19 56	0 57 37	10 06 59	
21	138	34.4	43.6	225	08.5 ¹²⁶	13.6	47	54	40	18	20 04	1 05 36	9 58 60	
22	153	34.6	44.5	239	40.1 ¹²⁶	08.8	48	56	44	24	14	14 35	49 62	
23	168	34.7	45.4	254	11.8 ¹²⁷	+16 04.0	48	58	49	31	26	24 34	39 63	
24	183	34.8	-8 46.4	268	43.5 ¹²⁷	+15 59.1	49	60 S	18 54	19 40	20 39	1 36 31	9 28 65	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 22 ^m 5		Mag: -4.0 PMG: 11 ^h 38 ^m		Mag: +0.9 PMG: 15 ^h 49 ^m		Mag: -2.0 PMG: 7 ^h 48 ^m		Mag: +0.6 PMG: 13 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	23	27.0	185 32.2	-6 14.3	122 39.3	-24 41.4	242 38.7	+15 55.0	153 22.9	-16 21.4				
1	38	29.5	200 31.7	15.5	137 39.8	41.5	257 40.8	54.9	168 25.1	21.5				
2	53	32.0	215 31.3	16.8	152 40.3	41.6	272 42.9	54.8	183 27.3	21.6				
3	68	34.4	230 30.9	18.0	167 40.7	41.7	287 45.0	54.7	198 29.4	21.6				
4	83	36.9	245 30.4	19.2	182 41.2	41.8	302 47.1	54.6	213 31.6	21.7				
5	98	39.3	260 30.0	-6 20.4	197 41.7	-24 42.0	317 49.2	+15 54.5	228 33.8	-16 21.8				
6	113	41.8	275 29.6	-6 21.7	212 42.2	-24 42.1	332 51.3	+15 54.4	243 36.0	-16 21.9				
7	128	44.3	290 29.1	22.9	227 42.7	42.2	347 53.4	54.3	258 38.2	21.9				
8	143	46.7	305 28.7	24.1	242 43.1	42.3	2 55.5	54.2	273 40.4	22.0				
9	158	49.2	320 28.3	25.4	257 43.6	42.4	17 57.6	54.1	288 42.6	22.1				
10	173	51.7	335 27.9	26.6	272 44.1	42.5	32 59.7	54.0	303 44.8	22.2				
11	188	54.1	350 27.4	-6 27.8	287 44.6	-24 42.6	48 01.8	+15 53.9	318 47.0	-16 22.2				
12	203	56.6	5 27.0	-6 29.0	302 45.1	-24 42.7	63 03.8	+15 53.8	333 49.2	-16 22.3				
13	218	59.1	20 26.6	30.3	317 45.5	42.9	78 05.9	53.7	348 51.4	22.4				
14	234	01.5	35 26.1	31.5	332 46.0	43.0	93 08.0	53.5	3 53.6	22.5				
15	249	04.0	50 25.7	32.7	347 46.5	43.1	108 10.1	53.4	18 55.8	22.5				
16	264	06.5	65 25.3	33.9	2 47.0	43.2	123 12.2	53.3	33 58.0	22.6				
17	279	08.9	80 24.8	-6 35.2	17 47.5	-24 43.3	138 14.3	+15 53.2	49 00.1	-16 22.7				
18	294	11.4	95 24.4	-6 36.4	32 47.9	-24 43.4	153 16.4	+15 53.1	64 02.3	-16 22.8				
19	309	13.8	110 24.0	37.6	47 48.4	43.5	168 18.5	53.0	79 04.5	22.8				
20	324	16.3	125 23.5	38.8	62 48.9	43.6	183 20.6	52.9	94 06.7	22.9				
21	339	18.8	140 23.1	40.0	77 49.4	43.7	198 22.7	52.8	109 08.9	23.0				
22	354	21.2	155 22.7	41.3	92 49.8	43.8	213 24.8	52.7	124 11.1	23.1				
23	9	23.7	170 22.2	42.5	107 50.3	43.9	228 26.9	52.6	139 13.3	23.1				
24	24	26.2	185 21.8	-6 43.7	122 50.8	-24 44.0	243 29.0	+15 52.5	154 15.5	-16 23.2				
Dif	—		-4	-12	+5	-1	+21	-1	+22	-1				

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: 21 ^d 7 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 PMG: 6 ^h 17 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	183	34.8	-8	268	43.5	+15	59.1	5	11	5	59	6	41	23
1	198	35.0		283	15.3 ¹²⁸		54.2 ⁴⁹	12	57		37	17	66	10
2	213	35.1		297	47.1 ¹²⁸		49.1 ⁵¹	12	55		33	24	64	14
3	228	35.2		312	18.9 ¹²⁸		44.0 ⁵¹	13	54		29	31	62	13
4	243	35.4		326	50.8 ¹²⁹		38.9 ⁵¹	13	52		26	37	61	49
5	258	35.5	-8	341	22.7 ¹²⁹	+15	33.6 ⁵³	5	13	5	50	6	23	23
6	273	35.6	-8	355	54.7 ¹³⁰	+15	28.3 ⁵³	5	13	5	47	6	17	23
7	288	35.8		10	26.7 ¹³⁰		23.0 ⁵³	13	44		11	**	**	21
8	303	35.9		24	58.8 ¹³¹		17.5 ⁵⁵	12	41		07	**	**	12
9	318	36.1		39	30.9 ¹³¹		12.0 ⁵⁵	10	38		6	02	**	13
10	333	36.2		54	03.0 ¹³¹		06.4 ⁵⁶	07	33		5	55	**	12
11	348	36.3	-8	68	35.2 ¹³²	+15	00.8 ⁵⁶	5	03	5	27	5	49	**
12	3	36.5	-8	83	07.4 ¹³²	+14	55.1 ⁵⁷	4	57	5	21	5	42	0
13	18	36.6		97	39.6 ¹³²		49.4 ⁵⁷	50	15		36	18	44	17
14	33	36.7	-8	112	11.9 ¹³³		43.5 ⁵⁹	40	5	07	29	30	42	12
15	48	36.8	-9	126	44.3 ¹³⁴		37.6 ⁵⁹	28	4	57	21	45	40	11
16	63	37.0		141	16.6 ¹³³		31.7 ⁵⁹	20	51		16	0	53	43
17	78	37.1	-9	155	49.0 ¹³⁴	+14	25.7 ⁶⁰	4	10	4	43	5	11	1
18	93	37.2	-9	170	21.5 ¹³⁵	+14	19.6 ⁶¹	3	58	4	35	5	05	1
19	108	37.4		184	54.0 ¹³⁵		13.5 ⁶¹	42	24		4	58	28	32
20	123	37.5		199	26.5 ¹³⁵		07.3 ⁶²	35	19		54	34	31	11
21	138	37.6		213	59.1 ¹³⁶	+14	01.0 ⁶³	26	13		50	41	30	10
22	153	37.8		228	31.7 ¹³⁶	+13	54.7 ⁶³	16	4	06	46	49	28	51
23	168	37.9		243	04.3 ¹³⁶		48.4 ⁶³	3	05	3	59	41	1	58
24	183	38.0	-9	257	37.0 ¹³⁷	+13	41.9 ⁶⁵	2	51	3	51	4	36	2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 18 ^m 6		Mag: -4.0 PMG: 11 ^h 39 ^m			Mag: +0.9 PMG: 15 ^h 48 ^m			Mag: -2.0 PMG: 7 ^h 45 ^m			Mag: +0.6 PMG: 13 ^h 41 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	24	26.2	185	21.8	-6	43.7	122	50.8	-24	44.0	243	29.0	+15	52.5
1	39	28.6	200	21.4		44.9	137	51.3		44.2	258	31.1		52.4
2	54	31.1	215	20.9		46.2	152	51.8		44.3	273	33.2		52.3
3	69	33.6	230	20.5		47.4	167	52.2		44.4	288	35.3		52.2
4	84	36.0	245	20.1		48.6	182	52.7		44.5	303	37.4		52.1
5	99	38.5	260	19.6	-6	49.8	197	53.2	-24	44.6	318	39.5	+15	51.9
6	114	41.0	275	19.2	-6	51.0	212	53.7	-24	44.7	333	41.6	+15	51.8
7	129	43.4	290	18.7		52.3	227	54.1		44.8	348	43.7		51.7
8	144	45.9	305	18.3		53.5	242	54.6		44.9	3	45.8		51.6
9	159	48.3	320	17.9		54.7	257	55.1		45.0	18	47.9		51.5
10	174	50.8	335	17.4		55.9	272	55.6		45.1	33	50.0		51.4
11	189	53.3	350	17.0	-6	57.1	287	56.0	-24	45.2	48	52.1	+15	51.3
12	204	55.7	5	16.6	-6	58.4	302	56.5	-24	45.3	63	54.2	+15	51.2
13	219	58.2	20	16.1	-6	59.6	317	57.0		45.4	78	56.3		51.1
14	235	00.7	35	15.7	-7	00.8	332	57.5		45.5	93	58.4		51.0
15	250	03.1	50	15.2		02.0	347	57.9		45.6	109	00.5		50.9
16	265	05.6	65	14.8		03.2	2	58.4		45.7	124	02.6		50.8
17	280	08.1	80	14.4	-7	04.5	17	58.9	-24	45.8	139	04.7	+15	50.7
18	295	10.5	95	13.9	-7	05.7	32	59.3	-24	45.9	154	06.8	+15	50.6
19	310	13.0	110	13.5		06.9	47	59.8		46.0	169	08.9		50.5
20	325	15.4	125	13.0		08.1	63	00.3		46.1	184	11.0		50.4
21	340	17.9	140	12.6		09.3	78	00.8		46.2	199	13.1		50.3
22	355	20.4	155	12.2		10.5	93	01.2		46.3	214	15.2		50.1
23	10	22.8	170	11.7		11.8	108	01.7		46.4	229	17.3		50.0
24	25	25.3	185	11.3	-7	13.0	123	02.2	-24	46.5	244	19.4	+15	49.9
Dif	—		-4	-12		+5	-1			+21	-1		+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 45 ^m 4			Edad: 22 ^d 7 PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2 SD: 14:8 PMG: 7 ^h 02 ^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	183	38.0	-9 08.4	257	37.0	+13 41.9	64	60 N	16 46	17 28	18 16	** ** *		14 42	19
1	198	38.2	09.3	272	09.7 ¹³⁷	35.5	64	58	50	30	16	** ** *		35	21
2	213	38.3	10.2	286	42.4 ¹³⁷	28.9	66	56	55	32	15	** ** *		29	23
3	228	38.4	11.2	301	15.2 ¹³⁸	22.3	66	54	16 59	34	15	** ** *		23	25
4	243	38.5	12.1	315	48.0 ¹³⁸	15.7	66	52	17 02	36	15	** ** *		18	26
5	258	38.7	-9 13.0	330	20.8 ¹³⁸	+13 08.9	68	50	17 05	17 38	18 15	** ** *		14 14	27
6	273	38.8	-9 13.9	344	53.7 ¹³⁹	+13 02.2	67	45	17 12	17 42	18 16	** ** *		14 04	30
7	288	38.9	14.8	359	26.6 ¹³⁹	+12 55.4	68	40	18	45	17	0 03	55	13 56	32
8	303	39.1	15.7	13	59.6 ¹⁴⁰	48.5	69	35	23	48	18	11 53		49	34
9	318	39.2	16.6	28	32.5 ¹³⁹	41.6	69	30	27	51	19	18 52		42	36
10	333	39.3	17.6	43	05.6 ¹⁴¹	34.6	70	20	35	17 57	23	31 49		32	38
11	348	39.4	-9 18.5	57	38.6 ¹⁴⁰	+12 27.6	70	10 N	17 42	18 03	18 28	0 41	47	13 22	41
12	3	39.6	-9 19.4	72	11.7 ¹⁴¹	+12 20.5	71	0	17 49	18 10	18 34	0 51	45	13 13	44
13	18	39.7	20.3	86	44.8 ¹⁴¹	13.3	72	10 S	17 55	17	42	1 02	42	13 04	46
14	33	39.8	21.2	101	17.9 ¹⁴¹	+12 06.1	72	20	18 03	25	18 51	12 40		12 54	49
15	48	39.9	22.1	115	51.1 ¹⁴²	+11 58.9	72	30	11	36	19 05	25 36		43	52
16	63	40.1	23.0	130	24.2 ¹⁴¹	51.6	73	35	16	42	13	32 35		37	53
17	78	40.2	-9 23.9	144	57.5 ¹⁴³	+11 44.3	73	40	18 22	18 50	19 23	1 40	33	12 30	55
18	93	40.3	-9 24.9	159	30.7 ¹⁴²	+11 36.9	74	45	18 28	18 59	19 36	1 49	31	12 21	58
19	108	40.4	25.8	174	04.0 ¹⁴³	29.5	74	50	36	19 10	19 52	2 00	29	11	60
20	123	40.6	26.7	188	37.3 ¹⁴³	22.0	75	52	40	16	20 00	05 28		06	62
21	138	40.7	27.6	203	10.6 ¹⁴³	14.5	75	54	44	22	09	11 26		12 00	64
22	153	40.8	28.5	217	44.0 ¹⁴⁴	+11 06.9	76	56	49	29	20	17 25		11 55	65
23	168	40.9	29.4	232	17.4 ¹⁴⁴	+10 59.3	76	58	54	36	32	25 22		48	67
24	183	41.1	-9 30.3	246	50.8 ¹⁴⁴	+10 51.6	77	60 S	18 59	19 45	20 46	2 33	20	11 40	70
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 14 ^m 7			Mag: -4.0 PMG: 11 ^h 40 ^m			Mag: +0.9 PMG: 15 ^h 47 ^m			Mag: -2.0 PMG: 7 ^h 42 ^m			Mag: +0.6 PMG: 13 ^h 37 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	25	25.3	185	11.3	-7 13.0	123	02.2	-24 46.5	244	19.4	+15 49.9	155	08.1	-16 25.0	
1	40	27.8	200	10.8	14.2	138	02.6	46.6	259	21.5	49.8	170	10.3	25.1	
2	55	30.2	215	10.4	15.4	153	03.1	46.7	274	23.6	49.7	185	12.4	25.1	
3	70	32.7	230	10.0	16.6	168	03.6	46.8	289	25.7	49.6	200	14.6	25.2	
4	85	35.2	245	09.5	17.8	183	04.1	46.8	304	27.8	49.5	215	16.8	25.3	
5	100	37.6	260	09.1	-7 19.0	198	04.5	-24 46.9	319	30.0	+15 49.4	230	19.0	-16 25.4	
6	115	40.1	275	08.6	-7 20.3	213	05.0	-24 47.0	334	32.1	+15 49.3	245	21.2	-16 25.4	
7	130	42.6	290	08.2	21.5	228	05.5	47.1	349	34.2	49.2	260	23.4	25.5	
8	145	45.0	305	07.7	22.7	243	05.9	47.2	4	36.3	49.1	275	25.6	25.6	
9	160	47.5	320	07.3	23.9	258	06.4	47.3	19	38.4	49.0	290	27.8	25.7	
10	175	49.9	335	06.9	25.1	273	06.9	47.4	34	40.5	48.9	305	30.0	25.7	
11	190	52.4	350	06.4	-7 26.3	288	07.3	-24 47.5	49	42.6	+15 48.8	320	32.1	-16 25.8	
12	205	54.9	5	06.0	-7 27.5	303	07.8	-24 47.6	64	44.7	+15 48.7	335	34.3	-16 25.9	
13	220	57.3	20	05.5	28.8	318	08.3	47.7	79	46.8	48.6	350	36.5	26.0	
14	235	59.8	35	05.1	30.0	333	08.8	47.8	94	48.9	48.5	5	38.7	26.0	
15	251	02.3	50	04.6	31.2	348	09.2	47.9	109	51.0	48.4	20	40.9	26.1	
16	266	04.7	65	04.2	32.4	3	09.7	47.9	124	53.1	48.3	35	43.1	26.2	
17	281	07.2	80	03.7	-7 33.6	18	10.2	-24 48.0	139	55.2	+15 48.2	50	45.3	-16 26.3	
18	296	09.7	95	03.3	-7 34.8	33	10.6	-24 48.1	154	57.3	+15 48.1	65	47.5	-16 26.3	
19	311	12.1	110	02.8	36.0	48	11.1	48.2	169	59.4	48.0	80	49.7	26.4	
20	326	14.6	125	02.4	37.2	63	11.6	48.3	185	01.5	47.8	95	51.8	26.5	
21	341	17.0	140	02.0	38.5	78	12.0	48.4	200	03.6	47.7	110	54.0	26.6	
22	356	19.5	155	01.5	39.7	93	12.5	48.5	215	05.8	47.6	125	56.2	26.6	
23	11	22.0	170	01.1	40.9	108	13.0	48.6	230	07.9	47.5	140	58.4	26.7	
24	26	24.4	185	00.6	-7 42.1	123	13.4	-24 48.6	245	10.0	+15 47.4	156	00.6	-16 26.8	
Dif	—			-4	-12	+5	-1		+21	-1		+22	-1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 23 ^d 7	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2	SD: 14 ^h 8		R°: 44 ^m	R°		R°					
	PMG: 11 ^h 45 ^m 2															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	41.1	-9 30.3	246	50.8	+10 51.6	77	60 N	5 16	6 04	6 46	0 17	69	15 01	17	
1	198	41.2		261	24.2 ¹⁴⁴	43.9	77	58	16	6 01	41	23	67	14 56	19	
2	213	41.3		275	57.6 ¹⁴⁴	36.1	78	56	16	5 59	37	28	66	52	20	
3	228	41.4		290	31.1 ¹⁴⁵	28.3	78	54	16	57	33	33	64	48	22	
4	243	41.6		305	04.6 ¹⁴⁵	20.5	78	52	16	55	30	38	62	44	24	
5	258	41.7	-9 34.9	319	38.2 ¹⁴⁶	+10 12.6	79	50	5 16	5 54	6 26	0 42	61	14 41	25	
6	273	41.8	-9 35.8	334	11.7 ¹⁴⁵	+10 04.6	80	45	5 15	5 50	6 19	0 51	58	14 34	28	
7	288	41.9		348	45.3 ¹⁴⁶	+9 56.7	79	40	15	46	13	0 58	56	28	30	
8	303	42.0		3	18.9 ¹⁴⁶	48.7	80	35	13	43	08	1 04	54	23	32	
9	318	42.2		17	52.5 ¹⁴⁶	40.6	81	30	12	40	6 04	10	52	18	35	
10	333	42.3		32	26.1 ¹⁴⁶	32.5	81	20	08	33	5 56	20	48	10	38	
11	348	42.4	-9 40.3	46	59.7 ¹⁴⁶	+9 24.4	81	10 N	5 03	5 27	5 49	1 28	46	14 03	41	
12	3	42.5	-9 41.2	61	33.4 ¹⁴⁷	+9 16.2	82	0	4 57	5 21	5 42	1 36	43	13 57	43	
13	18	42.6		76	07.1 ¹⁴⁷	+9 07.9	83	10 S	49	14	35	44	40	50	46	
14	33	42.8		90	40.8 ¹⁴⁷	+8 59.7	82	20	39	5 05	28	1 52	38	43	49	
15	48	42.9		105	14.5 ¹⁴⁷	51.4	83	30	26	4 54	19	2 01	35	35	52	
16	63	43.0		119	48.3 ¹⁴⁸	43.1	83	35	17	48	14	07	33	30	54	
17	78	43.1	-9 45.8	134	22.0 ¹⁴⁷	+8 34.7	84	40	4 07	4 40	5 08	2 13	31	13 25	56	
18	93	43.2	-9 46.7	148	55.8 ¹⁴⁸	+8 26.3	84	45	3 54	4 31	5 01	2 20	29	13 19	58	
19	108	43.4		163	29.6 ¹⁴⁸	17.8	85	50	38	19	4 53	29	26	11	62	
20	123	43.5		178	03.4 ¹⁴⁸	09.3	85	52	30	14	50	33	24	08	63	
21	138	43.6		192	37.2 ¹⁴⁸	+8 00.8	85	54	20	08	46	37	23	04	64	
22	153	43.7		207	11.0 ¹⁴⁸	+7 52.3	85	56	3 10	4 01	41	42	22	13 00	66	
23	168	43.8		221	44.9 ¹⁴⁹	43.7	86	58	2 58	3 53	36	47	20	12 55	68	
24	183	43.9	-9 52.1	236	18.7 ¹⁴⁸	+7 35.1	86	60 S	2 43	3 44	4 30	2 53	18	12 50	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 22 ^h 10 ^m 7		Mag: -4.0 PMG: 11 ^h 40 ^m		Mag: +0.9 PMG: 15 ^h 47 ^m		Mag: -2.0 PMG: 7 ^h 38 ^m		Mag: +0.6 PMG: 13 ^h 34 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	26	24.4	185	00.6	-7 42.1	123	13.4	-24 48.6	245	10.0	+15 47.4	156	00.6	-16 26.8	
1	41	26.9	200	00.2	43.3	138	13.9	48.7	260	12.1	47.3	171	02.8	26.9	
2	56	29.4	214	59.7	44.5	153	14.4	48.8	275	14.2	47.2	186	05.0	26.9	
3	71	31.8	229	59.3	45.7	168	14.8	48.9	290	16.3	47.1	201	07.2	27.0	
4	86	34.3	244	58.8	46.9	183	15.3	49.0	305	18.4	47.0	216	09.4	27.1	
5	101	36.8	259	58.4	-7 48.1	198	15.8	-24 49.1	320	20.5	+15 46.9	231	11.5	-16 27.2	
6	116	39.2	274	57.9	-7 49.3	213	16.2	-24 49.2	335	22.6	+15 46.8	246	13.7	-16 27.2	
7	131	41.7	289	57.5	50.5	228	16.7	49.2	350	24.7	46.7	261	15.9	27.3	
8	146	44.2	304	57.0	51.7	243	17.1	49.3	5	26.8	46.6	276	18.1	27.4	
9	161	46.6	319	56.6	53.0	258	17.6	49.4	20	29.0	46.5	291	20.3	27.4	
10	176	49.1	334	56.1	54.2	273	18.1	49.5	35	31.1	46.4	306	22.5	27.5	
11	191	51.5	349	55.7	-7 55.4	288	18.5	-24 49.6	50	33.2	+15 46.3	321	24.7	-16 27.6	
12	206	54.0	4	55.2	-7 56.6	303	19.0	-24 49.6	65	35.3	+15 46.2	336	26.9	-16 27.7	
13	221	56.5	19	54.8	57.8	318	19.5	49.7	80	37.4	46.1	351	29.0	27.7	
14	236	58.9	34	54.3	-7 59.0	333	19.9	49.8	95	39.5	46.0	6	31.2	27.8	
15	252	01.4	49	53.9	-8 00.2	348	20.4	49.9	110	41.6	45.9	21	33.4	27.9	
16	267	03.9	64	53.4	01.4	3	20.9	50.0	125	43.7	45.8	36	35.6	28.0	
17	282	06.3	79	53.0	-8 02.6	18	21.3	-24 50.0	140	45.8	+15 45.7	51	37.8	-16 28.0	
18	297	08.8	94	52.5	-8 03.8	33	21.8	-24 50.1	155	48.0	+15 45.6	66	40.0	-16 28.1	
19	312	11.3	109	52.1	05.0	48	22.2	50.2	170	50.1	45.5	81	42.2	28.2	
20	327	13.7	124	51.6	06.2	63	22.7	50.3	185	52.2	45.4	96	44.3	28.3	
21	342	16.2	139	51.1	07.4	78	23.2	50.4	200	54.3	45.3	111	46.5	28.3	
22	357	18.7	154	50.7	08.6	93	23.6	50.4	215	56.4	45.2	126	48.7	28.4	
23	12	21.1	169	50.2	09.8	108	24.1	50.5	230	58.5	45.1	141	50.9	28.5	
24	27	23.6	184	49.8	-8 11.0	123	24.5	-24 50.6	246	00.6	+15 45.0	156	53.1	-16 28.6	
Dif	—		-5	-12		+5	-1		+21		-1		+22		-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 45 ^m 0		Edad: 24 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 Rº: 42 ^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	183	43.9	-9	52.1	236	18.7	+7 35.1	60 N	16 40	17 23	18 11	1 26 71	15 18 15	
1	198	44.1		53.0	250	52.6 ¹⁴⁹	26.4 ⁸⁷	58	45	25	11	30 69	15 18	
2	213	44.2		53.9	265	26.5 ¹⁴⁹	17.7 ⁸⁷	56	50	28	11	34 67	12 20	
3	228	44.3		54.8	280	00.4 ¹⁴⁹	09.0 ⁸⁷	54	54	30	11	37 65	10 21	
4	243	44.4		55.7	294	34.3 ¹⁴⁹	+7 00.2 ⁸⁸	52	16 58	32	11	40 63	08 23	
5	258	44.5	-9	56.6	309	08.2 ¹⁴⁹	+6 51.5 ⁸⁷	50	17 01	17 34	18 11	1 43 62	15 06 24	
6	273	44.6	-9	57.5	323	42.1 ¹⁴⁹	+6 42.7 ⁸⁸	45	17 09	17 38	18 12	1 49 59	15 02 27	
7	288	44.8		58.4	338	16.0 ¹⁴⁹	33.8 ⁸⁹	40	15	42	14	54 56	14 58 30	
8	303	44.9	-9	59.3	352	49.9 ¹⁴⁹	24.9 ⁸⁹	35	20	46	15	1 58 54	55 32	
9	318	45.0	-10	00.2	7	23.9 ¹⁵⁰	16.0 ⁸⁹	30	25	49	17	2 02 52	53 33	
10	333	45.1		01.1	21	57.8 ¹⁴⁹	+6 07.1 ⁸⁹	20	34	17 56	22	08 49	48 37	
11	348	45.2	-10	02.0	36	31.8 ¹⁵⁰	+5 58.1 ⁹⁰	10 N	17 41	18 02	18 27	2 14 46	14 44 40	
12	3	45.3	-10	02.9	51	05.7 ¹⁴⁹	+5 49.1 ⁹⁰	0	17 48	18 09	18 34	2 19 43	14 40 43	
13	18	45.4		03.8	65	39.7 ¹⁵⁰	40.1 ⁹⁰	10 S	17 56	17	42	24 41	36 46	
14	33	45.6		04.7	80	13.7 ¹⁵⁰	31.1 ⁹⁰	20	18 03	26	18 52	30 37	32 48	
15	48	45.7		05.6	94	47.6 ¹⁴⁹	22.0 ⁹¹	30	13	37	19 06	36 34	27 52	
16	63	45.8		06.5	109	21.6 ¹⁵⁰	12.9 ⁹¹	35	18	44	15	40 32	24 54	
17	78	45.9	-10	07.4	123	55.6 ¹⁵⁰	+5 03.8 ⁹¹	40	18 24	18 52	19 26	2 44 30	14 21 56	
18	93	46.0	-10	08.3	138	29.6 ¹⁵⁰	+4 54.7 ⁹¹	45	18 31	19 02	19 39	2 49 28	14 17 59	
19	108	46.1		09.2	153	03.5 ¹⁴⁹	45.5 ⁹²	50	40	14	19 56	55 24	13 62	
20	123	46.2		10.1	167	37.5 ¹⁵⁰	36.3 ⁹²	52	44	20	20 05	2 57 24	11 63	
21	138	46.3		11.0	182	11.5 ¹⁵⁰	27.1 ⁹²	54	48	26	14	3 00 22	08 65	
22	153	46.5		11.9	196	45.5 ¹⁵⁰	17.9 ⁹²	56	53	33	25	04 20	06 67	
23	168	46.6		12.8	211	19.4 ¹⁴⁹	+4 08.6 ⁹³	58	18 58	42	38	07 18	03 69	
24	183	46.7	-10	13.7	225	53.4 ¹⁵⁰	+3 59.3 ⁹³	60 S	19 04	19 51	20 54	3 11 16	14 00 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 06 ^m 8		Mag: -4.0 PMG: 11 ^h 41 ^m		Mag: +0.9 PMG: 15 ^h 46 ^m		Mag: -2.0 PMG: 7 ^h 35 ^m		Mag: +0.6 PMG: 13 ^h 30 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	27	23.6	184	49.8	-8	11.0	246	00.6	+15	45.0				
1	42	26.0	199	49.3		12.2	261	02.7		44.9				
2	57	28.5	214	48.9		13.4	276	04.9		44.8				
3	72	31.0	229	48.4		14.6	291	07.0		44.7				
4	87	33.4	244	48.0		15.8	306	09.1		44.6				
5	102	35.9	259	47.5	-8	17.0	321	11.2	+15	44.4				
6	117	38.4	274	47.0	-8	18.2	336	13.3	+15	44.3				
7	132	40.8	289	46.6		19.4	351	15.4		44.2				
8	147	43.3	304	46.1		20.6	6	17.6		44.1				
9	162	45.8	319	45.7		21.8	21	19.7		44.0				
10	177	48.2	334	45.2		23.0	36	21.8		43.9				
11	192	50.7	349	44.8	-8	24.2	51	23.9	+15	43.8				
12	207	53.1	4	44.3	-8	25.4	66	26.0	+15	43.7				
13	222	55.6	19	43.8		26.6	81	28.1		43.6				
14	237	58.1	34	43.4		27.8	96	30.2		43.5				
15	253	00.5	49	42.9		29.0	111	32.4		43.4				
16	268	03.0	64	42.5		30.2	126	34.5		43.3				
17	283	05.5	79	42.0	-8	31.4	141	36.6	+15	43.2				
18	298	07.9	94	41.5	-8	32.6	156	38.7	+15	43.1				
19	313	10.4	109	41.1		33.8	171	40.8		43.0				
20	328	12.9	124	40.6		35.0	186	42.9		42.9				
21	343	15.3	139	40.2		36.2	201	45.1		42.8				
22	358	17.8	154	39.7		37.4	216	47.2		42.7				
23	13	20.3	169	39.2		38.6	231	49.3		42.6				
24	28	22.7	184	38.8	-8	39.8	246	51.4	+15	42.5				
Dif	—		-5	-12	+5	-1	+21	-1	+22	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'1 PMG: 11 ^h 44 ^m 8			Edad: 25 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 9 ^h 12 ^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	183	46.7	-10	13.7	225	53.4	+3	59.3	60 N	5	20	6	08	6	51	2	37	72	15	33	16	
1	198	46.8		14.6	240	27.4 ¹⁵⁰		50.0	93	58	20	06		46	39	69		33	17			
2	213	46.9		15.5	255	01.3 ¹⁴⁹		40.7	93	56	20	03		41	41	67		32	19			
3	228	47.0		16.4	269	35.3 ¹⁵⁰		31.4	93	54	20	6	01	37	42	66		31	22			
4	243	47.1		17.3	284	09.3 ¹⁵⁰		22.0	94	52	19	5	59	33	43	65		31	22			
5	258	47.2	-10	18.2	298	43.2 ¹⁴⁹	+3	12.6	94	50	5	19	5	57	6	30	2	45	62	15	30	24
6	273	47.3	-10	19.1	313	17.2 ¹⁵⁰	+3	03.2	94	45	5	18	5	52	6	22	2	48	59	15	29	27
7	288	47.4		20.0	327	51.1 ¹⁴⁹	+2	53.8	94	40	17	48		16	50	57		28	30			
8	303	47.5		20.9	342	25.0 ¹⁴⁹		44.4	94	35	15	44		10	52	54		27	32			
9	318	47.7		21.8	356	59.0 ¹⁵⁰		34.9	95	30	13	41	6	05	54	52		26	34			
10	333	47.8		22.7	11	32.9 ¹⁴⁹		25.5	94	20	08	34	5	56	2	57	49		25	38		
11	348	47.9	-10	23.6	26	06.8 ¹⁴⁹	+2	16.0	95	10 N	5	03	5	27	5	49	3	00	46	15	24	40
12	3	48.0	-10	24.5	40	40.7 ¹⁴⁹	+2	06.5	95	0	4	56	5	20	5	41	3	02	43	15	23	43
13	18	48.1		25.4	55	14.6 ¹⁴⁹	+1	57.0	95	10 S	48	13		34	05	40		22	46			
14	33	48.2		26.3	69	48.5 ¹⁴⁹		47.5	95	20	37	5	04	26	07	38		20	50			
15	48	48.3		27.2	84	22.3 ¹⁴⁸		37.9	96	30	23	4	52	17	10	34		19	53			
16	63	48.4		28.1	98	56.2 ¹⁴⁹		28.4	95	35	14	45		11	12	32		18	55			
17	78	48.5	-10	29.0	113	30.0 ¹⁴⁸	+1	18.8	96	40	4	03	4	37	5	05	3	14	30	15	17	57
18	93	48.6	-10	29.9	128	03.9 ¹⁴⁹	+1	09.3	95	45	3	50	4	27	4	58	3	17	27	15	16	60
19	108	48.7		30.8	142	37.7 ¹⁴⁸	+0	59.7	96	50	33	15		49	19	24		15	63			
20	123	48.8		31.7	157	11.5 ¹⁴⁸		50.1	96	52	24	09		45	21	22		14	65			
21	138	48.9		32.5	171	45.3 ¹⁴⁸		40.5	96	54	15	4	03	41	22	21		13	67			
22	153	49.0		33.4	186	19.0 ¹⁴⁷		30.9	96	56	3	04	3	56	36	24	19		13	68		
23	168	49.1		34.3	200	52.8 ¹⁴⁸		21.3	96	58	2	51	47	31	25	18		12	70			
24	183	49.2	-10	35.2	215	26.5 ¹⁴⁷	+0	11.7	96	60 S	2	35	3	38	4	24	3	27	16	15	11	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 22 ^h 02 ^m 9		Mag: -4.0 PMG: 11 ^h 42 ^m		Mag: +0.9 PMG: 15 ^h 45 ^m		Mag: -2.0 PMG: 7 ^h 32 ^m		Mag: +0.6 PMG: 13 ^h 27 ^m											
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'										
0	28	22.7	184	38.8	-8	39.8	123	35.6	-24	52.3	246	51.4	+15	42.5	157	45.6	-16	30.4		
1	43	25.2	199	38.3		41.0	138	36.0		52.3	261	53.5		42.4	172	47.7		30.4		
2	58	27.6	214	37.8		42.2	153	36.5		52.4	276	55.7		42.3	187	49.9		30.5		
3	73	30.1	229	37.4		43.4	168	36.9		52.5	291	57.8		42.2	202	52.1		30.6		
4	88	32.6	244	36.9		44.6	183	37.4		52.5	306	59.9		42.1	217	54.3		30.7		
5	103	35.0	259	36.5	-8	45.8	198	37.8	-24	52.6	322	02.0	+15	42.0	232	56.5	-16	30.7		
6	118	37.5	274	36.0	-8	47.0	213	38.3	-24	52.6	337	04.1	+15	41.9	247	58.7	-16	30.8		
7	133	40.0	289	35.5		48.1	228	38.7		52.7	352	06.3		41.8	263	00.9		30.9		
8	148	42.4	304	35.1		49.3	243	39.2		52.8	7	08.4		41.7	278	03.0		31.0		
9	163	44.9	319	34.6		50.5	258	39.7		52.8	22	10.5		41.6	293	05.2		31.0		
10	178	47.4	334	34.1		51.7	273	40.1		52.9	37	12.6		41.5	308	07.4		31.1		
11	193	49.8	349	33.7	-8	52.9	288	40.6	-24	53.0	52	14.7	+15	41.4	323	09.6	-16	31.2		
12	208	52.3	4	33.2	-8	54.1	303	41.0	-24	53.0	67	16.9	+15	41.3	338	11.8	-16	31.3		
13	223	54.7	19	32.7		55.3	318	41.5		53.1	82	19.0		41.2	353	14.0		31.3		
14	238	57.2	34	32.3		56.5	333	41.9		53.1	97	21.1		41.1	8	16.1		31.4		
15	253	59.7	49	31.8		57.7	348	42.4		53.2	112	23.2		41.0	23	18.3		31.5		
16	269	02.1	64	31.3	-8	58.9	3	42.8		53.2	127	25.4		40.9	38	20.5		31.6		
17	284	04.6	79	30.9	-9	00.0	18	43.3	-24	53.3	142	27.5	+15	40.8	53	22.7	-16	31.6		
18	299	07.1	94	30.4	-9	01.2	33	43.7	-24	53.4	157	29.6	+15	40.7	68	24.9	-16	31.7		
19	314	09.5	109	29.9		02.4	48	44.2		53.4	172	31.7		40.6	83	27.1		31.8		
20	329	12.0	124	29.5		03.6	63	44.6		53.5	187	33.8		40.5	98	29.2		31.9		
21	344	14.5	139	29.0		04.8	78	45.1		53.5	202	36.0		40.4	113	31.4		31.9		
22	359	16.9	154	28.5		06.0	93	45.5		53.6	217	38.1		40.3	128	33.6		32.0		
23	14	19.4	169	28.0		07.2	108	46.0		53.6	232	40.2		40.2	143	35.8		32.1		
24	29	21.9	184	27.6	-9	08.4	123	46.4	-24	53.7	247	42.3	+15	40.1	158	38.0	-16	32.2		
Dif	—		-5		-12		+5		-1		+21		-1		+22		-			

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: 26 ^d 7 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0 SD: 14 ^h 9 PMG: 9 ^h 56 ^m R°: 44 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	183	49.2	-10	35.2	215	26.5	+0	11.7	60 N	16 34	17 17	18 06	3 49 73		15 49 16					
1	198	49.3		36.1	230	00.3 ¹⁴⁸	+0	02.0	58	40	20	06	48 71		50 19					
2	213	49.4		37.0	244	34.0 ¹⁴⁷	-0	07.6	56	45	23	06	48 69		51 21					
3	228	49.5		37.9	259	07.6 ¹⁴⁶		17.3	54	49	26	07	48 67		53 22					
4	243	49.6		38.8	273	41.3 ¹⁴⁷		26.9	52	54	28	07	48 65		53 24					
5	258	49.7	-10	39.7	288	15.0 ¹⁴⁷	-0	36.6	50	16 57	17 30	18 08	3 47 64		15 54 26					
6	273	49.8	-10	40.6	302	48.6 ¹⁴⁶	-0	46.2	45	17 05	17 35	18 09	3 47 61		15 56 29					
7	288	49.9		41.5	317	22.2 ¹⁴⁶	-0	55.9	40	12	40	11	47 58		58 31					
8	303	50.0		42.4	331	55.8 ¹⁴⁶	-1	05.5	35	18	44	13	46 56		15 59 33					
9	318	50.1		43.2	346	29.3 ¹⁴⁵		15.2	30	23	47	15	46 54		16 00 36					
10	333	50.3		44.1	1	02.9 ¹⁴⁶		24.8	20	32	17 55	20	46 50		03 38					
11	348	50.4	-10	45.0	15	36.4 ¹⁴⁵	-1	34.5	10 N	17 40	18 02	18 26	3 46 46		16 04 42					
12	3	50.5	-10	45.9	30	09.9 ¹⁴⁵	-1	44.2	0	17 48	18 09	18 33	3 45 44		16 06 45					
13	18	50.6		46.8	44	43.3 ¹⁴⁴	-1	53.8	10 S	17 56	17	42	45 41		08 47					
14	33	50.6		47.7	59	16.8 ¹⁴⁵	-2	03.5	20	18 04	27	18 53	45 38		10 50					
15	48	50.7		48.6	73	50.2 ¹⁴⁴		13.2	30	14	39	19 08	44 35		12 54					
16	63	50.8		49.5	88	23.6 ¹⁴⁴		22.8	35	20	46	17	44 33		13 56					
17	78	50.9	-10	50.4	102	56.9 ¹⁴³	-2	32.5	40	18 26	18 54	19 28	3 44 30		16 14 59					
18	93	51.0	-10	51.2	117	30.3 ¹⁴⁴	-2	42.1	45	18 34	19 05	19 42	3 44 27		16 16 61					
19	108	51.1		52.1	132	03.6 ¹⁴³	-2	51.8	50	43	18	20 00	43 25		18 64					
20	123	51.2		53.0	146	36.9 ¹⁴³	-3	01.4	52	47	24	09	43 24		19 66					
21	138	51.3		53.9	161	10.1 ¹⁴²		11.0	54	52	30	19	43 22		20 67					
22	153	51.4		54.8	175	43.3 ¹⁴²		20.7	56	18 57	38	31	43 20		21 69					
23	168	51.5		55.7	190	16.5 ¹⁴²		30.3	58	19 03	47	20 45	43 18		22 71					
24	183	51.6	-10	56.6	204	49.7 ¹⁴²	-3	39.9	60 S	19 10	19 57	21 01	3 43 16		16 23 74					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 21 ^h 58 ^m 9		Mag: -4.0 PMG: 11 ^h 43 ^m			Mag: +0.9 PMG: 15 ^h 44 ^m			Mag: -2.0 PMG: 7 ^h 28 ^m			Mag: +0.6 PMG: 13 ^h 24 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	29	21.9	184	27.6	-9	08.4	123	46.4	-24	53.7	247	42.3	+15	40.1	158	38.0	-16	32.2		
1	44	24.3	199	27.1		09.5	138	46.9		53.8	262	44.5		40.0	173	40.2		32.2		
2	59	26.8	214	26.6		10.7	153	47.3		53.8	277	46.6		39.9	188	42.3		32.3		
3	74	29.2	229	26.2		11.9	168	47.8		53.9	292	48.7		39.8	203	44.5		32.4		
4	89	31.7	244	25.7		13.1	183	48.3		53.9	307	50.8		39.7	218	46.7		32.5		
5	104	34.2	259	25.2	-9	14.3	198	48.7	-24	54.0	322	53.0	+15	39.6	233	48.9	-16	32.5		
6	119	36.6	274	24.7	-9	15.5	213	49.2	-24	54.0	337	55.1	+15	39.5	248	51.1	-16	32.6		
7	134	39.1	289	24.3		16.7	228	49.6		54.1	352	57.2		39.4	263	53.3		32.7		
8	149	41.6	304	23.8		17.8	243	50.1		54.1	7	59.3		39.3	278	55.4		32.8		
9	164	44.0	319	23.3		19.0	258	50.5		54.2	23	01.5		39.2	293	57.6		32.8		
10	179	46.5	334	22.9		20.2	273	51.0		54.2	38	03.6		39.1	308	59.8		32.9		
11	194	49.0	349	22.4	-9	21.4	288	51.4	-24	54.3	53	05.7	+15	39.0	324	02.0	-16	33.0		
12	209	51.4	4	21.9	-9	22.6	303	51.8	-24	54.3	68	07.8	+15	38.9	339	04.2	-16	33.1		
13	224	53.9	19	21.4		23.8	318	52.3		54.4	83	10.0		38.8	354	06.4		33.1		
14	239	56.4	34	21.0		24.9	333	52.7		54.4	98	12.1		38.7	9	08.5		33.2		
15	254	58.8	49	20.5		26.1	348	53.2		54.5	113	14.2		38.6	24	10.7		33.3		
16	270	01.3	64	20.0		27.3	3	53.6		54.5	128	16.4		38.5	39	12.9		33.4		
17	285	03.7	79	19.5	-9	28.5	18	54.1	-24	54.6	143	18.5	+15	38.4	54	15.1	-16	33.4		
18	300	06.2	94	19.1	-9	29.7	33	54.5	-24	54.6	158	20.6	+15	38.3	69	17.3	-16	33.5		
19	315	08.7	109	18.6		30.8	48	55.0		54.7	173	22.7		38.2	84	19.5		33.6		
20	330	11.1	124	18.1		32.0	63	55.4		54.7	188	24.9		38.1	99	21.6		33.7		
21	345	13.6	139	17.6		33.2	78	55.9		54.7	203	27.0		38.0	114	23.8		33.7		
22	0	16.1	154	17.1		34.4	93	56.3		54.8	218	29.1		38.0	129	26.0		33.8		
23	15	18.5	169	16.7		35.6	108	56.8		54.8	233	31.3		37.9	144	28.2		33.9		
24	30	21.0	184	16.2	-9	36.7	123	57.2	-24	54.9	248	33.4	+15	37.8	159	30.4	-16	34.0		
Dif	—		-5			-12			+4			0			+21			-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 5			Edad: 27 ^d 7 PHE { 4 ^h : 55'2 12 ^h : 55'3 20 ^h : 55'5 R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	51.6	-10	56.6	204	49.7	-3	39.9	60 N	5	25	6	13	6	56	5	02
1	198	51.7		57.4	219	22.8 ¹⁴¹		49.5 ⁹⁶	58	24	10		51	4	59	72	
2	213	51.8		58.3	233	55.9 ¹⁴¹		-3 59.1 ⁹⁶	56	24	07		45	57	70	12	
3	228	51.9	-10	59.2	248	28.9 ¹⁴⁰		-4 08.7 ⁹⁶	54	23	05		41	55	68	15	
4	243	52.0	-11	00.1	263	02.0 ¹⁴¹		18.2 ⁹⁵	52	23	02		37	53	67	17	
5	258	52.1	-11	01.0	277	35.0 ¹⁴⁰		-4 27.8 ⁹⁶	50	5	22	6	00	6	33	4	
6	273	52.2	-11	01.9	292	07.9 ¹³⁹		-4 37.3 ⁹⁵	45	5	20	5	55	6	25	4	
7	288	52.3		02.7	306	40.8 ¹³⁹		46.9 ⁹⁶	40	19	50		18	45	59	29	
8	303	52.4		03.6	321	13.7 ¹³⁹		-4 56.4 ⁹⁵	35	16	46		12	42	57	32	
9	318	52.5		04.5	335	46.6 ¹³⁹		-5 05.9 ⁹⁵	30	14	42	6	06	40	55	36	
10	333	52.6		05.4	350	19.4 ¹³⁸		15.4 ⁹⁵	20	09	35	5	57	36	51	41	
11	348	52.7	-11	06.3	4	52.2 ¹³⁸		-5 24.8 ⁹⁴	10 N	5	03	5	28	5	49	4	
12	3	52.8	-11	07.2	19	24.9 ¹³⁷		-5 34.3 ⁹⁵	0	4	56	5	20	5	41	4	
13	18	52.9		08.0	33	57.6 ¹³⁷		43.7 ⁹⁴	10 S	47	12		33	26	43	16	
14	33	52.9		08.9	48	30.3 ¹³⁷		-5 53.1 ⁹⁴	20	36	5	02	25	23	39	17	
15	48	53.0		09.8	63	02.9 ¹³⁶		-6 02.5 ⁹⁴	30	21	4	50	15	19	36	06	
16	63	53.1		10.7	77	35.5 ¹³⁶		11.9 ⁹⁴	35	12	43		09	17	34	09	
17	78	53.2	-11	11.6	92	08.0 ¹³⁵		-6 21.3 ⁹⁴	40	4	00	4	34	5	02	4	
18	93	53.3	-11	12.4	106	40.5 ¹³⁵		-6 30.6 ⁹³	45	3	46	4	24	4	55	4	
19	108	53.4		13.3	121	13.0 ¹³⁵		39.9 ⁹³	50	28	11		45	08	26	22	
20	123	53.5		14.2	135	45.4 ¹³⁴		49.2 ⁹³	52	19	4	05	41	07	24	25	
21	138	53.6		15.1	150	17.8 ¹³⁴		-6 58.5 ⁹³	54	3	09	3	58	05	23	27	
22	153	53.7		16.0	164	50.2 ¹³⁴		-7 07.7 ⁹²	56	2	57		50	03	22	30	
23	168	53.8		16.8	179	22.4 ¹³²		17.0 ⁹³	58	44	41		25	4	01	20	
24	183	53.9	-11	17.7	193	54.7 ¹³³		-7 26.1 ⁹¹	60 S	2	27	3	31	4	19	3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 55 ^m 0		Mag: -4.0 PMG: 11 ^h 43 ^m			Mag: +0.9 PMG: 15 ^h 44 ^m			Mag: -2.0 PMG: 7 ^h 25 ^m			Mag: +0.6 PMG: 13 ^h 20 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	30	21.0	184	16.2	-9	36.7	123	57.2	-24	54.9	248	33.4	+15	37.8	159	30.4	
1	45	23.5	199	15.7		37.9	138	57.7		54.9	263	35.5		37.7	174	32.6	
2	60	25.9	214	15.2		39.1	153	58.1		55.0	278	37.6		37.6	189	34.7	
3	75	28.4	229	14.8		40.3	168	58.6		55.0	293	39.8		37.5	204	36.9	
4	90	30.8	244	14.3		41.4	183	59.0		55.1	308	41.9		37.4	219	39.1	
5	105	33.3	259	13.8	-9	42.6	198	59.5	-24	55.1	323	44.0	+15	37.3	234	41.3	
6	120	35.8	274	13.3	-9	43.8	213	59.9	-24	55.1	338	46.2	+15	37.2	249	43.5	
7	135	38.2	289	12.8		45.0	229	00.4		55.2	353	48.3		37.1	264	45.6	
8	150	40.7	304	12.3		46.1	244	00.8		55.2	8	50.4		37.0	279	47.8	
9	165	43.2	319	11.9		47.3	259	01.2		55.3	23	52.6		36.9	294	50.0	
10	180	45.6	334	11.4		48.5	274	01.7		55.3	38	54.7		36.8	309	52.2	
11	195	48.1	349	10.9	-9	49.7	289	02.1	-24	55.3	53	56.8	+15	36.7	324	54.4	
12	210	50.6	4	10.4	-9	50.8	304	02.6	-24	55.4	68	59.0	+15	36.6	339	56.6	
13	225	53.0	19	09.9		52.0	319	03.0		55.4	84	01.1		36.5	354	58.7	
14	240	55.5	34	09.5		53.2	334	03.5		55.5	99	03.2		36.4	10	00.9	
15	255	58.0	49	09.0		54.4	349	03.9		55.5	114	05.4		36.3	25	03.1	
16	271	00.4	64	08.5		55.5	4	04.4		55.5	129	07.5		36.2	40	05.3	
17	286	02.9	79	08.0	-9	56.7	19	04.8	-24	55.6	144	09.6	+15	36.1	55	07.5	
18	301	05.3	94	07.5	-9	57.9	34	05.2	-24	55.6	159	11.8	+15	36.0	70	09.6	
19	316	07.8	109	07.0	-9	59.0	49	05.7		55.6	174	13.9		35.9	85	11.8	
20	331	10.3	124	06.5	-10	00.2	64	06.1		55.7	189	16.0		35.8	100	14.0	
21	346	12.7	139	06.1		01.4	79	06.6		55.7	204	18.2		35.7	115	16.2	
22	1	15.2	154	05.6		02.5	94	07.0		55.7	219	20.3		35.6	130	18.4	
23	16	17.7	169	05.1		03.7	109	07.5		55.8	234	22.4		35.5	145	20.5	
24	31	20.1	184	04.6	-10	04.9	124	07.9	-24	55.8	249	24.6	+15	35.4	160	22.7	
Dif	—		-5		-12		+4		0		+21		-1		+22		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 3			Edad: 28 ^d 7 PHE { SD: 15:1 PMG: 11 ^h 26 ^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	183	53.9	-11	17.7	193	54.7	-7 26.1	60 N	16 29	17 12	18 00	6 16 75	16 24 22	
1	198	53.9		18.6	208	26.9 ¹³²	35.3 92	58	35	15	01	11 73	30 24	
2	213	54.0		19.5	222	59.1 ¹³²	44.4 91	56	40	19	02	07 71	35 26	
3	228	54.1		20.4	237	31.2 ¹³¹	-7 53.6 92	54	45	21	03	03 69	39 28	
4	243	54.2		21.2	252	03.3 ¹³¹	-8 02.6 90	52	49	24	03	6 00 67	43 30	
5	258	54.3	-11	22.1	266	35.3 ¹³⁰	-8 11.7 91	50	16 53	17 27	18 04	5 56 66	16 47 31	
6	273	54.4	-11	23.0	281	07.3 ¹³⁰	-8 20.7 90	45	17 02	17 32	18 06	5 49 63	16 55 34	
7	288	54.5		23.9	295	39.2 ¹²⁹	29.7 90	40	09	37	09	44 60	17 02 36	
8	303	54.6		24.7	310	11.1 ¹²⁹	38.6 89	35	16	41	11	39 58	08 38	
9	318	54.6		25.6	324	42.9 ¹²⁸	47.5 89	30	21	45	13	35 56	13 40	
10	333	54.7		26.5	339	14.7 ¹²⁸	-8 56.4 89	20	31	17 53	19	27 53	22 43	
11	348	54.8	-11	27.4	353	46.4 ¹²⁷	-9 05.3 89	10 N	17 40	18 01	18 26	5 21 50	17 30 45	
12	3	54.9	-11	28.2	8	18.1 ¹²⁷	-9 14.1 88	0	17 48	18 09	18 33	5 15 47	17 37 48	
13	18	55.0		29.1	22	49.8 ¹²⁷	22.9 88	10 S	17 56	18	43	09 44	44 51	
14	33	55.1		30.0	37	21.4 ¹²⁶	31.6 87	20	18 05	28	18 54	5 02 42	17 52 54	
15	48	55.2		30.9	51	52.9 ¹²⁵	40.3 87	30	15	40	19 10	4 55 39	18 01 57	
16	63	55.2		31.7	66	24.4 ¹²⁵	49.0 87	35	21	48	19	51 37	07 58	
17	78	55.3	-11	32.6	80	55.9 ¹²⁵	-9 57.6 86	40	18 28	18 57	19 31	4 46 35	18 12 61	
18	93	55.4	-11	33.5	95	27.3 ¹²⁴	-10 06.2 86	45	18 36	19 08	19 46	4 41 32	18 19 63	
19	108	55.5		34.4	109	58.6 ¹²³	14.7 85	50	46	21	20 05	34 29	28 66	
20	123	55.6		35.2	124	29.9 ¹²³	23.2 85	52	51	28	14	31 28	32 67	
21	138	55.7		36.1	139	01.1 ¹²²	31.6 84	54	18 56	35	24	28 26	36 69	
22	153	55.7		37.0	153	32.3 ¹²²	40.0 84	56	19 01	43	37	25 24	41 70	
23	168	55.8		37.8	168	03.5 ¹²²	48.4 84	58	08	19 52	20 52	21 22	46 73	
24	183	55.9	-11	38.7	182	34.5 ¹²⁰	-10 56.7 83	60 S	19 15	20 03	21 09	4 16 21	18 52 75	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 51 ^m 1		Mag: -4.0 PMG: 11 ^h 44 ^m		Mag: +0.9 PMG: 15 ^h 43 ^m		Mag: -2.1 PMG: 7 ^h 21 ^m		Mag: +0.6 PMG: 13 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	31	20.1	184	04.6	124	07.9	249	24.6	160	22.7
1	46	22.6	199	04.1	139	08.3	264	26.7	175	24.9
2	61	25.1	214	03.6	154	08.8	279	28.8	190	27.1
3	76	27.5	229	03.1	169	09.2	294	31.0	205	29.3
4	91	30.0	244	02.6	184	09.7	309	33.1	220	31.4
5	106	32.4	259	02.2	199	10.1	324	35.2	235	33.6
6	121	34.9	274	01.7	214	10.6	339	37.4	250	35.8
7	136	37.4	289	01.2	229	11.0	354	39.5	265	38.0
8	151	39.8	304	00.7	244	11.4	9	41.6	280	40.2
9	166	42.3	319	00.2	259	11.9	24	43.8	295	42.4
10	181	44.8	333	59.7	274	12.3	39	45.9	310	44.5
11	196	47.2	348	59.2	289	12.8	54	48.1	325	46.7
12	211	49.7	3	58.7	304	13.2	69	50.2	340	48.9
13	226	52.2	18	58.2	319	13.6	84	52.3	355	51.1
14	241	54.6	33	57.7	334	14.1	99	54.5	10	53.3
15	256	57.1	48	57.2	349	14.5	114	56.6	25	55.4
16	271	59.6	63	56.8	4	15.0	129	58.7	40	57.6
17	287	02.0	78	56.3	19	15.4	145	00.9	55	59.8
18	302	04.5	93	55.8	34	15.8	160	03.0	71	02.0
19	317	06.9	108	55.3	49	16.3	175	05.2	86	04.2
20	332	09.4	123	54.8	64	16.7	190	07.3	101	06.3
21	347	11.9	138	54.3	79	17.2	205	09.4	116	08.5
22	2	14.3	153	53.8	94	17.6	220	11.6	131	10.7
23	17	16.8	168	53.3	109	18.0	235	13.7	146	12.9
24	32	19.3	183	52.8	124	18.5	250	15.9	161	15.0
Dif	—		-5		+4		0		+22	
			-12		0		-1		-1	

