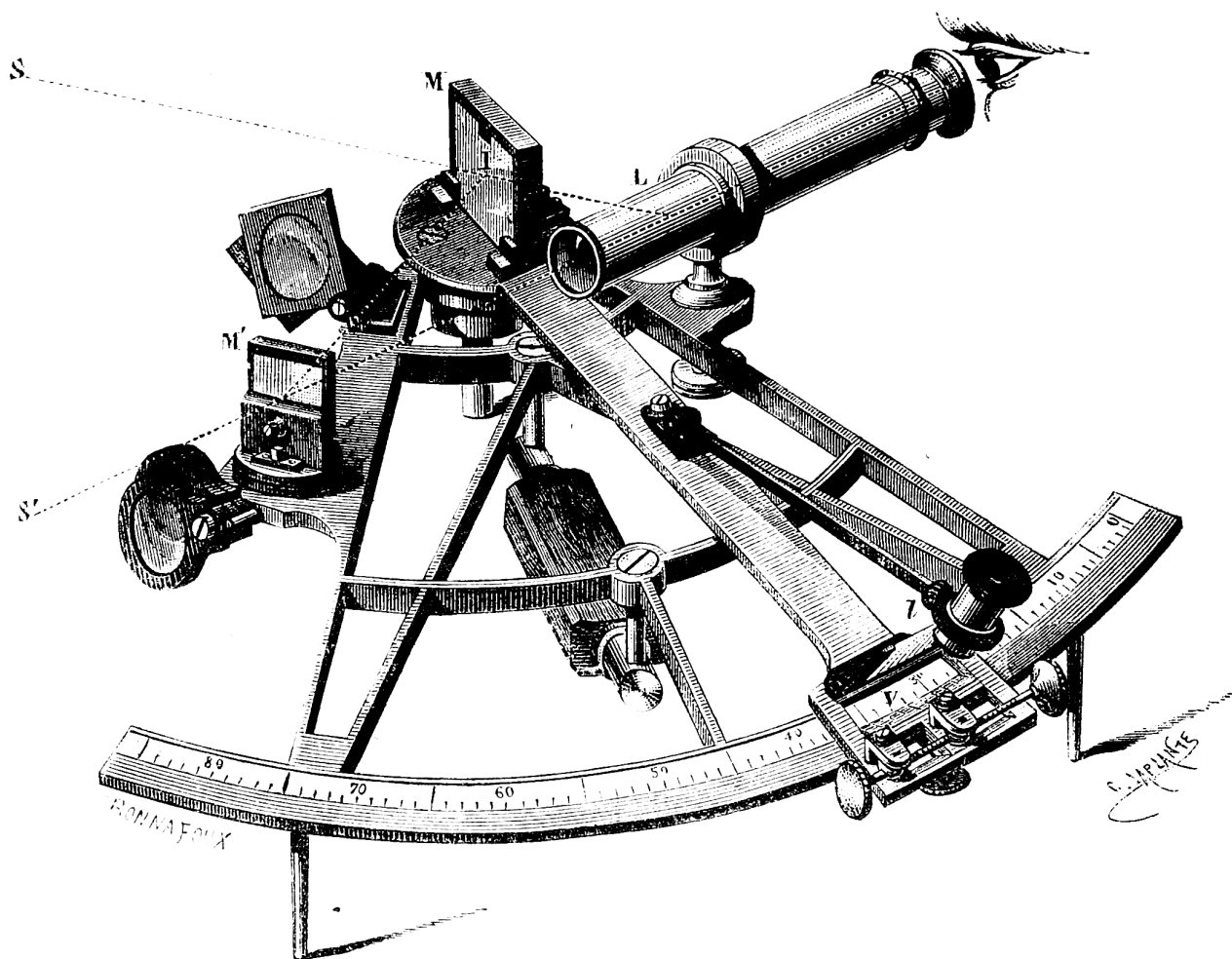




ALMANAQUE NÁUTICO PERSEIS 2007

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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 presentan 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			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 03 ^m 4			Edad: 11 ^d 4 PHE { 4 ^h : 58 ^s /5 12 ^h : 58 ^s /4 20 ^h : 58 ^s /2 PMG: 22 ^h 32 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	12.1	-23	03.0	35	33.2	+26	25.2	60 N	7	09	8	06	9	02	11	52	
1	194	11.8		02.8	49	57.6	54	31.6	58	7	02	7	54	8	46	12	23	
2	209	11.5		02.6	64	21.8	52	37.9	56	6	56	44	31	12	47	50	7	
3	224	11.2		02.4	78	46.0	52	43.9	54	50	36	19	13	07	52	6	52	
4	239	10.9		02.2	93	10.2	52	49.9	52	44	28	8	23	54	36	72		
5	254	10.6	-23	02.0	107	34.3	51	+26	55.6	50	6	39	7	20	7	59	13	
6	269	10.3	-23	01.8	121	58.3	50	+27	01.2	45	6	28	7	05	7	38	14	
7	284	10.0		01.6	136	22.4	51	06.6	40	17	6	51	22	29	57	31	67	
8	299	09.7		01.4	150	46.3	49	11.8	35	08	40	7	08	14	48	5	13	
9	314	09.4		01.2	165	10.3	50	16.8	30	6	00	30	6	56	15	04	5	
10	329	09.1		01.0	179	34.2	49	21.7	20	5	44	6	11	32	59	30	64	
11	344	08.8	-23	00.8	193	58.0	48	+27	26.3	10 N	5	28	5	54	6	17	15	
12	359	08.5	-23	00.6	208	21.9	49	+27	30.8	0	5	11	5	37	6	00	16	
13	14	08.2		00.4	222	45.7	48	35.1	10 S	4	52	5	19	5	42	16	40	
14	29	08.0	-23	00.2	237	09.4	47	39.3	20	30	4	59	24	17	04	61	25	
15	44	07.7	-23	00.0	251	33.2	48	43.2	39	30	4	02	35	5	02	32	62	
16	59	07.4	-22	59.8	265	56.9	47	47.0	35	3	43	20	4	49	17	48	63	
17	74	07.1	-22	59.6	280	20.6	47	+27	50.6	40	3	21	4	02	4	35	18	
18	89	06.8	-22	59.4	294	44.3	47	+27	54.0	45	2	51	3	40	4	17	18	
19	104	06.5		59.2	309	07.9	46	+27	57.2	50	2	07	3	11	3	55	19	
20	119	06.2		59.0	323	31.5	46	+28	00.2	52	1	40	2	56	17	63	1	
21	134	05.9		58.8	337	55.2	47	03.1	29	54	1	00	39	32	34	64	0	
22	149	05.6		58.6	352	18.8	46	05.7	26	56	** ** *	2	17	18	19	56	64	
23	164	05.3		58.3	6	42.4	46	08.2	25	58	** ** *	1	49	3	02	20	23	
24	179	05.0	-22	58.1	21	06.0	46	+28	10.5	60 S	** ** *	1	05	2	42	21	01	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 16 ^m 1		Mag: -3.9 PMG: 13 ^h 13 ^m				Mag: +1.5 PMG: 10 ^h 28 ^m				Mag: -1.8 PMG: 9 ^h 44 ^m				Mag: +0.2 PMG: 3 ^h 07 ^m			
	hG ☿	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	100	16.1	161	56.6	-22	14.9	202	52.7	-23	14.3	213	42.7	-20	59.2	313	05.7		
1	115	18.6	176	55.8		14.4	217	53.2		14.5	228	44.6		59.3	328	08.3		
2	130	21.1	191	54.9		13.8	232	53.7		14.6	243	46.5		59.4	343	10.8		
3	145	23.5	206	54.0		13.3	247	54.2		14.8	258	48.4		59.5	358	13.4		
4	160	26.0	221	53.2		12.7	262	54.7		15.0	273	50.4		59.5	13	16.0		
5	175	28.5	236	52.3	-22	12.2	277	55.2	-23	15.2	288	52.3	-20	59.6	28	18.6		
6	190	30.9	251	51.4	-22	11.7	292	55.7	-23	15.4	303	54.2	-20	59.7	43	21.1		
7	205	33.4	266	50.6		11.1	307	56.2		15.6	318	56.1		59.8	58	23.7		
8	220	35.9	281	49.7		10.6	322	56.7		15.7	333	58.0	-20	59.9	73	26.3		
9	235	38.3	296	48.8		10.0	337	57.2		15.9	349	00.0	-21	00.0	88	28.9		
10	250	40.8	311	48.0		09.5	352	57.7		16.1	4	01.9	-21	00.0	103	31.4		
11	265	43.2	326	47.1	-22	08.9	7	58.2	-23	16.3	19	03.8	-21	00.1	118	34.0		
12	280	45.7	341	46.2	-22	08.4	22	58.7	-23	16.5	34	05.7	-21	00.2	133	36.6		
13	295	48.2	356	45.4		07.8	37	59.2		16.6	49	07.7		00.3	148	39.2		
14	310	50.6	11	44.5		07.3	52	59.7		16.8	64	09.6		00.4	163	41.7		
15	325	53.1	26	43.6		06.7	68	00.2		17.0	79	11.5		00.4	178	44.3		
16	340	55.6	41	42.8		06.2	83	00.7		17.2	94	13.4		00.5	193	46.9		
17	355	58.0	56	41.9	-22	05.6	98	01.2	-23	17.3	109	15.3	-21	00.6	208	49.5		
18	11	00.5	71	41.0	-22	05.1	113	01.7	-23	17.5	124	17.3	-21	00.7	223	52.0		
19	26	03.0	86	40.2		04.5	128	02.2		17.7	139	19.2		00.8	238	54.6		
20	41	05.4	101	39.3		03.9	143	02.7		17.9	154	21.1		00.8	253	57.2		
21	56	07.9	116	38.5		03.4	158	03.2		18.1	169	23.0		00.9	268	59.8		
22	71	10.4	131	37.6		02.8	173	03.7		18.2	184	25.0		01.0	284	02.3		
23	86	12.8	146	36.7		02.3	188	04.2		18.4	199	26.9		01.1	299	04.9		
24	101	15.3	161	35.9	-22	01.7	203	04.7	-23	18.6	214	28.8	-21	01.2	314	07.5		
Dif	—		-9		+5		+5		-2		+19		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16 ^h 3			Edad: 12 ^d 4 PHE	SD: 15 ^h 8				R°: 59 ^m											
	PMG: 12 ^h 03 ^m 9				PMG: 23 ^h 32 ^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	05.0	-22 58.1	21	06.0	+28 10.5	21	60 N	15 06	16 03	16 59	12 32	81	9 33	43					
1	194	04.7	57.9	35	29.6	46	20	58	23	14	17 06	13 10	76	8 54	49					
2	209	04.4	57.7	49	53.2	46	19	56	37	24	13	37 73		27	52					
3	224	04.1	57.5	64	16.8	46	17	54	15 49	33	18	13 59	70	8 06	53					
4	239	03.8	57.3	78	40.4	46	16	52	16 00	40	24	14 17	69	7 48	54					
5	254	03.6	-22 57.1	93	04.0	46	13	50	16 09	16 48	17 29	14 32	68	7 33	55					
6	269	03.3	-22 56.8	107	27.6	46	12	45	16 30	17 03	17 40	15 02	67	7 02	57					
7	284	03.0	56.6	121	51.3	47	10	40	16 46	16	50	26 65		6 38	58					
8	299	02.7	56.4	136	14.9	46	9	35	17 00	28	17 59	15 46	64	19	58					
9	314	02.4	56.2	150	38.6	47	6	30	12	38	18 08	16 03	62	6 02	58					
10	329	02.1	56.0	165	02.3	47	5	20	33	17 56	24	31 61		5 34	59					
11	344	01.8	-22 55.7	179	26.0	47	2	10 N	17 51	18 13	18 40	16 55	60	5 09	60					
12	359	01.5	-22 55.5	193	49.7	47	1	0	18 08	18 30	18 56	17 18	59	4 47	60					
13	14	01.2	55.3	208	13.4	47	1	10 S	25	18 48	19 15	17 41	57	4 24	60					
14	29	00.9	55.1	222	37.2	48	3	20	18 43	19 08	19 37	18 05	56	3 59	61					
15	44	00.6	54.8	237	01.0	48	4	30	19 05	32	20 05	34 54		31	61					
16	59	00.4	54.6	251	24.9	49	7	35	17	19 47	23	18 51	53	3 14	61					
17	74	00.1	-22 54.4	265	48.8	49	8	40	19 32	20 05	20 46	19 10	52	2 54	62					
18	88	59.8	-22 54.2	280	12.7	49	10	45	19 50	20 27	21 15	19 34	50	2 31	61					
19	103	59.5	53.9	294	36.7	50	12	50	20 11	20 55	21 59	20 05	47	2 00	62					
20	118	59.2	53.7	309	00.7	50	13	52	22	21 10	22 24	20 45		1 45	62					
21	133	58.9	53.5	323	24.7	50	16	54	34	27	23 03	20 38	43	27	62					
22	148	58.6	53.2	337	48.8	51	17	56	20 48	21 48	** **	21 00	39	1 06	62					
23	163	58.3	53.0	352	13.0	52	19	58	21 04	22 15	** **	21 27	34	0 38	62					
24	178	58.0	-22 52.8	6	37.2	52	21	60 S	21 23	22 57	** **	22 06	24	0 00	61					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 17 ^h 12 ^m 2		Mag: -3.9 PMG: 13 ^h 14 ^m			Mag: +1.5 PMG: 10 ^h 27 ^m			Mag: -1.8 PMG: 9 ^h 41 ^m			Mag: +0.2 PMG: 3 ^h 03 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'						
0	101	15.3	161	35.9	-22 01.7	203	04.7	-23 18.6	214	28.8	-21 01.2	314	07.5	+14 31.4						
1	116	17.7	176	35.0	01.1	218	05.2	18.7	229	30.7	01.3	329	10.1	31.4						
2	131	20.2	191	34.2	-22 00.6	233	05.7	18.9	244	32.7	01.3	344	12.7	31.5						
3	146	22.7	206	33.3	-22 00.0	248	06.2	19.1	259	34.6	01.4	359	15.2	31.5						
4	161	25.1	221	32.4	-21 59.4	263	06.7	19.3	274	36.5	01.5	14	17.8	31.6						
5	176	27.6	236	31.6	-21 58.9	278	07.2	-23 19.4	289	38.4	-21 01.6	29	20.4	+14 31.6						
6	191	30.1	251	30.7	-21 58.3	293	07.8	-23 19.6	304	40.4	-21 01.7	44	23.0	+14 31.7						
7	206	32.5	266	29.9	57.7	308	08.3	19.8	319	42.3	01.7	59	25.5	31.7						
8	221	35.0	281	29.0	57.1	323	08.8	20.0	334	44.2	01.8	74	28.1	31.8						
9	236	37.5	296	28.2	56.6	338	09.3	20.1	349	46.1	01.9	89	30.7	31.8						
10	251	39.9	311	27.3	56.0	353	09.8	20.3	4	48.0	02.0	104	33.3	31.9						
11	266	42.4	326	26.4	-21 55.4	8	10.3	-23 20.5	19	50.0	-21 02.1	119	35.9	+14 31.9						
12	281	44.9	341	25.6	-21 54.8	23	10.8	-23 20.6	34	51.9	-21 02.1	134	38.4	+14 31.9						
13	296	47.3	356	24.7	54.3	38	11.3	20.8	49	53.8	02.2	149	41.0	32.0						
14	311	49.8	11	23.9	53.7	53	11.8	21.0	64	55.7	02.3	164	43.6	32.0						
15	326	52.2	26	23.0	53.1	68	12.3	21.1	79	57.7	02.4	179	46.2	32.1						
16	341	54.7	41	22.2	52.5	83	12.7	21.3	94	59.6	02.5	194	48.7	32.1						
17	356	57.2	56	21.3	-21 51.9	98	13.2	-23 21.5	110	01.5	-21 02.5	209	51.3	+14 32.2						
18	11	59.6	71	20.5	-21 51.4	113	13.7	-23 21.7	125	03.4	-21 02.6	224	53.9	+14 32.2						
19	27	02.1	86	19.6	50.8	128	14.2	21.8	140	05.4	02.7	239	56.5	32.3						
20	42	04.6	101	18.8	50.2	143	14.7	22.0	155	07.3	02.8	254	59.1	32.3						
21	57	07.0	116	17.9	49.6	158	15.2	22.2	170	09.2	02.9	270	01.6	32.4						
22	72	09.5	131	17.1	49.0	173	15.7	22.3	185	11.1	02.9	285	04.2	32.4						
23	87	12.0	146	16.2	48.4	188	16.2	22.5	200	13.1	03.0	300	06.8	32.5						
24	102	14.4	161	15.4	-21 47.8	203	16.7	-23 22.6	215	15.0	-21 03.1	315	09.4	+14 32.5						
Dif	—		-9			+6			+19			-1			+26			0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 4				Edad: 13 ^d 4 PHE { SD: 15 ^h 7 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	58.0	-22	52.8	6	37.2	+28	10.6	22	60 N	7 09	8 05	9 01	13 53	102	10 16	15	
1	193	57.7		52.5	21	01.5	53	08.4	25	58	7 02	7 54	8 45	14 26	92	9 43	25	
2	208	57.5		52.3	35	25.8	53	05.9	25	56	6 55	44	31	14 50	86	9 19	30	
3	223	57.2		52.1	49	50.2	54	03.3	26	54	50	35	19	15 09	82	8 59	34	
4	238	56.9		51.8	64	14.6	54	+28 00.6	27	52	44	27	8 08	26	79	42	37	
5	253	56.6	-22	51.6	78	39.1	55	+27 57.6	30	50	6 39	7 20	7 58	15 40	76	8 28	39	
6	268	56.3	-22	51.4	93	03.7	56	+27 54.5	31	45	6 28	7 05	7 38	16 09	72	7 59	43	
7	283	56.0		51.1	107	28.3	56	51.2	33	40	18	6 52	22	31	69	36	46	
8	298	55.7		50.9	121	53.0	57	47.8	34	35	09	40	7 08	16 50	66	17	48	
9	313	55.4		50.6	136	17.8	58	44.2	36	30	6 00	30	6 56	17 05	65	7 00	51	
10	328	55.2		50.4	150	42.7	59	40.4	38	20	5 44	6 12	36	32	61	6 33	53	
11	343	54.9	-22	50.2	165	07.6	59	+27 36.4	40	10 N	5 29	5 55	6 18	17 55	58	6 09	55	
12	358	54.6	-22	49.9	179	32.6	60	+27 32.3	41	0	5 12	5 38	6 01	18 17	55	5 47	57	
13	13	54.3		49.7	193	57.7	61	28.0	43	10 S	4 54	21	5 44	18 38	53	24	60	
14	28	54.0		49.4	208	22.8	61	23.5	45	20	32	5 01	25	19 01	50	5 00	62	
15	43	53.7		49.2	222	48.1	63	18.9	46	30	4 03	4 36	5 04	28	46	4 32	64	
16	58	53.4		49.0	237	13.4	63	14.2	47	35	3 45	21	4 51	19 44	43	4 15	66	
17	73	53.1	-22	48.7	251	38.8	64	+27 09.2	50	40	3 23	4 04	4 36	20 02	41	3 56	67	
18	88	52.9	-22	48.5	266	04.3	65	+27 04.1	51	45	2 53	3 42	4 19	20 24	37	3 32	70	
19	103	52.6		48.2	280	29.9	66	+26 58.9	52	50	2 10	3 13	3 57	20 52	32	3 02	73	
20	118	52.3		48.0	294	55.6	67	53.5	54	52	1 44	2 59	46	21 05	30	2 47	75	
21	133	52.0		47.7	309	21.4	68	48.0	55	54	1 05	41	35	21	26	29	78	
22	148	51.7		47.5	323	47.2	68	42.2	58	56	** ** *	2 21	21	21 39	22	2 08	81	
23	163	51.4		47.2	338	13.2	70	36.4	58	58	** ** *	1 53	3 05	22 01	17	1 40	87	
24	178	51.1	-22	47.0	352	39.3	71	+26 30.4	60	60 S	** ** *	1 11	2 46	22 30	7	1 01	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 08 ^m 2		Mag: -3.9 PMG: 13 ^h 16 ^m		Mag: +1.5 PMG: 10 ^h 27 ^m		Mag: -1.8 PMG: 9 ^h 38 ^m		Mag: +0.2 PMG: 2 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	102	14.4	161	15.4	-21	47.8	203	16.7	-23	22.6
1	117	16.9	176	14.5		47.2	218	17.2		22.8
2	132	19.3	191	13.7		46.7	233	17.7		23.0
3	147	21.8	206	12.8		46.1	248	18.2		23.1
4	162	24.3	221	12.0		45.5	263	18.7		23.3
5	177	26.7	236	11.1	-21	44.9	278	19.2	-23	23.5
6	192	29.2	251	10.3	-21	44.3	293	19.7	-23	23.6
7	207	31.7	266	09.5		43.7	308	20.2		23.8
8	222	34.1	281	08.6		43.1	323	20.7		24.0
9	237	36.6	296	07.8		42.5	338	21.2		24.1
10	252	39.1	311	06.9		41.9	353	21.7		24.3
11	267	41.5	326	06.1	-21	41.3	8	22.2	-23	24.4
12	282	44.0	341	05.2	-21	40.7	23	22.7	-23	24.6
13	297	46.5	356	04.4		40.1	38	23.2		24.8
14	312	48.9	11	03.6		39.5	53	23.7		24.9
15	327	51.4	26	02.7		38.8	68	24.2		25.1
16	342	53.8	41	01.9		38.2	83	24.7		25.2
17	357	56.3	56	01.0	-21	37.6	98	25.2	-23	25.4
18	12	58.8	71	00.2	-21	37.0	113	25.7	-23	25.6
19	28	01.2	85	59.3		36.4	128	26.2		25.7
20	43	03.7	100	58.5		35.8	143	26.7		25.9
21	58	06.2	115	57.7		35.2	158	27.2		26.0
22	73	08.6	130	56.8		34.6	173	27.7		26.2
23	88	11.1	145	56.0		33.9	188	28.1		26.3
24	103	13.6	160	55.2	-21	33.3	203	28.6	-23	26.5
Dif	—		-8		+6		+5		-2	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 8			Edad: 14 ^d 4 PHE { 4 ^h : 57 ⁰ 12 ^h : 56 ⁸ 20 ^h : 56 ⁶ SD: 15 ⁵ PMG: 0 ^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 m	h m m	h m m	
0	178	51.1	-22 47.0	352	39.3	+26 30.4	62	60 N	15 09	16 05	17 01	15 35 101	10 31 5		
1	193	50.9	46.7	7	05.4	71	24.2	58	26	16	08	15 58 94	10 08 12		
2	208	50.6	46.5	21	31.7	73	17.9	56	40	26	15	16 16 89	9 49 18		
3	223	50.3	46.2	35	58.0	73	11.5	54	15 52	35	21	31 85	33 22		
4	238	50.0	46.0	50	24.5	75	+26 04.9	52	16 02	43	26	45 81	19 25		
5	253	49.7	-22 45.7	64	51.0	75	+25 58.1	50	16 12	16 50	17 31	16 56 79	9 07 28		
6	268	49.4	-22 45.4	79	17.7	77	+25 51.3	45	16 32	17 05	17 42	17 21 72	8 42 33		
7	283	49.2	45.2	93	44.4	77	44.2	40	16 48	18	17 52	40 68	22 37		
8	298	48.9	44.9	108	11.3	79	37.1	35	17 01	29	18 01	17 56 65	8 05 40		
9	313	48.6	44.7	122	38.2	79	29.8	30	13	39	09	18 10 62	7 51 42		
10	328	48.3	44.4	137	05.3	81	22.4	20	34	17 58	25	33 58	26 46		
11	343	48.0	-22 44.2	151	32.5	82	+25 14.8	10 N	17 52	18 14	18 41	18 53 54	7 04 50		
12	358	47.7	-22 43.9	165	59.8	83	+25 07.1	0	18 09	18 31	18 57	19 12 51	6 44 53		
13	13	47.5	43.6	180	27.1	83	+24 59.3	10 S	26	18 48	19 15	31 47	24 56		
14	28	47.2	43.4	194	54.6	85	51.3	20	18 44	19 08	19 37	19 51 43	6 02 59		
15	43	46.9	43.1	209	22.2	86	43.2	30	19 05	32	20 05	20 14 38	5 36 64		
16	58	46.6	42.8	223	50.0	88	35.0	35	18	19 47	23	27 36	21 66		
17	73	46.3	-22 42.6	238	17.8	88	+24 26.7	40	19 32	20 05	20 46	20 43 32	5 03 70		
18	88	46.0	-22 42.3	252	45.7	89	+24 18.2	45	19 50	20 26	21 15	21 01 29	4 42 73		
19	103	45.8	42.0	267	13.7	90	09.6	50	20 11	20 55	21 57	24 23	15 79		
20	118	45.5	41.8	281	41.9	92	+24 00.9	52	21	21 09	22 22	35 20	4 02 81		
21	133	45.2	41.5	296	10.2	93	+23 52.1	54	33	26	22 59	21 47 17	3 47 85		
22	148	44.9	41.2	310	38.5	93	43.2	56	20 47	21 46	** ** *	22 01 14	29 89		
23	163	44.6	41.0	325	07.0	95	34.1	58	21 02	22 13	** ** *	18 8	3 07 95		
24	178	44.3	-22 40.7	339	35.6	96	+23 24.9	60 S	21 21	22 53	** ** *	22 37 3	2 39 104		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 04 ^m 3			Mag: -3.9 PMG: 13 ^h 17 ^m			Mag: +1.5 PMG: 10 ^h 26 ^m			Mag: -1.8 PMG: 9 ^h 35 ^m			Mag: +0.2 PMG: 2 ^h 55 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	103	13.6	160 55.2	-21 33.3	203 28.6	-23 26.5	216 01.2	-21 05.0	316 11.4	+14 33.7					
1	118	16.0	175 54.3	32.7	218 29.1	26.6	231 03.2	05.1	331 14.0	33.7					
2	133	18.5	190 53.5	32.1	233 29.6	26.8	246 05.1	05.2	346 16.5	33.8					
3	148	21.0	205 52.7	31.5	248 30.1	27.0	261 07.0	05.2	1 19.1	33.8					
4	163	23.4	220 51.8	30.9	263 30.6	27.1	276 09.0	05.3	16 21.7	33.9					
5	178	25.9	235 51.0	-21 30.2	278 31.1	-23 27.3	291 10.9	-21 05.4	31 24.3	+14 33.9					
6	193	28.3	250 50.2	-21 29.6	293 31.6	-23 27.4	306 12.8	-21 05.5	46 26.9	+14 34.0					
7	208	30.8	265 49.3	29.0	308 32.1	27.6	321 14.7	05.5	61 29.5	34.0					
8	223	33.3	280 48.5	28.4	323 32.6	27.7	336 16.7	05.6	76 32.0	34.1					
9	238	35.7	295 47.7	27.7	338 33.1	27.9	351 18.6	05.7	91 34.6	34.1					
10	253	38.2	310 46.8	27.1	353 33.6	28.0	6 20.5	05.8	106 37.2	34.2					
11	268	40.7	325 46.0	-21 26.5	8 34.1	-23 28.2	21 22.5	-21 05.9	121 39.8	+14 34.2					
12	283	43.1	340 45.2	-21 25.8	23 34.6	-23 28.3	36 24.4	-21 05.9	136 42.4	+14 34.3					
13	298	45.6	355 44.3	25.2	38 35.1	28.5	51 26.3	06.0	151 45.0	34.3					