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: 0 ^d 1 PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5 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	183	55.9	-11	38.7	182	34.5	-10	56.7	60 N	5	29	6	18	7	01	7	31	
1	198	56.0		39.6	197	05.6 ¹²¹	-11	05.0 ⁸³	58		29	14	6	55	24	73		
2	213	56.1		40.5	211	36.5 ¹¹⁹		13.2 ⁸²	56		28	11	50	18	70			
3	228	56.2		41.3	226	07.5 ¹²⁰		21.4 ⁸²	54		27	08	45	12	69			
4	243	56.2		42.2	240	38.3 ¹¹⁸		29.5 ⁸¹	52		26	05	40	07	67			
5	258	56.3	-11	43.1	255	09.2 ¹¹⁹	-11	37.6 ⁸¹	50	5	25	6	03	6	36			
6	273	56.4	-11	43.9	269	39.9 ¹¹⁷	-11	45.6 ⁸⁰	45	5	23	5	57	6	27			
7	288	56.5		44.8	284	10.6 ¹¹⁷	-11	53.5 ⁷⁹	40		21	52	20	44	61			
8	303	56.6		45.7	298	41.3 ¹¹⁷	-12	01.4 ⁷⁹	35		18	48	14	37	59			
9	318	56.6		46.5	313	11.9 ¹¹⁶		09.3 ⁷⁹	30		15	43	6	08	31			
10	333	56.7		47.4	327	42.4 ¹¹⁵		17.1 ⁷⁸	20		10	36	5	58	20			
11	348	56.8	-11	48.3	342	12.9 ¹¹⁵	-12	24.9 ⁷⁸	10 N	5	03	5	28	5	49			
12	3	56.9	-11	49.2	356	43.3 ¹¹⁴	-12	32.5 ⁷⁶	0	4	55	5	20	5	41			
13	18	56.9		50.0	11	13.7 ¹¹⁴		40.2 ⁷⁷	10 S		46	11	32	5	53			
14	33	57.0		50.9	25	44.0 ¹¹³		47.7 ⁷⁵	20	34	5	01	23	44	45			
15	48	57.1		51.8	40	14.3 ¹¹³	-12	55.3 ⁷⁶	30	19	4	48	13	34	41			
16	63	57.2		52.6	54	44.5 ¹¹²	-13	02.7 ⁷⁴	35	4	09	40	07	28	40			
17	78	57.3	-11	53.5	69	14.7 ¹¹²	-13	10.1 ⁷⁴	40	3	57	4	31	5	21			
18	93	57.3	-11	54.4	83	44.8 ¹¹¹	-13	17.4 ⁷³	45	3	42	4	20	4	51			
19	108	57.4		55.2	98	14.8 ¹¹⁰		24.7 ⁷³	50	23	07	42	5	03				
20	123	57.5		56.1	112	44.8 ¹¹⁰		31.9 ⁷²	52	14	4	00	37	4	59			
21	138	57.6		56.9	127	14.7 ¹⁰⁹		39.0 ⁷¹	54	3	03	3	53	54	31			
22	153	57.6		57.8	141	44.6 ¹⁰⁹		46.1 ⁷¹	56	2	51	45	26	49	29			
23	168	57.7		58.7	156	14.4 ¹⁰⁸	-13	53.1 ⁷⁰	58	36	35	20	43	27				
24	183	57.8	-11	59.5	170	44.2 ¹⁰⁸	-14	00.1 ⁷⁰	60 S	2	18	3	25	4	13			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 21 ^h 47 ^m 1		Mag: -4.0 PMG: 11 ^h 45 ^m			Mag: +0.9 PMG: 15 ^h 42 ^m			Mag: -2.1 PMG: 7 ^h 18 ^m			Mag: +0.6 PMG: 13 ^h 13 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	32	19.3	183	52.8	-10	32.8	124	18.5	-24	56.5	250	15.9	+15	33.1	161	15.0	-16	37.5
1	47	21.7	198	52.3		34.0	139	18.9		56.5	265	18.0		33.0	176	17.2		37.6
2	62	24.2	213	51.8		35.1	154	19.4		56.5	280	20.1		32.9	191	19.4		37.7
3	77	26.7	228	51.3		36.3	169	19.8		56.6	295	22.3		32.9	206	21.6		37.8
4	92	29.1	243	50.8		37.4	184	20.2		56.6	310	24.4		32.8	221	23.8		37.8
5	107	31.6	258	50.3	-10	38.6	199	20.7	-24	56.6	325	26.6	+15	32.7	236	25.9	-16	37.9
6	122	34.0	273	49.8	-10	39.7	214	21.1	-24	56.6	340	28.7	+15	32.6	251	28.1	-16	38.0
7	137	36.5	288	49.3		40.9	229	21.5		56.6	355	30.9		32.5	266	30.3		38.1
8	152	39.0	303	48.8		42.1	244	22.0		56.7	10	33.0		32.4	281	32.5		38.1
9	167	41.4	318	48.3		43.2	259	22.4		56.7	25	35.1		32.3	296	34.7		38.2
10	182	43.9	333	47.8		44.4	274	22.8		56.7	40	37.3		32.2	311	36.8		38.3
11	197	46.4	348	47.3	-10	45.5	289	23.3	-24	56.7	55	39.4	+15	32.1	326	39.0	-16	38.4
12	212	48.8	3	46.8	-10	46.7	304	23.7	-24	56.7	70	41.6	+15	32.0	341	41.2	-16	38.4
13	227	51.3	18	46.3		47.8	319	24.2		56.7	85	43.7		31.9	356	43.4		38.5
14	242	53.8	33	45.8		49.0	334	24.6		56.8	100	45.9		31.8	11	45.6		38.6
15	257	56.2	48	45.3		50.1	349	25.0		56.8	115	48.0		31.7	26	47.7		38.7
16	272	58.7	63	44.8		51.3	4	25.5		56.8	130	50.1		31.6	41	49.9		38.7
17	288	01.2	78	44.3	-10	52.4	19	25.9	-24	56.8	145	52.3	+15	31.5	56	52.1	-16	38.8
18	303	03.6	93	43.8	-10	53.6	34	26.3	-24	56.8	160	54.4	+15	31.4	71	54.3	-16	38.9
19	318	06.1	108	43.3		54.7	49	26.8		56.8	175	56.6		31.4	86	56.4		39.0
20	333	08.5	123	42.8		55.9	64	27.2		56.9	190	58.7		31.3	101	58.6		39.0
21	348	11.0	138	42.3		57.0	79	27.6		56.9	206	00.9		31.2	117	00.8		39.1
22	3	13.5	153	41.8		58.2	94	28.1		56.9	221	03.0		31.1	132	03.0		39.2
23	18	15.9	168	41.3	-10	59.3	109	28.5		56.9	236	05.2		31.0	147	05.2		39.3
24	33	18.4	183	40.8	-11	00.5	124	28.9	-24	56.9	251	07.3	+15	30.9	162	07.3	-16	39.3
Dif	—		-5		-12		+4		0		+21		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 1 ^d 1	PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0 R°: 52 ^m									
	PMG: 11 ^h 44 ^m 1					SD: 15'4			SD: 13 ^h 04 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	57.8	-11 59.5	170	44.2	-14 00.1		60 N	16 23	17 07	17 55	8 46 72	17 14 35	
1	198	57.9	-12 00.4	185	13.9 ¹⁰⁷	06.9	68	58	30	11	56	37 70	24 37	
2	213	57.9	01.3	199	43.6 ¹⁰⁷	13.7	68	56	35	14	57	28 69	33 38	
3	228	58.0	02.1	214	13.2 ¹⁰⁶	20.5	68	54	41	17	17 59	21 67	40 41	
4	243	58.1	03.0	228	42.7 ¹⁰⁵	27.1	66	52	45	20	18 00	14 66	47 42	
5	258	58.2	-12 03.9	243	12.2 ¹⁰⁵	-14 33.7	66	50	16 50	17 23	18 01	8 08 65	17 54 42	
6	273	58.2	-12 04.7	257	41.6 ¹⁰⁴	-14 40.2	65	45	16 59	17 29	18 03	7 56 62	18 07 44	
7	288	58.3	05.6	272	11.0 ¹⁰⁴	46.7	65	40	17 07	34	06	45 61	19 45	
8	303	58.4	06.4	286	40.3 ¹⁰³	53.1	64	35	13	39	09	36 59	28 47	
9	318	58.4	07.3	301	09.6 ¹⁰³	-14 59.4	63	30	19	44	12	28 58	37 48	
10	333	58.5	08.2	315	38.8 ¹⁰²	-15 05.6	62	20	30	17 52	18	14 56	18 51 50	
11	348	58.6	-12 09.0	330	07.9 ¹⁰¹	-15 11.7	61	10 N	17 39	18 00	18 25	7 03 53	19 04 52	
12	3	58.7	-12 09.9	344	37.0 ¹⁰¹	-15 17.8	61	0	17 47	18 09	18 33	6 51 52	19 16 53	
13	18	58.7	10.7	359	06.1 ¹⁰¹	23.8	60	10 S	17 56	18	43	40 51	28 55	
14	33	58.8	11.6	13	35.1 ¹⁰⁰	29.7	59	20	18 06	29	18 55	29 48	41 56	
15	48	58.9	12.5	28	04.0 ⁹⁹	35.5	58	30	17	42	19 11	15 46	19 56 57	
16	63	58.9	13.3	42	32.9 ⁹⁹	41.3	58	35	23	50	21	6 08 44	20 04 59	
17	78	59.0	-12 14.2	57	01.7 ⁹⁸	-15 46.9	56	40	18 31	18 59	19 34	5 59 43	20 14 60	
18	93	59.1	-12 15.0	71	30.5 ⁹⁸	-15 52.5	56	45	18 39	19 11	19 49	5 49 41	20 25 62	
19	108	59.1	15.9	85	59.2 ⁹⁷	-15 58.0	55	50	50	25	20 09	37 39	39 63	
20	123	59.2	16.8	100	27.9 ⁹⁷	-16 03.4	54	52	18 54	32	19	31 38	46 64	
21	138	59.3	17.6	114	56.5 ⁹⁶	08.8	54	54	19 00	39	30	25 36	20 53 65	
22	153	59.4	18.5	129	25.0 ⁹⁵	14.0	52	56	06	48	43	18 35	21 01 66	
23	168	59.4	19.3	143	53.6 ⁹⁶	19.2	52	58	12	19 58	20 59	10 34	10 67	
24	183	59.5	-12 20.2	158	22.0 ⁹⁴	-16 24.2	50	60 S	19 20	20 09	21 18	5 01 32	21 20 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 43 ^m 2		Mag: -4.0 PMG: 11 ^h 46 ^m		Mag: +0.9 PMG: 15 ^h 42 ^m		Mag: -2.1 PMG: 7 ^h 14 ^m		Mag: +0.6 PMG: 13 ^h 10 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	33	18.4	183	40.8	-11 00.5	124	28.9	-24 56.9	251	07.3	+15 30.9	162	07.3	-16 39.3
1	48	20.9	198	40.3	01.6	139	29.4	56.9	266	09.4	30.8	177	09.5	39.4
2	63	23.3	213	39.8	02.8	154	29.8	56.9	281	11.6	30.7	192	11.7	39.5
3	78	25.8	228	39.3	03.9	169	30.3	56.9	296	13.7	30.6	207	13.9	39.6
4	93	28.3	243	38.8	05.1	184	30.7	57.0	311	15.9	30.5	222	16.1	39.6
5	108	30.7	258	38.2	-11 06.2	199	31.1	-24 57.0	326	18.0	+15 30.4	237	18.2	-16 39.7
6	123	33.2	273	37.7	-11 07.4	214	31.6	-24 57.0	341	20.2	+15 30.3	252	20.4	-16 39.8
7	138	35.7	288	37.2	08.5	229	32.0	57.0	356	22.3	30.2	267	22.6	39.9
8	153	38.1	303	36.7	09.7	244	32.4	57.0	11	24.5	30.1	282	24.8	39.9
9	168	40.6	318	36.2	10.8	259	32.9	57.0	26	26.6	30.0	297	26.9	40.0
10	183	43.0	333	35.7	11.9	274	33.3	57.0	41	28.8	30.0	312	29.1	40.1
11	198	45.5	348	35.2	-11 13.1	289	33.7	-24 57.0	56	30.9	+15 29.9	327	31.3	-16 40.2
12	213	48.0	3	34.7	-11 14.2	304	34.2	-24 57.0	71	33.1	+15 29.8	342	33.5	-16 40.2
13	228	50.4	18	34.2	15.4	319	34.6	57.0	86	35.2	29.7	357	35.7	40.3
14	243	52.9	33	33.7	16.5	334	35.0	57.0	101	37.4	29.6	12	37.8	40.4
15	258	55.4	48	33.2	17.7	349	35.4	57.0	116	39.5	29.5	27	40.0	40.5
16	273	57.8	63	32.6	18.8	4	35.9	57.0	131	41.7	29.4	42	42.2	40.5
17	289	00.3	78	32.1	-11 19.9	19	36.3	-24 57.1	146	43.8	+15 29.3	57	44.4	-16 40.6
18	304	02.8	93	31.6	-11 21.1	34	36.7	-24 57.1	161	46.0	+15 29.2	72	46.5	-16 40.7
19	319	05.2	108	31.1	22.2	49	37.2	57.1	176	48.1	29.1	87	48.7	40.8
20	334	07.7	123	30.6	23.4	64	37.6	57.1	191	50.3	29.0	102	50.9	40.8
21	349	10.1	138	30.1	24.5	79	38.0	57.1	206	52.4	28.9	117	53.1	40.9
22	4	12.6	153	29.6	25.6	94	38.5	57.1	221	54.6	28.9	132	55.2	41.0
23	19	15.1	168	29.1	26.8	109	38.9	57.1	236	56.7	28.8	147	57.4	41.1
24	34	17.5	183	28.5	-11 27.9	124	39.3	-24 57.1	251	58.9	+15 28.7	162	59.6	-16 41.1
Dif	—		-5 -11		+4 0		+21 -1		+22 -1					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 0				Edad: 2 ^d 1 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/5 Rº: 55 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	59.5	-12	20.2	158	22.0	-16	24.2	60 N	5	34	6	23	7	06	9	58
1	198	59.6		21.0	172	50.4	94	29.2	50	58	33	19	7	00	47	64	18
2	213	59.6		21.9	187	18.8	94	34.1	49	56	32	15	6	54	37	63	11
3	228	59.7		22.7	201	47.1	93	38.9	48	54	30	12	49	28	63	21	48
4	243	59.8		23.6	216	15.3	92	43.6	47	52	29	09	44	20	62	29	49
5	258	59.8	-12	24.5	230	43.5	92	-16	48.3	47	50	5	28	6	06	6	39
6	273	59.9	-12	25.3	245	11.7	92	-16	52.8	45	45	5	25	6	00	6	30
7	288	59.9		26.2	259	39.8	91	-16	57.2	44	40	23	5	54	22	46	59
8	304	00.0		27.0	274	07.8	90	-17	01.6	44	35	20	49	15	35	58	15
9	319	00.1		27.9	288	35.9	91		05.8	42	30	17	45	6	09	26	57
10	334	00.1		28.7	303	03.8	89		10.0	42	20	10	36	5	59	8	10
11	349	00.2	-12	29.6	317	31.7	89	-17	14.1	41	10 N	5	03	5	28	5	49
12	4	00.3	-12	30.4	331	59.6	89	-17	18.0	39	0	4	55	5	19	5	41
13	19	00.3		31.3	346	27.4	88		21.9	39	10 S	45	5	10	32	31	53
14	34	00.4		32.1	0	55.2	88		25.7	38	20	33	4	59	22	17	52
15	49	00.5		33.0	15	22.9	87		29.4	37	30	16	46	11	7	01	51
16	64	00.5		33.8	29	50.6	87		32.9	35	35	4	06	38	5	04	6
17	79	00.6	-12	34.7	44	18.3	87	-17	36.4	35	40	3	54	4	28	4	57
18	94	00.6	-12	35.5	58	45.9	86	-17	39.8	34	45	3	39	4	17	4	48
19	109	00.7		36.4	73	13.4	85		43.1	33	50	19	4	03	38	16	46
20	124	00.8		37.2	87	40.9	85		46.3	32	52	3	09	3	56	33	09
21	139	00.8		38.1	102	08.4	85		49.3	30	54	2	58	48	27	6	01
22	154	00.9		38.9	116	35.8	84		52.3	30	56	44	39	21	5	53	44
23	169	00.9		39.8	131	03.2	84		55.2	29	58	29	30	15	44	42	17
24	184	01.0	-12	40.6	145	30.6	84	-17	58.0	28	60 S	2	09	3	18	4	07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 39 ^m 3		Mag: -4.0 PMG: 11 ^h 47 ^m		Mag: +0.9 PMG: 15 ^h 41 ^m		Mag: -2.1 PMG: 7 ^h 11 ^m		Mag: +0.6 PMG: 13 ^h 06 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	34	17.5	183	28.5	-11	27.9	124	39.3	-24	57.1
1	49	20.0	198	28.0		29.0	139	39.8		57.1
2	64	22.5	213	27.5		30.2	154	40.2		57.1
3	79	24.9	228	27.0		31.3	169	40.6		57.1
4	94	27.4	243	26.5		32.5	184	41.1		57.1
5	109	29.9	258	26.0	-11	33.6	199	41.5	-24	57.1
6	124	32.3	273	25.4	-11	34.7	214	41.9	-24	57.1
7	139	34.8	288	24.9		35.9	229	42.3		57.1
8	154	37.3	303	24.4		37.0	244	42.8		57.1
9	169	39.7	318	23.9		38.1	259	43.2		57.1
10	184	42.2	333	23.4		39.3	274	43.6		57.1
11	199	44.6	348	22.8	-11	40.4	289	44.1	-24	57.1
12	214	47.1	3	22.3	-11	41.5	304	44.5	-24	57.1
13	229	49.6	18	21.8		42.7	319	44.9		57.1
14	244	52.0	33	21.3		43.8	334	45.3		57.0
15	259	54.5	48	20.8		44.9	349	45.8		57.0
16	274	57.0	63	20.2		46.0	4	46.2		57.0
17	289	59.4	78	19.7	-11	47.2	19	46.6	-24	57.0
18	305	01.9	93	19.2	-11	48.3	34	47.1	-24	57.0
19	320	04.4	108	18.7		49.4	49	47.5		57.0
20	335	06.8	123	18.2		50.6	64	47.9		57.0
21	350	09.3	138	17.6		51.7	79	48.3		57.0
22	5	11.8	153	17.1		52.8	94	48.8		57.0
23	20	14.2	168	16.6		53.9	109	49.2		57.0
24	35	16.7	183	16.1	-11	55.1	124	49.6	-24	57.0
Dif	—		-5		-11		+4		0	
							+22		-1	
									+22	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9			Edad: 3 ^d 1 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 57 ^m 9 R°: 55 ^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	184	01.0	-12	40.6	145	30.6	-17	58.0	60 N	16 18	17 02	17 51	11 04 56	18 36 58				
1	199	01.1		41.5	159	57.9	83	-18 00.6	58	25	06	52	10 51 56	18 49 58				
2	214	01.1		42.3	174	25.2	83	03.2	56	31	10	53	40 56	19 00 58				
3	229	01.2		43.2	188	52.4	82	05.6	54	36	13	55	31 56	09 58				
4	244	01.2		44.0	203	19.6	82	08.0	52	41	16	56	22 56	18 58				
5	259	01.3	-12	44.9	217	46.8	82	-18 10.2	50	16 46	17 19	17 57	10 14 56	19 26 57				
6	274	01.4	-12	45.7	232	13.9	81	-18 12.4	45	16 56	17 26	18 00	9 58 56	19 42 57				
7	289	01.4		46.6	246	41.0	81	14.4	40	17 04	32	04	45 56	19 56 57				
8	304	01.5		47.4	261	08.1	81	16.3	35	11	37	07	33 56	20 07 57				
9	319	01.5		48.2	275	35.1	80	18.2	30	17	42	10	23 56	17 57				
10	334	01.6		49.1	290	02.1	80	19.9	20	28	17 51	17	9 06 56	35 56				
11	349	01.6	-12	49.9	304	29.1	80	-18 21.5	10 N	17 38	18 00	18 24	8 51 56	20 50 56				
12	4	01.7	-12	50.8	318	56.0	79	-18 23.0	0	17 47	18 08	18 33	8 37 56	21 04 55				
13	19	01.8		51.6	333	22.9	79	24.4	10 S	17 57	18	43	24 55	18 55				
14	34	01.8		52.5	347	49.8	79	25.6	20	18 07	29	18 56	8 09 55	33 55				
15	49	01.9		53.3	2	16.6	78	26.8	30	18	43	19 13	7 52 55	21 50 54				
16	64	01.9		54.1	16	43.5	79	27.9	35	25	18 52	24	42 55	22 00 54				
17	79	02.0	-12	55.0	31	10.3	78	-18 28.8	40	18 33	19 02	19 36	7 31 54	22 11 54				
18	94	02.0	-12	55.8	45	37.0	77	-18 29.6	45	18 42	19 14	19 52	7 18 54	22 25 53				
19	109	02.1		56.7	60	03.8	78	30.4	50	53	29	20 13	7 02 54	41 53				
20	124	02.1		57.5	74	30.5	77	31.0	52	18 58	36	23	6 54 54	49 52				
21	139	02.2		58.4	88	57.2	77	31.5	54	19 04	44	35	46 53	22 57 53				
22	154	02.2	-12	59.2	103	23.9	77	31.9	56	10	19 53	20 49	37 53	23 07 52				
23	169	02.3	-13	00.0	117	50.5	76	32.2	58	17	20 03	21 06	26 53	18 51				
24	184	02.3	-13	00.9	132	17.1	76	-18 32.3	60 S	19 25	20 15	21 27	6 14 52	23 30 51				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 35 ^m 3		Mag: -4.0 PMG: 11 ^h 47 ^m			Mag: +0.9 PMG: 15 ^h 40 ^m			Mag: -2.1 PMG: 7 ^h 08 ^m			Mag: +0.5 PMG: 13 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	35	16.7	183	16.1	-11	55.1	124	49.6	-24	57.0	252	50.6	+15	26.5	163	51.8	-16	42.9
1	50	19.1	198	15.5		56.2	139	50.1		57.0	267	52.8		26.4	178	54.0		43.0
2	65	21.6	213	15.0		57.3	154	50.5		57.0	282	54.9		26.3	193	56.2		43.1
3	80	24.1	228	14.5		58.4	169	50.9		56.9	297	57.1		26.2	208	58.4		43.2
4	95	26.5	243	14.0	-11	59.6	184	51.3		56.9	312	59.2		26.1	224	00.5		43.2
5	110	29.0	258	13.4	-12	00.7	199	51.8	-24	56.9	328	01.4	+15	26.1	239	02.7	-16	43.3
6	125	31.5	273	12.9	-12	01.8	214	52.2	-24	56.9	343	03.5	+15	26.0	254	04.9	-16	43.4
7	140	33.9	288	12.4		02.9	229	52.6		56.9	358	05.7		25.9	269	07.1		43.5
8	155	36.4	303	11.8		04.0	244	53.0		56.9	13	07.9		25.8	284	09.2		43.5
9	170	38.9	318	11.3		05.2	259	53.5		56.9	28	10.0		25.7	299	11.4		43.6
10	185	41.3	333	10.8		06.3	274	53.9		56.9	43	12.2		25.6	314	13.6		43.7
11	200	43.8	348	10.3	-12	07.4	289	54.3	-24	56.8	58	14.3	+15	25.5	329	15.8	-16	43.8
12	215	46.3		3 09.7	-12	08.5	304	54.7	-24	56.8	73	16.5	+15	25.4	344	17.9	-16	43.8
13	230	48.7		18 09.2		09.7	319	55.2		56.8	88	18.7		25.3	359	20.1		43.9
14	245	51.2		33 08.7		10.8	334	55.6		56.8	103	20.8		25.3	14	22.3		44.0
15	260	53.6		48 08.1		11.9	349	56.0		56.8	118	23.0		25.2	29	24.5		44.1
16	275	56.1		63 07.6		13.0	4	56.4		56.8	133	25.1		25.1	44	26.6		44.1
17	290	58.6		78 07.1	-12	14.1	19	56.9	-24	56.8	148	27.3	+15	25.0	59	28.8	-16	44.2
18	306	01.0		93 06.5	-12	15.2	34	57.3	-24	56.7	163	29.5	+15	24.9	74	31.0	-16	44.3
19	321	03.5		108 06.0		16.4	49	57.7		56.7	178	31.6		24.8	89	33.2		44.4
20	336	06.0		123 05.5		17.5	64	58.1		56.7	193	33.8		24.7	104	35.3		44.4
21	351	08.4		138 04.9		18.6	79	58.6		56.7	208	36.0		24.6	119	37.5		44.5
22	6	10.9		153 04.4		19.7	94	59.0		56.7	223	38.1		24.5	134	39.7		44.6
23	21	13.4		168 03.9		20.8	109	59.4		56.6	238	40.3		24.5	149	41.9		44.7
24	36	15.8		183 03.3	-12	21.9	124	59.8	-24	56.6	253	42.4	+15	24.4	164	44.0	-16	44.7
Dif	—		-5		-11		+4		0		+22		-1		+22		-	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 4 ^d 1	PHE {	4 ^h : 58 ^o 0 12 ^h : 58 ^o 2 20 ^h : 58 ^o 3	SD: 15 ^h 8	PMG: 15 ^h 46 ^m		R ^o : 56 ^m							
	PMG: 11 ^h 43 ^m 8																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	02.3	-13 00.9	132	17.1	-18 32.3		60 N	5 38	6 27	7 12	12 00	45	19 34	70		
1	199	02.4	01.7	146	43.7	76 32.4	1	58	37	23	7 04	11 47	47	47	68		
2	214	02.5	02.6	161	10.3	76 32.3	2	56	35	19	6 58	36 48	19 58	67			
3	229	02.5	03.4	175	36.9	76 32.1	2	54	34	15	52	27 48	20 07	66			
4	244	02.6	04.2	190	03.5	76 31.9	2	52	33	12	47	18 49	16 65				
5	259	02.6	-13 05.1	204	30.0	75 -18 31.5	4	50	5 31	6 09	6 43	11 10	50	20 23	65		
6	274	02.7	-13 05.9	218	56.5	75 -18 30.9	6	45	5 28	6 02	6 33	10 54	51	20 39	64		
7	289	02.7	06.7	233	23.0	75 30.3	6	40	25	5 56	24	41 51	20 53	62			
8	304	02.8	07.6	247	49.5	75 29.6	7	35	21	51	17	29 52	21 04	61			
9	319	02.8	08.4	262	16.0	75 28.7	9	30	18	46	11	19 53	14 60				
10	334	02.9	09.3	276	42.5	75 27.8	9	20	11	37	6 00	10 02	54	31 58			
11	349	02.9	-13 10.1	291	08.9	74 -18 26.7	11	10 N	5 03	5 28	5 50	9 47	55	21 46	57		
12	4	03.0	-13 10.9	305	35.4	75 -18 25.5	12	0	4 55	5 19	5 40	9 33	56	21 59	56		
13	19	03.0	11.8	320	01.8	74 24.2	13	10 S	44	5 09	31	19 56	22 13	55			
14	34	03.0	12.6	334	28.3	75 22.8	14	20	31	4 58	21	9 04	57	28 53			
15	49	03.1	13.4	348	54.7	74 21.2	16	30	14	44	09	8 47	58	44 52			
16	64	03.1	14.3	3	21.1	74 19.6	16	35	4 04	36	5 02	37 59	22 54	51			
17	79	03.2	-13 15.1	17	47.5	74 -18 17.8	18	40	3 51	4 26	4 54	8 25	60	23 05	50		
18	94	03.2	-13 15.9	32	13.9	74 -18 15.9	19	45	3 35	4 14	4 45	8 12	60	23 18	48		
19	109	03.3	16.8	46	40.3	74 13.9	20	50	14	3 58	34	7 56	61	34 46			
20	124	03.3	17.6	61	06.7	74 11.8	21	52	3 04	51	29	48 62	41 46				
21	139	03.4	18.4	75	33.1	74 09.6	22	54	2 52	43	23	39 63	50 44				
22	154	03.4	19.3	89	59.4	73 07.3	23	56	38	34	17	30 63	23 59	43			
23	169	03.5	20.1	104	25.8	74 04.8	25	58	21	24	10	19 64	** ** *	** ** *			
24	184	03.5	-13 20.9	118	52.2	74 -18 02.3	25	60 S	2 00	3 12	4 01	7 06	65	** ** *	** ** *		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 21 ^h 31 ^m 4		Mag: -4.0 PMG: 11 ^h 48 ^m			Mag: +0.9 PMG: 15 ^h 40 ^m			Mag: -2.1 PMG: 7 ^h 04 ^m			Mag: +0.5 PMG: 12 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	36	15.8	183	03.3	-12 21.9	124	59.8	-24 56.6	253	42.4	+15 24.4	164	44.0	-16 44.7
1	51	18.3	198	02.8	23.0	140	00.3	56.6	268	44.6	24.3	179	46.2	44.8
2	66	20.7	213	02.3	24.2	155	00.7	56.6	283	46.8	24.2	194	48.4	44.9
3	81	23.2	228	01.7	25.3	170	01.1	56.6	298	48.9	24.1	209	50.6	45.0
4	96	25.7	243	01.2	26.4	185	01.5	56.5	313	51.1	24.0	224	52.7	45.0
5	111	28.1	258	00.7	-12 27.5	200	02.0	-24 56.5	328	53.3	+15 23.9	239	54.9	-16 45.1
6	126	30.6	273	00.1	-12 28.6	215	02.4	-24 56.5	343	55.4	+15 23.8	254	57.1	-16 45.2
7	141	33.1	287	59.6	29.7	230	02.8	56.5	358	57.6	23.8	269	59.3	45.3
8	156	35.5	302	59.1	30.8	245	03.2	56.4	13	59.8	23.7	285	01.4	45.3
9	171	38.0	317	58.5	31.9	260	03.7	56.4	29	01.9	23.6	300	03.6	45.4
10	186	40.5	332	58.0	33.0	275	04.1	56.4	44	04.1	23.5	315	05.8	45.5
11	201	42.9	347	57.4	-12 34.1	290	04.5	-24 56.4	59	06.3	+15 23.4	330	08.0	-16 45.6
12	216	45.4	2 56.9	-12 35.3	305	04.9	-24 56.4	74	08.4	+15 23.3	345	10.1	-16 45.6	
13	231	47.9	17 56.4	36.4	320	05.3	56.3	89	10.6	23.2	0 12.3	45.7		
14	246	50.3	32 55.8	37.5	335	05.8	56.3	104	12.8	23.1	15 14.5	45.8		
15	261	52.8	47 55.3	38.6	350	06.2	56.3	119	14.9	23.1	30 16.6	45.9		
16	276	55.2	62 54.7	39.7	5 06.6	56.2	134	17.1	23.0	45 18.8	45.9			
17	291	57.7	77 54.2	-12 40.8	20 07.0	-24 56.2	149	19.3	+15 22.9	60 21.0	-16 46.0			
18	307	00.2	92 53.6	-12 41.9	35 07.5	-24 56.2	164	21.4	+15 22.8	75 23.2	-16 46.1			
19	322	02.6	107 53.1	43.0	50 07.9	56.2	179	23.6	22.7	90 25.3	46.2			
20	337	05.1	122 52.6	44.1	65 08.3	56.1	194	25.8	22.6	105 27.5	46.2			
21	352	07.6	137 52.0	45.2	80 08.7	56.1	209	27.9	22.5	120 29.7	46.3			
22	7	10.0	152 51.5	46.3	95 09.1	56.1	224	30.1	22.5	135 31.9	46.4			
23	22	12.5	167 50.9	47.4	110 09.6	56.0	239	32.3	22.4	150 34.0	46.5			
24	37	15.0	182 50.4	-12 48.5	125 10.0	-24 56.0	254	34.4	+15 22.3	165 36.2	-16 46.5			
Dif	—		-5		-11	+4		0	+22		-1	+22		-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 5 ^d 1 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'7 R°: 55 ^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	184	03.5	-13	20.9	118	52.2	-18	02.3	60 N	16 12	16 57	17 46	12 45	36	20 44	78	
1	199	03.5		21.8	133	18.6	-17	59.6	58	20	17 01	48	34	38	20 55	76	
2	214	03.6		22.6	147	45.0		56.8	56	26	06	49	24	39	21 05	74	
3	229	03.6		23.4	162	11.4		54.0	54	32	09	51	15	41	13	73	
4	244	03.7		24.2	176	37.8		50.9	52	38	13	52	07	42	21	71	
5	259	03.7	-13	25.1	191	04.1	-17	47.8	50	16 42	17 16	17 54	12 00	43	21 28	70	
6	274	03.8	-13	25.9	205	30.5	-17	44.6	45	16 53	17 23	17 58	11 45	45	21 43	67	
7	289	03.8		26.7	219	56.9		41.3	40	17 01	29	18 01	32	47	21 55	65	
8	304	03.8		27.6	234	23.3		37.8	35	09	35	05	21	49	22 05	63	
9	319	03.9		28.4	248	49.7		34.2	30	16	40	08	11	50	14	62	
10	334	03.9		29.2	263	16.2		30.6	20	27	50	16	10	56	29	60	
11	349	04.0	-13	30.0	277	42.6	-17	26.8	10 N	17 37	17 59	18 24	10 42	54	22 43	57	
12	4	04.0	-13	30.9	292	09.0	-17	22.9	0	17 47	18 08	18 33	10 29	55	22 55	55	
13	19	04.1		31.7	306	35.5		18.9	10 S	17 57	19	44	15	58	23 08	53	
14	34	04.1		32.5	321	01.9		14.8	20	18 08	30	18 57	10 01	59	21	51	
15	49	04.1		33.3	335	28.4		10.6	30	20	45	19 15	9 45	61	36	48	
16	64	04.2		34.2	349	54.8		06.2	35	27	18 54	26	36	62	45	46	
17	79	04.2	-13	35.0	4	21.3	-17	01.8	40	18 35	19 04	19 39	9 25	64	23 55	45	
18	94	04.3	-13	35.8	18	47.8	-16	57.3	45	18 45	19 17	19 56	9 12	66	*** ** *		
19	109	04.3		36.6	33	14.3		52.6	50	18 56	32	20 17	8 57	67	*** ** *		
20	124	04.3		37.5	47	40.8		47.8	52	19 02	40	28	50	68	*** ** *		
21	139	04.4		38.3	62	07.4		43.0	54	08	48	41	42	69	*** ** *		
22	154	04.4		39.1	76	33.9		38.0	56	14	19 58	20 55	33	71	*** ** *		
23	169	04.4		39.9	91	00.5		32.9	58	22	20 09	21 13	23	72	0 09	42	
24	184	04.5	-13	40.8	105	27.0	-16	27.8	60 S	19 31	20 21	21 36	8 11	74	0 21	40	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 27 ^m 5		Mag: -4.0 PMG: 11 ^h 49 ^m			Mag: +0.9 PMG: 15 ^h 39 ^m			Mag: -2.1 PMG: 7 ^h 01 ^m			Mag: +0.5 PMG: 12 ^h 56 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	37	15.0	182	50.4	-12	48.5	125	10.0	-24	56.0	254	34.4	+15	22.3	165	36.2	-16	46.5
1	52	17.4	197	49.8		49.6	140	10.4		56.0	269	36.6		22.2	180	38.4		46.6
2	67	19.9	212	49.3		50.7	155	10.8		55.9	284	38.8		22.1	195	40.6		46.7
3	82	22.4	227	48.7		51.8	170	11.2		55.9	299	40.9		22.0	210	42.7		46.8
4	97	24.8	242	48.2		52.9	185	11.7		55.9	314	43.1		21.9	225	44.9		46.8
5	112	27.3	257	47.7	-12	54.0	200	12.1	-24	55.8	329	45.3	+15	21.9	240	47.1	-16	46.9
6	127	29.7	272	47.1	-12	55.1	215	12.5	-24	55.8	344	47.5	+15	21.8	255	49.2	-16	47.0
7	142	32.2	287	46.6		56.2	230	12.9		55.8	359	49.6		21.7	270	51.4		47.1
8	157	34.7	302	46.0		57.3	245	13.3		55.7	14	51.8		21.6	285	53.6		47.1
9	172	37.1	317	45.5		58.4	260	13.8		55.7	29	54.0		21.5	300	55.8		47.2
10	187	39.6	332	44.9	-12	59.5	275	14.2		55.7	44	56.1		21.4	315	57.9		47.3
11	202	42.1	347	44.4	-13	00.6	290	14.6	-24	55.6	59	58.3	+15	21.3	331	00.1	-16	47.4
12	217	44.5		43.8	-13	01.7	305	15.0	-24	55.6	75	00.5	+15	21.3	346	02.3	-16	47.4
13	232	47.0	17	43.3		02.8	320	15.4		55.6	90	02.7		21.2	1	04.5		47.5
14	247	49.5	32	42.7		03.9	335	15.9		55.5	105	04.8		21.1	16	06.6		47.6
15	262	51.9	47	42.2		05.0	350	16.3		55.5	120	07.0		21.0	31	08.8		47.7
16	277	54.4	62	41.6		06.0	5	16.7		55.5	135	09.2		20.9	46	11.0		47.7
17	292	56.9	77	41.0	-13	07.1	20	17.1	-24	55.4	150	11.4	+15	20.8	61	13.2	-16	47.8
18	307	59.3	92	40.5	-13	08.2	35	17.5	-24	55.4	165	13.5	+15	20.7	76	15.3	-16	47.9
19	323	01.8	107	39.9		09.3	50	18.0		55.3	180	15.7		20.7	91	17.5		48.0
20	338	04.2	122	39.4		10.4	65	18.4		55.3	195	17.9		20.6	106	19.7		48.0
21	353	06.7	137	38.8		11.5	80	18.8		55.3	210	20.0		20.5	121	21.8		48.1
22	8	09.2	152	38.3		12.6	95	19.2		55.2	225	22.2		20.4	136	24.0		48.2
23	23	11.6	167	37.7		13.7	110	19.6		55.2	240	24.4		20.3	151	26.2		48.3
24	38	14.1	182	37.2	-13	14.8	125	20.1	-24	55.1	255	26.6	+15	20.2	166	28.4	-16	48.3
Dif	—		-6		-11		+4		0		+22		-1		+22		-	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 6 ^d 1 PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'0 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	184	04.5	-13	105	27.0	-16	27.8	60 N	5 43	6 32	7 17	13 21	28	22 02	84
1	199	04.5		119	53.6	76	22.5	58	41	27	09	12 30		11 81	
2	214	04.5		134	20.2	76	17.1	56	39	23	7 02	13 03	33	19 78	
3	229	04.6		148	46.9	77	11.6	54	37	19	6 56	12 56	34	26 7	
4	244	04.6		163	13.5	76	06.0	52	36	16	51	49 36		32 75	
5	259	04.7	-13	177	40.1	76	-16 00.3	50	5 34	6 12	6 46	12 43	38	22 38	73
6	274	04.7	-13	192	06.8	77	-15 54.5	45	5 30	6 05	6 35	12 30	41	22 50	70
7	289	04.7		206	33.5	77	48.6	40	27	5 59	27	19 43		23 00	67
8	304	04.8		221	00.2	77	42.6	35	23	53	19	10 45		08 66	
9	319	04.8		235	27.0	78	36.5	30	19	48	12	12 02	47	16 63	
10	334	04.8		249	53.7	77	30.3	20	12	38	6 00	11 48	50	29 60	
11	349	04.9	-13	264	20.5	78	-15 24.0	10 N	5 04	5 29	5 50	11 36	52	23 40	57
12	4	04.9	-13	278	47.3	78	-15 17.6	0	4 54	5 19	5 40	11 24	55	23 50	55
13	19	04.9		293	14.1	78	11.2	10 S	43	5 09	30	13 57		*** **	***
14	34	05.0		307	40.9	78	-15 04.6	20	30	4 57	20	11 00	60	*** **	***
15	49	05.0		322	07.8	79	-14 57.9	30	12	42	07	10 46	63	*** **	***
16	64	05.0		336	34.7	79	51.1	35	4 01	33	5 00	38 64		*** **	***
17	79	05.0	-13	351	01.6	79	-14 44.2	40	3 48	4 23	4 52	10 29	66	*** **	***
18	94	05.1	-13	5	28.5	79	-14 37.3	45	3 31	4 10	4 42	10 18	69	0 06	43
19	109	05.1		56.3	19 55.4	79	30.2	50	3 09	3 54	30	10 04	72	20 40	
20	124	05.1		57.1	34 22.4	80	23.1	52	2 58	47	25	9 58	73	27 39	
21	139	05.2		57.9	48 49.4	80	15.8	54	46	39	19	51 75		34 37	
22	154	05.2		58.8	63 16.4	80	08.5	56	31	29	12	44 76		42 36	
23	169	05.2	-13	59.6	77 43.4	80	-14 01.1	58	2 13	18	4 05	35 79		0 51	34
24	184	05.3	-14	00.4	92 10.5	81	-13 53.6	60 S	1 51	3 05	3 56	9 25	81	1 01	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 21 ^h 23 ^m 5		Mag: -4.0 PMG: 11 ^h 50 ^m		Mag: +0.9 PMG: 15 ^h 38 ^m		Mag: -2.1 PMG: 6 ^h 57 ^m		Mag: +0.5 PMG: 12 ^h 52 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	38	14.1	182	37.2	-13	14.8	125	20.1	-24	55.1	255	26.6	+15	20.2	166	28.4	-16	48.3	
1	53	16.6	197	36.6		15.9	140	20.5		55.1	270	28.7		20.2	181	30.5		48.4	
2	68	19.0	212	36.1		16.9	155	20.9		55.1	285	30.9		20.1	196	32.7		48.5	
3	83	21.5	227	35.5		18.0	170	21.3		55.0	300	33.1		20.0	211	34.9		48.6	
4	98	24.0	242	34.9		19.1	185	21.7		55.0	315	35.3		19.9	226	37.0		48.6	
5	113	26.4	257	34.4	-13	20.2	200	22.1	-24	54.9	330	37.5	+15	19.8	241	39.2	-16	48.7	
6	128	28.9	272	33.8	-13	21.3	215	22.6	-24	54.9	345	39.6	+15	19.7	256	41.4	-16	48.8	
7	143	31.3	287	33.3		22.4	230	23.0		54.8	0	41.8		19.6	271	43.6		48.8	
8	158	33.8	302	32.7		23.4	245	23.4		54.8	15	44.0		19.6	286	45.7		48.9	
9	173	36.3	317	32.1		24.5	260	23.8		54.7	30	46.2		19.5	301	47.9		49.0	
10	188	38.7	332	31.6		25.6	275	24.2		54.7	45	48.3		19.4	316	50.1		49.1	
11	203	41.2	347	31.0	-13	26.7	290	24.6	-24	54.6	60	50.5	+15	19.3	331	52.3	-16	49.1	
12	218	43.7	2	30.5	-13	27.8	305	25.1	-24	54.6	75	52.7	+15	19.2	346	54.4	-16	49.2	
13	233	46.1	17	29.9		28.9	320	25.5		54.6	90	54.9		19.1	1	56.6		49.3	
14	248	48.6	32	29.3		29.9	335	25.9		54.5	105	57.1		19.1	16	58.8		49.4	
15	263	51.1	47	28.8		31.0	350	26.3		54.5	120	59.2		19.0	32	00.9		49.4	
16	278	53.5	62	28.2		32.1	5	26.7		54.4	136	01.4		18.9	47	03.1		49.5	
17	293	56.0	77	27.7	-13	33.2	20	27.1	-24	54.4	151	03.6	+15	18.8	62	05.3	-16	49.6	
18	308	58.5	92	27.1	-13	34.2	35	27.6	-24	54.3	166	05.8	+15	18.7	77	07.5	-16	49.7	
19	324	00.9	107	26.5		35.3	50	28.0		54.3	181	07.9		18.6	92	09.6		49.7	
20	339	03.4	122	26.0		36.4	65	28.4		54.2	196	10.1		18.6	107	11.8		49.8	
21	354	05.8	137	25.4		37.5	80	28.8		54.2	211	12.3		18.5	122	14.0		49.9	
22	9	08.3	152	24.8		38.6	95	29.2		54.1	226	14.5		18.4	137	16.1		50.0	
23	24	10.8	167	24.3		39.6	110	29.6		54.0	241	16.7		18.3	152	18.3		50.0	
24	39	13.2	182	23.7	-13	40.7	125	30.1	-24	54.0	256	18.9	+15	18.2	167	20.5	-16	50.1	
Dif	—		-6	-11			+4	0			+22	-1			+22		-1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 7 ^d 1	PHE {	4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'3 R°: 53 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 6								SD: 16'1			PMG: 18 ^h 32 ^m			Hora
	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	184	05.3	-14 00.4	92	10.5	-13 53.6	76	60 N	16 07	16 52	17 41	13 49 24		23 26 85	
1	199	05.3		106	37.6	46.0	81	58	15	16 57	43	42 26		32 83	
2	214	05.3		121	04.7	38.3	77	56	22	17 01	45	36 28		37 81	
3	229	05.3		135	31.8	30.5	78	54	28	05	47	30 30		43 78	
4	244	05.4		149	59.0	22.7	78	52	34	09	49	25 32		47 77	
5	259	05.4	-14 04.4	164	26.1	-13 14.7	80	50	16 39	17 13	17 51	13 21 33		23 51 75	
6	274	05.4	-14 05.3	178	53.3	-13 06.7	80	45	16 50	17 20	17 55	13 11 36		*** ** *	
7	289	05.4		193	20.6	-12 58.6	81	40	16 59	27	17 59	13 02 40		*** ** *	
8	304	05.5		207	47.8	50.4	82	35	17 07	33	18 03	12 55 42		*** ** *	
9	319	05.5		222	15.1	42.1	83	30	14	39	07	49 44		*** ** *	
10	334	05.5		236	42.4	33.8	83	20	26	49	15	38 47		*** ** *	
11	349	05.6	-14 09.3	251	09.7	-12 25.4	84	10 N	17 37	17 58	18 23	12 28 51		*** ** *	
12	4	05.6	-14 10.1	265	37.1	-12 16.9	85	0	17 47	18 08	18 33	12 19 54		*** ** *	
13	19	05.6		280	04.4	-12 08.3	86	10 S	17 57	19	45	10 56		0 01 51	
14	34	05.6		294	31.8	-11 59.6	87	20	18 09	31	18 58	12 00 60		12 48	
15	49	05.6		308	59.3	50.9	87	30	21	47	19 17	11 49 63		24 45	
16	64	05.7		323	26.7	42.0	89	35	29	18 56	28	42 66		31 44	
17	79	05.7	-14 14.1	337	54.2	-11 33.2	88	40	18 37	19 07	19 42	11 35 68		0 40 41	
18	94	05.7	-14 14.9	352	21.7	-11 24.2	90	45	18 48	19 20	19 59	11 27 70		0 49 38	
19	109	05.7		6	49.2	15.2	90	50	19 00	36	20 22	16 75		1 00 36	
20	124	05.8		21	16.7	-11 06.1	91	52	06	44	33	11 76		06 33	
21	139	05.8		35	44.3	-10 56.9	92	54	12	19 53	20 46	06 78		11 33	
22	154	05.8		50	11.9	47.6	93	56	19	20 03	21 02	11 00 80		18 30	
23	169	05.8		64	39.5	38.3	93	58	27	14	21	10 54 82		25 28	
24	184	05.8	-14 19.8	79	07.1	-10 28.9	94	60 S	19 36	20 28	21 46	10 46 85		1 33 26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 19 ^m 6		Mag: -4.0 PMG: 11 ^h 51 ^m		Mag: +0.9 PMG: 15 ^h 38 ^m		Mag: -2.1 PMG: 6 ^h 54 ^m		Mag: +0.5 PMG: 12 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	13.2	182	23.7	-13	40.7	125	30.1	-24	54.0
1	54	15.7	197	23.1		41.8	140	30.5		53.9
2	69	18.2	212	22.6		42.8	155	30.9		53.9
3	84	20.6	227	22.0		43.9	170	31.3		53.8
4	99	23.1	242	21.4		45.0	185	31.7		53.8
5	114	25.6	257	20.9	-13	46.1	200	32.1	-24	53.7
6	129	28.0	272	20.3	-13	47.1	215	32.5	-24	53.7
7	144	30.5	287	19.7		48.2	230	33.0		53.6
8	159	33.0	302	19.1		49.3	245	33.4		53.6
9	174	35.4	317	18.6		50.3	260	33.8		53.5
10	189	37.9	332	18.0		51.4	275	34.2		53.4
11	204	40.3	347	17.4	-13	52.5	290	34.6	-24	53.4
12	219	42.8	2	16.9	-13	53.5	305	35.0	-24	53.3
13	234	45.3	17	16.3		54.6	320	35.4		53.3
14	249	47.7	32	15.7		55.7	335	35.9		53.2
15	264	50.2	47	15.1		56.7	350	36.3		53.2
16	279	52.7	62	14.6		57.8	5	36.7		53.1
17	294	55.1	77	14.0	-13	58.9	20	37.1	-24	53.0
18	309	57.6	92	13.4	-13	59.9	35	37.5	-24	53.0
19	325	00.1	107	12.8	-14	01.0	50	37.9		52.9
20	340	02.5	122	12.3		02.1	65	38.3		52.8
21	355	05.0	137	11.7		03.1	80	38.8		52.8
22	10	07.5	152	11.1		04.2	95	39.2		52.7
23	25	09.9	167	10.5		05.2	110	39.6		52.7
24	40	12.4	182	10.0	-14	06.3	125	40.0	-24	52.6
Dif	—		-6		-11		+4		+1	
								+22		-1
									+22	
										-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 8 ^d 1 PHE { SD: 16'2 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	184	05.8	-14	19.8	79	07.1	-10	28.9	60 N	5 47	6 37	7 22	14 13	20	***	***	***	
1	199	05.9		20.6	93	34.8	87	19.5	58	45	32	14	08	23	***	***	***	
2	214	05.9		21.4	108	02.5	87	10.0	56	43	27	07	04	25	***	***	***	
3	229	05.9		22.2	122	30.2	87	-10 00.4	54	41	23	7 00	14 00	28	***	***	***	
4	244	05.9		23.0	136	57.9	87	-9 50.7	52	39	19	6 55	13 57	29	***	***	***	
5	259	05.9	-14	23.8	151	25.6	87	-9 41.0	50	5 37	6 15	6 49	13 54	31	***	***	***	
6	274	06.0	-14	24.6	165	53.4	88	-9 31.3	45	5 33	6 08	6 38	13 47	34	0 00	71		
7	289	06.0		25.4	180	21.2	88	21.5	40	29	6 01	29	42	37	07	69		
8	304	06.0		26.2	194	49.0	88	11.6	35	25	5 55	21	37	40	14	65		
9	319	06.0		27.0	209	16.8	88	-9 01.6	30	21	49	14	33	42	19	64		
10	334	06.0		27.8	223	44.7	89	-8 51.6	20	13	39	6 01	25	46	29	59		
11	349	06.1	-14	28.6	238	12.6	89	-8 41.6	10 N	5 04	5 29	5 50	13 19	49	0 37	56		
12	4	06.1	-14	29.4	252	40.5	89	-8 31.5	0	4 54	5 19	5 40	13 13	52	0 45	53		
13	19	06.1		30.2	267	08.4	89	21.3	10 S	43	5 08	30	06	57	0 52	50		
14	34	06.1		31.0	281	36.3	89	11.1	20	29	4 56	18	13 00	60	1 00	47		
15	49	06.1		31.8	296	04.3	90	-8 00.8	30	4 10	40	5 05	12 52	64	09	43		
16	64	06.1		32.6	310	32.3	90	-7 50.5	35	3 59	31	4 58	48	66	15	40		
17	79	06.1	-14	33.4	325	00.3	90	-7 40.1	40	3 45	4 20	4 49	12 43	69	1 21	38		
18	94	06.2	-14	34.2	339	28.3	90	-7 29.7	45	3 27	4 07	4 39	12 37	72	1 27	36		
19	109	06.2		35.0	353	56.3	90	19.2	50	3 05	3 51	27	31	75	36	31		
20	124	06.2		35.8	8	24.3	90	-7 08.7	52	2 53	43	21	27	78	39	31		
21	139	06.2		36.6	22	52.4	91	-6 58.1	54	40	34	15	24	79	44	28		
22	154	06.2		37.4	37	20.5	91	47.5	56	25	24	08	20	82	48	27		
23	169	06.2		38.1	51	48.6	91	36.9	58	2 05	3 12	4 00	16	84	53	24		
24	184	06.2	-14	38.9	66	16.7	91	-6 26.2	60 S	1 41	2 59	3 50	12 11	87	1 59	22		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 15 ^m 7		Mag: -4.0 PMG: 11 ^h 52 ^m				Mag: +0.9 PMG: 15 ^h 37 ^m				Mag: -2.1 PMG: 6 ^h 50 ^m				Mag: +0.5 PMG: 12 ^h 45 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec		hG ♎	Dec		hG ♊	Dec		hG ♋	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	40	12.4	182	10.0	-14	06.3	125	40.0	-24	52.6	257	11.3	+15	16.3	168	12.6	-16	51.9
1	55	14.8	197	09.4		07.4	140	40.4		52.5	272	13.5		16.2	183	14.8		52.0
2	70	17.3	212	08.8		08.4	155	40.8		52.5	287	15.7		16.1	198	16.9		52.1
3	85	19.8	227	08.2		09.5	170	41.2		52.4	302	17.8		16.0	213	19.1		52.1
4	100	22.2	242	07.6		10.5	185	41.6		52.3	317	20.0		16.0	228	21.3		52.2
5	115	24.7	257	07.1	-14	11.6	200	42.1	-24	52.3	332	22.2	+15	15.9	243	23.4	-16	52.3
6	130	27.2	272	06.5	-14	12.6	215	42.5	-24	52.2	347	24.4	+15	15.8	258	25.6	-16	52.4
7	145	29.6	287	05.9		13.7	230	42.9		52.1	2	26.6		15.7	273	27.8		52.4
8	160	32.1	302	05.3		14.8	245	43.3		52.1	17	28.8		15.6	288	29.9		52.5
9	175	34.6	317	04.7		15.8	260	43.7		52.0	32	31.0		15.6	303	32.1		52.6
10	190	37.0	332	04.2		16.9	275	44.1		51.9	47	33.2		15.5	318	34.3		52.7
11	205	39.5	347	03.6	-14	17.9	290	44.5	-24	51.9	62	35.4	+15	15.4	333	36.5	-16	52.7
12	220	41.9	2	03.0	-14	19.0	305	44.9	-24	51.8	77	37.5	+15	15.3	348	38.6	-16	52.8
13	235	44.4	17	02.4		20.0	320	45.4		51.7	92	39.7		15.2	3	40.8		52.9
14	250	46.9	32	01.8		21.1	335	45.8		51.7	107	41.9		15.2	18	43.0		53.0
15	265	49.3	47	01.2		22.1	350	46.2		51.6	122	44.1		15.1	33	45.1		53.0
16	280	51.8	62	00.6		23.2	5	46.6		51.5	137	46.3		15.0	48	47.3		53.1
17	295	54.3	77	00.1	-14	24.2	20	47.0	-24	51.4	152	48.5	+15	14.9	63	49.5	-16	53.2
18	310	56.7	91	59.5	-14	25.3	35	47.4	-24	51.4	167	50.7	+15	14.8	78	51.6	-16	53.3
19	325	59.2	106	58.9		26.3	50	47.8		51.3	182	52.9		14.8	93	53.8		53.3
20	341	01.7	121	58.3		27.4	65	48.2		51.2	197	55.1		14.7	108	56.0		53.4
21	356	04.1	136	57.7		28.4	80	48.6		51.2	212	57.3		14.6	123	58.2		53.5
22	11	06.6	151	57.1		29.5	95	49.1		51.1	227	59.5		14.5	139	00.3		53.6
23	26	09.1	166	56.5		30.5	110	49.5		51.0	243	01.7		14.4	154	02.5		53.6
24	41	11.5	181	55.9	-14	31.5	125	49.9	-24	50.9	258	03.8	+15	14.4	169	04.7	-16	53.7
Dif	—		-6		-11		+4		+1		+22		-1		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 9 ^d 1 PHE { SD: 16'2 PMG: 20 ^h 18 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	184	06.2	-14	38.9	66	16.7	-6 26.2	60 N	16 02	16 47	17 37	14 33 19	0 51 87		
1	199	06.3		39.7	80	44.8	91 15.5	58	10	53	39	31 22	55 84		
2	214	06.3		40.5	95	13.0	92 -6 04.7	56	18	16 57	41	29 24	0 58 82		
3	229	06.3		41.3	109	41.2	92 -5 53.9	54	24	17 02	44	28 26	1 01 80		
4	244	06.3		42.1	124	09.3	91 43.0	52	30	06	46	26 28	04 78		
5	259	06.3	-14	42.9	138	37.5	92 -5 32.2	50	16 35	17 09	17 48	14 25 29	1 06 76		
6	274	06.3	-14	43.7	153	05.7	92 -5 21.2	45	16 47	17 18	17 52	14 21 34	1 11 73		
7	289	06.3		44.5	167	33.9	92 -5 10.3	40	16 57	25	17 57	19 36	16 69		
8	304	06.3		45.3	182	02.2	93 -4 59.3	35	17 05	31	18 01	17 39	19 67		
9	319	06.3		46.1	196	30.4	92 48.3	30	12	37	05	15 41	23 64		
10	334	06.4		46.9	210	58.7	93 37.3	20	25	48	14	11 46	28 60		
11	349	06.4	-14	47.6	225	26.9	92 -4 26.2	10 N	17 36	17 58	18 23	14 08 49	1 33 56		
12	4	06.4	-14	48.4	239	55.2	93 -4 15.1	0	17 47	18 08	18 33	14 05 53	1 38 52		
13	19	06.4		49.2	254	23.5	93 -4 03.9	10 S	17 58	20	18 45	03 55	42 49		
14	34	06.4		50.0	268	51.8	93 -3 52.8	20	18 09	33	19 00	14 00 59	47 46		
15	49	06.4		50.8	283	20.1	93 41.6	30	23	48	18	13 56 64	52 42		
16	64	06.4		51.6	297	48.4	93 30.4	35	31	18 58	30	54 66	55 40		
17	79	06.4	-14	52.4	312	16.8	94 -3 19.2	40	18 40	19 09	19 45	13 52 69	1 59 36		
18	94	06.4	-14	53.2	326	45.1	93 -3 07.9	45	18 50	19 23	20 03	13 49 73	2 03 33		
19	109	06.4		53.9	341	13.5	94 -2 56.7	50	19 03	40	26	46 76	07 30		
20	124	06.4		54.7	355	41.8	93 45.4	52	09	48	38	45 78	10 28		
21	139	06.4		55.5	10	10.2	94 34.1	54	16	19 57	20 52	43 80	12 26		
22	154	06.4		56.3	24	38.5	93 22.7	56	23	20 08	21 09	42 82	15 24		
23	169	06.4		57.1	39	06.9	94 11.4	58	32	20	29	40 84	17 23		
24	184	06.4	-14	57.9	53	35.3	94 -2 00.1	60 S	19 41	20 34	21 56	13 38 87	2 21 19		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 11 ^m 8		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +0.9 PMG: 15 ^h 36 ^m		Mag: -2.1 PMG: 6 ^h 47 ^m		Mag: +0.5 PMG: 12 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	41	11.5	181	55.9	-14	31.5	125	49.9	-24	50.9	258	03.8	+15	14.4	169	04.7	-16	53.7
1	56	14.0	196	55.4		32.6	140	50.3		50.9	273	06.0		14.3	184	06.8		53.8
2	71	16.4	211	54.8		33.6	155	50.7		50.8	288	08.2		14.2	199	09.0		53.8
3	86	18.9	226	54.2		34.7	170	51.1		50.7	303	10.4		14.1	214	11.2		53.9
4	101	21.4	241	53.6		35.7	185	51.5		50.6	318	12.6		14.0	229	13.3		54.0
5	116	23.8	256	53.0	-14	36.8	200	51.9	-24	50.5	333	14.8	+15	14.0	244	15.5	-16	54.1
6	131	26.3	271	52.4	-14	37.8	215	52.3	-24	50.5	348	17.0	+15	13.9	259	17.7	-16	54.1
7	146	28.8	286	51.8		38.8	230	52.8		50.4	3	19.2		13.8	274	19.9		54.2
8	161	31.2	301	51.2		39.9	245	53.2		50.3	18	21.4		13.7	289	22.0		54.3
9	176	33.7	316	50.6		40.9	260	53.6		50.2	33	23.6		13.7	304	24.2		54.4
10	191	36.2	331	50.0		42.0	275	54.0		50.2	48	25.8		13.6	319	26.4		54.4
11	206	38.6	346	49.4	-14	43.0	290	54.4	-24	50.1	63	28.0	+15	13.5	334	28.5	-16	54.5
12	221	41.1	1	48.8	-14	44.0	305	54.8	-24	50.0	78	30.2	+15	13.4	349	30.7	-16	54.6
13	236	43.5	16	48.2		45.1	320	55.2		49.9	93	32.4		13.3	4	32.9		54.7
14	251	46.0	31	47.6		46.1	335	55.6		49.8	108	34.6		13.3	19	35.0		54.7
15	266	48.5	46	47.0		47.1	350	56.0		49.8	123	36.8		13.2	34	37.2		54.8
16	281	50.9	61	46.4		48.2	5	56.4		49.7	138	39.0		13.1	49	39.4		54.9
17	296	53.4	76	45.9	-14	49.2	20	56.9	-24	49.6	153	41.2	+15	13.0	64	41.5	-16	55.0
18	311	55.9	91	45.3	-14	50.2	35	57.3	-24	49.5	168	43.4	+15	13.0	79	43.7	-16	55.0
19	326	58.3	106	44.7		51.3	50	57.7		49.4	183	45.6		12.9	94	45.9		55.1
20	342	00.8	121	44.1		52.3	65	58.1		49.3	198	47.8		12.8	109	48.0		55.2
21	357	03.3	136	43.5		53.3	80	58.5		49.3	213	50.0		12.7	124	50.2		55.3
22	12	05.7	151	42.9		54.4	95	58.9		49.2	228	52.2		12.7	139	52.4		55.3
23	27	08.2	166	42.3		55.4	110	59.3		49.1	243	54.4		12.6	154	54.6		55.4
24	42	10.7	181	41.7	-14	56.4	125	59.7	-24	49.0	258	56.6	+15	12.5	169	56.7	-16	55.5
Dif	—		-6 -10		+4 +1		+22 -1		+22 -1		+22 -1		+22 -1		+22 -1		+22 -1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 10 ^d 1 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'6 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	184	06.4	-14	57.9	53	35.3	-2 00.1	60 N	5 52	6 41	7 27	14 52	20	2 18	88			
1	199	06.4		58.6	68	03.7	-1 48.7 ¹¹⁴	58	49	36	18	53	22	19	85			
2	214	06.5	-14	59.4	82	32.1	37.3 ¹¹⁴	56	47	31	11	53	24	20	82			
3	229	06.5	-15	00.2	97	00.5	25.9 ¹¹⁴	54	44	26	7 04	54	26	21	80			
4	244	06.5		01.0	111	28.9	14.5 ¹¹⁴	52	42	22	6 58	54	28	22	78			
5	259	06.5	-15	01.8	125	57.3	-1 03.1 ¹¹⁴	50	5 40	6 19	6 53	14 54	30	2 22	76			
6	274	06.5	-15	02.6	140	25.7	-0 51.7 ¹¹⁴	45	5 35	6 10	6 41	14 55	33	2 24	72			
7	289	06.5		03.3	154	54.1	40.3 ¹¹⁴	40	31	6 03	31	55	36	25	69			
8	304	06.5		04.1	169	22.5	28.9 ¹¹⁴	35	26	5 56	23	56	39	26	66			
9	319	06.5		04.9	183	50.9	17.5 ¹¹⁴	30	22	50	15	56	41	27	63			
10	334	06.5		05.7	198	19.3	-0 06.1 ¹¹⁴	20	13	40	6 02	57	45	28	60			
11	349	06.5	-15	06.5	212	47.7	+0 05.4 ¹¹⁵	10 N	5 04	5 29	5 51	14 57	49	2 29	56			
12	4	06.5	-15	07.2	227	16.1	+0 16.8 ¹¹⁴	0	4 54	5 19	5 40	14 58	52	2 30	53			
13	19	06.5		08.0	241	44.5	28.2 ¹¹⁴	10 S	42	5 07	29	58	56	31	49			
14	34	06.5		08.8	256	12.9	39.6 ¹¹⁴	20	27	4 54	17	14 59	60	33	45			
15	49	06.5		09.6	270	41.3	+0 51.1 ¹¹⁵	30	4 08	39	5 04	15 00	64	34	41			
16	64	06.5		10.3	285	09.8	+1 02.5 ¹¹⁴	35	3 56	29	4 56	00	67	35	38			
17	79	06.5	-15	11.1	299	38.2	+1 13.9 ¹¹⁴	40	3 42	4 18	4 47	15 01	69	2 35	37			
18	94	06.5	-15	11.9	314	06.6	+1 25.3 ¹¹⁴	45	3 24	4 04	4 36	15 02	72	2 36	33			
19	109	06.5		12.7	328	35.0	36.6 ¹¹³	50	3 00	3 47	23	02	76	37	30			
20	124	06.5		13.5	343	03.4	48.0 ¹¹⁴	52	2 48	39	17	03	78	38	28			
21	139	06.5		14.2	357	31.8	+1 59.4 ¹¹⁴	54	34	29	11	03	80	38	26			
22	154	06.5		15.0	12	00.1	+2 10.7 ¹¹³	56	2 18	19	4 03	04	81	39	24			
23	169	06.5		15.8	26	28.5	22.1 ¹¹⁴	58	1 57	3 06	3 55	04	84	40	21			
24	184	06.4	-15	16.5	40	56.9	+2 33.4 ¹¹³	60 S	1 30	2 52	3 45	15 05	87	2 40	20			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 07 ^m 8		Mag: -4.0 PMG: 11 ^h 54 ^m			Mag: +0.9 PMG: 15 ^h 36 ^m			Mag: -2.1 PMG: 6 ^h 43 ^m			Mag: +0.5 PMG: 12 ^h 38 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	42	10.7	181	41.7	-14	56.4	125	59.7	-24	49.0	258	56.6	+15	12.5	169	56.7	-16	55.5
1	57	13.1	196	41.1		57.5	141	00.1		48.9	273	58.8		12.4	184	58.9		55.6
2	72	15.6	211	40.5		58.5	156	00.5		48.8	289	01.0		12.3	200	01.1		55.6
3	87	18.0	226	39.9	-14	59.5	171	00.9		48.7	304	03.2		12.3	215	03.2		55.7
4	102	20.5	241	39.2	-15	00.5	186	01.4		48.7	319	05.4		12.2	230	05.4		55.8
5	117	23.0	256	38.6	-15	01.6	201	01.8	-24	48.6	334	07.6	+15	12.1	245	07.6	-16	55.9
6	132	25.4	271	38.0	-15	02.6	216	02.2	-24	48.5	349	09.8	+15	12.0	260	09.7	-16	55.9
7	147	27.9	286	37.4		03.6	231	02.6		48.4	4	12.0		12.0	275	11.9		56.0
8	162	30.4	301	36.8		04.6	246	03.0		48.3	19	14.2		11.9	290	14.1		56.1
9	177	32.8	316	36.2		05.7	261	03.4		48.2	34	16.4		11.8	305	16.2		56.2
10	192	35.3	331	35.6		06.7	276	03.8		48.1	49	18.6		11.7	320	18.4		56.2
11	207	37.8	346	35.0	-15	07.7	291	04.2	-24	48.0	64	20.8	+15	11.7	335	20.6	-16	56.3
12	222	40.2	1	34.4	-15	08.7	306	04.6	-24	47.9	79	23.0	+15	11.6	350	22.7	-16	56.4
13	237	42.7	16	33.8		09.7	321	05.0		47.8	94	25.2		11.5	5	24.9		56.5
14	252	45.2	31	33.2		10.8	336	05.4		47.7	109	27.4		11.4	20	27.1		56.5
15	267	47.6	46	32.6		11.8	351	05.8		47.7	124	29.6		11.4	35	29.3		56.6
16	282	50.1	61	32.0		12.8	6	06.3		47.6	139	31.8		11.3	50	31.4		56.7
17	297	52.5	76	31.4	-15	13.8	21	06.7	-24	47.5	154	34.0	+15	11.2	65	33.6	-16	56.7
18	312	55.0	91	30.8	-15	14.8	36	07.1	-24	47.4	169	36.2	+15	11.1	80	35.8	-16	56.8
19	327	57.5	106	30.1		15.9	51	07.5		47.3	184	38.4		11.1	95	37.9		56.9
20	342	59.9	121	29.5		16.9	66	07.9		47.2	199	40.6		11.0	110	40.1		57.0
21	358	02.4	136	28.9		17.9	81	08.3		47.1	214	42.8		10.9	125	42.3		57.0
22	13	04.9	151	28.3		18.9	96	08.7		47.0	229	45.0		10.8	140	44.4		57.1
23	28	07.3	166	27.7		19.9	111	09.1		46.9	244	47.2		10.8	155	46.6		57.2
24	43	09.8	181	27.1	-15	20.9	126	09.5	-24	46.8	259	49.4	+15	10.7	170	48.8	-16	57.3
Dif	—		-6	-10			+4	+1			+22	-1			+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna							
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 11 ^d 1 PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'4 Rº: 53 ^m SD: 16'2 PMG: 22 ^h 03 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m	
0	184	06.4	-15	16.5	40	56.9	+2	33.4	60 N	15 57	16 43	17 32	15 12	21	3 46	86					
1	199	06.4		17.3	55	25.3	94	44.7 ¹¹³	58	16 06		48	35	15 24	44	84					
2	214	06.4		18.1	69	53.7	94	+2 56.0 ¹¹³	56	13	53	38	17 26		42	82					
3	229	06.4		18.9	84	22.0	93	+3 07.2 ¹¹²	54	20	16 58	40	20 28		41	79					
4	244	06.4		19.6	98	50.4	94	18.5 ¹¹³	52	26	17 02	43	22 30		40	77					
5	259	06.4	-15	20.4	113	18.7	93	+3 29.7 ¹¹²	50	16 32	17 06	17 45	15 24	31	3 38	76					
6	274	06.4	-15	21.2	127	47.1	94	+3 40.9 ¹¹²	45	16 44	17 15	17 50	15 28	35	3 36	72					
7	289	06.4		21.9	142	15.4	93	+3 52.1 ¹¹²	40	16 54	23	55	31 38		34	68					
8	304	06.4		22.7	156	43.7	93	+4 03.3 ¹¹²	35	17 03	29	17 59	35 40		32	66					
9	319	06.4		23.5	171	12.0	93	14.4 ¹¹¹	30	11	36	18 04	37 43		30	64					
10	334	06.4		24.3	185	40.4	94	25.5 ¹¹¹	20	24	47	13	42 46		28	59					
11	349	06.4	-15	25.0	200	08.7	93	+4 36.6 ¹¹¹	10 N	17 36	17 58	18 23	15 46	50	3 25	56					
12	4	06.4	-15	25.8	214	36.9	92	+4 47.6 ¹¹⁰	0	17 47	18 08	18 33	15 50	53	3 23	52					
13	19	06.4		26.6	229	05.2	93	+4 58.6 ¹¹⁰	10 S	17 58	20	18 46	54 56		20	50					
14	34	06.4		27.3	243	33.5	93	+5 09.6 ¹¹⁰	20	18 10	34	19 01	15 59	59	18	46					
15	49	06.3		28.1	258	01.8	93	20.6 ¹¹⁰	30	25	18 50	20	16 04	63	15	42					
16	64	06.3		28.9	272	30.0	92	31.5 ¹⁰⁹	35	33	19 00	33	07 65		13	40					
17	79	06.3	-15	29.6	286	58.3	93	+5 42.3 ¹⁰⁸	40	18 42	19 12	19 48	16 10	68	3 12	36					
18	94	06.3	-15	30.4	301	26.5	92	+5 53.2 ¹⁰⁹	45	18 53	19 26	20 06	16 14	71	3 09	34					
19	109	06.3		31.2	315	54.7	92	+6 04.0 ¹⁰⁸	50	19 07	44	31	18 75		07	30					
20	124	06.3		31.9	330	22.9	92	14.7 ¹⁰⁷	52	13	19 52	43	21 76		06	28					
21	139	06.3		32.7	344	51.1	92	25.5 ¹⁰⁸	54	20	20 02	20 58	23 79		04	27					
22	154	06.3		33.5	359	19.3	92	36.1 ¹⁰⁶	56	28	13	21 16	25 81		03	25					
23	169	06.3		34.2	13	47.5	92	46.8 ¹⁰⁷	58	37	26	21 38	28 84		01	23					
24	184	06.2	-15	35.0	28	15.6	91	+6 57.4 ¹⁰⁶	60 S	19 47	20 41	22 08	16 32	85	3 00	20					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 21 ^h 03 ^m 9			Mag: -4.0 PMG: 11 ^h 55 ^m			Mag: +0.9 PMG: 15 ^h 35 ^m			Mag: -2.1 PMG: 6 ^h 40 ^m			Mag: +0.5 PMG: 12 ^h 35 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	43	09.8	181	27.1	-15	20.9	126	09.5	-24	46.8	259	49.4	+15	10.7	170	48.8	-16	57.3			
1	58	12.3	196	26.5		21.9	141	09.9		46.7	274	51.6		10.6	185	50.9		57.3			
2	73	14.7	211	25.9		23.0	156	10.3		46.6	289	53.8		10.5	200	53.1		57.4			
3	88	17.2	226	25.2		24.0	171	10.7		46.5	304	56.1		10.5	215	55.3		57.5			
4	103	19.6	241	24.6		25.0	186	11.1		46.4	319	58.3		10.4	230	57.4		57.6			
5	118	22.1	256	24.0	-15	26.0	201	11.5	-24	46.3	335	00.5	+15	10.3	245	59.6	-16	57.6			
6	133	24.6	271	23.4	-15	27.0	216	12.0	-24	46.2	350	02.7	+15	10.2	261	01.8	-16	57.7			
7	148	27.0	286	22.8		28.0	231	12.4		46.1	5	04.9		10.2	276	03.9		57.8			
8	163	29.5	301	22.2		29.0	246	12.8		46.0	20	07.1		10.1	291	06.1		57.9			
9	178	32.0	316	21.5		30.0	261	13.2		45.9	35	09.3		10.0	306	08.3		57.9			
10	193	34.4	331	20.9		31.0	276	13.6		45.8	50	11.5		09.9	321	10.4		58.0			
11	208	36.9	346	20.3	-15	32.0	291	14.0	-24	45.7	65	13.7	+15	09.9	336	12.6	-16	58.1			
12	223	39.4	1	19.7	-15	33.0	306	14.4	-24	45.6	80	15.9	+15	09.8	351	14.8	-16	58.2			
13	238	41.8	16	19.1		34.0	321	14.8		45.5	95	18.1		09.7	6	16.9		58.2			
14	253	44.3	31	18.5		35.0	336	15.2		45.4	110	20.3		09.6	21	19.1		58.3			
15	268	46.8	46	17.8		36.0	351	15.6		45.3	125	22.6		09.6	36	21.3		58.4			
16	283	49.2	61	17.2		37.1	6	16.0		45.2	140	24.8		09.5	51	23.4		58.5			
17	298	51.7	76	16.6	-15	38.1	21	16.4	-24	45.1	155	27.0	+15	09.4	66	25.6	-16	58.5			
18	313	54.1	91	16.0	-15	39.1	36	16.8	-24	45.0	170	29.2	+15	09.3	81	27.8	-16	58.6			
19	328	56.6	106	15.3		40.1	51	17.2		44.9	185	31.4		09.3	96	29.9		58.7			
20	343	59.1	121	14.7		41.1	66	17.6		44.8	200	33.6		09.2	111	32.1		58.8			
21	359	01.5	136	14.1		42.1	81	18.1		44.7	215	35.8		09.1	126	34.3		58.8			
22	14	04.0	151	13.5		43.1	96	18.5		44.6	230	38.0		09.1	141	36.4		58.9			
23	29	06.5	166	12.9		44.0	111	18.9		44.4	245	40.2		09.0	156	38.6		59.0			
24	44	08.9	181	12.2	-15	45.0	126	19.3	-24	44.3	260	42.5	+15	08.9	171	40.8	-16	59.0			
Dif	—			-6			-10			+4			+1			+22			-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 12 ^d 1 PHE { 4 ^h : 59'2 12 ^h : 59'1 20 ^h : 59'0 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	184	06.2	-15 35.0	28	15.6	+6	57.4	60 N	5	56	6	46	7	32	15	33
1	199	06.2	35.7	42	43.8	+7	07.9	58	53	40	23			39	27	
2	214	06.2	36.5	57	11.9	91	18.4	56	50	35	15			43	30	
3	229	06.2	37.3	71	40.0	91	28.9	54	48	30	08			48	31	
4	244	06.2	38.0	86	08.1	91	39.3	52	45	26	7	02		52	32	
5	259	06.2	-15 38.8	100	36.2	91	+7 49.7	50	5	43	6	22	6	56	15	55
6	274	06.2	-15 39.5	115	04.3	91	+8 00.0	45	5	38	6	13	6	44	16	03
7	289	06.2	40.3	129	32.4	91	+8 10.2	40	33	6	05	33		09	40	
8	304	06.1	41.1	144	00.4	90	20.4	35	28	5	58	25		15	42	
9	319	06.1	41.8	158	28.5	91	30.6	30	23	52	17			20	44	
10	334	06.1	42.6	172	56.5	90	40.7	20	14	40	6	03		28	48	
11	349	06.1	-15 43.3	187	24.5	90	+8 50.7	10 N	5	04	5	30	5	51	16	36
12	4	06.1	-15 44.1	201	52.5	90	+9 00.7	0	4	54	5	19	5	40	16	43
13	19	06.1	44.9	216	20.5	90	10.6	10 S	41	5	07	29		50	57	
14	34	06.0	45.6	230	48.5	90	20.4	20	26	4	53	16	16	58	59	
15	49	06.0	46.4	245	16.4	89	30.2	30	4	07	37	5	02	17	07	
16	64	06.0	47.1	259	44.4	90	40.0	35	3	54	27	4	54	12	65	
17	79	06.0	-15 47.9	274	12.3	89	+9 49.7	40	3	39	4	15	4	45	17	18
18	94	06.0	-15 48.6	288	40.2	89	+9 59.3	45	3	20	4	01	4	33	17	25
19	109	05.9	49.4	303	08.1	89	+10 08.8	50	2	56	3	43	20	33	73	
20	124	05.9	50.1	317	36.0	89	18.3	52	43	34	14			37	75	
21	139	05.9	50.9	332	03.9	89	27.7	54	29	25	4	07		42	76	
22	154	05.9	51.6	346	31.8	89	37.1	56	2	11	14	3	59	46	79	
23	169	05.9	52.4	0	59.6	88	46.4	58	1	49	3	01	50	52	80	
24	184	05.8	-15 53.1	15	27.4	88	+10 55.6	60 S	1	19	2	45	3	40	17	57

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 00 ^m 0		Mag: -4.0 PMG: 11 ^h 56 ^m			Mag: +0.9 PMG: 15 ^h 34 ^m			Mag: -2.1 PMG: 6 ^h 36 ^m			Mag: +0.5 PMG: 12 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	44	08.9	181	12.2	-15 45.0	126	19.3	-24 44.3	260	42.5	+15 08.9	171	40.8	-16 59.0
1	59	11.4	196	11.6	46.0	141	19.7	44.2	275	44.7	08.8	186	42.9	59.1
2	74	13.9	211	11.0	47.0	156	20.1	44.1	290	46.9	08.8	201	45.1	59.2
3	89	16.3	226	10.3	48.0	171	20.5	44.0	305	49.1	08.7	216	47.3	59.3
4	104	18.8	241	09.7	49.0	186	20.9	43.9	320	51.3	08.6	231	49.5	59.3
5	119	21.2	256	09.1	-15 50.0	201	21.3	-24 43.8	335	53.5	+15 08.5	246	51.6	-16 59.4
6	134	23.7	271	08.5	-15 51.0	216	21.7	-24 43.7	350	55.7	+15 08.5	261	53.8	-16 59.5
7	149	26.2	286	07.8	52.0	231	22.1	43.6	5	57.9	08.4	276	56.0	59.6
8	164	28.6	301	07.2	53.0	246	22.5	43.5	21	00.2	08.3	291	58.1	59.6
9	179	31.1	316	06.6	54.0	261	22.9	43.3	36	02.4	08.3	307	00.3	59.7
10	194	33.6	331	06.0	55.0	276	23.3	43.2	51	04.6	08.2	322	02.5	59.8
11	209	36.0	346	05.3	-15 56.0	291	23.7	-24 43.1	66	06.8	+15 08.1	337	04.6	-16 59.9
12	224	38.5	1	04.7	-15 57.0	306	24.1	-24 43.0	81	09.0	+15 08.0	352	06.8	-16 59.9
13	239	41.0	16	04.1	57.9	321	24.5	42.9	96	11.2	08.0	7	09.0	-17 00.0
14	254	43.4	31	03.4	58.9	336	24.9	42.8	111	13.4	07.9	22	11.1	-17 00.1
15	269	45.9	46	02.8	-15 59.9	351	25.3	42.7	126	15.7	07.8	37	13.3	00.2
16	284	48.4	61	02.2	-16 00.9	6	25.8	42.5	141	17.9	07.7	52	15.5	00.2
17	299	50.8	76	01.5	-16 01.9	21	26.2	-24 42.4	156	20.1	+15 07.7	67	17.6	-17 00.3
18	314	53.3	91	00.9	-16 02.9	36	26.6	-24 42.3	171	22.3	+15 07.6	82	19.8	-17 00.4
19	329	55.7	106	00.3	03.8	51	27.0	42.2	186	24.5	07.5	97	22.0	00.5
20	344	58.2	120	59.6	04.8	66	27.4	42.1	201	26.7	07.5	112	24.1	00.5
21	0	00.7	135	59.0	05.8	81	27.8	42.0	216	29.0	07.4	127	26.3	00.6
22	15	03.1	150	58.4	06.8	96	28.2	41.8	231	31.2	07.3	142	28.5	00.7
23	30	05.6	165	57.7	07.8	111	28.6	41.7	246	33.4	07.3	157	30.6	00.8
24	45	08.1	180	57.1	-16 08.8	126	29.0	-24 41.6	261	35.6	+15 07.2	172	32.8	-17 00.8
Dif	—		-6 -10			+4 +1			+22 -1			+22 -1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 13 ^d 1 PHE { 4 ^h : 58/8 12 ^h : 58/7 20 ^h : 58/5 PMG: 23 ^h 49 ^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	184	05.8	-15 53.1	15	27.4	+10 55.6	89	60 N	15 52	16 38	17 28	15 58 30	6 37 81	
1	199	05.8		29	55.3	+11 04.7	91	58	16 01	44	31	16 06 32	30 78	
2	214	05.8	54.7	44	23.1		88	56	09	50	34	13 34	23 77	
3	229	05.8	55.4	58	50.9		88	54	16	55	37	19 35	18 77	
4	244	05.8	56.2	73	18.6		87	52	23	16 59	39	24 37	13 73	
5	259	05.7	-15 56.9	87	46.4	+11 40.5	88	50	16 29	17 03	17 42	16 29 39	6 08 72	
6	274	05.7	-15 57.7	102	14.2	+11 49.3	88	45	16 42	17 13	17 48	16 40 41	5 58 69	
7	289	05.7	58.4	116	41.9	+11 58.0	87	40	16 52	21	53	49 44	50 66	
8	304	05.7	59.1	131	09.6	+12 06.6	87	35	17 01	28	17 58	16 57 45	43 64	
9	319	05.6	-15 59.9	145	37.4		88	30	09	34	18 03	17 04 47	37 62	
10	334	05.6	-16 00.6	160	05.1		87	20	23	46	12	16 49	27 58	
11	349	05.6	-16 01.4	174	32.8	+12 32.0	84	10 N	17 35	17 57	18 23	17 27 51	5 17 57	
12	4	05.6	-16 02.1	189	00.4	+12 40.3	83	0	17 47	18 09	18 34	17 37 54	5 09 53	
13	19	05.5	02.9	203	28.1		87	10 S	17 59	21	18 46	47 56	5 00 51	
14	34	05.5	03.6	217	55.8	+12 56.7	82	20	18 12	35	19 02	17 57 59	4 51 48	
15	49	05.5	04.4	232	23.4	+13 04.7	80	30	26	18 52	22	18 10 61	40 46	
16	64	05.5	05.1	246	51.1		87	35	35	19 02	35	17 63	34 44	
17	79	05.4	-16 05.9	261	18.7	+13 20.6	79	40	18 44	19 14	19 50	18 25 65	4 27 42	
18	94	05.4	-16 06.6	275	46.3	+13 28.4	78	45	18 56	19 29	20 10	18 35 66	4 19 39	
19	109	05.4	07.3	290	13.9		86	50	19 10	47	36	46 70	10 36	
20	124	05.3	08.1	304	41.5		86	52	17	19 56	20 49	52 70	05 35	
21	139	05.3	08.8	319	09.1		86	54	24	20 06	21 04	18 58 72	4 00 34	
22	154	05.3	09.6	333	36.7	+13 58.7	86	56	32	18	23	19 05 73	3 55 32	
23	169	05.3	10.3	348	04.3	+14 06.1	84	58	41	31	21 46	12 75	49 29	
24	184	05.2	-16 11.1	2	31.8	+14 13.3	72	60 S	19 52	20 48	22 21	19 21 77	3 42 27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 56 ^m 0		Mag: -4.0 PMG: 11 ^h 57 ^m			Mag: +0.9 PMG: 15 ^h 34 ^m			Mag: -2.1 PMG: 6 ^h 33 ^m			Mag: +0.5 PMG: 12 ^h 28 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	45	08.1	180	57.1	-16 08.8	126	29.0	-24 41.6	261	35.6	+15 07.2	172	32.8	-17 00.8
1	60	10.5	195	56.4	09.7	141	29.4	41.5	276	37.8	07.1	187	35.0	00.9
2	75	13.0	210	55.8	10.7	156	29.8	41.4	291	40.1	07.0	202	37.1	01.0
3	90	15.5	225	55.2	11.7	171	30.2	41.2	306	42.3	07.0	217	39.3	01.0
4	105	17.9	240	54.5	12.7	186	30.6	41.1	321	44.5	06.9	232	41.4	01.1
5	120	20.4	255	53.9	-16 13.6	201	31.0	-24 41.0	336	46.7	+15 06.8	247	43.6	-17 01.2
6	135	22.9	270	53.2	-16 14.6	216	31.4	-24 40.9	351	48.9	+15 06.8	262	45.8	-17 01.3
7	150	25.3	285	52.6	15.6	231	31.8	40.8	6	51.2	06.7	277	47.9	01.3
8	165	27.8	300	52.0	16.6	246	32.2	40.6	21	53.4	06.6	292	50.1	01.4
9	180	30.2	315	51.3	17.5	261	32.6	40.5	36	55.6	06.5	307	52.3	01.5
10	195	32.7	330	50.7	18.5	276	33.0	40.4	51	57.8	06.5	322	54.4	01.6
11	210	35.2	345	50.0	-16 19.5	291	33.4	-24 40.3	67	00.0	+15 06.4	337	56.6	-17 01.6
12	225	37.6	0	49.4	-16 20.5	306	33.8	-24 40.1	82	02.3	+15 06.3	352	58.8	-17 01.7
13	240	40.1	15	48.7	21.4	321	34.2	40.0	97	04.5	06.3	8	00.9	01.8
14	255	42.6	30	48.1	22.4	336	34.6	39.9	112	06.7	06.2	23	03.1	01.9
15	270	45.0	45	47.5	23.4	351	35.0	39.8	127	08.9	06.1	38	05.3	01.9
16	285	47.5	60	46.8	24.3	6	35.4	39.6	142	11.2	06.1	53	07.4	02.0
17	300	50.0	75	46.2	-16 25.3	21	35.9	-24 39.5	157	13.4	+15 06.0	68	09.6	-17 02.1
18	315	52.4	90	45.5	-16 26.3	36	36.3	-24 39.4	172	15.6	+15 05.9	83	11.8	-17 02.2
19	330	54.9	105	44.9	27.2	51	36.7	39.3	187	17.8	05.8	98	13.9	02.2
20	345	57.3	120	44.2	28.2	66	37.1	39.1	202	20.0	05.8	113	16.1	02.3
21	0	59.8	135	43.6	29.2	81	37.5	39.0	217	22.3	05.7	128	18.3	02.4
22	16	02.3	150	42.9	30.1	96	37.9	38.9	232	24.5	05.6	143	20.4	02.4
23	31	04.7	165	42.3	31.1	111	38.3	38.7	247	26.7	05.6	158	22.6	02.5
24	46	07.2	180	41.6	-16 32.0	126	38.7	-24 38.6	262	28.9	+15 05.5	173	24.8	-17 02.6
Dif	—		-6	-10		+4	+1		+22		-1	+22		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 14 ^d 1 PHE { 4 ^h : 58'3 12 ^h : 58'0 20 ^h : 57'8 R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	05.2	-16	11.1	2	31.8	+14	13.3	72	60 N	6 00	6 51	7 37	16 28	37	7 58	73
1	199	05.2		11.8	16	59.4		86	20.5	71	58	5 57	44	28	38	39	48 72
2	214	05.2		12.5	31	27.0		86	27.6	70	56	54	39	19	47	40	40 70
3	229	05.1		13.3	45	54.5		85	34.6	69	54	51	34	12	16 54	42	32 69
4	244	05.1		14.0	60	22.1		86	41.5	69	52	49	29	7 05	17 01	43	26 67
5	259	05.1	-16	14.8	74	49.6		85	+14 48.3	68	50	5 46	6 25	6 59	17 08	43	7 20 66
6	274	05.0	-16	15.5	89	17.1		85	+14 55.1	68	45	5 40	6 15	6 46	17 21	46	7 07 64
7	289	05.0		16.2	103	44.7		86	+15 01.7	66	40	35	07	36	33	46	6 56 63
8	304	05.0		17.0	118	12.2		85	08.2	65	35	30	6 00	26	42	48	47 61
9	319	04.9		17.7	132	39.7		85	14.7	65	30	25	5 53	18	17 51	49	39 60
10	334	04.9		18.4	147	07.2		85	21.0	63	20	15	41	6 04	18 05	51	25 58
11	349	04.9	-16	19.2	161	34.8		86	+15 27.2	62	10 N	5 05	5 30	5 52	18 18	53	6 14 55
12	4	04.8	-16	19.9	176	02.3		85	+15 33.4	62	0	4 54	5 19	5 40	18 31	53	6 02 54
13	19	04.8		20.6	190	29.8		85	39.4	60	10 S	41	5 06	28	43	55	5 51 52
14	34	04.8		21.4	204	57.3		85	45.4	60	20	25	4 52	16	18 56	56	39 50
15	49	04.7		22.1	219	24.8		85	51.2	58	30	4 05	35	5 01	19 11	58	26 48
16	64	04.7		22.8	233	52.3		85	+15 57.0	58	35	3 52	25	4 52	20	59	18 46
17	79	04.7	-16	23.6	248	19.9		86	+16 02.7	57	40	3 36	4 13	4 42	19 30	60	5 09 45
18	94	04.6	-16	24.3	262	47.4		85	+16 08.2	55	45	3 17	3 58	4 31	19 41	62	4 58 44
19	109	04.6		25.0	277	14.9		85	13.7	55	50	2 51	39	17	19 56	63	46 41
20	124	04.6		25.8	291	42.4		85	19.0	53	52	38	30	10	20 02	65	40 40
21	139	04.5		26.5	306	10.0		86	24.3	53	54	23	20	4 03	10	65	34 38
22	154	04.5		27.2	320	37.5		85	29.4	51	56	2 04	3 09	3 54	18	66	27 36
23	169	04.4		28.0	335	05.0		85	34.5	51	58	1 40	2 55	45	27	68	18 36
24	184	04.4	-16	28.7	349	32.6		86	+16 39.4	49	60 S	1 06	2 39	3 34	20 38	69	4 09 34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 52 ^m 1		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: +0.9 PMG: 15 ^h 33 ^m		Mag: -2.1 PMG: 6 ^h 29 ^m		Mag: +0.5 PMG: 12 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	46	07.2	180	41.6	-16	32.0	126	38.7	-24	38.6	262	28.9	+15	05.5	173	24.8	-17	02.6
1	61	09.7	195	41.0		33.0	141	39.1		38.5	277	31.2		05.4	188	26.9		02.7
2	76	12.1	210	40.3		34.0	156	39.5		38.4	292	33.4		05.4	203	29.1		02.7
3	91	14.6	225	39.7		34.9	171	39.9		38.2	307	35.6		05.3	218	31.3		02.8
4	106	17.1	240	39.0		35.9	186	40.3		38.1	322	37.8		05.2	233	33.4		02.9
5	121	19.5	255	38.4	-16	36.8	201	40.7	-24	38.0	337	40.1	+15	05.2	248	35.6	-17	03.0
6	136	22.0	270	37.7	-16	37.8	216	41.1	-24	37.8	352	42.3	+15	05.1	263	37.8	-17	03.0
7	151	24.5	285	37.1		38.8	231	41.5		37.7	7	44.5		05.0	278	39.9		03.1
8	166	26.9	300	36.4		39.7	246	41.9		37.6	22	46.8		05.0	293	42.1		03.2
9	181	29.4	315	35.8		40.7	261	42.3		37.4	37	49.0		04.9	308	44.3		03.3
10	196	31.8	330	35.1		41.6	276	42.7		37.3	52	51.2		04.8	323	46.4		03.3
11	211	34.3	345	34.4	-16	42.6	291	43.1	-24	37.1	67	53.4	+15	04.7	338	48.6	-17	03.4
12	226	36.8	0	33.8	-16	43.5	306	43.5	-24	37.0	82	55.7	+15	04.7	353	50.8	-17	03.5
13	241	39.2	15	33.1		44.5	321	43.9		36.9	97	57.9		04.6	8	52.9		03.6
14	256	41.7	30	32.5		45.4	336	44.3		36.7	113	00.1		04.5	23	55.1		03.6
15	271	44.2	45	31.8		46.4	351	44.7		36.6	128	02.4		04.5	38	57.2		03.7
16	286	46.6	60	31.2		47.3	6	45.1		36.5	143	04.6		04.4	53	59.4		03.8
17	301	49.1	75	30.5	-16	48.3	21	45.5	-24	36.3	158	06.8	+15	04.3	69	01.6	-17	03.8
18	316	51.6	90	29.8	-16	49.2	36	45.9	-24	36.2	173	09.0	+15	04.3	84	03.7	-17	03.9
19	331	54.0	105	29.2		50.2	51	46.3		36.1	188	11.3		04.2	99	05.9		04.0
20	346	56.5	120	28.5		51.1	66	46.7		35.9	203	13.5		04.1	114	08.1		04.1
21	1	59.0	135	27.9		52.1	81	47.1		35.8	218	15.7		04.1	129	10.2		04.1
22	17	01.4	150	27.2		53.0	96	47.5		35.6	233	18.0		04.0	144	12.4		04.2
23	32	03.9	165	26.5		54.0	111	47.9		35.5	248	20.2		03.9	159	14.6		04.3
24	47	06.3	180	25.9	-16	54.9	126	48.3	-24	35.3	263	22.4	+15	03.9	174	16.7	-17	04.4
Dif	—		-7		-10		+4		+1		+22		-1		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 15 ^d 1 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/1 Rº: 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	184	04.4	-16	28.7	349	32.6	+16	39.4	60 N	15 47	16 34	17 24	17 05 45	9 11 64
1	199	04.4		29.4	4	00.1	85	44.3	58	15 57	40	28	17 46	9 00 63
2	214	04.3		30.2	18	27.7	86	49.0	56	16 05	46	31	27 47	8 50 62
3	229	04.3		30.9	32	55.3	86	53.7	54	13	51	34	36 47	41 61
4	244	04.3		31.6	47	22.8	85	+16 58.2	52	20	16 56	37	44 48	33 61
5	259	04.2	-16	32.3	61	50.4	86	+17 02.6	50	16 26	17 01	17 39	17 51 49	8 26 60
6	274	04.2	-16	33.1	76	18.0	86	+17 07.0	45	16 39	17 10	17 45	18 07 49	8 11 59
7	289	04.1		33.8	90	45.6	86	11.2	40	16 50	19	51	19 50	7 59 58
8	304	04.1		34.5	105	13.2	86	15.3	35	17 00	26	17 56	30 51	48 57
9	319	04.0		35.2	119	40.9	87	19.3	30	08	33	18 02	40 51	39 57
10	334	04.0		36.0	134	08.5	86	23.3	20	22	45	12	18 56 52	23 55
11	349	04.0	-16	36.7	148	36.2	87	+17 27.1	10 N	17 35	17 57	18 22	19 11 52	7 09 55
12	4	03.9	-16	37.4	163	03.8	86	+17 30.8	0	17 47	18 09	18 34	19 24 53	6 56 54
13	19	03.9		38.1	177	31.5	87	34.4	10 S	17 59	21	18 47	38 53	43 53
14	34	03.8		38.9	191	59.2	87	37.9	20	18 13	36	19 03	19 52 54	29 52
15	49	03.8		39.6	206	26.9	87	41.3	30	28	18 53	24	20 09 54	14 50
16	64	03.7		40.3	220	54.7	88	44.5	32	37	19 04	37	19 55	6 04 50
17	79	03.7	-16	41.0	235	22.4	87	+17 47.7	40	18 47	19 17	19 53	20 30 55	5 54 49
18	94	03.7	-16	41.7	249	50.2	88	+17 50.8	45	18 59	19 32	20 13	20 43 56	5 42 47
19	109	03.6		42.5	264	18.0	88	53.8	50	19 13	19 51	40	20 59 56	27 46
20	124	03.6		43.2	278	45.8	88	56.6	52	20	20 00	20 54	21 07 56	20 45
21	139	03.5		43.9	293	13.6	88	+17 59.4	54	28	11	21 10	15 57	12 45
22	154	03.5		44.6	307	41.4	88	+18 02.1	56	37	23	30	24 57	5 03 44
23	169	03.4		45.3	322	09.3	89	04.6	58	46	37	21 56	35 58	4 54 42
24	184	03.4	-16	46.1	336	37.2	89	+18 07.0	60 S	19 57	20 54	22 35	21 47 58	4 43 41
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 48 ^m 2		Mag: -4.0 PMG: 11 ^h 59 ^m		Mag: +0.9 PMG: 15 ^h 32 ^m		Mag: -2.2 PMG: 6 ^h 26 ^m		Mag: +0.5 PMG: 12 ^h 21 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	47	06.3	180	25.9	-16	54.9	126	48.3	-24	35.3				
1	62	08.8	195	25.2		55.9	141	48.7		35.2				
2	77	11.3	210	24.6		56.8	156	49.1		35.1				
3	92	13.7	225	23.9		57.7	171	49.5		34.9				
4	107	16.2	240	23.2		58.7	186	49.9		34.8				
5	122	18.7	255	22.6	-16	59.6	201	50.3	-24	34.6				
6	137	21.1	270	21.9	-17	00.6	216	50.7	-24	34.5				
7	152	23.6	285	21.2		01.5	231	51.1		34.3				
8	167	26.1	300	20.6		02.4	246	51.6		34.2				
9	182	28.5	315	19.9		03.4	261	52.0		34.1				
10	197	31.0	330	19.2		04.3	276	52.4		33.9				
11	212	33.4	345	18.6	-17	05.2	291	52.8	-24	33.8				
12	227	35.9	0	17.9	-17	06.2	306	53.2	-24	33.6				
13	242	38.4	15	17.2		07.1	321	53.6		33.5				
14	257	40.8	30	16.6		08.0	336	54.0		33.3				
15	272	43.3	45	15.9		09.0	351	54.4		33.2				
16	287	45.8	60	15.2		09.9	6	54.8		33.0				
17	302	48.2	75	14.5	-17	10.8	21	55.2	-24	32.9				
18	317	50.7	90	13.9	-17	11.8	36	55.6	-24	32.7				
19	332	53.2	105	13.2		12.7	51	56.0		32.6				
20	347	55.6	120	12.5		13.6	66	56.4		32.4				
21	2	58.1	135	11.9		14.5	81	56.8		32.3				
22	18	00.6	150	11.2		15.5	96	57.2		32.1				
23	33	03.0	165	10.5		16.4	111	57.6		32.0				
24	48	05.5	180	09.8	-17	17.3	126	58.0	-24	31.8				
Dif	—		-7		-9		+4		+1					
							+22		-1					
									+22					
									-1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 16 ^d 1	PHE { 4 ^h : 56 ^m /9 12 ^h : 56 ^m /6 20 ^h : 56 ^m /4										
	PMG: 11 ^h 43 ^m 8					SD: 15 ^h 5		R ^o : 53 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m		h	m	
0	184	03.4	-16	46.1	336	37.2	+18	07.0	60 N	6	04	6	55	7	42
1	199	03.3		46.8	351	05.1	89	09.4	24	58	6	01	48	32	18
2	214	03.3		47.5	5	33.0	89	11.6	22	56	5	58	43	24	14
3	229	03.2		48.2	20	01.0	90	13.8	22	54	55	37	16	23	54
4	244	03.2		48.9	34	29.0	90	15.8	20	52	52	32	09	32	53
5	259	03.1	-16	49.6	48	57.0	90	+18	17.7	19	50	5	49	6	28
6	274	03.1	-16	50.4	63	25.0	90	+18	19.5	18	45	5	43	6	18
7	289	03.0		51.1	77	53.1	91	21.2	17	40	37	09	38	19	09
8	304	03.0		51.8	92	21.2	91	22.8	16	35	32	6	02	28	21
9	319	02.9		52.5	106	49.3	91	24.3	15	30	26	5	55	20	31
10	334	02.9		53.2	121	17.5	92	25.7	14	20	16	42	6	05	19
11	349	02.8	-16	53.9	135	45.7	92	+18	27.0	13	10 N	5	05	5	31
12	4	02.8	-16	54.6	150	13.9	92	+18	28.2	12	0	4	54	5	19
13	19	02.7		55.3	164	42.1	92	29.3	11	10 S	40	5	06	28	31
14	34	02.7		56.1	179	10.4	93	30.3	10	20	24	4	51	5	15
15	49	02.6		56.8	193	38.7	93	31.2	9	30	4	03	34	4	59
16	64	02.6		57.5	208	07.0	93	31.9	7	35	3	50	23	51	14
17	79	02.5	-16	58.2	222	35.4	94	+18	32.6	7	40	3	34	4	10
18	94	02.5	-16	58.9	237	03.8	94	+18	33.2	6	45	3	14	3	55
19	109	02.4	-16	59.6	251	32.3	95	33.6	4	50	2	47	36	13	21
20	124	02.4	-17	00.3	266	00.8	95	34.0	4	52	33	26	4	07	22
21	139	02.3		01.0	280	29.3	95	34.3	3	54	2	17	16	3	59
22	154	02.2		01.7	294	57.8	95	34.4	1	56	1	57	3	04	50
23	169	02.2		02.4	309	26.4	96	34.5	1	58	1	31	2	49	41
24	184	02.1	-17	03.1	323	55.1	97	+18	34.5	0	60 S	0	52	2	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +0.9		Mag: -2.2		Mag: +0.5	
	20 ^h 44 ^m 2		PMG: 12 ^h 00 ^m		PMG: 15 ^h 32 ^m		PMG: 6 ^h 22 ^m		PMG: 12 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	48	05.5	180	09.8	-17	17.3	264	16.1	+15	02.3
1	63	07.9	195	09.2		18.2	279	18.3		02.2
2	78	10.4	210	08.5		19.2	294	20.5		02.2
3	93	12.9	225	07.8		20.1	309	22.8		02.1
4	108	15.3	240	07.1		21.0	324	25.0		02.0
5	123	17.8	255	06.4	-17	21.9	339	27.3	+15	02.0
6	138	20.3	270	05.8	-17	22.9	354	29.5	+15	01.9
7	153	22.7	285	05.1		23.8	9	31.7		01.8
8	168	25.2	300	04.4		24.7	24	34.0		01.8
9	183	27.7	315	03.7		25.6	39	36.2		01.7
10	198	30.1	330	03.1		26.5	54	38.5		01.7
11	213	32.6	345	02.4	-17	27.4	69	40.7	+15	01.6
12	228	35.1	0	01.7	-17	28.4	84	42.9	+15	01.5
13	243	37.5	15	01.0		29.3	99	45.2		01.5
14	258	40.0	30	00.3		30.2	114	47.4		01.4
15	273	42.4	44	59.6		31.1	129	49.7		01.3
16	288	44.9	59	59.0		32.0	144	51.9		01.3
17	303	47.4	74	58.3	-17	32.9	159	54.1	+15	01.2
18	318	49.8	89	57.6	-17	33.8	174	56.4	+15	01.1
19	333	52.3	104	56.9		34.7	189	58.6		01.1
20	348	54.8	119	56.2		35.7	205	00.9		01.0
21	3	57.2	134	55.5		36.6	220	03.1		01.0
22	18	59.7	149	54.8		37.5	235	05.4		00.9
23	34	02.2	164	54.2		38.4	250	07.6		00.8
24	49	04.6	179	53.5	-17	39.3	265	09.9	+15	00.8
Dif	—		-7	-9		+4	+22	-1		+22

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 17 ^d 1 PHE	SD: 15 ^h 3				R°: 50 ^m							
	PMG: 11 ^h 43 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m		
0	184	02.1	-17 03.1	323	55.1	+18 34.5	2	60 N	15 42	16 30	17 20	18 45 61	11 08 41			
1	199	02.1	03.8	338	23.7	34.3	2	58	15 52	36	24	18 57 60	10 55 42			
2	214	02.0	04.5	352	52.4	34.1	2	56	16 01	43	28	19 08 59	44 43			
3	229	02.0	05.3	7	21.2	33.8	3	54	09	48	31	17 58	35 44			
4	244	01.9	06.0	21	50.0	33.3	5	52	16	53	34	25 58	26 45			
5	259	01.8	-17 06.7	36	18.8	32.8	5	50	16 23	16 58	17 37	19 33 57	10 19 45			
6	274	01.8	-17 07.4	50	47.6	32.2	6	45	16 37	17 08	17 43	19 49 56	10 03 45			
7	289	01.7	08.1	65	16.6	31.4	8	40	48	17	49	20 02 55	9 49 47			
8	304	01.7	08.8	79	45.5	30.6	8	35	16 58	25	17 55	13 54	38 47			
9	319	01.6	09.5	94	14.5	29.7	9	30	17 07	32	18 00	23 53	28 48			
10	334	01.6	10.2	108	43.5	28.7	10	20	22	45	11	40 51	9 11 49			
11	349	01.5	-17 10.9	123	12.6	27.5	12	10 N	17 35	17 57	18 22	20 55 50	8 56 50			
12	4	01.4	-17 11.6	137	41.7	26.3	12	0	17 47	18 09	18 34	21 08 50	8 42 50			
13	19	01.4	12.3	152	10.9	25.0	13	10 S	18 00	22	18 48	22 48	28 51			
14	34	01.3	13.0	166	40.1	23.6	14	20	14	37	19 05	37 47	8 13 52			
15	49	01.2	13.7	181	09.4	22.1	15	30	29	18 55	26	21 54 45	7 56 52			
16	64	01.2	14.4	195	38.7	20.5	16	35	39	19 06	40	22 03 45	46 53			
17	79	01.1	-17 15.1	210	08.0	18.9	16	40	18 49	19 19	19 56	22 15 43	7 34 54			
18	94	01.1	-17 15.8	224	37.4	17.1	18	45	19 02	19 35	20 17	22 28 42	7 21 54			
19	109	01.0	16.5	239	06.9	15.2	19	50	17	19 55	45	44 41	7 04 55			
20	124	00.9	17.2	253	36.3	13.2	20	52	24	20 05	20 59	22 51 41	6 56 56			
21	139	00.9	17.8	268	05.9	11.2	20	54	32	16	21 16	23 00 39	48 56			
22	154	00.8	18.5	282	35.5	09.0	22	56	41	28	21 37	09 39	38 57			
23	169	00.7	19.2	297	05.1	06.8	22	58	19 51	20 43	22 06	19 38	27 57			
24	184	00.7	-17 19.9	311	34.8	04.5	23	60 S	20 03	21 01	22 53	23 32 36	6 14 58			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 20 ^h 40 ^m 3		Mag: -3.9 PMG: 12 ^h 01 ^m		Mag: +0.9 PMG: 15 ^h 31 ^m		Mag: -2.2 PMG: 6 ^h 18 ^m			Mag: +0.5 PMG: 12 ^h 14 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	49	04.6	179	53.5	-17 39.3	127 07.6	-24 28.0	265 09.9	+15 00.8	176 00.6	-17 07.9	
1	64	07.1	194	52.8	40.2	142 08.0	27.9	280 12.1	00.7	191 02.8	08.0	
2	79	09.6	209	52.1	41.1	157 08.4	27.7	295 14.3	00.6	206 05.0	08.0	
3	94	12.0	224	51.4	42.0	172 08.8	27.5	310 16.6	00.6	221 07.1	08.1	
4	109	14.5	239	50.7	42.9	187 09.2	27.4	325 18.8	00.5	236 09.3	08.2	
5	124	16.9	254	50.0	-17 43.8	202 09.6	-24 27.2	340 21.1	+15 00.5	251 11.4	-17 08.3	
6	139	19.4	269	49.3	-17 44.7	217 10.0	-24 27.0	355 23.3	+15 00.4	266 13.6	-17 08.3	
7	154	21.9	284	48.6	45.6	232 10.4	26.9	10 25.6	00.3	281 15.8	08.4	
8	169	24.3	299	48.0	46.5	247 10.8	26.7	25 27.8	00.3	296 17.9	08.5	
9	184	26.8	314	47.3	47.4	262 11.2	26.5	40 30.1	00.2	311 20.1	08.5	
10	199	29.3	329	46.6	48.3	277 11.6	26.4	55 32.3	00.1	326 22.3	08.6	
11	214	31.7	344	45.9	-17 49.2	292 12.0	-24 26.2	70 34.6	+15 00.1	341 24.4	-17 08.7	
12	229	34.2	359	45.2	-17 50.1	307 12.4	-24 26.0	85 36.8	+15 00.0	356 26.6	-17 08.8	
13	244	36.7	14 44.5	51.0	322 12.8	25.9	100 39.1	+15 00.0	11 28.8	08.8		
14	259	39.1	29 43.8	51.9	337 13.2	25.7	115 41.3	+14 59.9	26 30.9	08.9		
15	274	41.6	44 43.1	52.8	352 13.6	25.5	130 43.6	59.8	41 33.1	09.0		
16	289	44.0	59 42.4	53.7	7 14.0	25.3	145 45.8	59.8	56 35.2	09.1		
17	304	46.5	74 41.7	-17 54.6	22 14.4	-24 25.2	160 48.1	+14 59.7	71 37.4	-17 09.1		
18	319	49.0	89 41.0	-17 55.4	37 14.8	-24 25.0	175 50.3	+14 59.7	86 39.6	-17 09.2		
19	334	51.4	104 40.3	56.3	52 15.2	24.8	190 52.6	59.6	101 41.7	09.3		
20	349	53.9	119 39.6	57.2	67 15.6	24.6	205 54.8	59.5	116 43.9	09.3		
21	4	56.4	134 38.9	58.1	82 16.0	24.5	220 57.1	59.5	131 46.1	09.4		
22	19	58.8	149 38.2	59.0	97 16.4	24.3	235 59.3	59.4	146 48.2	09.5		
23	35	01.3	164 37.5	-17 59.9	112 16.8	24.1	251 01.6	59.4	161 50.4	09.6		
24	50	03.8	179 36.8	-18 00.8	127 17.2	-24 24.0	266 03.8	+14 59.3	176 52.6	-17 09.6		
Dif	—		-7	-9	+4	+2	+22	-1	+22	-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 18 ^d 1 PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 PMG: 3 ^h 20 ^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	184	00.7	-17 19.9	311	34.8	+18 04.5		60 N	6 09	7 00	7 47	19 46	66	11 49	32		
1	199	00.6		20.6	326	04.5 ¹⁰⁷	+18 02.1 ²⁴	58	05	6 53	37	19 57	64	37	34		
2	214	00.5		21.3	340	34.3 ¹⁰⁸	+17 59.6 ²⁵	56	6 01	46	28	20 07	62	27	35		
3	229	00.5		22.0	355	04.1 ¹⁰⁸	57.0 ²⁶	54	5 58	41	20	15 62		19	36		
4	244	00.4		22.7	9	34.0 ¹⁰⁹	54.3 ²⁷	52	55	36	13	23 60		11	37		
5	259	00.3	-17 23.4	24 03.9 ¹⁰⁹	+17 51.5 ²⁸	50		50	5 52	6 31	7 06	20 30	59	11 04	38		
6	274	00.3	-17 24.1	38 33.9 ¹¹⁰	+17 48.7 ²⁸	45		45	5 45	6 20	6 52	20 45	57	10 48	40		
7	289	00.2		24.8	53 03.9 ¹¹⁰		45.7 ³⁰	40	39	12	40	20 57	55	36	41		
8	304	00.1		25.5	67 33.9 ¹¹⁰		42.7 ³⁰	35	33	6 04	30	21 07	54	25	43		
9	319	00.1		26.1	82 04.1 ¹¹²		39.6 ³¹	30	28	5 56	22	16 53		16	44		
10	334	00.0		26.8	96 34.2 ¹¹¹		36.4 ³²	20	17	43	6 06	31 51		10 00	45		
11	348	59.9	-17 27.5	111 04.5 ¹¹³	+17 33.1 ³³	10 N		10 N	5 06	5 31	5 53	21 45	49	9 46	47		
12	3	59.9	-17 28.2	125 34.7 ¹¹²	+17 29.7 ³⁴	0		0	4 54	5 19	5 40	21 58	47	9 32	49		
13	18	59.8		28.9	140 05.0 ¹¹³		26.3 ³⁴	10 S	40	5 06	28	22 10	46	19	50		
14	33	59.7		29.6	154 35.4 ¹¹⁴		22.8 ³⁵	20	23	4 51	5 14	24 44		9 05	51		
15	48	59.7		30.3	169 05.8 ¹¹⁴		19.2 ³⁶	30	4 02	32	4 58	39 42		8 48	53		
16	63	59.6		31.0	183 36.3 ¹¹⁵		15.5 ³⁷	35	3 48	21	49	48 41		39	54		
17	78	59.5	-17 31.6	198 06.8 ¹¹⁵	+17 11.7 ³⁸	40		40	3 31	4 08	4 38	22 58	39	8 28	55		
18	93	59.4	-17 32.3	212 37.4 ¹¹⁶	+17 07.8 ³⁹	45		45	3 10	3 52	4 26	23 10	38	8 15	57		
19	108	59.4		33.0	227 08.0 ¹¹⁶		+17 03.9 ³⁹	50	2 43	32	10	25 35		7 59	59		
20	123	59.3		33.7	241 38.7 ¹¹⁷		+16 59.9 ⁴⁰	52	28	23	4 03	32 34		52	59		
21	138	59.2		34.4	256 09.4 ¹¹⁷		55.8 ⁴¹	54	2 11	3 12	3 55	39 33		44	60		
22	153	59.1		35.1	270 40.2 ¹¹⁸		51.6 ⁴²	56	1 50	2 59	46	48 31		35	61		
23	168	59.1		35.7	285 11.0 ¹¹⁸		47.4 ⁴²	58	1 21	44	36	23 57	30	24	63		
24	183	59.0	-17 36.4	299 41.9 ¹¹⁹	+16 43.1 ⁴³	60 S		60 S	0 34	2 26	3 24	** ** *		7 12	64		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 36 ^m 4		Mag: -3.9 PMG: 12 ^h 02 ^m		Mag: +0.9 PMG: 15 ^h 30 ^m		Mag: -2.2 PMG: 6 ^h 15 ^m		Mag: +0.5 PMG: 12 ^h 11 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	50	03.8	179	36.8	-18 00.8	127 17.2	-24 24.0	266 03.8	+14 59.3	176 52.6	-17 09.6
1	65	06.2	194	36.1	01.7	142 17.6	23.8	281 06.1	59.2	191 54.7	09.7
2	80	08.7	209	35.4	02.5	157 18.0	23.6	296 08.3	59.2	206 56.9	09.8
3	95	11.2	224	34.7	03.4	172 18.4	23.4	311 10.6	59.1	221 59.0	09.9
4	110	13.6	239	34.0	04.3	187 18.8	23.3	326 12.8	59.1	237 01.2	09.9
5	125	16.1	254	33.3	-18 05.2	202 19.2	-24 23.1	341 15.1	+14 59.0	252 03.4	-17 10.0
6	140	18.5	269	32.6	-18 06.1	217 19.6	-24 22.9	356 17.3	+14 58.9	267 05.5	-17 10.1
7	155	21.0	284	31.9	07.0	232 20.0	22.7	11 19.6	58.9	282 07.7	10.2
8	170	23.5	299	31.2	07.8	247 20.4	22.5	26 21.8	58.8	297 09.9	10.2
9	185	25.9	314	30.5	08.7	262 20.8	22.4	41 24.1	58.8	312 12.0	10.3
10	200	28.4	329	29.8	09.6	277 21.2	22.2	56 26.3	58.7	327 14.2	10.4
11	215	30.9	344	29.1	-18 10.5	292 21.6	-24 22.0	71 28.6	+14 58.6	342 16.3	-17 10.4
12	230	33.3	359	28.4	-18 11.3	307 22.0	-24 21.8	86 30.8	+14 58.6	357 18.5	-17 10.5
13	245	35.8	14	27.6	12.2	322 22.4	21.6	101 33.1	58.5	12 20.7	10.6
14	260	38.3	29	26.9	13.1	337 22.8	21.5	116 35.4	58.5	27 22.8	10.7
15	275	40.7	44	26.2	14.0	352 23.2	21.3	131 37.6	58.4	42 25.0	10.7
16	290	43.2	59	25.5	14.8	7 23.6	21.1	146 39.9	58.3	57 27.2	10.8
17	305	45.7	74	24.8	-18 15.7	22 24.0	-24 20.9	161 42.1	+14 58.3	72 29.3	-17 10.9
18	320	48.1	89	24.1	-18 16.6	37 24.4	-24 20.7	176 44.4	+14 58.2	87 31.5	-17 11.0
19	335	50.6	104	23.4	17.5	52 24.8	20.5	191 46.6	58.2	102 33.7	11.0
20	350	53.0	119	22.7	18.3	67 25.2	20.4	206 48.9	58.1	117 35.8	11.1
21	5	55.5	134	22.0	19.2	82 25.6	20.2	221 51.2	58.0	132 38.0	11.2
22	20	58.0	149	21.3	20.1	97 26.0	20.0	236 53.4	58.0	147 40.1	11.2
23	36	00.4	164	20.5	20.9	112 26.4	19.8	251 55.7	57.9	162 42.3	11.3
24	51	02.9	179	19.8	-18 21.8	127 26.8	-24 19.6	266 57.9	+14 57.9	177 44.5	-17 11.4
Dif	—		-7	-9		+4	+2	+23	-1	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 1			Edad: 19 ^d 1 PHE { SD: 15:0 PMG: 4 ^h 09 ^m 4 ^h : 55:0 12 ^h : 54:8 20 ^h : 54:7 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	59.0	-17 36.4	299	41.9	+16 43.1	44	60 N	15 37	16 26	17 17	20 52 68		12 21 25	
1	198	58.9	37.1	314	12.8 ¹¹⁹	38.7	44	58	48	33	21	21 01 66		11 27	
2	213	58.8	37.8	328	43.8 ¹²⁰	34.2	45	56	15 58	39	25	09 65		12 02 29	
3	228	58.8	38.5	343	14.9 ¹²¹	29.6	46	54	16 06	45	28	17 62		11 55 30	
4	243	58.7	39.1	357	45.9 ¹²⁰	25.0	46	52	13	50	31	23 61		48 31	
5	258	58.6	-17 39.8	12	17.1 ¹²²	+16 20.3	47	50	16 20	16 55	17 34	21 29 60		11 42 32	
6	273	58.5	-17 40.5	26	48.2 ¹²¹	+16 15.6	47	45	16 34	17 06	17 41	21 42 57		11 28 35	
7	288	58.5	41.2	41	19.5 ¹²³	10.7	49	40	46	15	48	21 52 56		17 37	
8	303	58.4	41.9	55	50.8 ¹²³	05.8	49	35	16 57	23	54	22 01 54		08 38	
9	318	58.3	42.5	70	22.1 ¹²³	+16 00.8	50	30	17 06	31	17 59	09 52		11 00 39	
10	333	58.2	43.2	84	53.5 ¹²⁴	+15 55.8	50	20	21	44	18 11	22 50		10 45 42	
11	348	58.2	-17 43.9	99	24.9 ¹²⁴	+15 50.6	52	10 N	17 35	17 57	18 22	22 34 47		10 33 44	
12	3	58.1	-17 44.6	113	56.4 ¹²⁵	+15 45.4	52	0	17 48	18 09	18 35	22 45 45		10 21 46	
13	18	58.0	45.2	128	27.9 ¹²⁵	40.2	52	10 S	18 01	23	18 49	22 56 43		10 09 48	
14	33	57.9	45.9	142	59.5 ¹²⁶	34.8	54	20	15	38	19 06	23 08 40		9 56 50	
15	48	57.8	46.6	157	31.1 ¹²⁶	29.4	54	30	31	18 57	28	21 38		41 53	
16	63	57.8	47.2	172	02.8 ¹²⁷	24.0	54	35	41	19 08	42	29 36		33 54	
17	78	57.7	-17 47.9	186	34.5 ¹²⁷	+15 18.4	56	40	18 52	19 22	19 59	23 37 35		9 23 56	
18	93	57.6	-17 48.6	201	06.3 ¹²⁸	+15 12.8	56	45	19 04	19 38	20 21	23 48 33		9 12 57	
19	108	57.5	49.3	215	38.1 ¹²⁸	07.2	56	50	20	19 59	20 50	*** ** *		8 58 60	
20	123	57.4	49.9	230	10.0 ¹²⁹	+15 01.4	58	52	28	20 09	21 04	*** ** *		51 61	
21	138	57.4	50.6	244	41.9 ¹²⁹	+14 55.6	58	54	36	20	22	*** ** *		44 62	
22	153	57.3	51.3	259	13.8 ¹²⁹	49.8	58	56	45	34	21 45	*** ** *		36 64	
23	168	57.2	51.9	273	45.8 ¹³⁰	43.9	59	58	19 56	20 49	22 17	*** ** *		27 65	
24	183	57.1	-17 52.6	288	17.9 ¹³¹	+14 37.9	60	60 S	20 08	21 08	23 22	0 08 28		8 16 68	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 32 ^m 4			Mag: -3.9 PMG: 12 ^h 03 ^m			Mag: +0.9 PMG: 15 ^h 30 ^m			Mag: -2.2 PMG: 6 ^h 11 ^m			Mag: +0.5 PMG: 12 ^h 07 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	51	02.9	179 19.8	-18 21.8	127 26.8	-24 19.6	266 57.9	+14 57.9	177 44.5	-17 11.4			177 44.5	-17 11.4	
1	66	05.4	194 19.1	22.7	142 27.2	19.4	282 00.2	57.8	192 46.6	11.5			192 46.6	11.5	
2	81	07.8	209 18.4	23.5	157 27.6	19.2	297 02.4	57.8	207 48.8	11.5			207 48.8	11.5	
3	96	10.3	224 17.7	24.4	172 28.0	19.1	312 04.7	57.7	222 51.0	11.6			222 51.0	11.6	
4	111	12.8	239 17.0	25.2	187 28.4	18.9	327 07.0	57.6	237 53.1	11.7			237 53.1	11.7	
5	126	15.2	254 16.3	-18 26.1	202 28.8	-24 18.7	342 09.2	+14 57.6	252 55.3	-17 11.8			252 55.3	-17 11.8	
6	141	17.7	269 15.5	-18 27.0	217 29.2	-24 18.5	357 11.5	+14 57.5	267 57.4	-17 11.8			267 57.4	-17 11.8	
7	156	20.2	284 14.8	27.8	232 29.6	18.3	12 13.7	57.5	282 59.6	11.9			282 59.6	11.9	
8	171	22.6	299 14.1	28.7	247 30.0	18.1	27 16.0	57.4	298 01.8	12.0			298 01.8	12.0	
9	186	25.1	314 13.4	29.5	262 30.4	17.9	42 18.3	57.4	313 03.9	12.0			313 03.9	12.0	
10	201	27.5	329 12.7	30.4	277 30.8	17.7	57 20.5	57.3	328 06.1	12.1			328 06.1	12.1	
11	216	30.0	344 11.9	-18 31.3	292 31.2	-24 17.5	72 22.8	+14 57.2	343 08.3	-17 12.2			343 08.3	-17 12.2	
12	231	32.5	359 11.2	-18 32.1	307 31.6	-24 17.4	87 25.0	+14 57.2	358 10.4	-17 12.3			358 10.4	-17 12.3	
13	246	34.9	14 10.5	33.0	322 32.0	17.2	102 27.3	57.1	13 12.6	12.3			13 12.6	12.3	
14	261	37.4	29 09.8	33.8	337 32.4	17.0	117 29.6	57.1	28 14.7	12.4			28 14.7	12.4	
15	276	39.9	44 09.1	34.7	352 32.8	16.8	132 31.8	57.0	43 16.9	12.5			43 16.9	12.5	
16	291	42.3	59 08.3	35.5	7 33.2	16.6	147 34.1	57.0	58 19.1	12.6			58 19.1	12.6	
17	306	44.8	74 07.6	-18 36.4	22 33.6	-24 16.4	162 36.4	+14 56.9	73 21.2	-17 12.6			73 21.2	-17 12.6	
18	321	47.3	89 06.9	-18 37.2	37 34.0	-24 16.2	177 38.6	+14 56.8	88 23.4	-17 12.7			88 23.4	-17 12.7	
19	336	49.7	104 06.2	38.1	52 34.4	16.0	192 40.9	56.8	103 25.6	12.8			103 25.6	12.8	
20	351	52.2	119 05.4	38.9	67 34.8	15.8	207 43.1	56.7	118 27.7	12.8			118 27.7	12.8	
21	6	54.6	134 04.7	39.8	82 35.2	15.6	222 45.4	56.7	133 29.9	12.9			133 29.9	12.9	
22	21	57.1	149 04.0	40.6	97 35.6	15.4	237 47.7	56.6	148 32.0	13.0			148 32.0	13.0	
23	36	59.6	164 03.3	41.5	112 36.0	15.2	252 49.9	56.6	163 34.2	13.1			163 34.2	13.1	
24	52	02.0	179 02.5	-18 42.3	127 36.4	-24 15.0	267 52.2	+14 56.5	178 36.4	-17 13.1			178 36.4	-17 13.1	
Dif	—			-7	-9	+4	+2	+23	-1	+22	-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 3			Edad: 20 ^d 1 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 PMG: 4 ^h 56 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	57.1	-17	52.6	288	17.9	+14 37.9	60 N	6 13	7 04	7 53	22 00	69	12 46	20
1	198	57.0		53.3	302	50.0 ¹³¹	31.8 61	58	09	6 57	42	07 67	38 23		
2	213	56.9		53.9	317	22.1 ¹³¹	25.7 61	56	05	50	32	14 65	31 25		
3	228	56.9		54.6	331	54.3 ¹³²	19.6 61	54	6 01	44	24	19 64	25 26		
4	243	56.8		55.3	346	26.6 ¹³³	13.3 63	52	5 58	39	16	24 63	19 28		
5	258	56.7	-17	55.9	0	58.8 ¹³²	+14 07.0 63	50	5 55	6 34	7 09	22 29	61	12 14	29
6	273	56.6	-17	56.6	15	31.2 ¹³⁴	+14 00.7 63	45	5 48	6 23	6 55	22 39	58	12 03	32
7	288	56.5		57.3	30	03.5 ¹³³	+13 54.3 64	40	41	14	43	48 55	11 54	34	
8	303	56.4		57.9	44	35.9 ¹³⁴	47.8 65	35	35	6 05	32	22 55	53	46	36
9	318	56.3		58.6	59	08.4 ¹³⁵	41.3 65	30	29	5 58	23	23 01	52	39	37
10	333	56.3		59.3	73	40.9 ¹³⁵	34.7 66	20	18	44	6 08	12 49	27	40	
11	348	56.2	-17	59.9	88	13.4 ¹³⁵	+13 28.1 66	10 N	5 06	5 32	5 54	23 21	46	11 17	42
12	3	56.1	-18	00.6	102	46.0 ¹³⁶	+13 21.4 67	0	4 54	5 19	5 41	23 30	44	11 07	44
13	18	56.0		01.3	117	18.6 ¹³⁶	14.6 68	10 S	39	5 05	28	39 41	10 57	47	
14	33	55.9		01.9	131	51.3 ¹³⁷	07.8 68	20	22	4 50	5 13	48 39	46	49	
15	48	55.8		02.6	146	24.0 ¹³⁷	+13 01.0 68	30	4 00	31	4 57	23 59	36	34	52
16	63	55.7		03.2	160	56.8 ¹³⁸	+12 54.1 69	35	3 46	20	47	** ** *	**	27	54
17	78	55.6	-18	03.9	175	29.5 ¹³⁷	+12 47.1 70	40	3 29	4 06	4 36	** ** *	**	10 19	55
18	93	55.5	-18	04.6	190	02.4 ¹³⁹	+12 40.1 70	45	3 07	3 50	4 23	** ** *	**	10 09	58
19	108	55.5		05.2	204	35.2 ¹³⁸	33.0 71	50	2 38	29	08	0 00	30	9 58	60
20	123	55.4		05.9	219	08.1 ¹³⁹	25.9 71	52	23	19	4 00	06 29	52	62	
21	138	55.3		06.5	233	41.1 ¹⁴⁰	18.8 71	54	2 05	3 07	3 52	12 28	46	64	
22	153	55.2		07.2	248	14.0 ¹³⁹	11.5 73	56	1 43	2 54	42	19 26	40	65	
23	168	55.1		07.8	262	47.1 ¹⁴¹	+12 04.3 72	58	1 11	39	32	27 24	32	67	
24	183	55.0	-18	08.5	277	20.1 ¹⁴⁰	+11 57.0 73	60 S	0 06	2 19	3 19	0 36	22	9 24	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 28 ^m 5		Mag: -3.9 PMG: 12 ^h 04 ^m		Mag: +1.0 PMG: 15 ^h 29 ^m		Mag: -2.2 PMG: 6 ^h 08 ^m		Mag: +0.5 PMG: 12 ^h 04 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	52	02.0	179	02.5	-18	42.3	127	36.4	-24	15.0
1	67	04.5	194	01.8		43.1	142	36.8		14.8
2	82	07.0	209	01.1		44.0	157	37.2		14.6
3	97	09.4	224	00.4		44.8	172	37.6		14.4
4	112	11.9	238	59.6		45.7	187	38.0		14.2
5	127	14.4	253	58.9	-18	46.5	202	38.4	-24	14.0
6	142	16.8	268	58.2	-18	47.3	217	38.8	-24	13.8
7	157	19.3	283	57.4		48.2	232	39.2		13.6
8	172	21.8	298	56.7		49.0	247	39.6		13.4
9	187	24.2	313	56.0		49.9	262	40.0		13.2
10	202	26.7	328	55.3		50.7	277	40.4		13.0
11	217	29.1	343	54.5	-18	51.5	292	40.8	-24	12.8
12	232	31.6	358	53.8	-18	52.4	307	41.2	-24	12.6
13	247	34.1	13	53.1		53.2	322	41.6		12.4
14	262	36.5	28	52.3		54.0	337	42.0		12.2
15	277	39.0	43	51.6		54.9	352	42.4		12.0
16	292	41.5	58	50.8		55.7	7	42.8		11.8
17	307	43.9	73	50.1	-18	56.5	22	43.2	-24	11.6
18	322	46.4	88	49.4	-18	57.4	37	43.6	-24	11.4
19	337	48.9	103	48.6		58.2	52	44.0		11.2
20	352	51.3	118	47.9		59.0	67	44.4		11.0
21	7	53.8	133	47.2	-18	59.8	82	44.8		10.8
22	22	56.3	148	46.4	-19	00.7	97	45.2		10.6
23	37	58.7	163	45.7		01.5	112	45.6		10.4
24	53	01.2	178	44.9	-19	02.3	127	46.0	-24	10.2
Dif	—		-7	-8			+4	+2		+23
										-1
										+22
										-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 21 ^d 1	PHE {	4 ^h : 54°/3 12 ^h : 54°/3 20 ^h : 54°/2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 44 ^m 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
0	183	55.0	-18 08.5	277	20.1	+11 57.0	74	60 N	15 33	16 22	17 13	23 09	70	13 06	18
1	198	54.9	09.1	291	53.2 ¹⁴¹	49.6	74	58	44	29	18	14	68	13 01	19
2	213	54.8	09.8	306	26.3 ¹⁴¹	42.2	74	56	15	54	36	19	66	12 56	21
3	228	54.7	10.5	320	59.5 ¹⁴²	34.7	75	54	16	03	42	23	64	51	23
4	243	54.6	11.1	335	32.7 ¹⁴²	27.2	75	52	10	48	29	27	62	47	24
5	258	54.5	-18 11.8	350	05.9 ¹⁴²	+11 19.7	75	50	16	17	16 53	23 30	61	12 43	26
6	273	54.4	-18 12.4	4	39.1 ¹⁴²	+11 12.1	76	45	16	32	17 04	23 37	58	12 35	28
7	288	54.3	13.1	19	12.4 ¹⁴³	+11 04.4	77	40	45	14	46	43	56	28	31
8	303	54.2	13.7	33	45.7 ¹⁴³	+10 56.7	77	35	16	55	22	53	48	54	22
9	318	54.1	14.4	48	19.1 ¹⁴⁴	49.0	77	30	17	04	30	23 53	51	16	35
10	333	54.1	15.0	62	52.5 ¹⁴⁴	41.2	78	20	21	44	18 10	** ** *	**	12 07	38
11	348	54.0	-18 15.7	77	25.9 ¹⁴⁴	+10 33.4	78	10 N	17 35	17 57	18 22	** ** *	**	11 59	41
12	3	53.9	-18 16.3	91	59.3 ¹⁴⁴	+10 25.5	79	0	17	48	18 10	** ** *	**	11 51	44
13	18	53.8	17.0	106	32.8 ¹⁴⁵	17.6	79	10 S	18 01	24	18 50	** ** *	**	44	46
14	33	53.7	17.6	121	06.3 ¹⁴⁵	09.7	79	20	16	40	19 07	** ** *	**	35	49
15	48	53.6	18.3	135	39.8 ¹⁴⁵	+10 01.7	80	30	33	18 59	30	** ** *	**	26	52
16	63	53.5	18.9	150	13.4 ¹⁴⁶	+9 53.7	80	35	43	19 11	19 44	0 05	34	21	53
17	78	53.4	-18 19.5	164	47.0 ¹⁴⁶	+9 45.6	81	40	18	54	19 24	0 12	32	11 14	56
18	93	53.3	-18 20.2	179	20.6 ¹⁴⁶	+9 37.5	81	45	19	07	19 41	0 21	29	11 07	58
19	108	53.2	20.8	193	54.2 ¹⁴⁶	29.3	82	50	24	20 03	20 54	30	27	10 58	61
20	123	53.1	21.5	208	27.9 ¹⁴⁷	21.2	81	52	31	13	21 10	35	25	54	63
21	138	53.0	22.1	223	01.6 ¹⁴⁷	12.9	83	54	40	25	29	40	24	50	64
22	153	52.9	22.8	237	35.3 ¹⁴⁷	+9 04.7	82	56	19	50	39	21 53	45	23	45
23	168	52.8	23.4	252	09.0 ¹⁴⁷	+8 56.4	83	58	20	01	20 55	22 28	51	21	39
24	183	52.7	-18 24.1	266	42.8 ¹⁴⁸	+8 48.0	84	60 S	20 14	21 15	** ** *	0 58	19	10 33	70
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 24 ^m 6		Mag: -3.9 PMG: 12 ^h 06 ^m			Mag: +1.0 PMG: 15 ^h 29 ^m			Mag: -2.2 PMG: 6 ^h 04 ^m			Mag: +0.5 PMG: 12 ^h 00 ^m			
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	53	01.2	178	44.9	-19 02.3	127	46.0	-24 10.2	268	46.6	+14 55.2	179	28.3	-17 14.9	
1	68	03.6	193	44.2	03.1	142	46.4	09.9	283	48.9	55.1	194	30.4	14.9	
2	83	06.1	208	43.5	03.9	157	46.8	09.7	298	51.2	55.1	209	32.6	15.0	
3	98	08.6	223	42.7	04.8	172	47.2	09.5	313	53.5	55.0	224	34.7	15.1	
4	113	11.0	238	42.0	05.6	187	47.6	09.3	328	55.7	55.0	239	36.9	15.2	
5	128	13.5	253	41.2	-19 06.4	202	48.0	-24 09.1	343	58.0	+14 54.9	254	39.1	-17 15.2	
6	143	16.0	268	40.5	-19 07.2	217	48.4	-24 08.9	359	00.3	+14 54.9	269	41.2	-17 15.3	
7	158	18.4	283	39.8	08.0	232	48.8	08.7	14	02.6	54.8	284	43.4	15.4	
8	173	20.9	298	39.0	08.9	247	49.2	08.5	29	04.8	54.8	299	45.6	15.4	
9	188	23.4	313	38.3	09.7	262	49.6	08.3	44	07.1	54.7	314	47.7	15.5	
10	203	25.8	328	37.5	10.5	277	50.0	08.1	59	09.4	54.7	329	49.9	15.6	
11	218	28.3	343	36.8	-19 11.3	292	50.4	-24 07.8	74	11.7	+14 54.6	344	52.0	-17 15.7	
12	233	30.7	358	36.0	-19 12.1	307	50.8	-24 07.6	89	13.9	+14 54.5	359	54.2	-17 15.7	
13	248	33.2	13	35.3	12.9	322	51.2	07.4	104	16.2	54.5	14	56.4	15.8	
14	263	35.7	28	34.5	13.7	337	51.6	07.2	119	18.5	54.4	29	58.5	15.9	
15	278	38.1	43	33.8	14.5	352	52.0	07.0	134	20.8	54.4	45	00.7	16.0	
16	293	40.6	58	33.0	15.4	7	52.4	06.8	149	23.0	54.3	60	02.9	16.0	
17	308	43.1	73	32.3	-19 16.2	22	52.8	-24 06.6	164	25.3	+14 54.3	75	05.0	-17 16.1	
18	323	45.5	88	31.5	-19 17.0	37	53.2	-24 06.3	179	27.6	+14 54.2	90	07.2	-17 16.2	
19	338	48.0	103	30.8	17.8	52	53.6	06.1	194	29.9	54.2	105	09.3	16.2	
20	353	50.5	118	30.0	18.6	67	54.0	05.9	209	32.1	54.1	120	11.5	16.3	
21	8	52.9	133	29.3	19.4	82	54.4	05.7	224	34.4	54.1	135	13.7	16.4	
22	23	55.4	148	28.5	20.2	97	54.8	05.5	239	36.7	54.0	150	15.8	16.5	
23	38	57.9	163	27.8	21.0	112	55.2	05.2	254	39.0	54.0	165	18.0	16.5	
24	54	00.3	178	27.0	-19 21.8	127	55.6	-24 05.0	269	41.3	+14 53.9	180	20.1	-17 16.6	
Dif	—		-7		-8	+4		+2	+23		-1	+22		-	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 22 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 PMG: 6 ^h 24 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	52.7	-18	24.1	266	42.8	+8	48.0	60 N	6 17	7 09	7 58	** ** *	**	13 24	16
1	198	52.6		24.7	281	16.5 ¹⁴⁷		39.7 ⁸³	58	12	7 01	46	** ** *	**	20	18
2	213	52.5		25.3	295	50.3 ¹⁴⁸		31.2 ⁸⁵	56	08	6 54	36	** ** *	**	17	20
3	228	52.4		26.0	310	24.2 ¹⁴⁹		22.8 ⁸⁴	54	04	48	27	** ** *	**	14	22
4	243	52.3		26.6	324	58.0 ¹⁴⁸		14.3 ⁸⁵	52	6 01	42	20	** ** *	**	11	23
5	258	52.2	-18	27.3	339	31.8 ¹⁴⁸	+8	05.8 ⁸⁵	50	5 58	6 37	7 12	** ** *	**	13 09	24
6	273	52.1	-18	27.9	354	05.7 ¹⁴⁹	+7	57.3 ⁸⁵	45	5 50	6 26	6 57	** ** *	**	13 03	28
7	288	52.0		28.5	8	39.6 ¹⁴⁹		48.7 ⁸⁶	40	43	16	45	** ** *	**	12 59	29
8	303	51.8		29.2	23	13.5 ¹⁴⁹		40.1 ⁸⁶	35	37	07	34	** ** *	**	55	32
9	318	51.7		29.8	37	47.5 ¹⁵⁰		31.4 ⁸⁷	30	31	6 00	25	** ** *	**	51	34
10	333	51.6		30.4	52	21.4 ¹⁴⁹		22.8 ⁸⁶	20	19	5 46	6 09	0 01	48	45	37
11	348	51.5	-18	31.1	66	55.4 ¹⁵⁰	+7	14.0 ⁸⁸	10 N	5 07	5 32	5 54	0 07	46	12 40	40
12	3	51.4	-18	31.7	81	29.3 ¹⁴⁹	+7	05.3 ⁸⁷	0	4 54	5 19	5 41	0 14	43	12 35	42
13	18	51.3		32.4	96	03.3 ¹⁵⁰	+6	56.5 ⁸⁸	10 S	39	5 05	5 27	20	41	30	45
14	33	51.2		33.0	110	37.3 ¹⁵⁰		47.7 ⁸⁸	20	4 21	4 49	5 13	27	38	24	48
15	48	51.1		33.6	125	11.3 ¹⁵⁰		38.9 ⁸⁸	30	3 59	30	4 56	35	34	18	51
16	63	51.0		34.3	139	45.4 ¹⁵¹		30.1 ⁸⁹	35	44	18	46	39	33	14	54
17	78	50.9	-18	34.9	154	19.4 ¹⁵⁰	+6	21.2 ⁸⁹	40	3 27	4 04	4 35	0 44	31	12 10	56
18	93	50.8	-18	35.5	168	53.4 ¹⁵⁰	+6	12.3 ⁸⁹	45	3 04	3 47	4 21	0 50	28	12 05	59
19	108	50.7		36.1	183	27.5 ¹⁵¹	+6	03.3 ⁹⁰	50	2 34	26	4 05	0 57	25	11 59	62
20	123	50.6		36.8	198	01.6 ¹⁵¹	+5	54.4 ⁸⁹	52	19	15	3 57	1 00	24	57	63
21	138	50.5		37.4	212	35.6 ¹⁵⁰		45.4 ⁹⁰	54	2 00	3 03	48	04	22	54	64
22	153	50.3		38.0	227	09.7 ¹⁵¹		36.3 ⁹¹	56	1 35	2 50	39	08	20	50	67
23	168	50.2		38.7	241	43.8 ¹⁵¹		27.3 ⁹⁰	58	1 00	33	28	12	19	47	68
24	183	50.1	-18	39.3	256	17.9 ¹⁵¹	+5	18.2 ⁹¹	60 S	** **	2 13	3 15	1 17	17	11 43	70
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 20 ^h 20 ^m 6		Mag: -3.9 PMG: 12 ^h 07 ^m			Mag: +1.0 PMG: 15 ^h 28 ^m			Mag: -2.2 PMG: 6 ^h 00 ^m			Mag: +0.5 PMG: 11 ^h 57 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	00.3	178	27.0	-19	21.8	127	55.6	-24	05.0	269	41.3	+14	53.9	180	20.1
1	69	02.8	193	26.3		22.6	142	55.9		04.8	284	43.5		53.9	195	22.3
2	84	05.2	208	25.5		23.4	157	56.3		04.6	299	45.8		53.8	210	24.5
3	99	07.7	223	24.8		24.2	172	56.7		04.4	314	48.1		53.8	225	26.6
4	114	10.2	238	24.0		25.0	187	57.1		04.1	329	50.4		53.7	240	28.8
5	129	12.6	253	23.3	-19	25.8	202	57.5	-24	03.9	344	52.7	+14	53.7	255	31.0
6	144	15.1	268	22.5	-19	26.6	217	57.9	-24	03.7	359	54.9	+14	53.6	270	33.1
7	159	17.6	283	21.8		27.4	232	58.3		03.5	14	57.2		53.6	285	35.3
8	174	20.0	298	21.0		28.2	247	58.7		03.3	29	59.5		53.5	300	37.4
9	189	22.5	313	20.3		29.0	262	59.1		03.0	45	01.8		53.5	315	39.6
10	204	25.0	328	19.5		29.7	277	59.5		02.8	60	04.1		53.4	330	41.8
11	219	27.4	343	18.7	-19	30.5	292	59.9	-24	02.6	75	06.3	+14	53.4	345	43.9
12	234	29.9	358	18.0	-19	31.3	308	00.3	-24	02.4	90	08.6	+14	53.3	0	46.1
13	249	32.4	13	17.2		32.1	323	00.7		02.1	105	10.9		53.3	15	48.2
14	264	34.8	28	16.5		32.9	338	01.1		01.9	120	13.2		53.2	30	50.4
15	279	37.3	43	15.7		33.7	353	01.5		01.7	135	15.5		53.2	45	52.6
16	294	39.7	58	14.9		34.5	8	01.9		01.5	150	17.8		53.1	60	54.7
17	309	42.2	73	14.2	-19	35.3	23	02.3	-24	01.2	165	20.0	+14	53.1	75	56.9
18	324	44.7	88	13.4	-19	36.0	38	02.7	-24	01.0	180	22.3	+14	53.0	90	59.1
19	339	47.1	103	12.7		36.8	53	03.1		00.8	195	24.6		53.0	106	01.2
20	354	49.6	118	11.9		37.6	68	03.5		00.5	210	26.9		52.9	121	03.4
21	9	52.1	133	11.1		38.4	83	03.9		00.3	225	29.2		52.9	136	05.5
22	24	54.5	148	10.4		39.2	98	04.3	-24	00.1	240	31.5		52.8	151	07.7
23	39	57.0	163	09.6		40.0	113	04.7	-23	59.9	255	33.8		52.8	166	09.9
24	54	59.5	178	08.8	-19	40.7	128	05.1	-23	59.6	270	36.0	+14	52.7	181	12.0
Dif	—		-8		-8		+4		+2		+23		-1		+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°2			Edad: 23 ^d 1 PHE	SD: 14°8				R°: 43 ^m				Hora R°		Hora R°	
	PMG: 11 ^h 44 ^m 7															
	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	50.1	-18 39.3	256	17.9	+5 18.2	91	60 N	15 29	16 18	17 10	0 19 71	13 40 15			
1	198	50.0	39.9	270	52.0 ¹⁵¹	+5 09.1	91	58	40	26	15	22 69	38 18			
2	213	49.9	40.6	285	26.1 ¹⁵¹	+5 00.0	91	56	15 51	33	19	25 67	37 19			
3	228	49.8	41.2	300	00.2 ¹⁵¹	+4 50.9	91	54	16 00	39	23	27 65	35 21			
4	243	49.7	41.8	314	34.3 ¹⁵¹	41.7	92	52	08	45	26	29 64	34 23			
5	258	49.6	-18 42.4	329	08.5 ¹⁵²	+4 32.5	92	50	16 15	16 51	17 30	0 31 62	13 33 24			
6	273	49.5	-18 43.1	343	42.6 ¹⁵¹	+4 23.3	92	45	16 30	17 02	17 38	0 35 59	13 31 26			
7	288	49.3	43.7	358	16.7 ¹⁵¹	14.1	92	40	43	12	45	39 56	28 30			
8	303	49.2	44.3	12	50.8 ¹⁵¹	+4 04.9	92	35	16 54	21	52	42 54	27 31			
9	318	49.1	44.9	27	25.0 ¹⁵²	+3 55.6	93	30	17 04	29	17 58	44 52	25 34			
10	333	49.0	45.5	41	59.1 ¹⁵¹	46.3	93	20	20	43	18 10	49 49	22 37			
11	348	48.9	-18 46.2	56	33.2 ¹⁵¹	+3 37.0	93	10 N	17 35	17 57	18 22	0 53 46	13 20 40			
12	3	48.8	-18 46.8	71	07.3 ¹⁵¹	+3 27.7	93	0	17 48	18 10	18 36	0 57 43	13 17 43			
13	18	48.7	47.4	85	41.4 ¹⁵¹	18.3	94	10 S	18 02	24	18 51	1 01 39	15 46			
14	33	48.5	48.0	100	15.5 ¹⁵¹	+3 09.0	93	20	17	18 41	19 09	05 36	12 49			
15	48	48.4	48.7	114	49.6 ¹⁵¹	+2 59.6	94	30	34	19 01	32	09 34	09 53			
16	63	48.3	49.3	129	23.7 ¹⁵¹	50.2	94	35	45	13	19 47	12 31	08 54			
17	78	48.2	-18 49.9	143	57.8 ¹⁵¹	+2 40.8	94	40	18 56	19 27	20 05	1 15 29	13 06 56			
18	93	48.1	-18 50.5	158	31.9 ¹⁵¹	+2 31.4	94	45	19 10	19 44	20 28	1 18 27	13 04 59			
19	108	48.0	51.1	173	06.0 ¹⁵¹	21.9	95	50	27	20 06	20 59	22 24	01 62			
20	123	47.8	51.7	187	40.1 ¹⁵¹	12.5	94	52	35	17	21 15	24 23	13 00 63			
21	138	47.7	52.4	202	14.2 ¹⁵¹	+2 03.0	95	54	44	30	21 35	26 21	12 58 66			
22	153	47.6	53.0	216	48.2 ¹⁵⁰	+1 53.5	95	56	19 54	20 44	22 01	28 20	57 67			
23	168	47.5	53.6	231	22.3 ¹⁵¹	44.0	95	58	20 05	21 01	22 42	31 17	55 69			
24	183	47.4	-18 54.2	245	56.3 ¹⁵⁰	+1 34.5	95	60 S	20 19	21 22	** **	1 34 15	12 53 72			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 16 ^m 7		Mag: -3.9 PMG: 12 ^h 08 ^m			Mag: +1.0 PMG: 15 ^h 27 ^m			Mag: -2.2 PMG: 5 ^h 57 ^m			Mag: +0.5 PMG: 11 ^h 53 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	54	59.5	178 08.8	-19 40.7	128 05.1	-23 59.6	270 36.0	+14 52.7	181 12.0	-17 18.3						
1	70	01.9	193 08.1	41.5	143 05.5	59.4	285 38.3	52.7	196 14.2	18.4						
2	85	04.4	208 07.3	42.3	158 05.9	59.2	300 40.6	52.6	211 16.3	18.5						
3	100	06.8	223 06.5	43.1	173 06.3	58.9	315 42.9	52.6	226 18.5	18.5						
4	115	09.3	238 05.8	43.8	188 06.7	58.7	330 45.2	52.5	241 20.7	18.6						
5	130	11.8	253 05.0	-19 44.6	203 07.1	-23 58.5	345 47.5	+14 52.5	256 22.8	-17 18.7						
6	145	14.2	268 04.2	-19 45.4	218 07.5	-23 58.2	0 49.8	+14 52.4	271 25.0	-17 18.8						
7	160	16.7	283 03.5	46.2	233 07.9	58.0	15 52.1	52.4	286 27.2	18.8						
8	175	19.2	298 02.7	46.9	248 08.3	57.8	30 54.3	52.3	301 29.3	18.9						
9	190	21.6	313 01.9	47.7	263 08.7	57.5	45 56.6	52.3	316 31.5	19.0						
10	205	24.1	328 01.2	48.5	278 09.1	57.3	60 58.9	52.2	331 33.6	19.0						
11	220	26.6	343 00.4	-19 49.2	293 09.5	-23 57.1	76 01.2	+14 52.2	346 35.8	-17 19.1						
12	235	29.0	357 59.6	-19 50.0	308 09.9	-23 56.8	91 03.5	+14 52.1	1 38.0	-17 19.2						
13	250	31.5	12 58.8	50.8	323 10.3	56.6	106 05.8	52.1	16 40.1	19.3						
14	265	34.0	27 58.1	51.5	338 10.7	56.4	121 08.1	52.0	31 42.3	19.3						
15	280	36.4	42 57.3	52.3	353 11.1	56.1	136 10.4	52.0	46 44.4	19.4						
16	295	38.9	57 56.5	53.1	8 11.5	55.9	151 12.7	51.9	61 46.6	19.5						
17	310	41.3	72 55.7	-19 53.8	23 11.9	-23 55.6	166 14.9	+14 51.9	76 48.8	-17 19.5						
18	325	43.8	87 55.0	-19 54.6	38 12.3	-23 55.4	181 17.2	+14 51.9	91 50.9	-17 19.6						
19	340	46.3	102 54.2	55.4	53 12.7	55.2	196 19.5	51.8	106 53.1	19.7						
20	355	48.7	117 53.4	56.1	68 13.1	54.9	211 21.8	51.8	121 55.2	19.8						
21	10	51.2	132 52.6	56.9	83 13.5	54.7	226 24.1	51.7	136 57.4	19.8						
22	25	53.7	147 51.9	57.6	98 13.9	54.5	241 26.4	51.7	151 59.6	19.9						
23	40	56.1	162 51.1	58.4	113 14.3	54.2	256 28.7	51.6	167 01.7	20.0						
24	55	58.6	177 50.3	-19 59.1	128 14.7	-23 54.0	271 31.0	+14 51.6	182 03.9	-17 20.0						
Dif	—		-8	-8	+4	+2	+23	0	+22	-1						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 9			Edad: 24 ^d 1 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 SD: 14'9 PMG: 7 ^h 50 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	47.4	-18	54.2	245	56.3	+1	34.5	60 N	6 21	7 13	8 03	1 30	72	13 55	16		
1	198	47.3		54.8	260	30.3 ¹⁵⁰		25.0 ⁹⁵	58	16	7 05	7 51	31	70	56	17		
2	213	47.1		55.4	275	04.3 ¹⁵⁰		15.4 ⁹⁶	56	12	6 58	40	32	68	56	20		
3	228	47.0		56.0	289	38.3 ¹⁵⁰	+1	05.9 ⁹⁵	54	08	51	31	32	66	56	22		
4	243	46.9		56.7	304	12.3 ¹⁵⁰	+0	56.3 ⁹⁶	52	04	45	23	33	64	57	23		
5	258	46.8	-18	57.3	318	46.3 ¹⁵⁰	+0	46.8 ⁹⁵	50	6 00	6 40	7 16	1 33	63	13 57	24		
6	273	46.7	-18	57.9	333	20.2 ¹⁴⁹	+0	37.2 ⁹⁶	45	5 52	6 28	7 00	1 34	60	13 57	28		
7	288	46.5		58.5	347	54.2 ¹⁵⁰		27.6 ⁹⁶	40	45	18	6 47	35	57	58	30		
8	303	46.4		59.1	2	28.1 ¹⁴⁹		18.0 ⁹⁶	35	39	09	36	36	55	58	33		
9	318	46.3	-18	59.7	17	02.0 ¹⁴⁹	+0	08.4 ⁹⁶	30	32	6 01	27	36	53	59	34		
10	333	46.2	-19	00.3	31	35.9 ¹⁴⁹	-0	01.2 ⁹⁶	20	20	5 47	6 10	38	49	13 59	38		
11	348	46.0	-19	00.9	46	09.7 ¹⁴⁸	-0	10.8 ⁹⁶	10 N	5 07	5 33	5 55	1 39	46	14 00	41		
12	3	45.9	-19	01.5	60	43.6 ¹⁴⁹	-0	20.4 ⁹⁶	0	4 54	5 20	5 41	1 40	43	14 00	44		
13	18	45.8		02.1	75	17.4 ¹⁴⁸		30.0 ⁹⁶	10 S	39	5 05	5 27	40	41	01	46		
14	33	45.7		02.8	89	51.2 ¹⁴⁸		39.6 ⁹⁶	20	4 21	4 49	5 12	41	38	01	50		
15	48	45.5		03.4	104	25.0 ¹⁴⁸		49.3 ⁹⁷	30	3 57	29	4 55	43	34	02	53		
16	63	45.4		04.0	118	58.8 ¹⁴⁸	-0	58.9 ⁹⁶	35	43	17	45	43	32	02	55		
17	78	45.3	-19	04.6	133	32.5 ¹⁴⁷	-1	08.5 ⁹⁶	40	3 25	4 02	4 33	1 44	30	14 02	58		
18	93	45.2	-19	05.2	148	06.2 ¹⁴⁷	-1	18.2 ⁹⁷	45	3 02	3 45	4 19	1 45	27	14 03	60		
19	108	45.0		05.8	162	39.9 ¹⁴⁷		27.8 ⁹⁶	50	2 30	23	4 02	46	24	03	64		
20	123	44.9		06.4	177	13.6 ¹⁴⁷		37.5 ⁹⁷	52	2 14	12	3 54	47	22	03	66		
21	138	44.8		07.0	191	47.2 ¹⁴⁶		47.1 ⁹⁷	54	1 54	3 00	45	47	21	04	66		
22	153	44.7		07.6	206	20.8 ¹⁴⁶	-1	56.8 ⁹⁶	56	1 28	2 45	35	48	19	04	68		
23	168	44.5		08.2	220	54.4 ¹⁴⁶	-2	06.4 ⁹⁶	58	0 47	28	24	48	18	04	71		
24	183	44.4	-19	08.8	235	28.0 ¹⁴⁶	-2	16.0 ⁹⁶	60 S	** *	2 07	3 10	1 49	16	14 05	72		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 12 ^m 8		Mag: -3.9 PMG: 12 ^h 09 ^m			Mag: +1.0 PMG: 15 ^h 27 ^m			Mag: -2.2 PMG: 5 ^h 53 ^m			Mag: +0.5 PMG: 11 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	55	58.6	177	50.3	-19	59.1	128	14.7	-23	54.0	271	31.0	+14	51.6	182	03.9	-17	20.0
1	71	01.1	192	49.5	-19	59.9	143	15.1		53.7	286	33.3		51.5	197	06.1		20.1
2	86	03.5	207	48.8	-20	00.6	158	15.5		53.5	301	35.6		51.5	212	08.2		20.2
3	101	06.0	222	48.0		01.4	173	15.9		53.2	316	37.9		51.4	227	10.4		20.3
4	116	08.5	237	47.2		02.2	188	16.3		53.0	331	40.2		51.4	242	12.5		20.3
5	131	10.9	252	46.4	-20	02.9	203	16.7	-23	52.8	346	42.5	+14	51.3	257	14.7	-17	20.4
6	146	13.4	267	45.6	-20	03.7	218	17.1	-23	52.5	1	44.8	+14	51.3	272	16.9	-17	20.5
7	161	15.8	282	44.9		04.4	233	17.5		52.3	16	47.1		51.2	287	19.0		20.5
8	176	18.3	297	44.1		05.2	248	17.9		52.0	31	49.3		51.2	302	21.2		20.6
9	191	20.8	312	43.3		05.9	263	18.3		51.8	46	51.6		51.2	317	23.3		20.7
10	206	23.2	327	42.5		06.6	278	18.7		51.5	61	53.9		51.1	332	25.5		20.8
11	221	25.7	342	41.7	-20	07.4	293	19.1	-23	51.3	76	56.2	+14	51.1	347	27.7	-17	20.8
12	236	28.2	357	40.9	-20	08.1	308	19.5	-23	51.0	91	58.5	+14	51.0	2	29.8	-17	20.9
13	251	30.6	12	40.2		08.9	323	19.9		50.8	107	00.8		51.0	17	32.0		21.0
14	266	33.1	27	39.4		09.6	338	20.3		50.5	122	03.1		50.9	32	34.1		21.0
15	281	35.6	42	38.6		10.4	353	20.7		50.3	137	05.4		50.9	47	36.3		21.1
16	296	38.0	57	37.8		11.1	8	21.1		50.0	152	07.7		50.8	62	38.5		21.2
17	311	40.5	72	37.0	-20	11.8	23	21.5	-23	49.8	167	10.0	+14	50.8	77	40.6	-17	21.3
18	326	42.9	87	36.2	-20	12.6	38	21.9	-23	49.5	182	12.3	+14	50.7	92	42.8	-17	21.3
19	341	45.4	102	35.4		13.3	53	22.3		49.3	197	14.6		50.7	107	45.0		21.4
20	356	47.9	117	34.7		14.0	68	22.7		49.0	212	16.9		50.7	122	47.1		21.5
21	11	50.3	132	33.9		14.8	83	23.1		48.8	227	19.2		50.6	137	49.3		21.5
22	26	52.8	147	33.1		15.5	98	23.6		48.5	242	21.5		50.6	152	51.4		21.6
23	41	55.3	162	32.3		16.3	113	24.0		48.3	257	23.8		50.5	167	53.6		21.7
24	56	57.7	177	31.5	-20	17.0	128	24.4	-23	48.0	272	26.1	+14	50.5	182	55.8	-17	21.8
Dif	—		-8		-7		+4		+2		+23		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 45 ^m 1			Edad: 25 ^d 1 PHE { SD: 15/0 PMG: 8 ^h 33 ^m R°: 45 ^m 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4										
	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	183	44.4	-19	08.8	235	28.0	-2 16.0	60 N	15 25	16 15	17 07	2 42 74	14 11 17	
1	198	44.3		09.4	250	01.5 ¹⁴⁵	25.7 ⁹⁷	58	37	23	12	41 71	13 20	
2	213	44.1		10.0	264	35.0 ¹⁴⁵	35.3 ⁹⁶	56	47	30	16	40 69	16 21	
3	228	44.0		10.6	279	08.5 ¹⁴⁵	45.0 ⁹⁷	54	15 57	37	20	38 68	18 23	
4	243	43.9		11.2	293	41.9 ¹⁴⁴	-2 54.6 ⁹⁶	52	16 05	43	24	37 66	20 24	
5	258	43.8	-19	11.8	308	15.3 ¹⁴⁴	-3 04.2 ⁹⁶	50	16 12	16 48	17 28	2 36 65	14 21 26	
6	273	43.6	-19	12.4	322	48.7 ¹⁴⁴	-3 13.8 ⁹⁶	45	16 28	17 00	17 36	2 34 61	14 25 29	
7	288	43.5		13.0	337	22.0 ¹⁴³	23.4 ⁹⁶	40	42	11	44	32 59	28 32	
8	303	43.4		13.6	351	55.3 ¹⁴³	33.1 ⁹⁷	35	16 53	20	51	31 56	31 34	
9	318	43.2		14.2	6	28.6 ¹⁴³	42.7 ⁹⁶	30	17 03	28	17 57	29 54	33 36	
10	333	43.1		14.8	21	01.8 ¹⁴²	-3 52.2 ⁹⁵	20	20	43	18 10	27 50	37 40	
11	348	43.0	-19	15.4	35	35.0 ¹⁴²	-4 01.8 ⁹⁶	10 N	17 35	17 57	18 22	2 25 47	14 41 42	
12	3	42.8	-19	15.9	50	08.2 ¹⁴²	-4 11.4 ⁹⁶	0	17 49	18 11	18 36	2 23 44	14 44 45	
13	18	42.7		16.5	64	41.3 ¹⁴¹	21.0 ⁹⁶	10 S	18 03	25	18 52	21 41	47 49	
14	33	42.6		17.1	79	14.4 ¹⁴¹	30.5 ⁹⁵	20	18	18 42	19 10	19 38	51 51	
15	48	42.4		17.7	93	47.4 ¹⁴⁰	40.1 ⁹⁶	30	36	19 02	34	17 35	55 55	
16	63	42.3		18.3	108	20.4 ¹⁴⁰	49.6 ⁹⁵	35	47	15	19 49	15 33	14 57 57	
17	78	42.2	-19	18.9	122	53.4 ¹⁴⁰	-4 59.1 ⁹⁵	40	18 59	19 29	20 08	2 14 31	15 00 59	
18	93	42.0	-19	19.5	137	26.3 ¹³⁹	-5 08.6 ⁹⁵	45	19 13	19 47	20 31	2 12 28	15 03 62	
19	108	41.9		20.1	151	59.2 ¹³⁹	18.1 ⁹⁵	50	30	20 10	21 04	10 25	07 65	
20	123	41.8		20.7	166	32.0 ¹³⁸	27.6 ⁹⁵	52	38	21	21	09 24	09 66	
21	138	41.6		21.3	181	04.8 ¹³⁸	37.1 ⁹⁵	54	48	34	21 42	08 22	10 69	
22	153	41.5		21.8	195	37.6 ¹³⁸	46.5 ⁹⁴	56	19 58	20 49	22 10	07 21	12 70	
23	168	41.4		22.4	210	10.3 ¹³⁷	-5 56.0 ⁹⁵	58	20 10	21 07	22 58	06 19	15 72	
24	183	41.2	-19	23.0	224	43.0 ¹³⁷	-6 05.4 ⁹⁴	60 S	20 24	21 30	** **	2 05 16	15 17 75	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 08 ^m 8		Mag: -3.9 PMG: 12 ^h 11 ^m		Mag: +1.0 PMG: 15 ^h 26 ^m		Mag: -2.2 PMG: 5 ^h 49 ^m		Mag: +0.5 PMG: 11 ^h 47 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	56	57.7	177	31.5	128	24.4	272	26.1	182	55.8				
1	72	00.2	192	30.7	143	24.8	287	28.4	197	57.9				
2	87	02.7	207	29.9	158	25.2	302	30.7	213	00.1				
3	102	05.1	222	29.1	173	25.6	317	33.0	228	02.2				
4	117	07.6	237	28.3	188	26.0	332	35.3	243	04.4				
5	132	10.1	252	27.5	203	26.4	347	37.6	258	06.6				
6	147	12.5	267	26.7	218	26.8	2	39.9	273	08.7				
7	162	15.0	282	25.9	233	27.2	17	42.2	288	10.9				
8	177	17.4	297	25.2	248	27.6	32	44.5	303	13.0				
9	192	19.9	312	24.4	263	28.0	47	46.8	318	15.2				
10	207	22.4	327	23.6	278	28.4	62	49.1	333	17.4				
11	222	24.8	342	22.8	293	28.8	77	51.4	348	19.5				
12	237	27.3	357	22.0	308	29.2	92	53.7	3	21.7				
13	252	29.8	12	21.2	323	29.6	107	56.0	18	23.9				
14	267	32.2	27	20.4	338	30.0	122	58.4	33	26.0				
15	282	34.7	42	19.6	353	30.4	138	00.7	48	28.2				
16	297	37.2	57	18.8	8	30.8	153	03.0	63	30.3				
17	312	39.6	72	18.0	23	31.2	168	05.3	78	32.5				
18	327	42.1	87	17.2	38	31.6	183	07.6	93	34.7				
19	342	44.5	102	16.4	53	32.0	198	09.9	108	36.8				
20	357	47.0	117	15.6	68	32.4	213	12.2	123	39.0				
21	12	49.5	132	14.8	83	32.8	228	14.5	138	41.1				
22	27	51.9	147	14.0	98	33.2	243	16.8	153	43.3				
23	42	54.4	162	13.2	113	33.6	258	19.1	168	45.5				
24	57	56.9	177	12.4	128	34.0	273	21.4	183	47.6				
Dif	—		-8	-7	+4	+3	+23	0	+22	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 45 ^m 4			Edad: 26 ^d 1 PHE { 4 ^h : 55'6 12 ^h : 55'7 20 ^h : 56'0 SD: 15'1 PMG: 9 ^h 18 ^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
0	183	41.2	-19	23.0	224	43.0	-6	05.4	60 N	6 25	7 17	8 07	3 56	76	14 28	21		
1	198	41.1		23.6	239	15.6 ¹³⁶		14.8 ⁹⁴	58	20	09	7 55	52	73	33	22		
2	213	40.9		24.2	253	48.2 ¹³⁶		24.1 ⁹³	56	15	7 01	44	49	71	37	25		
3	228	40.8		24.8	268	20.7 ¹³⁵		33.5 ⁹⁴	54	11	6 55	35	46	69	41	26		
4	243	40.7		25.4	282	53.2 ¹³⁵		42.8 ⁹³	52	07	48	26	43	67	44	28		
5	258	40.5	-19	25.9	297	25.6 ¹³⁴	-6	52.1 ⁹³	50	6 03	6 43	7 19	3 41	65	14 47	30		
6	273	40.4	-19	26.5	311	58.0 ¹³⁴	-7	01.4 ⁹³	45	5 55	6 31	7 03	3 35	63	14 54	32		
7	288	40.3		27.1	326	30.3 ¹³³		10.7 ⁹³	40	47	20	6 49	31	60	15 00	35		
8	303	40.1		27.7	341	02.6 ¹³³		20.0 ⁹³	35	40	11	38	27	57	05	37		
9	318	40.0		28.3	355	34.8 ¹³²		29.2 ⁹²	30	34	6 03	28	23	56	09	39		
10	333	39.8		28.8	10	07.0 ¹³²		38.4 ⁹²	20	21	5 48	6 11	17	53	17	42		
11	348	39.7	-19	29.4	24	39.2 ¹³²	-7	47.5 ⁹¹	10 N	5 08	5 34	5 56	3 12	49	15 23	45		
12	3	39.6	-19	30.0	39	11.3 ¹³¹	-7	56.7 ⁹²	0	4 54	5 20	5 42	3 07	47	15 29	48		
13	18	39.4		30.6	53	43.3 ¹³⁰	-8	05.8 ⁹¹	10 S	39	5 05	27	3 02	44	36	50		
14	33	39.3		31.2	68	15.3 ¹³⁰		14.9 ⁹¹	20	4 20	4 48	5 12	2 57	41	42	53		
15	48	39.1		31.7	82	47.2 ¹²⁹		24.0 ⁹¹	30	3 56	28	4 54	52	37	50	56		
16	63	39.0		32.3	97	19.1 ¹²⁹		33.0 ⁹⁰	35	41	15	44	48	36	54	59		
17	78	38.8	-19	32.9	111	50.9 ¹²⁸	-8	42.0 ⁹⁰	40	3 22	4 01	4 32	2 45	33	15 59	61		
18	93	38.7	-19	33.5	126	22.6 ¹²⁷	-8	51.0 ⁹⁰	45	2 59	3 43	4 17	2 40	31	16 05	63		
19	108	38.6		34.0	140	54.3 ¹²⁷	-8	59.9 ⁸⁹	50	26	20	4 00	35	28	12	66		
20	123	38.4		34.6	155	26.0 ¹²⁷	-9	08.8 ⁸⁹	52	2 09	3 09	3 52	33	26	15	68		
21	138	38.3		35.2	169	57.6 ¹²⁶		17.7 ⁸⁹	54	1 48	2 56	42	30	25	19	69		
22	153	38.1		35.8	184	29.1 ¹²⁵		26.5 ⁸⁸	56	1 20	41	32	28	23	22	72		
23	168	38.0		36.3	199	00.6 ¹²⁵		35.3 ⁸⁸	58	0 32	23	20	25	21	27	73		
24	183	37.8	-19	36.9	213	32.0 ¹²⁴	-9	44.0 ⁸⁷	60 S	** **	2 00	3 06	2 21	19	16 32	75		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 20 ^h 04 ^m 9		Mag: -3.9 PMG: 12 ^h 12 ^m				Mag: +1.0 PMG: 15 ^h 25 ^m				Mag: -2.2 PMG: 5 ^h 46 ^m				Mag: +0.5 PMG: 11 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	56.9	177	12.4	-20	34.3	128	34.0	-23	41.9	273	21.4	+14	49.4	183	47.6	-17	23.5
1	72	59.3	192	11.6		35.0	143	34.4		41.6	288	23.7		49.4	198	49.8		23.5
2	88	01.8	207	10.8		35.7	158	34.8		41.3	303	26.0		49.4	213	51.9		23.6
3	103	04.3	222	10.0		36.4	173	35.2		41.1	318	28.3		49.3	228	54.1		23.7
4	118	06.7	237	09.2		37.1	188	35.6		40.8	333	30.6		49.3	243	56.3		23.7
5	133	09.2	252	08.4	-20	37.8	203	36.0	-23	40.5	348	33.0	+14	49.2	258	58.4	-17	23.8
6	148	11.7	267	07.5	-20	38.5	218	36.4	-23	40.3	3	35.3	+14	49.2	274	00.6	-17	23.9
7	163	14.1	282	06.7		39.2	233	36.8		40.0	18	37.6		49.2	289	02.7		24.0
8	178	16.6	297	05.9		39.9	248	37.2		39.7	33	39.9		49.1	304	04.9		24.0
9	193	19.0	312	05.1		40.6	263	37.6		39.5	48	42.2		49.1	319	07.1		24.1
10	208	21.5	327	04.3		41.3	278	38.0		39.2	63	44.5		49.0	334	09.2		24.2
11	223	24.0	342	03.5	-20	42.0	293	38.4	-23	38.9	78	46.8	+14	49.0	349	11.4	-17	24.2
12	238	26.4	357	02.7	-20	42.7	308	38.8	-23	38.7	93	49.1	+14	49.0	4	13.6	-17	24.3
13	253	28.9	12	01.9		43.4	323	39.2		38.4	108	51.4		48.9	19	15.7		24.4
14	268	31.4	27	01.1		44.1	338	39.6		38.1	123	53.8		48.9	34	17.9		24.4
15	283	33.8	42	00.3		44.8	353	40.0		37.9	138	56.1		48.8	49	20.0		24.5
16	298	36.3	56	59.5		45.5	8	40.4		37.6	153	58.4		48.8	64	22.2		24.6
17	313	38.8	71	58.7	-20	46.1	23	40.8	-23	37.3	169	00.7	+14	48.7	79	24.4	-17	24.7
18	328	41.2	86	57.8	-20	46.8	38	41.2	-23	37.0	184	03.0	+14	48.7	94	26.5	-17	24.7
19	343	43.7	101	57.0		47.5	53	41.6		36.8	199	05.3		48.7	109	28.7		24.8
20	358	46.2	116	56.2		48.2	68	42.0		36.5	214	07.6		48.6	124	30.8		24.9
21	13	48.6	131	55.4		48.9	83	42.4		36.2	229	09.9		48.6	139	33.0		24.9
22	28	51.1	146	54.6		49.6	98	42.8		36.0	244	12.3		48.5	154	35.2		25.0
23	43	53.5	161	53.8		50.3	113	43.2		35.7	259	14.6		48.5	169	37.3		25.1
24	58	56.0	176	53.0	-20	51.0	128	43.6	-23	35.4	274	16.9	+14	48.5	184	39.5	-17	25.2
Dif	—		-8		-7		+4		+3		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 45 ^m 6			Edad: 27 ^d 1 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 PMG: 10 ^h 05 ^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	183	37.8	-19 36.9	213	32.0	-9 44.0	88	60 N	15 21	16 11	17 04	5 12 76	14 49 25					
1	198	37.7	37.5	228	03.4 ¹²⁴	-9 52.8	88	58	33	20	09	05 74	14 55 28					
2	213	37.5	38.0	242	34.7 ¹²³	-10 01.4	86	56	44	28	14	5 00 72	15 02 29					
3	228	37.4	38.6	257	05.9 ¹²²	10.1	87	54	15 54	34	18	4 55 70	07 31					
4	243	37.2	39.2	271	37.1 ¹²²	18.7	86	52	16 03	41	22	50 69	12 33					
5	258	37.1	-19 39.8	286	08.2 ¹²¹	-10 27.3	86	50	16 10	16 46	17 26	4 46 67	15 17 33					
6	273	37.0	-19 40.3	300	39.3 ¹²¹	-10 35.8	85	45	16 27	16 59	17 35	4 38 64	15 26 37					
7	288	36.8	40.9	315	10.3 ¹²⁰	44.2	84	40	40	17 10	43	31 61	35 39					
8	303	36.7	41.5	329	41.2 ¹¹⁹	-10 52.7	85	35	16 52	19	50	24 60	42 41					
9	318	36.5	42.0	344	12.1 ¹¹⁹	-11 01.1	84	30	17 02	27	17 57	19 57	48 42					
10	333	36.4	42.6	358	42.9 ¹¹⁸	09.4	83	20	19	43	18 10	10 54	15 59 45					
11	348	36.2	-19 43.2	13	13.6 ¹¹⁷	-11 17.7	83	10 N	17 35	17 57	18 23	4 01 52	16 08 48					
12	3	36.1	-19 43.7	27	44.3 ¹¹⁷	-11 26.0	83	0	17 49	18 11	18 37	3 54 49	16 17 50					
13	18	35.9	44.3	42	14.9 ¹¹⁶	34.1	81	10 S	18 04	26	18 53	46 47	26 53					
14	33	35.8	44.8	56	45.5 ¹¹⁶	42.3	82	20	20	18 43	19 12	38 44	35 56					
15	48	35.6	45.4	71	16.0 ¹¹⁵	50.4	81	30	38	19 04	36	29 41	46 58					
16	63	35.5	46.0	85	46.4 ¹¹⁴	-11 58.4	80	35	18 49	17	19 52	24 39	16 53 59					
17	78	35.3	-19 46.5	100	16.8 ¹¹⁴	-12 06.4	80	40	19 01	19 32	20 10	3 18 37	17 00 61					
18	93	35.2	-19 47.1	114	47.1 ¹¹³	-12 14.4	80	45	19 15	19 50	20 35	3 11 35	17 08 64					
19	108	35.0	47.6	129	17.4 ¹¹³	22.3	79	50	33	20 14	21 08	3 03 32	18 67					
20	123	34.8	48.2	143	47.5 ¹¹¹	30.1	78	52	42	25	26	2 59 30	23 68					
21	138	34.7	48.8	158	17.6 ¹¹¹	37.9	78	54	19 52	39	21 49	55 29	28 70					
22	153	34.5	49.3	172	47.7 ¹¹¹	45.6	77	56	20 02	20 54	22 19	51 27	34 71					
23	168	34.4	49.9	187	17.7 ¹¹⁰	-12 53.3	77	58	15	21 13	23 21	46 25	40 74					
24	183	34.2	-19 50.4	201	47.6 ¹⁰⁹	-13 00.9	76	60 S	20 29	21 37	** **	2 40 23	17 47 76					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 20 ^h 01 ^m 0		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: +1.0 PMG: 15 ^h 25 ^m		Mag: -2.2 PMG: 5 ^h 42 ^m		Mag: +0.5 PMG: 11 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	58	56.0	176	53.0	-20	51.0	128	43.6	-23	35.4	274	16.9	+14	48.5	184	39.5	-17	25.2
1	73	58.5	191	52.1		51.6	143	44.0		35.1	289	19.2		48.4	199	41.6		25.2
2	89	00.9	206	51.3		52.3	158	44.4		34.9	304	21.5		48.4	214	43.8		25.3
3	104	03.4	221	50.5		53.0	173	44.8		34.6	319	23.8		48.4	229	46.0		25.4
4	119	05.9	236	49.7		53.7	188	45.2		34.3	334	26.1		48.3	244	48.1		25.4
5	134	08.3	251	48.9	-20	54.4	203	45.6	-23	34.0	349	28.5	+14	48.3	259	50.3	-17	25.5
6	149	10.8	266	48.1	-20	55.0	218	46.0	-23	33.7	4	30.8	+14	48.2	274	52.4	-17	25.6
7	164	13.3	281	47.2		55.7	233	46.4		33.5	19	33.1		48.2	289	54.6		25.6
8	179	15.7	296	46.4		56.4	248	46.9		33.2	34	35.4		48.2	304	56.8		25.7
9	194	18.2	311	45.6		57.1	263	47.3		32.9	49	37.7		48.1	319	58.9		25.8
10	209	20.6	326	44.8		57.7	278	47.7		32.6	64	40.1		48.1	335	01.1		25.9
11	224	23.1	341	44.0	-20	58.4	293	48.1	-23	32.4	79	42.4	+14	48.0	350	03.2	-17	25.9
12	239	25.6	356	43.1	-20	59.1	308	48.5	-23	32.1	94	44.7	+14	48.0	5	05.4	-17	26.0
13	254	28.0	11	42.3	-20	59.7	323	48.9		31.8	109	47.0		48.0	20	07.6		26.1
14	269	30.5	26	41.5	-21	00.4	338	49.3		31.5	124	49.3		47.9	35	09.7		26.1
15	284	33.0	41	40.7		01.1	353	49.7		31.2	139	51.6		47.9	50	11.9		26.2
16	299	35.4	56	39.9		01.8	8	50.1		31.0	154	54.0		47.9	65	14.1		26.3
17	314	37.9	71	39.0	-21	02.4	23	50.5	-23	30.7	169	56.3	+14	47.8	80	16.2	-17	26.3
18	329	40.4	86	38.2	-21	03.1	38	50.9	-23	30.4	184	58.6	+14	47.8	95	18.4	-17	26.4
19	344	42.8	101	37.4		03.7	53	51.3		30.1	200	00.9		47.7	110	20.5		26.5
20	359	45.3	116	36.6		04.4	68	51.7		29.8	215	03.2		47.7	125	22.7		26.6
21	14	47.8	131	35.7		05.1	83	52.1		29.5	230	05.6		47.7	140	24.9		26.6
22	29	50.2	146	34.9		05.7	98	52.5		29.3	245	07.9		47.6	155	27.0		26.7
23	44	52.7	161	34.1		06.4	113	52.9		29.0	260	10.2		47.6	170	29.2		26.8
24	59	55.1	176	33.3	-21	07.1	128	53.3	-23	28.7	275	12.5	+14	47.6	185	31.3	-17	26.8
Dif	—		-8		-7		+4		+3		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 11 ^h 45 ^m 8			Edad: 28 ^d 1 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'2 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	183	34.2	-19	50.4	201	47.6	-13	00.9	60 N	6 28	7 21	8 12	6 28	75	15 14	32								
1	198	34.1		51.0	216	17.4 ¹⁰⁸		08.4 ⁷⁵	58	23	13	7 59	19	73	23	34								
2	213	33.9		51.5	230	47.2 ¹⁰⁸		15.9 ⁷⁵	56	18	7 05	48	12	71	31	36								
3	228	33.8		52.1	245	16.9 ¹⁰⁷		23.3 ⁷⁴	54	14	6 58	39	6 05	69	38	38								
4	243	33.6		52.7	259	46.6 ¹⁰⁷		30.7 ⁷⁴	52	10	52	30	5 59	68	45	39								
5	258	33.5	-19	53.2	274	16.1 ¹⁰⁵	-13	38.0 ⁷³	50	6 06	6 46	7 22	5 53	67	15 50	41								
6	273	33.3	-19	53.8	288	45.7 ¹⁰⁶	-13	45.2 ⁷²	45	5 57	6 33	7 05	5 42	64	16 03	43								
7	288	33.1		54.3	303	15.1 ¹⁰⁴		52.4 ⁷¹	40	49	22	6 52	32	62	14	44								
8	303	33.0		54.9	317	44.5 ¹⁰⁴	-13	59.5 ⁷⁰	35	42	13	40	24	60	23	45								
9	318	32.8		55.4	332	13.8 ¹⁰³	-14	06.5 ⁷⁰	30	35	6 04	30	16	59	30	48								
10	333	32.7		56.0	346	43.1 ¹⁰³		13.5 ⁷⁰	20	22	5 49	6 12	5 04	56	44	50								
11	348	32.5	-19	56.5	1	12.2 ¹⁰¹	-14	20.3 ⁶⁸	10 N	5 09	5 35	5 57	4 53	54	16 56	51								
12	3	32.4	-19	57.1	15	41.4 ¹⁰²	-14	27.2 ⁶⁹	0	4 55	5 20	5 42	4 43	52	17 07	53								
13	18	32.2		57.6	30	10.4 ¹⁰⁰		33.9 ⁶⁷	10 S	39	5 05	5 28	33	50	19	54								
14	33	32.0		58.2	44	39.4 ¹⁰⁰		40.6 ⁶⁷	20	4 20	4 48	5 12	22	48	31	56								
15	48	31.9		58.7	59	08.3 ⁹⁹		47.2 ⁶⁶	30	3 55	27	4 53	10	45	44	59								
16	63	31.7		59.3	73	37.2 ⁹⁹	-14	53.7 ⁶⁵	35	40	4 14	43	4 03	43	17 52	61								
17	78	31.6	-19	59.8	88	05.9 ⁹⁷	-15	00.2 ⁶⁵	40	3 21	3 59	4 30	3 55	42	18 01	62								
18	93	31.4	-20	00.3	102	34.7 ⁹⁸	-15	06.6 ⁶⁴	45	2 56	3 41	4 16	3 46	39	18 12	64								
19	108	31.2		00.9	117	03.3 ⁹⁶		12.9 ⁶³	50	23	17	3 58	35	37	25	66								
20	123	31.1		01.4	131	31.9 ⁹⁶		19.1 ⁶²	52	2 05	3 06	49	29	36	31	67								
21	138	30.9		02.0	146	00.4 ⁹⁵		25.2 ⁶¹	54	1 42	2 52	39	24	34	38	68								
22	153	30.8		02.5	160	28.9 ⁹⁵		31.3 ⁶¹	56	1 12	37	29	18	32	45	70								
23	168	30.6		03.1	174	57.3 ⁹⁴		37.3 ⁶⁰	58	0 10	2 18	16	11	30	18 54	71								
24	183	30.4	-20	03.6	189	25.6 ⁹³	-15	43.2 ⁵⁹	60 S	** **	1 54	3 02	3 03	28	19 03	73								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 19 ^h 57 ^m 0			Mag: -3.9 PMG: 12 ^h 14 ^m			Mag: +1.0 PMG: 15 ^h 24 ^m			Mag: -2.2 PMG: 5 ^h 38 ^m			Mag: +0.5 PMG: 11 ^h 36 ^m											
	hG ♂		Dec	hG ♀		Dec	hG ♂		Dec	hG ♀		Dec	hG ♀		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°							
0	59	55.1	176	33.3	-21	07.1	128	53.3	-23	28.7	275	12.5	+14	47.6	185	31.3	-17	26.8						
1	74	57.6	191	32.4		07.7	143	53.7		28.4	290	14.9		47.5	200	33.5		26.9						
2	90	00.1	206	31.6		08.4	158	54.1		28.1	305	17.2		47.5	215	35.7		27.0						
3	105	02.5	221	30.8		09.0	173	54.5		27.8	320	19.5		47.4	230	37.8		27.1						
4	120	05.0	236	29.9		09.7	188	54.9		27.5	335	21.8		47.4	245	40.0		27.1						
5	135	07.5	251	29.1	-21	10.3	203	55.3	-23	27.3	350	24.1	+14	47.4	260	42.1	-17	27.2						
6	150	09.9	266	28.3	-21	11.0	218	55.7	-23	27.0	5	26.5	+14	47.3	275	44.3	-17	27.3						
7	165	12.4	281	27.5		11.6	233	56.1		26.7	20	28.8		47.3	290	46.5		27.3						
8	180	14.9	296	26.6		12.3	248	56.5		26.4	35	31.1		47.3	305	48.6		27.4						
9	195	17.3	311	25.8		12.9	263	56.9		26.1	50	33.4		47.2	320	50.8		27.5						
10	210	19.8	326	25.0		13.6	278	57.3		25.8	65	35.8		47.2	335	52.9		27.5						
11	225	22.3	341	24.1	-21	14.2	293	57.7	-23	25.5	80	38.1	+14	47.1	350	55.1	-17	27.6						
12	240	24.7	356	23.3	-21	14.9	308	58.2	-23	25.2	95	40.4	+14	47.1	5	57.3	-17	27.7						
13	255	27.2	11	22.5		15.5	323	58.6		24.9	110	42.8		47.1	20	59.4		27.8						
14	270	29.6	26	21.6		16.2	338	59.0		24.7	125	45.1		47.0	36	01.6		27.8						
15	285	32.1	41	20.8		16.8	353	59.4		24.4	140	47.4		47.0	51	03.7		27.9						
16	300	34.6	56	20.0		17.4	8	59.8		24.1	155	49.7		47.0	66	05.9		28.0						
17	315	37.0	71	19.1	-21	18.1	24	00.2	-23	23.8	170	52.1	+14	46.9	81	08.1	-17	28.0						
18	330	39.5	86	18.3	-21	18.7	39	00.6	-23	23.5	185	54.4	+14	46.9	96	10.2	-17	28.1						
19	345	42.0	101	17.5		19.4	54	01.0		23.2	200	56.7		46.9	111	12.4		28.2						
20	0	44.4	116	16.6		20.0	69	01.4		22.9	215	59.0		46.8	126	14.6		28.2						
21	15	46.9	131	15.8		20.6	84	01.8		22.6	231	01.4		46.8	141	16.7		28.3						
22	30	49.4	146	14.9		21.3	99	02.2		22.3	246	03.7		46.8	156	18.9		28.4						
23	45	51.8	161	14.1		21.9	114	02.6		22.0	261	06.0		46.7	171	21.0		28.5						
24	60	54.3	176	13.3	-21	22.5	129	03.0	-23	21.7	276	08.4	+14	46.7	186	23.2	-17	28.5						
Dif	—			-8			+4			+3			+23			0			+22			-		