14	313	48.1	10 43.5	24.6	53 35.5	28.6	66 28.2	06.1	166 47.6	34.4					
15	328	50.5	25 42.7	23.9	68 36.0	28.8	81 30.2	06.2	181 50.2	34.4					
16	343	53.0	40 41.8	23.3	83 36.5	28.9	96 32.1	06.2	196 52.7	34.5					
17	358	55.5	55 41.0	-21 22.7	98 37.0	-23 29.1	111 34.0	-21 06.3	211 55.3	+14 34.5					
18	13	57.9	70 40.2	-21 22.0	113 37.5	-23 29.2	126 36.0	-21 06.4	226 57.9	+14 34.6					
19	29	00.4	85 39.4	21.4	128 38.0	29.4	141 37.9	06.5	242 00.5	34.6					
20	44	02.8	100 38.5	20.8	143 38.5	29.5	156 39.8	06.6	257 03.1	34.7					
21	59	05.3	115 37.7	20.1	158 39.0	29.7	171 41.8	06.6	272 05.7	34.7					
22	74	07.8	130 36.9	19.5	173 39.5	29.8	186 43.7	06.7	287 08.3	34.8					
23	89	10.2	145 36.1	18.8	188 40.0	30.0	201 45.6	06.8	302 10.8	34.8					
24	104	12.7	160 35.2	-21 18.2	203 40.5	-23 30.1	216 47.5	-21 06.9	317 13.4	+14 34.9					
Dif	—			-8	+6	+5	-2	+19	-1	+26	+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 3				Edad: 15 ^d 4 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0 R°: 49 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora R°			Hora R°			
h	°	'	°	'	°	'	°	'	°	'	°	°	h m	h m	h m	h m m		h m m	h m m		h m m
0	178	44.3	-22	40.7	339	35.6	+23	24.9	92	15.7	92	60 N	7 08	8 04	9 00	17 16	96	10 36	2	7	
1	193	44.1		40.4	354	04.3						58	7 01	7 53	8 44	32	89	20			
2	208	43.8		40.2	8	33.1	+23	06.3	94			56	6 55	43	30	45	85	10 07	10		
3	223	43.5		39.9	23	02.1	+22	56.8	95			54	49	35	18	17 56	82	9 55	14		
4	238	43.2		39.6	37	31.1						52	44	27	8 07	18 06	78	44	17		
5	253	42.9	-22	39.3	52	00.3	+22	37.4	98			50	6 39	7 20	7 58	18 15	76	9 35	20		
6	268	42.7	-22	39.1	66	29.5	+22	27.6	98			45	6 28	7 05	7 38	18 33	71	9 15	25		
7	283	42.4		38.8	80	58.9						40	18	6 52	22	18 48	66	8 59	29		
8	298	42.1		38.5	95	28.4	+22	07.7	100			35	09	41	7 09	19 01	63	45	32		
9	313	41.8		38.2	109	58.0	+21	57.5	106			30	6 01	30	6 57	12	60	33	35		
10	328	41.5		38.0	124	27.7						20	5 45	6 12	36	31	54	8 12	40		
11	343	41.3	-22	37.7	138	57.5	+21	37.0	103			10 N	5 29	5 56	6 18	19 47	50	7 54	44		
12	358	41.0	-22	37.4	153	27.4	+21	26.5	105			0	5 13	5 39	6 02	20 03	46	7 37	48		
13	13	40.7		37.1	167	57.4						10 S	4 55	22	5 45	18	42	20	52		
14	28	40.4		36.8	182	27.6	+21	05.4	106			20	33	5 02	26	34	38	7 01	57		
15	43	40.2		36.6	196	57.8	+20	54.7	107			30	4 05	4 38	5 05	20 52	33	6 40	61		
16	58	39.9		36.3	211	28.2						35	3 47	23	4 53	21 03	30	27	64		
17	73	39.6	-22	36.0	225	58.7	+20	33.0	109			40	3 25	4 06	4 38	21 15	27	6 13	67		
18	88	39.3	-22	35.7	240	29.2	+20	22.1	109			45	2 55	3 44	4 21	21 30	22	5 55	72		
19	103	39.0		35.4	254	59.9	+20	11.0	117			50	2 13	16	3 59	47	17	34	77		
20	118	38.8		35.1	269	30.7	+19	59.9	111			52	1 48	3 01	49	21 55	15	23	81		
21	133	38.5		34.9	284	01.6						54	1 11	2 45	37	22 04	12	5 12	83		
22	148	38.2		34.6	298	32.6						56	** **	2 24	24	15	8	4 58	88		
23	163	37.9		34.3	313	03.7						58	** **	1 57	3 08	26	5	42	93		
24	178	37.7	-22	34.0	327	34.9	+19	14.5	115			60 S	** **	1 18	2 49	22 40	0	4 23	99		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG 17 ^h 00 ^m 4				Mag: -3.9 PMG: 13 ^h 18 ^m				Mag: +1.5 PMG: 10 ^h 25 ^m				Mag: -1.8 PMG: 9 ^h 32 ^m				Mag: +0.2 PMG: 2 ^h 51 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	104	12.7	160	35.2	-21	18.2	203	40.5	-23	30.1	216	47.5	-21	06.9	317	13.4	+14	34.9			
1	119	15.2	175	34.4		17.5	218	40.9		30.3	231	49.5		06.9	332	16.0		34.9			
2	134	17.6	190	33.6		16.9	233	41.4		30.4	246	51.4		07.0	347	18.6		35.0			
3	149	20.1	205	32.8		16.3	248	41.9		30.5	261	53.3		07.1	2	21.2		35.1			
4	164	22.6	220	31.9		15.6	263	42.4		30.7	276	55.3		07.2	17	23.8		35.1			
5	179	25.0	235	31.1	-21	15.0	278	42.9	-23	30.8	291	57.2	-21	07.3	32	26.4	+14	35.2			
6	194	27.5	250	30.3	-21	14.3	293	43.4	-23	31.0	306	59.1	-21	07.3	47	29.0	+14	35.2			
7	209	30.0	265	29.5		13.7	308	43.9		31.1	322	01.1		07.4	62	31.6		35.3			
8	224	32.4	280	28.7		13.0	323	44.4		31.3	337	03.0		07.5	77	34.1		35.3			
9	239	34.9	295	27.8		12.3	338	44.9		31.4	352	04.9		07.6	92	36.7		35.4			
10	254	37.3	310	27.0		11.7	353	45.4		31.5	7	06.9		07.6	107	39.3		35.4			
11	269	39.8	325	26.2	-21	11.0	8	45.8	-23	31.7	22	08.8	-21	07.7	122	41.9	+14	35.5			
12	284	42.3	340	25.4	-21	10.4	23	46.3	-23	31.8	37	10.7	-21	07.8	137	44.5	+14	35.5			
13	299	44.7	355	24.6		09.7	38	46.8		32.0	52	12.6		07.9	152	47.1		35.6			
14	314	47.2	10	23.7		09.1	53	47.3		32.1	67	14.6		07.9	167	49.7		35.6			
15	329	49.7	25	22.9		08.4	68	47.8		32.3	82	16.5		08.0	182	52.3		35.7			
16	344	52.1	40	22.1		07.7	83	48.3		32.4	97	18.4		08.1	197	54.9		35.7			
17	359	54.6	55	21.3	-21	07.1	98	48.8	-23	32.5	112	20.4	-21	08.2	212	57.5	+14	35.8			
18	14	57.1	70	20.5	-21	06.4	113	49.3	-23	32.7	127	22.3	-21	08.3	228	00.0	+14	35.8			
19	29	59.5	85	19.7		05.8	128	49.7		32.8	142	24.2		08.3	243	02.6		35.9			
20	45	02.0	100	18.9		05.1	143	50.2		32.9	157	26.2		08.4	258	05.2		35.9			
21	60	04.5	115	18.0		04.4	158	50.7		33.1	172	28.1		08.5	273	07.8		36.0			
22	75	06.9	130	17.2		03.8	173	51.2		33.2	187	30.0		08.6	288	10.4		36.0			
23	90	09.4	145	16.4		03.1	188	51.7		33.4	202	32.0		08.6	303	13.0		36.1			
24	105	11.8	160	15.6	-21	02.4	203	52.2	-23	33.5	217	33.9	-21	08.7	318	15.6	+14	36.1			
Dif	—		-8		+7		+5		-1		+19		-1		+26		+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 7			Edad: 16 ^d 4 PHE { SD: 15:2 PMG: 2 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	178	37.7	-22	34.0	327	34.9	+19 14.5	60 N	15 13	16 08	17 04	18 52	88	10 38 0
1	193	37.4		33.7	342	06.2 ¹²³	+19 02.9 ¹¹⁶	58	29	19	11	19 01	85	27 4
2	208	37.1		33.4	356	37.6 ¹²⁴	+18 51.3 ¹¹⁶	56	42	29	17	10 81		17 8
3	223	36.8		33.1	11	09.1 ¹²⁵		54	15 54	37	23	18 77		09 10
4	238	36.6		32.8	25	40.7 ¹²⁶		52	16 05	45	28	24 75		10 01 13
5	253	36.3	-22	32.5	40	12.4 ¹²⁷	+18 16.0 ¹¹⁹	50	16 14	16 52	17 33	19 31	72	9 55 15
6	268	36.0	-22	32.2	54	44.2 ¹²⁸	+18 04.1 ¹¹⁹	45	16 34	17 07	17 44	19 44	67	9 40 20
7	283	35.7		32.0	69	16.2 ¹³⁰	+17 52.1 ¹²⁰	40	16 50	20	17 54	19 54	64	28 24
8	298	35.5		31.7	83	48.2 ¹³⁰		35	17 03	31	18 02	20 04	59	17 28
9	313	35.2		31.4	98	20.3 ¹³¹		30	15	41	11	12 56		9 08 31
10	328	34.9		31.1	112	52.5 ¹³²		20	35	17 59	26	25 52		8 52 36
11	343	34.6	-22	30.8	127	24.8 ¹³³	+17 03.6 ¹²²	10 N	17 53	18 15	18 42	20 37	47	8 38 40
12	358	34.4	-22	30.5	141	57.1 ¹³³	+16 51.3 ¹²³	0	18 09	18 32	18 58	20 49	42	8 25 44
13	13	34.1		30.2	156	29.6 ¹³⁵		10 S	26	18 49	19 16	21 00	38	8 12 48
14	28	33.8		29.9	171	02.2 ¹³⁶		20	18 44	19 09	19 38	12 33		7 58 52
15	43	33.5		29.6	185	34.9 ¹³⁷		30	19 05	33	20 05	25 29		41 58
16	58	33.3		29.3	200	07.6 ¹³⁷	+16 01.4 ¹²⁶	35	18	19 47	23	33 26		31 62
17	73	33.0	-22	29.0	214	40.5 ¹³⁹	+15 48.8 ¹²⁶	40	19 32	20 04	20 45	21 42	22	7 20 65
18	88	32.7	-22	28.7	229	13.4 ¹³⁹	+15 36.2 ¹²⁶	45	19 49	20 26	21 14	21 52	18	7 07 69
19	103	32.4		28.4	243	46.4 ¹⁴⁰		50	20 10	20 54	21 56	22 04	14	6 51 75
20	118	32.2		28.1	258	19.5 ¹⁴¹	+15 10.7 ¹²⁸	52	21	21 08	22 20	10 11		44 77
21	133	31.9		27.8	272	52.7 ¹⁴²	+14 57.9 ¹²⁸	54	32	24	22 54	16 9		35 80
22	148	31.6		27.5	287	26.0 ¹⁴³		56	20 45	21 44	** **	23 6		26 83
23	163	31.3		27.1	301	59.4 ¹⁴⁴		58	21 01	22 10	** **	31 3		15 87
24	178	31.1	-22	26.8	316	32.8 ¹⁴⁴	+14 19.1 ¹³⁰	60 S	21 19	22 47	** **	22 40	**	6 02 93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 56 ^m 4		Mag: -3.9 PMG: 13 ^h 20 ^m		Mag: +1.5 PMG: 10 ^h 24 ^m		Mag: -1.8 PMG: 9 ^h 29 ^m		Mag: +0.2 PMG: 2 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	105	11.8	160	15.6	-21	02.4	203	52.2	-23	33.5
1	120	14.3	175	14.8		01.7	218	52.7		33.6
2	135	16.8	190	14.0		01.1	233	53.2		33.8
3	150	19.2	205	13.2	-21	00.4	248	53.6		33.9
4	165	21.7	220	12.4	-20	59.7	263	54.1		34.0
5	180	24.2	235	11.5	-20	59.1	278	54.6	-23	34.2
6	195	26.6	250	10.7	-20	58.4	293	55.1	-23	34.3
7	210	29.1	265	09.9		57.7	308	55.6		34.4
8	225	31.6	280	09.1		57.0	323	56.1		34.6
9	240	34.0	295	08.3		56.3	338	56.6		34.7
10	255	36.5	310	07.5		55.7	353	57.0		34.8
11	270	38.9	325	06.7	-20	55.0	8	57.5	-23	35.0
12	285	41.4	340	05.9	-20	54.3	23	58.0	-23	35.1
13	300	43.9	355	05.1		53.6	38	58.5		35.2
14	315	46.3	10	04.3		52.9	53	59.0		35.4
15	330	48.8	25	03.5		52.2	68	59.5		35.5
16	345	51.3	40	02.7		51.6	84	00.0		35.6
17	0	53.7	55	01.9	-20	50.9	99	00.4	-23	35.7
18	15	56.2	70	01.1	-20	50.2	114	00.9	-23	35.9
19	30	58.7	85	00.3		49.5	129	01.4		36.0
20	46	01.1	99	59.5		48.8	144	01.9		36.1
21	61	03.6	114	58.7		48.1	159	02.4		36.3
22	76	06.1	129	57.9		47.4	174	02.9		36.4
23	91	08.5	144	57.1		46.7	189	03.3		36.5
24	106	11.0	159	56.3	-20	46.0	204	03.8	-23	36.6
Dif	—		-8		+7		+5		-1	
							+19		-1	
									+26	
									+1	

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 1				Edad: 17 ^d 4 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9 R°: 42 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora		R°	Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	°	h	m	h	m	h	m	h	m	m
0	178	31.1	-22	26.8	316	32.8	+14	19.1	130	58	60 N	7 07	8 03	8 58	20 20	84	10 38	**			
1	193	30.8		26.5	331	06.3	+14	06.1	145	58	58	7 01	7 52	42		26 80	31	2			
2	208	30.5		26.2	345	39.9	+13	53.0	131	56	56	6 54	43	29		31 77	25	5			
3	223	30.3		25.9	0	13.6		39.9	131	54	54	49	34	17		35 75	19	8			
4	238	30.0		25.6	14	47.4		26.8	131	52	52	43	27	8 07		39 72	14	11			
5	253	29.7	-22	25.3	29	21.2	+13	13.6	132	50	50	6 39	7 20	7 57	20 43	70	10 10	13			
6	268	29.4	-22	25.0	43	55.1	+13	00.4	132	45	45	6 28	7 05	7 38	20 51	65	10 00	18			
7	283	29.2		24.7	58	29.1	+12	47.1	133	40	40	18	6 52	22	20 58	60	9 52	21			
8	298	28.9		24.4	73	03.2		33.8	133	35	35	09	41	7 09	21 03	57	45	25			
9	313	28.6		24.0	87	37.3		20.4	134	30	30	6 01	31	6 57	08 54		39	27			
10	328	28.4		23.7	102	11.6	+12	07.0	134	20	20	5 46	6 13	37	17 49		28	33			
11	343	28.1	-22	23.4	116	45.8	+11	53.6	134	10 N	10 N	5 30	5 56	6 19	21 24	45	9 18	37			
12	358	27.8	-22	23.1	131	20.2	+11	40.1	135	0	0	5 14	5 40	6 02	21 31	40	9 09	42			
13	13	27.6		22.8	145	54.6		26.6	135	10 S	10 S	4 56	23	5 46	38 36		9 00	46			
14	28	27.3		22.5	160	29.1	+11	13.1	135	20	20	34	5 03	28	45 32		8 50	51			
15	43	27.0		22.1	175	03.6	+10	59.5	136	30	30	4 07	4 39	5 07	54 26		39	56			
16	58	26.8		21.8	189	38.3		45.9	136	35	35	3 49	25	4 54	21 59	23	33	58			
17	73	26.5	-22	21.5	204	12.9	+10	32.3	136	40	40	3 27	4 08	4 40	22 04	20	8 25	62			
18	88	26.2	-22	21.2	218	47.7	+10	18.7	136	45	45	2 58	3 46	4 23	22 10	17	8 16	66			
19	103	25.9		20.9	233	22.5	+10	05.0	137	50	50	2 17	18	4 02	18 12		06	71			
20	118	25.7		20.5	247	57.3	+9	51.3	137	52	52	1 52	3 04	3 51	21 10		8 01	73			
21	133	25.4		20.2	262	32.3		37.5	138	54	54	1 18	2 48	40	25 7		7 55	76			
22	148	25.1		19.9	277	07.3		23.7	138	56	56	** ** *	28	27	29 5		49	79			
23	163	24.9		19.6	291	42.3	+9	09.9	138	58	58	** ** *	2 02	3 11	34 2		42	83			
24	178	24.6	-22	19.2	306	17.4	+8	56.1	138	60 S	60 S	** ** *	1 25	2 53	22 39	**	7 35	86			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG 16 ^h 52 ^m 5				Mag: -3.9 PMG: 13 ^h 21 ^m				Mag: +1.5 PMG: 10 ^h 23 ^m				Mag: -1.8 PMG: 9 ^h 25 ^m				Mag: +0.2 PMG: 2 ^h 42 ^m				
	hG ♂		Dec		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	106	11.0	159	56.3	-20	46.0	204	03.8	-23	36.6	218	20.3	-21	10.5	319	17.8	+14	37.4			
1	121	13.4	174	55.5		45.3	219	04.3		36.8	233	22.3		10.6	334	20.4		37.4			
2	136	15.9	189	54.7		44.6	234	04.8		36.9	248	24.2		10.7	349	23.0		37.5			
3	151	18.4	204	53.9		43.9	249	05.3		37.0	263	26.1		10.8	4	25.6		37.5			
4	166	20.8	219	53.1		43.2	264	05.8		37.1	278	28.1		10.8	19	28.2		37.6			
5	181	23.3	234	52.3	-20	42.5	279	06.2	-23	37.3	293	30.0	-21	10.9	34	30.8	+14	37.6			
6	196	25.8	249	51.5	-20	41.8	294	06.7	-23	37.4	308	31.9	-21	11.0	49	33.4	+14	37.7			
7	211	28.2	264	50.7		41.1	309	07.2		37.5	323	33.9		11.1	64	36.0		37.8			
8	226	30.7	279	49.9		40.4	324	07.7		37.6	338	35.8		11.1	79	38.6		37.8			
9	241	33.2	294	49.1		39.7	339	08.2		37.8	353	37.7		11.2	94	41.2		37.9			
10	256	35.6	309	48.3		39.0	354	08.6		37.9	8	39.7		11.3	109	43.8		37.9			
11	271	38.1	324	47.5	-20	38.3	9	09.1	-23	38.0	23	41.6	-21	11.4	124	46.4	+14	38.0			
12	286	40.6	339	46.7	-20	37.6	24	09.6	-23	38.1	38	43.6	-21	11.4	139	49.0	+14	38.0			
13	301	43.0	354	45.9		36.9	39	10.1		38.3	53	45.5		11.5	154	51.6		38.1			
14	316	45.5	9	45.1		36.2	54	10.6		38.4	68	47.4		11.6	169	54.2		38.1			
15	331	47.9	24	44.3		35.5	69	11.1		38.5	83	49.4		11.7	184	56.8		38.2			
16	346	50.4	39	43.5		34.8	84	11.5		38.6	98	51.3		11.7	199	59.4		38.2			
17	1	52.9	54	42.8	-20	34.1	99	12.0	-23	38.7	113	53.2	-21	11.8	215	02.0	+14	38.3			
18	16	55.3	69	42.0	-20	33.3	114	12.5	-23	38.9	128	55.2	-21	11.9	230	04.6	+14	38.3			
19	31	57.8	84	41.2		32.6	129	13.0		39.0	143	57.1		12.0	245	07.2		38.4			
20	47	00.3	99	40.4		31.9	144	13.5		39.1	158	59.1		12.0	260	09.8		38.5			
21	62	02.7	114	39.6		31.2	159	13.9		39.2	174	01.0		12.1	275	12.4		38.5			
22	77	05.2	129	38.8		30.5	174	14.4		39.3	189	02.9		12.2	290	15.0		38.6			
23	92	07.7	144	38.0		29.8	189	14.9		39.4	204	04.9		12.2	305	17.6		38.6			
24	107	10.1	159	37.2	-20	29.0	204	15.4	-23	39.6	219	06.8	-21	12.3	320	20.2	+14	38.7			
Dif	—		-8		+7		+5		-1		+19		-1		+26		+1				

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3				Edad: 18 ^d 4 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5						Civil Nútico			Hora R°		Hora R°				
	PMG: 12 ^h 06 ^m 6				SD: 14 ^h 9 PMG: 3 ^h 41 ^m R°: 40 ^m						Civil Nútico			Hora R°		Hora R°				
	hG ☉	Dec			hG ☾	Dif														
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	24.6	-22	19.2	306	17.4	+8	56.1	60 N	15 16	16 11	17 07	21 44 82	10 37 **						
1	193	24.3		18.9	320	52.5 ¹⁶¹		42.3 ¹³⁸	58	32		13	46 79	33 2						
2	208	24.1		18.6	335	27.7 ¹⁶²		28.4 ¹³⁹	56	45	31	20	48 75	30 5						
3	223	23.8		18.3	350	03.0 ¹⁶³		14.5 ¹³⁹	54	15 57	40	25	50 72	27 7						
4	238	23.5		17.9	4	38.3 ¹⁶³	+8	00.6 ¹³⁹	52	16 07	47	30	51 71	25 9						
5	253	23.3	-22	17.6	19	13.7 ¹⁶⁴	+7	46.7 ¹³⁹	50	16 16	16 54	17 35	21 53 68	10 23 11						
6	268	23.0	-22	17.3	33	49.1 ¹⁶⁴	+7	32.7 ¹⁴⁰	45	16 36	17 09	17 46	21 56 63	10 18 15						
7	283	22.7		16.9	48	24.5 ¹⁶⁴		18.8 ¹³⁹	40	16 51	22	17 55	21 58 60	13 20						
8	298	22.5		16.6	63	00.0 ¹⁶⁵	+7	04.8 ¹⁴⁰	35	17 05	33	18 04	22 00 56	10 22						
9	313	22.2		16.3	77	35.5 ¹⁶⁵	+6	50.8 ¹⁴⁰	30	16	17 42	12	02 53	06 26						
10	328	21.9		15.9	92	11.1 ¹⁶⁶		36.8 ¹⁴⁰	20	36	18 00	27	06 47	10 01 30						
11	343	21.7	-22	15.6	106	46.8 ¹⁶⁷	+6	22.7 ¹⁴¹	10 N	17 54	18 16	18 43	22 09 43	9 55 36						
12	358	21.4	-22	15.3	121	22.4 ¹⁶⁶	+6	08.7 ¹⁴⁰	0	18 10	18 33	18 59	22 11 39	9 51 39						
13	13	21.2		14.9	135	58.1 ¹⁶⁷	+5	54.6 ¹⁴¹	10 S	27	18 50	19 17	14 35	46 43						
14	28	20.9		14.6	150	33.9 ¹⁶⁸		40.6 ¹⁴⁰	20	18 45	19 09	19 38	17 30	41 48						
15	43	20.6		14.3	165	09.7 ¹⁶⁸		26.5 ¹⁴¹	30	19 06	33	20 05	20 25	35 53						
16	58	20.4		13.9	179	45.5 ¹⁶⁸	+5	12.4 ¹⁴¹	35	18	19 47	23	22 22	31 57						
17	73	20.1	-22	13.6	194	21.4 ¹⁶⁹	+4	58.3 ¹⁴¹	40	19 32	20 04	20 45	22 24 19	9 27 60						
18	88	19.8	-22	13.3	208	57.3 ¹⁶⁹	+4	44.2 ¹⁴¹	45	19 49	20 25	21 13	22 27 15	9 22 64						
19	103	19.6		12.9	223	33.2 ¹⁶⁹		30.0 ¹⁴²	50	20 10	20 53	21 53	30 11	17 69						
20	118	19.3		12.6	238	09.1 ¹⁶⁹		15.9 ¹⁴¹	52	20	21 06	22 17	31 9	14 71						
21	133	19.0		12.2	252	45.1 ¹⁷⁰	+4	01.7 ¹⁴²	54	31	22	22 49	32 7	11 74						
22	148	18.8		11.9	267	21.2 ¹⁷¹	+3	47.6 ¹⁴¹	56	44	21 42	** **	34 4	08 77						
23	163	18.5		11.5	281	57.2 ¹⁷⁰		33.4 ¹⁴²	58	20 59	22 07	** **	36 1	05 79						
24	178	18.3	-22	11.2	296	33.3 ¹⁷¹	+3	19.3 ¹⁴¹	60 S	21 17	22 42	** **	22 38 **	9 01 83						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 48 ^m 6				Mag: -3.9 PMG: 13 ^h 22 ^m				Mag: +1.5 PMG: 10 ^h 23 ^m				Mag: -1.8 PMG: 9 ^h 22 ^m				Mag: +0.2 PMG: 2 ^h 38 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	10.1	159	37.2	-20	29.0	204	15.4	-23	39.6	219	06.8	-21	12.3	320	20.2	+14	38.7		
1	122	12.6	174	36.4		28.3	219	15.9		39.7	234	08.7		12.4	335	22.8		38.7		
2	137	15.0	189	35.7		27.6	234	16.3		39.8	249	10.7		12.5	350	25.4		38.8		
3	152	17.5	204	34.9		26.9	249	16.8		39.9	264	12.6		12.5	5	28.0		38.8		
4	167	20.0	219	34.1		26.1	264	17.3		40.0	279	14.6		12.6	20	30.6		38.9		
5	182	22.4	234	33.3	-20	25.4	279	17.8	-23	40.1	294	16.5	-21	12.7	35	33.2	+14	38.9		
6	197	24.9	249	32.5	-20	24.7	294	18.3	-23	40.3	309	18.4	-21	12.8	50	35.8	+14	39.0		
7	212	27.4	264	31.7		24.0	309	18.7		40.4	324	20.4		12.8	65	38.3		39.0		
8	227	29.8	279	31.0		23.2	324	19.2		40.5	339	22.3		12.9	80	40.9		39.1		
9	242	32.3	294	30.2		22.5	339	19.7		40.6	354	24.2		13.0	95	43.5		39.2		
10	257	34.8	309	29.4		21.8	354	20.2		40.7	9	26.2		13.1	110	46.1		39.2		
11	272	37.2	324	28.6	-20	21.0	9	20.6	-23	40.8	24	28.1	-21	13.1	125	48.7	+14	39.3		
12	287	39.7	339	27.8	-20	20.3	24	21.1	-23	40.9	39	30.1	-21	13.2	140	51.3	+14	39.3		
13	302	42.2	354	27.1		19.6	39	21.6		41.0	54	32.0		13.3	155	53.9		39.4		
14	317	44.6	9	26.3		18.8	54	22.1		41.2	69	33.9		13.4	170	56.6		39.4		
15	332	47.1	24	25.5		18.1	69	22.6		41.3	84	35.9		13.4	185	59.2		39.5		
16	347	49.5	39	24.7		17.4	84	23.0		41.4	99	37.8		13.5	201	01.8		39.5		
17	2	52.0	54	23.9	-20	16.6	99	23.5	-23	41.5	114	39.8	-21	13.6	216	04.4	+14	39.6		
18	17	54.5	69	23.2	-20	15.9	114	24.0	-23	41.6	129	41.7	-21	13.6	231	07.0	+14	39.6		
19	32	56.9	84	22.4		15.2	129	24.5		41.7	144	43.6		13.7	246	09.6		39.7		
20	47	59.4	99	21.6		14.4	144	24.9		41.8	159	45.6		13.8	261	12.2		39.8		
21	63	01.9	114	20.8		13.7	159	25.4		41.9	174	47.5		13.9	276	14.8		39.8		
22	78	04.3	129	20.1		12.9	174	25.9		42.0	189	49.5		13.9	291	17.4		39.9		
23	93	06.8	144	19.3		12.2	189	26.4		42.1	204	51.4		14.0	306	20.0		39.9		
24	108	09.3	159	18.5	-20	11.4	204	26.9	-23	42.2	219	53.3	-21	14.1	321	22.6	+14	40.0		
Dif	—				-8 +7				+5 -1				+19 -1				+26 +1			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 07 ^m 0				Edad: 19 ^d 4 PHE { SD: 14'8 PMG: 4 ^h 21 ^m R°: 39 ^m 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	18.3	-22	11.2	296	33.3	+3	19.3	60 N	7	06	8	01	8	56	23	06	82
1	193	18.0		10.9	311	09.4 ¹⁷¹	+3	05.1 ¹⁴²	58	7	00	7	51	41		05	78	35 2
2	208	17.7		10.5	325	45.5 ¹⁷¹	+2	50.9 ¹⁴²	56	6	54	42		27		03	76	35 4
3	223	17.5		10.2	340	21.7 ¹⁷²		36.8 ¹⁴¹	54		48	33		16		02	73	34
4	238	17.2		09.8	354	57.8 ¹⁷¹		22.6 ¹⁴²	52		43	26		8	06	02	70	34 9
5	253	17.0	-22	09.5	9	34.0 ¹⁷²	+2	08.4 ¹⁴²	50	6	38	7	19	7	57	23	01	68
6	268	16.7	-22	09.1	24	10.2 ¹⁷²	+1	54.2 ¹⁴²	45	6	27	7	04	7	37	22	59	63
7	283	16.4		08.8	38	46.5 ¹⁷³		40.1 ¹⁴¹	40		18	6	52	22		58	59	33 19
8	298	16.2		08.4	53	22.7 ¹⁷²		25.9 ¹⁴²	35		09	41		7	09	56	56	32 23
9	313	15.9		08.1	67	59.0 ¹⁷³	+1	11.7 ¹⁴²	30	6	01	31		6	57	55	53	32 25
10	328	15.7		07.7	82	35.3 ¹⁷³	+0	57.5 ¹⁴²	20	5	46	6	13	37		53	48	31 31
11	343	15.4	-22	07.4	97	11.5 ¹⁷²	+0	43.3 ¹⁴²	10 N	5	31	5	57	6	20	22	52	43
12	358	15.1	-22	07.0	111	47.9 ¹⁷⁴	+0	29.2 ¹⁴¹	0	5	15	5	41	6	03	22	50	39
13	13	14.9		06.7	126	24.2 ¹⁷³		15.0 ¹⁴²	10 S	4	57	24		5	47	49	35	29 44
14	28	14.6		06.3	141	00.5 ¹⁷³	+0	00.8 ¹⁴²	20		36	5	05	29		47	31	29 47
15	43	14.4		06.0	155	36.8 ¹⁷³	-0	13.3 ¹⁴¹	30	4	08	4	41	5	08	45	26	28 53
16	58	14.1		05.6	170	13.2 ¹⁷⁴		27.5 ¹⁴²	35	3	51	27		4	56	44	23	28 55
17	73	13.8	-22	05.2	184	49.5 ¹⁷³	-0	41.6 ¹⁴¹	40	3	29	4	10	4	42	22	43	20
18	88	13.6	-22	04.9	199	25.9 ¹⁷⁴	-0	55.8 ¹⁴²	45	3	01	3	49	4	25	22	42	16
19	103	13.3		04.5	214	02.3 ¹⁷⁴	-1	09.9 ¹⁴¹	50	2	20	21		4	04	41	11	26 68
20	118	13.1		04.2	228	38.6 ¹⁷³		24.0 ¹⁴¹	52	1	57	3	08	3	54	40	9	25 70
21	133	12.8		03.8	243	15.0 ¹⁷⁴		38.1 ¹⁴¹	54	1	25	2	51	43		39	7	25 72
22	148	12.6		03.5	257	51.4 ¹⁷⁴	-1	52.3 ¹⁴²	56	** **		32		30		38	5	25 75
23	163	12.3		03.1	272	27.7 ¹⁷³	-2	06.4 ¹⁴¹	58	** **	2	07	3	15		37	2	24 78
24	178	12.0	-22	02.7	287	04.1 ¹⁷⁴	-2	20.4 ¹⁴⁰	60 S	** **	1	32	2	57		22	36	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 44 ^m 6		Mag: -3.9 PMG: 13 ^h 23 ^m		Mag: +1.5 PMG: 10 ^h 22 ^m		Mag: -1.8 PMG: 9 ^h 19 ^m		Mag: +0.2 PMG: 2 ^h 34 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	108	09.3	159	18.5	-20	11.4	204	26.9	-21	14.1
1	123	11.7	174	17.7		10.7	219	27.3		14.2
2	138	14.2	189	17.0		09.9	234	27.8		14.2
3	153	16.7	204	16.2		09.2	249	28.3		14.3
4	168	19.1	219	15.4		08.4	264	28.8		14.4
5	183	21.6	234	14.7	-20	07.7	279	29.2	-23	14.5
6	198	24.0	249	13.9	-20	06.9	294	29.7	-23	14.5
7	213	26.5	264	13.1		06.2	309	30.2		14.6
8	228	29.0	279	12.3		05.4	324	30.7		14.7
9	243	31.4	294	11.6		04.7	339	31.1		14.7
10	258	33.9	309	10.8		03.9	354	31.6		14.8
11	273	36.4	324	10.0	-20	03.2	9	32.1	-23	14.9
12	288	38.8	339	09.3	-20	02.4	24	32.6	-23	15.0
13	303	41.3	354	08.5		01.7	39	33.0		15.0
14	318	43.8	9	07.7		00.9	54	33.5		15.1
15	333	46.2	24	07.0	-20	00.1	69	34.0		15.2
16	348	48.7	39	06.2	-19	59.4	84	34.5		15.2
17	3	51.1	54	05.5	-19	58.6	99	34.9	-23	15.3
18	18	53.6	69	04.7	-19	57.9	114	35.4	-23	15.4
19	33	56.1	84	03.9		57.1	129	35.9		15.5
20	48	58.5	99	03.2		56.3	144	36.4		15.5
21	64	01.0	114	02.4		55.6	159	36.8		15.6
22	79	03.5	129	01.6		54.8	174	37.3		15.7
23	94	05.9	144	00.9		54.0	189	37.8		15.8
24	109	08.4	159	00.1	-19	53.3	204	38.3	-23	15.8
Dif	—		-8		+8		+5		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3			Edad: 20 ^d 4	PHE	SD: 14:8			PMG: 5 ^h 00 ^m	R°: 39 ^m	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	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	178	12.0	-22 02.7	287	04.1	-2 20.4	60 N	15 20	16 15	17 10	*** ** *	10 34	***			
1	193	11.8	02.4	301	40.5 ¹⁷⁴	34.5 ¹⁴¹	58	36	25	16	*** ** *	37	2			
2	208	11.5	02.0	316	16.8 ¹⁷³	-2 48.6 ¹⁴¹	56	15 49	34	22	*** ** *	39	5			
3	223	11.3	01.6	330	53.2 ¹⁷⁴	-3 02.6 ¹⁴⁰	54	16 00	42	28	*** ** *	41	7			
4	238	11.0	01.3	345	29.5 ¹⁷³	16.7 ¹⁴¹	52	10	50	33	*** ** *	43	10			
5	253	10.8	-22 00.9	0	05.9 ¹⁷⁴	-3 30.7 ¹⁴⁰	50	16 19	16 57	17 37	*** ** *	10 45	12			
6	268	10.5	-22 00.5	14	42.2 ¹⁷³	-3 44.7 ¹⁴⁰	45	16 38	17 11	17 48	*** ** *	10 49	16			
7	283	10.3	-22 00.2	29	18.6 ¹⁷⁴	-3 58.7 ¹⁴⁰	40	16 53	23	17 57	23 57 60	52	20			
8	298	10.0	-21 59.8	43	54.9 ¹⁷³	-4 12.7 ¹⁴⁰	35	17 07	34	18 06	52 57	55	23			
9	313	09.7	59.4	58	31.2 ¹⁷³	26.6 ¹³⁹	30	18	17 44	14	48 54	10 57	26			
10	328	09.5	59.1	73	07.5 ¹⁷³	40.6 ¹⁴⁰	20	38	18 01	29	41 49	11 02	31			
11	343	09.2	-21 58.7	87	43.7 ¹⁷²	-4 54.5 ¹³⁹	10 N	17 55	18 17	18 44	23 35 44	11 05	36			
12	358	09.0	-21 58.3	102	20.0 ¹⁷³	-5 08.4 ¹³⁹	0	18 11	18 33	18 59	23 29 41	11 09	39			
13	13	08.7	58.0	116	56.2 ¹⁷²	22.3 ¹³⁹	10 S	27	18 50	19 17	24 36	13	43			
14	28	08.5	57.6	131	32.5 ¹⁷³	36.2 ¹³⁹	20	18 45	19 09	19 38	18 32	16	49			
15	43	08.2	57.2	146	08.7 ¹⁷²	-5 50.1 ¹³⁹	30	19 06	33	20 05	11 27	21	53			
16	58	08.0	56.8	160	44.8 ¹⁷¹	-6 03.9 ¹³⁸	35	18	19 47	22	07 24	23	57			
17	73	07.7	-21 56.5	175	21.0 ¹⁷²	-6 17.7 ¹³⁸	40	19 31	20 04	20 44	23 03 21	11 26	60			
18	88	07.5	-21 56.1	189	57.2 ¹⁷²	-6 31.5 ¹³⁸	45	19 48	20 24	21 12	22 58 17	11 30	63			
19	103	07.2	55.7	204	33.3 ¹⁷¹	45.2 ¹³⁷	50	20 09	20 51	21 51	52 12	34	68			
20	118	07.0	55.3	219	09.4 ¹⁷¹	-6 59.0 ¹³⁸	52	18	21 05	22 14	49 10	35	71			
21	133	06.7	55.0	233	45.4 ¹⁷⁰	-7 12.7 ¹³⁷	54	29	20	22 44	46 8	37	74			
22	148	06.5	54.6	248	21.5 ¹⁷¹	26.4 ¹³⁷	56	42	21 39	*** **	43 5	40	76			
23	163	06.2	54.2	262	57.5 ¹⁷⁰	40.1 ¹³⁷	58	20 57	22 03	*** **	39 2	42	79			
24	178	06.0	-21 53.8	277	33.5 ¹⁷⁰	-7 53.7 ¹³⁶	60 S	21 14	22 36	*** **	22 35 **	11 45	83			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 16 ^h 40 ^m 7		Mag: -3.9 PMG: 13 ^h 25 ^m			Mag: +1.5 PMG: 10 ^h 21 ^m			Mag: -1.8 PMG: 9 ^h 16 ^m			Mag: +0.2 PMG: 2 ^h 30 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'		
0	109	08.4	159	00.1	-19 53.3	204	38.3	-23 44.7	220	40.0	-21 15.8	322	25.1	+14 41.3		
1	124	10.9	173	59.4	52.5	219	38.7	44.8	235	41.9	15.9	337	27.7	41.4		
2	139	13.3	188	58.6	51.7	234	39.2	44.9	250	43.8	16.0	352	30.3	41.4		
3	154	15.8	203	57.8	50.9	249	39.7	45.0	265	45.8	16.0	7	32.9	41.5		
4	169	18.3	218	57.1	50.2	264	40.1	45.1	280	47.7	16.1	22	35.5	41.5		
5	184	20.7	233	56.3	-19 49.4	279	40.6	-23 45.2	295	49.7	-21 16.2	37	38.1	+14 41.6		
6	199	23.2	248	55.6	-19 48.6	294	41.1	-23 45.3	310	51.6	-21 16.3	52	40.7	+14 41.6		
7	214	25.6	263	54.8	47.8	309	41.6	45.4	325	53.6	16.3	67	43.3	41.7		
8	229	28.1	278	54.1	47.1	324	42.0	45.4	340	55.5	16.4	82	45.9	41.8		
9	244	30.6	293	53.3	46.3	339	42.5	45.5	355	57.4	16.5	97	48.5	41.8		
10	259	33.0	308	52.5	45.5	354	43.0	45.6	10	59.4	16.5	112	51.1	41.9		
11	274	35.5	323	51.8	-19 44.7	9	43.5	-23 45.7	26	01.3	-21 16.6	127	53.7	+14 41.9		
12	289	38.0	338	51.0	-19 44.0	24	43.9	-23 45.8	41	03.3	-21 16.7	142	56.3	+14 42.0		
13	304	40.4	353	50.3	43.2	39	44.4	45.9	56	05.2	16.8	157	58.9	42.0		
14	319	42.9	8	49.5	42.4	54	44.9	46.0	71	07.2	16.8	173	01.5	42.1		
15	334	45.4	23	48.8	41.6	69	45.3	46.1	86	09.1	16.9	188	04.1	42.2		
16	349	47.8	38	48.0	40.8	84	45.8	46.2	101	11.1	17.0	203	06.8	42.2		
17	4	50.3	53	47.3	-19 40.0	99	46.3	-23 46.3	116	13.0	-21 17.0	218	09.4	+14 42.3		
18	19	52.8	68	46.5	-19 39.2	114	46.8	-23 46.4	131	15.0	-21 17.1	233	12.0	+14 42.3		
19	34	55.2	83	45.8	38.5	129	47.2	46.4	146	16.9	17.2	248	14.6	42.4		
20	49	57.7	98	45.0	37.7	144	47.7	46.5	161	18.8	17.3	263	17.2	42.4		
21	65	00.1	113	44.3	36.9	159	48.2	46.6	176	20.8	17.3	278	19.8	42.5		
22	80	02.6	128	43.5	36.1	174	48.6	46.7	191	22.7	17.4	293	22.4	42.5		
23	95	05.1	143	42.8	35.3	189	49.1	46.8	206	24.7	17.5	308	25.0	42.6		
24	110	07.5	158	42.0	-19 34.5	204	49.6	-23 46.9	221	26.6	-21 17.5	323	27.6	+14 42.7		
Dif	—		-8 +8			+5 -1			+19 -1			+26 +1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 08 ^m 2			Edad: 22 ^d 4 PHE { SD: 14:8 PMG: 6 ^h 20 ^m 4 ^h : 54:4 12 ^h : 54:5 20 ^h : 54:6 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	178	00.0	-21 44.5	267	45.0	-13 11.4		60 N	15 24	16 18	17 13	1 52 89		10 32 0	
1	192	59.8	44.1	282	19.9 ¹⁵⁹	24.2 ¹²⁸		58	39	28	19	43 85		42 4	
2	207	59.5	43.7	296	54.7 ¹⁵⁸	36.9 ¹²⁷		56	15 52	37	25	36 80		50 8	
3	222	59.3	43.3	311	29.5 ¹⁵⁸	-13 49.5 ¹²⁶		54	16 03	45	30	29 77		10 57 12	
4	237	59.0	42.9	326	04.1 ¹⁵⁶	-14 02.2 ¹²⁷		52	13	52	35	23 75		11 04 14	
5	252	58.8	-21 42.5	340	38.8 ¹⁵⁷	-14 14.7 ¹²⁵		50	16 22	16 59	17 40	1 18 72		11 10 17	
6	267	58.5	-21 42.1	355	13.3 ¹⁵⁵	-14 27.2 ¹²⁵		45	16 40	17 13	17 50	1 07 66		11 23 22	
7	282	58.3	41.7	9	47.8 ¹⁵⁵	39.7 ¹²⁵		40	16 55	25	17 59	0 57 63		34 26	
8	297	58.1	41.3	24	22.2 ¹⁵⁴	-14 52.1 ¹²⁴		35	17 08	36	18 07	49 59		43 29	
9	312	57.8	40.9	38	56.6 ¹⁵⁴	-15 04.5 ¹²⁴		30	20	17 46	15	42 56		11 51 32	
10	327	57.6	40.5	53	30.9 ¹⁵³	16.8 ¹²³		20	39	18 03	30	30 51		12 06 36	
11	342	57.3	-21 40.1	68	05.1 ¹⁵²	-15 29.1 ¹²³		10 N	17 56	18 18	18 44	0 19 47		12 18 41	
12	357	57.1	-21 39.7	82	39.2 ¹⁵¹	-15 41.3 ¹²²		0	18 12	18 34	19 00	0 10 42		12 30 44	
13	12	56.9	39.3	97	13.3 ¹⁵¹	-15 53.5 ¹²²		10 S	28	18 51	17	0 00 39		42 48	
14	27	56.6	38.9	111	47.3 ¹⁵⁰	-16 05.6 ¹²¹		20	18 45	19 09	19 38	** ** *		12 54 53	
15	42	56.4	38.4	126	21.2 ¹⁴⁹	17.6 ¹²⁰		30	19 05	32	20 05	** ** *		13 09 57	
16	57	56.1	38.0	140	55.1 ¹⁴⁹	29.6 ¹²⁰		35	17	19 46	22	23 58 32		17 60	
17	72	55.9	-21 37.6	155	28.9 ¹⁴⁸	-16 41.5 ¹¹⁹		40	19 31	20 03	20 43	23 47 29		13 27 63	
18	87	55.6	-21 37.2	170	02.6 ¹⁴⁷	-16 53.4 ¹¹⁹		45	19 47	20 23	21 10	23 35 24		13 38 68	
19	102	55.4	36.8	184	36.2 ¹⁴⁶	-17 05.2 ¹¹⁸		50	20 07	20 50	21 49	19 20		52 73	
20	117	55.2	36.4	199	09.8 ¹⁴⁶	17.0 ¹¹⁸		52	17	21 03	22 10	12 17		13 59 75	
21	132	54.9	36.0	213	43.2 ¹⁴⁴	28.7 ¹¹⁷		54	28	18	22 39	23 04 14		14 06 78	
22	147	54.7	35.6	228	16.6 ¹⁴⁴	40.3 ¹¹⁶		56	40	36	23 30	22 55 11		14 82	
23	162	54.5	35.2	242	49.9 ¹⁴³	-17 51.8 ¹¹⁵		58	20 54	21 59	** ** *	45 7		23 86	
24	177	54.2	-21 34.7	257	23.2 ¹⁴³	-18 03.3 ¹¹⁵		60 S	21 12	22 31	** ** *	22 34 1		14 34 91	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 32 ^m 8		Mag: -3.9 PMG: 13 ^h 27 ^m			Mag: +1.5 PMG: 10 ^h 20 ^m			Mag: -1.8 PMG: 9 ^h 10 ^m			Mag: +0.2 PMG: 2 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	111	06.7	158 24.3	-19 15.2	205 00.8	-23 48.9		222 13.4	-21 19.2		324 30.3	+14 44.0			
1	126	09.1	173 23.5	14.4	220 01.3	48.9		237 15.3	19.3		339 32.9	44.1			
2	141	11.6	188 22.8	13.6	235 01.8	49.0		252 17.3	19.4		354 35.5	44.2			
3	156	14.1	203 22.1	12.7	250 02.2	49.1		267 19.2	19.4		9 38.1	44.2			
4	171	16.5	218 21.3	11.9	265 02.7	49.2		282 21.2	19.5		24 40.7	44.3			
5	186	19.0	233 20.6	-19 11.1	280 03.2	-23 49.2		297 23.1	-21 19.6		39 43.3	+14 44.3			
6	201	21.5	248 19.9	-19 10.3	295 03.6	-23 49.3		312 25.1	-21 19.6		54 45.9	+14 44.4			
7	216	23.9	263 19.2	09.4	310 04.1	49.4		327 27.0	19.7		69 48.5	44.4			
8	231	26.4	278 18.4	08.6	325 04.6	49.5		342 29.0	19.8		84 51.2	44.5			
9	246	28.9	293 17.7	07.8	340 05.0	49.5		357 30.9	19.8		99 53.8	44.6			
10	261	31.3	308 17.0	07.0	355 05.5	49.6		12 32.9	19.9		114 56.4	44.6			
11	276	33.8	323 16.2	-19 06.1	10 06.0	-23 49.7		27 34.8	-21 20.0		129 59.0	+14 44.7			
12	291	36.2	338 15.5	-19 05.3	25 06.4	-23 49.7		42 36.8	-21 20.1		145 01.6	+14 44.7			
13	306	38.7	353 14.8	04.5	40 06.9	49.8		57 38.7	20.1		160 04.2	44.8			
14	321	41.2	8 14.1	03.7	55 07.4	49.9		72 40.7	20.2		175 06.8	44.9			
15	336	43.6	23 13.3	02.8	70 07.8	50.0		87 42.6	20.3		190 09.5	44.9			
16	351	46.1	38 12.6	02.0	85 08.3	50.0		102 44.6	20.3		205 12.1	45.0			
17	6	48.6	53 11.9	-19 01.2	100 08.8	-23 50.1		117 46.5	-21 20.4		220 14.7	+14 45.0			
18	21	51.0	68 11.2	-19 00.3	115 09.2	-23 50.2		132 48.5	-21 20.5		235 17.3	+14 45.1			
19	36	53.5	83 10.4	-18 59.5	130 09.7	50.2		147 50.4	20.5		250 19.9	45.1			
20	51	56.0	98 09.7	58.7	145 10.2	50.3		162 52.4	20.6		265 22.5	45.2			
21	66	58.4	113 09.0	57.8	160 10.6	50.4		177 54.3	20.7		280 25.1	45.3			
22	82	00.9	128 08.3	57.0	175 11.1	50.4		192 56.3	20.7		295 27.8	45.3			
23	97	03.3	143 07.6	56.2	190 11.6	50.5		207 58.2	20.8		310 30.4	45.4			
24	112	05.8	158 06.8	-18 55.3	205 12.0	-23 50.6		223 00.2	-21 20.9		325 33.0	+14 45.4			
Dif	—		-7	+8	+5	-1		+20	-1		+26	+1			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 23 ^d 4	PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1										
	PMG: 12 ^h 08 ^m 6					SD: 14'9		PMG: 7 ^h 03 ^m			R°: 47 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	'	h	m		h	m	
0	177	54.2	-21	257	23.2	-18	03.3	60 N	7 03	7 58	8 51	3 21	95	10 32	2
1	192	54.0		271	56.3 ¹⁴¹		14.8 ¹¹⁵	58	6 57	48	36	3 08	88	46	8