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 29 ^d 1 PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'8 R°: 55 ^m											
	PMG: 11 ^h 46 ^m 1			SD: 15'6 PMG: 11 ^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	30.4	-20 03.6	189	25.6	-15 43.2	58	60 N	15 17	16 08	17 01	7 43	70	15 46	43
1	198	30.3	04.1	203	53.9	49.0	93	58	30	17	07	32	69	15 57	45
2	213	30.1	04.7	218	22.1	-15 54.7	92	56	41	25	12	23	67	16 07	45
3	228	29.9	05.2	232	50.2	-16 00.4	91	54	15 51	32	16	14	67	16	44
4	243	29.8	05.8	247	18.3	06.0	91	52	16 00	39	21	07	65	24	47
5	258	29.6	-20 06.3	261	46.3	-16 11.4	90	50	16 08	16 45	17 25	7 00	65	16 31	47
6	273	29.5	-20 06.8	276	14.2	-16 16.8	89	45	16 25	16 58	17 34	6 46	62	16 46	49
7	288	29.3	07.4	290	42.1	22.1	89	40	39	17 09	42	34	61	16 58	50
8	303	29.1	07.9	305	10.0	27.3	89	35	16 51	18	49	24	60	17 08	52
9	318	29.0	08.5	319	37.7	32.5	87	30	17 01	27	17 56	15	59	18	52
10	333	28.8	09.0	334	05.4	37.5	87	20	19	43	18 10	6 00	57	34	53
11	348	28.6	-20 09.5	348	33.1	-16 42.4	87	10 N	17 35	17 57	18 23	5 47	56	17 47	55
12	3	28.5	-20 10.1	3	00.6	-16 47.3	85	0	17 50	18 12	18 37	5 35	54	18 00	56
13	18	28.3	10.6	17	28.2	52.0	86	10 S	18 05	27	18 54	23	53	13	57
14	33	28.1	11.1	31	55.6	-16 56.7	84	20	21	18 45	19 13	5 10	51	27	58
15	48	28.0	11.7	46	23.0	-17 01.3	84	30	40	19 06	38	4 55	49	43	59
16	63	27.8	12.2	60	50.4	05.7	84	35	18 50	19	19 54	46	49	18 53	59
17	78	27.6	-20 12.7	75	17.7	-17 10.1	83	40	19 03	19 34	20 13	4 37	47	19 03	60
18	93	27.5	-20 13.2	89	44.9	-17 14.4	82	45	19 18	19 53	20 38	4 25	46	19 16	61
19	108	27.3	13.8	104	12.1	18.5	82	50	37	20 17	21 13	12	43	31	62
20	123	27.1	14.3	118	39.2	22.6	81	52	45	29	32	4 05	43	38	63
21	138	26.9	14.8	133	06.3	26.6	81	54	19 55	43	21 55	3 58	42	46	63
22	153	26.8	15.4	147	33.3	30.5	80	56	20 06	20 59	22 29	50	41	19 55	64
23	168	26.6	15.9	162	00.3	34.2	80	58	19	21 19	** **	41	40	20 05	65
24	183	26.4	-20 16.4	176	27.2	-17 37.9	79	60 S	20 34	21 44	** **	3 31	38	20 16	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 53 ^m 1		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +1.0 PMG: 15 ^h 23 ^m		Mag: -2.2 PMG: 5 ^h 35 ^m		Mag: +0.5 PMG: 11 ^h 33 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	60	54.3	176	13.3	-21 22.5	129	03.0	-23 21.7	276	08.4	+14 46.7	186	23.2	-17 28.5
1	75	56.7	191	12.4	23.2	144	03.4	21.4	291	10.7	46.7	201	25.4	28.6
2	90	59.2	206	11.6	23.8	159	03.8	21.1	306	13.0	46.6	216	27.5	28.7
3	106	01.7	221	10.8	24.4	174	04.2	20.8	321	15.4	46.6	231	29.7	28.7
4	121	04.1	236	09.9	25.1	189	04.6	20.5	336	17.7	46.6	246	31.8	28.8
5	136	06.6	251	09.1	-21 25.7	204	05.0	-23 20.2	351	20.0	+14 46.5	261	34.0	-17 28.9
6	151	09.1	266	08.2	-21 26.3	219	05.4	-23 19.9	6	22.3	+14 46.5	276	36.2	-17 28.9
7	166	11.5	281	07.4	26.9	234	05.8	19.6	21	24.7	46.5	291	38.3	29.0
8	181	14.0	296	06.5	27.6	249	06.2	19.3	36	27.0	46.4	306	40.5	29.1
9	196	16.5	311	05.7	28.2	264	06.7	19.0	51	29.3	46.4	321	42.6	29.1
10	211	18.9	326	04.9	28.8	279	07.1	18.7	66	31.7	46.4	336	44.8	29.2
11	226	21.4	341	04.0	-21 29.4	294	07.5	-23 18.4	81	34.0	+14 46.3	351	47.0	-17 29.3
12	241	23.9	356	03.2	-21 30.1	309	07.9	-23 18.1	96	36.3	+14 46.3	6	49.1	-17 29.4
13	256	26.3	11	02.3	30.7	324	08.3	17.8	111	38.7	46.3	21	51.3	29.4
14	271	28.8	26	01.5	31.3	339	08.7	17.5	126	41.0	46.2	36	53.4	29.5
15	286	31.2	41	00.6	31.9	354	09.1	17.2	141	43.3	46.2	51	55.6	29.6
16	301	33.7	55	59.8	32.5	9	09.5	16.9	156	45.7	46.2	66	57.8	29.6
17	316	36.2	70	58.9	-21 33.1	24	09.9	-23 16.6	171	48.0	+14 46.1	81	59.9	-17 29.7
18	331	38.6	85	58.1	-21 33.8	39	10.3	-23 16.3	186	50.3	+14 46.1	97	02.1	-17 29.8
19	346	41.1	100	57.3	34.4	54	10.7	16.0	201	52.7	46.1	112	04.2	29.8
20	1	43.6	115	56.4	35.0	69	11.1	15.7	216	55.0	46.0	127	06.4	29.9
21	16	46.0	130	55.6	35.6	84	11.5	15.4	231	57.4	46.0	142	08.6	30.0
22	31	48.5	145	54.7	36.2	99	11.9	15.1	246	59.7	46.0	157	10.7	30.1
23	46	51.0	160	53.9	36.8	114	12.3	14.8	262	02.0	45.9	172	12.9	30.1
24	61	53.4	175	53.0	-21 37.4	129	12.7	-23 14.5	277	04.4	+14 45.9	187	15.1	-17 30.2
Dif	—		-8	-6		+4	+3		+23	0		+22	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 46 ^m 4			Edad: 0 ^d 5 PHE { SD: 15'8 PMG: 12 ^h 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	26.4	-20	176	27.2	-17	37.9	60 N	6 32	7 25	8 17	8 53	62	16 29	55
1	198	26.3		190	54.0		41.5	58	27	16	8 04	41	61	42	55
2	213	26.1		205	20.8		44.9	56	21	08	7 52	30	61	16 52	56
3	228	25.9		219	47.6		48.3	54	17	7 01	42	21	60	17 02	56
4	243	25.7		234	14.3		51.6	52	13	6 55	33	12	60	11	56
5	258	25.6	-20	248	41.0	-17	54.7	50	6 08	6 49	7 25	8 05	59	17 18	57
6	273	25.4	-20	263	07.6	-17	57.7	45	5 59	6 35	7 08	7 48	60	17 35	56
7	288	25.2		277	34.2	-18	00.7	40	51	24	6 54	35	59	17 48	57
8	303	25.1		292	00.7		03.5	35	44	15	42	24	58	18 00	56
9	318	24.9		306	27.2		06.2	30	37	6 06	32	7 14	58	10	56
10	333	24.7		320	53.6		08.8	20	23	5 50	6 13	6 57	58	27	57
11	348	24.5	-20	335	20.0	-18	11.3	10 N	5 10	5 35	5 58	6 43	57	18 42	57
12	3	24.4	-20	349	46.3	-18	13.7	0	4 55	5 21	5 43	6 29	57	18 56	57
13	18	24.2		4	12.6		16.0	10 S	39	5 05	5 28	16	55	19 10	57
14	33	24.0		18	38.9		18.2	20	4 19	4 48	5 11	6 01	55	25	57
15	48	23.8		33	05.1		20.2	30	3 54	26	4 53	5 44	55	42	57
16	63	23.7		47	31.3		22.1	35	38	4 13	42	35	54	19 52	57
17	78	23.5	-20	61	57.5	-18	24.0	40	3 19	3 58	4 29	5 24	53	20 03	57
18	93	23.3	-20	76	23.6	-18	25.7	45	2 54	3 39	4 14	5 11	53	20 17	57
19	108	23.1		90	49.7		27.3	50	19	15	3 55	4 55	53	33	57
20	123	23.0		105	15.7		28.8	52	2 01	3 03	47	48	52	41	56
21	138	22.8		119	41.7		30.1	54	1 37	2 49	37	40	51	49	57
22	153	22.6		134	07.7		31.4	56	1 03	33	26	31	51	20 59	56
23	168	22.4		148	33.7		32.5	58	** **	2 13	3 13	21	50	21 10	56
24	183	22.2	-20	162	59.6	-18	33.6	60 S	** **	1 48	2 57	4 09	49	21 22	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 49 ^m 2		Mag: -3.9 PMG: 12 ^h 17 ^m		Mag: +1.0 PMG: 15 ^h 23 ^m		Mag: -2.2 PMG: 5 ^h 31 ^m		Mag: +0.5 PMG: 11 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	61	53.4	175	53.0	-21	37.4	129	12.7	-23	14.5
1	76	55.9	190	52.2		38.0	144	13.2		14.2
2	91	58.4	205	51.3		38.6	159	13.6		13.9
3	107	00.8	220	50.5		39.2	174	14.0		13.6
4	122	03.3	235	49.6		39.8	189	14.4		13.3
5	137	05.7	250	48.8	-21	40.4	204	14.8	-23	12.9
6	152	08.2	265	47.9	-21	41.0	219	15.2	-23	12.6
7	167	10.7	280	47.0		41.6	234	15.6		12.3
8	182	13.1	295	46.2		42.2	249	16.0		12.0
9	197	15.6	310	45.3		42.8	264	16.4		11.7
10	212	18.1	325	44.5		43.4	279	16.8		11.4
11	227	20.5	340	43.6	-21	44.0	294	17.2	-23	11.1
12	242	23.0	355	42.8	-21	44.6	309	17.6	-23	10.8
13	257	25.5	10	41.9		45.2	324	18.0		10.5
14	272	27.9	25	41.1		45.8	339	18.4		10.2
15	287	30.4	40	40.2		46.4	354	18.8		09.8
16	302	32.9	55	39.4		47.0	9	19.3		09.5
17	317	35.3	70	38.5	-21	47.6	24	19.7	-23	09.2
18	332	37.8	85	37.6	-21	48.2	39	20.1	-23	08.9
19	347	40.2	100	36.8		48.8	54	20.5		08.6
20	2	42.7	115	35.9		49.3	69	20.9		08.3
21	17	45.2	130	35.1		49.9	84	21.3		07.9
22	32	47.6	145	34.2		50.5	99	21.7		07.6
23	47	50.1	160	33.3		51.1	114	22.1		07.3
24	62	52.6	175	32.5	-21	51.7	129	22.5	-23	07.0
Dif	—		-9	-6			+4	+3		
								+23	0	
									+22	-1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 46 ^m 7				Edad: 1 ^d 5 PHE { SD: 15 ^h 9 PMG: 13 ^h 39 ^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	22.2	-20	28.8	162	59.6	-18	33.6	60 N	15 13	16 05	16 59	9 55 50		17 24 68			
1	198	22.1		29.4	177	25.5 69		34.5 9	58	27	15	17 05	42 51		37 67			
2	213	21.9		29.9	191	51.4 69		35.3 8	56	39	23	10	31 52		48 66			
3	228	21.7		30.4	206	17.2 68		35.9 6	54	49	30	15	21 53		17 58 65			
4	243	21.5		30.9	220	43.0 68		36.5 6	52	15 58	37	19	12 53		18 07 64			
5	258	21.3	-20	31.4	235	08.8 68	-18	36.9 4	50	16 06	16 43	17 23	9 04 54		18 15 63			
6	273	21.2	-20	31.9	249	34.6 68	-18	37.3 4	45	16 24	16 56	17 32	8 48 54		18 31 63			
7	288	21.0		32.4	264	00.3 67		37.5 2	40	38	17 08	41	34 55		45 62			
8	303	20.8		32.9	278	26.1 68		37.5 0	35	16 50	17	48	22 56		18 56 61			
9	318	20.6		33.4	292	51.8 67		37.5 0	30	17 01	26	17 56	8 12 56		19 06 61			
10	333	20.4		33.9	307	17.5 67		37.4 1	20	19	43	18 10	7 55 56		24 59			
11	348	20.3	-20	34.4	321	43.1 66	-18	37.1 3	10 N	17 35	17 58	18 23	7 40 57		19 39 58			
12	3	20.1	-20	34.9	336	08.8 67	-18	36.7 4	0	17 50	18 12	18 38	7 26 57		19 53 57			
13	18	19.9		35.4	350	34.4 66		36.2 5	10 S	18 06	28	18 55	7 11 58		20 07 56			
14	33	19.7		35.9	5	00.1 67		35.6 6	20	22	18 46	19 14	6 56 58		22 55			
15	48	19.5		36.4	19	25.7 66		34.8 8	30	41	19 08	40	39 59		39 54			
16	63	19.3		36.9	33	51.3 66		33.9 9	35	18 52	21	19 56	29 59		20 49 53			
17	78	19.2	-20	37.4	48	16.9 66	-18	33.0 9	40	19 05	19 37	20 16	6 17 60		21 00 53			
18	93	19.0	-20	37.9	62	42.5 66	-18	31.8 12	45	19 21	19 56	20 42	6 04 60		21 14 51			
19	108	18.8		38.4	77	08.0 65		30.6 12	50	40	20 21	21 17	5 48 60		30 50			
20	123	18.6		38.9	91	33.6 66		29.3 13	52	49	33	21 37	40 60		37 50			
21	138	18.4		39.4	105	59.2 66		27.8 15	54	19 59	20 47	22 02	31 61		46 48			
22	153	18.2		39.9	120	24.7 65		26.2 16	56	20 10	21 04	22 39	22 61		21 55 48			
23	168	18.0		40.4	134	50.3 66		24.5 17	58	24	25	** **	5 11 61		22 06 46			
24	183	17.9	-20	40.9	149	15.8 65	-18	22.7 18	60 S	20 39	21 52	** **	4 58 62		22 19 44			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 45 ^m 3		Mag: -3.9 PMG: 12 ^h 19 ^m				Mag: +1.0 PMG: 15 ^h 22 ^m				Mag: -2.3 PMG: 5 ^h 27 ^m				Mag: +0.5 PMG: 11 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	52.6	175	32.5	-21	51.7	129	22.5	-23	07.0	278	00.6	+14	45.2	188	06.9	-17	31.9
1	77	55.0	190	31.6		52.3	144	22.9		06.7	293	02.9		45.1	203	09.1		31.9
2	92	57.5	205	30.8		52.8	159	23.3		06.4	308	05.2		45.1	218	11.2		32.0
3	108	00.0	220	29.9		53.4	174	23.7		06.0	323	07.6		45.1	233	13.4		32.1
4	123	02.4	235	29.0		54.0	189	24.2		05.7	338	09.9		45.0	248	15.6		32.1
5	138	04.9	250	28.2	-21	54.6	204	24.6	-23	05.4	353	12.3	+14	45.0	263	17.7	-17	32.2
6	153	07.4	265	27.3	-21	55.1	219	25.0	-23	05.1	8	14.6	+14	45.0	278	19.9	-17	32.3
7	168	09.8	280	26.4		55.7	234	25.4		04.8	23	17.0		44.9	293	22.0		32.3
8	183	12.3	295	25.6		56.3	249	25.8		04.4	38	19.3		44.9	308	24.2		32.4
9	198	14.7	310	24.7		56.9	264	26.2		04.1	53	21.7		44.9	323	26.4		32.5
10	213	17.2	325	23.8		57.4	279	26.6		03.8	68	24.0		44.9	338	28.5		32.5
11	228	19.7	340	23.0	-21	58.0	294	27.0	-23	03.5	83	26.4	+14	44.8	353	30.7	-17	32.6
12	243	22.1	355	22.1	-21	58.6	309	27.4	-23	03.2	98	28.7	+14	44.8	8	32.8	-17	32.7
13	258	24.6	10	21.3		59.1	324	27.8		02.8	113	31.1		44.8	23	35.0		32.8
14	273	27.1	25	20.4	-21	59.7	339	28.2		02.5	128	33.4		44.7	38	37.2		32.8
15	288	29.5	40	19.5	-22	00.3	354	28.6		02.2	143	35.8		44.7	53	39.3		32.9
16	303	32.0	55	18.6		00.8	9	29.1		01.9	158	38.1		44.7	68	41.5		33.0
17	318	34.5	70	17.8	-22	01.4	24	29.5	-23	01.5	173	40.5	+14	44.7	83	43.6	-17	33.0
18	333	36.9	85	16.9	-22	01.9	39	29.9	-23	01.2	188	42.8	+14	44.6	98	45.8	-17	33.1
19	348	39.4	100	16.0		02.5	54	30.3		00.9	203	45.2		44.6	113	48.0		33.2
20	3	41.8	115	15.2		03.1	69	30.7		00.6	218	47.5		44.6	128	50.1		33.2
21	18	44.3	130	14.3		03.6	84	31.1	-23	00.2	233	49.9		44.6	143	52.3		33.3
22	33	46.8	145	13.4		04.2	99	31.5	-22	59.9	248	52.2		44.5	158	54.5		33.4
23	48	49.2	160	12.6		04.7	114	31.9		59.6	263	54.6		44.5	173	56.6		33.4
24	63	51.7	175	11.7	-22	05.3	129	32.3	-22	59.3	278	56.9	+14	44.5	188	58.8	-17	33.5
Dif	—		-9		-6		+4		+3		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 47 ^m 0			Edad: 2 ^d 5 PHE { SD: 16:0 PMG: 14 ^h 36 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	17.9	-20	40.9	149	15.8	-18	22.7	60 N	6 36	7 29	8 22	10 45	40	18 32	77	
1	198	17.7		41.4	163	41.4		20.8	58	30	20	8 08	33	42	44	75	
2	213	17.5		41.9	178	06.9		18.7	56	25	12	7 56	23	43	18 54	74	
3	228	17.3		42.4	192	32.5		16.5	54	20	7 04	46	14	44	19 03	72	
4	243	17.1		42.9	206	58.0		14.2	52	15	6 57	36	10 05	45	11	71	
5	258	16.9	-20	43.4	221	23.6		11.8	50	6 11	6 51	7 28	9 58	46	19 18	70	
6	273	16.7	-20	43.8	235	49.2		9.3	45	6 02	6 38	7 10	9 42	48	19 34	67	
7	288	16.5		44.3	250	14.7		06.6	40	5 53	26	6 56	29	49	47	65	
8	303	16.3		44.8	264	40.3		03.8	35	45	16	44	18	51	19 57	64	
9	318	16.2		45.3	279	05.9		01.0	30	38	6 07	33	9 08	52	20 07	62	
10	333	16.0		45.8	293	31.5		01.0	20	24	5 51	6 15	8 51	54	23	60	
11	348	15.8	-20	46.3	307	57.1		01.0	10 N	5 10	5 36	5 59	8 37	55	20 37	58	
12	3	15.6	-20	46.8	322	22.7		01.0	0	4 55	5 21	5 43	8 23	57	20 50	56	
13	18	15.4		47.3	336	48.3		48.2	10 S	39	5 05	28	8 09	58	21 03	55	
14	33	15.2		47.7	351	13.9		44.8	20	4 19	4 47	5 11	7 54	60	17	53	
15	48	15.0		48.2	5	39.6		41.2	30	3 53	26	4 52	38	61	33	50	
16	63	14.8		48.7	20	05.3		37.5	35	37	4 12	41	28	63	42	49	
17	78	14.6	-20	49.2	34	30.9		33.7	40	3 17	3 56	4 28	7 17	64	21 53	47	
18	93	14.4	-20	49.7	48	56.6		29.7	45	2 52	3 37	4 13	7 04	65	22 05	45	
19	108	14.2		50.2	63	22.3		25.7	50	2 16	12	3 53	6 48	67	20	42	
20	123	14.1		50.6	77	48.1		21.5	52	1 56	3 00	44	40	68	27	41	
21	138	13.9		51.1	92	13.8		17.3	54	1 31	2 46	34	32	69	34	40	
22	153	13.7		51.6	106	39.6		12.9	56	0 54	29	23	23	70	43	38	
23	168	13.5		52.1	121	05.4		08.4	58	** **	2 08	3 09	12	71	22 52	37	
24	183	13.3	-20	52.6	135	31.2		03.8	60 S	** **	1 41	2 54	6 00	73	23 03	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 19 ^h 41 ^m 3		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +1.0 PMG: 15 ^h 21 ^m		Mag: -2.3 PMG: 5 ^h 23 ^m		Mag: +0.5 PMG: 11 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	63	51.7	175	11.7	-22	05.3	129	32.3	-22	59.3	278	56.9	+14	44.5	188	58.8	-17	33.5
1	78	54.2	190	10.8		05.8	144	32.7		58.9	293	59.3		44.4	204	00.9		33.6
2	93	56.6	205	09.9		06.4	159	33.2		58.6	309	01.6		44.4	219	03.1		33.6
3	108	59.1	220	09.1		06.9	174	33.6		58.3	324	04.0		44.4	234	05.3		33.7
4	124	01.6	235	08.2		07.5	189	34.0		57.9	339	06.3		44.4	249	07.4		33.8
5	139	04.0	250	07.3	-22	08.0	204	34.4	-22	57.6	354	08.7	+14	44.3	264	09.6	-17	33.9
6	154	06.5	265	06.5	-22	08.6	219	34.8	-22	57.3	9	11.0	+14	44.3	279	11.7	-17	33.9
7	169	09.0	280	05.6		09.1	234	35.2		57.0	24	13.4		44.3	294	13.9		34.0
8	184	11.4	295	04.7		09.7	249	35.6		56.6	39	15.7		44.3	309	16.1		34.1
9	199	13.9	310	03.8		10.2	264	36.0		56.3	54	18.1		44.2	324	18.2		34.1
10	214	16.3	325	03.0		10.8	279	36.4		56.0	69	20.5		44.2	339	20.4		34.2
11	229	18.8	340	02.1	-22	11.3	294	36.8	-22	55.6	84	22.8	+14	44.2	354	22.5	-17	34.3
12	244	21.3	355	01.2	-22	11.9	309	37.3	-22	55.3	99	25.2	+14	44.2	9	24.7	-17	34.3
13	259	23.7	10	00.3		12.4	324	37.7		55.0	114	27.5		44.1	24	26.9		34.4
14	274	26.2	24	59.4		12.9	339	38.1		54.6	129	29.9		44.1	39	29.0		34.5
15	289	28.7	39	58.6		13.5	354	38.5		54.3	144	32.2		44.1	54	31.2		34.5
16	304	31.1	54	57.7		14.0	9	38.9		54.0	159	34.6		44.1	69	33.4		34.6
17	319	33.6	69	56.8	-22	14.5	24	39.3	-22	53.6	174	37.0	+14	44.0	84	35.5	-17	34.7
18	334	36.1	84	55.9	-22	15.1	39	39.7	-22	53.3	189	39.3	+14	44.0	99	37.7	-17	34.7
19	349	38.5	99	55.1		15.6	54	40.1		52.9	204	41.7		44.0	114	39.8		34.8
20	4	41.0	114	54.2		16.1	69	40.5		52.6	219	44.0		44.0	129	42.0		34.9
21	19	43.5	129	53.3		16.7	84	41.0		52.3	234	46.4		43.9	144	44.2		35.0
22	34	45.9	144	52.4		17.2	99	41.4		51.9	249	48.8		43.9	159	46.3		35.0
23	49	48.4	159	51.5		17.7	114	41.8		51.6	264	51.1		43.9	174	48.5		35.1
24	64	50.8	174	50.7	-22	18.3	129	42.2	-22	51.3	279	53.5	+14	43.9	189	50.6	-17	35.2
Dif	—		-9		-5		+4		+3		+24		0		+22		-	

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: 3 ^d 5 PHE { SD: 16/1 PMG: 15 ^h 33 ^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	13.3	-20	52.6	135	31.2	-17	03.8	60 N	15 10	16 03	16 57	11 25	31	19 49 83
1	198	13.1		53.0	149	57.0	68	-16 59.1	58	24	12	17 03	15	33	19 59 80
2	213	12.9		53.5	164	22.9	69	54.3	56	36	21	08	11 06	35	20 08 78
3	228	12.7		54.0	178	48.8	69	49.3	54	47	28	13	10 58	36	15 76
4	243	12.5		54.5	193	14.7	69	44.3	52	15 56	35	17	50	39	22 75
5	258	12.3	-20	54.9	207	40.6	69	-16 39.2	50	16 05	16 41	17 22	10 44	40	20 28 73
6	273	12.1	-20	55.4	222	06.6	70	-16 33.9	45	16 22	16 55	17 31	10 30	42	20 41 70
7	288	11.9		55.9	236	32.5	69	28.5	40	37	17 07	40	18	45	20 52 67
8	303	11.7		56.4	250	58.6	71	23.1	35	16 49	17	48	09	46	21 01 66
9	318	11.5		56.8	265	24.6	70	17.5	30	17 00	26	17 55	10 00	48	09 64
10	333	11.3		57.3	279	50.7	71	11.8	20	19	43	18 10	9 45	51	23 60
11	348	11.1	-20	57.8	294	16.8	71	-16 06.1	10 N	17 35	17 58	18 24	9 32	53	21 35 58
12	3	10.9	-20	58.3	308	42.9	71	-16 00.2	0	17 51	18 13	18 39	9 20	55	21 46 55
13	18	10.7		58.7	323	09.1	72	-15 54.2	10 S	18 07	29	18 56	9 07	58	21 58 52
14	33	10.5		59.2	337	35.3	72	48.1	20	23	18 47	19 16	8 54	61	22 10 49
15	48	10.3	-20	59.7	352	01.5	72	41.9	30	43	19 10	42	39	64	23 46
16	63	10.1	-21	00.1	6	27.8	73	35.6	35	18 54	23	19 58	31	64	31 44
17	78	09.9	-21	00.6	20	54.1	73	-15 29.2	40	19 08	19 39	20 19	8 21	66	22 40 42
18	93	09.7	-21	01.1	35	20.4	73	-15 22.8	45	19 23	19 59	20 45	8 09	69	22 50 40
19	108	09.5		01.5	49	46.7	73	16.2	50	43	20 24	21 22	7 55	71	23 02 37
20	123	09.3		02.0	64	13.1	74	09.5	52	19 52	37	21 42	48	73	08 36
21	138	09.1		02.5	78	39.6	75	-15 02.7	54	20 02	20 52	22 09	41	74	14 34
22	153	08.9		02.9	93	06.0	74	-14 55.9	56	14	21 09	22 50	33	76	21 32
23	168	08.7		03.4	107	32.5	75	48.9	58	28	31	** **	23	78	29 30
24	183	08.5	-21	03.8	121	59.1	76	-14 41.8	60 S	20 44	21 59	** **	7 13	80	23 38 28

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 37 ^m 4		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: +1.0 PMG: 15 ^h 21 ^m		Mag: -2.3 PMG: 5 ^h 20 ^m		Mag: +0.5 PMG: 11 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	64	50.8	174	50.7	-22	18.3	129	42.2	-22	51.3	279	53.5	+14	43.9	189	50.6	-17	35.2
1	79	53.3	189	49.8		18.8	144	42.6		50.9	294	55.8		43.8	204	52.8		35.2
2	94	55.8	204	48.9		19.3	159	43.0		50.6	309	58.2		43.8	219	55.0		35.3
3	109	58.2	219	48.0		19.8	174	43.4		50.2	325	00.6		43.8	234	57.1		35.4
4	125	00.7	234	47.1		20.4	189	43.8		49.9	340	02.9		43.8	249	59.3		35.4
5	140	03.2	249	46.2	-22	20.9	204	44.3	-22	49.6	355	05.3	+14	43.7	265	01.5	-17	35.5
6	155	05.6	264	45.4	-22	21.4	219	44.7	-22	49.2	10	07.6	+14	43.7	280	03.6	-17	35.6
7	170	08.1	279	44.5		21.9	234	45.1		48.9	25	10.0		43.7	295	05.8		35.6
8	185	10.6	294	43.6		22.4	249	45.5		48.5	40	12.4		43.7	310	07.9		35.7
9	200	13.0	309	42.7		23.0	264	45.9		48.2	55	14.7		43.6	325	10.1		35.8
10	215	15.5	324	41.8		23.5	279	46.3		47.9	70	17.1		43.6	340	12.3		35.8
11	230	18.0	339	40.9	-22	24.0	294	46.7	-22	47.5	85	19.5	+14	43.6	355	14.4	-17	35.9
12	245	20.4	354	40.0	-22	24.5	309	47.1	-22	47.2	100	21.8	+14	43.6	10	16.6	-17	36.0
13	260	22.9	9	39.2		25.0	324	47.6		46.8	115	24.2		43.5	25	18.7		36.0
14	275	25.3	24	38.3		25.5	339	48.0		46.5	130	26.5		43.5	40	20.9		36.1
15	290	27.8	39	37.4		26.0	354	48.4		46.1	145	28.9		43.5	55	23.1		36.2
16	305	30.3	54	36.5		26.5	9	48.8		45.8	160	31.3		43.5	70	25.2		36.2
17	320	32.7	69	35.6	-22	27.1	24	49.2	-22	45.4	175	33.6	+14	43.5	85	27.4	-17	36.3
18	335	35.2	84	34.7	-22	27.6	39	49.6	-22	45.1	190	36.0	+14	43.4	100	29.5	-17	36.4
19	350	37.7	99	33.8		28.1	54	50.0		44.8	205	38.4		43.4	115	31.7		36.5
20	5	40.1	114	32.9		28.6	69	50.4		44.4	220	40.7		43.4	130	33.9		36.5
21	20	42.6	129	32.0		29.1	84	50.9		44.1	235	43.1		43.4	145	36.0		36.6
22	35	45.1	144	31.2		29.6	99	51.3		43.7	250	45.5		43.3	160	38.2		36.7
23	50	47.5	159	30.3		30.1	114	51.7		43.4	265	47.8		43.3	175	40.4		36.7
24	65	50.0	174	29.4	-22	30.6	129	52.1	-22	43.0	280	50.2	+14	43.3	190	42.5	-17	36.8
Dif	—		-9		-5		+4		+3		+24		0		+22		-1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 47 ^m 6				Edad: 4 ^d 5 PHE { 4 ^h : 59'3 12 ^h : 59'3 20 ^h : 59'3 R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	08.5	-21	03.8	121	59.1	-14	41.8	60 N	6 39	7 33	8 26	11 56	24	21 12	85		
1	198	08.3		04.3	136	25.6	75	34.7	58	33	24	12	48	27	19	83		
2	213	08.1		04.8	150	52.3	77	27.4	56	28	15	8 00	41	29	26	80		
3	228	07.9		05.2	165	18.9	76	20.1	54	23	07	7 49	34	31	31	78		
4	243	07.7		05.7	179	45.6	77	12.7	52	18	7 00	39	29	33	37	76		
5	258	07.5	-21	06.1	194	12.3	77	-14 05.2	50	6 14	6 54	7 31	11 24	34	21 41	75		
6	273	07.3	-21	06.6	208	39.1	78	-13 57.6	45	6 04	6 40	7 13	11 12	38	21 51	71		
7	288	07.1		07.1	223	05.9	78	49.9	40	5 55	28	6 58	11 03	41	21 59	68		
8	303	06.9		07.5	237	32.7	78	42.1	35	47	18	46	10 55	43	22 07	65		
9	318	06.7		08.0	251	59.6	79	34.3	30	40	6 09	35	48	45	13	63		
10	333	06.5		08.4	266	26.5	79	26.3	20	25	5 52	6 16	36	48	23	60		
11	348	06.3	-21	08.9	280	53.5	80	-13 18.3	10 N	5 11	5 37	5 59	10 25	52	22 33	56		
12	3	06.1	-21	09.3	295	20.5	80	-13 10.2	0	4 56	5 22	5 44	10 15	54	22 41	54		
13	18	05.9		09.8	309	47.5	80	-13 02.0	10 S	39	5 06	28	10 05	57	50	50		
14	33	05.7		10.2	324	14.6	81	-12 53.8	20	4 19	4 47	5 11	9 55	60	22 59	47		
15	48	05.5		10.7	338	41.7	81	45.4	30	3 53	25	4 52	43	63	23 09	44		
16	63	05.3		11.1	353	08.8	81	37.0	35	36	4 11	40	35	66	15	42		
17	78	05.0	-21	11.6	7	36.0	82	-12 28.5	40	3 16	3 55	4 27	9 27	68	23 22	39		
18	93	04.8	-21	12.0	22	03.3	83	-12 19.9	45	2 50	3 36	4 11	9 18	70	23 30	36		
19	108	04.6		12.5	36	30.5	82	11.3	50	2 13	3 10	3 52	06	74	39	33		
20	123	04.4		12.9	50	57.8	83	-12 02.6	52	1 52	2 57	42	9 01	76	44	30		
21	138	04.2		13.4	65	25.2	84	-11 53.8	54	1 26	43	32	8 55	78	48	29		
22	153	04.0		13.8	79	52.6	84	44.9	56	0 44	25	20	49	79	53	28		
23	168	03.8		14.3	94	20.0	84	36.0	58	** **	2 04	3 06	41	82	23 59	25		
24	183	03.6	-21	14.7	108	47.5	85	-11 27.0	60 S	** **	1 35	2 50	8 33	84	** **	**		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 33 ^m 5		Mag: -3.9 PMG: 12 ^h 23 ^m				Mag: +1.0 PMG: 15 ^h 20 ^m				Mag: -2.3 PMG: 5 ^h 16 ^m				Mag: +0.5 PMG: 11 ^h 16 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	65	50.0	174	29.4	-22	30.6	129	52.1	-22	43.0	280	50.2	+14	43.3	190	42.5	-17	36.8
1	80	52.5	189	28.5		31.1	144	52.5		42.7	295	52.6		43.3	205	44.7		36.9
2	95	54.9	204	27.6		31.6	159	52.9		42.3	310	54.9		43.3	220	46.8		36.9
3	110	57.4	219	26.7		32.1	174	53.3		42.0	325	57.3		43.2	235	49.0		37.0
4	125	59.8	234	25.8		32.6	189	53.8		41.6	340	59.7		43.2	250	51.2		37.1
5	141	02.3	249	24.9	-22	33.1	204	54.2	-22	41.3	356	02.0	+14	43.2	265	53.3	-17	37.1
6	156	04.8	264	24.0	-22	33.5	219	54.6	-22	40.9	11	04.4	+14	43.2	280	55.5	-17	37.2
7	171	07.2	279	23.1		34.0	234	55.0		40.6	26	06.8		43.1	295	57.7		37.3
8	186	09.7	294	22.2		34.5	249	55.4		40.2	41	09.2		43.1	310	59.8		37.3
9	201	12.2	309	21.3		35.0	264	55.8		39.9	56	11.5		43.1	326	02.0		37.4
10	216	14.6	324	20.4		35.5	279	56.2		39.5	71	13.9		43.1	341	04.1		37.5
11	231	17.1	339	19.5	-22	36.0	294	56.7	-22	39.1	86	16.3	+14	43.1	356	06.3	-17	37.5
12	246	19.6	354	18.6	-22	36.5	309	57.1	-22	38.8	101	18.6	+14	43.0	11	08.5	-17	37.6
13	261	22.0	9	17.7		37.0	324	57.5		38.4	116	21.0		43.0	26	10.6		37.7
14	276	24.5	24	16.9		37.4	339	57.9		38.1	131	23.4		43.0	41	12.8		37.7
15	291	26.9	39	16.0		37.9	354	58.3		37.7	146	25.8		43.0	56	14.9		37.8
16	306	29.4	54	15.1		38.4	9	58.7		37.4	161	28.1		43.0	71	17.1		37.9
17	321	31.9	69	14.2	-22	38.9	24	59.2	-22	37.0	176	30.5	+14	42.9	86	19.3	-17	37.9
18	336	34.3	84	13.3	-22	39.4	39	59.6	-22	36.7	191	32.9	+14	42.9	101	21.4	-17	38.0
19	351	36.8	99	12.4		39.8	55	00.0		36.3	206	35.3		42.9	116	23.6		38.1
20	6	39.3	114	11.5		40.3	70	00.4		35.9	221	37.6		42.9	131	25.8		38.1
21	21	41.7	129	10.6		40.8	85	00.8		35.6	236	40.0		42.9	146	27.9		38.2
22	36	44.2	144	09.7		41.3	100	01.2		35.2	251	42.4		42.8	161	30.1		38.3
23	51	46.7	159	08.8		41.7	115	01.7		34.9	266	44.7		42.8	176	32.2		38.4
24	66	49.1	174	07.9	-22	42.2	130	02.1	-22	34.5	281	47.1	+14	42.8	191	34.4	-17	38.4
Dif	—		-9		-5		+4		+4		+24		0		+22		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna											
	SD: 16:2 PMG: 11 ^h 47 ^m 9			Edad: 5 ^d 5 SD: 16:1 PMG: 17 ^h 22 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 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	183	03.6	-21	14.7	108	47.5	-11	27.0	60 N	15 07	16 00	16 55	12 20 21	22 37 86											
1	198	03.4		15.2	123	15.0	85	17.9	58	22	10	17 01	15 23	42 83											
2	213	03.2		15.6	137	42.5	85	-11 08.7	56	34	19	06	10 25	46 80											
3	228	03.0		16.1	152	10.1	86	-10 59.5	54	45	27	11	05 28	49 79											
4	243	02.7		16.5	166	37.7	86	50.3	52	15 54	34	16	12 02 29	53 76											
5	258	02.5	-21	16.9	181	05.4	87	-10 40.9	50	16 03	16 40	17 21	11 58 31	22 56 74											
6	273	02.3	-21	17.4	195	33.1	87	-10 31.5	45	16 21	16 54	17 31	11 50 35	23 02 71											
7	288	02.1		17.8	210	00.8	87	22.1	40	36	17 06	40	44 37	07 68											
8	303	01.9		18.3	224	28.6	88	12.5	35	16 49	17	48	38 40	12 65											
9	318	01.7		18.7	238	56.4	88	-10 02.9	30	17 00	26	17 55	33 42	16 63											
10	333	01.5		19.1	253	24.3	89	-9 53.3	20	19	43	18 10	24 46	23 59											
11	348	01.3	-21	19.6	267	52.2	89	-9 43.6	10 N	17 36	17 58	18 24	11 17 49	23 29 55											
12	3	01.1	-21	20.0	282	20.1	89	-9 33.8	0	17 52	18 14	18 40	11 09 53	23 35 52											
13	18	00.8		20.5	296	48.0	89	24.0	10 S	18 07	30	18 57	11 02 56	40 49											
14	33	00.6		20.9	311	16.0	90	14.1	20	25	18 49	19 17	10 55 59	46 45											
15	48	00.4		21.3	325	44.1	91	-9 04.2	30	45	19 11	19 44	46 63	53 41											
16	63	00.2		21.8	340	12.1	90	-8 54.2	35	18 56	25	20 01	41 65	23 57 38											
17	78	00.0	-21	22.2	354	40.2	91	-8 44.2	40	19 10	19 42	20 21	10 35 68	*** ** *											
18	92	59.8	-21	22.6	9	08.4	92	-8 34.1	45	19 26	20 02	20 48	10 28 71	*** ** *											
19	107	59.6		23.1	23	36.5	91	24.0	50	46	28	21 26	20 75	*** ** *											
20	122	59.3		23.5	38	04.7	92	13.8	52	19 55	41	21 47	17 76	*** ** *											
21	137	59.1		23.9	52	33.0	93	-8 03.6	54	20 06	20 56	22 16	13 78	*** ** *											
22	152	58.9		24.3	67	01.3	93	-7 53.3	56	18	21 14	23 03	08 80	*** ** *											
23	167	58.7		24.8	81	29.6	93	43.0	58	32	21 36	** ** *	10 03 83	*** ** *											
24	182	58.5	-21	25.2	95	57.9	93	-7 32.7	60 S	20 49	22 07	** ** *	9 57 86	0 06 22											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO												
	PMG 19 ^h 29 ^m 5			Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.0 PMG: 15 ^h 19 ^m			Mag: -2.3 PMG: 5 ^h 12 ^m			Mag: +0.5 PMG: 11 ^h 12 ^m												
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'									
0	66	49.1	174	07.9	-22	42.2	130	02.1	-22	34.5	281	47.1	+14	42.8	191	34.4	-17	38.4							
1	81	51.6	189	07.0		42.7	145	02.5		34.2	296	49.5		42.8	206	36.6		38.5							
2	96	54.1	204	06.1		43.2	160	02.9		33.8	311	51.9		42.8	221	38.7		38.6							
3	111	56.5	219	05.2		43.6	175	03.3		33.4	326	54.3		42.7	236	40.9		38.6							
4	126	59.0	234	04.3		44.1	190	03.7		33.1	341	56.6		42.7	251	43.0		38.7							
5	142	01.4	249	03.4	-22	44.6	205	04.2	-22	32.7	356	59.0	+14	42.7	266	45.2	-17	38.8							
6	157	03.9	264	02.4	-22	45.0	220	04.6	-22	32.4	12	01.4	+14	42.7	281	47.4	-17	38.8							
7	172	06.4	279	01.5		45.5	235	05.0		32.0	27	03.8		42.7	296	49.5		38.9							
8	187	08.8	294	00.6		46.0	250	05.4		31.6	42	06.1		42.7	311	51.7		39.0							
9	202	11.3	308	59.7		46.4	265	05.8		31.3	57	08.5		42.6	326	53.9		39.0							
10	217	13.8	323	58.8		46.9	280	06.2		30.9	72	10.9		42.6	341	56.0		39.1							
11	232	16.2	338	57.9	-22	47.3	295	06.7	-22	30.5	87	13.3	+14	42.6	356	58.2	-17	39.2							
12	247	18.7	353	57.0	-22	47.8	310	07.1	-22	30.2	102	15.7	+14	42.6	12	00.3	-17	39.2							
13	262	21.2	8	56.1		48.2	325	07.5		29.8	117	18.0		42.6	27	02.5		39.3							
14	277	23.6	23	55.2		48.7	340	07.9		29.4	132	20.4		42.5	42	04.7		39.4							
15	292	26.1	38	54.3		49.2	355	08.3		29.1	147	22.8		42.5	57	06.8		39.4							
16	307	28.6	53	53.4		49.6	10	08.7		28.7	162	25.2		42.5	72	09.0		39.5							
17	322	31.0	68	52.5	-22	50.1	25	09.2	-22	28.3	177	27.6	+14	42.5	87	11.2	-17	39.6							
18	337	33.5	83	51.6	-22	50.5	40	09.6	-22	28.0	192	29.9	+14	42.5	102	13.3	-17	39.6							
19	352	35.9	98	50.7		51.0	55	10.0		27.6	207	32.3		42.5	117	15.5		39.7							
20	7	38.4	113	49.8		51.4	70	10.4		27.2	222	34.7		42.4	132	17.6		39.8							
21	22	40.9	128	48.9		51.9	85	10.8		26.9	237	37.1		42.4	147	19.8		39.8							
22	37	43.3	143	48.0		52.3	100	11.3		26.5	252	39.5		42.4	162	22.0		39.9							
23	52	45.8	158	47.0		52.7	115	11.7		26.1	267	41.8		42.4	177	24.1		40.0							
24	67	48.3	173	46.1	-22	53.2	130	12.1	-22	25.8	282	44.2	+14	42.4	192	26.3	-17	40.0							
Dif	—			-9			+4			+4			+24			0			+22			-		4	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2			Edad: 6 ^d 5	PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2																
	PMG: 11 ^h 48 ^m 3					SD: 16:1		PMG: 18 ^h 14 ^m			R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m						
0	182	58.5	-21	25.2	95	57.9	-7	32.7	60 N	6	42	7	37	8	30	12	41	19	**	**	**
1	197	58.3		25.6	110	26.3	94	22.3	58	36	27		16		38	21		**	**	**	
2	212	58.0		26.1	124	54.7	94	11.8	56	30	18	8	03		35	24		**	**	**	
3	227	57.8		26.5	139	23.1	94	-7	54	25	10	7	52		33	26		**	**	**	
4	242	57.6		26.9	153	51.6	95	-6	52	20	7	03		42	31	27		**	**	**	
5	257	57.4	-21	27.3	168	20.0	94	-6	50	6	16	6	57	7	34	12	29	29	**	**	**
6	272	57.2	-21	27.8	182	48.6	96	-6	45	6	06	6	42	7	15	12	25	32	**	**	**
7	287	57.0		28.2	197	17.1	95	19.0	40	5	57	30	7	00		21	35		**	**	**
8	302	56.7		28.6	211	45.7	96	-6	35	49	20	6	48		18	38		**	**	**	
9	317	56.5		29.0	226	14.3	96	-5	30	41	6	11	36		15	40		**	**	**	
10	332	56.3		29.5	240	42.9	96	46.9	20	26	5	54	17		10	45		**	**	**	
11	347	56.1	-21	29.9	255	11.6	97	-5	10 N	5	12	5	38	6	00	12	06	48	**	**	**
12	2	55.9	-21	30.3	269	40.3	97	-5	0	4	57	5	22	5	45	12	02	51	**	**	**
13	17	55.6		30.7	284	09.0	97	14.5	10 S	39	5	06	29		11	58	55		**	**	**
14	32	55.4		31.1	298	37.7	97	-5	20	4	19	4	47	5	11	54	58		**	**	**
15	47	55.2		31.6	313	06.5	98	-4	30	3	52	25	4	51		49	63		**	**	**
16	62	55.0		32.0	327	35.3	98	41.9	35	35	4	11	40		46	65		**	**	**	
17	77	54.8	-21	32.4	342	04.1	98	-4	40	3	15	3	54	4	26	11	43	68	0	01	36
18	92	54.5	-21	32.8	356	32.9	98	-4	45	2	48	3	34	4	10	11	39	71	0	06	33
19	107	54.3		33.2	11	01.8	99	-4	50	2	10	3	08	3	50		35	75		12	30
20	122	54.1		33.6	25	30.7	99	-3	52	1	48	2	55	41		33	76		14	29	
21	137	53.9		34.0	39	59.6	99	47.0	54	1	20	40	30		31	78		17	27		
22	152	53.7		34.5	54	28.5	99	35.9	56	0	33	2	22	18		28	81		21	24	
23	167	53.4		34.9	68	57.4	99	24.9	58	**	**	1	59	3	04		26	82	24	23	
24	182	53.2	-21	35.3	83	26.4	100	-3	60 S	**	**	1	29	2	47	11	23	85	0	28	20