2	207	53.7		286	29.4 ¹⁴¹		26.1 ¹¹³	56	51	39	24	2 56	84	10 58	13
3	222	53.5		301	02.4 ¹⁴⁰		37.4 ¹¹³	54	46	31	13	46	80	11 09	16
4	237	53.3		315	35.2 ¹³⁸		48.6 ¹¹²	52	41	24	8 03	38	76	18	20
5	252	53.0	-21	330	08.1 ¹³⁹	-18	59.8 ¹¹²	50	6 37	7 17	7 54	2 30	74	11 27	22
6	267	52.8	-21	344	40.8 ¹³⁷	-19	10.9 ¹¹¹	45	6 26	7 03	7 36	2 13	69	11 45	27
7	282	52.5		359	13.4 ¹³⁶		21.9 ¹¹⁰	40	18	6 51	21	2 00	64	12 00	31
8	297	52.3		13	45.9 ¹³⁵		32.8 ¹⁰⁹	35	09	40	7 08	1 48	61	12	34
9	312	52.1		28	18.4 ¹³⁵		43.7 ¹⁰⁹	30	6 02	31	6 57	38	59	23	37
10	327	51.8		42	50.7 ¹³³	-19	54.5 ¹⁰⁸	20	5 47	6 14	38	21	54	42	41
11	342	51.6	-21	57	23.0 ¹³³	-20	05.2 ¹⁰⁷	10 N	5 32	5 58	6 21	1 06	50	12 59	45
12	357	51.4	-21	71	55.2 ¹³²	-20	15.8 ¹⁰⁶	0	5 17	5 43	6 05	0 52	47	13 14	48
13	12	51.1		86	27.3 ¹³¹		26.4 ¹⁰⁶	10 S	4 59	26	5 49	39	42	30	51
14	27	50.9		100	59.3 ¹³⁰		36.9 ¹⁰⁵	20	39	5 07	32	24	39	13 47	55
15	42	50.7		115	31.1 ¹²⁸		47.3 ¹⁰⁴	30	4 12	4 45	12	0 08	34	14 06	60
16	57	50.4		130	02.9 ¹²⁸	-20	57.6 ¹⁰³	35	3 55	31	5 00	** ** *	**	17	62
17	72	50.2	-21	144	34.6 ¹²⁷	-21	07.8 ¹⁰²	40	3 34	4 14	4 46	** * *	**	14 30	66
18	87	50.0	-21	159	06.3 ¹²⁷	-21	18.0 ¹⁰²	45	3 07	3 54	4 30	23 59	31	14 46	69
19	102	49.7		173	37.8 ¹²⁵		28.0 ¹⁰⁰	50	2 29	28	10	39	26	15 05	74
20	117	49.5		188	09.2 ¹²⁴		38.0 ¹⁰⁰	52	2 07	3 14	4 00	29	24	14	77
21	132	49.3		202	40.5 ¹²³		47.9 ⁹⁹	54	1 38	2 59	3 49	18	21	24	81
22	147	49.0		217	11.7 ¹²²	-21	57.7 ⁹⁸	56	0 47	41	37	23 06	17	36	84
23	162	48.8		231	42.8 ¹²¹	-22	07.4 ⁹⁷	58	** ** *	2 18	23	22 52	12	15 49	90
24	177	48.6	-21	246	13.8 ¹²⁰	-22	17.0 ⁹⁶	60 S	** ** *	1 47	3 06	22 35	5	16 05	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 28 ^m 9		Mag: -3.9 PMG: 13 ^h 28 ^m		Mag: +1.5 PMG: 10 ^h 19 ^m		Mag: -1.8 PMG: 9 ^h 07 ^m		Mag: +0.2 PMG: 2 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	112	05.8	158	06.8	-18	55.3	205	12.0	-23	50.6
1	127	08.3	173	06.1		54.5	220	12.5		50.6
2	142	10.7	188	05.4		53.6	235	12.9		50.7
3	157	13.2	203	04.7		52.8	250	13.4		50.8
4	172	15.7	218	04.0		52.0	265	13.9		50.8
5	187	18.1	233	03.2	-18	51.1	280	14.3	-23	50.9
6	202	20.6	248	02.5	-18	50.3	295	14.8	-23	51.0
7	217	23.1	263	01.8		49.4	310	15.3		51.0
8	232	25.5	278	01.1		48.6	325	15.7		51.1
9	247	28.0	293	00.4		47.7	340	16.2		51.2
10	262	30.5	307	59.7		46.9	355	16.7		51.2
11	277	32.9	322	59.0	-18	46.0	10	17.1	-23	51.3
12	292	35.4	337	58.2	-18	45.2	25	17.6	-23	51.3
13	307	37.8	352	57.5		44.3	40	18.1		51.4
14	322	40.3	7	56.8		43.5	55	18.5		51.5
15	337	42.8	22	56.1		42.6	70	19.0		51.5
16	352	45.2	37	55.4		41.8	85	19.4		51.6
17	7	47.7	52	54.7	-18	40.9	100	19.9	-23	51.6
18	22	50.2	67	54.0	-18	40.1	115	20.4	-23	51.7
19	37	52.6	82	53.3		39.2	130	20.8		51.8
20	52	55.1	97	52.6		38.3	145	21.3		51.8
21	67	57.6	112	51.8		37.5	160	21.8		51.9
22	83	00.0	127	51.1		36.6	175	22.2		51.9
23	98	02.5	142	50.4		35.8	190	22.7		52.0
24	113	05.0	157	49.7	-18	34.9	205	23.1	-23	52.1
Dif	—		-7		+9		+5		-1	
								+20		-1
									+26	
										+1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 08 ^m 9			Edad: 24 ^d 4 PHE { 4 ^h : 55:3 12 ^h : 55:5 20 ^h : 55:7 SD: 15:0 PMG: 7 ^h 50 ^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	48.6	-21	24.6	246	13.8	-22 17.0	60 N	15 29	16 22	17 16	4 56 100	10 34 7		
1	192	48.3		24.1	260	44.7 ¹¹⁹	26.5 ⁹⁵	58	43	32	22	36 91	10 54 16		
2	207	48.1		23.7	275	15.6 ¹¹⁹	35.9 ⁹⁴	56	15 56	40	28	20 85	11 11 22		
3	222	47.9		23.3	289	46.3 ¹¹⁷	45.3 ⁹⁴	54	16 06	48	33	4 06 81	25 26		
4	237	47.6		22.8	304	16.9 ¹¹⁶	-22 54.5 ⁹²	52	16	16 55	38	3 54 78	38 29		
5	252	47.4	-21	22.4	318	47.4 ¹¹⁵	-23 03.6 ⁹¹	50	16 25	17 02	17 42	3 44 74	11 49 31		
6	267	47.2	-21	22.0	333	17.8 ¹¹⁴	-23 12.7 ⁹¹	45	16 43	17 16	17 52	3 22 69	12 12 36		
7	282	46.9		21.5	347	48.1 ¹¹³	21.6 ⁸⁹	40	16 58	27	18 01	3 04 66	31 39		
8	297	46.7		21.1	2	18.3 ¹¹²	30.5 ⁸⁹	35	17 10	38	09	2 49 63	12 46 42		
9	312	46.5		20.6	16	48.4 ¹¹¹	39.2 ⁸⁷	30	21	17 47	17	37 60	13 00 44		
10	327	46.3		20.2	31	18.4 ¹¹⁰	47.8 ⁸⁶	20	40	18 04	31	2 15 57	23 48		
11	342	46.0	-21	19.8	45	48.3 ¹⁰⁹	-23 56.3 ⁸⁵	10 N	17 57	18 19	18 45	1 56 54	13 44 50		
12	357	45.8	-21	19.3	60	18.0 ¹⁰⁷	-24 04.8 ⁸⁵	0	18 13	18 35	19 01	1 39 50	14 02 53		
13	12	45.6		18.9	74	47.7 ¹⁰⁷	13.1 ⁸³	10 S	28	18 51	18	21 48	21 56		
14	27	45.3		18.4	89	17.3 ¹⁰⁶	21.3 ⁸²	20	18 45	19 10	19 38	1 03 44	14 42 58		
15	42	45.1		18.0	103	46.8 ¹⁰⁵	29.4 ⁸¹	30	19 05	32	20 04	0 42 40	15 06 61		
16	57	44.9		17.6	118	16.1 ¹⁰³	37.3 ⁷⁹	35	17	19 46	21	30 38	19 64		
17	72	44.7	-21	17.1	132	45.4 ¹⁰³	-24 45.2 ⁷⁹	40	19 30	20 02	20 42	0 16 35	15 36 65		
18	87	44.4	-21	16.7	147	14.6 ¹⁰²	-24 53.0 ⁷⁸	45	19 46	20 22	21 08	*** ** *	15 55 69		
19	102	44.2		16.2	161	43.6 ¹⁰⁰	-25 00.6 ⁷⁶	50	20 06	20 48	21 46	*** ** *	16 19 73		
20	117	44.0		15.8	176	12.6 ¹⁰⁰	08.1 ⁷⁵	52	15	21 00	22 06	23 53 35	31 75		
21	132	43.7		15.3	190	41.4 ⁹⁸	15.5 ⁷⁴	54	26	15	22 34	39 33	16 45 78		
22	147	43.5		14.9	205	10.2 ⁹⁸	22.8 ⁷³	56	38	33	23 18	23 29	17 00 82		
23	162	43.3		14.4	219	38.8 ⁹⁶	30.0 ⁷²	58	20 52	21 55	*** ** *	23 04 23	19 88		
24	177	43.1	-21	14.0	234	07.3 ⁹⁵	-25 37.0 ⁷⁰	60 S	21 08	22 25	*** ** *	22 40 14	17 42 97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 25 ^m 0		Mag: -3.9 PMG: 13 ^h 29 ^m		Mag: +1.4 PMG: 10 ^h 18 ^m		Mag: -1.8 PMG: 9 ^h 04 ^m		Mag: +0.1 PMG: 2 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	°	'	°	'	°	'	°	'	°	'
0	113	05.0	157	49.7	-18	34.9	205	23.1	-23	52.1
1	128	07.4	172	49.0		34.0	220	23.6		52.1
2	143	09.9	187	48.3		33.2	235	24.1		52.2
3	158	12.3	202	47.6		32.3	250	24.5		52.2
4	173	14.8	217	46.9		31.5	265	25.0		52.3
5	188	17.3	232	46.2	-18	30.6	280	25.5	-23	52.3
6	203	19.7	247	45.5	-18	29.7	295	25.9	-23	52.4
7	218	22.2	262	44.8		28.9	310	26.4		52.4
8	233	24.7	277	44.1		28.0	325	26.8		52.5
9	248	27.1	292	43.4		27.1	340	27.3		52.5
10	263	29.6	307	42.7		26.3	355	27.8		52.6
11	278	32.1	322	42.0	-18	25.4	10	28.2	-23	52.7
12	293	34.5	337	41.3	-18	24.5	25	28.7	-23	52.7
13	308	37.0	352	40.6		23.6	40	29.1		52.8
14	323	39.4	7	39.9		22.8	55	29.6		52.8
15	338	41.9	22	39.2		21.9	70	30.1		52.9
16	353	44.4	37	38.5		21.0	85	30.5		52.9
17	8	46.8	52	37.8	-18	20.1	100	31.0	-23	53.0
18	23	49.3	67	37.1	-18	19.3	115	31.4	-23	53.0
19	38	51.8	82	36.4		18.4	130	31.9		53.1
20	53	54.2	97	35.7		17.5	145	32.4		53.1
21	68	56.7	112	35.0		16.6	160	32.8		53.2
22	83	59.2	127	34.3		15.7	175	33.3		53.2
23	99	01.6	142	33.6		14.9	190	33.7		53.2
24	114	04.1	157	32.9	-18	14.0	205	34.2	-23	53.3
Dif	—		-7		+9		+5		-1	
							+20		-1	
									+26	
									+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 09 ^m 3			Edad: 25 ^d 4 SD: 15/2 PMG: 8 ^h 42 ^m	PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/4 R°: 56 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	43.1	-21	14.0	234	07.3	-25	37.0	60 N	7 01	7 55	8 48	6 36	94	10 41	22
1	192	42.8		13.5	248	35.8	95	43.9	58	6 55	46	34	6 07	83	11 10	33
2	207	42.6		13.1	263	04.1	93	50.7	56	50	37	22	5 45	78	33	37
3	222	42.4		12.6	277	32.3	92	-25 57.4	54	45	29	11	27	75	11 51	41
4	237	42.2		12.2	292	00.5	92	-26 03.9	52	40	22	8 01	5 12	72	12 07	42
5	252	41.9	-21	11.7	306	28.5	90	-26 10.3	50	6 36	7 16	7 53	4 58	71	12 20	45
6	267	41.7	-21	11.3	320	56.4	89	-26 16.6	45	6 26	7 02	7 35	4 31	67	12 48	47
7	282	41.5		10.8	335	24.2	88	22.7	40	17	6 50	20	4 10	65	13 10	49
8	297	41.3		10.4	349	52.0	88	28.7	35	09	40	7 08	3 52	63	28	51
9	312	41.0		09.9	4	19.6	86	34.6	30	6 01	31	6 57	37	62	13 44	52
10	327	40.8		09.4	18	47.1	85	40.3	20	5 47	6 14	38	3 12	58	14 11	53
11	342	40.6	-21	09.0	33	14.5	84	-26 46.0	10 N	5 33	5 59	6 21	2 50	56	14 34	55
12	357	40.4	-21	08.5	47	41.9	84	-26 51.4	0	5 18	5 43	6 06	2 29	55	14 55	57
13	12	40.2		08.1	62	09.1	82	-26 56.7	10 S	5 01	27	5 50	2 09	53	15 17	57
14	27	39.9		07.6	76	36.3	82	-27 01.9	20	4 40	5 09	33	1 47	51	15 40	59
15	42	39.7		07.1	91	03.3	80	07.0	30	4 14	4 46	13	22	48	16 07	60
16	57	39.5		06.7	105	30.3	80	11.9	35	3 57	33	5 02	1 08	46	23	61
17	72	39.3	-21	06.2	119	57.1	78	-27 16.6	40	3 37	4 17	4 48	0 51	44	16 41	63
18	87	39.0	-21	05.8	134	23.9	78	-27 21.3	45	3 10	3 57	4 32	0 30	42	17 04	64
19	102	38.8		05.3	148	50.6	77	25.7	50	2 33	31	13	0 05	38	32	66
20	117	38.6		04.8	163	17.2	76	30.0	52	2 12	18	4 03	** ** *	**	17 46	67
21	132	38.4		04.4	177	43.7	75	34.2	54	1 45	3 03	3 53	** ** *	**	18 03	68
22	147	38.2		03.9	192	10.1	74	38.2	56	1 01	2 46	41	23 52	49	22	71
23	162	38.0		03.4	206	36.4	73	42.1	58	** ** *	2 24	27	23 27	47	18 47	73
24	177	37.7	-21	03.0	221	02.6	72	-27 45.8	60 S	** ** *	1 54	3 10	22 54	40	19 19	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 21 ^m 0		Mag: -3.9 PMG: 13 ^h 30 ^m		Mag: +1.4 PMG: 10 ^h 17 ^m		Mag: -1.8 PMG: 9 ^h 01 ^m		Mag: +0.1 PMG: 2 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	114	04.1	157	32.9	-18	14.0	205	34.2	-23	53.3
1	129	06.6	172	32.3		13.1	220	34.7		53.3
2	144	09.0	187	31.6		12.2	235	35.1		53.4
3	159	11.5	202	30.9		11.3	250	35.6		53.4
4	174	13.9	217	30.2		10.4	265	36.0		53.5
5	189	16.4	232	29.5	-18	09.5	280	36.5	-23	53.5
6	204	18.9	247	28.8	-18	08.7	295	37.0	-23	53.6
7	219	21.3	262	28.1		07.8	310	37.4		53.6
8	234	23.8	277	27.4		06.9	325	37.9		53.6
9	249	26.3	292	26.7		06.0	340	38.3		53.7
10	264	28.7	307	26.1		05.1	355	38.8		53.7
11	279	31.2	322	25.4	-18	04.2	10	39.2	-23	53.8
12	294	33.7	337	24.7	-18	03.3	25	39.7	-23	53.8
13	309	36.1	352	24.0		02.4	40	40.2		53.9
14	324	38.6	7	23.3		01.5	55	40.6		53.9
15	339	41.1	22	22.6	-18	00.6	70	41.1		53.9
16	354	43.5	37	21.9	-17	59.7	85	41.5		54.0
17	9	46.0	52	21.3	-17	58.8	100	42.0	-23	54.0
18	24	48.4	67	20.6	-17	57.9	115	42.5	-23	54.1
19	39	50.9	82	19.9		57.0	130	42.9		54.1
20	54	53.4	97	19.2		56.1	145	43.4		54.1
21	69	55.8	112	18.5		55.2	160	43.8		54.2
22	84	58.3	127	17.9		54.3	175	44.3		54.2
23	100	00.8	142	17.2		53.4	190	44.7		54.2
24	115	03.2	157	16.5	-17	52.5	205	45.2	-23	54.3
Dif	—		-7 +9		+5 0		+20 -1		+26 +1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3			Edad: 26 ^d 4 PHE { 4 ^h : 56/6 12 ^h : 56/9 20 ^h : 57/1										
	PMG: 12 ^h 09 ^m 7			SD: 15/4 PMG: 9 ^h 38 ^m R°: 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	37.7	-21 03.0	221	02.6	-27 45.8	72	60 N	15 33	16 26	17 20	8 10 61	11 03 62	
1	192	37.5	02.5	235	28.8	49.4	36	58	47	35	26	7 30 61	11 43 61	
2	207	37.3	02.0	249	54.9	52.8	34	56	15 59	44	31	7 03 61	12 10 61	
3	222	37.1	01.6	264	20.9	56.0	32	54	16 10	51	36	6 42 60	32 61	
4	237	36.9	01.1	278	46.8	-27 59.1	31	52	19	16 58	40	24 61	12 49 61	
5	252	36.6	-21 00.6	293	12.6	-28 02.1	30	50	16 28	17 04	17 45	6 09 60	13 05 61	
6	267	36.4	-21 00.2	307	38.4	-28 04.8	27	45	16 45	17 18	17 54	5 38 61	13 35 61	
7	282	36.2	-20 59.7	322	04.1	07.5	27	40	17 00	30	18 03	5 15 60	13 59 61	
8	297	36.0	59.2	336	29.7	09.9	24	35	12	40	11	4 55 60	14 19 60	
9	312	35.8	58.7	350	55.3	12.2	23	30	23	17 49	18	39 59	14 36 60	
10	327	35.6	58.3	5	20.8	14.3	21	20	42	18 05	32	4 10 59	15 04 60	
11	342	35.3	-20 57.8	19	46.2	-28 16.3	20	10 N	17 58	18 20	18 46	3 46 59	15 29 59	
12	357	35.1	-20 57.3	34	11.5	-28 18.1	18	0	18 13	18 35	19 01	3 24 58	15 52 59	
13	12	34.9	56.9	48	36.8	19.7	16	10 S	29	18 51	18	3 02 57	16 14 59	
14	27	34.7	56.4	63	02.0	21.2	15	20	18 46	19 10	19 38	2 38 57	16 39 58	
15	42	34.5	55.9	77	27.2	22.5	13	30	19 05	32	20 04	2 10 56	17 07 57	
16	57	34.3	55.4	91	52.3	23.6	11	35	16	19 45	20	1 54 56	24 57	
17	72	34.1	-20 54.9	106	17.3	-28 24.6	10	40	19 29	20 01	20 40	1 35 55	17 44 56	
18	87	33.8	-20 54.5	120	42.3	-28 25.4	8	45	19 45	20 20	21 06	1 12 54	18 08 55	
19	102	33.6	54.0	135	07.3	26.0	6	50	20 04	46	21 43	0 43 52	38 54	
20	117	33.4	53.5	149	32.1	26.5	5	52	13	20 58	22 02	28 52	18 53 53	
21	132	33.2	53.0	163	57.0	26.8	3	54	24	21 12	22 28	0 12 50	19 11 52	
22	147	33.0	52.5	178	21.8	26.9	1	56	35	30	23 07	** ** *	19 33 49	
23	162	32.8	52.1	192	46.5	26.8	1	58	20 49	21 51	** ** *	** ** *	20 00 47	
24	177	32.6	-20 51.6	207	11.2	-28 26.6	2	60 S	21 05	22 18	** ** *	23 34 84	20 39 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 17 ^m 1		Mag: -3.9 PMG: 13 ^h 32 ^m		Mag: +1.4 PMG: 10 ^h 17 ^m		Mag: -1.9 PMG: 8 ^h 57 ^m		Mag: +0.1 PMG: 2 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	115	03.2	157	16.5	-17	52.5	205	45.2	-23	54.3
1	130	05.7	172	15.8		51.6	220	45.7		54.3
2	145	08.2	187	15.1		50.7	235	46.1		54.4
3	160	10.6	202	14.5		49.8	250	46.6		54.4
4	175	13.1	217	13.8		48.9	265	47.0		54.4
5	190	15.6	232	13.1	-17	48.0	280	47.5	-23	54.5
6	205	18.0	247	12.4	-17	47.1	295	47.9	-23	54.5
7	220	20.5	262	11.8		46.2	310	48.4		54.5
8	235	22.9	277	11.1		45.3	325	48.9		54.6
9	250	25.4	292	10.4		44.4	340	49.3		54.6
10	265	27.9	307	09.7		43.4	355	49.8		54.6
11	280	30.3	322	09.1	-17	42.5	10	50.2	-23	54.7
12	295	32.8	337	08.4	-17	41.6	25	50.7	-23	54.7
13	310	35.3	352	07.7		40.7	40	51.1		54.7
14	325	37.7	7	07.1		39.8	55	51.6		54.8
15	340	40.2	22	06.4		38.9	70	52.0		54.8
16	355	42.7	37	05.7		37.9	85	52.5		54.8
17	10	45.1	52	05.0	-17	37.0	100	53.0	-23	54.8
18	25	47.6	67	04.4	-17	36.1	115	53.4	-23	54.9
19	40	50.1	82	03.7		35.2	130	53.9		54.9
20	55	52.5	97	03.0		34.3	145	54.3		54.9
21	70	55.0	112	02.4		33.3	160	54.8		55.0
22	85	57.4	127	01.7		32.4	175	55.2		55.0
23	100	59.9	142	01.0		31.5	190	55.7		55.0
24	116	02.4	157	00.4	-17	30.6	205	56.1	-23	55.0
Dif	—		-7	+9		+5	0	+20		-1
									+26	+1

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 27 ^d 4	PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'9											
	PMG: 12 ^h 10 ^m 0					SD: 15'6				PMG: 10 ^h 36 ^m			R ^o : 60 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.6	-20 51.6	207	11.2	-28 26.6		60 N	6 59	7 53	8 45	9 11	23	12 05	101	
1	192	32.4	51.1	221	35.9	26.1	5	58	53	43	31	8 31	34	12 44	90	
2	207	32.1	50.6	236	00.5	25.6	5	56	48	35	19	8 04	39	13 11	85	
3	222	31.9	50.1	250	25.1	24.8	8	54	43	28	09	7 42	43	33	80	
4	237	31.7	49.6	264	49.7	23.8	10	52	39	21	8 00	25	44	13 50	78	
5	252	31.5	-20 49.1	279	14.2	-28 22.7	11	50	6 34	7 15	7 51	7 09	47	14 06	76	
6	267	31.3	-20 48.7	293	38.7	-28 21.4	13	45	6 25	7 01	7 34	6 39	49	14 36	72	
7	282	31.1	48.2	308	03.2	20.0	14	40	16	6 50	19	6 15	51	15 00	70	
8	297	30.9	47.7	322	27.6	18.3	17	35	09	40	7 07	5 55	53	19	68	
9	312	30.7	47.2	336	52.0	16.5	18	30	6 01	31	6 56	38	55	15 36	66	
10	327	30.5	46.7	351	16.4	14.5	20	20	5 47	6 14	38	5 09	57	16 04	64	
11	342	30.3	-20 46.2	5	40.8	-28 12.3	22	10 N	5 33	5 59	6 22	4 45	58	16 28	61	
12	357	30.0	-20 45.7	20	05.2	-28 09.9	24	0	5 18	5 44	6 06	4 22	60	16 51	59	
13	12	29.8	45.2	34	29.5	07.4	25	10 S	5 02	28	5 51	3 59	61	17 13	57	
14	27	29.6	44.7	48	53.9	04.7	27	20	4 42	5 10	34	35	62	17 37	54	
15	42	29.4	44.2	63	18.2	-28 01.8	29	30	16	4 48	15	3 06	64	18 04	52	
16	57	29.2	43.8	77	42.5	-27 58.7	31	35	4 00	35	5 04	2 50	64	21	49	
17	72	29.0	-20 43.3	92	06.8	-27 55.4	33	40	3 40	4 19	4 51	2 30	66	18 40	47	
18	87	28.8	-20 42.8	106	31.2	-27 52.0	34	45	3 14	4 00	4 35	2 06	67	19 03	44	
19	102	28.6	42.3	120	55.5	48.4	36	50	2 37	3 34	16	1 35	70	32	40	
20	117	28.4	41.8	135	19.8	44.6	38	52	2 18	22	4 07	20	70	19 46	38	
21	132	28.2	41.3	149	44.1	40.6	40	54	1 52	3 08	3 56	1 02	72	20 03	34	
22	147	28.0	40.8	164	08.4	36.4	42	56	1 13	2 51	45	0 41	74	22	31	
23	162	27.8	40.3	178	32.8	32.1	43	58	** **	29	31	0 14	77	20 47	25	
24	177	27.6	-20 39.8	192	57.1	-27 27.6	45	60 S	** **	2 02	3 15	** **	**	21 20	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 16 ^h 13 ^m 2		Mag: -3.9 PMG: 13 ^h 33 ^m		Mag: +1.4 PMG: 10 ^h 16 ^m		Mag: -1.9 PMG: 8 ^h 54 ^m		Mag: +0.1 PMG: 2 ^h 01 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	116	02.4	157	00.4	-17 30.6	205 56.1	-23 55.0	226 08.2	-21 27.2	329 44.6				
1	131	04.8	171	59.7	29.7	220 56.6	55.1	241 10.1	27.3	344 47.2				
2	146	07.3	186	59.0	28.7	235 57.1	55.1	256 12.1	27.4	359 49.8				
3	161	09.8	201	58.4	27.8	250 57.5	55.1	271 14.1	27.4	14 52.5				
4	176	12.2	216	57.7	26.9	265 58.0	55.1	286 16.0	27.5	29 55.1				
5	191	14.7	231	57.1	-17 25.9	280 58.4	-23 55.2	301 18.0	-21 27.6	44 57.7				
6	206	17.2	246	56.4	-17 25.0	295 58.9	-23 55.2	316 20.0	-21 27.6	60 00.3				
7	221	19.6	261	55.7	24.1	310 59.3	55.2	331 21.9	27.7	75 03.0				
8	236	22.1	276	55.1	23.2	325 59.8	55.2	346 23.9	27.7	90 05.6				
9	251	24.6	291	54.4	22.2	341 00.2	55.3	1 25.9	27.8	105 08.2				
10	266	27.0	306	53.8	21.3	356 00.7	55.3	16 27.8	27.9	120 10.9				
11	281	29.5	321	53.1	-17 20.4	11 01.1	-23 55.3	31 29.8	-21 27.9	135 13.5				
12	296	31.9	336	52.4	-17 19.4	26 01.6	-23 55.3	46 31.8	-21 28.0	150 16.1				
13	311	34.4	351	51.8	18.5	41 02.1	55.3	61 33.7	28.1	165 18.7				
14	326	36.9	6	51.1	17.5	56 02.5	55.4	76 35.7	28.1	180 21.4				
15	341	39.3	21	50.5	16.6	71 03.0	55.4	91 37.7	28.2	195 24.0				
16	356	41.8	36	49.8	15.7	86 03.4	55.4	106 39.6	28.3	210 26.6				
17	11	44.3	51	49.2	-17 14.7	101 03.9	-23 55.4	121 41.6	-21 28.3	225 29.3				
18	26	46.7	66	48.5	-17 13.8	116 04.3	-23 55.4	136 43.6	-21 28.4	240 31.9				
19	41	49.2	81	47.8	12.9	131 04.8	55.5	151 45.5	28.4	255 34.5				
20	56	51.7	96	47.2	11.9	146 05.2	55.5	166 47.5	28.5	270 37.1				
21	71	54.1	111	46.5	11.0	161 05.7	55.5	181 49.5	28.6	285 39.8				
22	86	56.6	126	45.9	10.0	176 06.1	55.5	196 51.4	28.6	300 42.4				
23	101	59.1	141	45.2	09.1	191 06.6	55.5	211 53.4	28.7	315 45.0				
24	117	01.5	156	44.6	-17 08.1	206 07.0	-23 55.5	226 55.4	-21 28.8	330 47.7				
Dif	—		-7		+9	+5		+20		-1	+26		+	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 10 ^m 3			Edad: 28 ^d 4 PHE { 4 ^h : 58' ¹ 12 ^h : 58' ³ 20 ^h : 58' ⁶ R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	177	27.6	-20	39.8	192	57.1	-27	27.6	60 N	15 38	16 30	17 23	9 34	7	13 46	113
1	192	27.4		39.3	207	21.5	54	22.9	58	15 51	39	29	9 05	17	14 14	103
2	207	27.2		38.8	221	45.9	54	18.0	56	16 03	47	34	8 43	23	36	96
3	222	27.0		38.3	236	10.2	53	13.0	54	13	16 54	39	25	28	14 53	92
4	237	26.8		37.8	250	34.7	55	07.8	52	22	17 01	43	8 09	32	15 08	89
5	252	26.5	-20	37.3	264	59.1	54	-27 02.4	50	16 31	17 07	17 47	7 56	34	15 22	85
6	267	26.3	-20	36.8	279	23.5	54	-26 56.8	45	16 48	17 20	17 57	7 28	40	15 48	80
7	282	26.1		36.3	293	48.0	55	51.0	40	17 02	32	18 05	7 06	43	16 10	75
8	297	25.9		35.8	308	12.5	55	45.1	35	14	42	12	6 48	46	27	72
9	312	25.7		35.2	322	37.1	56	39.0	30	25	17 50	20	33	48	16 42	69
10	327	25.5		34.7	337	01.6	55	32.7	20	43	18 06	33	6 06	52	17 08	64
11	342	25.3	-20	34.2	351	26.2	56	-26 26.3	10 N	17 59	18 21	18 47	5 43	55	17 29	61
12	357	25.1	-20	33.7	5	50.8	56	-26 19.7	0	18 14	18 36	19 02	5 22	58	17 50	57
13	12	24.9		33.2	20	15.5	57	12.9	10 S	29	18 52	18	5 00	61	18 10	53
14	27	24.7		32.7	34	40.2	57	-26 05.9	20	18 46	19 09	19 38	4 37	64	31	50
15	42	24.5		32.2	49	05.0	58	-25 58.8	30	19 05	31	20 03	4 10	68	18 56	45
16	57	24.3		31.7	63	29.8	58	51.5	35	16	19 44	19	3 54	71	19 10	43
17	72	24.1	-20	31.2	77	54.6	58	-25 44.0	40	19 28	20 00	20 39	3 36	73	19 27	39
18	87	23.9	-20	30.7	92	19.5	59	-25 36.3	45	19 44	20 19	21 04	3 13	77	19 47	35
19	102	23.7		30.2	106	44.4	59	28.5	50	20 02	43	39	2 45	81	20 12	29
20	117	23.5		29.6	121	09.3	59	20.5	52	11	20 55	21 58	30	85	24	26
21	132	23.3		29.1	135	34.4	61	12.4	54	21	21 09	22 23	2 14	88	37	23
22	147	23.1		28.6	149	59.4	60	-25 04.1	56	33	26	22 58	1 55	91	20 53	18
23	162	22.9		28.1	164	24.6	62	-24 55.6	58	20 46	21 46	** **	1 31	98	21 12	12
24	177	22.7	-20	27.6	178	49.7	61	-24 47.0	60 S	21 01	22 12	** **	0 58	108	21 34	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 09 ^m 2		Mag: -3.9 PMG: 13 ^h 34 ^m		Mag: +1.4 PMG: 10 ^h 15 ^m		Mag: -1.9 PMG: 8 ^h 51 ^m		Mag: +0.1 PMG: 1 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	117	01.5	156	44.6	-17	08.1	206	07.0	226	55.4
1	132	04.0	171	43.9		07.2	221	07.5	241	57.3
2	147	06.4	186	43.3		06.2	236	07.9	256	59.3
3	162	08.9	201	42.6		05.3	251	08.4	272	01.3
4	177	11.4	216	42.0		04.4	266	08.9	287	03.2
5	192	13.8	231	41.3	-17	03.4	281	09.3	302	05.2
6	207	16.3	246	40.7	-17	02.5	296	09.8	317	07.2
7	222	18.8	261	40.0		01.5	311	10.2	332	09.2
8	237	21.2	276	39.4	-17	00.6	326	10.7	347	11.1
9	252	23.7	291	38.7	-16	59.6	341	11.1	2	13.1
10	267	26.2	306	38.1		58.6	356	11.6	17	15.1
11	282	28.6	321	37.5	-16	57.7	11	12.0	32	17.0
12	297	31.1	336	36.8	-16	56.7	26	12.5	47	19.0
13	312	33.6	351	36.2		55.8	41	12.9	62	21.0
14	327	36.0	6	35.5		54.8	56	13.4	77	22.9
15	342	38.5	21	34.9		53.9	71	13.8	92	24.9
16	357	40.9	36	34.2		52.9	86	14.3	107	26.9
17	12	43.4	51	33.6	-16	52.0	101	14.7	122	28.8
18	27	45.9	66	33.0	-16	51.0	116	15.2	137	30.8
19	42	48.3	81	32.3		50.0	131	15.6	152	32.8
20	57	50.8	96	31.7		49.1	146	16.1	167	34.8
21	72	53.3	111	31.0		48.1	161	16.5	182	36.7
22	87	55.7	126	30.4		47.2	176	17.0	197	38.7
23	102	58.2	141	29.8		46.2	191	17.4	212	40.7
24	118	00.7	156	29.1	-16	45.2	206	17.9	227	42.6
Dif	—		-6		+10		+5		+20	
									-1	
									+26	
									+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 10 ^m 6			Edad: 29 ^d 4 SD: 16'0 PMG: 12 ^h 34 ^m	PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'1 R°: 55 ^m	Náutico		Civil	Hora		R°	Hora	R°				
	hG ☉	Dec												hG ☾	Dif	Dec	Dif
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	177	22.7	-20	178	49.7	-24	47.0	60 N	6 57	7 50	8 42	9 41	3	15 39	111		
1	192	22.6		193	15.0		38.2	58	51	41	28	22	9	15 57	105		
2	207	22.4		207	40.2		29.2	56	46	33	17	9 06	14	16 12	100		
3	222	22.2		222	05.6		20.1	54	41	26	8 07	8 53	18	25	95		
4	237	22.0		236	31.0		10.8	52	37	19	7 58	41	21	37	91		
5	252	21.8	-20	250	56.4	-24	01.4	50	6 33	7 13	7 50	8 30	25	16 47	88		
6	267	21.6	-20	265	22.0	-23	51.8	45	6 24	7 00	7 32	8 08	30	17 08	82		
7	282	21.4		279	47.6		42.1	40	16	6 49	18	7 49	36	25	77		
8	297	21.2		294	13.2		32.2	35	08	39	7 06	34	39	39	73		
9	312	21.0		308	38.9		22.1	30	6 01	30	6 56	7 21	42	17 51	70		
10	327	20.8		323	04.7		11.9	20	5 47	14	38	6 58	48	18 12	64		
11	342	20.6	-20	337	30.5	-23	01.6	10 N	5 34	6 00	6 22	6 38	52	18 30	59		
12	357	20.4	-20	351	56.4	-22	51.1	0	5 19	5 45	6 07	6 20	56	18 47	54		
13	12	20.2		6	22.4		40.4	10 S	5 03	29	5 52	6 01	60	19 03	50		
14	27	20.0		20	48.5		29.6	20	4 43	5 12	36	5 41	65	21	45		
15	42	19.8		35	14.6		18.7	30	18	4 50	17	18	70	41	40		
16	57	19.6		49	40.8	-22	07.6	35	4 02	37	5 06	5 05	72	19 53	36		
17	72	19.4	-20	64	07.0	-21	56.4	40	3 42	4 21	4 53	4 49	76	20 06	32		
18	87	19.3	-20	78	33.3	-21	45.0	45	3 17	4 02	4 38	4 30	81	20 22	27		
19	102	19.1		92	59.7		33.5	50	2 42	3 38	19	4 06	87	41	22		
20	117	18.9		107	26.2		21.9	52	2 23	26	10	3 55	90	20 50	19		
21	132	18.7		121	52.8	-21	10.1	54	1 59	3 12	4 00	42	94	21 00	16		
22	147	18.5		136	19.4	-20	58.2	56	1 24	2 56	3 49	26	99	11	12		
23	162	18.3		150	46.1		46.2	58	** **	35	36	3 09	104	24	7		
24	177	18.1	-20	165	12.8	-20	34.0	60 S	** **	2 09	3 20	2 46	113	21 39	2		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 05 ^m 3			Mag: -3.9 PMG: 13 ^h 35 ^m			Mag: +1.4 PMG: 10 ^h 14 ^m			Mag: -1.9 PMG: 8 ^h 48 ^m			Mag: +0.1 PMG: 1 ^h 52 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	118	00.7		156	29.1	-16	45.2	206	17.9	-23	55.8	227	42.6	-21	30.3		
1	133	03.1		171	28.5		44.3	221	18.3		55.8	242	44.6		30.3		
2	148	05.6		186	27.8		43.3	236	18.8		55.8	257	46.6		30.4		
3	163	08.0		201	27.2		42.3	251	19.2		55.8	272	48.6		30.4		
4	178	10.5		216	26.6		41.4	266	19.7		55.8	287	50.5		30.5		
5	193	13.0		231	25.9	-16	40.4	281	20.1	-23	55.8	302	52.5	-21	30.6		
6	208	15.4		246	25.3	-16	39.4	296	20.6	-23	55.8	317	54.5	-21	30.6		
7	223	17.9		261	24.7		38.5	311	21.0		55.8	332	56.5		30.7		
8	238	20.4		276	24.0		37.5	326	21.5		55.8	347	58.4		30.8		
9	253	22.8		291	23.4		36.5	341	21.9		55.8	3	00.4		30.8		
10	268	25.3		306	22.8		35.5	356	22.4		55.8	18	02.4		30.9		
11	283	27.8		321	22.1	-16	34.6	11	22.8	-23	55.8	33	04.3	-21	30.9		
12	298	30.2		336	21.5	-16	33.6	26	23.3	-23	55.8	48	06.3	-21	31.0		
13	313	32.7		351	20.9		32.6	41	23.7		55.8	63	08.3		31.1		
14	328	35.2		6	20.2		31.6	56	24.2		55.8	78	10.3		31.1		
15	343	37.6		21	19.6		30.7	71	24.7		55.8	93	12.2		31.2		
16	358	40.1		36	19.0		29.7	86	25.1		55.8	108	14.2		31.2		
17	13	42.5	-16	51	18.4	-16	28.7	101	25.5	-23	55.8	123	16.2	-21	31.3		
18	28	45.0		66	17.7	-16	27.7	116	26.0	-23	55.8	138	18.2	-21	31.4		
19	43	47.5		81	17.1		26.8	131	26.4		55.8	153	20.1		31.4		
20	58	49.9		96	16.5		25.8	146	26.9		55.8	168	22.1		31.5		
21	73	52.4		111	15.9		24.8	161	27.3		55.8	183	24.1		31.5		
22	88	54.9		126	15.2		23.8	176	27.8		55.8	198	26.1		31.6		
23	103	57.3		141	14.6		22.8	191	28.2		55.8	213	28.0		31.7		
24	118	59.8	-16	156	14.0	-16	21.8	206	28.7	-23	55.8	228	30.0	-21	31.7		
Dif	—			-6			+10	+5			0	+20			-1	+26	
																+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 10 ^m 9			Edad: 30 ^d 4 PHE { 4 ^h : 59:3 12 ^h : 59:4 20 ^h : 59:5 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	177	18.1	-20	15.0	165	12.8	-20 34.0	60 N	15 43	16 34	17 27	9 44	0	17 30	107		
1	192	17.9		14.5	179	39.6	78 21.7	58	15 56	43	32	31	5	42	101		
2	207	17.7		13.9	194	06.6	80 -20 09.3	56	16 07	51	37	20	10	17 52	97		
3	222	17.5		13.4	208	33.5	79 -19 56.8	54	17	16 58	42	11	13	18 00	94		
4	237	17.4		12.9	223	00.6	81 44.1	52	26	17 04	46	9	02	17	08	90	
5	252	17.2	-20	12.3	237	27.7	81 -19 31.3	50	16 34	17 10	17 50	8	55	19	18 15	87	
6	267	17.0	-20	11.8	251	54.9	82 -19 18.3	45	16 51	17 23	17 59	8	38	25	18 30	80	
7	282	16.8		11.3	266	22.2	83 -19 05.3	40	17 04	34	18 07	25	29		42	75	
8	297	16.6		10.7	280	49.6	84 -18 52.1	35	16	43	14	13	34	18	52	71	
9	312	16.4		10.2	295	17.0	84 38.9	30	26	17 52	21	8	03	37	19	01	67
10	327	16.2		09.6	309	44.5	85 25.5	20	17 44	18 08	35	7	46	42		16	61
11	342	16.0	-20	09.1	324	12.1	86 -18 12.0	10 N	18 00	18 22	18 48	7	30	48	19	29	56
12	357	15.9	-20	08.6	338	39.7	86 -17 58.4	0	18 15	18 37	19 02	7	16	52	19	41	51
13	12	15.7		08.0	353	07.4	87 44.6	10 S	29	18 52	18	7	01	58	19	53	47
14	27	15.5		07.5	7	35.2	88 30.8	20	18 45	19 09	19 38	6	46	62	20	06	41
15	42	15.3		06.9	22	03.1	89 16.8	30	19 04	30	20 02	28	68		21	35	
16	57	15.1		06.4	36	31.0	89 -17 02.8	35	15	43	18	17	72		29	31	
17	72	14.9	-20	05.9	50	59.0	90 -16 48.6	40	19 27	19 58	20 37	6	05	76	20	38	28
18	87	14.8	-20	05.3	65	27.1	91 -16 34.4	45	19 42	20 17	21 02	5	51	81	20	49	23
19	102	14.6		04.8	79	55.3	92 20.0	50	20 00	41	36		33	88	21	03	17
20	117	14.4		04.2	94	23.5	92 -16 05.6	52	09	20 53	21 54	25	91		09	14	
21	132	14.2		03.7	108	51.8	93 -15 51.0	54	19	21 06	22 17	16	94		16	11	
22	147	14.0		03.1	123	20.2	94 36.4	56	30	22	22 49	5	05	98	23	8	
23	162	13.8		02.6	137	48.6	94 21.7	58	42	21 41	** **	4	53	103	31	5	
24	177	13.7	-20	02.0	152	17.1	95 -15 06.8	60 S	20 57	22 06	** **	4	39	109	21	41	0
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 16 ^h 01 ^m 4		Mag: -3.9 PMG: 13 ^h 36 ^m		Mag: +1.4 PMG: 10 ^h 14 ^m		Mag: -1.9 PMG: 8 ^h 45 ^m		Mag: +0.1 PMG: 1 ^h 48 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	118	59.8	156	14.0	-16	21.8	206	28.7	228	30.0							
1	134	02.3	171	13.4		20.9	221	29.1	243	32.0							
2	149	04.7	186	12.7		19.9	236	29.6	258	34.0							
3	164	07.2	201	12.1		18.9	251	30.0	273	35.9							
4	179	09.7	216	11.5		17.9	266	30.5	288	37.9							
5	194	12.1	231	10.9	-16	16.9	281	30.9	303	39.9							
6	209	14.6	246	10.2	-16	15.9	296	31.4	318	41.9							
7	224	17.0	261	09.6		14.9	311	31.8	333	43.8							
8	239	19.5	276	09.0		14.0	326	32.3	348	45.8							
9	254	22.0	291	08.4		13.0	341	32.7	3	47.8							
10	269	24.4	306	07.8		12.0	356	33.2	18	49.8							
11	284	26.9	321	07.1	-16	11.0	11	33.6	33	51.7							
12	299	29.4	336	06.5	-16	10.0	26	34.1	48	53.7							
13	314	31.8	351	05.9		09.0	41	34.5	63	55.7							
14	329	34.3	6	05.3		08.0	56	35.0	78	57.7							
15	344	36.8	21	04.7		07.0	71	35.4	93	59.7							
16	359	39.2	36	04.1		06.0	86	35.9	109	01.6							
17	14	41.7	51	03.5	-16	05.0	101	36.3	124	03.6							
18	29	44.2	66	02.8	-16	04.0	116	36.8	139	05.6							
19	44	46.6	81	02.2		03.0	131	37.2	154	07.6							
20	59	49.1	96	01.6		02.0	146	37.7	169	09.5							
21	74	51.5	111	01.0	-16	01.0	161	38.1	184	11.5							
22	89	54.0	126	00.4	-16	00.0	176	38.6	199	13.5							
23	104	56.5	140	59.8	-15	59.0	191	39.0	214	15.5							
24	119	58.9	155	59.2	-15	58.0	206	39.5	229	17.5							
Dif	—		-6		+10		+4		+20								
							0		-1								
									+26								
									+1								

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 11 ^m 2			Edad: 1 ^d 8 PHE { 4 ^h : 59/6 12 ^h : 59/7 20 ^h : 59/7 R°: 50 ^m	hG ☾ Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾												
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m		
0	177	13.7	-20 02.0	152	17.1	-15 06.8	60 N	6 54	7 47	8 38	9 44 **	19 17	103		
1	192	13.5	01.5	166	45.7	96 -14 51.9 ¹⁴⁹	58	49	38	25	36 4	23	99		
2	207	13.3	00.9	181	14.3	96 36.9 ¹⁵⁰	56	44	31	14	30 7	29	94		
3	222	13.1	-20 00.4	195	43.0	97 21.8 ¹⁵¹	54	40	24	8 04	24 10	34	91		
4	237	12.9	-19 59.8	210	11.8	98 -14 06.7 ¹⁵¹	52	35	17	7 56	19 13	38	88		
5	252	12.8	-19 59.3	224	40.7	99 -13 51.4 ¹⁵³	50	6 32	7 11	7 48	9 14 15	19 42	85		
6	267	12.6	-19 58.7	239	09.6	99 -13 36.1 ¹⁵³	45	6 23	6 59	7 31	9 03 22	19 50	80		
7	282	12.4	58.2	253	38.5	99 20.7 ¹⁵⁴	40	15	48	17	8 54 26	19 57	75		
8	297	12.2	57.6	268	07.6	101 -13 05.2 ¹⁵⁵	35	08	38	7 06	47 30	20 03	70		
9	312	12.0	57.1	282	36.7	101 -12 49.6 ¹⁵⁶	30	6 01	30	6 55	40 34	08	67		
10	327	11.9	56.5	297	05.8	101 34.0 ¹⁵⁶	20	5 47	14	38	28 40	17	60		
11	342	11.7	-19 56.0	311	35.1	103 -12 18.2 ¹⁵⁸	10 N	5 34	6 00	6 22	8 18 45	20 25	55		
12	357	11.5	-19 55.4	326	04.3	102 -12 02.5 ¹⁵⁷	0	5 20	5 46	6 08	8 08 51	20 32	50		
13	12	11.3	54.9	340	33.7	104 -11 46.6 ¹⁵⁹	10 S	5 04	30	5 53	7 59 55	40	44		
14	27	11.1	54.3	355	03.1	104 30.7 ¹⁵⁹	20	4 45	5 13	37	48 61	47	39		
15	42	11.0	53.8	9	32.5	104 -11 14.7 ¹⁶⁰	30	20	4 52	18	36 67	20 56	32		
16	57	10.8	53.2	24	02.0	105 -10 58.7 ¹⁶⁰	35	4 04	39	5 08	29 71	21 00	29		
17	72	10.6	-19 52.6	38	31.6	106 -10 42.6 ¹⁶¹	40	3 45	4 24	4 55	7 21 75	21 06	25		
18	87	10.4	-19 52.1	53	01.2	106 -10 26.4 ¹⁶²	45	3 21	4 05	4 40	7 12 80	21 12	21		
19	102	10.3	51.5	67	30.9	107 -10 10.2 ¹⁶²	50	2 47	3 42	22	7 01 86	20	15		
20	117	10.1	51.0	82	00.6	107 -9 53.9 ¹⁶³	52	29	30	14	6 56 88	23	13		
21	132	09.9	50.4	96	30.4	108 37.5 ¹⁶⁴	54	2 06	17	4 04	50 92	27	10		
22	147	09.7	49.8	111	00.2	108 21.2 ¹⁶³	56	1 34	3 01	3 53	43 96	31	7		
23	162	09.6	49.3	125	30.1	109 -9 04.7 ¹⁶⁵	58	** **	2 41	40	36 100	36	3		