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 25 ^m 6		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.0 PMG: 15 ^h 19 ^m			Mag: -2.3 PMG: 5 ^h 08 ^m			Mag: +0.5 PMG: 11 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	67	48.3	173	46.1	-22	53.2	130	12.1	-22	25.8	282	44.2	+14	42.4	192	26.3	-17	40.0
1	82	50.7	188	45.2		53.6	145	12.5		25.4	297	46.6		42.4	207	28.5		40.1
2	97	53.2	203	44.3		54.1	160	12.9		25.0	312	49.0		42.3	222	30.6		40.2
3	112	55.7	218	43.4		54.5	175	13.3		24.7	327	51.4		42.3	237	32.8		40.2
4	127	58.1	233	42.5		55.0	190	13.8		24.3	342	53.8		42.3	252	34.9		40.3
5	143	00.6	248	41.6	-22	55.4	205	14.2	-22	23.9	357	56.1	+14	42.3	267	37.1	-17	40.4
6	158	03.0	263	40.7	-22	55.8	220	14.6	-22	23.5	12	58.5	+14	42.3	282	39.3	-17	40.4
7	173	05.5	278	39.8		56.3	235	15.0		23.2	28	00.9		42.3	297	41.4		40.5
8	188	08.0	293	38.8		56.7	250	15.4		22.8	43	03.3		42.2	312	43.6		40.6
9	203	10.4	308	37.9		57.1	265	15.9		22.4	58	05.7		42.2	327	45.8		40.6
10	218	12.9	323	37.0		57.6	280	16.3		22.1	73	08.1		42.2	342	47.9		40.7
11	233	15.4	338	36.1	-22	58.0	295	16.7	-22	21.7	88	10.5	+14	42.2	357	50.1	-17	40.8
12	248	17.8	353	35.2	-22	58.4	310	17.1	-22	21.3	103	12.9	+14	42.2	12	52.2	-17	40.8
13	263	20.3	8	34.3		58.9	325	17.5		20.9	118	15.2		42.2	27	54.4		40.9
14	278	22.8	23	33.4		59.3	340	18.0		20.6	133	17.6		42.2	42	56.6		41.0
15	293	25.2	38	32.4	-22	59.7	355	18.4		20.2	148	20.0		42.1	57	58.7		41.0
16	308	27.7	53	31.5	-23	00.1	10	18.8		19.8	163	22.4		42.1	73	00.9		41.1
17	323	30.2	68	30.6	-23	00.6	25	19.2	-22	19.4	178	24.8	+14	42.1	88	03.1	-17	41.2
18	338	32.6	83	29.7	-23	01.0	40	19.6	-22	19.0	193	27.2	+14	42.1	103	05.2	-17	41.2
19	353	35.1	98	28.8		01.4	55	20.1		18.7	208	29.6		42.1	118	07.4		41.3
20	8	37.5	113	27.9		01.8	70	20.5		18.3	223	32.0		42.1	133	09.5		41.4
21	23	40.0	128	26.9		02.2	85	20.9		17.9	238	34.3		42.0	148	11.7		41.4
22	38	42.5	143	26.0		02.6	100	21.3		17.5	253	36.7		42.0	163	13.9		41.5
23	53	44.9	158	25.1		03.1	115	21.8		17.2	268	39.1		42.0	178	16.0		41.6
24	68	47.4	173	24.2	-23	03.5	130	22.2	-22	16.8	283	41.5	+14	42.0	193	18.2	-17	41.6
Dif	—		-9	-4			+4	+4			+24	0			+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16:2 PMG: 11 ^h 48 ^m 6			Edad: 7 ^d 5 PHE { 4 ^h : 59:1 12 ^h : 59:0 20 ^h : 59:0 R°: 51 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m					
0	182	53.2	-21	35.3	83	26.4	-3	13.8	60 N	15 04	15 58	16 53	13 00	18	0 03 85					
1	197	53.0		35.7	97	55.3	-3	02.7 ¹¹¹	58	19	16 08	16 59	12 59	21	05 82					
2	212	52.8		36.1	112	24.3 ¹⁰⁰	-2	51.6 ¹¹¹	56	32	17	17 05	59	23	06 80					
3	227	52.5		36.5	126	53.4 ¹⁰¹		40.5 ¹¹¹	54	43	25	10	59	25	08 78					
4	242	52.3		36.9	141	22.4 ¹⁰⁰		29.3 ¹¹²	52	15 53	32	15	58	27	09 76					
5	257	52.1	-21	37.3	155	51.4 ¹⁰⁰	-2	18.2 ¹¹¹	50	16 02	16 39	17 20	12 58	28	0 10 75					
6	272	51.9	-21	37.7	170	20.5 ¹⁰¹	-2	07.0 ¹¹²	45	16 20	16 53	17 30	12 57	32	0 13 71					
7	287	51.6		38.1	184	49.6 ¹⁰¹	-1	55.9 ¹¹¹	40	36	17 06	39	56	36	15 68					
8	302	51.4		38.5	199	18.7 ¹⁰¹		44.7 ¹¹²	35	16 49	16	47	56	38	17 65					
9	317	51.2		39.0	213	47.8 ¹⁰¹		33.5 ¹¹²	30	17 00	26	17 55	55	40	19 62					
10	332	51.0		39.4	228	16.9 ¹⁰¹		22.3 ¹¹²	20	19	43	18 10	55	44	22 58					
11	347	50.7	-21	39.8	242	46.0 ¹⁰¹	-1	11.1 ¹¹²	10 N	17 36	17 59	18 25	12 54	48	0 24 55					
12	2	50.5	-21	40.2	257	15.2 ¹⁰²	-0	59.9 ¹¹²	0	17 52	18 15	18 40	12 53	51	0 27 51					
13	17	50.3		40.6	271	44.3 ¹⁰¹		48.7 ¹¹²	10 S	18 08	31	18 58	53	54	29 48					
14	32	50.1		41.0	286	13.5 ¹⁰²		37.5 ¹¹²	20	26	18 50	19 19	52	58	31 44					
15	47	49.8		41.4	300	42.7 ¹⁰²		26.3 ¹¹²	30	46	19 13	19 46	52	62	34 40					
16	62	49.6		41.8	315	11.8 ¹⁰¹		15.1 ¹¹²	35	18 58	27	20 03	51	65	35 38					
17	77	49.4	-21	42.2	329	41.0 ¹⁰²	-0	03.9 ¹¹²	40	19 12	19 44	20 24	12 51	67	0 37 35					
18	92	49.1	-21	42.6	344	10.2 ¹⁰²	+0	07.3 ¹¹²	45	19 28	20 04	20 51	12 50	70	0 39 32					
19	107	48.9		43.0	358	39.5 ¹⁰³		18.5 ¹¹²	50	49	31	21 30	50	74	42 28					
20	122	48.7		43.4	13	08.7 ¹⁰²		29.7 ¹¹²	52	19 58	20 44	21 52	49	76	43 27					
21	137	48.5		43.8	27	37.9 ¹⁰²		40.9 ¹¹²	54	20 09	21 00	22 22	49	78	44 25					
22	152	48.2		44.2	42	07.1 ¹⁰²	+0	52.1 ¹¹²	56	22	18	23 19	49	80	45 23					
23	167	48.0		44.6	56	36.4 ¹⁰³	+1	03.2 ¹¹¹	58	36	21 42	** **	48	83	47 21					
24	182	47.8	-21	44.9	71	05.6 ¹⁰²	+1	14.4 ¹¹²	60 S	20 54	22 14	** **	12 48	85	0 48 19					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 19 ^h 21 ^m 7		Mag: -3.9 PMG: 12 ^h 27 ^m				Mag: +1.0 PMG: 15 ^h 18 ^m				Mag: -2.3 PMG: 5 ^h 04 ^m				Mag: +0.5 PMG: 11 ^h 05 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	68	47.4	173	24.2	-23	03.5	130	22.2	-22	16.8	283	41.5	+14	42.0	193	18.2	-17	41.6		
1	83	49.9	188	23.3		03.9	145	22.6		16.4	298	43.9		42.0	208	20.4		41.7		
2	98	52.3	203	22.4		04.3	160	23.0		16.0	313	46.3		42.0	223	22.5		41.8		
3	113	54.8	218	21.4		04.7	175	23.4		15.6	328	48.7		42.0	238	24.7		41.8		
4	128	57.3	233	20.5		05.1	190	23.9		15.3	343	51.1		42.0	253	26.8		41.9		
5	143	59.7	248	19.6	-23	05.5	205	24.3	-22	14.9	358	53.5	+14	41.9	268	29.0	-17	42.0		
6	159	02.2	263	18.7	-23	05.9	220	24.7	-22	14.5	13	55.9	+14	41.9	283	31.2	-17	42.0		
7	174	04.7	278	17.8		06.4	235	25.1		14.1	28	58.3		41.9	298	33.3		42.1		
8	189	07.1	293	16.8		06.8	250	25.6		13.7	44	00.7		41.9	313	35.5		42.2		
9	204	09.6	308	15.9		07.2	265	26.0		13.3	59	03.1		41.9	328	37.7		42.2		
10	219	12.0	323	15.0		07.6	280	26.4		13.0	74	05.4		41.9	343	39.8		42.3		
11	234	14.5	338	14.1	-23	08.0	295	26.8	-22	12.6	89	07.8	+14	41.9	358	42.0	-17	42.4		
12	249	17.0	353	13.2	-23	08.4	310	27.2	-22	12.2	104	10.2	+14	41.8	13	44.1	-17	42.4		
13	264	19.4	8	12.2		08.8	325	27.7		11.8	119	12.6		41.8	28	46.3		42.5		
14	279	21.9	23	11.3		09.2	340	28.1		11.4	134	15.0		41.8	43	48.5		42.6		
15	294	24.4	38	10.4		09.6	355	28.5		11.0	149	17.4		41.8	58	50.6		42.6		
16	309	26.8	53	09.5		10.0	10	28.9		10.6	164	19.8		41.8	73	52.8		42.7		
17	324	29.3	68	08.5	-23	10.4	25	29.4	-22	10.3	179	22.2	+14	41.8	88	55.0	-17	42.8		
18	339	31.8	83	07.6	-23	10.7	40	29.8	-22	09.9	194	24.6	+14	41.8	103	57.1	-17	42.8		
19	354	34.2	98	06.7		11.1	55	30.2		09.5	209	27.0		41.8	118	59.3		42.9		
20	9	36.7	113	05.8		11.5	70	30.6		09.1	224	29.4		41.7	134	01.5		43.0		
21	24	39.1	128	04.8		11.9	85	31.1		08.7	239	31.8		41.7	149	03.6		43.0		
22	39	41.6	143	03.9		12.3	100	31.5		08.3	254	34.2		41.7	164	05.8		43.1		
23	54	44.1	158	03.0		12.7	115	31.9		07.9	269	36.6		41.7	179	07.9		43.2		
24	69	46.5	173	02.1	-23	13.1	130	32.3	-22	07.5	284	39.0	+14	41.7	194	10.1	-17	43.2		
Dif	—		-9		-4		+4		+4		+24		0		+22		-		8	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 49 ^m 0			Edad: 8 ^d 5 PHE { SD: 16:1 PMG: 19 ^h 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	47.8	-21	44.9	71	05.6	+1	14.4	60 N	6 46	7 40	8 35	13 18	20	1 28	84
1	197	47.5		45.3	85	34.9 ¹⁰³		25.6 ¹¹²	58	39	30	19	20	22	27	82
2	212	47.3		45.7	100	04.1 ¹⁰²		36.7 ¹¹¹	56	33	21	8 07	22	24	26	80
3	227	47.1		46.1	114	33.4 ¹⁰³		47.8 ¹¹¹	54	28	13	7 55	24	26	26	77
4	242	46.9		46.5	129	02.6 ¹⁰²	+1	59.0 ¹¹²	52	23	7 06	45	25	28	25	76
5	257	46.6	-21	46.9	143	31.9 ¹⁰³	+2	10.1 ¹¹¹	50	6 18	6 59	7 36	13 26	30	1 25	74
6	272	46.4	-21	47.3	158	01.1 ¹⁰²	+2	21.2 ¹¹¹	45	6 08	6 45	7 18	13 29	33	1 24	70
7	287	46.2		47.7	172	30.4 ¹⁰³		32.2 ¹¹⁰	40	5 59	32	7 02	32	35	23	67
8	302	45.9		48.1	186	59.6 ¹⁰²		43.3 ¹¹¹	35	50	22	6 49	34	38	22	64
9	317	45.7		48.5	201	28.9 ¹⁰³	+2	54.3 ¹¹⁰	30	43	6 12	38	35	41	21	62
10	332	45.5		48.8	215	58.1 ¹⁰²	+3	05.4 ¹¹¹	20	28	5 55	19	39	44	20	58
11	347	45.2	-21	49.2	230	27.4 ¹⁰³	+3	16.4 ¹¹⁰	10 N	5 13	5 39	6 01	13 42	48	1 19	54
12	2	45.0	-21	49.6	244	56.6 ¹⁰²	+3	27.3 ¹⁰⁹	0	4 57	5 23	5 45	13 44	51	1 18	51
13	17	44.8		50.0	259	25.9 ¹⁰³		38.3 ¹¹⁰	10 S	40	5 06	29	47	54	17	47
14	32	44.5		50.4	273	55.1 ¹⁰²	+3	49.2 ¹⁰⁹	20	4 19	4 47	5 12	50	58	15	45
15	47	44.3		50.8	288	24.4 ¹⁰³	+4	00.1 ¹⁰⁹	30	3 52	24	4 51	54	61	14	40
16	62	44.1		51.2	302	53.6 ¹⁰²		11.0 ¹⁰⁹	35	35	4 10	39	56	64	13	38
17	77	43.8	-21	51.5	317	22.8 ¹⁰²	+4	21.9 ¹⁰⁹	40	3 13	3 54	4 26	13 58	66	1 12	36
18	92	43.6	-21	51.9	331	52.1 ¹⁰³	+4	32.7 ¹⁰⁸	45	2 46	3 33	4 09	14 00	70	1 11	33
19	107	43.4		52.3	346	21.3 ¹⁰²		43.5 ¹⁰⁸	50	2 07	3 06	3 49	04	73	10	29
20	122	43.1		52.7	0	50.5 ¹⁰²	+4	54.3 ¹⁰⁸	52	1 45	2 53	39	05	75	10	27
21	137	42.9		53.1	15	19.7 ¹⁰²	+5	05.0 ¹⁰⁷	54	1 15	38	28	07	77	09	25
22	152	42.7		53.4	29	48.9 ¹⁰²		15.7 ¹⁰⁷	56	0 18	2 19	16	09	79	08	24
23	167	42.4		53.8	44	18.1 ¹⁰²		26.4 ¹⁰⁷	58	** **	1 55	3 01	11	81	08	21
24	182	42.2	-21	54.2	58	47.3 ¹⁰²	+5	37.0 ¹⁰⁶	60 S	** **	1 23	2 44	14 13	84	1 07	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 17 ^m 7		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +1.0 PMG: 15 ^h 17 ^m		Mag: -2.3 PMG: 5 ^h 01 ^m		Mag: +0.5 PMG: 11 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	69	46.5	173	02.1	-23	13.1	130	32.3	-22	07.5	284	39.0	+14	41.7	194	10.1	-17	43.2
1	84	49.0	188	01.1		13.5	145	32.8		07.1	299	41.4		41.7	209	12.3		43.3
2	99	51.5	203	00.2		13.8	160	33.2		06.8	314	43.8		41.7	224	14.4		43.4
3	114	53.9	217	59.3		14.2	175	33.6		06.4	329	46.2		41.7	239	16.6		43.4
4	129	56.4	232	58.4		14.6	190	34.0		06.0	344	48.6		41.7	254	18.8		43.5
5	144	58.9	247	57.4	-23	15.0	205	34.5	-22	05.6	359	51.0	+14	41.6	269	20.9	-17	43.6
6	160	01.3	262	56.5	-23	15.4	220	34.9	-22	05.2	14	53.4	+14	41.6	284	23.1	-17	43.6
7	175	03.8	277	55.6		15.7	235	35.3		04.8	29	55.8		41.6	299	25.3		43.7
8	190	06.3	292	54.6		16.1	250	35.7		04.4	44	58.2		41.6	314	27.4		43.8
9	205	08.7	307	53.7		16.5	265	36.2		04.0	60	00.6		41.6	329	29.6		43.8
10	220	11.2	322	52.8		16.9	280	36.6		03.6	75	03.0		41.6	344	31.7		43.9
11	235	13.6	337	51.9	-23	17.2	295	37.0	-22	03.2	90	05.4	+14	41.6	359	33.9	-17	44.0
12	250	16.1	352	50.9	-23	17.6	310	37.4	-22	02.8	105	07.8	+14	41.6	14	36.1	-17	44.0
13	265	18.6	7	50.0		18.0	325	37.9		02.4	120	10.2		41.6	29	38.2		44.1
14	280	21.0	22	49.1		18.4	340	38.3		02.0	135	12.6		41.6	44	40.4		44.2
15	295	23.5	37	48.1		18.7	355	38.7		01.6	150	15.0		41.5	59	42.6		44.2
16	310	26.0	52	47.2		19.1	10	39.1		01.2	165	17.4		41.5	74	44.7		44.3
17	325	28.4	67	46.3	-23	19.5	25	39.6	-22	00.8	180	19.8	+14	41.5	89	46.9	-17	44.4
18	340	30.9	82	45.3	-23	19.8	40	40.0	-22	00.5	195	22.2	+14	41.5	104	49.1	-17	44.4
19	355	33.4	97	44.4		20.2	55	40.4	-22	00.1	210	24.6		41.5	119	51.2		44.5
20	10	35.8	112	43.5		20.5	70	40.8	-21	59.7	225	27.0		41.5	134	53.4		44.6
21	25	38.3	127	42.5		20.9	85	41.3		59.3	240	29.4		41.5	149	55.5		44.6
22	40	40.8	142	41.6		21.3	100	41.7		58.9	255	31.8		41.5	164	57.7		44.7
23	55	43.2	157	40.7		21.6	115	42.1		58.5	270	34.3		41.5	179	59.9		44.8
24	70	45.7	172	39.7	-23	22.0	130	42.6	-21	58.1	285	36.7	+14	41.5	195	02.0	-17	44.8
Dif	—		-9		-4		+4		+4		+24		0		+22		-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 49 ^m 4				Edad: 9 ^d 5 PHE { SD: 16:0 PMG: 20 ^h 48 ^m 4 ^h : 58/6 12 ^h : 58/5 20 ^h : 58/4 R°: 52 ^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	42.2	-21	54.2	58	47.3	+5	37.0	60 N	15 02	15 56	16 51	13 38 22		2 52 84			
1	197	41.9		54.6	73	16.5 ¹⁰²		47.7 ¹⁰⁷	58	17	16 07	16 58	42 25		49 81			
2	212	41.7		54.9	87	45.6 ¹⁰¹	+5	58.2 ¹⁰⁵	56	30	16	17 04	46 27		46 78			
3	227	41.5		55.3	102	14.8 ¹⁰²	+6	08.8 ¹⁰⁶	54	42	24	09	50 28		43 77			
4	242	41.2		55.7	116	43.9 ¹⁰¹		19.3 ¹⁰⁵	52	15 52	31	14	53 30		41 74			
5	257	41.0	-21	56.1	131	13.1 ¹⁰²	+6	29.7 ¹⁰⁴	50	16 01	16 38	17 19	13 56 32		2 39 72			
6	272	40.8	-21	56.4	145	42.2 ¹⁰¹	+6	40.1 ¹⁰⁴	45	16 20	16 53	17 29	14 02 35		2 34 69			
7	287	40.5		56.8	160	11.3 ¹⁰¹	+6	50.5 ¹⁰⁴	40	35	17 05	39	07 38		30 66			
8	302	40.3		57.2	174	40.4 ¹⁰¹	+7	00.9 ¹⁰⁴	35	16 48	16	47	12 40		26 64			
9	317	40.0		57.6	189	09.5 ¹⁰¹		11.1 ¹⁰²	30	17 00	26	17 55	16 42		23 62			
10	332	39.8		57.9	203	38.5 ¹⁰⁰		21.4 ¹⁰³	20	19	43	18 10	23 46		18 58			
11	347	39.6	-21	58.3	218	07.6 ¹⁰¹	+7	31.6 ¹⁰²	10 N	17 37	17 59	18 25	14 30 48		2 13 55			
12	2	39.3	-21	58.7	232	36.7 ¹⁰¹	+7	41.8 ¹⁰²	0	17 53	18 15	18 41	14 35 52		2 09 51			
13	17	39.1		59.0	247	05.7 ¹⁰⁰	+7	51.9 ¹⁰¹	10 S	18 09	32	18 59	41 55		04 49			
14	32	38.8		59.4	261	34.7 ¹⁰⁰	+8	01.9 ¹⁰⁰	20	27	18 51	19 20	48 58		2 00 45			
15	47	38.6	-21	59.8	276	03.7 ¹⁰⁰		11.9 ¹⁰⁰	30	18 48	19 15	19 48	14 55 62		1 54 42			
16	62	38.4	-22	00.1	290	32.7 ¹⁰⁰		21.9 ¹⁰⁰	35	19 00	29	20 05	15 00 63		51 39			
17	77	38.1	-22	00.5	305	01.7 ¹⁰⁰	+8	31.8 ⁹⁹	40	19 14	19 46	20 26	15 04 66		1 48 36			
18	92	37.9	-22	00.9	319	30.6 ⁹⁹	+8	41.7 ⁹⁹	45	19 31	20 07	20 54	15 10 69		1 44 34			
19	107	37.6		01.2	333	59.6 ¹⁰⁰	+8	51.5 ⁹⁸	50	19 51	34	21 34	17 72		39 30			
20	122	37.4		01.6	348	28.5 ⁹⁹	+9	01.3 ⁹⁸	52	20 01	20 48	21 57	20 74		37 29			
21	137	37.2		01.9	2	57.4 ⁹⁹		11.0 ⁹⁷	54	12	21 03	22 29	24 75		34 28			
22	152	36.9		02.3	17	26.3 ⁹⁹		20.6 ⁹⁶	56	25	23	** **	28 77		32 25			
23	167	36.7		02.7	31	55.2 ⁹⁹		30.2 ⁹⁶	58	40	21 47	** **	32 80		29 23			
24	182	36.4	-22	03.0	46	24.1 ⁹⁹	+9	39.7 ⁹⁵	60 S	20 58	22 21	** **	15 37 82		1 26 20			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 13 ^m 8		Mag: -3.9 PMG: 12 ^h 30 ^m				Mag: +1.0 PMG: 15 ^h 17 ^m				Mag: -2.3 PMG: 4 ^h 57 ^m				Mag: +0.5 PMG: 10 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	70	45.7	172	39.7	-23	22.0	130	42.6	-21	58.1	285	36.7	+14	41.5	195	02.0	-17	44.8
1	85	48.1	187	38.8		22.3	145	43.0		57.7	300	39.1		41.4	210	04.2		44.9
2	100	50.6	202	37.9		22.7	160	43.4		57.3	315	41.5		41.4	225	06.4		44.9
3	115	53.1	217	36.9		23.0	175	43.8		56.9	330	43.9		41.4	240	08.5		45.0
4	130	55.5	232	36.0		23.4	190	44.3		56.5	345	46.3		41.4	255	10.7		45.1
5	145	58.0	247	35.1	-23	23.7	205	44.7	-21	56.1	0	48.7	+14	41.4	270	12.9	-17	45.1
6	161	00.5	262	34.1	-23	24.1	220	45.1	-21	55.7	15	51.1	+14	41.4	285	15.0	-17	45.2
7	176	02.9	277	33.2		24.4	235	45.5		55.2	30	53.5		41.4	300	17.2		45.3
8	191	05.4	292	32.3		24.8	250	46.0		54.8	45	55.9		41.4	315	19.3		45.3
9	206	07.9	307	31.3		25.1	265	46.4		54.4	60	58.3		41.4	330	21.5		45.4
10	221	10.3	322	30.4		25.5	280	46.8		54.0	76	00.7		41.4	345	23.7		45.5
11	236	12.8	337	29.5	-23	25.8	295	47.3	-21	53.6	91	03.2	+14	41.4	0	25.8	-17	45.5
12	251	15.2	352	28.5	-23	26.2	310	47.7	-21	53.2	106	05.6	+14	41.4	15	28.0	-17	45.6
13	266	17.7	7	27.6		26.5	325	48.1		52.8	121	08.0		41.4	30	30.2		45.7
14	281	20.2	22	26.6		26.8	340	48.5		52.4	136	10.4		41.3	45	32.3		45.7
15	296	22.6	37	25.7		27.2	355	49.0		52.0	151	12.8		41.3	60	34.5		45.8
16	311	25.1	52	24.8		27.5	10	49.4		51.6	166	15.2		41.3	75	36.7		45.9
17	326	27.6	67	23.8	-23	27.9	25	49.8	-21	51.2	181	17.6	+14	41.3	90	38.8	-17	45.9
18	341	30.0	82	22.9	-23	28.2	40	50.3	-21	50.8	196	20.0	+14	41.3	105	41.0	-17	46.0
19	356	32.5	97	22.0		28.5	55	50.7		50.4	211	22.4		41.3	120	43.1		46.1
20	11	35.0	112	21.0		28.9	70	51.1		50.0	226	24.9		41.3	135	45.3		46.1
21	26	37.4	127	20.1		29.2	85	51.6		49.6	241	27.3		41.3	150	47.5		46.2
22	41	39.9	142	19.1		29.5	100	52.0		49.2	256	29.7		41.3	165	49.6		46.3
23	56	42.4	157	18.2		29.8	115	52.4		48.7	271	32.1		41.3	180	51.8		46.3
24	71	44.8	172	17.3	-23	30.2	130	52.8	-21	48.3	286	34.5	+14	41.3	195	54.0	-17	46.4
Dif	—		-9		-3		+4		+4		+24		0		+22		-1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2			Edad: 10 ^d 5 PHE { 4 ^h : 58 ^m /3 12 ^h : 58 ^m /2 20 ^h : 58 ^m /0																		
	PMG: 11 ^h 49 ^m 8			SD: 15:9 PMG: 21 ^h 40 ^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	182	36.4	-22	03.0	46	24.1	+9	39.7	60 N	6	49	7	44	8	39	14	00	27	4	16	80	
1	197	36.2		03.4	60	52.9	98	49.2	58	42	33		23		07	29			10	78		
2	212	35.9		03.7	75	21.7	98	+9	58.6	56	36	24	8	10	13	31			04	76		
3	227	35.7		04.1	89	50.5	98	+10	08.0	54	30	16	7	58	18	33			4	00	74	
4	242	35.5		04.5	104	19.3	98		17.3	52	25	08		48	23	34			3	55	73	
5	257	35.2	-22	04.8	118	48.1	98	+10	26.5	50	6	21	7	01	7	39	14	28	35	3	51	71
6	272	35.0	-22	05.2	133	16.9	98	+10	35.7	45	6	10	6	47	7	20	14	37	39	3	43	68
7	287	34.7		05.5	147	45.6	97		44.8	40	6	01		34	7	04	45	41		36	65	
8	302	34.5		05.9	162	14.3	97	+10	53.8	35	5	52	23	6	51	52	43			30	63	
9	317	34.2		06.2	176	43.0	97	+11	02.8	30		44	6	14	40	14	58	45		25	61	
10	332	34.0		06.6	191	11.7	97		11.7	20	29	5	56		20	15	09	47		16	57	
11	347	33.7	-22	06.9	205	40.4	97	+11	20.6	10 N	5	14	5	40	6	02	15	18	50	3	08	54
12	2	33.5	-22	07.3	220	09.0	96	+11	29.3	0	4	58	5	24	5	46	15	27	53	3	00	52
13	17	33.3		07.6	234	37.7	97		38.0	10 S		40	5	07	30		36	55		2	53	49
14	32	33.0		08.0	249	06.3	96		46.7	20	4	19	4	48	5	12	46	57		45	46	
15	47	32.8		08.3	263	34.9	96	+11	55.2	30	3	51	24	4	51	15	57	60		36	43	
16	62	32.5		08.7	278	03.5	96	+12	03.7	35		34	4	10	39	16	03	62		30	42	
17	77	32.3	-22	09.0	292	32.0	95	+12	12.2	40	3	13	3	53	4	25	16	10	64	2	24	40
18	92	32.0	-22	09.4	307	00.6	96	+12	20.5	45	2	45	3	32	4	08	16	19	66	2	18	36
19	107	31.8		09.7	321	29.1	95		28.8	50	2	04	3	05	3	48		29	70		09	34
20	122	31.5		10.1	335	57.6	95		37.0	52	1	42	2	51	38		34	71		06	32	
21	137	31.3		10.4	350	26.1	95		45.1	54	1	10		35	26		39	73		2	02	30
22	152	31.0		10.7	4	54.5	94	+12	53.2	56	** ** *	2	16	3	14		45	74		1	57	28
23	167	30.8		11.1	19	23.0	95	+13	01.1	58	** ** *	1	52	2	59		52	76		52	26	
24	182	30.5	-22	11.4	33	51.4	94	+13	09.0	60 S	** ** *	1	17	2	41		16	59	79	1	46	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 09 ^m 9		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: +1.0 PMG: 15 ^h 16 ^m		Mag: -2.3 PMG: 4 ^h 53 ^m		Mag: +0.5 PMG: 10 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	71	44.8	172	17.3	-23	30.2	130	52.8	-21	48.3
1	86	47.3	187	16.3		30.5	145	53.3		47.9
2	101	49.7	202	15.4		30.8	160	53.7		47.5
3	116	52.2	217	14.4		31.1	175	54.1		47.1
4	131	54.7	232	13.5		31.5	190	54.6		46.7
5	146	57.1	247	12.6	-23	31.8	205	55.0	-21	46.3
6	161	59.6	262	11.6	-23	32.1	220	55.4	-21	45.9
7	177	02.1	277	10.7		32.4	235	55.9		45.5
8	192	04.5	292	09.7		32.7	250	56.3		45.0
9	207	07.0	307	08.8		33.1	265	56.7		44.6
10	222	09.5	322	07.8		33.4	280	57.2		44.2
11	237	11.9	337	06.9	-23	33.7	295	57.6	-21	43.8
12	252	14.4	352	06.0	-23	34.0	310	58.0	-21	43.4
13	267	16.9	7	05.0		34.3	325	58.5		43.0
14	282	19.3	22	04.1		34.6	340	58.9		42.6
15	297	21.8	37	03.1		34.9	355	59.3		42.1
16	312	24.2	52	02.2		35.2	10	59.7		41.7
17	327	26.7	67	01.2	-23	35.5	26	00.2	-21	41.3
18	342	29.2	82	00.3	-23	35.8	41	00.6	-21	40.9
19	357	31.6	96	59.3		36.1	56	01.0		40.5
20	12	34.1	111	58.4		36.5	71	01.5		40.1
21	27	36.6	126	57.4		36.8	86	01.9		39.6
22	42	39.0	141	56.5		37.1	101	02.3		39.2
23	57	41.5	156	55.6		37.4	116	02.8		38.8
24	72	44.0	171	54.6	-23	37.6	131	03.2	-21	38.4
Dif	—		-9		-3		+4		+4	
									+24	
									0	
									+22	
									-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 50 ^m 2			Edad: 11 ^d 5 PHE { SD: 15'8 PMG: 22 ^h 32 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'		h m	h m	h m	h m	h m	m	h m	m			
0	182	30.5	-22	11.4	33	51.4	+13 09.0	60 N	14 59	15 55	16 50	14 27	32	5 36	76			
1	197	30.3		11.8	48	19.8	94 16.8	58	15 15	16 05	16 57		36 34	28	74			
2	212	30.0		12.1	62	48.2	94 24.6	56	29	15	17 03		44 36	20	72			
3	227	29.8		12.4	77	16.6	94 32.2	54	40	23	08		51 38	14	70			
4	242	29.5		12.8	91	45.0	94 39.8	52	15 51	30	14	14 57	39	08	69			
5	257	29.3	-22	13.1	106	13.3	93 +13 47.3	50	16 00	16 37	17 18	15 03	40	5 02	68			
6	272	29.0	-22	13.5	120	41.7	94 +13 54.7	45	16 19	16 52	17 29	15 16	42	4 51	65			
7	287	28.8		13.8	135	10.0	93 +14 02.0	40	35	17 05	39	26	44	41	63			
8	302	28.5		14.1	149	38.3	93 09.3	35	16 48	16	47	35	46	33	61			
9	317	28.3		14.5	164	06.5	92 16.4	30	17 00	26	17 55	43	47	26	59			
10	332	28.0		14.8	178	34.8	93 23.5	20	20	17 44	18 11	15 56	50	13	57			
11	347	27.8	-22	15.1	193	03.1	93 +14 30.5	10 N	17 37	18 00	18 26	16 08	52	4 02	55			
12	2	27.5	-22	15.5	207	31.3	92 +14 37.4	0	17 54	18 16	18 42	16 20	53	3 52	53			
13	17	27.3		15.8	221	59.5	92 44.2	10 S	18 11	33	19 00	31	55	42	51			
14	32	27.0		16.1	236	27.7	92 50.9	20	28	18 53	22	43	57	31	49			
15	47	26.8		16.5	250	55.9	92 +14 57.6	30	18 49	19 16	19 49	16 57	59	19	46			
16	62	26.5		16.8	265	24.1	92 +15 04.1	35	19 02	31	20 07	17 05	60	12	44			
17	77	26.3	-22	17.1	279	52.3	92 +15 10.6	40	19 16	19 48	20 29	17 14	62	3 04	42			
18	92	26.0	-22	17.4	294	20.4	91 +15 17.0	45	19 33	20 09	20 57	17 25	64	2 54	41			
19	107	25.8		17.8	308	48.5	91 23.2	50	19 54	37	21 38	39	65	43	38			
20	122	25.5		18.1	323	16.7	92 29.4	52	20 04	20 51	22 02	45	66	38	36			
21	137	25.3		18.4	337	44.8	91 35.5	54	15	21 07	22 36	52	67	32	35			
22	152	25.0		18.7	352	12.9	91 41.5	56	28	27	** **	17 59	69	25	34			
23	167	24.7		19.1	6	41.0	91 47.4	58	20 44	21 52	** **	18 08	70	18	32			
24	182	24.5	-22	19.4	21	09.1	91 +15 53.2	60 S	21 02	22 28	** **	18 18	72	2 10	29			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 19 ^h 05 ^m 9		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +1.0 PMG: 15 ^h 15 ^m			Mag: -2.3 PMG: 4 ^h 49 ^m			Mag: +0.5 PMG: 10 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	72	44.0	171	54.6	-23	37.6	131	03.2	-21	38.4	287	32.6	+14	41.2	196	45.9	-17	48.0
1	87	46.4	186	53.7		37.9	146	03.6		38.0	302	35.0		41.2	211	48.1		48.0
2	102	48.9	201	52.7		38.2	161	04.1		37.5	317	37.4		41.2	226	50.3		48.1
3	117	51.3	216	51.8		38.5	176	04.5		37.1	332	39.8		41.2	241	52.4		48.1
4	132	53.8	231	50.8		38.8	191	04.9		36.7	347	42.2		41.1	256	54.6		48.2
5	147	56.3	246	49.9	-23	39.1	206	05.4	-21	36.3	2	44.7	+14	41.1	271	56.7	-17	48.3
6	162	58.7	261	48.9	-23	39.4	221	05.8	-21	35.9	17	47.1	+14	41.1	286	58.9	-17	48.3
7	178	01.2	276	48.0		39.7	236	06.3		35.4	32	49.5		41.1	302	01.1		48.4
8	193	03.7	291	47.0		40.0	251	06.7		35.0	47	51.9		41.1	317	03.2		48.5
9	208	06.1	306	46.1		40.3	266	07.1		34.6	62	54.4		41.1	332	05.4		48.5
10	223	08.6	321	45.1		40.6	281	07.6		34.2	77	56.8		41.1	347	07.6		48.6
11	238	11.1	336	44.2	-23	40.8	296	08.0	-21	33.7	92	59.2	+14	41.1	2	09.7	-17	48.7
12	253	13.5	351	43.2	-23	41.1	311	08.4	-21	33.3	108	01.6	+14	41.1	17	11.9	-17	48.7
13	268	16.0	6	42.3		41.4	326	08.9		32.9	123	04.1		41.1	32	14.1		48.8
14	283	18.5	21	41.3		41.7	341	09.3		32.5	138	06.5		41.1	47	16.2		48.9
15	298	20.9	36	40.4		42.0	356	09.7		32.0	153	08.9		41.1	62	18.4		48.9
16	313	23.4	51	39.4		42.2	11	10.2		31.6	168	11.4		41.1	77	20.6		49.0
17	328	25.8	66	38.5	-23	42.5	26	10.6	-21	31.2	183	13.8	+14	41.1	92	22.7	-17	49.1
18	343	28.3	81	37.5	-23	42.8	41	11.0	-21	30.8	198	16.2	+14	41.1	107	24.9	-17	49.1
19	358	30.8	96	36.6		43.1	56	11.5		30.3	213	18.6		41.1	122	27.1		49.2
20	13	33.2	111	35.6		43.3	71	11.9		29.9	228	21.1		41.1	137	29.2		49.2
21	28	35.7	126	34.7		43.6	86	12.3		29.5	243	23.5		41.1	152	31.4		49.3
22	43	38.2	141	33.7		43.9	101	12.8		29.0	258	25.9		41.1	167	33.6		49.4
23	58	40.6	156	32.8		44.1	116	13.2		28.6	273	28.4		41.1	182	35.7		49.4
24	73	43.1	171	31.8	-23	44.4	131	13.7	-21	28.2	288	30.8	+14	41.1	197	37.9	-17	49.5
Dif	—		-9		-3		+4		+4		+24		0		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 50 ^m 6			Edad: 12 ^d 5 PHE { 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 57/1 PMG: 23 ^h 25 ^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	182	24.5	-22	19.4	21	09.1	+15	53.2	60 N	6	51	7	47	8	42	14	59
1	197	24.2		19.7	35	37.1	+15	59.0	58	45		36	26	15	10	43	42
2	212	24.0		20.0	50	05.2	+16	04.6	56	38		27	13	20	43	32	66
3	227	23.7		20.4	64	33.3		10.1	55	33		18	8	01	29	44	24
4	242	23.5		20.7	79	01.3		15.6	55	28		11	7	51	36	45	17
5	257	23.2	-22	21.0	93	29.3	+16	20.9	53	50	6	23	7	04	7	42	15
6	272	23.0	-22	21.3	107	57.4	+16	26.1	52	45	6	12	6	49	7	22	15
7	287	22.7		21.6	122	25.4		31.3	52	40	6	02		36	7	06	16
8	302	22.5		22.0	136	53.4		36.3	50	35	5	54		25	6	53	21
9	317	22.2		22.3	151	21.4		41.3	50	30		45	6	15	41	30	50
10	332	21.9		22.6	165	49.4		46.2	49	20		30		5	57	21	16
11	347	21.7	-22	22.9	180	17.4	+16	50.9	47	10 N	5	15		5	41	6	03
12	2	21.4	-22	23.2	194	45.4	+16	55.6	47	0	4	58		5	25	5	47
13	17	21.2		23.5	209	13.4	+17	00.1	45	10 S		40		5	07	30	26
14	32	20.9		23.8	223	41.4		04.6	45	20	4	19		4	48	5	12
15	47	20.6		24.2	238	09.4		08.9	43	30	3	51		24	4	51	17
16	62	20.4		24.5	252	37.4		13.2	43	35		34		4	10	39	18
17	77	20.1	-22	24.8	267	05.4	+17	17.4	42	40	3	12		3	52	4	25
18	92	19.9	-22	25.1	281	33.4	+17	21.4	40	45		2	43	3	31	4	08
19	107	19.6		25.4	296	01.4		25.4	40	50	2	02		3	04	3	47
20	122	19.4		25.7	310	29.4		29.2	38	52		1	38		2	50	37
21	137	19.1		26.0	324	57.4		33.0	38	54		1	05		33	25	18
22	152	18.8		26.3	339	25.4		36.6	36	56	** ** *				2	14	3
23	167	18.6		26.6	353	53.4		40.2	36	58	** ** *				1	48	2
24	182	18.3	-22	26.9	8	21.4	+17	43.6	34	60 S	** ** *				1	12	2

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 02 ^m 0		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.0 PMG: 15 ^h 15 ^m			Mag: -2.3 PMG: 4 ^h 45 ^m			Mag: +0.5 PMG: 10 ^h 48 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	73	43.1	171	31.8	-23	44.4	131	13.7	-21	28.2	288	30.8	+14	41.1			
1	88	45.6	186	30.9		44.7	146	14.1		27.8	303	33.2		41.1			
2	103	48.0	201	29.9		44.9	161	14.5		27.3	318	35.6		41.1			
3	118	50.5	216	29.0		45.2	176	15.0		26.9	333	38.1		41.1			
4	133	53.0	231	28.0		45.5	191	15.4		26.5	348	40.5		41.1			
5	148	55.4	246	27.1	-23	45.7	206	15.8	-21	26.0	3	42.9	+14	41.1			
6	163	57.9	261	26.1	-23	46.0	221	16.3	-21	25.6	18	45.4	+14	41.1			
7	179	00.3	276	25.1		46.2	236	16.7		25.2	33	47.8		41.1			
8	194	02.8	291	24.2		46.5	251	17.2		24.7	48	50.2		41.1			
9	209	05.3	306	23.2		46.8	266	17.6		24.3	63	52.7		41.1			
10	224	07.7	321	22.3		47.0	281	18.0		23.9	78	55.1		41.1			
11	239	10.2	336	21.3	-23	47.3	296	18.5	-21	23.4	93	57.5	+14	41.1			
12	254	12.7	351	20.4	-23	47.5	311	18.9	-21	23.0	109	00.0	+14	41.1			
13	269	15.1	6	19.4		47.8	326	19.4		22.6	124	02.4		41.1			
14	284	17.6	21	18.5		48.0	341	19.8		22.1	139	04.8		41.1			
15	299	20.1	36	17.5		48.3	356	20.2		21.7	154	07.3		41.1			
16	314	22.5	51	16.6		48.5	11	20.7		21.3	169	09.7		41.1			
17	329	25.0	66	15.6	-23	48.8	26	21.1	-21	20.8	184	12.1	+14	41.1			
18	344	27.5	81	14.6	-23	49.0	41	21.5	-21	20.4	199	14.6	+14	41.1			
19	359	29.9	96	13.7		49.2	56	22.0		19.9	214	17.0		41.1			
20	14	32.4	111	12.7		49.5	71	22.4		19.5	229	19.5		41.1			
21	29	34.8	126	11.8		49.7	86	22.9		19.1	244	21.9		41.1			
22	44	37.3	141	10.8		50.0	101	23.3		18.6	259	24.3		41.1			
23	59	39.8	156	09.9		50.2	116	23.7		18.2	274	26.8		41.1			
24	74	42.2	171	08.9	-23	50.4	131	24.2	-21	17.8	289	29.2	+14	41.1			
Dif	—		-10		-3		+4		+4		+24		0		+22		-1

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 51 ^m 0			Edad: 13 ^d 5 PHE { 4 ^h : 56:9 12 ^h : 56:7 20 ^h : 56:5 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	182	18.3	-22	26.9	8	21.4	+17	43.6	60 N	14 58	15 53	16 49	15 40	51	8 01	57		
1	197	18.1		27.2	22	49.4	90	47.0	58	15 14	16 04	16 56	15 53	50	7 48	58		
2	212	17.8		27.5	37	17.4	90	50.2	56	27	14	17 02	16 03	51	38	57		
3	227	17.5		27.8	51	45.5	91	53.4	54	39	22	08	13	51	28	57		
4	242	17.3		28.1	66	13.5	90	56.4	52	50	30	13	21	51	20	57		
5	257	17.0	-22	28.4	80	41.5	90	+17 59.3	50	15 59	16 37	17 18	16 29	51	7 13	56		
6	272	16.8	-22	28.8	95	09.6	91	+18 02.2	45	16 19	16 52	17 29	16 45	51	6 57	55		
7	287	16.5		29.1	109	37.6	90	04.9	40	35	17 05	39	16 58	52	44	55		
8	302	16.2		29.4	124	05.7	91	07.5	35	16 48	16	47	17 10	51	33	54		
9	317	16.0		29.6	138	33.8	91	10.0	30	17 00	26	17 56	20	51	23	54		
10	332	15.7		29.9	153	01.9	91	12.5	20	20	17 44	18 11	37	52	6 06	54		
11	347	15.4	-22	30.2	167	30.0	91	+18 14.8	10 N	17 38	18 01	18 27	17 52	52	5 52	53		
12	2	15.2	-22	30.5	181	58.1	91	+18 17.0	0	17 55	18 17	18 43	18 06	52	5 38	53		
13	17	14.9		30.8	196	26.2	91	19.1	10 S	18 12	34	19 01	20	52	24	53		
14	32	14.7		31.1	210	54.3	91	21.1	20	30	18 54	23	35	52	5 10	51		
15	47	14.4		31.4	225	22.5	92	23.0	30	18 51	19 18	19 51	18 52	52	4 53	51		
16	62	14.1		31.7	239	50.7	92	24.8	35	19 03	33	20 09	19 02	52	43	51		
17	77	13.9	-22	32.0	254	18.9	92	+18 26.5	40	19 18	19 50	20 31	19 13	53	4 32	50		
18	92	13.6	-22	32.3	268	47.1	92	+18 28.1	45	19 35	20 12	21 00	19 27	52	4 19	50		
19	107	13.3		32.6	283	15.3	92	29.6	50	19 56	40	21 42	43	53	4 04	48		
20	122	13.1		32.9	297	43.6	93	31.0	52	20 07	20 54	22 06	19 51	52	3 56	48		
21	137	12.8		33.2	312	11.8	92	32.2	54	18	21 10	22 42	20 00	52	48	48		
22	152	12.5		33.5	326	40.1	93	33.4	56	31	31	** ** *	10	52	39	47		
23	167	12.3		33.7	341	08.4	93	34.5	58	20 47	21 57	** ** *	21	52	28	47		
24	182	12.0	-22	34.0	355	36.7	93	+18 35.5	60 S	21 06	22 35	** ** *	20 33	52	3 16	46		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 58 ^m 1		Mag: -3.9 PMG: 12 ^h 36 ^m				Mag: +1.0 PMG: 15 ^h 14 ^m				Mag: -2.3 PMG: 4 ^h 41 ^m				Mag: +0.5 PMG: 10 ^h 44 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	42.2	171	08.9	-23	50.4	131	24.2	-21	17.8	289	29.2	+14	41.1	198	29.9	-17	51.0
1	89	44.7	186	07.9		50.7	146	24.6		17.3	304	31.6		41.1	213	32.0		51.1
2	104	47.2	201	07.0		50.9	161	25.1		16.9	319	34.1		41.1	228	34.2		51.2
3	119	49.6	216	06.0		51.2	176	25.5		16.4	334	36.5		41.1	243	36.4		51.2
4	134	52.1	231	05.1		51.4	191	25.9		16.0	349	39.0		41.1	258	38.5		51.3
5	149	54.6	246	04.1	-23	51.6	206	26.4	-21	15.6	4	41.4	+14	41.1	273	40.7	-17	51.4
6	164	57.0	261	03.1	-23	51.8	221	26.8	-21	15.1	19	43.8	+14	41.1	288	42.9	-17	51.4
7	179	59.5	276	02.2		52.1	236	27.3		14.7	34	46.3		41.1	303	45.0		51.5
8	195	01.9	291	01.2		52.3	251	27.7		14.2	49	48.7		41.1	318	47.2		51.6
9	210	04.4	306	00.3		52.5	266	28.2		13.8	64	51.2		41.1	333	49.4		51.6
10	225	06.9	320	59.3		52.7	281	28.6		13.3	79	53.6		41.1	348	51.5		51.7
11	240	09.3	335	58.4	-23	53.0	296	29.0	-21	12.9	94	56.0	+14	41.1	3	53.7	-17	51.7
12	255	11.8	350	57.4	-23	53.2	311	29.5	-21	12.5	109	58.5	+14	41.1	18	55.9	-17	51.8
13	270	14.3	5	56.4		53.4	326	29.9		12.0	125	00.9		41.1	33	58.0		51.9
14	285	16.7	20	55.5		53.6	341	30.4		11.6	140	03.4		41.2	49	00.2		51.9
15	300	19.2	35	54.5		53.9	356	30.8		11.1	155	05.8		41.2	64	02.4		52.0
16	315	21.7	50	53.6		54.1	11	31.2		10.7	170	08.3		41.2	79	04.5		52.1
17	330	24.1	65	52.6	-23	54.3	26	31.7	-21	10.2	185	10.7	+14	41.2	94	06.7	-17	52.1
18	345	26.6	80	51.6	-23	54.5	41	32.1	-21	09.8	200	13.1	+14	41.2	109	08.9	-17	52.2
19	0	29.1	95	50.7		54.7	56	32.6		09.3	215	15.6		41.2	124	11.0		52.2
20	15	31.5	110	49.7		54.9	71	33.0		08.9	230	18.0		41.2	139	13.2		52.3
21	30	34.0	125	48.7		55.1	86	33.5		08.4	245	20.5		41.2	154	15.4		52.4
22	45	36.4	140	47.8		55.3	101	33.9		08.0	260	22.9		41.2	169	17.5		52.4
23	60	38.9	155	46.8		55.5	116	34.4		07.5	275	25.4		41.2	184	19.7		52.5
24	75	41.4	170	45.9	-23	55.8	131	34.8	-21	07.1	290	27.8	+14	41.2	199	21.9	-17	52.6
Dif	—		-10		-2		+4		+4		+24		0		+22		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 51 ^m 4				Edad: 14 ^d 5 PHE { 4 ^h : 56/3 12 ^h : 56/1 20 ^h : 56/0 PMG: 0 ^h 18 ^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	182	12.0	-22	34.0	355	36.7	+18	35.5	8	60 N	6 54	7 50	8 46	16 31	58	8 58	47	
1	197	11.7		34.3	10	05.1	94	36.3	8	58	47	39	30	43	58	46	47	
2	212	11.5		34.6	24	33.5	94	37.1	6	56	41	29	16	16 54	57	35	47	
3	227	11.2		34.9	39	01.9	94	37.7	6	54	35	21	8 04	17 04	56	25	48	
4	242	10.9		35.2	53	30.3	94	38.3	6	52	30	13	7 53	12 56		17	48	
5	257	10.7	-22	35.5	67	58.8	95	+18	38.8	5	50	6 25	7 06	17 20	56	8 09	48	
6	272	10.4	-22	35.7	82	27.2	94	+18	39.1	3	45	6 14	6 51	17 36	55	7 52	50	
7	287	10.1		36.0	96	55.7	95	39.4	3	40	6 04	38	7 08	17 50	54	39	49	
8	302	09.9		36.3	111	24.3	96	39.5	1	35	5 55	27	6 55	18 01	54	27	50	
9	317	09.6		36.6	125	52.8	95	39.6	1	30	47	6 16	43	11 53		17	51	
10	332	09.3		36.9	140	21.4	96	39.5	1	20	31	5 58	22	29 52		7 00	51	
11	347	09.1	-22	37.1	154	50.1	97	+18	39.4	1	10 N	5 16	5 42	6 04	18 44	51	6 45	51
12	2	08.8	-22	37.4	169	18.7	96	+18	39.1	3	0	4 59	5 25	5 48	18 58	50	6 31	51
13	17	08.5		37.7	183	47.4	97	38.8	3	10 S	41	5 08	31	19 12	50	17	51	
14	32	08.3		38.0	198	16.1	97	38.3	5	20	4 19	4 48	5 13	27 49		6 01	53	
15	47	08.0		38.3	212	44.9	98	37.8	5	30	3 51	24	4 51	44 48		5 44	53	
16	62	07.7		38.5	227	13.6	97	37.2	6	35	33	4 10	39	19 54	48	34	53	
17	77	07.5	-22	38.8	241	42.5	99	+18	36.4	8	40	3 11	3 52	4 25	20 06	47	5 22	53
18	92	07.2	-22	39.1	256	11.3	98	+18	35.6	8	45	2 42	3 31	4 07	20 19	46	5 09	53
19	107	06.9		39.3	270	40.2	99	34.6	10	50	2 00	3 02	3 46	36 45		4 52	54	
20	122	06.6		39.6	285	09.1	99	33.6	10	52	1 36	2 48	36	43 45		44	54	
21	137	06.4		39.9	299	38.1	100	32.4	12	54	1 00	32	24	20 52	44	36	54	
22	152	06.1		40.2	314	07.1	100	31.2	12	56	** *	2 11	3 11	21 02	43	26	54	
23	167	05.8		40.4	328	36.1	100	29.9	13	58	** *	1 45	2 55	13 42		15	54	
24	182	05.6	-22	40.7	343	05.2	101	+18	28.5	14	60 S	** *	1 07	2 36	21 25	41	4 02	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 54 ^m 1		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +1.0 PMG: 15 ^h 13 ^m		Mag: -2.3 PMG: 4 ^h 37 ^m		Mag: +0.5 PMG: 10 ^h 41 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	75	41.4	170	45.9	-23	55.8	131	34.8	-21	07.1
1	90	43.8	185	44.9		56.0	146	35.2		06.6
2	105	46.3	200	43.9		56.2	161	35.7		06.2
3	120	48.8	215	43.0		56.4	176	36.1		05.7
4	135	51.2	230	42.0		56.6	191	36.6		05.3
5	150	53.7	245	41.0	-23	56.8	206	37.0	-21	04.8
6	165	56.2	260	40.1	-23	57.0	221	37.5	-21	04.4
7	180	58.6	275	39.1		57.2	236	37.9		03.9
8	196	01.1	290	38.2		57.4	251	38.3		03.5
9	211	03.6	305	37.2		57.6	266	38.8		03.0
10	226	06.0	320	36.2		57.8	281	39.2		02.6
11	241	08.5	335	35.3	-23	57.9	296	39.7	-21	02.1
12	256	10.9	350	34.3	-23	58.1	311	40.1	-21	01.7
13	271	13.4	5	33.3		58.3	326	40.6		01.2
14	286	15.9	20	32.4		58.5	341	41.0		00.8
15	301	18.3	35	31.4		58.7	356	41.5	-21	00.3
16	316	20.8	50	30.4		58.9	11	41.9	-20	59.9
17	331	23.3	65	29.5	-23	59.1	26	42.4	-20	59.4
18	346	25.7	80	28.5	-23	59.3	41	42.8	-20	58.9
19	1	28.2	95	27.5		59.4	56	43.3		58.5
20	16	30.7	110	26.6		59.6	71	43.7		58.0
21	31	33.1	125	25.6	-23	59.8	86	44.1		57.6
22	46	35.6	140	24.6	-24	00.0	101	44.6		57.1
23	61	38.1	155	23.7	-24	00.2	116	45.0		56.7
24	76	40.5	170	22.7	-24	00.3	131	45.5	-20	56.2
Dif	—		-10		-2		+4		+5	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 15 ^d 5 PHE { 4 ^h : 55:8 12 ^h : 55:6 20 ^h : 55:4					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 51 ^m 8			SD: 15:2 PMG: 1 ^h 10 ^m R°: 50 ^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	m	h m m	m
0	182	05.6	-22 40.7	343	05.2	+18 28.5	16	60 N	14 56	15 52	16 48	17 29	65	9 45	36
1	197	05.3		41.0	357	34.3 ¹⁰¹	26.9	58	15 12	16 03	16 55	41	63	33	38
2	212	05.0		41.2	12	03.4 ¹⁰¹	25.3	56	26	13	17 01	17 51	62	22	39
3	227	04.8		41.5	26	32.6 ¹⁰²	23.6	54	38	22	07	18 00	61	13	40
4	242	04.5		41.8	41	01.8 ¹⁰²	21.8	52	49	29	13	08	60	9	05
5	257	04.2	-22 42.0	55	31.1 ¹⁰³	+18 19.9	19	50	15 58	16 36	17 18	18 16	59	8	57
6	272	03.9	-22 42.3	70	00.4 ¹⁰³	+18 17.9	20	45	16 18	16 52	17 29	18 31	57	8	42
7	287	03.7		42.6	84	29.8 ¹⁰⁴	15.8	40	35	17 05	39	44	56	28	45
8	302	03.4		42.8	98	59.2 ¹⁰⁴	13.6	35	16 48	16	48	18 55	54	17	46
9	317	03.1		43.1	113	28.6 ¹⁰⁴	11.4	30	17 00	26	17 56	19 04	54	8	08
10	332	02.8		43.3	127	58.1 ¹⁰⁵	09.0	20	21	17 45	18 12	21	51	7	51
11	347	02.6	-22 43.6	142	27.6 ¹⁰⁵	+18 06.5	25	10 N	17 39	18 01	18 28	19 35	50	7	36
12	2	02.3	-22 43.9	156	57.2 ¹⁰⁶	+18 04.0	25	0	17 56	18 18	18 44	19 48	49	7	22
13	17	02.0		44.1	171	26.8 ¹⁰⁶	26	10 S	18 13	36	19 03	20 02	47	7	08
14	32	01.8		44.4	185	56.4 ¹⁰⁶	28	20	31	18 55	24	16	46	6	54
15	47	01.5		44.6	200	26.1 ¹⁰⁷	28	30	18 52	19 20	19 53	32	44	37	53
16	62	01.2		44.9	214	55.9 ¹⁰⁸	29	35	19 05	34	20 11	42	43	27	54
17	77	00.9	-22 45.1	229	25.7 ¹⁰⁸	+17 49.9	30	40	19 20	19 52	20 33	20 53	41	6	15
18	92	00.7	-22 45.4	243	55.5 ¹⁰⁸	+17 46.9	30	45	19 37	20 14	21 02	21 05	40	6	02
19	107	00.4		45.7	258	25.4 ¹⁰⁹	32	50	19 59	42	21 45	21	38	5	46
20	122	00.1		45.9	272	55.4 ¹¹⁰	33	52	20 09	20 57	22 11	28	37	38	58
21	136	59.8		46.2	287	25.3 ¹⁰⁹	33	54	21	21 14	22 48	36	36	30	59
22	151	59.6		46.4	301	55.4 ¹¹¹	34	56	34	21 34	** **	45	35	20	60
23	166	59.3		46.7	316	25.4 ¹¹⁰	35	58	20 50	22 01	** **	21	55	5	09
24	181	59.0	-22 46.9	330	55.6 ¹¹²	+17 26.6	36	60 S	21 09	22 42	** **	22	06	32	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 50 ^m 2		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.0 PMG: 15 ^h 13 ^m		Mag: -2.3 PMG: 4 ^h 33 ^m		Mag: +0.5 PMG: 10 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	76	40.5	170	22.7	131	45.5	291	26.6	200	13.9
1	91	43.0	185	21.8	146	45.9	306	29.1	215	16.1
2	106	45.4	200	20.8	161	46.4	321	31.5	230	18.2
3	121	47.9	215	19.8	176	46.8	336	34.0	245	20.4
4	136	50.4	230	18.9	191	47.3	351	36.4	260	22.6
5	151	52.8	245	17.9	206	47.7	6	38.9	275	24.7
6	166	55.3	260	16.9	221	48.2	21	41.3	290	26.9
7	181	57.8	275	16.0	236	48.6	36	43.8	305	29.1
8	197	00.2	290	15.0	251	49.1	51	46.2	320	31.2
9	212	02.7	305	14.0	266	49.5	66	48.7	335	33.4
10	227	05.2	320	13.0	281	50.0	81	51.2	350	35.6
11	242	07.6	335	12.1	296	50.4	96	53.6	5	37.8
12	257	10.1	350	11.1	311	50.9	111	56.1	20	39.9
13	272	12.6	5	10.1	326	51.3	126	58.5	35	42.1
14	287	15.0	20	09.2	341	51.8	142	01.0	50	44.3
15	302	17.5	35	08.2	356	52.2	157	03.5	65	46.4
16	317	19.9	50	07.2	11	52.7	172	05.9	80	48.6
17	332	22.4	65	06.3	26	53.1	187	08.4	95	50.8
18	347	24.9	80	05.3	41	53.6	202	10.8	110	52.9
19	2	27.3	95	04.3	56	54.0	217	13.3	125	55.1
20	17	29.8	110	03.4	71	54.5	232	15.8	140	57.3
21	32	32.3	125	02.4	86	54.9	247	18.2	155	59.4
22	47	34.7	140	01.4	101	55.4	262	20.7	171	01.6
23	62	37.2	155	00.5	116	55.8	277	23.1	186	03.8
24	77	39.7	169	59.5	131	56.3	292	25.6	201	05.9
Dif	—		-10	-2	+4	+5	+25	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 52 ^m 3			Edad: 16 ^d 5 PHE { 4 ^h : 55/2 12 ^h : 55/1 20 ^h : 54/9 SD: 15/1 PMG: 2 ^h 00 ^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	m	
0	181	59.0	-22	46.9	330	55.6	+17	26.6	60 N	6 57	7 53	8 49	18 34	68	10 21	29		
1	196	58.7		47.2	345	25.7 ¹¹¹		22.9 ³⁷	58	49	42	32	44	66	11	30		
2	211	58.5		47.4	359	56.0 ¹¹³		19.2 ³⁷	56	43	32	18	18 53	64	10 01	32		
3	226	58.2		47.7	14	26.2 ¹¹²		15.3 ³⁹	54	37	23	8 06	19 01	63	9 53	33		
4	241	57.9		47.9	28	56.5 ¹¹³		11.4 ³⁹	52	32	15	7 56		08	62	46	34	
5	256	57.6	-22	48.2	43	26.9 ¹¹⁴	+17	07.4 ⁴⁰	50	6 27	7 08	7 46	19 15	60	9 39	35		
6	271	57.3	-22	48.4	57	57.3 ¹¹⁴	+17	03.3 ⁴¹	45	6 15	6 53	7 26	19 28	58	9 25	37		
7	286	57.1		48.6	72	27.8 ¹¹⁵	+16	59.1 ⁴²	40	6 06	39	7 10	40	56	13	39		
8	301	56.8		48.9	86	58.3 ¹¹⁵		54.9 ⁴²	35	5 57	28	6 56	49	55	9 03	40		
9	316	56.5		49.1	101	28.9 ¹¹⁶		50.6 ⁴³	30		48	18	44	58	8 54	42		
10	331	56.2		49.4	115	59.5 ¹¹⁶		46.2 ⁴⁴	20	32	6 00	24	20 12	51	38	44		
11	346	56.0	-22	49.6	130	30.2 ¹¹⁷	+16	41.7 ⁴⁵	10 N	5 17	5 43	6 06	20 25	49	8 25	46		
12	1	55.7	-22	49.9	145	00.9 ¹¹⁷	+16	37.2 ⁴⁵	0	5 00	5 26	5 49	20 37	47	8 12	48		
13	16	55.4		50.1	159	31.7 ¹¹⁸		32.5 ⁴⁷	10 S	4 42	5 09	31	20 49	45	7 59	50		
14	31	55.1		50.3	174	02.5 ¹¹⁸		27.8 ⁴⁷	20	4 20	4 49	5 13	21 02	42	46	51		
15	46	54.8		50.6	188	33.3 ¹¹⁸		23.0 ⁴⁸	30	3 51	24	4 52	16	40	30	53		
16	61	54.6		50.8	203	04.3 ¹²⁰		18.2 ⁴⁸	35	33	4 10	39	25	38	21	55		
17	76	54.3	-22	51.0	217	35.2 ¹¹⁹	+16	13.3 ⁴⁹	40	3 11	3 52	4 24	21 34	37	7 11	56		
18	91	54.0	-22	51.3	232	06.3 ¹²¹	+16	08.3 ⁵⁰	45	2 41	3 30	4 07	21 45	35	6 58	58		
19	106	53.7		51.5	246	37.3 ¹²⁰	+16	03.2 ⁵¹	50	1 59	3 02	3 45	21 59	32	43	60		
20	121	53.4		51.8	261	08.4 ¹²¹	+15	58.0 ⁵²	52	1 33	2 47	35	22 05	31	36	61		
21	136	53.2		52.0	275	39.6 ¹²²		52.8 ⁵²	54	0 56	30	23	12	30	29	62		
22	151	52.9		52.2	290	10.8 ¹²²		47.5 ⁵³	56	** **	2 09	3 10	20	28	20	63		
23	166	52.6		52.5	304	42.1 ¹²³		42.2 ⁵³	58	** **	1 42	2 54	28	27	6	10	65	
24	181	52.3	-22	52.7	319	13.4 ¹²³	+15	36.8 ⁵⁴	60 S	** **	1 02	2 34	22 38	25	5 59	67		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 46 ^m 3			Mag: -3.9 PMG: 12 ^h 41 ^m			Mag: +1.0 PMG: 15 ^h 12 ^m			Mag: -2.4 PMG: 4 ^h 30 ^m			Mag: +0.5 PMG: 10 ^h 34 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	77	39.7	169	59.5	-24	04.2	131	56.3	-20	45.1	292	25.6	+14	41.5	201	05.9	-17	55.6
1	92	42.1	184	58.5		04.3	146	56.7		44.6	307	28.1		41.5	216	08.1		55.6
2	107	44.6	199	57.6		04.5	161	57.2		44.2	322	30.5		41.6	231	10.3		55.7
3	122	47.0	214	56.6		04.6	176	57.6		43.7	337	33.0		41.6	246	12.5		55.8
4	137	49.5	229	55.6		04.7	191	58.1		43.2	352	35.4		41.6	261	14.6		55.8
5	152	52.0	244	54.6	-24	04.9	206	58.5	-20	42.7	7	37.9	+14	41.6	276	16.8	-17	55.9
6	167	54.4	259	53.7	-24	05.0	221	59.0	-20	42.3	22	40.4	+14	41.6	291	19.0	-17	56.0
7	182	56.9	274	52.7		05.1	236	59.4		41.8	37	42.8		41.6	306	21.1		56.0
8	197	59.4	289	51.7		05.3	251	59.9		41.3	52	45.3		41.6	321	23.3		56.1
9	213	01.8	304	50.8		05.4	267	00.3		40.9	67	47.8		41.6	336	25.5		56.1
10	228	04.3	319	49.8		05.5	282	00.8		40.4	82	50.2		41.6	351	27.6		56.2
11	243	06.8	334	48.8	-24	05.7	297	01.2	-20	39.9	97	52.7	+14	41.6	6	29.8	-17	56.3
12	258	09.2	349	47.8	-24	05.8	312	01.7	-20	39.4	112	55.2	+14	41.7	21	32.0	-17	56.3
13	273	11.7	4	46.9		05.9	327	02.1		39.0	127	57.6		41.7	36	34.1		56.4
14	288	14.2	19	45.9		06.1	342	02.6		38.5	143	00.1		41.7	51	36.3		56.5
15	303	16.6	34	44.9		06.2	357	03.0		38.0	158	02.6		41.7	66	38.5		56.5
16	318	19.1	49	44.0		06.3	12	03.5		37.6	173	05.0		41.7	81	40.7		56.6
17	333	21.5	64	43.0	-24	06.4	27	04.0	-20	37.1	188	07.5	+14	41.7	96	42.8	-17	56.6
18	348	24.0	79	42.0	-24	06.6	42	04.4	-20	36.6	203	10.0	+14	41.7	111	45.0	-17	56.7
19	3	26.5	94	41.0		06.7	57	04.9		36.1	218	12.4		41.7	126	47.2		56.8
20	18	28.9	109	40.1		06.8	72	05.3		35.7	233	14.9		41.8	141	49.3		56.8
21	33	31.4	124	39.1		06.9	87	05.8		35.2	248	17.4		41.8	156	51.5		56.9
22	48	33.9	139	38.1		07.0	102	06.2		34.7	263	19.8		41.8	171	53.7		57.0
23	63	36.3	154	37.2		07.2	117	06.7		34.2	278	22.3		41.8	186	55.8		57.0
24	78	38.8	169	36.2	-24	07.3	132	07.1	-20	33.8	293	24.8	+14	41.8	201	58.0	-17	57.1
Dif	—		-10		-1		+5		+5		+25		0		+22		-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 52 ^m 7			Edad: 17 ^d 5 PHE { SD: 14:9 PMG: 2 ^h 48 ^m R°: 47 ^m 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:6										
	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	181	52.3	-22 52.7	319	13.4	+15 36.8	55	60 N	14 55	15 51	16 47	19 42 69	10 50 22	
1	196	52.0	52.9	333	44.8 ¹²⁴	31.3	55	58	15 11	16 02	16 55	50 67	41 24	
2	211	51.8	53.1	348	16.2 ¹²⁴	25.7	56	56	26	12	17 01	19 57 66	33 26	
3	226	51.5	53.4	2	47.7 ¹²⁵	20.1	56	54	38	21	07	20 04 64	26 28	
4	241	51.2	53.6	17	19.2 ¹²⁵	14.4	57	52	49	29	13	10 62	20 29	
5	256	50.9	-22 53.8	31	50.8 ¹²⁶	+15 08.6	58	50	15 58	16 36	17 18	20 15 61	10 14 31	
6	271	50.6	-22 54.1	46	22.4 ¹²⁶	+15 02.8	58	45	16 18	16 52	17 29	20 26 59	10 02 33	
7	286	50.4	54.3	60	54.1 ¹²⁷	+14 56.9	59	40	35	17 05	39	36 56	9 52 35	
8	301	50.1	54.5	75	25.8 ¹²⁷	50.9	60	35	16 48	17	48	44 54	43 37	
9	316	49.8	54.7	89	57.6 ¹²⁸	44.9	60	30	17 01	27	17 57	20 51 52	36 38	
10	331	49.5	55.0	104	29.4 ¹²⁸	38.8	61	20	21	17 45	18 13	21 03 50	22 42	
11	346	49.2	-22 55.2	119	01.2 ¹²⁸	+14 32.7	61	10 N	17 39	18 02	18 28	21 14 47	9 11 43	
12	1	48.9	-22 55.4	133	33.2 ¹³⁰	+14 26.4	63	0	17 56	18 19	18 45	21 24 44	9 00 45	
13	16	48.7	55.6	148	05.1 ¹²⁹	20.2	62	10 S	18 14	37	19 04	34 42	8 49 48	
14	31	48.4	55.8	162	37.1 ¹³⁰	13.8	64	20	32	18 57	26	44 40	37 50	
15	46	48.1	56.1	177	09.2 ¹³¹	07.5	63	30	18 54	19 21	19 54	21 56 37	23 53	
16	61	47.8	56.3	191	41.3 ¹³¹	+14 01.0	65	35	19 07	36	20 13	22 03 36	16 54	
17	76	47.5	-22 56.5	206	13.4 ¹³¹	+13 54.5	65	40	19 21	19 54	20 35	22 11 34	8 07 56	
18	91	47.2	-22 56.7	220	45.6 ¹³²	+13 47.9	66	45	19 39	20 16	21 05	22 20 31	7 56 58	
19	106	47.0	56.9	235	17.9 ¹³³	41.3	66	50	20 01	45	21 48	31 29	43 61	
20	121	46.7	57.2	249	50.2 ¹³³	34.6	67	52	11	20 59	22 14	36 28	37 62	
21	136	46.4	57.4	264	22.5 ¹³³	27.9	67	54	23	21 17	22 54	42 26	31 63	
22	151	46.1	57.6	278	54.9 ¹³⁴	21.1	68	56	37	21 38	** **	48 25	23 66	
23	166	45.8	57.8	293	27.3 ¹³⁴	14.2	69	58	20 53	22 06	** **	22 55 23	15 67	
24	181	45.5	-22 58.0	307	59.8 ¹³⁵	+13 07.3	69	60 S	21 13	22 49	** **	23 03 21	7 06 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 18 ^h 42 ^m 3		Mag: -3.9 PMG: 12 ^h 42 ^m			Mag: +1.0 PMG: 15 ^h 11 ^m			Mag: -2.4 PMG: 4 ^h 26 ^m			Mag: +0.5 PMG: 10 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	78	38.8	169	36.2	-24 07.3	132	07.1	-20 33.8	293	24.8	+14 41.8	201	58.0	-17 57.1
1	93	41.3	184	35.2	07.4	147	07.6	33.3	308	27.2	41.8	217	00.2	57.1
2	108	43.7	199	34.2	07.5	162	08.0	32.8	323	29.7	41.8	232	02.3	57.2
3	123	46.2	214	33.3	07.6	177	08.5	32.3	338	32.2	41.8	247	04.5	57.3
4	138	48.7	229	32.3	07.7	192	09.0	31.8	353	34.7	41.9	262	06.7	57.3
5	153	51.1	244	31.3	-24 07.8	207	09.4	-20 31.4	8	37.1	+14 41.9	277	08.9	-17 57.4
6	168	53.6	259	30.4	-24 07.9	222	09.9	-20 30.9	23	39.6	+14 41.9	292	11.0	-17 57.4
7	183	56.0	274	29.4	08.0	237	10.3	30.4	38	42.1	41.9	307	13.2	57.5
8	198	58.5	289	28.4	08.1	252	10.8	29.9	53	44.5	41.9	322	15.4	57.6
9	214	01.0	304	27.4	08.2	267	11.2	29.4	68	47.0	41.9	337	17.5	57.6
10	229	03.4	319	26.5	08.3	282	11.7	29.0	83	49.5	41.9	352	19.7	57.7
11	244	05.9	334	25.5	-24 08.4	297	12.1	-20 28.5	98	52.0	+14 41.9	7	21.9	-17 57.8
12	259	08.4	349	24.5	-24 08.5	312	12.6	-20 28.0	113	54.4	+14 42.0	22	24.0	-17 57.8
13	274	10.8	4	23.5	08.6	327	13.1	27.5	128	56.9	42.0	37	26.2	57.9
14	289	13.3	19	22.6	08.7	342	13.5	27.0	143	59.4	42.0	52	28.4	57.9
15	304	15.8	34	21.6	08.8	357	14.0	26.6	159	01.9	42.0	67	30.6	58.0
16	319	18.2	49	20.6	08.9	12	14.4	26.1	174	04.3	42.0	82	32.7	58.1
17	334	20.7	64	19.7	-24 09.0	27	14.9	-20 25.6	189	06.8	+14 42.0	97	34.9	-17 58.1
18	349	23.2	79	18.7	-24 09.1	42	15.3	-20 25.1	204	09.3	+14 42.0	112	37.1	-17 58.2
19	4	25.6	94	17.7	09.2	57	15.8	24.6	219	11.8	42.1	127	39.2	58.2
20	19	28.1	109	16.7	09.3	72	16.3	24.1	234	14.2	42.1	142	41.4	58.3
21	34	30.5	124	15.8	09.4	87	16.7	23.6	249	16.7	42.1	157	43.6	58.4
22	49	33.0	139	14.8	09.5	102	17.2	23.2	264	19.2	42.1	172	45.8	58.4
23	64	35.5	154	13.8	09.5	117	17.6	22.7	279	21.7	42.1	187	47.9	58.5
24	79	37.9	169	12.8	-24 09.6	132	18.1	-20 22.2	294	24.2	+14 42.1	202	50.1	-17 58.6
Dif	—		-10		-1	+5		+5	+25		0	+22		-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 53 ^m 2			Edad: 18 ^d 5 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 SD: 14'8 PMG: 3 ^h 35 ^m R°: 44 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	181	45.5	-22	58.0	307	59.8	+13	07.3	60 N	6 59	7 55	8 52	20 51	70	11 12	19				
1	196	45.3		58.2	322	32.3 ¹³⁵	+13	00.4 ⁶⁹	58	52	44	35	20 57	68	11 05	21				
2	211	45.0		58.4	337	04.9 ¹³⁶	+12	53.4 ⁷⁰	56	45	34	21	21 03	66	10 59	23				
3	226	44.7		58.6	351	37.5 ¹³⁶		46.3 ⁷¹	54	39	25	8 09	08 64		54	24				
4	241	44.4		58.8	6	10.1 ¹³⁶		39.2 ⁷¹	52	34	17	7 58	12 63		49	26				
5	256	44.1	-22	59.1	20	42.8 ¹³⁷	+12	32.0 ⁷²	50	6 29	7 10	7 48	21 16	61	10 45	27				
6	271	43.8	-22	59.3	35	15.6 ¹³⁸	+12	24.8 ⁷²	45	6 17	6 54	7 28	21 25	58	10 35	30				
7	286	43.5		59.5	49	48.4 ¹³⁸		17.6 ⁷²	40	6 07	41	7 11	32 55		27	32				
8	301	43.3		59.7	64	21.2 ¹³⁸		10.2 ⁷⁴	35	5 58	30	6 58	38 53		20	34				
9	316	43.0	-22	59.9	78	54.0 ¹³⁸	+12	02.9 ⁷³	30	49	19	46	43 52		14	36				
10	331	42.7	-23	00.1	93	26.9 ¹³⁹	+11	55.5 ⁷⁴	20	33	6 01	25	21 53	48	10 04	38				
11	346	42.4	-23	00.3	107	59.9 ¹⁴⁰	+11	48.0 ⁷⁵	10 N	5 18	5 44	6 07	22 01	46	9 54	42				
12	1	42.1	-23	00.5	122	32.9 ¹⁴⁰	+11	40.5 ⁷⁵	0	5 01	5 27	5 49	22 08	44	9 45	44				
13	16	41.8		00.7	137	05.9 ¹⁴⁰		32.9 ⁷⁶	10 S	4 42	5 09	32	16 41		37	46				
14	31	41.5		00.9	151	38.9 ¹⁴⁰		25.3 ⁷⁶	20	4 20	4 49	5 14	24 38		27	49				
15	46	41.2		01.1	166	12.0 ¹⁴¹		17.7 ⁷⁶	30	3 52	25	4 52	33 35		16	52				
16	61	41.0		01.3	180	45.2 ¹⁴²		10.0 ⁷⁷	35	33	4 10	39	39 33		10	54				
17	76	40.7	-23	01.5	195	18.4 ¹⁴²	+11	02.3 ⁷⁷	40	3 11	3 52	4 25	22 45	30	9 03	56				
18	91	40.4	-23	01.7	209	51.6 ¹⁴²	+10	54.5 ⁷⁸	45	2 41	3 30	4 07	22 51	29	8 54	59				
19	106	40.1		01.9	224	24.8 ¹⁴²		46.7 ⁷⁸	50	1 57	3 01	3 45	23 00	25	44	61				
20	121	39.8		02.1	238	58.1 ¹⁴³		38.8 ⁷⁹	52	1 31	2 46	34	04 24		39	63				
21	136	39.5		02.3	253	31.4 ¹⁴³		30.9 ⁷⁹	54	0 52	29	23	08 23		34	64				
22	151	39.2		02.5	268	04.8 ¹⁴⁴		23.0 ⁷⁹	56	** ** *	2 08	3 09	13 21		29	65				
23	166	38.9		02.7	282	38.2 ¹⁴⁴		15.0 ⁸⁰	58	** ** *	1 40	2 53	18 19		22	68				
24	181	38.7	-23	02.9	297	11.6 ¹⁴⁴	+10	07.0 ⁸⁰	60 S	** ** *	0 57	2 33	23 24	17	8 15	70				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 18 ^h 38 ^m 4			Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: +1.0 PMG: 15 ^h 10 ^m			Mag: -2.4 PMG: 4 ^h 22 ^m			Mag: +0.5 PMG: 10 ^h 27 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	79	37.9	169	12.8	-24	09.6	132	18.1	-20	22.2	294	24.2	+14	42.1	202	50.1	-17	58.6		
1	94	40.4	184	11.9		09.7	147	18.5		21.7	309	26.6		42.1	217	52.3		58.6		
2	109	42.9	199	10.9		09.8	162	19.0		21.2	324	29.1		42.2	232	54.4		58.7		
3	124	45.3	214	09.9		09.9	177	19.5		20.7	339	31.6		42.2	247	56.6		58.7		
4	139	47.8	229	08.9		09.9	192	19.9		20.2	354	34.1		42.2	262	58.8		58.8		
5	154	50.3	244	08.0	-24	10.0	207	20.4	-20	19.8	9	36.5	+14	42.2	278	00.9	-17	58.9		
6	169	52.7	259	07.0	-24	10.1	222	20.8	-20	19.3	24	39.0	+14	42.2	293	03.1	-17	58.9		
7	184	55.2	274	06.0		10.2	237	21.3		18.8	39	41.5		42.2	308	05.3		59.0		
8	199	57.6	289	05.0		10.2	252	21.8		18.3	54	44.0		42.3	323	07.5		59.0		
9	215	00.1	304	04.1		10.3	267	22.2		17.8	69	46.5		42.3	338	09.6		59.1		
10	230	02.6	319	03.1		10.4	282	22.7		17.3	84	48.9		42.3	353	11.8		59.2		
11	245	05.0	334	02.1	-24	10.4	297	23.1	-20	16.8	99	51.4	+14	42.3	8	14.0	-17	59.2		
12	260	07.5	349	01.1	-24	10.5	312	23.6	-20	16.3	114	53.9	+14	42.3	23	16.1	-17	59.3		
13	275	10.0	4	00.2		10.6	327	24.1		15.8	129	56.4		42.3	38	18.3		59.4		
14	290	12.4	18	59.2		10.6	342	24.5		15.3	144	58.9		42.4	53	20.5		59.4		
15	305	14.9	33	58.2		10.7	357	25.0		14.9	160	01.4		42.4	68	22.7		59.5		
16	320	17.4	48	57.2		10.8	12	25.4		14.4	175	03.8		42.4	83	24.8		59.5		
17	335	19.8	63	56.3	-24	10.8	27	25.9	-20	13.9	190	06.3	+14	42.4	98	27.0	-17	59.6		
18	350	22.3	78	55.3	-24	10.9	42	26.4	-20	13.4	205	08.8	+14	42.4	113	29.2	-17	59.7		
19	5	24.8	93	54.3		11.0	57	26.8		12.9	220	11.3		42.4	128	31.3		59.7		
20	20	27.2	108	53.3		11.0	72	27.3		12.4	235	13.8		42.5	143	33.5		59.8		
21	35	29.7	123	52.4		11.1	87	27.8		11.9	250	16.3		42.5	158	35.7		59.8		
22	50	32.1	138	51.4		11.1	102	28.2		11.4	265	18.7		42.5	173	37.9	-17	59.9		
23	65	34.6	153	50.4		11.2	117	28.7		10.9	280	21.2		42.5	188	40.0	-18	00.0		
24	80	37.1	168	49.4	-24	11.2	132	29.1	-20	10.4	295	23.7	+14	42.5	203	42.2	-18	00.0		
Dif	—			-10			+5			+25			0			+22			-	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 53 ^m 7			Edad: 19 ^d 5 PHE { SD: 14:8 PMG: 4 ^h 19 ^m R°: 43 ^m 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2										
	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	181	38.7	-23	02.9	297	11.6	+10 07.0	60 N	14 54	15 51	16 47	22 01 70	11 31 16	
1	196	38.4		03.1	311	45.1 ¹⁴⁵	+9 58.9 ⁸¹	58	15 11	16 02	16 54	05 68	26 19	
2	211	38.1		03.3	326	18.6 ¹⁴⁵	50.8 ⁸¹	56	25	12	17 01	09 66	22 20	
3	226	37.8		03.4	340	52.1 ¹⁴⁵	42.6 ⁸²	54	37	21	07	12 64	18 22	
4	241	37.5		03.6	355	25.6 ¹⁴⁵	34.5 ⁸¹	52	48	29	13	15 62	15 23	
5	256	37.2	-23	03.8	9	59.2 ¹⁴⁶	+9 26.2 ⁸³	50	15 58	16 36	17 18	22 17 62	11 12 24	
6	271	36.9	-23	04.0	24	32.8 ¹⁴⁶	+9 18.0 ⁸²	45	16 18	16 52	17 29	22 23 58	11 05 28	
7	286	36.6		04.2	39	06.5 ¹⁴⁷	09.7 ⁸³	40	35	17 05	39	27 56	10 59 30	
8	301	36.3		04.4	53	40.2 ¹⁴⁷	+9 01.4 ⁸³	35	16 49	17	49	31 54	54 33	
9	316	36.0		04.6	68	13.9 ¹⁴⁷	+8 53.0 ⁸⁴	30	17 01	27	17 57	35 52	50 34	
10	331	35.8		04.8	82	47.6 ¹⁴⁷	44.6 ⁸⁴	20	22	17 46	18 13	41 48	42 38	
11	346	35.5	-23	04.9	97	21.4 ¹⁴⁸	+8 36.2 ⁸⁴	10 N	17 40	18 03	18 29	22 47 45	10 36 40	
12	1	35.2	-23	05.1	111	55.1 ¹⁴⁷	+8 27.7 ⁸⁵	0	17 57	18 20	18 46	22 52 42	10 29 43	
13	16	34.9		05.3	126	28.9 ¹⁴⁸	19.2 ⁸⁵	10 S	18 15	38	19 05	22 57 39	23 45	
14	31	34.6		05.5	141	02.8 ¹⁴⁹	10.7 ⁸⁵	20	33	18 58	27	23 02 37	16 48	
15	46	34.3		05.7	155	36.7 ¹⁴⁹	+8 02.1 ⁸⁶	30	18 55	19 23	19 56	08 34	08 52	
16	61	34.0		05.9	170	10.5 ¹⁴⁸	+7 53.5 ⁸⁶	35	19 08	38	20 14	12 31	10 04 53	
17	76	33.7	-23	06.0	184	44.5 ¹⁵⁰	+7 44.9 ⁸⁶	40	19 23	19 56	20 37	23 15 30	9 59 55	
18	91	33.4	-23	06.2	199	18.4 ¹⁴⁹	+7 36.2 ⁸⁷	45	19 41	20 18	21 07	23 20 27	9 53 58	
19	106	33.1		06.4	213	52.3 ¹⁴⁹	27.5 ⁸⁷	50	20 03	20 47	21 51	25 25	45 62	
20	121	32.8		06.6	228	26.3 ¹⁵⁰	18.8 ⁸⁷	52	13	21 02	22 18	28 23	42 63	
21	136	32.5		06.8	243	00.3 ¹⁵⁰	10.1 ⁸⁷	54	25	19	23 00	31 21	38 65	
22	151	32.3		06.9	257	34.3 ¹⁵⁰	+7 01.3 ⁸⁸	56	39	21 41	** **	34 19	34 66	
23	166	32.0		07.1	272	08.4 ¹⁵¹	+6 52.5 ⁸⁸	58	20 56	22 09	** **	37 18	30 68	
24	181	31.7	-23	07.3	286	42.4 ¹⁵⁰	+6 43.7 ⁸⁸	60 S	21 16	22 55	** **	23 41 16	9 25 70	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 34 ^m 5		Mag: -3.9 PMG: 12 ^h 46 ^m		Mag: +1.0 PMG: 15 ^h 10 ^m		Mag: -2.4 PMG: 4 ^h 18 ^m		Mag: +0.5 PMG: 10 ^h 24 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	80	37.1	168	49.4	132	29.1	295	23.7	203	42.2				
1	95	39.5	183	48.5	147	29.6	310	26.2	218	44.4				
2	110	42.0	198	47.5	162	30.1	325	28.7	233	46.5				
3	125	44.5	213	46.5	177	30.5	340	31.2	248	48.7				
4	140	46.9	228	45.5	192	31.0	355	33.7	263	50.9				
5	155	49.4	243	44.6	207	31.5	10	36.2	278	53.1				
6	170	51.9	258	43.6	222	31.9	25	38.6	293	55.2				
7	185	54.3	273	42.6	237	32.4	40	41.1	308	57.4				
8	200	56.8	288	41.6	252	32.8	55	43.6	323	59.6				
9	215	59.3	303	40.7	267	33.3	70	46.1	339	01.8				
10	231	01.7	318	39.7	282	33.8	85	48.6	354	03.9				
11	246	04.2	333	38.7	297	34.2	100	51.1	9	06.1				
12	261	06.6	348	37.7	312	34.7	115	53.6	24	08.3				
13	276	09.1	3	36.8	327	35.2	130	56.1	39	10.4				
14	291	11.6	18	35.8	342	35.6	145	58.6	54	12.6				
15	306	14.0	33	34.8	357	36.1	161	01.0	69	14.8				
16	321	16.5	48	33.8	12	36.6	176	03.5	84	17.0				
17	336	19.0	63	32.9	27	37.0	191	06.0	99	19.1				
18	351	21.4	78	31.9	42	37.5	206	08.5	114	21.3				
19	6	23.9	93	30.9	57	37.9	221	11.0	129	23.5				
20	21	26.4	108	29.9	72	38.4	236	13.5	144	25.6				
21	36	28.8	123	28.9	87	38.9	251	16.0	159	27.8				
22	51	31.3	138	28.0	102	39.3	266	18.5	174	30.0				
23	66	33.7	153	27.0	117	39.8	281	21.0	189	32.2				
24	81	36.2	168	26.0	132	40.3	296	23.5	204	34.3				
Dif	—	-10	0		+5	+5	+25	0	+22	-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 54 ^m 1			Edad: 20 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 SD: 14/8 PMG: 5 ^h 02 ^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	181	31.7	-23	07.3	286	42.4	+6	43.7	60 N	7 01	7 58	8 55	23	11	71	11	47	16
1	196	31.4		07.5	301	16.5 ¹⁵¹		34.8 ⁸⁹	58	6 54	46	38		13	69	45	17	
2	211	31.1		07.6	315	50.6 ¹⁵¹		26.0 ⁸⁸	56		47	36	23	15	66	42	19	
3	226	30.8		07.8	330	24.7 ¹⁵¹		17.0 ⁹⁰	54		41	27	11	16	65	40	21	
4	241	30.5		08.0	344	58.9 ¹⁵²		+6 08.1 ⁸⁹	52		35	19	8 00	17	64	38	23	
5	256	30.2	-23	08.1	359	33.0 ¹⁵¹		+5 59.2 ⁸⁹	50	6 30	7 12	7 50	23	19	61	11	36	24
6	271	29.9	-23	08.3	14	07.2 ¹⁵²		+5 50.2 ⁹⁰	45	6 19	6 56	7 30	23	21	59	11	33	26
7	286	29.6		08.5	28	41.3 ¹⁵¹		41.2 ⁹¹	40	6 09	43	7 13		23	56	29	29	
8	301	29.3		08.6	43	15.5 ¹⁵²		32.1 ⁹¹	35	5 59	31	6 59		25	54	27	31	
9	316	29.0		08.8	57	49.7 ¹⁵²		23.1 ⁹⁰	30		51	21	47	27	51	24	33	
10	331	28.7		09.0	72	23.9 ¹⁵²		14.0 ⁹¹	20		34	6 02	26	29	49	20	36	
11	346	28.4	-23	09.1	86	58.1 ¹⁵²		+5 04.9 ⁹¹	10 N	5 19	5 45	6 08	23	32	45	11	16	39
12	1	28.1	-23	09.3	101	32.4 ¹⁵³		+4 55.8 ⁹¹	0	5 02	5 28	5 50	23	34	42	11	12	42
13	16	27.8		09.5	116	06.6 ¹⁵²		46.7 ⁹²	10 S	4 43	5 10	33		36	40	08	46	
14	31	27.6		09.6	130	40.9 ¹⁵³		37.5 ⁹²	20	4 21	4 50	5 14		39	36	04	49	
15	46	27.3		09.8	145	15.1 ¹⁵²		28.3 ⁹²	30	3 52	25	4 53		42	33	11	00	51
16	61	27.0		10.0	159	49.4 ¹⁵³		19.1 ⁹²	35		34	4 10	40	43	31	10	57	54
17	76	26.7	-23	10.1	174	23.7 ¹⁵³		+4 09.9 ⁹²	40	3 11	3 52	4 25	23	45	29	10	54	56
18	91	26.4	-23	10.3	188	58.0 ¹⁵³		+4 00.7 ⁹²	45	2 41	3 30	4 07	23	47	27	10	51	58
19	106	26.1		10.4	203	32.2 ¹⁵²		+3 51.4 ⁹³	50	1 56	3 01	3 45		50	23	47	61	
20	121	25.8		10.6	218	06.5 ¹⁵³		42.2 ⁹²	52	1 30	2 46	34		51	22	45	63	
21	136	25.5		10.8	232	40.8 ¹⁵³		32.9 ⁹³	54	0 48	28	22		52	21	43	64	
22	151	25.2		10.9	247	15.1 ¹⁵³		23.6 ⁹³	56	** ** *	2 07	3 08		53	19	40	67	
23	166	24.9		11.1	261	49.4 ¹⁵³		14.3 ⁹³	58	** ** *	1 38	2 52		55	17	38	68	
24	181	24.6	-23	11.2	276	23.7 ¹⁵³		+3 04.9 ⁹⁴	60 S	** ** *	0 53	2 32	23	57	15	10	35	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 30 ^m 5		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: +1.0 PMG: 15 ^h 09 ^m		Mag: -2.4 PMG: 4 ^h 14 ^m		Mag: +0.5 PMG: 10 ^h 20 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	36.2	168	26.0	-24	12.1	132	40.3	-19	58.4
1	96	38.7	183	25.0		12.1	147	40.7		57.9
2	111	41.1	198	24.1		12.1	162	41.2		57.4
3	126	43.6	213	23.1		12.1	177	41.7		56.9
4	141	46.1	228	22.1		12.2	192	42.1		56.4
5	156	48.5	243	21.1	-24	12.2	207	42.6	-19	55.9
6	171	51.0	258	20.2	-24	12.2	222	43.1	-19	55.4
7	186	53.5	273	19.2		12.2	237	43.5		54.9
8	201	55.9	288	18.2		12.2	252	44.0		54.4
9	216	58.4	303	17.2		12.2	267	44.5		53.9
10	232	00.9	318	16.3		12.2	282	44.9		53.3
11	247	03.3	333	15.3	-24	12.2	297	45.4	-19	52.8
12	262	05.8	348	14.3	-24	12.2	312	45.9	-19	52.3
13	277	08.2	3	13.3		12.2	327	46.3		51.8
14	292	10.7	18	12.4		12.2	342	46.8		51.3
15	307	13.2	33	11.4		12.2	357	47.3		50.8
16	322	15.6	48	10.4		12.2	12	47.8		50.3
17	337	18.1	63	09.4	-24	12.2	27	48.2	-19	49.8
18	352	20.6	78	08.4	-24	12.2	42	48.7	-19	49.3
19	7	23.0	93	07.5		12.2	57	49.2		48.8
20	22	25.5	108	06.5		12.2	72	49.6		48.2
21	37	28.0	123	05.5		12.2	87	50.1		47.7
22	52	30.4	138	04.5		12.2	102	50.6		47.2
23	67	32.9	153	03.6		12.2	117	51.0		46.7
24	82	35.4	168	02.6	-24	12.2	132	51.5	-19	46.2
Dif	—		-10		0		+5		+5	
							+25		0	
									+22	
									-	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 54 ^m 6				Edad: 21 ^d 5 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 SD: 14/8 PMG: 5 ^h 44 ^m R°: 43 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	181	24.6	-23	11.2	276	23.7	+3	04.9	60 N	14 53	15 50	16 47	** ** *	**	12 03	15		
1	196	24.3		11.4	290	58.0 ¹⁵³	+2	55.6 ⁹³	58	15 10	16 02	16 54	** ** *	**	02 17			
2	211	24.0		11.5	305	32.3 ¹⁵³		46.2 ⁹⁴	56	25	12	17 01	** ** *	**	01 19			
3	226	23.7		11.7	320	06.6 ¹⁵³		36.9 ⁹³	54	37	21	07	** ** *	**	01 21			
4	241	23.4		11.8	334	41.0 ¹⁵⁴		27.5 ⁹⁴	52	48	29	13	** ** *	**	01 22			
5	256	23.1	-23	12.0	349	15.2 ¹⁵²	+2	18.1 ⁹⁴	50	15 58	16 37	17 18	** ** *	**	12 00	24		
6	271	22.8	-23	12.1	3	49.5 ¹⁵³	+2	08.7 ⁹⁴	45	16 19	16 52	17 30	** ** *	**	11 59	27		
7	286	22.5		12.3	18	23.8 ¹⁵³	+1	59.2 ⁹⁵	40	35	17 06	40	** ** *	**	58 30			
8	301	22.2		12.4	32	58.1 ¹⁵³		49.8 ⁹⁴	35	16 49	17	49	** ** *	**	58 31			
9	316	21.9		12.6	47	32.4 ¹⁵³		40.3 ⁹⁵	30	17 02	28	17 58	** ** *	**	57 34			
10	331	21.6		12.7	62	06.7 ¹⁵³		30.9 ⁹⁴	20	23	17 47	18 14	** ** *	**	56 37			
11	346	21.3	-23	12.9	76	41.0 ¹⁵³	+1	21.4 ⁹⁵	10 N	17 41	18 04	18 30	** ** *	**	11 55	40		
12	1	21.0	-23	13.0	91	15.2 ¹⁵²	+1	11.9 ⁹⁴	0	17 58	18 21	18 47	** ** *	**	11 54	43		
13	16	20.7		13.2	105	49.5 ¹⁵³	+1	02.5 ⁹⁵	10 S	18 16	39	19 06	** ** *	**	54 45			
14	31	20.4		13.3	120	23.7 ¹⁵²	+0	53.0 ⁹⁵	20	35	18 59	28	** ** *	**	53 48			
15	46	20.1		13.5	134	58.0 ¹⁵³		43.5 ⁹⁵	30	18 56	19 24	19 57	** ** *	**	51 53			
16	61	19.8		13.6	149	32.2 ¹⁵²		34.0 ⁹⁵	35	19 09	39	20 16	** ** *	**	51 54			
17	76	19.5	-23	13.7	164	06.4 ¹⁵²	+0	24.4 ⁹⁶	40	19 24	19 57	20 39	** ** *	**	11 50	56		
18	91	19.2	-23	13.9	178	40.6 ¹⁵²	+0	14.9 ⁹⁵	45	19 42	20 19	21 09	** ** *	**	11 49	59		
19	106	18.9		14.0	193	14.8 ¹⁵²	+0	05.4 ⁹⁵	50	20 04	20 49	21 54	** ** *	**	48 62			
20	121	18.6		14.2	207	49.0 ¹⁵²	-0	04.1 ⁹⁵	52	15	21 04	22 21	** ** *	**	48 63			
21	136	18.3		14.3	222	23.1 ¹⁵¹		13.7 ⁹⁶	54	27	22	23 05	** ** *	**	47 65			
22	151	18.0		14.4	236	57.3 ¹⁵²		23.2 ⁹⁵	56	41	21 43	** ** *	**	47 67				
23	166	17.7		14.6	251	31.4 ¹⁵¹		32.8 ⁹⁶	58	20 58	22 12	** ** *	**	46 69				
24	181	17.4	-23	14.7	266	05.5 ¹⁵¹	-0	42.3 ⁹⁵	60 S	21 18	23 00	** ** *	**	11 45	72			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 26 ^m 6		Mag: -3.9 PMG: 12 ^h 49 ^m				Mag: +1.0 PMG: 15 ^h 08 ^m				Mag: -2.4 PMG: 4 ^h 10 ^m				Mag: +0.5 PMG: 10 ^h 17 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	82	35.4	168	02.6	-24	12.2	132	51.5	-19	46.2	297	23.4	+14	43.5	205	26.5		
1	97	37.8	183	01.6		12.2	147	52.0		45.7	312	25.9		43.5	220	28.7		
2	112	40.3	198	00.6		12.2	162	52.5		45.2	327	28.4		43.6	235	30.8		
3	127	42.7	212	59.7		12.2	177	52.9		44.7	342	30.9		43.6	250	33.0		
4	142	45.2	227	58.7		12.1	192	53.4		44.1	357	33.4		43.6	265	35.2		
5	157	47.7	242	57.7	-24	12.1	207	53.9	-19	43.6	12	35.9	+14	43.6	280	37.4		
6	172	50.1	257	56.7	-24	12.1	222	54.3	-19	43.1	27	38.4	+14	43.7	295	39.5		
7	187	52.6	272	55.8		12.1	237	54.8		42.6	42	41.0		43.7	310	41.7		
8	202	55.1	287	54.8		12.1	252	55.3		42.1	57	43.5		43.7	325	43.9		
9	217	57.5	302	53.8		12.0	267	55.7		41.6	72	46.0		43.7	340	46.1		
10	233	00.0	317	52.8		12.0	282	56.2		41.0	87	48.5		43.8	355	48.2		
11	248	02.5	332	51.9	-24	12.0	297	56.7	-19	40.5	102	51.0	+14	43.8	10	50.4		
12	263	04.9	347	50.9	-24	12.0	312	57.2	-19	40.0	117	53.5	+14	43.8	25	52.6		
13	278	07.4	2	49.9		11.9	327	57.6		39.5	132	56.0		43.8	40	54.8		
14	293	09.8	17	48.9		11.9	342	58.1		39.0	147	58.5		43.9	55	56.9		
15	308	12.3	32	47.9		11.9	357	58.6		38.5	163	01.0		43.9	70	59.1		
16	323	14.8	47	47.0		11.9	12	59.1		37.9	178	03.5		43.9	86	01.3		
17	338	17.2	62	46.0	-24	11.8	27	59.5	-19	37.4	193	06.0	+14	43.9	101	03.5		
18	353	19.7	77	45.0	-24	11.8	43	00.0	-19	36.9	208	08.5	+14	44.0	116	05.6		
19	8	22.2	92	44.0		11.8	58	00.5		36.4	223	11.0		44.0	131	07.8		
20	23	24.6	107	43.1		11.7	73	00.9		35.9	238	13.5		44.0	146	10.0		
21	38	27.1	122	42.1		11.7	88	01.4		35.3	253	16.0		44.0	161	12.2		
22	53	29.6	137	41.1		11.6	103	01.9		34.8	268	18.6		44.1	176	14.3		
23	68	32.0	152	40.1		11.6	118	02.4		34.3	283	21.1		44.1	191	16.5		
24	83	34.5	167	39.2	-24	11.6	133	02.8	-19	33.8	298	23.6	+14	44.1	206	18.7		
Dif	—		-10		0		+5		+5		+25		0		+22			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 55 ^m 1			Edad: 22 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 PMG: 6 ^h 27 ^m R°: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	181	17.4	-23	14.7	266	05.5	-0	42.3	60 N	7 03	8 00	8 57	0 22	72	12 18	16	
1	196	17.1		14.9	280	39.6 ¹⁵¹	-0	51.9 ⁹⁶	58	6 55	7 48	40		22 70	19 18		
2	211	16.8		15.0	295	13.7 ¹⁵¹	-1	01.4 ⁹⁵	56		49 38	25		21 68	20 21		
3	226	16.5		15.1	309	47.7 ¹⁵⁰		11.0 ⁹⁶	54		43 29	13		21 66	22 22		
4	241	16.2		15.3	324	21.8 ¹⁵¹		20.5 ⁹⁵	52		37 21	8 02		21 64	23 23		
5	256	15.9	-23	15.4	338	55.8 ¹⁵⁰	-1	30.1 ⁹⁶	50	6 32	7 13	7 52	0 20	63	12 24	24	
6	271	15.6	-23	15.5	353	29.8 ¹⁵⁰	-1	39.6 ⁹⁵	45	6 20	6 57	7 31	0 20	59	12 26	28	
7	286	15.3		15.6	8	03.7 ¹⁴⁹		49.2 ⁹⁶	40		10 44	14		19 57	28 30		
8	301	15.0		15.8	22	37.7 ¹⁵⁰	-1	58.7 ⁹⁵	35	6 01	32	7 00	19	54	29 33		
9	316	14.7		15.9	37	11.6 ¹⁴⁹	-2	08.3 ⁹⁶	30	5 52	22	6 48	18	53	31 34		
10	331	14.4		16.0	51	45.5 ¹⁴⁹		17.8 ⁹⁵	20		36 6 03	27		18 49	33 38		
11	346	14.1	-23	16.2	66	19.4 ¹⁴⁹	-2	27.4 ⁹⁶	10 N	5 20	5 46	6 09	0 17	46	12 35	41	
12	1	13.8	-23	16.3	80	53.2 ¹⁴⁸	-2	36.9 ⁹⁵	0	5 03	5 29	5 51	0 16	44	12 37	44	
13	16	13.5		16.4	95	27.0 ¹⁴⁸		46.4 ⁹⁶	10 S	4 44	5 11	34	16	40	39 47		
14	31	13.2		16.5	110	00.8 ¹⁴⁸	-2	56.0 ⁹⁶	20	4 21	4 50	5 15	15	38	41 50		
15	46	12.9		16.7	124	34.6 ¹⁴⁸	-3	05.5 ⁹⁵	30	3 52	26	4 53	15	34	44 53		
16	61	12.6		16.8	139	08.3 ¹⁴⁷		15.0 ⁹⁵	35		34 4 11	40	14	32	45 55		
17	76	12.3	-23	16.9	153	42.0 ¹⁴⁷	-3	24.5 ⁹⁵	40	3 11	3 53	4 25	0 14	30	12 46	58	
18	91	12.0	-23	17.0	168	15.7 ¹⁴⁷	-3	34.1 ⁹⁶	45	2 41	3 30	4 07	0 14	27	12 48	60	
19	106	11.7		17.1	182	49.3 ¹⁴⁶		43.6 ⁹⁵	50	1 56	3 01	3 45	13	24	50 64		
20	121	11.4		17.3	197	22.9 ¹⁴⁶	-3	53.0 ⁹⁴	52	1 29	2 46	34	13	23	51 65		
21	136	11.1		17.4	211	56.5 ¹⁴⁶	-4	02.5 ⁹⁵	54	0 45	28	22	13	21	52 67		
22	151	10.8		17.5	226	30.0 ¹⁴⁵		12.0 ⁹⁵	56	** ** *	2 06	3 08	12	20	54 68		
23	166	10.5		17.6	241	03.5 ¹⁴⁵		21.5 ⁹⁵	58	** ** *	1 37	2 52	12	18	55 70		
24	181	10.2	-23	17.7	255	37.0 ¹⁴⁵	-4	30.9 ⁹⁴	60 S	** ** *	0 50	2 31	0 12	15	12 57	72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 22 ^m 7		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: +1.1 PMG: 15 ^h 07 ^m		Mag: -2.4 PMG: 4 ^h 06 ^m		Mag: +0.5 PMG: 10 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	83	34.5	167	39.2	-24	11.6	133	02.8	-19	33.8
1	98	37.0	182	38.2		11.5	148	03.3		33.3
2	113	39.4	197	37.2		11.5	163	03.8		32.7
3	128	41.9	212	36.2		11.4	178	04.3		32.2
4	143	44.3	227	35.3		11.4	193	04.7		31.7
5	158	46.8	242	34.3	-24	11.3	208	05.2	-19	31.2
6	173	49.3	257	33.3	-24	11.3	223	05.7	-19	30.6
7	188	51.7	272	32.3		11.2	238	06.2		30.1
8	203	54.2	287	31.4		11.2	253	06.6		29.6
9	218	56.7	302	30.4		11.1	268	07.1		29.1
10	233	59.1	317	29.4		11.1	283	07.6		28.5
11	249	01.6	332	28.4	-24	11.0	298	08.1	-19	28.0
12	264	04.1	347	27.5	-24	11.0	313	08.5	-19	27.5
13	279	06.5	2	26.5		10.9	328	09.0		27.0
14	294	09.0	17	25.5		10.8	343	09.5		26.4
15	309	11.5	32	24.5		10.8	358	10.0		25.9
16	324	13.9	47	23.6		10.7	13	10.4		25.4
17	339	16.4	62	22.6	-24	10.6	28	10.9	-19	24.9
18	354	18.8	77	21.6	-24	10.6	43	11.4	-19	24.3
19	9	21.3	92	20.6		10.5	58	11.9		23.8
20	24	23.8	107	19.7		10.5	73	12.4		23.3
21	39	26.2	122	18.7		10.4	88	12.8		22.7
22	54	28.7	137	17.7		10.3	103	13.3		22.2
23	69	31.2	152	16.7		10.2	118	13.8		21.7
24	84	33.6	167	15.8	-24	10.2	133	14.3	-19	21.1
Dif	—		-10		+1		+5		+5	
							+25		0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 23 ^d 5	PHE {	4 ^h : 55:1 12 ^h : 55:3 20 ^h : 55:5									
	PMG: 11 ^h 55 ^m 6								SD: 15:0	PMG: 7 ^h 10 ^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	181	10.2	-23 17.7	255	37.0	-4 30.9	95	60 N	14 53	15 51	16 47	1 34 74	12 34 18		
1	196	09.9		270	10.4 ¹⁴⁴	40.4	95	58	15 10	16 02	16 55	32 71	37 21		
2	211	09.6		284	43.8 ¹⁴⁴	49.8	94	56	25	12	17 01	29 69	41 22		
3	226	09.3		299	17.2 ¹⁴⁴	-4 59.2	94	54	38	21	08	27 67	43 25		
4	241	09.0		313	50.5 ¹⁴³	-5 08.6	94	52	49	30	13	25 66	46 26		
5	256	08.7	-23 18.3	328	23.7 ¹⁴²	-5 18.0	94	50	15 58	16 37	17 18	1 23 65	12 48 28		
6	271	08.4	-23 18.4	342	57.0 ¹⁴³	-5 27.4	94	45	16 19	16 53	17 30	1 19 61	12 54 30		
7	286	08.1		357	30.2 ¹⁴²	36.8	94	40	36	17 06	40	16 59	12 58 33		
8	301	07.8		12	03.3 ¹⁴¹	46.1	93	35	16 50	18	50	13 57	13 02 35		
9	316	07.5		26	36.4 ¹⁴¹	-5 55.4	93	30	17 02	29	17 59	11 54	05 37		
10	331	07.2		41	09.5 ¹⁴¹	-6 04.7	93	20	23	17 47	18 15	07 50	11 40		
11	346	06.9	-23 19.0	55	42.5 ¹⁴⁰	-6 14.0	93	10 N	17 42	18 05	18 31	1 03 48	13 16 43		
12	1	06.6	-23 19.1	70	15.5 ¹⁴⁰	-6 23.3	93	0	17 59	18 22	18 48	1 00 44	13 21 46		
13	16	06.3		84	48.4 ¹³⁹	32.6	93	10 S	18 17	18 40	19 07	0 56 42	26 48		
14	31	06.0		99	21.3 ¹³⁹	41.8	92	20	36	19 00	30	53 39	31 51		
15	46	05.7		113	54.1 ¹³⁸	-6 51.0	92	30	18 58	25	19 59	49 35	37 55		
16	61	05.4		128	26.9 ¹³⁸	-7 00.2	92	35	19 11	40	20 17	46 34	40 57		
17	76	05.1	-23 19.6	142	59.6 ¹³⁷	-7 09.4	92	40	19 26	19 59	20 40	0 44 31	13 44 59		
18	91	04.8	-23 19.7	157	32.3 ¹³⁷	-7 18.6	92	45	19 44	20 21	21 11	0 41 29	13 48 62		
19	106	04.5		172	04.9 ¹³⁶	27.7	91	50	20 06	20 51	21 56	37 26	54 65		
20	121	04.1		186	37.5 ¹³⁶	36.8	91	52	17	21 06	22 23	36 24	56 67		
21	136	03.8		201	10.0 ¹³⁵	45.9	91	54	29	24	23 09	34 23	13 59 68		
22	151	03.5		215	42.5 ¹³⁵	-7 54.9	90	56	20 43	21 46	** **	32 21	14 02 70		
23	166	03.2		230	14.9 ¹³⁴	-8 04.0	91	58	21 00	22 15	** **	30 19	05 72		
24	181	02.9	-23 20.3	244	47.3 ¹³⁴	-8 13.0	90	60 S	21 20	23 04	** **	0 27 17	14 09 74		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 18 ^h 18 ^m 7		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: +1.1 PMG: 15 ^h 07 ^m		Mag: -2.4 PMG: 4 ^h 02 ^m		Mag: +0.5 PMG: 10 ^h 10 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	84	33.6	167	15.8	-24 10.2	133 14.3	-19 21.1	299 23.9	+14 44.8	207 10.9	-18 05.7
1	99	36.1	182	14.8	10.1	148 14.7	20.6	314 26.4	44.8	222 13.1	05.8
2	114	38.6	197	13.8	10.0	163 15.2	20.1	329 28.9	44.8	237 15.3	05.9
3	129	41.0	212	12.9	09.9	178 15.7	19.6	344 31.5	44.8	252 17.4	05.9
4	144	43.5	227	11.9	09.9	193 16.2	19.0	359 34.0	44.9	267 19.6	06.0
5	159	45.9	242	10.9	-24 09.8	208 16.7	-19 18.5	14 36.5	+14 44.9	282 21.8	-18 06.0
6	174	48.4	257	09.9	-24 09.7	223 17.1	-19 18.0	29 39.0	+14 44.9	297 24.0	-18 06.1
7	189	50.9	272	09.0	09.6	238 17.6	17.4	44 41.5	45.0	312 26.1	06.2
8	204	53.3	287	08.0	09.5	253 18.1	16.9	59 44.1	45.0	327 28.3	06.2
9	219	55.8	302	07.0	09.5	268 18.6	16.4	74 46.6	45.0	342 30.5	06.3
10	234	58.3	317	06.0	09.4	283 19.1	15.8	89 49.1	45.1	357 32.7	06.3
11	250	00.7	332	05.1	-24 09.3	298 19.5	-19 15.3	104 51.6	+14 45.1	12 34.8	-18 06.4
12	265	03.2	347	04.1	-24 09.2	313 20.0	-19 14.8	119 54.2	+14 45.1	27 37.0	-18 06.4
13	280	05.7	2 03.1	09.1	09.1	328 20.5	14.2	134 56.7	45.1	42 39.2	06.5
14	295	08.1	17 02.1	09.0	09.0	343 21.0	13.7	149 59.2	45.2	57 41.4	06.6
15	310	10.6	32 01.2	08.9	08.9	358 21.5	13.1	165 01.7	45.2	72 43.6	06.6
16	325	13.1	47 00.2	08.8	08.8	13 21.9	12.6	180 04.2	45.2	87 45.7	06.7
17	340	15.5	61 59.2	-24 08.7	08.7	28 22.4	-19 12.1	195 06.8	+14 45.3	102 47.9	-18 06.7
18	355	18.0	76 58.3	-24 08.6	08.6	43 22.9	-19 11.5	210 09.3	+14 45.3	117 50.1	-18 06.8
19	10	20.4	91 57.3	08.5	08.5	58 23.4	11.0	225 11.8	45.3	132 52.3	06.9
20	25	22.9	106 56.3	08.4	08.4	73 23.9	10.5	240 14.3	45.4	147 54.4	06.9
21	40	25.4	121 55.3	08.3	08.3	88 24.3	09.9	255 16.9	45.4	162 56.6	07.0
22	55	27.8	136 54.4	08.2	08.2	103 24.8	09.4	270 19.4	45.4	177 58.8	07.0
23	70	30.3	151 53.4	08.1	08.1	118 25.3	08.8	285 21.9	45.4	193 01.0	07.1
24	85	32.8	166 52.4	-24 08.0	08.0	133 25.8	-19 08.3	300 24.4	+14 45.5	208 03.1	-18 07.1
Dif	—		-10 +1		+5 +5		+25 0		+22 -1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 56 ^m 0			Edad: 24 ^d 5 PHE { 4 ^h : 55'7 12 ^h : 55'9 20 ^h : 56'2 SD: 15'1 PMG: 7 ^h 56 ^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	181	02.9	-23	20.3	244	47.3	-8	13.0	60 N	7 05	8 01	8 59	2 48	75	12 52	22		
1	196	02.6		20.4	259	19.6 ¹³³		21.9 ⁸⁹	58	6 57	7 50	41	43	73	12 58	24		
2	211	02.3		20.5	273	51.9 ¹³³		30.9 ⁹⁰	56	50	39	27	38	71	13 03	26		
3	226	02.0		20.6	288	24.1 ¹³²		39.8 ⁸⁹	54	44	30	14	34	69	08	28		
4	241	01.7		20.7	302	56.2 ¹³¹		48.7 ⁸⁹	52	39	22	8 03	31	67	12	29		
5	256	01.4	-23	20.8	317	28.3 ¹³¹	-8	57.6 ⁸⁹	50	6 33	7 15	7 53	2 28	65	13 16	31		
6	271	01.1	-23	20.9	332	00.4 ¹³¹	-9	06.4 ⁸⁸	45	6 22	6 59	7 33	2 20	63	13 24	34		
7	286	00.8		21.0	346	32.3 ¹²⁹		15.2 ⁸⁸	40	11	45	16	15	60	31	36		
8	301	00.5		21.1	1	04.2 ¹²⁹		23.9 ⁸⁷	35	6 02	34	7 02	10	57	37	38		
9	316	00.2		21.1	15	36.1 ¹²⁹		32.7 ⁸⁸	30	5 53	23	6 49	2 05	56	42	40		
10	330	59.9		21.2	30	07.9 ¹²⁸		41.4 ⁸⁷	20	37	6 04	28	1 57	53	51	43		
11	345	59.6	-23	21.3	44	39.6 ¹²⁷	-9	50.0 ⁸⁶	10 N	5 21	5 47	6 10	1 51	50	13 59	46		
12	0	59.3	-23	21.4	59	11.3 ¹²⁷	-9	58.6 ⁸⁶	0	5 04	5 30	5 52	1 44	48	14 07	48		
13	15	59.0		21.5	73	42.9 ¹²⁶	-10	07.2 ⁸⁶	10 S	4 45	5 12	35	38	45	14	51		
14	30	58.7		21.6	88	14.4 ¹²⁵		15.8 ⁸⁶	20	4 22	4 51	5 16	32	41	22	54		
15	45	58.3		21.7	102	45.9 ¹²⁵		24.3 ⁸⁵	30	3 53	26	4 54	24	39	32	57		
16	60	58.0		21.7	117	17.3 ¹²⁴		32.7 ⁸⁴	35	34	4 11	41	20	37	37	59		
17	75	57.7	-23	21.8	131	48.7 ¹²⁴	-10	41.2 ⁸⁵	40	3 11	3 53	4 26	1 15	35	14 43	61		
18	90	57.4	-23	21.9	146	20.0 ¹²³	-10	49.6 ⁸⁴	45	2 41	3 31	4 08	1 10	32	14 50	63		
19	105	57.1		22.0	160	51.2 ¹²²	-10	57.9 ⁸³	50	1 56	3 01	3 45	03	29	14 59	66		
20	120	56.8		22.1	175	22.3 ¹²¹	-11	06.2 ⁸³	52	1 28	2 46	35	1 00	28	15 03	67		
21	135	56.5		22.2	189	53.4 ¹²¹		14.5 ⁸³	54	0 43	28	22	0 57	26	07	69		
22	150	56.2		22.2	204	24.4 ¹²⁰		22.7 ⁸²	56	** **	2 06	3 08	53	24	12	71		
23	165	55.9		22.3	218	55.4 ¹²⁰		30.8 ⁸¹	58	** **	1 36	2 51	49	22	17	73		
24	180	55.6	-23	22.4	233	26.3 ¹¹⁹	-11	39.0 ⁸²	60 S	** **	0 47	2 31	0 44	21	15 23	76		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 14 ^m 8		Mag: -3.9 PMG: 12 ^h 53 ^m				Mag: +1.1 PMG: 15 ^h 06 ^m				Mag: -2.4 PMG: 3 ^h 58 ^m				Mag: +0.5 PMG: 10 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	32.8	166	52.4	-24	08.0	133	25.8	-19	08.3	300	24.4	+14	45.5	208	03.1	-18	07.1
1	100	35.2	181	51.4		07.9	148	26.3		07.8	315	27.0		45.5	223	05.3		07.2
2	115	37.7	196	50.5		07.8	163	26.7		07.2	330	29.5		45.5	238	07.5		07.3
3	130	40.2	211	49.5		07.7	178	27.2		06.7	345	32.0		45.6	253	09.7		07.3
4	145	42.6	226	48.5		07.6	193	27.7		06.2	0	34.5		45.6	268	11.9		07.4
5	160	45.1	241	47.6	-24	07.5	208	28.2	-19	05.6	15	37.1	+14	45.6	283	14.0	-18	07.4
6	175	47.6	256	46.6	-24	07.4	223	28.7	-19	05.1	30	39.6	+14	45.7	298	16.2	-18	07.5
7	190	50.0	271	45.6		07.3	238	29.2		04.5	45	42.1		45.7	313	18.4		07.6
8	205	52.5	286	44.6		07.2	253	29.6		04.0	60	44.7		45.7	328	20.6		07.6
9	220	54.9	301	43.7		07.0	268	30.1		03.4	75	47.2		45.8	343	22.7		07.7
10	235	57.4	316	42.7		06.9	283	30.6		02.9	90	49.7		45.8	358	24.9		07.7
11	250	59.9	331	41.7	-24	06.8	298	31.1	-19	02.4	105	52.2	+14	45.8	13	27.1	-18	07.8
12	266	02.3	346	40.8	-24	06.7	313	31.6	-19	01.8	120	54.8	+14	45.9	28	29.3	-18	07.8
13	281	04.8	1	39.8		06.6	328	32.1		01.3	135	57.3		45.9	43	31.5		07.9
14	296	07.3	16	38.8		06.4	343	32.5		00.7	150	59.8		45.9	58	33.6		08.0
15	311	09.7	31	37.9		06.3	358	33.0	-19	00.2	166	02.4		46.0	73	35.8		08.0
16	326	12.2	46	36.9		06.2	13	33.5	-18	59.6	181	04.9		46.0	88	38.0		08.1
17	341	14.7	61	35.9	-24	06.1	28	34.0	-18	59.1	196	07.4	+14	46.0	103	40.2	-18	08.1
18	356	17.1	76	34.9	-24	05.9	43	34.5	-18	58.5	211	10.0	+14	46.1	118	42.4	-18	08.2
19	11	19.6	91	34.0		05.8	58	35.0		58.0	226	12.5		46.1	133	44.5		08.2
20	26	22.0	106	33.0		05.7	73	35.5		57.5	241	15.0		46.1	148	46.7		08.3
21	41	24.5	121	32.0		05.5	88	35.9		56.9	256	17.6		46.2	163	48.9		08.4
22	56	27.0	136	31.1		05.4	103	36.4		56.4	271	20.1		46.2	178	51.1		08.4
23	71	29.4	151	30.1		05.3	118	36.9		55.8	286	22.6		46.2	193	53.2		08.5
24	86	31.9	166	29.1	-24	05.1	133	37.4	-18	55.3	301	25.2	+14	46.3	208	55.4	-18	08.5
Dif	—		-10		+1		+5		+5		+25		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 25 ^d 5 PHE	SD: 15'3	PMG: 8 ^h 43 ^m			R°: 51 ^m						
	hG ☉	Dec								Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	55.6	-23	22.4	233	26.3	-11 39.0	60 N	14 53	15 51	16 48	4 03 76	13 14 28		
1	195	55.3		22.5	247	57.1 ¹¹⁸	47.0 ⁸⁰	58	15 11	16 03	16 55	3 56 73	22 31		
2	210	55.0		22.5	262	27.8 ¹¹⁷	-11 55.1 ⁸¹	56	25	13	17 02	49 71	29 32		
3	225	54.7		22.6	276	58.5 ¹¹⁷	-12 03.0 ⁷⁹	54	38	22	08	43 70	36 33		
4	240	54.4		22.7	291	29.1 ¹¹⁶	11.0 ⁸⁰	52	49	30	14	38 68	41 36		
5	255	54.0	-23	22.8	305	59.6 ¹¹⁵	-12 18.8 ⁷⁸	50	15 59	16 38	17 19	3 33 67	13 47 36		
6	270	53.7	-23	22.8	320	30.1 ¹¹⁵	-12 26.7 ⁷⁹	45	16 20	16 54	17 31	3 23 64	13 58 39		
7	285	53.4		22.9	335	00.5 ¹¹⁴	34.4 ⁷⁷	40	37	17 07	41	15 61	14 07 41		
8	300	53.1		23.0	349	30.8 ¹¹³	42.1 ⁷⁷	35	16 51	19	51	07 60	15 43		
9	315	52.8		23.1	4	01.0 ¹¹²	49.8 ⁷⁷	30	17 03	29	17 59	3 01 58	22 45		
10	330	52.5		23.1	18	31.2 ¹¹²	-12 57.4 ⁷⁶	20	24	17 48	18 16	2 50 55	34 48		
11	345	52.2	-23	23.2	33	01.3 ¹¹¹	-13 05.0 ⁷⁶	10 N	17 43	18 06	18 32	2 41 52	14 45 50		
12	0	51.9	-23	23.3	47	31.3 ¹¹⁰	-13 12.5 ⁷⁵	0	18 00	18 23	18 49	2 32 50	14 55 52		
13	15	51.6		23.3	62	01.3 ¹¹⁰	19.9 ⁷⁴	10 S	18	18 41	19 08	23 48	15 05 54		
14	30	51.3		23.4	76	31.1 ¹⁰⁸	27.3 ⁷⁴	20	37	19 01	19 31	13 46	16 56		
15	45	51.0		23.5	91	00.9 ¹⁰⁸	34.6 ⁷³	30	18 59	26	20 00	2 03 42	29 58		
16	60	50.7		23.5	105	30.7 ¹⁰⁸	41.8 ⁷²	35	19 12	19 42	18	1 57 40	36 60		
17	75	50.4	-23	23.6	120	00.3 ¹⁰⁶	-13 49.0 ⁷²	40	19 27	20 00	20 42	1 50 38	15 44 62		
18	90	50.0	-23	23.7	134	29.9 ¹⁰⁶	-13 56.1 ⁷¹	45	19 45	20 22	21 12	1 42 36	15 53 64		
19	105	49.7		23.7	148	59.4 ¹⁰⁵	-14 03.2 ⁷¹	50	20 08	20 52	21 58	32 34	16 05 66		
20	120	49.4		23.8	163	28.8 ¹⁰⁴	10.2 ⁷⁰	52	18	21 07	22 26	28 32	10 68		
21	135	49.1		23.8	177	58.2 ¹⁰⁴	17.1 ⁶⁹	54	31	25	23 12	23 31	16 69		
22	150	48.8		23.9	192	27.5 ¹⁰³	24.0 ⁶⁹	56	20 45	21 48	** **	17 30	23 71		
23	165	48.5		24.0	206	56.7 ¹⁰²	30.8 ⁶⁸	58	21 02	22 17	** **	11 28	30 73		
24	180	48.2	-23	24.0	221	25.8 ¹⁰¹	-14 37.5 ⁶⁷	60 S	21 22	23 08	** **	1 05 25	16 39 74		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 18 ^h 10 ^m 9		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: +1.1 PMG: 15 ^h 05 ^m		Mag: -2.4 PMG: 3 ^h 54 ^m		Mag: +0.5 PMG: 10 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	86	31.9	166	29.1	133	37.4	301	25.2	208	55.4					
1	101	34.4	181	28.2	148	37.9	316	27.7	223	57.6					
2	116	36.8	196	27.2	163	38.4	331	30.2	238	59.8					
3	131	39.3	211	26.2	178	38.9	346	32.8	254	02.0					
4	146	41.8	226	25.2	193	39.3	1	35.3	269	04.1					
5	161	44.2	241	24.3	208	39.8	16	37.8	284	06.3					
6	176	46.7	256	23.3	223	40.3	31	40.4	299	08.5					
7	191	49.2	271	22.3	238	40.8	46	42.9	314	10.7					
8	206	51.6	286	21.4	253	41.3	61	45.4	329	12.9					
9	221	54.1	301	20.4	268	41.8	76	48.0	344	15.0					
10	236	56.5	316	19.4	283	42.3	91	50.5	359	17.2					
11	251	59.0	331	18.5	298	42.8	106	53.1	14	19.4					
12	267	01.5	346	17.5	313	43.2	121	55.6	29	21.6					
13	282	03.9	1	16.5	328	43.7	136	58.1	44	23.8					
14	297	06.4	16	15.6	343	44.2	152	00.7	59	25.9					
15	312	08.9	31	14.6	358	44.7	167	03.2	74	28.1					
16	327	11.3	46	13.6	13	45.2	182	05.8	89	30.3					
17	342	13.8	61	12.7	28	45.7	197	08.3	104	32.5					
18	357	16.3	76	11.7	43	46.2	212	10.8	119	34.7					
19	12	18.7	91	10.7	58	46.7	227	13.4	134	36.8					
20	27	21.2	106	09.8	73	47.2	242	15.9	149	39.0					
21	42	23.7	121	08.8	88	47.7	257	18.5	164	41.2					
22	57	26.1	136	07.8	103	48.1	272	21.0	179	43.4					
23	72	28.6	151	06.9	118	48.6	287	23.5	194	45.6					
24	87	31.0	166	05.9	133	49.1	302	26.1	209	47.7					
Dif	—		-10	+2	+5	+6	+25	0	+22	-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 57 ^m 0			Edad: 26 ^d 5 PHE { 4 ^h : 57'2 12 ^h : 57'5 20 ^h : 57'8 SD: 15'6 PMG: 9 ^h 34 ^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	h	m
0	180	48.2	-23	24.0	221	25.8	-14	37.5	60 N	7 06	8 03	9 01	5 19	73	13 42	38		
1	195	47.9		24.1	235	54.8 ¹⁰⁰		44.2 ⁶⁷	58	6 58	7 51	8 43		09 72	13 53	39		
2	210	47.6		24.1	250	23.8 ¹⁰⁰		50.7 ⁶⁵	56		52	41	28	5 00	71	14 01	41	
3	225	47.3		24.2	264	52.7 ⁹⁹	-14	57.3 ⁶⁶	54		46	32	16	4 53	69		09 42	
4	240	47.0		24.2	279	21.5 ⁹⁸	-15	03.7 ⁶⁴	52		40	24	8 05	46 68		17 43		
5	255	46.6	-23	24.3	293	50.2 ⁹⁷	-15	10.1 ⁶⁴	50	6 35	7 16	7 55	4 40	66	14 23	44		
6	270	46.3	-23	24.4	308	18.9 ⁹⁷	-15	16.3 ⁶²	45	6 23	7 00	7 34	4 27	64	14 37	46		
7	285	46.0		24.4	322	47.5 ⁹⁶		22.5 ⁶²	40		12	6 46	17	16 62		48 48		
8	300	45.7		24.5	337	16.0 ⁹⁵		28.7 ⁶²	35	6 03		35	7 03	4 07	61	14 58	49	
9	315	45.4		24.5	351	44.4 ⁹⁴		34.7 ⁶⁰	30	5 54		24	6 50	3 59	59	15 07	50	
10	330	45.1		24.6	6	12.8 ⁹⁴		40.7 ⁶⁰	20		38	6 05	29	45 57		22 51		
11	345	44.8	-23	24.6	20	41.1 ⁹³	-15	46.6 ⁵⁹	10 N	5 22	5 48	6 11	3 33	55	15 35	53		
12	0	44.5	-23	24.7	35	09.3 ⁹²	-15	52.4 ⁵⁸	0	5 05	5 31	5 53	3 22	53	15 47	55		
13	15	44.2		24.7	49	37.4 ⁹¹	-15	58.2 ⁵⁸	10 S	4 46	5 13	36	3 11	51	15 59	56		
14	30	43.9		24.7	64	05.5 ⁹¹	-16	03.8 ⁵⁶	20	4 23	4 52	5 17	2 59	49	16 12	58		
15	45	43.6		24.8	78	33.5 ⁹⁰		09.4 ⁵⁶	30	3 54		27	4 55	45 47		27 60		
16	60	43.2		24.8	93	01.4 ⁸⁹		14.8 ⁵⁴	35	35	4 12	42	37 46		36 60			
17	75	42.9	-23	24.9	107	29.2 ⁸⁸	-16	20.2 ⁵⁴	40	3 12	3 54	4 27	2 28	45	16 46	61		
18	90	42.6	-23	24.9	121	56.9 ⁸⁷	-16	25.5 ⁵³	45	2 41	3 31	4 09	2 18	43	16 57	63		
19	105	42.3		25.0	136	24.6 ⁸⁷		30.8 ⁵³	50	1 56	3 01	3 46	06 40		17 11	65		
20	120	42.0		25.0	150	52.2 ⁸⁶		35.9 ⁵¹	52	1 28	2 46	35	2 00	39	18 66			
21	135	41.7		25.1	165	19.8 ⁸⁶		40.9 ⁵⁰	54	0 41		28	23	1 54	37	25 67		
22	150	41.4		25.1	179	47.2 ⁸⁴		45.9 ⁵⁰	56	** **	2 06	3 09	47 36		34 67			
23	165	41.1		25.1	194	14.6 ⁸⁴		50.7 ⁴⁸	58	** **	1 36	2 52	39 34		43 69			
24	180	40.8	-23	25.2	208	41.9 ⁸³	-16	55.5 ⁴⁸	60 S	** **	0 46	2 31	1 30	32	17 53	71		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 07 ^m 0		Mag: -3.9 PMG: 12 ^h 56 ^m				Mag: +1.1 PMG: 15 ^h 04 ^m				Mag: -2.4 PMG: 3 ^h 50 ^m				Mag: +0.5 PMG: 9 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	31.0	166	05.9	-24	01.5	133	49.1	-18	42.0	302	26.1	+14	47.1	209	47.7	-18	09.9
1	102	33.5	181	04.9		01.3	148	49.6		41.5	317	28.6		47.1	224	49.9		10.0
2	117	36.0	196	04.0		01.2	163	50.1		40.9	332	31.2		47.2	239	52.1		10.0
3	132	38.4	211	03.0		01.0	178	50.6		40.4	347	33.7		47.2	254	54.3		10.1
4	147	40.9	226	02.0		00.8	193	51.1		39.8	2	36.2		47.3	269	56.5		10.1
5	162	43.4	241	01.1	-24	00.7	208	51.6	-18	39.2	17	38.8	+14	47.3	284	58.6	-18	10.2
6	177	45.8	256	00.1	-24	00.5	223	52.1	-18	38.7	32	41.3	+14	47.3	300	00.8	-18	10.2
7	192	48.3	270	59.1		00.3	238	52.6		38.1	47	43.9		47.4	315	03.0		10.3
8	207	50.8	285	58.2	-24	00.1	253	53.0		37.6	62	46.4		47.4	330	05.2		10.4
9	222	53.2	300	57.2	-24	00.0	268	53.5		37.0	77	49.0		47.4	345	07.4		10.4
10	237	55.7	315	56.3	-23	59.8	283	54.0		36.5	92	51.5		47.5	0	09.5		10.5
11	252	58.1	330	55.3	-23	59.6	298	54.5	-18	35.9	107	54.1	+14	47.5	15	11.7	-18	10.5
12	268	00.6	345	54.3	-23	59.4	313	55.0	-18	35.3	122	56.6	+14	47.6	30	13.9	-18	10.6
13	283	03.1	0	53.4		59.2	328	55.5		34.8	137	59.2		47.6	45	16.1		10.6
14	298	05.5	15	52.4		59.1	343	56.0		34.2	153	01.7		47.6	60	18.3		10.7
15	313	08.0	30	51.4		58.9	358	56.5		33.7	168	04.2		47.7	75	20.4		10.7
16	328	10.5	45	50.5		58.7	13	57.0		33.1	183	06.8		47.7	90	22.6		10.8
17	343	12.9	60	49.5	-23	58.5	28	57.5	-18	32.5	198	09.3	+14	47.7	105	24.8	-18	10.9
18	358	15.4	75	48.5	-23	58.3	43	58.0	-18	32.0	213	11.9	+14	47.8	120	27.0	-18	10.9
19	13	17.9	90	47.6		58.1	58	58.5		31.4	228	14.4		47.8	135	29.2		11.0
20	28	20.3	105	46.6		57.9	73	59.0		30.8	243	17.0		47.9	150	31.3		11.0
21	43	22.8	120	45.7		57.7	88	59.5		30.3	258	19.5		47.9	165	33.5		11.1
22	58	25.3	135	44.7		57.5	104	00.0		29.7	273	22.1		47.9	180	35.7		11.1
23	73	27.7	150	43.7		57.3	119	00.4		29.2	288	24.6		48.0	195	37.9		11.2
24	88	30.2	165	42.8	-23	57.1	134	00.9	-18	28.6	303	27.2	+14	48.0	210	40.1	-18	11.3
Dif	—		-10		+2		+5		+6		+25		0		+22		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 57 ^m 5				Edad: 27 ^d 5 PHE { 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'6 PMG: 10 ^h 28 ^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		
0	180	40.8	-23	25.2	208	41.9	-16	55.5	60 N	14 54	15 52	16 48	6 32	68	14 20	49		
1	195	40.5		25.2	223	09.2	83	-17 00.2	58	15 11	16 03	16 56	21	66	32	50		
2	210	40.1		25.2	237	36.3	81	04.7	56	26	14	17 03	11	65	42	51		
3	225	39.8		25.3	252	03.4	81	09.2	54	39	23	09	6 02	64	14 51	52		
4	240	39.5		25.3	266	30.5	81	13.6	52	15 50	31	15	5 54	64	15 00	52		
5	255	39.2	-23	25.4	280	57.4	79	-17 17.9	50	16 00	16 38	17 20	5 46	64	15 07	53		
6	270	38.9	-23	25.4	295	24.3	79	-17 22.0	45	16 21	16 54	17 32	5 31	62	15 23	54		
7	285	38.6		25.4	309	51.1	78	26.1	40	37	17 08	42	18	61	36	54		
8	300	38.3		25.5	324	17.9	78	30.1	35	16 52	20	17 52	5 08	60	47	55		
9	315	38.0		25.5	338	44.6	77	34.0	30	17 04	30	18 00	4 58	60	15 57	55		
10	330	37.7		25.5	353	11.2	76	37.8	20	25	17 49	17	42	59	16 13	57		
11	345	37.3	-23	25.5	7	37.7	75	-17 41.4	10 N	17 44	18 07	18 33	4 28	57	16 28	57		
12	0	37.0	-23	25.6	22	04.2	75	-17 45.0	0	18 01	18 24	18 50	4 15	56	16 42	57		
13	15	36.7		25.6	36	30.7	75	48.5	10 S	19	18 42	19 09	4 02	55	16 55	58		
14	30	36.4		25.6	50	57.0	73	51.8	20	18 38	19 02	19 32	3 48	54	17 10	58		
15	45	36.1		25.7	65	23.3	73	55.1	30	19 00	27	20 01	32	53	27	59		
16	60	35.8		25.7	79	49.5	72	-17 58.2	35	13	19 43	20	23	52	36	60		
17	75	35.5	-23	25.7	94	15.7	72	-18 01.3	40	19 28	20 01	20 43	3 13	51	17 47	60		
18	90	35.2	-23	25.7	108	41.8	71	-18 04.2	45	19 46	20 24	21 13	3 01	50	18 00	61		
19	105	34.9		25.8	123	07.9	71	07.0	50	20 09	20 53	21 59	2 46	48	16	61		
20	120	34.6		25.8	137	33.9	70	09.7	52	20	21 09	22 27	39	48	24	61		
21	135	34.2		25.8	151	59.8	69	12.3	54	32	27	23 14	31	47	32	62		
22	150	33.9		25.8	166	25.7	69	14.8	56	20 46	21 49	** **	23	46	41	62		
23	165	33.6		25.8	180	51.5	68	17.2	58	21 03	22 19	** **	13	45	18	52		
24	180	33.3	-23	25.9	195	17.2	67	-18 19.4	60 S	21 24	23 10	** **	2 02	44	19 04	63		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 03 ^m 0		Mag: -3.9 PMG: 12 ^h 58 ^m		Mag: +1.1 PMG: 15 ^h 03 ^m		Mag: -2.4 PMG: 3 ^h 46 ^m		Mag: +0.5 PMG: 9 ^h 56 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	88	30.2	165	42.8	-23	57.1	134	00.9	-18	28.6	303	27.2	+14	48.0	210	40.1	-18	11.3
1	103	32.6	180	41.8		56.9	149	01.4		28.0	318	29.7		48.1	225	42.3		11.3
2	118	35.1	195	40.8		56.7	164	01.9		27.5	333	32.3		48.1	240	44.4		11.4
3	133	37.6	210	39.9		56.5	179	02.4		26.9	348	34.8		48.1	255	46.6		11.4
4	148	40.0	225	38.9		56.3	194	02.9		26.3	3	37.4		48.2	270	48.8		11.5
5	163	42.5	240	38.0	-23	56.1	209	03.4	-18	25.8	18	39.9	+14	48.2	285	51.0	-18	11.5
6	178	45.0	255	37.0	-23	55.9	224	03.9	-18	25.2	33	42.5	+14	48.3	300	53.2	-18	11.6
7	193	47.4	270	36.0		55.7	239	04.4		24.6	48	45.0		48.3	315	55.3		11.6
8	208	49.9	285	35.1		55.5	254	04.9		24.1	63	47.6		48.3	330	57.5		11.7
9	223	52.4	300	34.1		55.3	269	05.4		23.5	78	50.1		48.4	345	59.7		11.8
10	238	54.8	315	33.2		55.1	284	05.9		22.9	93	52.7		48.4	1	01.9		11.8
11	253	57.3	330	32.2	-23	54.9	299	06.4	-18	22.4	108	55.3	+14	48.5	16	04.1	-18	11.9
12	268	59.8	345	31.2	-23	54.7	314	06.9	-18	21.8	123	57.8	+14	48.5	31	06.3	-18	11.9
13	284	02.2	0	30.3		54.5	329	07.4		21.2	139	00.4		48.5	46	08.4		12.0
14	299	04.7	15	29.3		54.2	344	07.9		20.7	154	02.9		48.6	61	10.6		12.0
15	314	07.1	30	28.4		54.0	359	08.4		20.1	169	05.5		48.6	76	12.8		12.1
16	329	09.6	45	27.4		53.8	14	08.9		19.5	184	08.0		48.7	91	15.0		12.1
17	344	12.1	60	26.4	-23	53.6	29	09.4	-18	19.0	199	10.6	+14	48.7	106	17.2	-18	12.2
18	359	14.5	75	25.5	-23	53.4	44	09.9	-18	18.4	214	13.1	+14	48.7	121	19.4	-18	12.3
19	14	17.0	90	24.5		53.2	59	10.4		17.8	229	15.7		48.8	136	21.5		12.3
20	29	19.5	105	23.6		52.9	74	10.9		17.3	244	18.3		48.8	151	23.7		12.4
21	44	21.9	120	22.6		52.7	89	11.4		16.7	259	20.8		48.9	166	25.9		12.4
22	59	24.4	135	21.7		52.5	104	11.9		16.1	274	23.4		48.9	181	28.1		12.5
23	74	26.9	150	20.7		52.3	119	12.4		15.5	289	25.9		48.9	196	30.3		12.5
24	89	29.3	165	19.7	-23	52.0	134	12.9	-18	15.0	304	28.5	+14	49.0	211	32.5	-18	12.6
Dif	—		-10		+2		+5		+6		+26		0		+22		-1	