24	177	09.4	-19 48.7	140	00.0	109 -8 48.2 ¹⁶⁵	60 S	** **	2 17	3 25	6 28 104	21 41	**		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 15 ^h 57 ^m 4			Mag: -3.9 PMG: 13 ^h 37 ^m			Mag: +1.4 PMG: 10 ^h 13 ^m			Mag: -1.9 PMG: 8 ^h 42 ^m			Mag: +0.1 PMG: 1 ^h 44 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	°	°	°	'	°	°	'	°	
0	119	58.9	155 59.2	-15 58.0	206 39.5	-23 55.6	229 17.5	-21 33.2	333 57.2	+14 57.4					
1	135	01.4	170 58.6	57.0	221 39.9	55.6	244 19.4	33.2	348 59.9	57.4					
2	150	03.9	185 57.9	56.0	236 40.4	55.5	259 21.4	33.3	4 02.5	57.5					
3	165	06.3	200 57.3	55.0	251 40.8	55.5	274 23.4	33.4	19 05.1	57.6					
4	180	08.8	215 56.7	54.0	266 41.3	55.5	289 25.4	33.4	34 07.8	57.6					
5	195	11.3	230 56.1	-15 53.0	281 41.7	-23 55.5	304 27.4	-21 33.5	49 10.4	+14 57.7					
6	210	13.7	245 55.5	-15 52.0	296 42.2	-23 55.5	319 29.3	-21 33.5	64 13.1	+14 57.8					
7	225	16.2	260 54.9	51.0	311 42.6	55.5	334 31.3	33.6	79 15.7	57.8					
8	240	18.6	275 54.3	50.0	326 43.0	55.4	349 33.3	33.7	94 18.3	57.9					
9	255	21.1	290 53.7	49.0	341 43.5	55.4	4 35.3	33.7	109 21.0	58.0					
10	270	23.6	305 53.1	48.0	356 43.9	55.4	19 37.3	33.8	124 23.6	58.0					
11	285	26.0	320 52.5	-15 47.0	11 44.4	-23 55.4	34 39.2	-21 33.8	139 26.2	+14 58.1					
12	300	28.5	335 51.9	-15 45.9	26 44.8	-23 55.4	49 41.2	-21 33.9	154 28.9	+14 58.2					
13	315	31.0	350 51.3	44.9	41 45.3	55.3	64 43.2	33.9	169 31.5	58.2					
14	330	33.4	5 50.7	43.9	56 45.7	55.3	79 45.2	34.0	184 34.2	58.3					
15	345	35.9	20 50.1	42.9	71 46.2	55.3	94 47.2	34.1	199 36.8	58.4					
16	0	38.4	35 49.5	41.9	86 46.6	55.3	109 49.1	34.1	214 39.4	58.4					
17	15	40.8	50 48.9	-15 40.9	101 47.1	-23 55.3	124 51.1	-21 34.2	229 42.1	+14 58.5					
18	30	43.3	65 48.3	-15 39.9	116 47.5	-23 55.2	139 53.1	-21 34.2	244 44.7	+14 58.6					
19	45	45.8	80 47.7	38.8	131 48.0	55.2	154 55.1	34.3	259 47.3	58.6					
20	60	48.2	95 47.1	37.8	146 48.4	55.2	169 57.1	34.4	274 50.0	58.7					
21	75	50.7	110 46.5	36.8	161 48.9	55.2	184 59.0	34.4	289 52.6	58.7					
22	90	53.1	125 45.9	35.8	176 49.3	55.1	200 01.0	34.5	304 55.3	58.8					
23	105	55.6	140 45.3	34.8	191 49.7	55.1	215 03.0	34.5	319 57.9	58.9					
24	120	58.1	155 44.7	-15 33.8	206 50.2	-23 55.1	230 05.0	-21 34.6	335 00.5	+14 58.9					
Dif	—			-6 +10	+4 0			+20 -1			+26 +1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 2 ^d 8	PHE	SD: 16'3			R ^o : 48 ^m	Civil		Náutico	Hora	R ^o	Hora	R ^o
	hG ☉	Dec								hG ☾	Dif					
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	09.4	-19 48.7	140	00.0	-8 48.2	¹¹⁰	60 N	15 47	16 38	17 31	9 43 **	21 00	101		
1	192	09.2	48.1	154	30.0	31.7	¹⁶⁵	58	16 00	47	36	40 3	02	97		
2	207	09.0	47.6	169	00.0	-8 15.1	¹⁶⁶	56	11	16 54	41	37 6	03	94		
3	222	08.9	47.0	183	30.1	-7 58.5	¹⁶⁶	54	21	17 01	45	34 9	05	90		
4	237	08.7	46.4	198	00.2	41.8	¹⁶⁷	52	29	07	49	32 11	06	87		
5	252	08.5	-19 45.9	212	30.3	-7 25.1	¹⁶⁷	50	16 37	17 13	17 53	9 29 15	21 07	84		
6	267	08.4	-19 45.3	227	00.5	-7 08.3	¹⁶⁸	45	16 53	17 25	18 01	9 25 19	21 10	78		
7	282	08.2	44.7	241	30.7	-6 51.6	¹⁶⁷	40	17 07	36	09	20 25	12	73		
8	297	08.0	44.2	256	01.0	34.7	¹⁶⁹	35	18	45	16	17 28	13	69		
9	312	07.8	43.6	270	31.3	17.9	¹⁶⁸	30	28	17 54	23	14 31	15	65		
10	327	07.7	43.0	285	01.6	-6 01.0	¹⁶⁹	20	17 46	18 09	36	08 38	17	59		
11	342	07.5	-19 42.5	299	32.0	-5 44.1	¹⁶⁹	10 N	18 01	18 23	18 49	9 03 44	21 20	53		
12	357	07.3	-19 41.9	314	02.4	-5 27.1	¹⁷⁰	0	18 15	18 37	19 03	8 59 48	21 22	48		
13	12	07.2	41.3	328	32.8	-5 10.1	¹⁷⁰	10 S	30	18 52	18	54 54	24	43		
14	27	07.0	40.8	343	03.3	-4 53.1	¹⁷⁰	20	18 45	19 09	19 37	49 59	26	37		
15	42	06.8	40.2	357	33.8	36.1	¹⁷⁰	30	19 03	30	20 01	43 66	28	32		
16	57	06.7	39.6	12	04.4	19.1	¹⁷⁰	35	14	42	17	40 69	29	28		
17	72	06.5	-19 39.0	26	34.9	-4 02.0	¹⁷¹	40	19 26	19 57	20 35	8 36 74	21 31	24		
18	87	06.3	-19 38.5	41	05.5	-3 44.9	¹⁷¹	45	19 41	20 15	20 59	8 32 79	21 33	19		
19	102	06.2	37.9	55	36.1	27.8	¹⁷¹	50	19 58	38	21 32	27 84	35	14		
20	117	06.0	37.3	70	06.7	-3 10.7	¹⁷¹	52	20 07	20 50	21 50	24 88	36	11		
21	132	05.8	36.7	84	37.4	-2 53.6	¹⁷¹	54	16	21 03	22 11	22 90	37	9		
22	147	05.7	36.2	99	08.1	36.4	¹⁷²	56	27	18	22 41	19 93	38	6		
23	162	05.5	35.6	113	38.8	19.3	¹⁷¹	58	39	21 36	23 33	16 97	39	3		
24	177	05.3	-19 35.0	128	09.5	-2 02.1	¹⁷²	60 S	20 53	22 00	** **	8 12 101	21 40	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 53 ^m 5		Mag: -3.9 PMG: 13 ^h 38 ^m			Mag: +1.4 PMG: 10 ^h 12 ^m			Mag: -1.9 PMG: 8 ^h 39 ^m			Mag: +0.1 PMG: 1 ^h 40 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	120	58.1	155	44.7	-15 33.8	206	50.2	-23 55.1	230	05.0	-21 34.6	335	00.5	+14 58.9		
1	136	00.5	170	44.1	32.7	221	50.6	55.1	245	07.0	34.7	350	03.2	59.0		
2	151	03.0	185	43.5	31.7	236	51.1	55.0	260	09.0	34.7	5	05.8	59.1		
3	166	05.5	200	42.9	30.7	251	51.5	55.0	275	10.9	34.8	20	08.5	59.1		
4	181	07.9	215	42.3	29.7	266	52.0	55.0	290	12.9	34.8	35	11.1	59.2		
5	196	10.4	230	41.7	-15 28.6	281	52.4	-23 55.0	305	14.9	-21 34.9	50	13.7	+14 59.3		
6	211	12.9	245	41.1	-15 27.6	296	52.9	-23 54.9	320	16.9	-21 34.9	65	16.4	+14 59.3		
7	226	15.3	260	40.5	26.6	311	53.3	54.9	335	18.9	35.0	80	19.0	59.4		
8	241	17.8	275	39.9	25.6	326	53.8	54.9	350	20.9	35.1	95	21.7	59.5		
9	256	20.3	290	39.3	24.5	341	54.2	54.8	5	22.8	35.1	110	24.3	59.5		
10	271	22.7	305	38.7	23.5	356	54.7	54.8	20	24.8	35.2	125	26.9	59.6		
11	286	25.2	320	38.1	-15 22.5	11	55.1	-23 54.8	35	26.8	-21 35.2	140	29.6	+14 59.7		
12	301	27.6	335	37.6	-15 21.5	26	55.5	-23 54.8	50	28.8	-21 35.3	155	32.2	+14 59.7		
13	316	30.1	350	37.0	20.4	41	56.0	54.7	65	30.8	35.4	170	34.9	59.8		
14	331	32.6	5	36.4	19.4	56	56.4	54.7	80	32.8	35.4	185	37.5	59.9		
15	346	35.0	20	35.8	18.4	71	56.9	54.7	95	34.7	35.5	200	40.1	+14 59.9		
16	1	37.5	35	35.2	17.3	86	57.3	54.6	110	36.7	35.5	215	42.8	+15 00.0		
17	16	40.0	50	34.6	-15 16.3	101	57.8	-23 54.6	125	38.7	-21 35.6	230	45.4	+15 00.1		
18	31	42.4	65	34.0	-15 15.3	116	58.2	-23 54.6	140	40.7	-21 35.6	245	48.1	+15 00.1		
19	46	44.9	80	33.4	14.2	131	58.7	54.5	155	42.7	35.7	260	50.7	00.2		
20	61	47.4	95	32.9	13.2	146	59.1	54.5	170	44.7	35.8	275	53.3	00.3		
21	76	49.8	110	32.3	12.2	161	59.6	54.5	185	46.7	35.8	290	56.0	00.3		
22	91	52.3	125	31.7	11.1	177	00.0	54.4	200	48.6	35.9	305	58.6	00.4		
23	106	54.7	140	31.1	10.1	192	00.5	54.4	215	50.6	35.9	321	01.3	00.5		
24	121	57.2	155	30.5	-15 09.1	207	00.9	-23 54.4	230	52.6	-21 36.0	336	03.9	+15 00.5		
Dif	—		-6		+10	+4		0	+20		-1	+26		+1		

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: 3 ^d 8 SD: 16/3 PMG: 15 ^h 58 ^m	PHE { 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/6 R°: 49 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	05.3	-19 35.0	128	09.5	-2 02.1	172	60 N	6 52	7 44	8 34	9 42	0	22 41	102
1	192	05.2	34.4	142	40.2 ¹¹⁷	-1 44.9 ¹⁷²	172	58	46	36	22	43	3	39	97
2	207	05.0	33.8	157	11.0 ¹¹⁸	27.7 ¹⁷²	172	56	42	28	11	43	6	37	93
3	222	04.8	33.3	171	41.7 ¹¹⁷	-1 10.6 ¹⁷¹	171	54	38	21	8 02	43	9	35	90
4	237	04.7	32.7	186	12.5 ¹¹⁸	-0 53.4 ¹⁷²	172	52	34	15	7 53	43	12	33	87
5	252	04.5	-19 32.1	200	43.3 ¹¹⁸	-0 36.2 ¹⁷²	172	50	6 30	7 10	7 46	9 44	14	22 31	85
6	267	04.3	-19 31.5	215	14.1 ¹¹⁸	-0 19.0 ¹⁷²	172	45	6 21	6 57	7 29	9 44	20	22 28	78
7	282	04.2	30.9	229	44.9 ¹¹⁸	-0 01.8 ¹⁷²	172	40	14	47	16	45	24	25	73
8	297	04.0	30.4	244	15.7 ¹¹⁸	+0 15.4 ¹⁷²	172	35	07	38	7 05	45	28	22	70
9	312	03.9	29.8	258	46.5 ¹¹⁸	32.6 ¹⁷²	172	30	6 00	29	6 55	45	32	20	66
10	327	03.7	29.2	273	17.4 ¹¹⁹	+0 49.7 ¹⁷¹	171	20	5 47	14	38	46	38	16	60
11	342	03.5	-19 28.6	287	48.2 ¹¹⁸	+1 06.9 ¹⁷²	172	10 N	5 35	6 00	6 22	9 47	43	22 13	54
12	357	03.4	-19 28.0	302	19.0 ¹¹⁸	+1 24.0 ¹⁷¹	171	0	5 21	5 46	6 08	9 47	48	22 10	49
13	12	03.2	27.4	316	49.9 ¹¹⁹	41.2 ¹⁷²	172	10 S	5 05	31	5 54	48	53	07	44
14	27	03.0	26.8	331	20.7 ¹¹⁸	+1 58.3 ¹⁷¹	171	20	4 46	5 14	38	48	59	03	39
15	42	02.9	26.3	345	51.5 ¹¹⁸	+2 15.4 ¹⁷¹	171	30	22	4 54	20	49	65	22 00	32
16	57	02.7	25.7	0	22.4 ¹¹⁹	32.5 ¹⁷¹	171	35	4 07	41	5 10	49	70	21 57	29
17	72	02.6	-19 25.1	14	53.2 ¹¹⁸	+2 49.6 ¹⁷¹	171	40	3 48	4 27	4 58	9 50	73	21 55	25
18	87	02.4	-19 24.5	29	24.0 ¹¹⁸	+3 06.6 ¹⁷⁰	170	45	3 24	4 09	4 43	9 51	78	21 52	21
19	102	02.2	23.9	43	54.8 ¹¹⁸	23.7 ¹⁷¹	171	50	2 51	3 45	25	51	84	49	15
20	117	02.1	23.3	58	25.6 ¹¹⁸	40.7 ¹⁷⁰	170	52	34	34	17	52	86	47	13
21	132	01.9	22.7	72	56.4 ¹¹⁸	+3 57.7 ¹⁷⁰	170	54	2 12	21	4 08	52	90	46	9
22	147	01.8	22.1	87	27.2 ¹¹⁸	+4 14.6 ¹⁶⁹	169	56	1 43	3 06	3 57	52	94	44	6
23	162	01.6	21.5	101	58.0 ¹¹⁸	31.6 ¹⁷⁰	170	58	0 51	2 47	45	53	97	42	3
24	177	01.5	-19 20.9	116	28.7 ¹¹⁷	+4 48.5 ¹⁶⁹	169	60 S	** **	2 24	3 31	9 53	102	21 39	0
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 49 ^m 6		Mag: -3.9 PMG: 13 ^h 38 ^m			Mag: +1.4 PMG: 10 ^h 12 ^m			Mag: -1.9 PMG: 8 ^h 35 ^m			Mag: +0.1 PMG: 1 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	121	57.2	155 30.5	-15 09.1	207 00.9	-23 54.4	230 52.6	-21 36.0	336 03.9	+15 00.5					
1	136	59.7	170 29.9	08.0	222 01.3	54.3	245 54.6	36.0	351 06.5	00.6					
2	152	02.1	185 29.3	07.0	237 01.8	54.3	260 56.6	36.1	6 09.2	00.7					
3	167	04.6	200 28.8	06.0	252 02.2	54.2	275 58.6	36.2	21 11.8	00.7					
4	182	07.1	215 28.2	04.9	267 02.7	54.2	291 00.6	36.2	36 14.5	00.8					
5	197	09.5	230 27.6	-15 03.9	282 03.1	-23 54.2	306 02.6	-21 36.3	51 17.1	+15 00.9					
6	212	12.0	245 27.0	-15 02.8	297 03.6	-23 54.1	321 04.5	-21 36.3	66 19.8	+15 00.9					
7	227	14.5	260 26.4	01.8	312 04.0	54.1	336 06.5	36.4	81 22.4	01.0					
8	242	16.9	275 25.9	-15 00.7	327 04.5	54.1	351 08.5	36.4	96 25.0	01.1					
9	257	19.4	290 25.3	-14 59.7	342 04.9	54.0	6 10.5	36.5	111 27.7	01.1					
10	272	21.9	305 24.7	58.7	357 05.3	54.0	21 12.5	36.6	126 30.3	01.2					
11	287	24.3	320 24.1	-14 57.6	12 05.8	-23 53.9	36 14.5	-21 36.6	141 33.0	+15 01.3					
12	302	26.8	335 23.5	-14 56.6	27 06.2	-23 53.9	51 16.5	-21 36.7	156 35.6	+15 01.3					
13	317	29.2	350 23.0	55.5	42 06.7	53.9	66 18.5	36.7	171 38.2	01.4					
14	332	31.7	5 22.4	54.5	57 07.1	53.8	81 20.4	36.8	186 40.9	01.5					
15	347	34.2	20 21.8	53.4	72 07.6	53.8	96 22.4	36.8	201 43.5	01.5					
16	2	36.6	35 21.2	52.4	87 08.0	53.7	111 24.4	36.9	216 46.2	01.6					
17	17	39.1	50 20.7	-14 51.3	102 08.5	-23 53.7	126 26.4	-21 37.0	231 48.8	+15 01.7					
18	32	41.6	65 20.1	-14 50.3	117 08.9	-23 53.6	141 28.4	-21 37.0	246 51.5	+15 01.7					
19	47	44.0	80 19.5	49.2	132 09.3	53.6	156 30.4	37.1	261 54.1	01.8					
20	62	46.5	95 18.9	48.2	147 09.8	53.6	171 32.4	37.1	276 56.7	01.9					
21	77	49.0	110 18.4	47.1	162 10.2	53.5	186 34.4	37.2	291 59.4	01.9					
22	92	51.4	125 17.8	46.1	177 10.7	53.5	201 36.4	37.2	307 02.0	02.0					
23	107	53.9	140 17.2	45.0	192 11.1	53.4	216 38.3	37.3	322 04.7	02.1					
24	122	56.4	155 16.7	-14 44.0	207 11.6	-23 53.4	231 40.3	-21 37.4	337 07.3	+15 02.1					
Dif	—		-6	+10	+4	0	+20	-1	+26	+1					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 0			Edad: 4 ^d 8 PHE { SD: 16'2 PMG: 16 ^h 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	01.5	-19 20.9	116	28.7	+4 48.5	60 N	15 52	16 42	17 35	9 42	**	**	**	**
1	192	01.3	20.3	130	59.5 ¹¹⁸	+5 05.3 ¹⁶⁸	58	16 05	51	40	46	3	**	**	**
2	207	01.1	19.8	145	30.2 ¹¹⁷	22.2 ¹⁶⁹	56	15	16 58	44	49	7	**	**	**
3	222	01.0	19.2	160	00.9 ¹¹⁷	39.0 ¹⁶⁸	54	24	17 05	48	52	11	**	**	**
4	237	00.8	18.6	174	31.6 ¹¹⁷	+5 55.8 ¹⁶⁸	52	33	11	52	55	14	**	**	**
5	252	00.7	-19 18.0	189	02.3 ¹¹⁷	+6 12.5 ¹⁶⁷	50	16 40	17 16	17 56	9 58	16	23	56	85
6	267	00.5	-19 17.4	203	32.9 ¹¹⁶	+6 29.2 ¹⁶⁷	45	16 56	17 28	18 04	10 04	21	23	46	79
7	282	00.4	16.8	218	03.5 ¹¹⁶	+6 45.9 ¹⁶⁷	40	17 09	38	11	09	26	38	75	
8	297	00.2	16.2	232	34.1 ¹¹⁶	+7 02.5 ¹⁶⁶	35	20	47	18	13	30	32	70	
9	312	00.1	15.6	247	04.7 ¹¹⁶	19.1 ¹⁶⁶	30	30	17 55	24	17	34	26	66	
10	326	59.9	15.0	261	35.3 ¹¹⁶	35.6 ¹⁶⁵	20	17 47	18 10	37	24	39	16	60	
11	341	59.8	-19 14.4	276	05.8 ¹¹⁵	+7 52.1 ¹⁶⁵	10 N	18 02	18 24	18 49	10 30	44	23	07	55
12	356	59.6	-19 13.8	290	36.3 ¹¹⁵	+8 08.6 ¹⁶⁵	0	18 16	18 38	19 03	10 35	50	22	59	50
13	11	59.4	13.2	305	06.8 ¹¹⁵	24.9 ¹⁶³	10 S	30	18 52	18	41	55	51	45	
14	26	59.3	12.6	319	37.2 ¹¹⁴	41.3 ¹⁶⁴	20	18 45	19 09	19 37	47	60	42	41	
15	41	59.1	12.0	334	07.6 ¹¹⁴	+8 57.6 ¹⁶³	30	19 03	29	20 00	54	66	32	35	
16	56	59.0	11.4	348	38.0 ¹¹⁴	+9 13.8 ¹⁶²	35	13	41	15	10 59	69	26	32	
17	71	58.8	-19 10.8	3	08.3 ¹¹³	+9 30.0 ¹⁶²	40	19 25	19 55	20 34	11 03	74	22	20	28
18	86	58.7	-19 10.2	17	38.6 ¹¹³	+9 46.1 ¹⁶¹	45	19 39	20 13	20 57	11 09	79	22	13	22
19	101	58.5	09.6	32	08.8 ¹¹²	+10 02.2 ¹⁶¹	50	19 56	36	21 29	15	85	04	17	
20	116	58.4	08.9	46	39.1 ¹¹³	18.2 ¹⁶⁰	52	20 04	47	21 45	18	88	22	00	14
21	131	58.2	08.3	61	09.2 ¹¹¹	34.2 ¹⁶⁰	54	13	20 59	22 06	22	91	21	55	12
22	146	58.1	07.7	75	39.4 ¹¹²	+10 50.1 ¹⁵⁹	56	23	21 14	22 33	26	94	50	8	
23	161	57.9	07.1	90	09.5 ¹¹¹	+11 05.9 ¹⁵⁸	58	35	31	23 16	30	99	45	4	
24	176	57.8	-19 06.5	104	39.5 ¹¹⁰	+11 21.7 ¹⁵⁸	60 S	20 49	21 53	** **	11 35	103	21	39	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 45 ^m 7		Mag: -3.9 PMG: 13 ^h 39 ^m			Mag: +1.4 PMG: 10 ^h 11 ^m			Mag: -1.9 PMG: 8 ^h 32 ^m			Mag: +0.1 PMG: 1 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	122	56.4	155 16.7	-14 44.0	207 11.6	-23 53.4	231 40.3	-21 37.4	337 07.3	+15 02.1					
1	137	58.8	170 16.1	42.9	222 12.0	53.3	246 42.3	37.4	352 10.0	02.2					
2	153	01.3	185 15.5	41.9	237 12.5	53.3	261 44.3	37.5	7 12.6	02.3					
3	168	03.7	200 15.0	40.8	252 12.9	53.2	276 46.3	37.5	22 15.2	02.3					
4	183	06.2	215 14.4	39.8	267 13.3	53.2	291 48.3	37.6	37 17.9	02.4					
5	198	08.7	230 13.8	-14 38.7	282 13.8	-23 53.1	306 50.3	-21 37.6	52 20.5	+15 02.5					
6	213	11.1	245 13.3	-14 37.6	297 14.2	-23 53.1	321 52.3	-21 37.7	67 23.2	+15 02.5					
7	228	13.6	260 12.7	36.6	312 14.7	53.0	336 54.3	37.7	82 25.8	02.6					
8	243	16.1	275 12.1	35.5	327 15.1	53.0	351 56.3	37.8	97 28.5	02.7					
9	258	18.5	290 11.6	34.5	342 15.6	52.9	6 58.3	37.9	112 31.1	02.7					
10	273	21.0	305 11.0	33.4	357 16.0	52.9	22 00.3	37.9	127 33.8	02.8					
11	288	23.5	320 10.4	-14 32.3	12 16.5	-23 52.8	37 02.2	-21 38.0	142 36.4	+15 02.9					
12	303	25.9	335 09.9	-14 31.3	27 16.9	-23 52.8	52 04.2	-21 38.0	157 39.0	+15 02.9					
13	318	28.4	350 09.3	30.2	42 17.3	52.7	67 06.2	38.1	172 41.7	03.0					
14	333	30.8	5 08.7	29.2	57 17.8	52.7	82 08.2	38.1	187 44.3	03.1					
15	348	33.3	20 08.2	28.1	72 18.2	52.6	97 10.2	38.2	202 47.0	03.1					
16	3	35.8	35 07.6	27.0	87 18.7	52.6	112 12.2	38.2	217 49.6	03.2					
17	18	38.2	50 07.0	-14 26.0	102 19.1	-23 52.5	127 14.2	-21 38.3	232 52.3	+15 03.3					
18	33	40.7	65 06.5	-14 24.9	117 19.6	-23 52.5	142 16.2	-21 38.4	247 54.9	+15 03.3					
19	48	43.2	80 05.9	23.8	132 20.0	52.4	157 18.2	38.4	262 57.6	03.4					
20	63	45.6	95 05.4	22.8	147 20.4	52.4	172 20.2	38.5	278 00.2	03.5					
21	78	48.1	110 04.8	21.7	162 20.9	52.3	187 22.2	38.5	293 02.8	03.5					
22	93	50.6	125 04.2	20.6	177 21.3	52.3	202 24.2	38.6	308 05.5	03.6					
23	108	53.0	140 03.7	19.6	192 21.8	52.2	217 26.2	38.6	323 08.1	03.7					
24	123	55.5	155 03.1	-14 18.5	207 22.2	-23 52.1	232 28.2	-21 38.7	338 10.8	+15 03.7					
Dif	—		-6	+11	+4	+1	+20	-1	+26	+1					