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 58 ^m 0			Edad: 28 ^d 5 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 2 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	180	33.3	-23	25.9	195	17.2	-18	19.4	60 N	7 07	8 04	9 02	7 40	58	15 09	64	
1	195	33.0		25.9	209	42.9		21.5	58	7 00	7 52	8 44	27	58	22	63	
2	210	32.7		25.9	224	08.6		23.6	56	6 53	42	30	16	58	33	63	
3	225	32.4		25.9	238	34.2		25.5	54	47	33	17	7 06	58	43	63	
4	240	32.1		25.9	252	59.8		27.3	52	41	25	8 06	6 58	58	15 52	62	
5	255	31.7	-23	25.9	267	25.3	-18	29.0	50	6 36	7 17	7 56	6 50	58	16 00	62	
6	270	31.4	-23	26.0	281	50.7	-18	30.5	45	6 24	7 01	7 35	6 33	58	16 17	61	
7	285	31.1		26.0	296	16.1		32.0	40	13	6 48	18	19	59	30	61	
8	300	30.8		26.0	310	41.5		33.3	35	6 04	36	7 04	6 08	58	42	61	
9	315	30.5		26.0	325	06.8		34.5	30	5 55	25	6 52	5 58	58	16 52	60	
10	330	30.2		26.0	339	32.1		35.6	20	39	6 06	30	41	58	17 10	59	
11	345	29.9	-23	26.0	353	57.3	-18	36.5	10 N	5 23	5 49	6 12	5 25	59	17 25	59	
12	0	29.6	-23	26.0	8	22.5	-18	37.4	0	5 05	5 32	5 54	5 11	59	17 39	59	
13	15	29.3		26.0	22	47.6		38.1	10 S	4 46	5 14	37	4 57	59	17 53	59	
14	30	28.9		26.0	37	12.7		38.7	20	4 24	4 53	5 18	42	59	18 08	58	
15	45	28.6		26.0	51	37.8		39.2	30	3 55	28	4 56	25	58	26	57	
16	60	28.3		26.1	66	02.8		39.5	35	36	4 13	43	15	58	36	56	
17	75	28.0	-23	26.1	80	27.8	-18	39.8	40	3 13	3 55	4 27	4 04	58	18 47	56	
18	90	27.7	-23	26.1	94	52.8	-18	39.9	45	2 42	3 32	4 09	3 51	57	19 01	55	
19	105	27.4		26.1	109	17.7		39.9	50	1 56	3 02	3 47	34	58	17	55	
20	120	27.1		26.1	123	42.6		39.7	52	1 28	2 47	36	27	57	25	54	
21	135	26.8		26.1	138	07.5		39.5	54	0 41	29	24	18	58	34	54	
22	150	26.5		26.1	152	32.3		39.1	56	** **	2 07	3 09	3 09	57	43	54	
23	165	26.1		26.1	166	57.1		38.6	58	** **	1 37	2 52	2 58	57	19 54	53	
24	180	25.8	-23	26.1	181	21.9	-18	37.9	60 S	** **	0 45	2 32	2 46	56	20 07	52	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 59 ^m 1		Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: +1.1 PMG: 15 ^h 03 ^m			Mag: -2.4 PMG: 3 ^h 41 ^m			Mag: +0.5 PMG: 9 ^h 52 ^m						
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	89	29.3	165	19.7	-23	52.0	134	12.9	-18	15.0	304	28.5	+14	49.0	211	32.5	-18	12.6
1	104	31.8	180	18.8		51.8	149	13.4		14.4	319	31.0		49.0	226	34.6		12.7
2	119	34.3	195	17.8		51.6	164	13.9		13.8	334	33.6		49.1	241	36.8		12.7
3	134	36.7	210	16.9		51.3	179	14.4		13.3	349	36.2		49.1	256	39.0		12.8
4	149	39.2	225	15.9		51.1	194	14.9		12.7	4	38.7		49.2	271	41.2		12.8
5	164	41.6	240	15.0	-23	50.9	209	15.4	-18	12.1	19	41.3	+14	49.2	286	43.4	-18	12.9
6	179	44.1	255	14.0	-23	50.6	224	15.9	-18	11.5	34	43.8	+14	49.2	301	45.6	-18	12.9
7	194	46.6	270	13.1		50.4	239	16.4		11.0	49	46.4		49.3	316	47.7		13.0
8	209	49.0	285	12.1		50.2	254	16.9		10.4	64	49.0		49.3	331	49.9		13.0
9	224	51.5	300	11.1		49.9	269	17.4		09.8	79	51.5		49.4	346	52.1		13.1
10	239	54.0	315	10.2		49.7	284	17.9		09.2	94	54.1		49.4	1	54.3		13.1
11	254	56.4	330	09.2	-23	49.4	299	18.4	-18	08.7	109	56.6	+14	49.5	16	56.5	-18	13.2
12	269	58.9	345	08.3	-23	49.2	314	18.9	-18	08.1	124	59.2	+14	49.5	31	58.7	-18	13.3
13	285	01.4	0	07.3		48.9	329	19.4		07.5	140	01.8		49.5	47	00.8		13.3
14	300	03.8	15	06.4		48.7	344	19.9		06.9	155	04.3		49.6	62	03.0		13.4
15	315	06.3	30	05.4		48.5	359	20.4		06.4	170	06.9		49.6	77	05.2		13.4
16	330	08.8	45	04.5		48.2	14	20.9		05.8	185	09.4		49.7	92	07.4		13.5
17	345	11.2	60	03.5	-23	48.0	29	21.4	-18	05.2	200	12.0	+14	49.7	107	09.6	-18	13.5
18	0	13.7	75	02.6	-23	47.7	44	21.9	-18	04.6	215	14.6	+14	49.8	122	11.8	-18	13.6
19	15	16.1	90	01.6		47.5	59	22.4		04.0	230	17.1		49.8	137	13.9		13.6
20	30	18.6	105	00.6		47.2	74	22.9		03.5	245	19.7		49.8	152	16.1		13.7
21	45	21.1	119	59.7		46.9	89	23.4		02.9	260	22.3		49.9	167	18.3		13.8
22	60	23.5	134	58.7		46.7	104	23.9		02.3	275	24.8		49.9	182	20.5		13.8
23	75	26.0	149	57.8		46.4	119	24.4		01.7	290	27.4		50.0	197	22.7		13.9
24	90	28.5	164	56.8	-23	46.2	134	24.9	-18	01.1	305	30.0	+14	50.0	212	24.9	-18	13.9
Dif	—		-10 +2			+5 +6			+26 0			+22 -1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 58 ^m 5			Edad: 29 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/6 20 ^h : 59/7 R°: 59 ^m															
	hG ☉		Dec	hG ☾		Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	180	25.8	-23	26.1	181	21.9	-18	37.9	60 N	14 55	15 53	16 49	8 38 46	16 13 75					
1	195	25.5		26.1	195	46.6	57	37.2	58	15 12	16 04	16 57	25 47	25 74					
2	210	25.2		26.1	210	11.4	58	36.3	56	27	14	17 04	14 48	36 73					
3	225	24.9		26.1	224	36.1	57	35.3	54	40	24	10	8 04 50	46 71					
4	240	24.6		26.1	239	00.8	57	34.1	52	15 51	32	16	7 56 50	16 54 71					
5	255	24.3	-23	26.1	253	25.5	57	-18 32.8	50	16 01	16 39	17 21	7 48 51	17 02 69					
6	270	24.0	-23	26.1	267	50.1	56	-18 31.5	45	16 22	16 55	17 33	7 31 53	17 18 68					
7	285	23.6		26.0	282	14.7	56	29.9	40	38	17 09	43	18 54	31 66					
8	300	23.3		26.0	296	39.4	57	28.3	35	16 53	21	17 52	7 06 55	43 64					
9	315	23.0		26.0	311	04.0	56	26.5	30	17 05	31	18 01	6 56 56	17 52 64					
10	330	22.7		26.0	325	28.6	56	24.6	20	26	17 50	18	39 57	18 09 62					
11	345	22.4	-23	26.0	339	53.2	56	-18 22.6	10 N	17 45	18 08	18 34	6 24 58	18 24 60					
12	0	22.1	-23	26.0	354	17.7	55	-18 20.5	0	18 02	18 25	18 51	6 10 59	18 38 59					
13	15	21.8		26.0	8	42.3	56	18.2	10 S	20	18 43	19 10	5 56 60	18 52 57					
14	30	21.5		26.0	23	06.9	56	15.8	20	18 39	19 03	19 33	41 61	19 06 56					
15	45	21.2		26.0	37	31.4	55	13.3	30	19 01	28	20 02	23 63	23 53					
16	60	20.8		26.0	51	56.0	56	10.6	35	14	19 44	21	13 63	32 53					
17	75	20.5	-23	25.9	66	20.5	55	-18 07.9	40	19 29	20 02	20 44	5 02 64	19 43 52					
18	90	20.2	-23	25.9	80	45.1	56	-18 05.0	45	19 47	20 25	21 14	4 48 65	19 56 50					
19	105	19.9		25.9	95	09.6	55	-18 01.9	50	20 10	20 54	22 00	32 66	20 12 47					
20	120	19.6		25.9	109	34.2	56	-17 58.8	52	21	21 10	22 28	24 67	19 47					
21	135	19.3		25.9	123	58.7	55	55.5	54	33	28	23 15	16 67	28 45					
22	150	19.0		25.9	138	23.3	56	52.1	56	20 47	21 50	** **	4 06 68	37 44					
23	165	18.7		25.8	152	47.8	55	48.6	58	21 04	22 20	** **	3 55 69	47 42					
24	180	18.3	-23	25.8	167	12.4	56	-17 45.0	60 S	21 25	23 11	** **	3 42 71	20 59 40					
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 17 ^h 55 ^m 2		Mag: -3.9 PMG: 13 ^h 01 ^m			Mag: +1.1 PMG: 15 ^h 02 ^m			Mag: -2.4 PMG: 3 ^h 37 ^m				Mag: +0.5 PMG: 9 ^h 49 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃				hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	90	28.5	164	56.8	-23	46.2	134	24.9	-18	01.1	305	30.0	+14	50.0	212	24.9	-18	13.9	
1	105	30.9	179	55.9		45.9	149	25.4	-18	00.6	320	32.5		50.1	227	27.1		14.0	
2	120	33.4	194	54.9		45.7	164	25.9	-18	00.0	335	35.1		50.1	242	29.2		14.0	
3	135	35.9	209	54.0		45.4	179	26.4	-17	59.4	350	37.7		50.2	257	31.4		14.1	
4	150	38.3	224	53.0		45.1	194	26.9		58.8	5	40.2		50.2	272	33.6		14.1	
5	165	40.8	239	52.1	-23	44.9	209	27.4	-17	58.2	20	42.8	+14	50.2	287	35.8	-18	14.2	
6	180	43.3	254	51.1	-23	44.6	224	27.9	-17	57.7	35	45.4	+14	50.3	302	38.0	-18	14.3	
7	195	45.7	269	50.2		44.3	239	28.4		57.1	50	47.9		50.3	317	40.2		14.3	
8	210	48.2	284	49.2		44.1	254	28.9		56.5	65	50.5		50.4	332	42.3		14.4	
9	225	50.6	299	48.3		43.8	269	29.4		55.9	80	53.1		50.4	347	44.5		14.4	
10	240	53.1	314	47.3		43.5	284	29.9		55.3	95	55.6		50.5	2	46.7		14.5	
11	255	55.6	329	46.4	-23	43.2	299	30.4	-17	54.8	110	58.2	+14	50.5	17	48.9	-18	14.5	
12	270	58.0	344	45.4	-23	43.0	314	30.9	-17	54.2	126	00.8	+14	50.6	32	51.1	-18	14.6	
13	286	00.5	359	44.5		42.7	329	31.4		53.6	141	03.3		50.6	47	53.3		14.6	
14	301	03.0	14	43.5		42.4	344	31.9		53.0	156	05.9		50.6	62	55.5		14.7	
15	316	05.4	29	42.6		42.1	359	32.4		52.4	171	08.5		50.7	77	57.6		14.7	
16	331	07.9	44	41.6		41.9	14	33.0		51.8	186	11.1		50.7	92	59.8		14.8	
17	346	10.4	59	40.7	-23	41.6	29	33.5	-17	51.2	201	13.6	+14	50.8	108	02.0	-18	14.9	
18	1	12.8	74	39.8	-23	41.3	44	34.0	-17	50.7	216	16.2	+14	50.8	123	04.2	-18	14.9	
19	16	15.3	89	38.8		41.0	59	34.5		50.1	231	18.8		50.9	138	06.4		15.0	
20	31	17.7	104	37.9		40.7	74	35.0		49.5	246	21.3		50.9	153	08.6		15.0	
21	46	20.2	119	36.9		40.5	89	35.5		48.9	261	23.9		51.0	168	10.8		15.1	
22	61	22.7	134	36.0		40.2	104	36.0		48.3	276	26.5		51.0	183	12.9		15.1	
23	76	25.1	149	35.0		39.9	119	36.5		47.7	291	29.1		51.1	198	15.1		15.2	
24	91	27.6	164	34.1	-23	39.6	134	37.0	-17	47.1	306	31.6	+14	51.1	213	17.3	-18	15.2	
Dif	—		-9			+3	+5			+6	+26		0		+22		-		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 0			Edad: 0 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'0 R°: 58 ^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	180	18.3	-23	25.8	167	12.4	-17	45.0	60 N	7 08	8 05	9 03	9 24	35	17 28	84		
1	195	18.0		25.8	181	37.0		56	58	7 01	7 53	8 45		12 38		39 82		
2	210	17.7		25.8	196	01.5		55	56	6 54	43	30	9 02	40		49 79		
3	225	17.4		25.8	210	26.1		56	54	48	34	18	8 54	41	17 57	78		
4	240	17.1		25.7	224	50.7		56	52	42	26	8 07	46	43	18 05	75		
5	255	16.8	-23	25.7	239	15.3	-17	24.9	50	6 37	7 18	7 57	8 39	44	18 11	75		
6	270	16.5	-23	25.7	253	40.0	-17	20.5	45	6 25	7 02	7 36	8 24	46	18 26	71		
7	285	16.2		25.7	268	04.6		56	40	14	6 49	19		12 48		37 70		
8	300	15.8		25.6	282	29.3		57	35	6 05	37	7 05	8 01	50		47 68		
9	315	15.5		25.6	296	54.0		57	30	5 56	26	6 53	7 52	51	18 56	66		
10	330	15.2		25.6	311	18.7	-17	01.9	20	40	6 07	31	36	54	19 11	63		
11	345	14.9	-23	25.5	325	43.4	-16	56.9	10 N	5 24	5 50	6 13	7 22	56	19 24	60		
12	0	14.6	-23	25.5	340	08.1	-16	51.8	0	5 06	5 33	5 55	7 09	58	19 37	57		
13	15	14.3		25.5	354	32.9		58	10 S	4 47	5 15	38	6 56	60	19 49	55		
14	30	14.0		25.5	8	57.7		58	20	4 25	4 54	5 19	42	62	20 02	52		
15	45	13.7		25.4	23	22.5		58	30	3 56	29	4 57	26	65	16 50			
16	60	13.4		25.4	37	47.3		58	35	37	4 14	44	16	67	25 48			
17	75	13.0	-23	25.4	52	12.2	-16	24.7	40	3 14	3 56	4 28	6 06	68	20 35	45		
18	90	12.7	-23	25.3	66	37.1	-16	18.9	45	2 43	3 33	4 10	5 53	70	20 46	43		
19	105	12.4		25.3	81	02.0		59	50	1 57	3 03	3 48	38	72	20 59	41		
20	120	12.1		25.2	95	26.9		59	52	1 29	2 48	37	31	73	21 06	39		
21	135	11.8		25.2	109	51.9	-16	01.0	61	0 42	30	25	23	75	13 37			
22	150	11.5		25.2	124	16.9	-15	54.8	56	** **	2 08	3 10	14	77	21 35			
23	165	11.2		25.1	138	42.0		61	58	** **	1 38	2 53	5 04	78	29 34			
24	180	10.9	-23	25.1	153	07.1	-15	42.0	60 S	** **	0 46	2 33	4 53	80	21 39	32		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 51 ^m 2			Mag: -3.9 PMG: 13 ^h 03 ^m			Mag: +1.1 PMG: 15 ^h 01 ^m			Mag: -2.4 PMG: 3 ^h 33 ^m			Mag: +0.5 PMG: 9 ^h 45 ^m					
h	°	'	°	'	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♉	Dec	hG ♋	Dec	hG ♌	Dec	hG ♍	Dec
0	91	27.6	164	34.1	-23	39.6	134	37.0	-17	47.1	306	31.6	+14	51.1	213	17.3	-18	15.2
1	106	30.1	179	33.1		39.3	149	37.5		46.6	321	34.2		51.2	228	19.5		15.3
2	121	32.5	194	32.2		39.0	164	38.0		46.0	336	36.8		51.2	243	21.7		15.3
3	136	35.0	209	31.2		38.7	179	38.5		45.4	351	39.4		51.3	258	23.9		15.4
4	151	37.5	224	30.3		38.4	194	39.0		44.8	6	41.9		51.3	273	26.1		15.5
5	166	39.9	239	29.4	-23	38.1	209	39.5	-17	44.2	21	44.5	+14	51.3	288	28.3	-18	15.5
6	181	42.4	254	28.4	-23	37.8	224	40.1	-17	43.6	36	47.1	+14	51.4	303	30.4	-18	15.6
7	196	44.9	269	27.5		37.5	239	40.6		43.0	51	49.7		51.4	318	32.6		15.6
8	211	47.3	284	26.5		37.2	254	41.1		42.4	66	52.2		51.5	333	34.8		15.7
9	226	49.8	299	25.6		36.9	269	41.6		41.8	81	54.8		51.5	348	37.0		15.7
10	241	52.2	314	24.6		36.6	284	42.1		41.3	96	57.4		51.6	3	39.2		15.8
11	256	54.7	329	23.7	-23	36.3	299	42.6	-17	40.7	112	00.0	+14	51.6	18	41.4	-18	15.8
12	271	57.2	344	22.8	-23	36.0	314	43.1	-17	40.1	127	02.5	+14	51.7	33	43.6	-18	15.9
13	286	59.6	359	21.8		35.7	329	43.6		39.5	142	05.1		51.7	48	45.7		15.9
14	302	02.1	14	20.9		35.4	344	44.1		38.9	157	07.7		51.8	63	47.9		16.0
15	317	04.6	29	19.9		35.1	359	44.6		38.3	172	10.3		51.8	78	50.1		16.0
16	332	07.0	44	19.0		34.8	14	45.1		37.7	187	12.9		51.9	93	52.3		16.1
17	347	09.5	59	18.0	-23	34.5	29	45.7	-17	37.1	202	15.4	+14	51.9	108	54.5	-18	16.2
18	2	12.0	74	17.1	-23	34.2	44	46.2	-17	36.5	217	18.0	+14	52.0	123	56.7	-18	16.2
19	17	14.4	89	16.2		33.9	59	46.7		35.9	232	20.6		52.0	138	58.9		16.3
20	32	16.9	104	15.2		33.6	74	47.2		35.3	247	23.2		52.1	154	01.1		16.3
21	47	19.4	119	14.3		33.2	89	47.7		34.7	262	25.8		52.1	169	03.2		16.4
22	62	21.8	134	13.3		32.9	104	48.2		34.1	277	28.3		52.2	184	05.4		16.4
23	77	24.3	149	12.4		32.6	119	48.7		33.5	292	30.9		52.2	199	07.6		16.5
24	92	26.7	164	11.5	-23	32.3	134	49.2	-17	33.0	307	33.5	+14	52.3	214	09.8	-18	16.5
Dif	—			-9 +3			+5 +6			+26 0			+22 -1					

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 59 ^m 5				Edad: 1 ^d 9 PHE { 4 ^h : 60'1 12 ^h : 60'1 20 ^h : 60'1 PMG: 14 ^h 21 ^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	180	10.9	-23	25.1	153	07.1	-15	42.0	60 N	14 56	15 54	16 51	9 59 28	18 52 88				
1	195	10.5		25.1	167	32.2 61		35.5 65	58	15 14	16 05	16 58	50 30	19 01 84				
2	210	10.2		25.0	181	57.3 61		28.9 66	56	28	16	17 05	42 32	08 82				
3	225	09.9		25.0	196	22.5 62		22.1 68	54	41	25	11	35 34	15 80				
4	240	09.6		24.9	210	47.7 62		15.3 68	52	15 52	33	17	29 36	20 79				
5	255	09.3	-23	24.9	225	13.0 63	-15	08.4 69	50	16 02	16 40	17 22	9 23 37	19 26 76				
6	270	09.0	-23	24.8	239	38.3 63	-15	01.3 71	45	16 23	16 57	17 34	9 10 41	19 37 73				
7	285	08.7		24.8	254	03.6 63	-14	54.2 71	40	40	17 10	44	9 00 43	47 70				
8	300	08.4		24.7	268	29.0 64		46.9 73	35	16 54	22	17 54	8 51 46	19 55 67				
9	315	08.1		24.7	282	54.4 64		39.6 73	30	17 06	32	18 02	43 48	20 02 65				
10	330	07.7		24.7	297	19.8 64		32.1 75	20	27	17 51	19	30 51	14 62				
11	345	07.4	-23	24.6	311	45.3 65	-14	24.6 75	10 N	17 46	18 09	18 35	8 18 54	20 24 59				
12	0	07.1	-23	24.6	326	10.8 65	-14	17.0 76	0	18 03	18 26	18 52	8 07 57	20 34 56				
13	15	06.8		24.5	340	36.4 66		09.2 78	10 S	21	18 44	19 11	7 56 59	44 53				
14	30	06.5		24.5	355	02.0 66	-14	01.4 78	20	18 40	19 04	19 34	44 62	20 54 50				
15	45	06.2		24.4	9	27.7 67	-13	53.5 79	30	19 02	29	20 03	31 65	21 06 46				
16	60	05.9		24.4	23	53.4 67		45.5 80	35	15	19 45	21	23 67	13 44				
17	75	05.6	-23	24.3	38	19.1 67	-13	37.4 81	40	19 30	20 03	20 45	7 14 69	21 20 42				
18	90	05.3	-23	24.2	52	44.9 68	-13	29.2 82	45	19 48	20 25	21 15	7 03 73	21 29 39				
19	105	04.9		24.2	67	10.8 69		20.9 83	50	20 11	20 55	22 01	6 50 76	40 35				
20	120	04.6		24.1	81	36.7 69		12.6 83	52	21	21 10	22 29	44 78	45 33				
21	135	04.3		24.1	96	02.6 69	-13	04.1 85	54	34	28	23 15	38 79	50 32				
22	150	04.0		24.0	110	28.6 70	-12	55.6 85	56	20 48	21 51	** **	31 81	21 56 30				
23	165	03.7		24.0	124	54.6 70		47.0 86	58	21 05	22 20	** **	22 84	22 03 28				
24	180	03.4	-23	23.9	139	20.7 71	-12	38.3 87	60 S	21 25	23 11	** **	6 13 86	22 11 25				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 47 ^m 3		Mag: -3.9 PMG: 13 ^h 04 ^m				Mag: +1.1 PMG: 15 ^h 00 ^m				Mag: -2.4 PMG: 3 ^h 29 ^m				Mag: +0.5 PMG: 9 ^h 42 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	92	26.7	164	11.5	-23	32.3	134	49.2	-17	33.0	307	33.5	+14	52.3	214	09.8	-18	16.5
1	107	29.2	179	10.5		32.0	149	49.7		32.4	322	36.1		52.3	229	12.0		16.6
2	122	31.7	194	09.6		31.6	164	50.3		31.8	337	38.7		52.4	244	14.2		16.6
3	137	34.1	209	08.7		31.3	179	50.8		31.2	352	41.2		52.4	259	16.4		16.7
4	152	36.6	224	07.7		31.0	194	51.3		30.6	7	43.8		52.5	274	18.6		16.7
5	167	39.1	239	06.8	-23	30.7	209	51.8	-17	30.0	22	46.4	+14	52.5	289	20.8	-18	16.8
6	182	41.5	254	05.8	-23	30.3	224	52.3	-17	29.4	37	49.0	+14	52.6	304	22.9	-18	16.9
7	197	44.0	269	04.9		30.0	239	52.8		28.8	52	51.6		52.6	319	25.1		16.9
8	212	46.5	284	04.0		29.7	254	53.3		28.2	67	54.2		52.7	334	27.3		17.0
9	227	48.9	299	03.0		29.4	269	53.9		27.6	82	56.7		52.7	349	29.5		17.0
10	242	51.4	314	02.1		29.0	284	54.4		27.0	97	59.3		52.8	4	31.7		17.1
11	257	53.9	329	01.2	-23	28.7	299	54.9	-17	26.4	113	01.9	+14	52.8	19	33.9	-18	17.1
12	272	56.3	344	00.2	-23	28.4	314	55.4	-17	25.8	128	04.5	+14	52.9	34	36.1	-18	17.2
13	287	58.8	358	59.3		28.0	329	55.9		25.2	143	07.1		52.9	49	38.3		17.2
14	303	01.2	13	58.4		27.7	344	56.4		24.6	158	09.7		53.0	64	40.5		17.3
15	318	03.7	28	57.4		27.4	359	56.9		24.0	173	12.3		53.0	79	42.6		17.3
16	333	06.2	43	56.5		27.0	14	57.4		23.4	188	14.8		53.1	94	44.8		17.4
17	348	08.6	58	55.6	-23	26.7	29	58.0	-17	22.8	203	17.4	+14	53.1	109	47.0	-18	17.4
18	3	11.1	73	54.6	-23	26.3	44	58.5	-17	22.2	218	20.0	+14	53.2	124	49.2	-18	17.5
19	18	13.6	88	53.7		26.0	59	59.0		21.6	233	22.6		53.2	139	51.4		17.5
20	33	16.0	103	52.8		25.6	74	59.5		21.0	248	25.2		53.3	154	53.6		17.6
21	48	18.5	118	51.8		25.3	90	00.0		20.4	263	27.8		53.3	169	55.8		17.7
22	63	21.0	133	50.9		25.0	105	00.5		19.8	278	30.4		53.4	184	58.0		17.7
23	78	23.4	148	50.0		24.6	120	01.1		19.2	293	33.0		53.4	200	00.2		17.8
24	93	25.9	163	49.0	-23	24.3	135	01.6	-17	18.6	308	35.6	+14	53.5	215	02.3	-18	17.8
Dif	—		-9 +3				+5 +6				+26 +1				+22 -1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 00 ^m 0			Edad: 2 ^d 9 PHE { SD: 16:4 PMG: 15 ^h 17 ^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	03.4	-23	23.9	139	20.7	-12	38.3	60 N	7 09	8 06	9 03	10 27	22	20 20	87	
1	195	03.1		23.8	153	46.8	71	29.6	58	7 01	7 54	8 46		20 25	25 85		
2	210	02.8		23.8	168	13.0	72	20.7	56	6 55	44	31	14	28	30 83		
3	225	02.5		23.7	182	39.2	72	11.8	54		48	35	18	09 30	35 80		
4	240	02.1		23.7	197	05.4	72	-12 02.8	52		43	26	8 07	05 31	39 78		
5	255	01.8	-23	23.6	211	31.7	73	-11 53.7	50	6 37	7 19	7 58	10 00	33	20 42	77	
6	270	01.5	-23	23.5	225	58.1	74	-11 44.5	45	6 26	7 03	7 37	9 51	37	20 50	73	
7	285	01.2		23.5	240	24.5	74	35.3	40		15	6 49		43 40	20 57	69	
8	300	00.9		23.4	254	51.0	75	26.0	35	6 06		38	7 06	37 42	21 02	67	
9	315	00.6		23.3	269	17.5	75	16.6	30	5 57		27	6 53	31 44	07 65		
10	330	00.3		23.3	283	44.0	75	-11 07.2	20		41	6 08		21 48	16 60		
11	345	00.0	-23	23.2	298	10.6	76	-10 57.7	10 N	5 25	5 51	6 14	9 12	51	21 23	57	
12	359	59.7	-23	23.1	312	37.3	77	-10 48.1	0	5 08	5 34	5 56	9 04	54	21 30	53	
13	14	59.3		23.1	327	04.0	77	38.5	10 S	4 49	5 16	5 39	8 55	58	37 50		
14	29	59.0		23.0	341	30.7	77	28.8	20	4 26	4 55	5 20		46 61	44 47		
15	44	58.7		22.9	355	57.5	78	19.0	30	3 57		30	4 58	36 65	52 43		
16	59	58.4		22.8	10	24.3	78	-10 09.2	35		38	4 15		30 68	21 57	40	
17	74	58.1	-23	22.8	24	51.2	79	-9 59.3	40	3 15	3 57	4 30	8 23	70	22 02	38	
18	89	57.8	-23	22.7	39	18.2	80	-9 49.4	45	2 44	3 34	4 12	8 16	73	22 08	35	
19	104	57.5		22.6	53	45.2	80	39.3	50	1 59	3 04	3 49		06 77	15 32		
20	119	57.2		22.5	68	12.2	80	29.3	52	1 31	2 49		38	8 02	78	18 30	
21	134	56.9		22.5	82	39.3	81	19.2	54	0 45		31	26	7 57	80	22 28	
22	149	56.6		22.4	97	06.4	81	-9 09.0	56	** **	2 09	3 12		52 82	26 26		
23	164	56.2		22.3	111	33.6	82	-8 58.8	58	** **	1 39	2 55		46 84	31 23		
24	179	55.9	-23	22.2	126	00.8	82	-8 48.5	60 S	** **	0 49	2 34	7 39	87	22 36	21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 43 ^m 4		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: +1.1 PMG: 14 ^h 59 ^m		Mag: -2.4 PMG: 3 ^h 25 ^m		Mag: +0.5 PMG: 9 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	93	25.9	163	49.0	-23	24.3	135	01.6	-17	18.6
1	108	28.4	178	48.1		23.9	150	02.1		18.0
2	123	30.8	193	47.2		23.6	165	02.6		17.4
3	138	33.3	208	46.2		23.2	180	03.1		16.8
4	153	35.7	223	45.3		22.8	195	03.6		16.2
5	168	38.2	238	44.4	-23	22.5	210	04.2	-17	15.6
6	183	40.7	253	43.4	-23	22.1	225	04.7	-17	15.0
7	198	43.1	268	42.5		21.8	240	05.2		14.4
8	213	45.6	283	41.6		21.4	255	05.7		13.8
9	228	48.1	298	40.7		21.1	270	06.2		13.2
10	243	50.5	313	39.7		20.7	285	06.7		12.5
11	258	53.0	328	38.8	-23	20.3	300	07.3	-17	11.9
12	273	55.5	343	37.9	-23	20.0	315	07.8	-17	11.3
13	288	57.9	358	36.9		19.6	330	08.3		10.7
14	304	00.4	13	36.0		19.2	345	08.8		10.1
15	319	02.8	28	35.1		18.9	0	09.3		09.5
16	334	05.3	43	34.2		18.5	15	09.9		08.9
17	349	07.8	58	33.2	-23	18.1	30	10.4	-17	08.3
18	4	10.2	73	32.3	-23	17.8	45	10.9	-17	07.7
19	19	12.7	88	31.4		17.4	60	11.4		07.1
20	34	15.2	103	30.5		17.0	75	11.9		06.5
21	49	17.6	118	29.5		16.6	90	12.5		05.9
22	64	20.1	133	28.6		16.3	105	13.0		05.3
23	79	22.6	148	27.7		15.9	120	13.5		04.7
24	94	25.0	163	26.8	-23	15.5	135	14.0	-17	04.0
Dif	—		-9	+4		+5	+6	+26	+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 00 ^m 5			Edad: 3 ^d 9 PHE { SD: 16'3 PMG: 16 ^h 11 ^m 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'7 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	179	55.9	-23	22.2	126	00.8	-8	48.5	60 N	14 58	15 55	16 52	10 49 20	21 47 87	
1	194	55.6		22.2	140	28.1	83	38.2	58	15 15	16 07	17 00	45 23	50 84	
2	209	55.3		22.1	154	55.4	83	27.8	56	30	17	06	42 24	53 81	
3	224	55.0		22.0	169	22.8	84	17.4	54	42	26	12	39 26	55 79	
4	239	54.7		21.9	183	50.2	84	-8 06.9	52	15 53	34	18	36 28	57 77	
5	254	54.4	-23	21.8	198	17.6	84	-7 56.4	50	16 03	16 42	17 23	10 33 30	21 59 75	
6	269	54.1	-23	21.7	212	45.1	85	-7 45.8	45	16 24	16 58	17 35	10 28 33	22 03 72	
7	284	53.8		21.7	227	12.7	86	35.2	40	41	17 11	45	23 37	06 69	
8	299	53.5		21.6	241	40.3	86	24.6	35	16 55	23	17 55	19 39	09 66	
9	314	53.1		21.5	256	07.9	86	13.9	30	17 07	34	18 03	15 42	12 63	
10	329	52.8		21.4	270	35.6	87	-7 03.2	20	28	17 52	20	09 46	16 59	
11	344	52.5	-23	21.3	285	03.3	87	-6 52.5	10 N	17 47	18 10	18 36	10 03 50	22 20 55	
12	359	52.2	-23	21.2	299	31.1	88	-6 41.7	0	18 04	18 27	18 53	9 58 53	22 23 52	
13	14	51.9		21.1	313	58.9	88	30.8	10 S	22	18 45	19 12	53 56	27 49	
14	29	51.6		21.0	328	26.8	89	20.0	20	18 41	19 05	19 34	47 60	31 45	
15	44	51.3		21.0	342	54.7	89	-6 09.1	30	19 03	30	20 04	41 64	35 41	
16	59	51.0		20.9	357	22.6	89	-5 58.2	35	16	19 45	22	38 66	37 39	
17	74	50.7	-23	20.8	11	50.6	90	-5 47.2	40	19 31	20 04	20 45	9 33 69	22 40 36	
18	89	50.4	-23	20.7	26	18.6	90	-5 36.2	45	19 49	20 26	21 16	9 29 72	22 43 33	
19	104	50.1		20.6	40	46.7	91	25.2	50	20 11	20 56	22 01	23 76	47 29	
20	119	49.7		20.5	55	14.8	91	14.2	52	22	21 11	22 28	20 78	48 28	
21	134	49.4		20.4	69	42.9	91	-5 03.1	54	34	29	23 14	17 80	50 26	
22	149	49.1		20.3	84	11.1	92	-4 52.0	56	20 48	21 51	** **	14 82	52 24	
23	164	48.8		20.2	98	39.3	92	40.9	58	21 05	22 20	** **	10 85	54 22	
24	179	48.5	-23	20.1	113	07.6	93	-4 29.8	60 S	21 25	23 09	** **	9 06 87	22 57 19	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 17 ^h 39 ^m 4		Mag: -3.9 PMG: 13 ^h 07 ^m		Mag: +1.1 PMG: 14 ^h 59 ^m		Mag: -2.5 PMG: 3 ^h 21 ^m		Mag: +0.5 PMG: 9 ^h 35 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	94	25.0	163	26.8	-23	15.5	135	14.0	-17	04.0					
1	109	27.5	178	25.8		15.1	150	14.5		03.4					
2	124	30.0	193	24.9		14.8	165	15.1		02.8					
3	139	32.4	208	24.0		14.4	180	15.6		02.2					
4	154	34.9	223	23.1		14.0	195	16.1		01.6					
5	169	37.3	238	22.2	-23	13.6	210	16.6	-17	01.0					
6	184	39.8	253	21.2	-23	13.2	225	17.1	-17	00.4					
7	199	42.3	268	20.3		12.8	240	17.7	-16	59.8					
8	214	44.7	283	19.4		12.4	255	18.2		59.2					
9	229	47.2	298	18.5		12.0	270	18.7		58.5					
10	244	49.7	313	17.6		11.7	285	19.2		57.9					
11	259	52.1	328	16.6	-23	11.3	300	19.8	-16	57.3					
12	274	54.6	343	15.7	-23	10.9	315	20.3	-16	56.7					
13	289	57.1	358	14.8		10.5	330	20.8		56.1					
14	304	59.5	13	13.9		10.1	345	21.3		55.5					
15	320	02.0	28	13.0		09.7	0	21.8		54.9					
16	335	04.5	43	12.0		09.3	15	22.4		54.2					
17	350	06.9	58	11.1	-23	08.9	30	22.9	-16	53.6					
18	5	09.4	73	10.2	-23	08.5	45	23.4	-16	53.0					
19	20	11.8	88	09.3		08.1	60	23.9		52.4					
20	35	14.3	103	08.4		07.7	75	24.5		51.8					
21	50	16.8	118	07.5		07.3	90	25.0		51.2					
22	65	19.2	133	06.5		06.9	105	25.5		50.6					
23	80	21.7	148	05.6		06.5	120	26.0		49.9					
24	95	24.2	163	04.7	-23	06.1	135	26.6	-16	49.3					
Dif	—		-9		+4		+5		+6						
							+26		+1						
									+22						
									-1						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 01 ^m 0			Edad: 4 ^d 9	PHE { 4 ^h : 59/6 12 ^h : 59/4 20 ^h : 59/3 R°: 51 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	48.5	-23	20.1	113	07.6	-4	29.8	60 N	7 09	8 06	9 04	11 09	19	23	14 85
1	194	48.2		20.0	127	35.9	93	18.7	58	7 02	7 54	8 46	08 21		14	82
2	209	47.9		19.9	142	04.2	93	-4	56	6 55	44	32	06 24		14	80
3	224	47.6		19.8	156	32.6	94	-3	54	49	35	19	05 25		14	78
4	239	47.3		19.7	171	01.0	94	45.1	52	43	27	8 08	04 27		14	76
5	254	47.0	-23	19.6	185	29.4	94	-3	50	6 38	7 20	7 58	11 03	29	23	14 75
6	269	46.7	-23	19.5	199	57.9	95	-3	45	6 26	7 04	7 37	11 01	33	23	15 70
7	284	46.4		19.4	214	26.4	95	11.4	40	16	6 50	21	11 00	35	15	67
8	299	46.0		19.3	228	54.9	95	-3	35	6 07	38	7 07	10 58	38	15	64
9	314	45.7		19.2	243	23.5	96	-2	30	5 58	28	6 54	57 40		15	62
10	329	45.4		19.1	257	52.1	96	37.7	20	42	6 09	33	55 44		15	58
11	344	45.1	-23	19.0	272	20.7	96	-2	10 N	5 25	5 52	6 15	10 53	48	23	15 55
12	359	44.8	-23	18.9	286	49.4	97	-2	0	5 09	5 35	5 57	10 51	51	23	15 52
13	14	44.5		18.8	301	18.1	97	-2	10 S	4 50	5 17	40	49 55		16	47
14	29	44.2		18.6	315	46.8	97	-1	20	4 27	4 56	5 21	47 59		16	44
15	44	43.9		18.5	330	15.6	98	41.2	30	3 58	31	4 59	45 63		16	40
16	59	43.6		18.4	344	44.3	97	29.9	35	39	4 16	46	44 65		16	38
17	74	43.3	-23	18.3	359	13.1	98	-1	40	3 16	3 58	4 31	10 42	68	23	16 35
18	89	43.0	-23	18.2	13	42.0	99	-1	45	2 46	3 36	4 13	10 41	71	23	16 32
19	104	42.7		18.1	28	10.9	99	-0	50	2 01	3 06	3 50	39 75		16	28
20	119	42.4		18.0	42	39.7	98	44.7	52	1 33	2 51	40	38 77		16	27
21	134	42.1		17.9	57	08.7	100	33.4	54	0 48	33	27	37 79		16	25
22	149	41.7		17.7	71	37.6	99	22.1	56	** **	2 11	3 13	36 81		16	23
23	164	41.4		17.6	86	06.6	100	-0	58	** **	1 41	2 57	35 83		16	21
24	179	41.1	-23	17.5	100	35.5	99	+0	60 S	** **	0 52	2 36	10 33	86	23	16 18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 35 ^m 5		Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: +1.1 PMG: 14 ^h 58 ^m			Mag: -2.5 PMG: 3 ^h 17 ^m			Mag: +0.5 PMG: 9 ^h 31 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	95	24.2	163	04.7	-23	06.1	135	26.6	-16	49.3	310	40.2	+14	56.1	216	47.5	-18	20.3
1	110	26.6	178	03.8		05.6	150	27.1		48.7	325	42.8		56.1	231	49.7		20.4
2	125	29.1	193	02.9		05.2	165	27.6		48.1	340	45.4		56.2	246	51.9		20.4
3	140	31.6	208	02.0		04.8	180	28.1		47.5	355	48.0		56.3	261	54.1		20.5
4	155	34.0	223	01.1		04.4	195	28.7		46.9	10	50.6		56.3	276	56.3		20.5
5	170	36.5	238	00.1	-23	04.0	210	29.2	-16	46.2	25	53.2	+14	56.4	291	58.5	-18	20.6
6	185	38.9	252	59.2	-23	03.6	225	29.7	-16	45.6	40	55.8	+14	56.4	307	00.7	-18	20.6
7	200	41.4	267	58.3		03.2	240	30.3		45.0	55	58.4		56.5	322	02.9		20.7
8	215	43.9	282	57.4		02.7	255	30.8		44.4	71	01.0		56.5	337	05.1		20.7
9	230	46.3	297	56.5		02.3	270	31.3		43.8	86	03.6		56.6	352	07.3		20.8
10	245	48.8	312	55.6		01.9	285	31.8		43.1	101	06.3		56.7	7	09.5		20.8
11	260	51.3	327	54.7	-23	01.5	300	32.4	-16	42.5	116	08.9	+14	56.7	22	11.7	-18	20.9
12	275	53.7	342	53.8	-23	01.1	315	32.9	-16	41.9	131	11.5	+14	56.8	37	13.9	-18	20.9
13	290	56.2	357	52.9		00.6	330	33.4		41.3	146	14.1		56.8	52	16.1		21.0
14	305	58.7	12	51.9	-23	00.2	345	33.9		40.7	161	16.7		56.9	67	18.2		21.1
15	321	01.1	27	51.0	-22	59.8	0	34.5		40.0	176	19.3		57.0	82	20.4		21.1
16	336	03.6	42	50.1		59.4	15	35.0		39.4	191	21.9		57.0	97	22.6		21.2
17	351	06.1	57	49.2	-22	58.9	30	35.5	-16	38.8	206	24.5	+14	57.1	112	24.8	-18	21.2
18	6	08.5	72	48.3	-22	58.5	45	36.1	-16	38.2	221	27.1	+14	57.1	127	27.0	-18	21.3
19	21	11.0	87	47.4		58.1	60	36.6		37.6	236	29.7		57.2	142	29.2		21.3
20	36	13.4	102	46.5		57.6	75	37.1		36.9	251	32.3		57.2	157	31.4		21.4
21	51	15.9	117	45.6		57.2	90	37.6		36.3	266	35.0		57.3	172	33.6		21.4
22	66	18.4	132	44.7		56.8	105	38.2		35.7	281	37.6		57.4	187	35.8		21.5
23	81	20.8	147	43.8		56.3	120	38.7		35.1	296	40.2		57.4	202	38.0		21.5
24	96	23.3	162	42.9	-22	55.9	135	39.2	-16	34.4	311	42.8	+14	57.5	217	40.2	-18	21.6
Dif	—		-9	+4			+5	+6			+26	+1			+22	-1		

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 01 ^m 5				Edad: 5 ^d 9 PHE { 4 ^h : 59/1 12 ^h : 59/0 20 ^h : 58/8 R°: 51 ^m SD: 16:1 PMG: 17 ^h 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	179	41.1	-23	17.5	100	35.5	+0	00.5	60 N	15 00	15 57	16 54	11 28 18	*** ** *	*** ** *	*** ** *		
1	194	40.8		17.4	115	04.6 ¹⁰¹		11.7 ¹¹²	58	17	16 09	17 01	29 21	*** ** *	*** ** *	*** ** *		
2	209	40.5		17.3	129	33.6 ¹⁰⁰		23.0 ¹¹³	56	32	19	08	30 23	*** ** *	*** ** *	*** ** *		
3	224	40.2		17.1	144	02.6 ¹⁰⁰		34.3 ¹¹³	54	44	28	14	30 26	*** ** *	*** ** *	*** ** *		
4	239	39.9		17.0	158	31.7 ¹⁰¹		45.5 ¹¹²	52	15 55	36	20	31 27	*** ** *	*** ** *	*** ** *		
5	254	39.6	-23	16.9	173	00.8 ¹⁰¹	+0	56.7 ¹¹²	50	16 05	16 43	17 25	11 32 29	*** ** *	*** ** *	*** ** *		
6	269	39.3	-23	16.8	187	29.9 ¹⁰¹	+1	08.0 ¹¹³	45	16 25	16 59	17 36	11 34 32	*** ** *	*** ** *	*** ** *		
7	284	39.0		16.7	201	59.1 ¹⁰²		19.2 ¹¹²	40	42	17 13	47	35 35	*** ** *	*** ** *	*** ** *		
8	299	38.7		16.5	216	28.2 ¹⁰¹		30.3 ¹¹¹	35	16 56	24	17 56	36 38	*** ** *	*** ** *	*** ** *		
9	314	38.4		16.4	230	57.4 ¹⁰²		41.5 ¹¹²	30	17 08	35	18 05	37 40	*** ** *	*** ** *	*** ** *		
10	329	38.1		16.3	245	26.6 ¹⁰²	+1	52.7 ¹¹²	20	30	17 54	21	39 44	*** ** *	*** ** *	*** ** *		
11	344	37.8	-23	16.2	259	55.8 ¹⁰²	+2	03.8 ¹¹¹	10 N	17 48	18 11	18 37	11 41 47	*** ** *	*** ** *	*** ** *		
12	359	37.5	-23	16.0	274	25.0 ¹⁰²	+2	14.9 ¹¹¹	0	18 05	18 28	18 54	11 42 51	*** ** *	*** ** *	*** ** *		
13	14	37.2		15.9	288	54.2 ¹⁰²		26.0 ¹¹¹	10 S	23	18 46	19 13	44 54	*** ** *	*** ** *	*** ** *		
14	29	36.8		15.8	303	23.4 ¹⁰²		37.1 ¹¹¹	20	18 42	19 06	19 35	46 57	*** ** *	*** ** *	*** ** *		
15	44	36.5		15.6	317	52.7 ¹⁰³		48.1 ¹¹⁰	30	19 03	31	20 04	48 61	23 56 40				
16	59	36.2		15.5	332	22.0 ¹⁰³	+2	59.2 ¹¹¹	35	16	19 46	23	49 64	54 38				
17	74	35.9	-23	15.4	346	51.3 ¹⁰³	+3	10.2 ¹¹⁰	40	19 31	20 04	20 46	11 50 67	23 51 36				
18	89	35.6	-23	15.2	1	20.5 ¹⁰²	+3	21.2 ¹¹⁰	45	19 49	20 26	21 16	11 52 69	23 48 33				
19	104	35.3		15.1	15	49.9 ¹⁰⁴		32.1 ¹⁰⁹	50	20 11	20 56	22 01	54 73	44 30				
20	119	35.0		15.0	30	19.2 ¹⁰³		43.0 ¹⁰⁹	52	22	21 11	22 28	55 75	43 28				
21	134	34.7		14.8	44	48.5 ¹⁰³	+3	53.9 ¹⁰⁹	54	34	28	23 12	56 76	41 26				
22	149	34.4		14.7	59	17.8 ¹⁰³	+4	04.8 ¹⁰⁹	56	20 48	21 50	** ** *	57 79	39 24				
23	164	34.1		14.6	73	47.2 ¹⁰⁴		15.6 ¹⁰⁸	58	21 05	22 19	** ** *	58 81	37 22				
24	179	33.8	-23	14.4	88	16.5 ¹⁰³	+4	26.4 ¹⁰⁸	60 S	21 25	23 07	** ** *	11 59 84	23 34 20				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 31 ^m 6		Mag: -3.9 PMG: 13 ^h 10 ^m				Mag: +1.1 PMG: 14 ^h 57 ^m				Mag: -2.5 PMG: 3 ^h 13 ^m				Mag: +0.5 PMG: 9 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	23.3	162	42.9	-22	55.9	135	39.2	-16	34.4	311	42.8	+14	57.5	217	40.2	-18	21.6
1	111	25.8	177	42.0		55.5	150	39.8		33.8	326	45.4		57.5	232	42.4		21.6
2	126	28.2	192	41.1		55.0	165	40.3		33.2	341	48.0		57.6	247	44.6		21.7
3	141	30.7	207	40.2		54.6	180	40.8		32.6	356	50.6		57.7	262	46.8		21.7
4	156	33.2	222	39.3		54.1	195	41.4		31.9	11	53.2		57.7	277	49.0		21.8
5	171	35.6	237	38.3	-22	53.7	210	41.9	-16	31.3	26	55.9	+14	57.8	292	51.2	-18	21.8
6	186	38.1	252	37.4	-22	53.2	225	42.4	-16	30.7	41	58.5	+14	57.8	307	53.4	-18	21.9
7	201	40.6	267	36.5		52.8	240	42.9		30.1	57	01.1		57.9	322	55.6		21.9
8	216	43.0	282	35.6		52.4	255	43.5		29.4	72	03.7		58.0	337	57.8		22.0
9	231	45.5	297	34.7		51.9	270	44.0		28.8	87	06.3		58.0	353	00.0		22.0
10	246	47.9	312	33.8		51.5	285	44.5		28.2	102	08.9		58.1	8	02.2		22.1
11	261	50.4	327	32.9	-22	51.0	300	45.1	-16	27.6	117	11.5	+14	58.1	23	04.3	-18	22.1
12	276	52.9	342	32.0	-22	50.6	315	45.6	-16	26.9	132	14.2	+14	58.2	38	06.5	-18	22.2
13	291	55.3	357	31.1		50.1	330	46.1		26.3	147	16.8		58.3	53	08.7		22.2
14	306	57.8	12	30.2		49.7	345	46.7		25.7	162	19.4		58.3	68	10.9		22.3
15	322	00.3	27	29.3		49.2	0	47.2		25.0	177	22.0		58.4	83	13.1		22.3
16	337	02.7	42	28.4		48.7	15	47.7		24.4	192	24.6		58.4	98	15.3		22.4
17	352	05.2	57	27.5	-22	48.3	30	48.3	-16	23.8	207	27.2	+14	58.5	113	17.5	-18	22.4
18	7	07.7	72	26.6	-22	47.8	45	48.8	-16	23.2	222	29.9	+14	58.6	128	19.7	-18	22.5
19	22	10.1	87	25.7		47.4	60	49.3		22.5	237	32.5		58.6	143	21.9		22.5
20	37	12.6	102	24.8		46.9	75	49.9		21.9	252	35.1		58.7	158	24.1		22.6
21	52	15.0	117	23.9		46.4	90	50.4		21.3	267	37.7		58.7	173	26.3		22.6
22	67	17.5	132	23.0		46.0	105	50.9		20.6	282	40.3		58.8	188	28.5		22.7
23	82	20.0	147	22.1		45.5	120	51.5		20.0	297	42.9		58.9	203	30.7		22.7
24	97	22.4	162	21.2	-22	45.0	135	52.0	-16	19.4	312	45.6	+14	58.9	218	32.9	-18	22.8
Dif	—		-9 +5		+5		+5 +6		+6		+26		+1		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 02 ^m 0			Edad: 6 ^d 9 PHE { SD: 16'0 PMG: 18 ^h 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	33.8	-23	14.4	88	16.5	+4	26.4	60 N	7 09	8 06	9 03	11 46	21	0 39	83		
1	194	33.5		14.3	102	45.9 ¹⁰⁴		37.2 ¹⁰⁸	58	7 02	7 55	8 46	50	23	36	81		
2	209	33.2		14.2	117	15.3 ¹⁰⁴		48.0 ¹⁰⁸	56	6 55	44	32	53	25	34	78		
3	224	32.9		14.0	131	44.6 ¹⁰³	+4	58.7 ¹⁰⁷	54	49	35	19	56	27	32	76		
4	239	32.6		13.9	146	14.0 ¹⁰⁴	+5	09.3 ¹⁰⁶	52	44	27	8 08	11 58	29	30	74		
5	254	32.3	-23	13.7	160	43.4 ¹⁰⁴	+5	20.0 ¹⁰⁷	50	6 39	7 20	7 58	12 01	30	0 29	72		
6	269	32.0	-23	13.6	175	12.8 ¹⁰⁴	+5	30.6 ¹⁰⁶	45	6 27	7 04	7 38	12 06	34	0 25	69		
7	284	31.7		13.4	189	42.2 ¹⁰⁴		41.1 ¹⁰⁵	40	17	6 51	21	10	37	22	66		
8	299	31.4		13.3	204	11.6 ¹⁰⁴	+5	51.6 ¹⁰⁵	35	6 07	39	7 07	14	39	19	64		
9	314	31.1		13.2	218	41.0 ¹⁰⁴	+6	02.1 ¹⁰⁵	30	5 59	29	6 55	17	41	17	61		
10	329	30.8		13.0	233	10.4 ¹⁰⁴		12.6 ¹⁰⁵	20	42	6 10	34	23	45	13	58		
11	344	30.5	-23	12.9	247	39.8 ¹⁰⁴	+6	23.0 ¹⁰⁴	10 N	5 26	5 53	6 16	12 28	48	0 10	54		
12	359	30.2	-23	12.7	262	09.2 ¹⁰⁴	+6	33.3 ¹⁰³	0	5 10	5 36	5 58	12 33	51	0 07	50		
13	14	29.9		12.6	276	38.6 ¹⁰⁴		43.6 ¹⁰³	10 S	4 51	5 18	41	38	54	03	48		
14	29	29.5		12.4	291	08.0 ¹⁰⁴	+6	53.9 ¹⁰³	20	4 28	4 57	22	43	57	0 00	44		
15	44	29.2		12.3	305	37.4 ¹⁰⁴	+7	04.1 ¹⁰²	30	3 59	33	5 00	49	61	***	***		
16	59	28.9		12.1	320	06.8 ¹⁰⁴		14.3 ¹⁰²	35	41	18	4 47	53	63	***	***		
17	74	28.6	-23	12.0	334	36.2 ¹⁰⁴	+7	24.4 ¹⁰¹	40	3 18	4 00	4 32	12 57	65	***	***		
18	89	28.3	-23	11.8	349	05.6 ¹⁰⁴	+7	34.5 ¹⁰¹	45	2 48	3 37	4 14	13 01	68	***	***		
19	104	28.0		11.7	3	35.0 ¹⁰⁴		44.6 ¹⁰¹	50	2 03	3 08	3 52	07	72	***	***		
20	119	27.7		11.5	18	04.4 ¹⁰⁴	+7	54.5 ⁹⁹	52	1 36	2 53	41	10	73	***	***		
21	134	27.4		11.4	32	33.8 ¹⁰⁴	+8	04.5 ¹⁰⁰	54	0 52	35	29	12	75	***	***		
22	149	27.1		11.2	47	03.2 ¹⁰⁴		14.4 ⁹⁹	56	*** **	2 13	3 15	16	77	***	***		
23	164	26.8		11.1	61	32.6 ¹⁰⁴		24.2 ⁹⁸	58	*** **	1 44	2 59	19	79	23	59		
24	179	26.5	-23	10.9	76	01.9 ¹⁰³	+8	34.0 ⁹⁸	60 S	*** **	0 57	2 38	13 23	82	23	54		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 27 ^m 6		Mag: -3.9 PMG: 13 ^h 11 ^m				Mag: +1.1 PMG: 14 ^h 56 ^m				Mag: -2.5 PMG: 3 ^h 08 ^m				Mag: +0.5 PMG: 9 ^h 24 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	97	22.4	162	21.2	-22	45.0	135	52.0	-16	19.4	312	45.6	+14	58.9	218	32.9	-18	
1	112	24.9	177	20.4		44.6	150	52.5		18.8	327	48.2		59.0	233	35.1		
2	127	27.4	192	19.5		44.1	165	53.1		18.1	342	50.8		59.1	248	37.3		
3	142	29.8	207	18.6		43.6	180	53.6		17.5	357	53.4		59.1	263	39.5		
4	157	32.3	222	17.7		43.2	195	54.1		16.9	12	56.0		59.2	278	41.7		
5	172	34.8	237	16.8	-22	42.7	210	54.7	-16	16.2	27	58.7	+14	59.2	293	43.9	-18	
6	187	37.2	252	15.9	-22	42.2	225	55.2	-16	15.6	43	01.3	+14	59.3	308	46.1	-18	
7	202	39.7	267	15.0		41.7	240	55.7		15.0	58	03.9		59.4	323	48.3		
8	217	42.2	282	14.1		41.3	255	56.3		14.3	73	06.5		59.4	338	50.5		
9	232	44.6	297	13.2		40.8	270	56.8		13.7	88	09.2		59.5	353	52.7		
10	247	47.1	312	12.3		40.3	285	57.4		13.1	103	11.8		59.5	8	54.9		
11	262	49.5	327	11.4	-22	39.8	300	57.9	-16	12.4	118	14.4	+14	59.6	23	57.1	-18	
12	277	52.0	342	10.5	-22	39.4	315	58.4	-16	11.8	133	17.0	+14	59.7	38	59.3	-18	
13	292	54.5	357	09.6		38.9	330	59.0		11.2	148	19.6		59.7	54	01.5		
14	307	56.9	12	08.7		38.4	345	59.5		10.5	163	22.3		59.8	69	03.7		
15	322	59.4	27	07.9		37.9	1	00.0		09.9	178	24.9		59.9	84	05.9		
16	338	01.9	42	07.0		37.4	16	00.6		09.3	193	27.5	+14	59.9	99	08.1		
17	353	04.3	57	06.1	-22	36.9	31	01.1	-16	08.6	208	30.1	+15	00.0	114	10.3	-18	
18	8	06.8	72	05.2	-22	36.5	46	01.7	-16	08.0	223	32.8	+15	00.0	129	12.5	-18	
19	23	09.3	87	04.3		36.0	61	02.2		07.3	238	35.4	+15	00.1	144	14.7		
20	38	11.7	102	03.4		35.5	76	02.7		06.7	253	38.0		00.2	159	16.9		
21	53	14.2	117	02.5		35.0	91	03.3		06.1	268	40.6		00.2	174	19.1		
22	68	16.7	132	01.6		34.5	106	03.8		05.4	283	43.3		00.3	189	21.3		
23	83	19.1	147	00.8		34.0	121	04.3		04.8	298	45.9		00.4	204	23.5		
24	98	21.6	161	59.9	-22	33.5	136	04.9	-16	04.2	313	48.5	+15	00.4	219	25.7	-18	
Dif	—		-9		+5		+5		+6		+26		+1		+22		-	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 02 ^m 5				Edad: 7 ^d 9 PHE { SD: 15/9 PMG: 19 ^h 36 ^m 4 ^h : 58/1 12 ^h : 57/9 20 ^h : 57/8 R°: 51 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m	
0	179	26.5	-23	10.9	76	01.9	+8	34.0	60 N	15 02	15 59	16 56	12 07	24	2 02	80			
1	194	26.2		10.7	90	31.3 ¹⁰⁴		43.7 ⁹⁷	58	19	16 11	17 03	13 26		1 57	78			
2	209	25.9		10.6	105	00.7 ¹⁰⁴	+8	53.4 ⁹⁷	56	34	21	10	18 29		52	76			
3	224	25.6		10.4	119	30.0 ¹⁰³	+9	03.0 ⁹⁶	54	46	30	16	23 30		48	74			
4	239	25.3		10.3	133	59.4 ¹⁰⁴		12.5 ⁹⁵	52	15 57	38	21	27 32		44	73			
5	254	25.0	-23	10.1	148	28.8 ¹⁰⁴	+9	22.0 ⁹⁵	50	16 07	16 45	17 26	12 31	33	1 41	71			
6	269	24.7	-23	09.9	162	58.1 ¹⁰³	+9	31.5 ⁹⁵	45	16 27	17 01	17 38	12 40	36	1 34	67			
7	284	24.4		09.8	177	27.4 ¹⁰³		40.9 ⁹⁴	40	44	14	48	47 38		28	64			
8	299	24.1		09.6	191	56.8 ¹⁰⁴		50.2 ⁹³	35	16 58	26	17 57	53 41		23	62			
9	314	23.8		09.4	206	26.1 ¹⁰³	+9	59.5 ⁹³	30	17 10	36	18 06	12 58	43	18	61			
10	329	23.5		09.3	220	55.4 ¹⁰³	+10	08.7 ⁹²	20	31	17 55	22	13 08	45	11	56			
11	344	23.2	-23	09.1	235	24.7 ¹⁰³	+10	17.8 ⁹¹	10 N	17 49	18 12	18 38	13 16	48	1 04	53			
12	359	22.9	-23	09.0	249	54.0 ¹⁰³	+10	26.9 ⁹¹	0	18 06	18 29	18 55	13 24	51	0 57	51			
13	14	22.6		08.8	264	23.3 ¹⁰³		35.9 ⁹⁰	10 S	24	18 47	19 14	32 53		51	48			
14	29	22.3		08.6	278	52.6 ¹⁰³		44.9 ⁹⁰	20	18 42	19 07	19 36	40 57		44	45			
15	44	22.0		08.5	293	21.8 ¹⁰²	+10	53.8 ⁸⁹	30	19 04	31	20 05	50 59		36	42			
16	59	21.7		08.3	307	51.1 ¹⁰³	+11	02.6 ⁸⁸	35	17	19 46	23	13 56	61	32	40			
17	74	21.4	-23	08.1	322	20.3 ¹⁰²	+11	11.4 ⁸⁸	40	19 32	20 04	20 46	14 02	64	0 27	37			
18	89	21.1	-23	07.9	336	49.6 ¹⁰³	+11	20.0 ⁸⁶	45	19 49	20 27	21 16	14 09	67	0 21	35			
19	104	20.8		07.8	351	18.8 ¹⁰²		28.7 ⁸⁷	50	20 12	20 56	22 00	19 69		14	32			
20	119	20.5		07.6	5	48.0 ¹⁰²		37.2 ⁸⁵	52	22	21 11	22 27	23 70		11	30			
21	134	20.2		07.4	20	17.2 ¹⁰²		45.7 ⁸⁵	54	34	28	23 09	27 73		07	29			
22	149	19.9		07.2	34	46.4 ¹⁰²	+11	54.1 ⁸⁴	56	20 48	21 50	** ** *	33 74		0 03	27			
23	164	19.6		07.1	49	15.6 ¹⁰²	+12	02.5 ⁸⁴	58	21 05	22 18	** ** *	38 77		** ** *	**			
24	179	19.3	-23	06.9	63	44.8 ¹⁰²	+12	10.7 ⁸²	60 S	21 25	23 03	** ** *	14 45	78	** ** *	**			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 17 ^h 23 ^m 7		Mag: -3.9 PMG: 13 ^h 13 ^m				Mag: +1.1 PMG: 14 ^h 55 ^m				Mag: -2.5 PMG: 3 ^h 04 ^m				Mag: +0.5 PMG: 9 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	98	21.6	161	59.9	-22	33.5	136	04.9	-16	04.2	313	48.5	+15	00.4	219	25.7	-18	24.0	
1	113	24.0	176	59.0		33.0	151	05.4		03.5	328	51.1		00.5	234	27.9		24.0	
2	128	26.5	191	58.1		32.5	166	06.0		02.9	343	53.8		00.6	249	30.1		24.1	
3	143	29.0	206	57.2		32.0	181	06.5		02.3	358	56.4		00.6	264	32.3		24.1	
4	158	31.4	221	56.3		31.5	196	07.0		01.6	13	59.0		00.7	279	34.5		24.2	
5	173	33.9	236	55.4	-22	31.0	211	07.6	-16	01.0	29	01.7	+15	00.8	294	36.7	-18	24.2	
6	188	36.4	251	54.6	-22	30.5	226	08.1	-16	00.3	44	04.3	+15	00.8	309	38.9	-18	24.3	
7	203	38.8	266	53.7		30.0	241	08.7	-15	59.7	59	06.9		00.9	324	41.1		24.3	
8	218	41.3	281	52.8		29.5	256	09.2		59.1	74	09.5		00.9	339	43.3		24.4	
9	233	43.8	296	51.9		29.0	271	09.7		58.4	89	12.2		01.0	354	45.5		24.4	
10	248	46.2	311	51.0		28.5	286	10.3		57.8	104	14.8		01.1	9	47.7		24.5	
11	263	48.7	326	50.1	-22	28.0	301	10.8	-15	57.1	119	17.4	+15	01.1	24	49.9	-18	24.5	
12	278	51.1	341	49.3	-22	27.5	316	11.4	-15	56.5	134	20.1	+15	01.2	39	52.1	-18	24.6	
13	293	53.6	356	48.4		27.0	331	11.9		55.9	149	22.7		01.3	54	54.3		24.6	
14	308	56.1	11	47.5		26.5	346	12.4		55.2	164	25.3		01.3	69	56.5		24.7	
15	323	58.5	26	46.6		25.9	1	13.0		54.6	179	27.9		01.4	84	58.7		24.7	
16	339	01.0	41	45.7		25.4	16	13.5		53.9	194	30.6		01.5	100	00.9		24.8	
17	354	03.5	56	44.9	-22	24.9	31	14.1	-15	53.3	209	33.2	+15	01.5	115	03.1	-18	24.8	
18	9	05.9	71	44.0	-22	24.4	46	14.6	-15	52.6	224	35.8	+15	01.6	130	05.3	-18	24.9	
19	24	08.4	86	43.1		23.9	61	15.2		52.0	239	38.5		01.7	145	07.5		24.9	
20	39	10.9	101	42.2		23.4	76	15.7		51.4	254	41.1		01.7	160	09.7		25.0	
21	54	13.3	116	41.4		22.8	91	16.2		50.7	269	43.7		01.8	175	11.9		25.0	
22	69	15.8	131	40.5		22.3	106	16.8		50.1	284	46.4		01.9	190	14.1		25.1	
23	84	18.3	146	39.6		21.8	121	17.3		49.4	299	49.0		01.9	205	16.3		25.1	
24	99	20.7	161	38.7	-22	21.3	136	17.9	-15	48.8	314	51.6	+15	02.0	220	18.5	-18	25.2	
Dif	—		-9		+5		+5		+6		+26		+1		+22		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 0			Edad: 8 ^d 9 PHE { SD: 15/7 PMG: 20 ^h 27 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	179	19.3	-23	06.9	63	44.8	+12	10.7	82	60 N	7 09	8 06	9 03	12 31	30
1	194	19.0		06.7	78	13.9	101	18.9	82	58	7 02	7 54	8 46	39	32
2	209	18.7		06.5	92	43.1	102	27.1	80	56	6 56	44	31	47	33
3	224	18.4		06.4	107	12.2	101	35.1	80	54	50	36	19	53	35
4	239	18.1		06.2	121	41.3	101	43.1	80	52	44	28	8 08	12 59	36
5	254	17.8	-23	06.0	136	10.5	102	+12	51.0	79	6 39	7 20	7 59	13 04	38
6	269	17.5	-23	05.8	150	39.6	101	+12	58.9	79	6 27	7 04	7 38	13 16	40
7	284	17.2		05.6	165	08.6	100	+13	06.6	77	17	6 51	22	25	42
8	299	16.9		05.5	179	37.7	101	14.3	77	35	6 08	40	7 08	34	43
9	314	16.6		05.3	194	06.8	101	21.9	76	30	5 59	29	6 56	41	45
10	329	16.3		05.1	208	35.8	100	29.4	75	20	43	6 11	35	13 53	48
11	344	16.0	-23	04.9	223	04.9	101	+13	36.9	75	5 27	5 54	6 16	14 04	50
12	359	15.7	-23	04.7	237	33.9	100	+13	44.2	73	5 11	5 37	5 59	14 15	52
13	14	15.4		04.5	252	02.9	100	51.5	73	10 S	4 52	5 19	42	25	54
14	29	15.1		04.3	266	31.9	100	+13	58.7	72	30	4 59	23	37	55
15	44	14.8		04.2	281	00.9	100	+14	05.9	72	30	4 01	34	49	59
16	59	14.5		04.0	295	29.9	100	12.9	70	35	3 42	19	4 49	14 57	60
17	74	14.2	-23	03.8	309	58.8	99	+14	19.9	70	3 20	4 01	4 34	15 06	61
18	89	13.9	-23	03.6	324	27.8	100	+14	26.8	69	2 50	3 39	4 16	15 16	63
19	104	13.6		03.4	338	56.7	99	33.6	68	50	2 05	3 10	3 54	28	65
20	119	13.4		03.2	353	25.7	100	40.3	67	52	1 39	2 55	43	33	67
21	134	13.1		03.0	7	54.6	99	46.9	66	54	0 57	37	31	40	68
22	149	12.8		02.8	22	23.5	99	53.4	65	56	** ** *	2 16	17	47	69
23	164	12.5		02.6	36	52.4	99	+14	59.9	65	** ** *	1 47	3 01	15 55	71
24	179	12.2	-23	02.4	51	21.2	98	+15	06.3	64	** ** *	1 02	2 41	16 03	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 19 ^m 8		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +1.1 PMG: 14 ^h 54 ^m		Mag: -2.5 PMG: 3 ^h 00 ^m		Mag: +0.5 PMG: 9 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	99	20.7	161	38.7	-22	21.3	136	17.9	-15	48.8
1	114	23.2	176	37.9		20.8	151	18.4		48.1
2	129	25.6	191	37.0		20.2	166	19.0		47.5
3	144	28.1	206	36.1		19.7	181	19.5		46.9
4	159	30.6	221	35.2		19.2	196	20.1		46.2
5	174	33.0	236	34.4	-22	18.6	211	20.6	-15	45.6
6	189	35.5	251	33.5	-22	18.1	226	21.1	-15	44.9
7	204	38.0	266	32.6		17.6	241	21.7		44.3
8	219	40.4	281	31.7		17.1	256	22.2		43.6
9	234	42.9	296	30.9		16.5	271	22.8		43.0
10	249	45.4	311	30.0		16.0	286	23.3		42.3
11	264	47.8	326	29.1	-22	15.5	301	23.9	-15	41.7
12	279	50.3	341	28.3	-22	14.9	316	24.4	-15	41.0
13	294	52.8	356	27.4		14.4	331	25.0		40.4
14	309	55.2	11	26.5		13.8	346	25.5		39.7
15	324	57.7	26	25.7		13.3	1	26.1		39.1
16	340	00.1	41	24.8		12.8	16	26.6		38.5
17	355	02.6	56	23.9	-22	12.2	31	27.1	-15	37.8
18	10	05.1	71	23.0	-22	11.7	46	27.7	-15	37.2
19	25	07.5	86	22.2		11.1	61	28.2		36.5
20	40	10.0	101	21.3		10.6	76	28.8		35.9
21	55	12.5	116	20.4		10.0	91	29.3		35.2
22	70	14.9	131	19.6		09.5	106	29.9		34.6
23	85	17.4	146	18.7		08.9	121	30.4		33.9
24	100	19.9	161	17.9	-22	08.4	136	31.0	-15	33.3
Dif	—		-9	+5			+5	+6		
									+26	+1
										+22