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 12 ^m 5			Edad: 6 ^d 8 PHE { 4 ^h : 58/9 12 ^h : 58/8 20 ^h : 58/7 PMG: 18 ^h 30 ^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	176	54.3	-18	51.7	92	25.1	+17 16.7	60 N	15 58	16 47	17 39	9 42 3	2 08 109	
1	191	54.2		51.1	106	53.7	96 30.3	58	16 09	16 55	43	9 55 10	1 56 102	
2	206	54.0		50.5	121	22.3	96 43.9	56	19	17 02	48	10 06 15	46 96	
3	221	53.9		49.9	135	50.8	95 +17 57.3	54	28	08	51	16 19	36 93	
4	236	53.8		49.2	150	19.3	95 +18 10.7	52	36	14	55	25 23	28 89	
5	251	53.6	-18	48.6	164	47.6	93 +18 23.9	50	16 43	17 19	17 58	10 33 26	1 21 86	
6	266	53.5	-18	48.0	179	15.9	93 +18 37.1	45	16 59	17 31	18 06	10 50 32	1 05 80	
7	281	53.4		47.4	193	44.2	93 +18 50.1	40	17 11	40	13	11 05 35	0 53 74	
8	296	53.2		46.7	208	12.3	91 +19 03.0	35	22	49	20	17 39	42 71	
9	311	53.1		46.1	222	40.4	91 15.8	30	32	17 57	26	27 42	32 68	
10	326	52.9		45.5	237	08.5	91 28.5	20	17 48	18 11	38	11 46 47	16 63	
11	341	52.8	-18	44.9	251	36.4	89 +19 41.1	10 N	18 02	18 25	18 50	12 02 51	0 02 58	
12	356	52.7	-18	44.2	266	04.3	89 +19 53.5	0	18 16	18 38	19 03	12 17 55	** ** *	
13	11	52.5		43.6	280	32.1	88 +20 05.8	10 S	30	18 52	18	32 59	** ** *	
14	26	52.4		43.0	294	59.9	88 18.1	20	18 45	19 08	36	12 49 63	** ** *	
15	41	52.3		42.3	309	27.5	86 30.2	30	19 02	28	19 59	13 08 68	23 46 45	
16	56	52.1		41.7	323	55.1	86 42.1	35	12	40	20 14	19 71	34 42	
17	71	52.0	-18	41.1	338	22.7	86 +20 54.0	40	19 23	19 54	20 31	13 32 74	23 20 39	
18	86	51.9	-18	40.4	352	50.1	84 +21 05.7	45	19 37	20 11	20 54	13 47 79	23 03 35	
19	101	51.7		39.8	7	17.5	84 17.3	50	19 53	33	21 25	14 06 85	22 43 29	
20	116	51.6		39.2	21	44.8	83 28.8	52	20 01	43	21 41	15 88	33 27	
21	131	51.5		38.5	36	12.0	82 40.1	54	10	20 55	22 00	25 92	22 23	
22	146	51.3		37.9	50	39.2	82 +21 51.3	56	20	21 09	22 25	37 96	22 10 19	
23	161	51.2		37.3	65	06.3	81 +22 02.4	58	31	26	23 02	14 50 102	21 56 13	
24	176	51.1	-18	36.6	79	33.3	80 +22 13.4	60 S	20 44	21 47	** **	15 06 111	21 40 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 37 ^m 8		Mag: -3.9 PMG: 13 ^h 41 ^m		Mag: +1.4 PMG: 10 ^h 10 ^m		Mag: -1.9 PMG: 8 ^h 26 ^m		Mag: +0.1 PMG: 1 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	124	54.6	154	49.9	207	32.8	233	16.1	339	14.3
1	139	57.1	169	49.4	222	33.3	248	18.1	354	16.9
2	154	59.6	184	48.8	237	33.7	263	20.1	9	19.6
3	170	02.0	199	48.3	252	34.2	278	22.1	24	22.2
4	185	04.5	214	47.7	267	34.6	293	24.1	39	24.9
5	200	06.9	229	47.2	282	35.1	308	26.1	54	27.5
6	215	09.4	244	46.6	297	35.5	323	28.1	69	30.2
7	230	11.9	259	46.1	312	35.9	338	30.1	84	32.8
8	245	14.3	274	45.6	327	36.4	353	32.1	99	35.5
9	260	16.8	289	45.0	342	36.8	8	34.1	114	38.1
10	275	19.3	304	44.5	357	37.3	23	36.1	129	40.8
11	290	21.7	319	43.9	12	37.7	38	38.1	144	43.4
12	305	24.2	334	43.4	27	38.1	53	40.1	159	46.1
13	320	26.7	349	42.9	42	38.6	68	42.1	174	48.7
14	335	29.1	4	42.3	57	39.0	83	44.1	189	51.4
15	350	31.6	19	41.8	72	39.5	98	46.1	204	54.0
16	5	34.1	34	41.3	87	39.9	113	48.1	219	56.7
17	20	36.5	49	40.7	102	40.4	128	50.1	234	59.3
18	35	39.0	64	40.2	117	40.8	143	52.1	250	01.9
19	50	41.4	79	39.7	132	41.2	158	54.1	265	04.6
20	65	43.9	94	39.1	147	41.7	173	56.1	280	07.2
21	80	46.4	109	38.6	162	42.1	188	58.1	295	09.9
22	95	48.8	124	38.1	177	42.6	204	00.1	310	12.5
23	110	51.3	139	37.5	192	43.0	219	02.1	325	15.2
24	125	53.8	154	37.0	207	43.4	234	04.1	340	17.8
Dif	—		-5		+11		+20		+26	

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: 7 ^d 8 PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'2 R ^o : 59 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	176	51.1	-18	36.6	79	33.3	+22	13.4	60 N	6 45	7 37	8 26	9 45	9	3 57	109				
1	191	50.9		36.0	94	00.3	80	24.2	58	41	29	15	10 05	19	38	100				
2	206	50.8		35.4	108	27.1	78	34.8	56	37	22	8 05	21	25	22	94				
3	221	50.7		34.7	122	53.9	78	45.4	54	33	16	7 56	35	29	3 09	89				
4	236	50.5		34.1	137	20.7	78	+22 55.8	52	29	11	48	48	32	2 57	85				
5	251	50.4	-18	33.4	151	47.3	76	+23 06.0	50	6 26	7 05	7 41	10 59	35	2 47	82				
6	266	50.3	-18	32.8	166	13.9	76	+23 16.2	45	6 18	6 54	7 26	11 22	39	2 25	77				
7	281	50.2		32.2	180	40.4	75	26.1	40	12	44	13	40	44	2 07	74				
8	296	50.0		31.5	195	06.9	75	36.0	35	6 05	36	7 03	11 56	46	1 53	70				
9	311	49.9		30.9	209	33.2	73	45.7	30	5 59	28	6 53	12 09	49	40	68				
10	326	49.8		30.2	223	59.6	74	+23 55.2	20	47	14	37	33	52	19	63				
11	341	49.6	-18	29.6	238	25.8	72	+24 04.6	10 N	5 35	6 01	6 23	12 53	55	1 00	60				
12	356	49.5	-18	28.9	252	52.0	72	+24 13.9	0	5 22	5 47	6 09	13 12	58	0 43	56				
13	11	49.4		28.3	267	18.1	71	23.0	10 S	5 07	33	5 56	31	60	25	54				
14	26	49.3		27.7	281	44.1	70	31.9	20	4 49	5 17	41	13 52	63	0 07	50				
15	41	49.1		27.0	296	10.1	70	40.7	30	26	4 58	24	14 16	66	** ** *	**				
16	56	49.0		26.4	310	36.0	69	49.4	35	4 12	46	14	30	69	** ** *	**				
17	71	48.9	-18	25.7	325	01.8	68	+24 57.9	40	3 54	4 32	5 02	14 46	72	23 59	48				
18	86	48.8	-18	25.1	339	27.6	68	+25 06.2	45	3 32	4 15	4 49	15 06	75	23 38	45				
19	101	48.6		24.4	353	53.3	67	14.4	50	3 01	3 53	32	31	79	12	41				
20	116	48.5		23.8	8	19.0	67	22.4	52	2 45	43	24	43	82	23 00	39				
21	131	48.4		23.1	22	44.6	66	30.3	54	26	30	16	15 57	85	22 45	36				
22	146	48.3		22.5	37	10.1	65	38.0	56	2 01	16	4 06	16 13	89	29	32				
23	161	48.1		21.8	51	35.6	65	45.6	58	1 24	3 00	3 55	32	96	22 09	26				
24	176	48.0	-18	21.2	66	01.0	64	+25 53.0	60 S	** ** *	2 39	3 42	16 57	107	21 44	14				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 33 ^m 9				Mag: -3.9 PMG: 13 ^h 42 ^m				Mag: +1.4 PMG: 10 ^h 09 ^m				Mag: -1.9 PMG: 8 ^h 23 ^m				Mag: 0.0 PMG: 1 ^h 19 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	125	53.8	154	37.0	-13	26.4	207	43.4	-23	48.9	234	04.1	-21	41.3	340	17.8	+15	07.0		
1	140	56.2	169	36.5		25.3	222	43.9		48.9	249	06.1		41.3	355	20.5		07.0		
2	155	58.7	184	35.9		24.2	237	44.3		48.8	264	08.1		41.4	10	23.1		07.1		
3	171	01.2	199	35.4		23.1	252	44.8		48.7	279	10.1		41.4	25	25.8		07.2		
4	186	03.6	214	34.9		22.0	267	45.2		48.6	294	12.1		41.5	40	28.4		07.3		
5	201	06.1	229	34.3	-13	20.8	282	45.7	-23	48.5	309	14.1	-21	41.6	55	31.1	+15	07.3		
6	216	08.6	244	33.8	-13	19.7	297	46.1	-23	48.5	324	16.1	-21	41.6	70	33.7	+15	07.4		
7	231	11.0	259	33.3		18.6	312	46.5		48.4	339	18.1		41.7	85	36.4		07.5		
8	246	13.5	274	32.7		17.5	327	47.0		48.3	354	20.1		41.7	100	39.0		07.5		
9	261	15.9	289	32.2		16.4	342	47.4		48.2	9	22.1		41.8	115	41.7		07.6		
10	276	18.4	304	31.7		15.3	357	47.9		48.1	24	24.1		41.8	130	44.3		07.7		
11	291	20.9	319	31.2	-13	14.2	12	48.3	-23	48.1	39	26.1	-21	41.9	145	47.0	+15	07.7		
12	306	23.3	334	30.6	-13	13.1	27	48.7	-23	48.0	54	28.1	-21	41.9	160	49.6	+15	07.8		
13	321	25.8	349	30.1		12.0	42	49.2		47.9	69	30.1		42.0	175	52.3		07.9		
14	336	28.3	4	29.6		10.9	57	49.6		47.8	84	32.1		42.0	190	54.9		07.9		
15	351	30.7	19	29.1		09.8	72	50.1		47.7	99	34.1		42.1	205	57.6		08.0		
16	6	33.2	34	28.5		08.7	87	50.5		47.6	114	36.1		42.1	221	00.2		08.1		
17	21	35.7	49	28.0	-13	07.6	102	51.0	-23	47.6	129	38.1	-21	42.2	236	02.9	+15	08.1		
18	36	38.1	64	27.5	-13	06.4	117	51.4	-23	47.5	144	40.1	-21	42.2	251	05.5	+15	08.2		
19	51	40.6	79	27.0		05.3	132	51.8		47.4	159	42.1		42.3	266	08.2		08.3		
20	66	43.0	94	26.5		04.2	147	52.3		47.3	174	44.2		42.3	281	10.8		08.3		
21	81	45.5	109	25.9		03.1	162	52.7		47.2	189	46.2		42.4	296	13.5		08.4		
22	96	48.0	124	25.4		02.0	177	53.2		47.1	204	48.2		42.4	311	16.1		08.5		
23	111	50.4	139	24.9	-13	00.9	192	53.6		47.0	219	50.2		42.5	326	18.8		08.5		
24	126	52.9	154	24.4	-12	59.8	207	54.0	-23	47.0	234	52.2	-21	42.5	341	21.4	+15	08.6		
Dif	—				-5 +11				+4 +1				+20 -1				+26 +1			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 9				Edad: 8 ^d 8 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 9 SD: 15 ^h 8 PMG: 20 ^h 24 ^m R°: 59 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	176	48.0	-18	21.2	66	01.0	+25	53.0	60 N	16 03	16 51	17 43	9 54 28		5 46 96					
1	191	47.9		20.5	80	26.4	64	+26	00.2	58	14	16 59	47	10 24 36	5 18 86					
2	206	47.8		19.9	94	51.7	63		07.3	56	24	17 06	51	10 46 42	4 56 81					
3	221	47.6		19.2	109	17.0	63		14.2	54	32	12	55	11 04 45	38 78					
4	236	47.5		18.6	123	42.2	62		20.9	52	40	17	58	20 47	22 76					
5	251	47.4	-18	17.9	138	07.4	62	+26	27.5	50	16 47	17 22	18 01	11 34 48	4 09 74					
6	266	47.3	-18	17.3	152	32.5	61	+26	33.9	45	17 02	17 33	18 09	12 01 51	3 42 71					
7	281	47.2		16.6	166	57.5	60		40.2	40	14	43	15	24 52	21 68					
8	296	47.0		16.0	181	22.5	60		46.3	35	24	51	22	42 54	3 03 66					
9	311	46.9		15.3	195	47.5	60		52.2	30	33	17 59	27	12 58 55	2 48 65					
10	326	46.8		14.6	210	12.4	59	+26	57.9	20	17 49	18 12	39	13 25 56	22 63					
11	341	46.7	-18	14.0	224	37.3	59	+27	03.5	10 N	18 03	18 25	18 51	13 48 58	2 00 60					
12	356	46.6	-18	13.3	239	02.2	59	+27	08.9	0	18 16	18 38	19 03	14 10 59	1 39 59					
13	11	46.4		12.7	253	27.0	58		14.1	10 S	30	18 52	18	31 61	1 19 56					
14	26	46.3		12.0	267	51.8	58		19.2	20	18 44	19 08	35	14 55 61	0 57 54					
15	41	46.2		11.4	282	16.5	57		24.1	30	19 01	27	19 58	15 22 63	31 52					
16	56	46.1		10.7	296	41.2	57		28.8	35	10	38	20 12	39 63	0 16 50					
17	71	46.0	-18	10.0	311	05.9	57	+27	33.4	40	19 22	19 52	20 29	15 58 64	** ** *					
18	86	45.9	-18	09.4	325	30.5	56	+27	37.7	45	19 35	20 08	20 51	16 21 65	** ** *					
19	101	45.7		08.7	339	55.1	56		41.9	50	51	30	21 21	16 50 67	23 53 56					
20	116	45.6		08.1	354	19.7	56		46.0	52	19 58	40	36	17 05 68	39 54					
21	131	45.5		07.4	8	44.3	56		49.8	54	20 07	20 51	21 54	22 69	21 54					
22	146	45.4		06.7	23	08.8	55		53.5	56	16	21 05	22 18	17 42 71	23 01 52					
23	161	45.3		06.1	37	33.3	55	+27	57.0	58	27	21	22 50	18 08 74	22 35 50					
24	176	45.2	-18	05.4	51	57.8	55	+28	00.3	60 S	20 40	21 40	** ** *	18 44 80	21 58 45					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 29 ^m 9				Mag: -3.9 PMG: 13 ^h 43 ^m				Mag: +1.4 PMG: 10 ^h 08 ^m				Mag: -1.9 PMG: 8 ^h 19 ^m				Mag: 0.0 PMG: 1 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	126	52.9	154	24.4	-12	59.8	207	54.0	-23	47.0	234	52.2	-21	42.5	341	21.4	+15	08.6		
1	141	55.4	169	23.9		58.6	222	54.5		46.9	249	54.2		42.6	356	24.1		08.7		
2	156	57.8	184	23.3		57.5	237	54.9		46.8	264	56.2		42.7	11	26.7		08.8		
3	172	00.3	199	22.8		56.4	252	55.4		46.7	279	58.2		42.7	26	29.4		08.8		
4	187	02.8	214	22.3		55.3	267	55.8		46.6	295	00.2		42.8	41	32.0		08.9		
5	202	05.2	229	21.8	-12	54.2	282	56.2	-23	46.5	310	02.2	-21	42.8	56	34.7	+15	09.0		
6	217	07.7	244	21.3	-12	53.1	297	56.7	-23	46.4	325	04.2	-21	42.9	71	37.3	+15	09.0		
7	232	10.2	259	20.7		51.9	312	57.1		46.3	340	06.2		42.9	86	40.0		09.1		
8	247	12.6	274	20.2		50.8	327	57.6		46.2	355	08.2		43.0	101	42.6		09.2		
9	262	15.1	289	19.7		49.7	342	58.0		46.1	10	10.2		43.0	116	45.3		09.2		
10	277	17.5	304	19.2		48.6	357	58.4		46.1	25	12.3		43.1	131	47.9		09.3		
11	292	20.0	319	18.7	-12	47.5	12	58.9	-23	46.0	40	14.3	-21	43.1	146	50.6	+15	09.4		
12	307	22.5	334	18.2	-12	46.3	27	59.3	-23	45.9	55	16.3	-21	43.2	161	53.2	+15	09.4		
13	322	24.9	349	17.7		45.2	42	59.8		45.8	70	18.3		43.2	176	55.9		09.5		
14	337	27.4	4	17.1		44.1	58	00.2		45.7	85	20.3		43.3	191	58.5		09.6		
15	352	29.9	19	16.6		43.0	73	00.7		45.6	100	22.3		43.3	207	01.2		09.6		
16	7	32.3	34	16.1		41.8	88	01.1		45.5	115	24.3		43.4	222	03.9		09.7		
17	22	34.8	49	15.6	-12	40.7	103	01.5	-23	45.4	130	26.3	-21	43.4	237	06.5	+15	09.8		
18	37	37.3	64	15.1	-12	39.6	118	02.0	-23	45.3	145	28.3	-21	43.5	252	09.2	+15	09.8		
19	52	39.7	79	14.6		38.5	133	02.4		45.2	160	30.3		43.5	267	11.8		09.9		
20	67	42.2	94	14.1		37.3	148	02.9		45.1	175	32.3		43.6	282	14.5		10.0		
21	82	44.7	109	13.6		36.2	163	03.3		45.0	190	34.4		43.6	297	17.1		10.1		
22	97	47.1	124	13.1		35.1	178	03.7		44.9	205	36.4		43.7	312	19.8		10.1		
23	112	49.6	139	12.6		33.9	193	04.2		44.8	220	38.4		43.7	327	22.4		10.2		
24	127	52.0	154	12.0	-12	32.8	208	04.6	-23	44.7	235	40.4	-21	43.8	342	25.1	+15	10.3		
Dif	—		-5		+11		+4		+1		+20		-1		+27		+1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 1			Edad: 9 ^d 8 PHE { 4 ^h : 57/6 12 ^h : 57/5 20 ^h : 57/3 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	176	45.2	-18 05.4	51	57.8	+28 00.3	32	6 42	7 33	8 22	10 22	67	7 22	57	
1	191	45.1	04.7	66	22.3	03.5	55	38	26	11	11 00	65	6 44	58	
2	206	44.9	04.1	80	46.8	06.5	30	34	19	8 01	28	63	6 17	59	
3	221	44.8	03.4	95	11.3	09.3	28	30	13	7 53	11 49	63	5 56	59	
4	236	44.7	02.7	109	35.7	11.9	26	27	08	45	12 07	62	38	59	
5	251	44.6	-18 02.1	124	00.2	+28 14.3	24	6 24	7 03	7 38	12 22	62	5 23	59	
6	266	44.5	-18 01.4	138	24.6	+28 16.6	23	6 17	6 52	7 24	12 52	62	4 53	59	
7	281	44.4	00.7	152	49.0	18.7	21	10	43	12	13 16	61	29	59	
8	296	44.3	-18 00.1	167	13.5	20.6	19	6 04	35	7 01	36	61	4 09	60	
9	311	44.2	-17 59.4	181	37.9	22.3	17	5 58	27	6 52	13 53	60	3 53	59	
10	326	44.0	58.7	196	02.3	23.9	16	47	13	36	14 21	60	25	59	
11	341	43.9	-17 58.1	210	26.8	+28 25.3	14	5 35	6 01	6 23	14 46	59	3 00	60	
12	356	43.8	-17 57.4	224	51.2	+28 26.5	12	5 23	5 48	6 10	15 09	58	2 38	59	
13	11	43.7	56.7	239	15.7	27.5	10	5 08	34	5 56	32	57	2 15	59	
14	26	43.6	56.0	253	40.1	28.4	9	4 51	19	42	15 56	57	1 51	59	
15	41	43.5	55.4	268	04.6	29.0	6	28	5 00	26	16 25	56	23	58	
16	56	43.4	54.7	282	29.1	29.5	5	4 14	4 48	16	16 42	55	1 06	58	
17	71	43.3	-17 54.0	296	53.6	+28 29.9	4	3 57	4 34	5 05	17 02	54	0 47	57	
18	86	43.2	-17 53.4	311	18.2	+28 30.0	1	3 35	4 18	4 52	17 26	53	0 23	57	
19	101	43.1	52.7	325	42.7	30.0	0	3 06	3 57	36	17 57	51	** ** *	**	
20	116	43.0	52.0	340	07.3	29.8	2	2 51	47	28	18 13	50	** ** *	**	
21	131	42.8	51.3	354	31.9	29.4	4	32	35	20	31	48	** ** *	**	
22	146	42.7	50.7	8	56.5	28.8	6	2 09	22	4 10	18 53	46	23 53	74	
23	161	42.6	50.0	23	21.2	28.1	7	1 36	3 06	3 59	19 22	42	23 25	78	
24	176	42.5	-17 49.3	37	45.9	+28 27.2	9	** ** *	2 46	3 47	20 04	33	22 43	87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 26 ^m 0		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: +1.4 PMG: 10 ^h 07 ^m			Mag: -1.9 PMG: 8 ^h 16 ^m			Mag: 0.0 PMG: 1 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	127	52.0	154	12.0	-12 32.8	208	04.6	-23 44.7	235	40.4	-21 43.8	342	25.1	+15 10.3	
1	142	54.5	169	11.5	31.7	223	05.1	44.6	250	42.4	43.8	357	27.7	10.3	
2	157	57.0	184	11.0	30.6	238	05.5	44.5	265	44.4	43.9	12	30.4	10.4	
3	172	59.4	199	10.5	29.4	253	05.9	44.4	280	46.4	43.9	27	33.0	10.5	
4	188	01.9	214	10.0	28.3	268	06.4	44.3	295	48.4	44.0	42	35.7	10.5	
5	203	04.4	229	09.5	-12 27.2	283	06.8	-23 44.2	310	50.4	-21 44.0	57	38.3	+15 10.6	
6	218	06.8	244	09.0	-12 26.0	298	07.3	-23 44.1	325	52.5	-21 44.1	72	41.0	+15 10.7	
7	233	09.3	259	08.5	24.9	313	07.7	44.0	340	54.5	44.1	87	43.6	10.7	
8	248	11.8	274	08.0	23.8	328	08.1	43.9	355	56.5	44.2	102	46.3	10.8	
9	263	14.2	289	07.5	22.6	343	08.6	43.8	10	58.5	44.2	117	48.9	10.9	
10	278	16.7	304	07.0	21.5	358	09.0	43.7	26	00.5	44.3	132	51.6	10.9	
11	293	19.2	319	06.5	-12 20.4	13	09.5	-23 43.6	41	02.5	-21 44.3	147	54.2	+15 11.0	
12	308	21.6	334	06.0	-12 19.2	28	09.9	-23 43.5	56	04.5	-21 44.4	162	56.9	+15 11.1	