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 03 ^m 4				Edad: 9 ^d 9 PHE { 4 ^h : 57:1 12 ^h : 56:9 20 ^h : 56:7 PMG: 21 ^h 19 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	12.2	-23	02.4	51	21.2	+15	06.3	60 N	15 05	16 01	16 58	13 01 36	4 39 70			
1	194	11.9		02.2	65	50.1		12.6	58	22	13	17 05	11 38	29 68			
2	209	11.6		02.0	80	19.0		18.8	56	36	23	12	20 40	20 67			
3	224	11.3		01.8	94	47.8		24.9	54	48	32	17	28 41	12 66			
4	239	11.0		01.6	109	16.7		30.9	52	15 59	39	23	35 42	4 05 65			
5	254	10.7	-23	01.4	123	45.5	+15	36.8	50	16 09	16 47	17 28	13 42 42	3 59 64			
6	269	10.4	-23	01.2	138	14.3	+15	42.7	45	16 29	17 02	17 39	13 56 44	3 46 61			
7	284	10.1		01.0	152	43.1		48.4	40	45	16	50	14 07 46	35 60			
8	299	09.8		00.8	167	11.9		54.1	35	16 59	27	17 59	17 47	26 58			
9	314	09.5		00.6	181	40.7	+15	59.7	30	17 11	37	18 07	26 48	18 57			
10	329	09.2		00.4	196	09.5	+16	05.2	20	32	17 56	23	41 49	3 03 56			
11	344	08.9	-23	00.2	210	38.2	+16	10.6	10 N	17 50	18 13	18 39	14 54 51	2 51 54			
12	359	08.6	-23	00.0	225	07.0	+16	15.9	0	18 07	18 30	18 56	15 07 51	2 40 51			
13	14	08.3	-22	59.8	239	35.7		21.1	10 S	24	18 47	19 14	19 53	28 50			
14	29	08.0		59.6	254	04.5		26.2	20	18 43	19 07	19 37	32 55	16 48			
15	44	07.7		59.4	268	33.2		31.2	30	19 05	32	20 05	48 56	2 02 46			
16	59	07.5		59.2	283	02.0		36.2	35	17	19 47	23	15 57 56	1 54 45			
17	74	07.2	-22	59.0	297	30.7	+16	41.0	40	19 32	20 05	20 46	16 07 58	1 44 44			
18	89	06.9	-22	58.8	311	59.4	+16	45.8	45	19 50	20 27	21 16	16 19 59	1 34 42			
19	104	06.6		58.6	326	28.1		50.4	50	20 12	20 56	21 59	33 61	21 40			
20	119	06.3		58.4	340	56.8		55.0	52	22	21 10	22 25	40 62	15 38			
21	134	06.0		58.2	355	25.5	+16	59.4	54	34	27	23 05	48 62	08 38			
22	149	05.7		57.9	9	54.2	+17	03.8	56	20 48	21 49	** **	16 56 64	1 01 36			
23	164	05.4		57.7	24	22.9		08.1	58	21 04	22 16	** **	17 06 64	0 52 35			
24	179	05.1	-22	57.5	38	51.6	+17	12.3	60 S	21 23	22 59	** **	17 17 66	0 43 32			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 17 ^h 15 ^m 8		Mag: -3.9 PMG: 13 ^h 16 ^m		Mag: +1.1 PMG: 14 ^h 53 ^m		Mag: -2.5 PMG: 2 ^h 56 ^m		Mag: +0.5 PMG: 9 ^h 14 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	100	19.9	161	17.9	136	31.0	315	54.9	221	11.3							
1	115	22.3	176	17.0	151	31.5	330	57.6	236	13.5							
2	130	24.8	191	16.1	166	32.1	346	00.2	251	15.7							
3	145	27.2	206	15.3	181	32.6	1	02.9	266	17.9							
4	160	29.7	221	14.4	196	33.2	16	05.5	281	20.1							
5	175	32.2	236	13.5	211	33.7	31	08.1	296	22.3							
6	190	34.6	251	12.7	226	34.3	46	10.8	311	24.5							
7	205	37.1	266	11.8	241	34.8	61	13.4	326	26.7							
8	220	39.6	281	11.0	256	35.4	76	16.1	341	28.9							
9	235	42.0	296	10.1	271	35.9	91	18.7	356	31.1							
10	250	44.5	311	09.2	286	36.5	106	21.4	11	33.3							
11	265	47.0	326	08.4	301	37.0	121	24.0	26	35.5							
12	280	49.4	341	07.5	316	37.6	136	26.6	41	37.8							
13	295	51.9	356	06.7	331	38.1	151	29.3	56	40.0							
14	310	54.4	11	05.8	346	38.7	166	31.9	71	42.2							
15	325	56.8	26	04.9	1	39.2	181	34.6	86	44.4							
16	340	59.3	41	04.1	16	39.8	196	37.2	101	46.6							
17	356	01.7	56	03.2	31	40.3	211	39.9	116	48.8							
18	11	04.2	71	02.4	46	40.9	226	42.5	131	51.0							
19	26	06.7	86	01.5	57.7	61 41.4	241	45.2	146	53.2							
20	41	09.1	101	00.7	77.1	76 42.0	256	47.8	161	55.4							
21	56	11.6	115	59.8	92.5	91 42.5	271	50.5	176	57.6							
22	71	14.1	130	58.9	107.9	106 43.1	286	53.1	191	59.8							
23	86	16.5	145	58.1	122.9	121 43.6	301	55.8	207	02.0							
24	101	19.0	160	57.2	137.9	136 44.2	316	58.4	222	04.2							
Dif	—		-9		+6		+7		+22								

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	43.1	43.2	43.3	43.2	43.0	42.8	42.5	42.3	42.2	42.2	42.2	42.3
2 - β Cas	<i>Caph</i>	2.3	357	30.8	31.0	31.1	31.0	30.7	30.4	30.0	29.7	29.5	29.5	29.6	29.8
3 - γ Peg	<i>Algenib</i>	2.8	356	30.5	30.6	30.6	30.6	30.4	30.2	29.9	29.7	29.6	29.6	29.6	29.7
4 - α Phe	<i>Ankaa</i>	2.4	353	15.5	15.6	15.6	15.6	15.5	15.2	14.9	14.7	14.5	14.5	14.5	14.7
5 - α Cas	<i>Schedar</i>	2.2	349	40.1	40.3	40.4	40.3	40.1	39.8	39.4	39.1	38.9	38.8	38.9	39.0
6 - β Cet	<i>Diphda</i>	2.0	348	55.6	55.6	55.7	55.7	55.5	55.3	55.1	54.9	54.7	54.7	54.7	54.8
7 - γ Cas	<i>Navi</i>	1.6	345	36.2	36.4	36.6	36.6	36.3	36.0	35.6	35.2	34.9	34.8	34.9	35.1
8 - β And	<i>Mirach</i>	2.1	342	21.9	22.1	22.1	22.1	22.0	21.7	21.5	21.2	21.1	21.0	21.0	21.0
9 - α Eri	<i>Achernar</i>	0.5	335	26.5	26.8	26.9	27.0	26.9	26.7	26.4	26.0	25.7	25.6	25.6	25.8
10 - γ And	<i>Almak</i>	2.3	328	48.1	48.3	48.4	48.5	48.4	48.1	47.8	47.6	47.3	47.2	47.1	47.2
12 - α Ari	<i>Hamal</i>	2.0	327	60.2	60.3	60.4	60.4	60.4	60.2	59.9	59.7	59.5	59.4	59.3	59.3
11 - α UMi	<i>Polaris</i>	2.0	316	83.6	97.6	109.0	116.2	115.3	106.9	94.2	79.2	65.1	55.0	50.8	54.0
13 - θ Eri	<i>Acamar</i>	3.3	315	17.9	18.1	18.2	18.3	18.3	18.2	18.0	17.7	17.5	17.3	17.2	17.3
14 - α Cet	<i>Menkar</i>	2.5	314	14.5	14.6	14.7	14.8	14.7	14.6	14.4	14.2	14.0	13.8	13.7	13.7
15 - β Per	<i>Algol</i>	2.1	312	43.2	43.4	43.5	43.6	43.6	43.4	43.1	42.9	42.6	42.4	42.3	42.2
16 - α Per	<i>Mirfak</i>	1.8	308	39.4	39.6	39.8	39.9	39.9	39.7	39.5	39.1	38.8	38.6	38.4	38.4
17 - η Tau	<i>Alcyone</i>	2.9	302	54.7	54.9	55.0	55.1	55.1	55.0	54.8	54.5	54.3	54.1	54.0	53.9
18 - γ Eri	<i>Zaurak</i>	3.0	300	19.4	19.5	19.6	19.7	19.8	19.7	19.5	19.3	19.1	18.9	18.8	18.7
19 - α Tau	<i>Aldebaran</i>	0.9	290	48.6	48.7	48.8	49.0	49.0	48.9	48.8	48.5	48.3	48.1	47.9	47.9
20 - β Ori	<i>Rigel</i>	0.1	281	11.4	11.4	11.6	11.7	11.8	11.7	11.6	11.4	11.2	11.0	10.8	10.7
21 - α Aur	<i>Capella</i>	0.1	280	33.4	33.5	33.7	33.9	34.0	33.9	33.7	33.5	33.1	32.8	32.6	32.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	31.3	31.3	31.5	31.6	31.7	31.6	31.5	31.3	31.1	30.9	30.7	30.6
23 - β Tau	<i>Elnath</i>	1.7	278	11.7	11.8	12.0	12.1	12.2	12.1	12.0	11.8	11.5	11.3	11.1	10.9
24 - δ Ori	<i>Mintaka</i>	2.2	276	48.7	48.7	48.9	49.0	49.1	49.0	48.9	48.7	48.5	48.3	48.1	48.0
25 - ε Ori	<i>Alnilam</i>	1.7	275	45.6	45.7	45.8	46.0	46.0	46.0	45.9	45.7	45.5	45.3	45.1	45.0
26 - ζ Ori	<i>Alnitak</i>	1.9	274	37.5	37.6	37.7	37.8	37.9	37.9	37.8	37.6	37.4	37.2	37.0	36.9
27 - κ Ori	<i>Saiph</i>	2.1	272	53.2	53.3	53.4	53.5	53.6	53.6	53.5	53.3	53.1	52.9	52.7	52.6
28 - α Ori	<i>Betelgeuse</i>	0.4	270	60.5	60.6	60.7	60.8	60.9	60.9	60.8	60.6	60.4	60.2	60.0	59.9
29 - β Aur	<i>Menkalinan</i>	1.9	269	50.9	51.0	51.2	51.4	51.5	51.5	51.3	51.1	50.8	50.5	50.2	50.0
30 - β CMa	<i>Mirzam</i>	2.0	264	9.7	9.8	9.9	10.1	10.2	10.2	10.1	10.0	9.8	9.6	9.4	9.2
31 - α Car	<i>Canopus</i>	-0.7	263	55.4	55.6	55.8	56.1	56.3	56.4	56.3	56.2	55.9	55.6	55.3	55.1
32 - γ Gem	<i>Alhena</i>	1.9	260	21.6	21.7	21.8	21.9	22.0	22.0	21.9	21.8	21.6	21.3	21.1	20.9
33 - α CMa	<i>Sirius</i>	-1.5	258	33.0	33.1	33.2	33.3	33.4	33.5	33.4	33.3	33.1	32.9	32.6	32.5
34 - ε CMa	<i>Adhara</i>	1.5	255	11.8	11.8	12.0	12.2	12.3	12.3	12.3	12.2	12.0	11.8	11.5	11.3
35 - δ CMa	<i>Wezen</i>	1.9	252	45.0	45.1	45.2	45.4	45.5	45.5	45.5	45.4	45.2	45.0	44.8	44.6
36 - η CMa	<i>Aludra</i>	2.5	248	49.7	49.7	49.8	50.0	50.2	50.2	50.2	50.1	49.9	49.7	49.5	49.3
37 - α Gem	<i>Castor</i>	2.0	246	7.0	7.0	7.1	7.3	7.4	7.4	7.4	7.3	7.1	6.8	6.5	6.3
38 - α CMi	<i>Procyon</i>	0.4	244	58.9	58.9	59.0	59.2	59.3	59.3	59.3	59.2	59.0	58.8	58.6	58.4
39 - β Gem	<i>Pollux</i>	1.1	243	26.9	26.8	26.9	27.1	27.2	27.2	27.2	27.1	26.9	26.7	26.4	26.2
40 - ζ Pup	<i>Naos</i>	2.3	238	58.2	58.2	58.3	58.5	58.7	58.8	58.8	58.8	58.6	58.4	58.1	57.9
41 - γ Vel	<i>Regor</i>	1.8	237	29.8	29.9	30.0	30.2	30.4	30.6	30.6	30.5	30.4	30.1	29.8	29.6
42 - ε Car	<i>Avior</i>	1.9	234	17.1	17.2	17.3	17.6	17.9	18.2	18.3	18.2	18.0	17.7	17.3	17.0
43 - δ Velorum		2.0	228	42.8	42.8	43.0	43.2	43.4	43.7	43.8	43.7	43.6	43.3	43.0	42.7
44 - ζ Hydrae		3.1	225	57.5	57.4	57.5	57.6	57.7	57.8	57.8	57.7	57.6	57.4	57.2	57.0
45 - λ Vel	<i>Suhail</i>	2.2	222	51.7	51.6	51.7	51.8	52.0	52.2	52.2	52.2	52.1	51.9	51.6	51.3
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.6	38.5	38.7	39.1	39.5	40.0	40.2	40.3	40.1	39.7	39.2	38.7
47 - ι Car	<i>Aspidiske</i>	2.3	220	37.2	37.1	37.2	37.4	37.7	38.0	38.1	38.2	38.0	37.8	37.4	37.0
48 - α Lyn	<i>Elvashak</i>	3.1	219	30.9	30.8	30.8	30.9	31.1	31.2	31.2	31.2	31.1	30.9	30.6	30.3
49 - α Hyd	<i>Alphard</i>	2.0	217	55.4	55.3	55.3	55.4	55.5	55.6	55.6	55.6	55.5	55.4	55.1	54.9
50 - α Leo	<i>Regulus</i>	1.4	207	42.8	42.7	42.7	42.7	42.8	42.9	43.0	43.0	42.9	42.8	42.6	42.3

ESTRELLAS, 2014
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	10.2	10.2	10.1	10.0	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.6
2 - β Cas	<i>Caph</i>	2.3	+59	13.9	13.8	13.7	13.6	13.5	13.5	13.6	13.7	13.9	14.1	14.2	14.3
3 - γ Peg	<i>Algenib</i>	2.8	+15	15.8	15.7	15.7	15.7	15.7	15.8	15.9	16.0	16.1	16.1	16.1	16.1
4 - α Phe	<i>Ankaa</i>	2.4	-42	14.0	14.0	13.8	13.7	13.6	13.4	13.3	13.3	13.4	13.5	13.6	13.7
5 - α Cas	<i>Schedar</i>	2.2	+56	37.1	37.1	36.9	36.8	36.7	36.7	36.8	36.9	37.1	37.2	37.4	37.4
6 - β Cet	<i>Diphda</i>	2.0	-17	54.7	54.7	54.7	54.6	54.5	54.3	54.2	54.2	54.2	54.2	54.3	54.4
7 - γ Cas	<i>Navi</i>	1.6	+60	47.8	47.8	47.7	47.5	47.4	47.4	47.5	47.6	47.7	47.9	48.0	48.1
8 - β And	<i>Mirach</i>	2.1	+35	41.9	41.8	41.7	41.6	41.6	41.6	41.7	41.8	41.9	42.0	42.1	42.1
9 - α Eri	<i>Achernar</i>	0.5	-57	10.3	10.2	10.1	9.9	9.8	9.6	9.5	9.5	9.5	9.7	9.8	9.9
10 - γ And	<i>Almak</i>	2.3	+42	24.0	23.9	23.9	23.8	23.7	23.7	23.7	23.8	23.9	24.0	24.1	24.2
12 - α Ari	<i>Hamal</i>	2.0	+23	31.8	31.7	31.7	31.6	31.6	31.6	31.7	31.8	31.9	32.0	32.0	32.0
11 - α UMi	<i>Polaris</i>	2.0	+89	19.7	19.7	19.7	19.5	19.4	19.2	19.2	19.2	19.3	19.4	19.6	19.8
13 - θ Eri	<i>Acamar</i>	3.3	-40	15.2	15.3	15.2	15.1	15.0	14.8	14.7	14.6	14.6	14.7	14.8	14.9
14 - α Cet	<i>Menkar</i>	2.5	+4	8.6	8.5	8.5	8.5	8.6	8.6	8.7	8.8	8.8	8.9	8.8	8.8
15 - β Per	<i>Algol</i>	2.1	+41	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8
16 - α Per	<i>Mirfak</i>	1.8	+49	54.7	54.7	54.7	54.6	54.5	54.5	54.4	54.5	54.5	54.6	54.7	54.8
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.8	8.8	8.8	8.8	8.7	8.8	8.8	8.8	8.9	8.9	9.0	9.0
18 - γ Eri	<i>Zaurak</i>	3.0	-13	28.4	28.4	28.4	28.4	28.3	28.2	28.1	28.0	28.0	28.0	28.1	28.2
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.1	32.1	32.1	32.1	32.1	32.1	32.1	32.2	32.2	32.2	32.2	32.2
20 - β Ori	<i>Rigel</i>	0.1	-8	11.4	11.4	11.5	11.4	11.4	11.3	11.2	11.1	11.1	11.1	11.2	11.3
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.7	21.7	21.7	21.6	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	37.0	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.4	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.4	56.4	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.2	56.3
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.2	40.2	40.2	40.2	40.2	40.1	40.0	39.9	39.9	39.9	40.0	40.1
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.4	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.8	56.8	56.8	56.8	56.7	56.7	56.6	56.6	56.6	56.6	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.1	58.2	58.2	58.1	58.0	57.9	57.8	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.5	42.6	42.7	42.7	42.6	42.5	42.3	42.2	42.1	42.1	42.2	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	22.9
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.4	44.5	44.5	44.5	44.5	44.4	44.3	44.2	44.2	44.2	44.3	44.4
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.7	59.9	59.9	59.9	59.9	59.8	59.7	59.5	59.5	59.5	59.5	59.7
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.2	25.3	25.4	25.4	25.3	25.2	25.1	25.0	24.9	24.9	25.0	25.1
36 - η CMa	<i>Aludra</i>	2.5	-29	20.1	20.2	20.3	20.3	20.3	20.2	20.0	19.9	19.8	19.8	19.9	20.0
37 - α Gem	<i>Castor</i>	2.0	+31	51.2	51.2	51.3	51.3	51.3	51.3	51.2	51.2	51.1	51.1	51.1	51.0
38 - α CMi	<i>Procyon</i>	0.4	+5	11.1	11.0	11.0	11.0	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.0
39 - β Gem	<i>Pollux</i>	1.1	+27	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.2	59.2	59.1	59.1
40 - ζ Pup	<i>Naos</i>	2.3	-40	2.8	2.9	3.0	3.1	3.1	3.0	2.8	2.7	2.6	2.6	2.6	2.8
41 - γ Vel	<i>Regor</i>	1.8	-47	22.9	23.0	23.1	23.2	23.2	23.1	23.0	22.8	22.7	22.7	22.7	22.9
42 - ϵ Car	<i>Avior</i>	1.9	-59	33.4	33.6	33.7	33.8	33.8	33.7	33.6	33.4	33.3	33.3	33.3	33.4
43 - δ Velorum		2.0	-54	45.7	45.9	46.1	46.1	46.2	46.1	46.0	45.8	45.7	45.6	45.6	45.8
44 - ζ Hydrae		3.1	+5	53.3	53.2	53.2	53.2	53.2	53.3	53.3	53.3	53.3	53.3	53.2	53.1
45 - λ Vel	<i>Suhail</i>	2.2	-43	29.5	29.7	29.8	29.9	29.9	29.8	29.7	29.6	29.5	29.4	29.4	29.5
46 - β Car	<i>Miaplacidus</i>	1.7	-69	46.5	46.7	46.9	47.0	47.1	47.0	46.9	46.7	46.6	46.5	46.5	46.6
47 - ι Car	<i>Aspidiske</i>	2.3	-59	20.1	20.3	20.5	20.6	20.6	20.6	20.4	20.3	20.1	20.1	20.1	20.2
48 - α Lyn	<i>Elvashak</i>	3.1	+34	19.7	19.7	19.8	19.8	19.9	19.9	19.8	19.8	19.7	19.6	19.5	19.4
49 - α Hyd	<i>Alphard</i>	2.0	-8	43.4	43.5	43.5	43.6	43.5	43.5	43.4	43.4	43.3	43.3	43.4	43.5
50 - α Leo	<i>Regulus</i>	1.4	+11	53.7	53.6	53.6	53.6	53.7	53.7	53.7	53.7	53.7	53.6	53.6	53.5

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	8.7	8.5	8.5	8.6	8.8	8.9	9.1	9.2	9.2	9.0	8.7	8.4
52 - ν	Hydrae	3.1	197	24.8	24.6	24.6	24.7	24.7	24.8	24.9	24.9	24.9	24.8	24.6	24.4
53 - β	UMa Merak	2.4	194	19.4	19.2	19.1	19.2	19.4	19.6	19.8	19.9	19.8	19.7	19.4	19.0
54 - α	UMa Dubhe	1.8	193	50.9	50.6	50.5	50.6	50.8	51.1	51.3	51.4	51.4	51.3	50.9	50.5
55 - β	Leo Denebola	2.1	182	33.1	32.9	32.8	32.8	32.9	33.0	33.0	33.1	33.1	33.1	32.9	32.7
56 - γ	Crv Gienah	2.6	175	51.7	51.5	51.4	51.4	51.4	51.5	51.6	51.7	51.7	51.7	51.5	51.3
57 - α	Cru Acrux	1.4	173	8.5	8.1	8.0	7.9	8.0	8.2	8.5	8.8	8.9	8.9	8.6	8.2
58 - γ	Cru Gacrux	1.6	171	60.2	59.8	59.7	59.6	59.7	59.9	60.1	60.3	60.4	60.4	60.1	59.8
59 - γ	Cen Muhlifain	2.2	169	25.1	24.8	24.6	24.6	24.6	24.7	24.9	25.1	25.2	25.1	25.0	24.7
60 - β	Cru Mimosa	1.3	167	51.2	50.8	50.6	50.6	50.6	50.8	51.0	51.3	51.4	51.4	51.2	50.8
61 - ε	UMa Alioth	1.8	166	20.3	20.0	19.8	19.7	19.8	20.0	20.2	20.4	20.5	20.6	20.4	20.1
62 - α^2	CVn Cor Caroli	2.9	165	49.6	49.4	49.2	49.2	49.2	49.3	49.5	49.6	49.7	49.7	49.6	49.3
63 - ε	Vir Vindemiatrix	2.8	164	16.7	16.5	16.3	16.3	16.3	16.3	16.4	16.5	16.6	16.6	16.5	16.3
64 - ζ	UMa Mizar	2.3	158	52.7	52.4	52.1	52.1	52.1	52.3	52.5	52.7	52.8	52.9	52.8	52.6
65 - α	Vir Spica	1.0	158	30.8	30.5	30.4	30.3	30.3	30.4	30.4	30.5	30.6	30.6	30.5	30.3
66 - η	UMa Alkaid	1.9	152	58.7	58.3	58.1	58.0	58.0	58.2	58.3	58.5	58.7	58.7	58.7	58.5
67 - β	Cen Hadar	0.6	148	47.3	46.8	46.5	46.4	46.3	46.4	46.6	46.8	47.0	47.1	47.0	46.7
68 - θ	Cen Menkent	2.1	148	7.1	6.8	6.6	6.5	6.4	6.5	6.5	6.7	6.8	6.9	6.8	6.6
69 - α	Boo Arcturus	0.0	145	55.4	55.2	55.0	54.9	54.9	54.9	55.0	55.1	55.2	55.3	55.2	55.1
70 - α^1	Cen Rigil Kentaurus	0.0	139	51.3	50.9	50.6	50.3	50.2	50.3	50.5	50.7	51.0	51.1	51.1	50.8
71 - α^2	Lib Zubenelgenubi	2.8	137	5.1	4.8	4.6	4.5	4.4	4.4	4.4	4.5	4.7	4.7	4.7	4.5
72 - β	UMi Kochab	2.1	137	20.6	19.9	19.4	19.1	19.0	19.3	19.8	20.4	20.9	21.3	21.4	21.2
73 - β	Lib Zubeneschamali	2.6	130	33.5	33.3	33.1	32.9	32.8	32.8	32.8	32.9	33.1	33.1	33.1	33.0
74 - α	CrB Alphecca	2.2	126	10.9	10.6	10.4	10.2	10.1	10.1	10.2	10.3	10.5	10.6	10.6	10.5
75 - α	Ser Unukalhai	2.7	123	45.6	45.4	45.2	45.0	44.9	44.9	44.9	45.0	45.2	45.2	45.3	45.2
76 - α	Sco Antares	0.9	112	26.0	25.7	25.5	25.3	25.1	25.0	25.0	25.1	25.3	25.4	25.4	25.4
77 - α	TrA Atria	1.9	107	27.8	27.3	26.8	26.2	25.8	25.6	25.7	25.9	26.3	26.7	26.9	26.8
78 - ε	Scorpii	2.3	107	13.9	13.7	13.4	13.2	13.0	12.9	12.9	13.0	13.1	13.3	13.3	13.3
79 - η	Oph Sabik	2.4	102	12.3	12.1	11.9	11.7	11.5	11.4	11.4	11.4	11.6	11.7	11.8	11.7
80 - α	Her Rasalgethi	3.1	101	10.8	10.6	10.4	10.2	10.1	10.0	9.9	10.0	10.2	10.3	10.4	10.4
81 - λ	Sco Shaula	1.6	96	21.7	21.4	21.2	20.9	20.7	20.5	20.5	20.6	20.7	20.9	21.0	21.0
82 - α	Oph Rasalhague	2.1	96	6.4	6.2	6.0	5.8	5.6	5.5	5.4	5.5	5.6	5.8	5.9	5.9
83 - θ	Sco Sargas	1.9	95	25.2	25.0	24.7	24.4	24.2	24.0	23.9	24.0	24.2	24.4	24.5	24.4
84 - γ	Dra Eltanin	2.2	90	46.4	46.2	45.9	45.6	45.4	45.3	45.3	45.4	45.7	45.9	46.1	46.2
85 - ε	Sgr Kaus Australis	1.9	83	43.6	43.4	43.2	42.9	42.7	42.5	42.4	42.4	42.6	42.7	42.9	42.9
86 - α	Lyr Vega	0.0	80	39.1	38.9	38.7	38.4	38.2	38.1	38.0	38.1	38.2	38.4	38.6	38.7
87 - σ	Sgr Nunki	2.0	75	58.2	58.0	57.8	57.6	57.3	57.1	57.0	57.0	57.1	57.3	57.4	57.4
88 - α	Aql Altair	0.8	62	8.2	8.0	7.9	7.7	7.5	7.3	7.2	7.1	7.2	7.3	7.5	7.5
89 - γ	Cyg Sadr	2.2	54	19.3	19.2	19.0	18.8	18.5	18.3	18.2	18.1	18.2	18.4	18.6	18.7
90 - α	Pav Peacock	1.9	53	19.2	19.1	18.9	18.5	18.1	17.8	17.5	17.5	17.6	17.8	18.0	18.2
91 - α	Cyg Deneb	1.3	49	31.6	31.6	31.4	31.2	30.9	30.6	30.5	30.4	30.5	30.7	30.9	31.1
92 - α	Cep Alderamin	2.4	40	16.7	16.7	16.6	16.2	15.8	15.5	15.2	15.1	15.2	15.5	15.8	16.1
93 - ε	Peg Enif	0.7	33	47.0	47.0	46.9	46.7	46.5	46.3	46.1	46.0	46.0	46.1	46.2	46.3
94 - δ	Cap Deneb Algedi	2.9	33	2.9	2.9	2.8	2.7	2.5	2.2	2.0	1.9	1.9	2.0	2.1	2.2
95 - α	Gru Al Na'ir	1.7	27	43.6	43.6	43.5	43.3	43.1	42.8	42.5	42.3	42.3	42.4	42.6	42.7
96 - β	Gruis	2.1	19	7.8	7.8	7.8	7.6	7.4	7.0	6.7	6.5	6.5	6.6	6.7	6.9
97 - α	PsA Fomalhaut	1.2	15	23.8	23.8	23.8	23.7	23.5	23.2	23.0	22.8	22.7	22.7	22.8	23.0
98 - β	Peg Scheat	2.4	13	53.2	53.2	53.2	53.1	52.9	52.6	52.4	52.2	52.1	52.2	52.3	52.4
99 - α	Peg Markab	2.5	13	38.1	38.1	38.1	38.0	37.8	37.6	37.4	37.2	37.1	37.2	37.2	37.3

ESTRELLAS, 2014
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	29.6	29.8	30.0	30.1	30.2	30.2	30.1	30.0	29.8	29.7	29.7	29.8
52 - ν	Hydrae	3.1	-16	16.1	16.3	16.3	16.4	16.4	16.4	16.3	16.3	16.2	16.2	16.2	16.3
53 - β	UMa Merak	2.4	+56	18.0	18.1	18.2	18.4	18.4	18.5	18.4	18.3	18.2	18.0	17.9	17.8
54 - α	UMa Dubhe	1.8	+61	40.1	40.2	40.3	40.4	40.5	40.6	40.5	40.4	40.2	40.1	39.9	39.8
55 - β	Leo Denebola	2.1	+14	29.4	29.4	29.4	29.4	29.4	29.5	29.5	29.5	29.5	29.4	29.3	29.2
56 - γ	Crv Gienah	2.6	-17	37.2	37.3	37.4	37.5	37.5	37.5	37.4	37.4	37.3	37.3	37.3	37.4
57 - α	Cru Acrux	1.4	-63	10.4	10.5	10.7	10.9	11.0	11.1	11.1	11.0	10.9	10.7	10.6	10.6
58 - γ	Cru Gacrux	1.6	-57	11.3	11.4	11.6	11.8	11.9	11.9	11.9	11.9	11.7	11.6	11.5	11.5
59 - γ	Cen Muhlifain	2.2	-49	2.0	2.2	2.3	2.5	2.6	2.6	2.6	2.5	2.4	2.3	2.2	2.2
60 - β	Cru Mimosa	1.3	-59	45.7	45.8	46.0	46.1	46.3	46.3	46.4	46.3	46.2	46.0	45.9	45.9
61 - ϵ	UMa Alioth	1.8	+55	52.7	52.7	52.8	52.9	53.1	53.1	53.2	53.1	53.0	52.8	52.6	52.5
62 - α^2	CVn Cor Caroli	2.9	+38	14.3	14.3	14.3	14.4	14.5	14.6	14.6	14.6	14.5	14.4	14.2	14.1
63 - ϵ	Vir Vindemiatrix	2.8	+10	52.9	52.8	52.8	52.8	52.9	52.9	53.0	53.0	53.0	52.9	52.8	52.7
64 - ζ	UMa Mizar	2.3	+54	50.8	50.8	50.9	51.0	51.2	51.3	51.3	51.3	51.1	51.0	50.8	50.6
65 - α	Vir Spica	1.0	-11	14.1	14.2	14.2	14.3	14.3	14.2	14.2	14.2	14.1	14.1	14.2	14.2
66 - η	UMa Alkaid	1.9	+49	14.3	14.3	14.3	14.5	14.6	14.7	14.8	14.8	14.7	14.5	14.3	14.2
67 - β	Cen Hadar	0.6	-60	26.1	26.2	26.3	26.5	26.6	26.7	26.8	26.7	26.7	26.5	26.4	26.4
68 - θ	Cen Menkent	2.1	-36	26.1	26.2	26.3	26.4	26.5	26.6	26.6	26.5	26.5	26.4	26.3	26.3
69 - α	Boo Arcturus	0.0	+19	6.4	6.4	6.4	6.4	6.5	6.6	6.6	6.6	6.6	6.5	6.4	6.3
70 - α^1	Cen Rigil Kentaurus	0.0	-60	53.3	53.3	53.4	53.6	53.7	53.8	53.9	53.9	53.8	53.7	53.6	53.5
71 - α^2	Lib Zubenelgenubi	2.8	-16	5.9	6.0	6.0	6.1	6.1	6.1	6.1	6.0	6.0	6.0	6.0	6.0
72 - β	UMi Kochab	2.1	+74	5.6	5.6	5.6	5.8	5.9	6.1	6.1	6.1	6.1	5.9	5.7	5.5
73 - β	Lib Zubeneshamali	2.6	-9	26.0	26.1	26.1	26.1	26.1	26.1	26.1	26.0	26.0	26.0	26.0	26.1
74 - α	CrB Alphecca	2.2	+26	40.0	39.9	39.9	39.9	40.0	40.2	40.2	40.3	40.3	40.2	40.1	40.0
75 - α	Ser Unukalhai	2.7	+6	22.9	22.8	22.8	22.8	22.9	23.0	23.0	23.1	23.1	23.0	23.0	22.9
76 - α	Sco Antares	0.9	-26	27.6	27.6	27.6	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.7	27.6
77 - α	TrA Atria	1.9	-69	2.8	2.8	2.8	2.8	2.9	3.1	3.2	3.3	3.3	3.2	3.1	3.0
78 - ϵ	Scorpii	2.3	-34	18.9	18.9	18.9	18.9	19.0	19.0	19.1	19.1	19.1	19.0	19.0	19.0
79 - η	Oph Sabik	2.4	-15	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.4	44.3	44.3	44.3	44.4
80 - α	Her Rasalgethi	3.1	+14	22.5	22.4	22.4	22.4	22.5	22.6	22.7	22.8	22.8	22.8	22.7	22.6
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.6
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	33.0	33.0	33.1	33.2	33.2	33.3	33.3	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.3	29.1	29.1	29.1	29.2	29.4	29.5	29.7	29.7	29.7	29.6	29.5
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.5	22.4	22.4	22.4	22.4	22.4	22.4	22.5	22.5	22.5	22.5	22.4
86 - α	Lyr Vega	0.0	+38	47.9	47.8	47.7	47.7	47.8	48.0	48.1	48.2	48.3	48.3	48.3	48.1
87 - σ	Sgr Nunki	2.0	-26	16.6	16.6	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5
88 - α	Aql Altair	0.8	+8	54.5	54.4	54.4	54.4	54.5	54.6	54.7	54.7	54.8	54.8	54.8	54.7
89 - γ	Cyg Sadr	2.2	+40	18.3	18.1	18.0	18.0	18.1	18.2	18.4	18.5	18.6	18.7	18.7	18.6
90 - α	Pav Peacock	1.9	-56	41.3	41.2	41.1	41.0	40.9	40.9	41.0	41.1	41.2	41.2	41.3	41.2
91 - α	Cyg Deneb	1.3	+45	20.0	19.9	19.8	19.7	19.8	19.9	20.1	20.2	20.4	20.5	20.5	20.4
92 - α	Cep Alderamin	2.4	+62	39.0	38.8	38.7	38.6	38.6	38.7	38.9	39.1	39.2	39.3	39.4	39.3
93 - ϵ	Peg Enif	0.7	+9	56.5	56.4	56.4	56.4	56.5	56.6	56.7	56.8	56.8	56.9	56.9	56.8
94 - δ	Cap Deneb Algedi	2.9	-16	3.8	3.7	3.7	3.6	3.6	3.5	3.4	3.4	3.4	3.4	3.5	3.5
95 - α	Gru Al Na'ir	1.7	-46	53.6	53.5	53.4	53.3	53.2	53.1	53.1	53.1	53.2	53.3	53.4	53.4
96 - β	Gruis	2.1	-46	48.8	48.7	48.5	48.4	48.3	48.2	48.2	48.2	48.3	48.4	48.5	48.5
97 - α	PsA Fomalhaut	1.2	-29	32.9	32.9	32.8	32.7	32.6	32.5	32.4	32.4	32.5	32.5	32.6	32.6
98 - β	Peg Scheat	2.4	+28	9.7	9.6	9.6	9.5	9.5	9.6	9.7	9.9	10.0	10.1	10.1	10.1
99 - α	Peg Markab	2.5	+15	17.0	16.9	16.9	16.8	16.9	17.0	17.1	17.2	17.3	17.3	17.4	17.3

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

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN					
1 - α Andromedae	<i>Alpheratz</i>	2.1	h m 3 30	h m 1 29	h m 23 27	h m 21 25	h m 19 27	Se restará para obtener la hora del paso en otro día del mismo mes.					
2 - β Cassiopeae	<i>Caph</i>	2.3	3 31	1 29	23 28	21 26	19 28						
6 - β Ceti	<i>Diphda</i>	2.0	4 06	2 04	0 06	22 00	20 02						
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 57	1 00	22 54	20 56						
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 23	21 25	<table><tr><th>Día</th><th>Corr.</th></tr></table>	Día	Corr.			
Día	Corr.												
13 - θ Eridani	<i>Acamar</i>	3.3	6 20	4 18	2 20	0 18	22 16	<table><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr></table>		h m	1	0 00	
	h m												
1	0 00												
16 - α Persei	<i>Mirfak</i>	1.8	6 46	4 44	2 46	0 44	22 43	<table><tr><td>2</td><td>0 04</td></tr></table>	2	0 04			
2	0 04												
19 - α Tauri	<i>Aldebaran</i>	0.9	7 57	5 55	3 58	1 56	23 54	<table><tr><td>3</td><td>0 08</td></tr></table>	3	0 08			
3	0 08												
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36	<table><tr><td>4</td><td>0 12</td></tr></table>	4	0 12			
4	0 12												
21 - α Aurigae	<i>Capella</i>	0.1	8 38	6 36	4 38	2 37	0 39	<table><tr><td>5</td><td>0 16</td></tr></table>	5	0 16			
5	0 16												
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 46	6 44	4 47	2 45	0 47	<table><tr><td>6</td><td>0 20</td></tr></table>	6	0 20			
6	0 20												
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 16	7 14	5 17	3 15	1 17	<table><tr><td>7</td><td>0 24</td></tr></table>	7	0 24			
7	0 24												
31 - α Carinae	<i>Canopus</i>	-0.7	9 45	7 43	5 45	3 43	1 45	<table><tr><td>8</td><td>0 28</td></tr></table>	8	0 28			
8	0 28												
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 06	<table><tr><td>9</td><td>0 31</td></tr></table>	9	0 31			
9	0 31												
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 18	6 20	4 18	2 20	<table><tr><td>10</td><td>0 35</td></tr></table>	10	0 35			
10	0 35												
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 58	7 00	4 58	3 01	<table><tr><td>11</td><td>0 39</td></tr></table>	11	0 39			
11	0 39												
39 - β Geminorum	<i>Pollux</i>	1.1	11 06	9 04	7 06	5 05	3 07	<table><tr><td>12</td><td>0 43</td></tr></table>	12	0 43			
12	0 43												
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43	<table><tr><td>13</td><td>0 47</td></tr></table>	13	0 47			
13	0 47												
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 26	8 29	6 27	4 29	<table><tr><td>14</td><td>0 51</td></tr></table>	14	0 51			
14	0 51												
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 33	6 31	4 34	<table><tr><td>15</td><td>0 55</td></tr></table>	15	0 55			
15	0 55												
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 46	4 48	<table><tr><td>16</td><td>0 59</td></tr></table>	16	0 59			
16	0 59												
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29	<table><tr><td>17</td><td>1 03</td></tr></table>	17	1 03			
17	1 03												
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 22	10 24	8 22	6 24	<table><tr><td>18</td><td>1 07</td></tr></table>	18	1 07			
18	1 07												
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 07	11 09	9 07	7 10	<table><tr><td>19</td><td>1 11</td></tr></table>	19	1 11			
19	1 11												
57 - α Crucis	<i>Acrux</i>	1.4	15 47	13 45	11 47	9 45	7 47	<table><tr><td>20</td><td>1 15</td></tr></table>	20	1 15			
20	1 15												
58 - γ Crucis	<i>Gacrux</i>	1.6	15 51	13 49	11 51	9 50	7 52	<table><tr><td>21</td><td>1 19</td></tr></table>	21	1 19			
21	1 19												
60 - β Crucis	<i>Mimosa</i>	1.3	16 08	14 06	12 08	10 06	8 08	<table><tr><td>22</td><td>1 23</td></tr></table>	22	1 23			
22	1 23												
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14	<table><tr><td>23</td><td>1 27</td></tr></table>	23	1 27			
23	1 27												
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 44	14 42	12 44	10 42	8 44	<table><tr><td>24</td><td>1 30</td></tr></table>	24	1 30			
24	1 30												
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 45	10 43	8 45	<table><tr><td>25</td><td>1 34</td></tr></table>	25	1 34			
25	1 34												
68 - θ Centauri	<i>Menkent</i>	2.1	17 27	15 25	13 27	11 25	9 27	<table><tr><td>26</td><td>1 38</td></tr></table>	26	1 38			
26	1 38												
69 - α Bootis	<i>Arcturus</i>	0.0	17 35	15 33	13 35	11 34	9 36	<table><tr><td>27</td><td>1 42</td></tr></table>	27	1 42			
27	1 42												
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	18 00	15 58	14 00	11 58	10 00	<table><tr><td>28</td><td>1 46</td></tr></table>	28	1 46			
28	1 46												
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 10	16 08	14 10	12 08	10 10	<table><tr><td>29</td><td>1 50</td></tr></table>	29	1 50			
29	1 50												
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 54	<table><tr><td>30</td><td>1 54</td></tr></table>	30	1 54			
30	1 54												
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 47	11 49	<table><tr><td>31</td><td>1 58</td></tr></table>	31	1 58			
31	1 58												
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 09	18 07	16 09	14 07	12 09	Si el resultado es negativo sumar 23 ^h 56 ^m .					
81 - λ Scorpii	<i>Shaula</i>	1.6	20 53	18 51	16 53	14 51	12 53	2ª CORRECCIÓN					
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 52	12 54	Se aplicará para tener la hora civil del paso por otro meridiano.					
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 13	17 16	15 14	13 16						
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 43	19 42	17 44	15 42	13 44						
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56						
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 14	20 13	18 15	16 13	14 15	<table><tr><th>Long.</th><th>Corr.</th></tr></table>	Long.	Corr.			
Long.	Corr.												
88 - α Aquilae	<i>Altair</i>	0.8	23 10	21 08	19 10	17 08	15 10	<table><tr><td>o</td><td>m</td></tr><tr><td>180 W</td><td>-2</td></tr></table>	o	m	180 W	-2	
o	m												
180 W	-2												
90 - α Pavonis	<i>Peacock</i>	1.9	23 45	21 43	19 45	17 43	15 45	<table><tr><td>138 W</td><td>-1</td></tr></table>	138 W	-1			
138 W	-1												
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00	<table><tr><td>46 W</td><td>0</td></tr></table>	46 W	0			
46 W	0												
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 07	23 01	21 03	19 01	17 03	<table><tr><td>46 E</td><td>+1</td></tr></table>	46 E	+1			
46 E	+1												
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 31	23 25	21 27	19 25	17 27	<table><tr><td>136 E</td><td>+1</td></tr></table>	136 E	+1			
136 E	+1												
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 16	20 14	18 16	<table><tr><td>180 E</td><td>+2</td></tr></table>	180 E	+2			
180 E	+2												
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 21	18 23						

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

2ª CORRECCIÓN

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2014

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	-29.8	26 00	-38.8	52 00	-39.9	78 00	-33.0	104 00	-19.4	130 00	-1.8	156 00	+16.1
0 30	-30.0	26 30	-38.9	52 30	-39.9	78 30	-32.8	104 30	-19.1	130 30	-1.5	156 30	+16.4
1 00	-30.3	27 00	-39.0	53 00	-39.8	79 00	-32.6	105 00	-18.8	131 00	-1.1	157 00	+16.7
1 30	-30.5	27 30	-39.1	53 30	-39.8	79 30	-32.4	105 30	-18.4	131 30	-0.8	157 30	+17.1
2 00	-30.7	28 00	-39.2	54 00	-39.7	80 00	-32.2	106 00	-18.1	132 00	-0.4	158 00	+17.4
2 30	-31.0	28 30	-39.3	54 30	-39.6	80 30	-32.0	106 30	-17.8	132 30	-0.1	158 30	+17.7
3 00	-31.2	29 00	-39.4	55 00	-39.5	81 00	-31.7	107 00	-17.5	133 00	+0.3	159 00	+18.0
3 30	-31.4	29 30	-39.4	55 30	-39.5	81 30	-31.5	107 30	-17.2	133 30	+0.6	159 30	+18.3
4 00	-31.6	30 00	-39.5	56 00	-39.4	82 00	-31.3	108 00	-16.9	134 00	+1.0	160 00	+18.6
4 30	-31.9	30 30	-39.6	56 30	-39.3	82 30	-31.1	108 30	-16.5	134 30	+1.3	160 30	+18.9
5 00	-32.1	31 00	-39.7	57 00	-39.2	83 00	-30.8	109 00	-16.2	135 00	+1.7	161 00	+19.3
5 30	-32.3	31 30	-39.7	57 30	-39.1	83 30	-30.6	109 30	-15.9	135 30	+2.1	161 30	+19.6
6 00	-32.5	32 00	-39.8	58 00	-39.0	84 00	-30.4	110 00	-15.6	136 00	+2.4	162 00	+19.9
6 30	-32.7	32 30	-39.9	58 30	-38.9	84 30	-30.1	110 30	-15.2	136 30	+2.8	162 30	+20.2
7 00	-32.9	33 00	-39.9	59 00	-38.8	85 00	-29.9	111 00	-14.9	137 00	+3.1	163 00	+20.5
7 30	-33.1	33 30	-40.0	59 30	-38.7	85 30	-29.7	111 30	-14.6	137 30	+3.5	163 30	+20.8
8 00	-33.3	34 00	-40.0	60 00	-38.6	86 00	-29.4	112 00	-14.2	138 00	+3.8	164 00	+21.1
8 30	-33.5	34 30	-40.1	60 30	-38.5	86 30	-29.2	112 30	-13.9	138 30	+4.2	164 30	+21.4
9 00	-33.7	35 00	-40.1	61 00	-38.4	87 00	-28.9	113 00	-13.6	139 00	+4.5	165 00	+21.7
9 30	-33.9	35 30	-40.2	61 30	-38.3	87 30	-28.7	113 30	-13.2	139 30	+4.9	165 30	+22.0
10 00	-34.1	36 00	-40.2	62 00	-38.2	88 00	-28.4	114 00	-12.9	140 00	+5.2	166 00	+22.3
10 30	-34.3	36 30	-40.3	62 30	-38.1	88 30	-28.2	114 30	-12.6	140 30	+5.6	166 30	+22.6
11 00	-34.5	37 00	-40.3	63 00	-38.0	89 00	-27.9	115 00	-12.2	141 00	+5.9	167 00	+22.9
11 30	-34.7	37 30	-40.3	63 30	-37.8	89 30	-27.7	115 30	-11.9	141 30	+6.3	167 30	+23.2
12 00	-34.9	38 00	-40.4	64 00	-37.7	90 00	-27.4	116 00	-11.6	142 00	+6.6	168 00	+23.5
12 30	-35.0	38 30	-40.4	64 30	-37.6	90 30	-27.1	116 30	-11.2	142 30	+7.0	168 30	+23.7
13 00	-35.2	39 00	-40.4	65 00	-37.4	91 00	-26.9	117 00	-10.9	143 00	+7.3	169 00	+24.0
13 30	-35.4	39 30	-40.4	65 30	-37.3	91 30	-26.6	117 30	-10.5	143 30	+7.7	169 30	+24.3
14 00	-35.6	40 00	-40.5	66 00	-37.2	92 00	-26.3	118 00	-10.2	144 00	+8.0	170 00	+24.6
14 30	-35.7	40 30	-40.5	66 30	-37.0	92 30	-26.1	118 30	-9.9	144 30	+8.4	170 30	+24.9
15 00	-35.9	41 00	-40.5	67 00	-36.9	93 00	-25.8	119 00	-9.5	145 00	+8.7	171 00	+25.2
15 30	-36.0	41 30	-40.5	67 30	-36.7	93 30	-25.5	119 30	-9.2	145 30	+9.0	171 30	+25.4
16 00	-36.2	42 00	-40.5	68 00	-36.6	94 00	-25.3	120 00	-8.8	146 00	+9.4	172 00	+25.7
16 30	-36.4	42 30	-40.5	68 30	-36.4	94 30	-25.0	120 30	-8.5	146 30	+9.7	172 30	+26.0
17 00	-36.5	43 00	-40.5	69 00	-36.3	95 00	-24.7	121 00	-8.1	147 00	+10.1	173 00	+26.2
17 30	-36.7	43 30	-40.5	69 30	-36.1	95 30	-24.4	121 30	-7.8	147 30	+10.4	173 30	+26.5
18 00	-36.8	44 00	-40.5	70 00	-35.9	96 00	-24.1	122 00	-7.4	148 00	+10.8	174 00	+26.8
18 30	-37.0	44 30	-40.5	70 30	-35.8	96 30	-23.9	122 30	-7.1	148 30	+11.1	174 30	+27.0
19 00	-37.1	45 00	-40.5	71 00	-35.6	97 00	-23.6	123 00	-6.8	149 00	+11.4	175 00	+27.3
19 30	-37.2	45 30	-40.4	71 30	-35.4	97 30	-23.3	123 30	-6.4	149 30	+11.8	175 30	+27.6
20 00	-37.4	46 00	-40.4	72 00	-35.3	98 00	-23.0	124 00	-6.1	150 00	+12.1	176 00	+27.8
20 30	-37.5	46 30	-40.4	72 30	-35.1	98 30	-22.7	124 30	-5.7	150 30	+12.4	176 30	+28.1
21 00	-37.6	47 00	-40.4	73 00	-34.9	99 00	-22.4	125 00	-5.4	151 00	+12.8	177 00	+28.3
21 30	-37.8	47 30	-40.3	73 30	-34.7	99 30	-22.1	125 30	-5.0	151 30	+13.1	177 30	+28.6
22 00	-37.9	48 00	-40.3	74 00	-34.6	100 00	-21.8	126 00	-4.7	152 00	+13.5	178 00	+28.8
22 30	-38.0	48 30	-40.3	74 30	-34.4	100 30	-21.5	126 30	-4.3	152 30	+13.8	178 30	+29.1
23 00	-38.1	49 00	-40.2	75 00	-34.2	101 00	-21.2	127 00	-3.9	153 00	+14.1	179 00	+29.3
23 30	-38.3	49 30	-40.2	75 30	-34.0	101 30	-20.9	127 30	-3.6	153 30	+14.4	179 30	+29.6
24 00	-38.4	50 00	-40.2	76 00	-33.8	102 00	-20.6	128 00	-3.2	154 00	+14.8	180 00	+29.8
24 30	-38.5	50 30	-40.1	76 30	-33.6	102 30	-20.3	128 30	-2.9	154 30	+15.1	180 30	+30.0
25 00	-38.6	51 00	-40.1	77 00	-33.4	103 00	-20.0	129 00	-2.5	155 00	+15.4	181 00	+30.3
25 30	-38.7	51 30	-40.0	77 30	-33.2	103 30	-19.7	129 30	-2.2	155 30	+15.8	181 30	+30.5
26 00	-38.8	52 00	-39.9	78 00	-33.0	104 00	-19.4	130 00	-1.8	156 00	+16.1	182 00	+30.7

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POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2014

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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	+30.7	208 00	+39.2	234 00	+39.7	260 00	+32.2	286 00	+18.1	312 00	+0.4	338 00	-17.4
182 30	+31.0	208 30	+39.3	234 30	+39.6	260 30	+32.0	286 30	+17.8	312 30	+0.1	338 30	-17.7
183 00	+31.2	209 00	+39.4	235 00	+39.5	261 00	+31.7	287 00	+17.5	313 00	-0.3	339 00	-18.0
183 30	+31.4	209 30	+39.4	235 30	+39.5	261 30	+31.5	287 30	+17.2	313 30	-0.6	339 30	-18.3
184 00	+31.6	210 00	+39.5	236 00	+39.4	262 00	+31.3	288 00	+16.9	314 00	-1.0	340 00	-18.6
184 30	+31.9	210 30	+39.6	236 30	+39.3	262 30	+31.1	288 30	+16.5	314 30	-1.3	340 30	-18.9
185 00	+32.1	211 00	+39.7	237 00	+39.2	263 00	+30.8	289 00	+16.2	315 00	-1.7	341 00	-19.3
185 30	+32.3	211 30	+39.7	237 30	+39.1	263 30	+30.6	289 30	+15.9	315 30	-2.1	341 30	-19.6
186 00	+32.5	212 00	+39.8	238 00	+39.0	264 00	+30.4	290 00	+15.6	316 00	-2.4	342 00	-19.9
186 30	+32.7	212 30	+39.9	238 30	+38.9	264 30	+30.1	290 30	+15.2	316 30	-2.8	342 30	-20.2
187 00	+32.9	213 00	+39.9	239 00	+38.8	265 00	+29.9	291 00	+14.9	317 00	-3.1	343 00	-20.5
187 30	+33.1	213 30	+40.0	239 30	+38.7	265 30	+29.7	291 30	+14.6	317 30	-3.5	343 30	-20.8
188 00	+33.3	214 00	+40.0	240 00	+38.6	266 00	+29.4	292 00	+14.2	318 00	-3.8	344 00	-21.1
188 30	+33.5	214 30	+40.1	240 30	+38.5	266 30	+29.2	292 30	+13.9	318 30	-4.2	344 30	-21.4
189 00	+33.7	215 00	+40.1	241 00	+38.4	267 00	+28.9	293 00	+13.6	319 00	-4.5	345 00	-21.7
189 30	+33.9	215 30	+40.2	241 30	+38.3	267 30	+28.7	293 30	+13.2	319 30	-4.9	345 30	-22.0
190 00	+34.1	216 00	+40.2	242 00	+38.2	268 00	+28.4	294 00	+12.9	320 00	-5.2	346 00	-22.3
190 30	+34.3	216 30	+40.3	242 30	+38.1	268 30	+28.2	294 30	+12.6	320 30	-5.6	346 30	-22.6
191 00	+34.5	217 00	+40.3	243 00	+38.0	269 00	+27.9	295 00	+12.2	321 00	-5.9	347 00	-22.9
191 30	+34.7	217 30	+40.3	243 30	+37.8	269 30	+27.7	295 30	+11.9	321 30	-6.3	347 30	-23.2
192 00	+34.9	218 00	+40.4	244 00	+37.7	270 00	+27.4	296 00	+11.6	322 00	-6.6	348 00	-23.5
192 30	+35.0	218 30	+40.4	244 30	+37.6	270 30	+27.1	296 30	+11.2	322 30	-7.0	348 30	-23.7
193 00	+35.2	219 00	+40.4	245 00	+37.4	271 00	+26.9	297 00	+10.9	323 00	-7.3	349 00	-24.0
193 30	+35.4	219 30	+40.4	245 30	+37.3	271 30	+26.6	297 30	+10.5	323 30	-7.7	349 30	-24.3
194 00	+35.6	220 00	+40.5	246 00	+37.2	272 00	+26.3	298 00	+10.2	324 00	-8.0	350 00	-24.6
194 30	+35.7	220 30	+40.5	246 30	+37.0	272 30	+26.1	298 30	+9.9	324 30	-8.4	350 30	-24.9
195 00	+35.9	221 00	+40.5	247 00	+36.9	273 00	+25.8	299 00	+9.5	325 00	-8.7	351 00	-25.2
195 30	+36.0	221 30	+40.5	247 30	+36.7	273 30	+25.5	299 30	+9.2	325 30	-9.0	351 30	-25.4
196 00	+36.2	222 00	+40.5	248 00	+36.6	274 00	+25.3	300 00	+8.8	326 00	-9.4	352 00	-25.7
196 30	+36.4	222 30	+40.5	248 30	+36.4	274 30	+25.0	300 30	+8.5	326 30	-9.7	352 30	-26.0
197 00	+36.5	223 00	+40.5	249 00	+36.3	275 00	+24.7	301 00	+8.1	327 00	-10.1	353 00	-26.2
197 30	+36.7	223 30	+40.5	249 30	+36.1	275 30	+24.4	301 30	+7.8	327 30	-10.4	353 30	-26.5
198 00	+36.8	224 00	+40.5	250 00	+35.9	276 00	+24.1	302 00	+7.4	328 00	-10.8	354 00	-26.8
198 30	+37.0	224 30	+40.5	250 30	+35.8	276 30	+23.9	302 30	+7.1	328 30	-11.1	354 30	-27.0
199 00	+37.1	225 00	+40.5	251 00	+35.6	277 00	+23.6	303 00	+6.8	329 00	-11.4	355 00	-27.3
199 30	+37.2	225 30	+40.4	251 30	+35.4	277 30	+23.3	303 30	+6.4	329 30	-11.8	355 30	-27.6
200 00	+37.4	226 00	+40.4	252 00	+35.3	278 00	+23.0	304 00	+6.1	330 00	-12.1	356 00	-27.8
200 30	+37.5	226 30	+40.4	252 30	+35.1	278 30	+22.7	304 30	+5.7	330 30	-12.4	356 30	-28.1
201 00	+37.6	227 00	+40.4	253 00	+34.9	279 00	+22.4	305 00	+5.4	331 00	-12.8	357 00	-28.3
201 30	+37.8	227 30	+40.3	253 30	+34.7	279 30	+22.1	305 30	+5.0	331 30	-13.1	357 30	-28.6
202 00	+37.9	228 00	+40.3	254 00	+34.6	280 00	+21.8	306 00	+4.7	332 00	-13.5	358 00	-28.8
202 30	+38.0	228 30	+40.3	254 30	+34.4	280 30	+21.5	306 30	+4.3	332 30	-13.8	358 30	-29.1
203 00	+38.1	229 00	+40.2	255 00	+34.2	281 00	+21.2	307 00	+3.9	333 00	-14.1	359 00	-29.3
203 30	+38.3	229 30	+40.2	255 30	+34.0	281 30	+20.9	307 30	+3.6	333 30	-14.4	359 30	-29.6
204 00	+38.4	230 00	+40.2	256 00	+33.8	282 00	+20.6	308 00	+3.2	334 00	-14.8	360 00	-29.8
204 30	+38.5	230 30	+40.1	256 30	+33.6	282 30	+20.3	308 30	+2.9	334 30	-15.1		
205 00	+38.6	231 00	+40.1	257 00	+33.4	283 00	+20.0	309 00	+2.5	335 00	-15.4		
205 30	+38.7	231 30	+40.0	257 30	+33.2	283 30	+19.7	309 30	+2.2	335 30	-15.8		
206 00	+38.8	232 00	+39.9	258 00	+33.0	284 00	+19.4	310 00	+1.8	336 00	-16.1		
206 30	+38.9	232 30	+39.9	258 30	+32.8	284 30	+19.1	310 30	+1.5	336 30	-16.4		
207 00	+39.0	233 00	+39.8	259 00	+32.6	285 00	+18.8	311 00	+1.1	337 00	-16.7		
207 30	+39.1	233 30	+39.8	259 30	+32.4	285 30	+18.4	311 30	+0.8	337 30	-17.1		
208 00	+39.2	234 00	+39.7	260 00	+32.2	286 00	+18.1	312 00	+0.4	338 00	-17.4		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2014

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	0.1	0.1	0.1
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
120	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4
300	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
360	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

TABLA III

hL $\cap$	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	0.0	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.3	+0.5
40	+0.2	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.1	+0.1	+0.2	+0.4
60	+0.1	+0.2	+0.3	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	-0.1
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.3	-0.5
220	-0.2	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.3	+0.1	-0.1	-0.2	-0.4
240	-0.1	-0.2	-0.3	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	+0.1
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2014**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2014)	
Elevación del observador m	Corrección /	Elevación del observador m	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /				
				6 15		8 45		13 23		25 59		Ene 1	+0'3		
1.6	-2.3	12.7	-6.4	6 21	+8.2	8 54	+10.2	13 44	+12.2	27 12	+14.2	Ene 22	+0'2		
1.7	-2.4	13.1	-6.5	6 27	+8.3	9 05	+10.3	14 06	+12.3	28 32	+14.3	Feb 27	+0'1		
1.9	-2.5	13.6	-6.6	6 33	+8.4	9 15	+10.4	14 29	+12.4	29 59	+14.4	Mar 22	0'0		
2.0	-2.6	14.0	-6.7	6 40	+8.5	9 26	+10.5	14 53	+12.5	31 34	+14.5	Abr 13	-0'1		
2.2	-2.7	14.4	-6.8	6 46	+8.6	9 37	+10.6	15 18	+12.6	33 19	+14.6	May 7	-0'2		
2.3	-2.8	14.8	-6.9	6 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.7	Jun 13	-0'3		
2.5	-2.9	15.3	-7.0	7 00	+8.8	10 00	+10.8	16 13	+12.8	37 25	+14.8	Jul 28	-0'2		
2.7	-3.0	15.7	-7.1	7 06	+8.9	10 12	+10.9	16 43	+12.9	39 49	+14.9	Sep 2	-0'1		
2.9	-3.1	16.2	-7.2	7 14	+9.0	10 25	+11.0	17 14	+13.0	42 30	+15.0	Sep 26	0'0		
3.1	-3.2	16.6	-7.3	7 21	+9.1	10 38	+11.1	17 47	+13.1	45 30	+15.1	Oct 17	+0'1		
3.3	-3.2	17.1	-7.3	7 28	+9.2	10 52	+11.2	18 23	+13.2	48 53	+15.2	Nov 10	+0'2		
3.5	-3.3	17.6	-7.4	7 36	+9.3	11 06	+11.3	19 01	+13.3	52 43	+15.3	Dic 15	+0'3		
3.7	-3.4	18.0	-7.5	7 44	+9.4	11 21	+11.4	19 41	+13.4	57 01	+15.4	Dic 31			
3.9	-3.5	18.5	-7.6	7 52	+9.5	11 36	+11.5	20 24	+13.5	61 51	+15.5				
4.2	-3.6	19.0	-7.7	8 00	+9.6	11 52	+11.6	21 10	+13.6	67 16	+15.6				
4.4	-3.7	19.5	-7.8	8 08	+9.7	12 09	+11.7	21 59	+13.7	73 14	+15.7				
4.7	-3.8	20.0	-7.9	8 17	+9.8	12 26	+11.8	22 53	+13.8	79 42	+15.8				
4.9	-3.9	20.5	-8.0	8 26	+9.9	12 44	+11.9	23 50	+13.9	86 30	+15.9				
5.2	-4.0	21.0	-8.1	8 35	+10.0	13 03	+12.0	24 52	+14.0	90 00	+16.0				
5.4	-4.1	21.5	-8.2	8 45	+10.1	13 23	+12.1	25 59	+14.1						
5.7	-4.2	22.1	-8.3	TABLA C = PLANETAS Y ESTRELLAS											
6.0	-4.3	22.6	-8.4	Refracción				Paralaje (2014)							
6.2	-4.4	23.1	-8.5	Altura apte.	Corrección	Altura apte.	Corrección	Fechas	Venus para cualquier altura	Marte					
6.5	-4.5	23.7	-8.6							Altura aparente					
6.8	-4.6	24.2	-8.7	° /	/	° /	/			< 30°	> 30° < 60°	> 60°			
7.1	-4.7	24.8	-8.8	6 30	-7.8	14 00	-3.8	Ene 1	+0'5	+0'1	+0'1	0'0			
7.4	-4.8	25.4	-8.9	6 40	-7.6	15 00	-3.6	Ene 25	+0'4	+0'1	+0'1	0'0			
7.7	-4.9	25.9	-9.0	6 50	-7.5	16 00	-3.3	Feb 6	+0'4	+0'1	+0'1	+0'1			
8.0	-5.0	26.5	-9.1	7 00	-7.3	17 00	-3.1	Feb 10	+0'4	+0'1	+0'1	+0'1			
8.4	-5.1	27.1	-9.2	7 15	-7.1	18 00	-3.0	Feb 15	+0'3	+0'1	+0'1	+0'1			
8.7	-5.2	27.7	-9.3	7 30	-6.9	19 00	-2.8	Feb 18	+0'3	+0'2	+0'1	+0'1			
9.0	-5.3	28.3	-9.4	7 45	-6.7	20 00	-2.6	Mar 3	+0'2	+0'2	+0'1	+0'1			
9.4	-5.4	28.9	-9.5	8 00	-6.5	21 00	-2.5	Mar 18	+0'2	+0'2	+0'2	+0'1			
9.7	-5.5	29.5	-9.6	8 15	-6.3	22 00	-2.4	Abr 18	+0'1	+0'2	+0'2	+0'1			
10.1	-5.6	30.1	-9.7	8 30	-6.2	24 00	-2.2	May 13	+0'1	+0'2	+0'1	+0'1			
10.4	-5.7	30.7	-9.8	8 45	-6.0	26 00	-2.0	Jun 20	+0'1	+0'1	+0'1	+0'1			
10.8	-5.8	31.3	-9.9	9 00	-5.9	28 00	-1.8	Jul 3	+0'1	+0'1	+0'1	+0'1			
11.2	-5.9	32.0	-10.0	9 20	-5.7	32 00	-1.6	Dic 31	+0'1	+0'1	+0'1	0'0			
11.6	-6.0	32.6	-10.1	9 40	-5.5	36 00	-1.3								
11.9	-6.1	33.3	-10.2	10 00	-5.3	40 00	-1.2								
12.3	-6.2	33.9	-10.3	10 30	-5.1	45 00	-1.0								
12.7	-6.3	34.6	-10.4	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.