13	323	24.1	349	05.5	18.1	43	10.3	43.4	71	06.5	44.4	177	59.5	11.2	
14	338	26.5	4	05.0	16.9	58	10.8	43.3	86	08.6	44.5	193	02.2	11.2	
15	353	29.0	19	04.5	15.8	73	11.2	43.2	101	10.6	44.5	208	04.9	11.3	
16	8	31.5	34	04.0	14.7	88	11.7	43.1	116	12.6	44.6	223	07.5	11.4	
17	23	33.9	49	03.5	-12 13.5	103	12.1	-23 43.0	131	14.6	-21 44.6	238	10.2	+15 11.4	
18	38	36.4	64	03.0	-12 12.4	118	12.5	-23 42.9	146	16.6	-21 44.7	253	12.8	+15 11.5	
19	53	38.9	79	02.5	11.3	133	13.0	42.8	161	18.6	44.7	268	15.5	11.6	
20	68	41.3	94	02.0	10.1	148	13.4	42.7	176	20.6	44.8	283	18.1	11.6	
21	83	43.8	109	01.5	09.0	163	13.9	42.6	191	22.7	44.8	298	20.8	11.7	
22	98	46.3	124	01.0	07.8	178	14.3	42.5	206	24.7	44.9	313	23.4	11.8	
23	113	48.7	139	00.5	06.7	193	14.7	42.4	221	26.7	44.9	328	26.1	11.8	
24	128	51.2	154	00.0	-12 05.5	208	15.2	-23 42.2	236	28.7	-21 45.0	343	28.7	+15 11.9	
Dif	—		-5	+11		+4	+1		+20	-1		+27	+1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 10 ^d 8 PHE { 4 ^h : 57:2 12 ^h : 57:0 20 ^h : 56:9 PMG: 22 ^h 21 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	42.5	-17 49.3	37	45.9	+28 27.2	11	60 N	16 08	16 56	17 47	11 29 97	8 19 21		
1	191	42.4		52	10.6	57 26.1	11	58	19	17 03	51	12 05 87	7 42 31		
2	206	42.3		66	35.4	58 24.9	12	56	28	09	55	31 82	7 16 36		
3	221	42.2		81	00.2	58 23.5	14	54	36	15	17 58	12 52 78	6 55 39		
4	236	42.1		95	25.0	58 21.9	16	52	43	20	18 01	13 09 76	37 42		
5	251	42.0	-17 45.9	109	49.9	59 +28 20.1	18	50	16 50	17 25	18 04	13 24 73	6 22 44		
6	266	41.9	-17 45.2	124	14.9	60 +28 18.2	19	45	17 04	17 36	18 11	13 54 69	5 52 47		
7	281	41.8		138	39.8	59 16.1	21	40	16	45	17	14 17 67	28 50		
8	296	41.7		153	04.9	61 13.8	23	35	26	17 53	23	37 64	5 09 51		
9	311	41.6		167	29.9	60 11.4	24	30	35	18 00	29	14 53 63	4 52 52		
10	326	41.5		181	55.1	62 08.7	27	20	17 50	14	40	15 21 60	24 54		
11	341	41.4	-17 41.8	196	20.3	62 +28 06.0	27	10 N	18 04	18 26	18 51	15 45 58	4 00 55		
12	356	41.3	-17 41.1	210	45.5	62 +28 03.0	30	0	18 17	18 38	19 04	16 07 56	3 37 57		
13	11	41.2		225	10.8	63 +27 59.9	31	10 S	30	18 52	18	29 54	3 14 59		
14	26	41.1		239	36.2	64 56.6	33	20	18 44	19 07	35	16 53 51	2 50 60		
15	41	41.0		254	01.6	64 53.2	34	30	19 00	25	19 56	17 21 48	21 62		
16	56	40.9		268	27.1	65 49.6	36	35	09	37	20 10	37 46	2 04 63		
17	71	40.8	-17 37.7	282	52.6	65 +27 45.9	37	40	19 20	19 50	20 27	17 56 44	1 44 65		
18	86	40.7	-17 37.0	297	18.2	66 +27 41.9	40	45	19 33	20 06	20 48	18 19 41	1 20 66		
19	101	40.6		311	43.9	67 37.9	40	50	48	26	21 16	18 48 37	0 49 69		
20	116	40.5		326	09.7	68 33.6	43	52	19 55	36	31	19 03 34	33 70		
21	131	40.4		340	35.5	68 29.2	44	54	20 03	20 47	21 48	19 31	0 15 72		
22	146	40.3		343	355 01.4	69 24.7	45	56	13	21 00	22 10	19 39 27	** ** *		
23	161	40.2		33.6	9 27.4	70 19.9	48	58	23	16	22 40	20 04 21	** ** *		
24	176	40.1	-17 32.9	23	53.4	70 +27 15.1	48	60 S	20 35	21 34	23 32	20 37 11	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 22 ^m 1		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: +1.4 PMG: 10 ^h 07 ^m			Mag: -1.9 PMG: 8 ^h 13 ^m			Mag: 0.0 PMG: 1 ^h 06 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	128	51.2	154 00.0	-12 05.5		208 15.2	-23 42.2		236 28.7	-21 45.0		343 28.7	+15 11.9		
1	143	53.7	168 59.5	04.4		223 15.6	42.1		251 30.7	45.0		358 31.4	12.0		
2	158	56.1	183 59.0	03.3		238 16.1	42.0		266 32.7	45.1		13 34.0	12.1		
3	173	58.6	198 58.5	02.1		253 16.5	41.9		281 34.7	45.1		28 36.7	12.1		
4	189	01.0	213 58.0	-12 01.0		268 16.9	41.8		296 36.8	45.2		43 39.3	12.2		
5	204	03.5	228 57.5	-11 59.8		283 17.4	-23 41.7		311 38.8	-21 45.2		58 42.0	+15 12.3		
6	219	06.0	243 57.0	-11 58.7		298 17.8	-23 41.6		326 40.8	-21 45.3		73 44.7	+15 12.3		
7	234	08.4	258 56.5	57.5		313 18.3	41.5		341 42.8	45.3		88 47.3	12.4		
8	249	10.9	273 56.1	56.4		328 18.7	41.4		356 44.8	45.4		103 50.0	12.5		
9	264	13.4	288 55.6	55.2		343 19.1	41.3		11 46.8	45.4		118 52.6	12.5		
10	279	15.8	303 55.1	54.1		358 19.6	41.1		26 48.9	45.5		133 55.3	12.6		
11	294	18.3	318 54.6	-11 52.9		13 20.0	-23 41.0		41 50.9	-21 45.5		148 57.9	+15 12.7		
12	309	20.8	333 54.1	-11 51.8		28 20.5	-23 40.9		56 52.9	-21 45.6		164 00.6	+15 12.7		
13	324	23.2	348 53.6	50.6		43 20.9	40.8		71 54.9	45.6		179 03.2	12.8		
14	339	25.7	3 53.1	49.5		58 21.3	40.7		86 56.9	45.7		194 05.9	12.9		
15	354	28.2	18 52.6	48.3		73 21.8	40.6		101 58.9	45.7		209 08.5	13.0		
16	9	30.6	33 52.1	47.2		88 22.2	40.5		117 01.0	45.8		224 11.2	13.0		
17	24	33.1	48 51.7	-11 46.0		103 22.7	-23 40.3		132 03.0	-21 45.8		239 13.9	+15 13.1		
18	39	35.5	63 51.2	-11 44.9		118 23.1	-23 40.2		147 05.0	-21 45.9		254 16.5	+15 13.2		
19	54	38.0	78 50.7	43.7		133 23.5	40.1		162 07.0	45.9		269 19.2	13.2		
20	69	40.5	93 50.2	42.6		148 24.0	40.0		177 09.0	46.0		284 21.8	13.3		
21	84	42.9	108 49.7	41.4		163 24.4	39.9		192 11.1	46.0		299 24.5	13.4		
22	99	45.4	123 49.2	40.3		178 24.9	39.8		207 13.1	46.1		314 27.1	13.4		
23	114	47.9	138 48.7	39.1		193 25.3	39.6		222 15.1	46.1		329 29.8	13.5		
24	129	50.3	153 48.3	-11 38.0		208 25.7	-23 39.5		237 17.1	-21 46.2		344 32.4	+15 13.6		
Dif	—		-5		+11	+4		+1	+20		0	+27		+	

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: 11 ^d 8 PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'4 Rº: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	40.1	-17	32.9	23	53.4	+27	15.1	60 N	6	38	7	29	8	17	13	06
1	191	40.0		32.2	38	19.5	71	10.1	58	35	22	8	07		32	94	8
2	206	39.9		31.5	52	45.7	72	+27	04.9	52	31	16	7	58	13	53	7
3	221	39.8		30.8	67	12.0	73	+26	59.6	53	28	10	49		14	10	34
4	236	39.7		30.1	81	38.4	74		54.1	55	25	05	42		25	80	19
5	251	39.6	-17	29.4	96	04.8	74	+26	48.5	56	6	22	7	01	14	37	7
6	266	39.5	-17	28.7	110	31.4	76	+26	42.7	58	6	15	6	50	15	03	6
7	281	39.4		28.0	124	58.0	76		36.8	59	09	41	10		24	68	18
8	296	39.3		27.3	139	24.7	77		30.7	61	6	03	33	7	00	41	6
9	311	39.2		26.6	153	51.5	78		24.5	62	5	57	26	6	51	15	56
10	326	39.1		25.9	168	18.3	78		18.1	64		46	13	36	16	21	5
11	341	39.0	-17	25.2	182	45.3	80	+26	11.7	64	10 N	5	35	6	01	16	43
12	356	39.0	-17	24.5	197	12.4	81	+26	05.0	67	0	5	23	5	48	17	03
13	11	38.9		23.9	211	39.5	81	+25	58.2	68	10 S	5	09	35	5	57	23
14	26	38.8		23.2	226	06.7	82		51.3	69	20	4	52	20	43	17	44
15	41	38.7		22.5	240	34.1	84		44.3	70	30	31	5	01	27	18	09
16	56	38.6		21.8	255	01.5	84		37.1	72	35	17	4	50	18	23	38
17	71	38.5	-17	21.1	269	29.0	85	+25	29.8	73	40	4	00	4	37	5	07
18	86	38.4	-17	20.4	283	56.6	86	+25	22.3	75	45	3	39	4	21	4	55
19	101	38.3		19.7	298	24.3	87		14.7	76	50	3	11	4	01	39	25
20	116	38.2		19.0	312	52.1	88	+25	07.0	77	52	2	56	3	51	32	37
21	131	38.1		18.3	327	20.0	89	+24	59.2	78	54		39	40	24	19	50
22	146	38.0		17.6	341	48.0	90		51.2	80	56	2	17	27	15	20	06
23	161	38.0		16.8	356	16.1	91		43.1	81	58	1	47	3	12	4	04
24	176	37.9	-17	16.1	10	44.3	92	+24	34.9	82	60 S	0	55	2	53	3	52

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 18 ^m 1		Mag: -3.9 PMG: 13 ^h 45 ^m			Mag: +1.4 PMG: 10 ^h 06 ^m			Mag: -1.9 PMG: 8 ^h 10 ^m			Mag: 0.0 PMG: 1 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	129	50.3	153	48.3	-11	38.0	208	25.7	-23	39.5	237	17.1	-21	46.2	344	32.4	+15	13.6
1	144	52.8	168	47.8		36.8	223	26.2		39.4	252	19.1		46.2	359	35.1		13.6
2	159	55.3	183	47.3		35.6	238	26.6		39.3	267	21.2		46.3	14	37.7		13.7
3	174	57.7	198	46.8		34.5	253	27.1		39.2	282	23.2		46.3	29	40.4		13.8
4	190	00.2	213	46.3		33.3	268	27.5		39.0	297	25.2		46.4	44	43.1		13.9
5	205	02.7	228	45.8	-11	32.2	283	27.9	-23	38.9	312	27.2	-21	46.4	59	45.7	+15	13.9
6	220	05.1	243	45.4	-11	31.0	298	28.4	-23	38.8	327	29.2	-21	46.5	74	48.4	+15	14.0
7	235	07.6	258	44.9		29.8	313	28.8		38.7	342	31.3		46.5	89	51.0		14.1
8	250	10.0	273	44.4		28.7	328	29.3		38.6	357	33.3		46.6	104	53.7		14.1
9	265	12.5	288	43.9		27.5	343	29.7		38.4	12	35.3		46.6	119	56.3		14.2
10	280	15.0	303	43.4		26.4	358	30.1		38.3	27	37.3		46.7	134	59.0		14.3
11	295	17.4	318	43.0	-11	25.2	13	30.6	-23	38.2	42	39.3	-21	46.7	150	01.6	+15	14.3
12	310	19.9	333	42.5	-11	24.0	28	31.0	-23	38.1	57	41.4	-21	46.8	165	04.3	+15	14.4
13	325	22.4	348	42.0		22.9	43	31.5		37.9	72	43.4		46.8	180	07.0		14.5
14	340	24.8	3	41.5		21.7	58	31.9		37.8	87	45.4		46.9	195	09.6		14.5
15	355	27.3	18	41.0		20.6	73	32.3		37.7	102	47.4		46.9	210	12.3		14.6
16	10	29.8	33	40.6		19.4	88	32.8		37.6	117	49.4		47.0	225	14.9		14.7
17	25	32.2	48	40.1	-11	18.2	103	33.2	-23	37.4	132	51.5	-21	47.0	240	17.6	+15	14.8
18	40	34.7	63	39.6	-11	17.1	118	33.7	-23	37.3	147	53.5	-21	47.1	255	20.2	+15	14.8
19	55	37.1	78	39.1		15.9	133	34.1		37.2	162	55.5		47.1	270	22.9		14.9
20	70	39.6	93	38.7		14.7	148	34.5		37.1	177	57.5		47.2	285	25.5		15.0
21	85	42.1	108	38.2		13.6	163	35.0		36.9	192	59.6		47.2	300	28.2		15.0
22	100	44.5	123	37.7		12.4	178	35.4		36.8	208	01.6		47.3	315	30.9		15.1
23	115	47.0	138	37.2		11.2	193	35.9		36.7	223	03.6		47.3	330	33.5		15.2
24	130	49.5	153	36.8	-11	10.1	208	36.3	-23	36.5	238	05.6	-21	47.3	345	36.2	+15	15.2
Dif	—		-5		+12		+4		+1		+20		0		+27		+	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 5				Edad: 12 ^d 8 PHE { 4 ^h : 56 ^m 2 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9 R°: ***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	176	37.9	-17	16.1	10	44.3	+24	34.9	60 N	16 13	17 01	17 51	14 48 97		8 47 2					
1	191	37.8		15.4	25	12.6 ⁹³		26.5 ⁸⁴	58	23	07	55	15 06 91		28 8					
2	206	37.7		14.7	39	41.0 ⁹⁴		18.1 ⁸⁴	56	32	13	17 58	21 86		8 13 12					
3	221	37.6		14.0	54	09.5 ⁹⁵		09.5 ⁸⁶	54	40	19	18 02	34 82		7 59 16					
4	236	37.5		13.3	68	38.1 ⁹⁶	+24	00.8 ⁸⁷	52	47	24	05	45 79		47 20					
5	251	37.4	-17	12.6	83	06.8 ⁹⁷	+23	51.9 ⁸⁹	50	16 54	17 28	18 07	15 55 77		7 37 22					
6	266	37.3	-17	11.9	97	35.6 ⁹⁸	+23	43.0 ⁸⁹	45	17 07	17 39	18 14	16 16 71		7 15 27					
7	281	37.3		11.2	112	04.4 ⁹⁸		33.9 ⁹¹	40	19	47	20	32 67		6 57 31					
8	296	37.2		10.5	126	33.4 ¹⁰⁰		24.8 ⁹¹	35	28	17 55	25	47 63		42 34					
9	311	37.1		09.8	141	02.5 ¹⁰¹		15.5 ⁹³	30	37	18 02	31	16 59 60		29 37					
10	326	37.0		09.1	155	31.7 ¹⁰²	+23	06.1 ⁹⁴	20	17 52	15	41	17 20 55		6 06 42					
11	341	36.9	-17	08.4	170	01.0 ¹⁰³	+22	56.6 ⁹⁵	10 N	18 05	18 27	18 52	17 38 51		5 46 46					
12	356	36.8	-17	07.7	184	30.4 ¹⁰⁴	+22	47.0 ⁹⁶	0	18 17	18 39	19 04	17 54 48		5 28 50					
13	11	36.7		07.0	198	59.9 ¹⁰⁵		37.2 ⁹⁸	10 S	30	18 52	17	18 11 44		5 09 54					
14	26	36.7		06.2	213	29.5 ¹⁰⁶		27.4 ⁹⁸	20	43	19 06	34	29 39		4 50 57					
15	41	36.6		05.5	227	59.2 ¹⁰⁷		17.5 ⁹⁹	30	18 58	24	19 55	18 49 35		26 62					
16	56	36.5		04.8	242	29.0 ¹⁰⁸	+22	07.5 ¹⁰⁰	35	19 08	35	20 08	19 01 32		4 13 64					
17	71	36.4	-17	04.1	256	58.9 ¹⁰⁹	+21	57.3 ¹⁰²	40	19 18	19 48	20 25	19 15 28		3 57 68					
18	86	36.3	-17	03.4	271	28.9 ¹¹⁰	+21	47.1 ¹⁰²	45	19 30	20 03	20 45	19 31 24		3 38 72					
19	101	36.3		02.7	285	59.0 ¹¹¹		36.8 ¹⁰³	50	45	23	21 12	19 50 19		14 78					
20	116	36.2		02.0	300	29.2 ¹¹²		26.3 ¹⁰⁵	52	19 52	32	26	20 00 16		3 02 81					
21	131	36.1		01.3	314	59.5 ¹¹³		15.8 ¹⁰⁵	54	20 00	43	21 43	10 13		2 49 84					
22	146	36.0	-17	00.5	329	29.9 ¹¹⁴	+21	05.2 ¹⁰⁶	56	09	20 56	22 03	22 10		34 88					
23	161	35.9	-16	59.8	344	00.4 ¹¹⁵	+20	54.5 ¹⁰⁷	58	19	21 10	22 30	35 6		2 16 94					
24	176	35.8	-16	59.1	358	31.0 ¹¹⁶	+20	43.7 ¹⁰⁸	60 S	20 30	21 27	23 12	20 51 0		1 53 102					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 14 ^m 2				Mag: -3.9 PMG: 13 ^h 46 ^m				Mag: +1.4 PMG: 10 ^h 05 ^m				Mag: -1.9 PMG: 8 ^h 07 ^m				Mag: 0.0 PMG: 0 ^h 57 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	130	49.5	153	36.8	-11	10.1	208	36.3	-23	36.5	238	05.6	-21	47.3	345	36.2	+15	15.2		
1	145	51.9	168	36.3		08.9	223	36.7		36.4	253	07.7		47.4	0	38.8		15.3		
2	160	54.4	183	35.8		07.7	238	37.2		36.3	268	09.7		47.4	15	41.5		15.4		
3	175	56.9	198	35.3		06.6	253	37.6		36.2	283	11.7		47.5	30	44.1		15.4		
4	190	59.3	213	34.9		05.4	268	38.1		36.0	298	13.7		47.5	45	46.8		15.5		
5	206	01.8	228	34.4	-11	04.2	283	38.5	-23	35.9	313	15.8	-21	47.6	60	49.4	+15	15.6		
6	221	04.3	243	33.9	-11	03.0	298	38.9	-23	35.8	328	17.8	-21	47.6	75	52.1	+15	15.7		
7	236	06.7	258	33.5		01.9	313	39.4		35.6	343	19.8		47.7	90	54.8		15.7		
8	251	09.2	273	33.0	-11	00.7	328	39.8		35.5	358	21.8		47.7	105	57.4		15.8		
9	266	11.6	288	32.5	-10	59.5	343	40.3		35.4	13	23.9		47.8	121	00.1		15.9		
10	281	14.1	303	32.1		58.4	358	40.7		35.2	28	25.9		47.8	136	02.7		15.9		
11	296	16.6	318	31.6	-10	57.2	13	41.1	-23	35.1	43	27.9	-21	47.9	151	05.4	+15	16.0		
12	311	19.0	333	31.1	-10	56.0	28	41.6	-23	35.0	58	29.9	-21	47.9	166	08.0	+15	16.1		
13	326	21.5	348	30.7		54.8	43	42.0		34.8	73	32.0		48.0	181	10.7		16.1		
14	341	24.0	3	30.2		53.7	58	42.5		34.7	88	34.0		48.0	196	13.4		16.2		
15	356	26.4	18	29.7		52.5	73	42.9		34.6	103	36.0		48.1	211	16.0		16.3		
16	11	28.9	33	29.3		51.3	88	43.3		34.4	118	38.0		48.1	226	18.7		16.4		
17	26	31.4	48	28.8	-10	50.1	103	43.8	-23	34.3	133	40.1	-21	48.2	241	21.3	+15	16.4		
18	41	33.8	63	28.3	-10	48.9	118	44.2	-23	34.2	148	42.1	-21	48.2	256	24.0	+15	16.5		
19	56	36.3	78	27.9		47.8	133	44.7		34.0	163	44.1		48.3	271	26.6		16.6		
20	71	38.8	93	27.4		46.6	148	45.1		33.9	178	46.1		48.3	286	29.3		16.6		
21	86	41.2	108	26.9		45.4	163	45.5		33.7	193	48.2		48.3	301	32.0		16.7		
22	101	43.7	123	26.5		44.2	178	46.0		33.6	208	50.2		48.4	316	34.6		16.8		
23	116	46.1	138	26.0		43.1	193	46.4		33.5	223	52.2		48.4	331	37.3		16.8		
24	131	48.6	153	25.5	-10	41.9	208	46.9	-23	33.3	238	54.3	-21	48.5	346	39.9	+15	16.9		
Dif	—		-5		+12		+4		+1		+20		0		+27		+1			

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: 13 ^d 8 PHE { 4 ^h : 55/7 12 ^h : 55/6 20 ^h : 55/4 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		h m m			
0	176	35.8	-16 59.1	358	31.0	+20	43.7	60 N	6 35	7 25	8 12	16 25 92	8 49 0					
1	191	35.8	58.4	13	01.7 ¹¹⁷		32.8 ¹⁰⁹	58	31	19	8 02	37 87	36 5					
2	206	35.7	57.7	27	32.4 ¹¹⁷		21.8 ¹¹⁰	56	28	13	7 54	47 83	25 9					
3	221	35.6	57.0	42	03.3 ¹¹⁹	+20	10.7 ¹¹¹	54	25	07	46	16 56 80	15 12					
4	236	35.5	56.2	56	34.3 ¹²⁰	+19	59.6 ¹¹¹	52	22	7 02	39	17 04 77	8 07 14					
5	251	35.5	-16 55.5	71	05.4 ¹²¹	+19	48.3 ¹¹³	50	6 19	6 58	7 33	17 12 74	7 59 17					
6	266	35.4	-16 54.8	85	36.6 ¹²²	+19	37.0 ¹¹³	45	6 13	6 48	7 19	17 27 69	7 42 22					
7	281	35.3	54.1	100	07.9 ¹²³		25.6 ¹¹⁴	40	07	39	7 08	39 65	28 26					
8	296	35.2	53.4	114	39.2 ¹²³		14.1 ¹¹⁵	35	6 02	32	6 58	50 61	16 30					
9	311	35.1	52.6	129	10.7 ¹²⁵	+19	02.5 ¹¹⁶	30	5 56	25	50	17 59 58	7 06 32					
10	326	35.1	51.9	143	42.2 ¹²⁵	+18	50.9 ¹¹⁶	20	46	12	35	18 15 53	6 48 37					
11	341	35.0	-16 51.2	158	13.9 ¹²⁷	+18	39.2 ¹¹⁷	10 N	5 35	6 00	6 22	18 29 48	6 32 42					
12	356	34.9	-16 50.5	172	45.6 ¹²⁷	+18	27.4 ¹¹⁸	0	5 23	5 49	6 10	18 42 44	6 18 45					
13	11	34.8	49.8	187	17.5 ¹²⁹		15.5 ¹¹⁹	10 S	5 10	36	5 58	18 55 39	6 03 49					
14	26	34.8	49.0	201	49.4 ¹²⁹	+18	03.6 ¹¹⁹	20	4 54	21	44	19 08 36	5 47 54					
15	41	34.7	48.3	216	21.4 ¹³⁰	+17	51.6 ¹²⁰	30	33	5 03	29	24 30	28 60					
16	56	34.6	47.6	230	53.5 ¹³¹		39.5 ¹²¹	35	19	4 53	20	33 27	17 63					
17	71	34.5	-16 46.9	245	25.7 ¹³²	+17	27.3 ¹²²	40	4 03	4 40	5 10	19 43 24	5 05 66					
18	86	34.5	-16 46.1	259	58.0 ¹³³	+17	15.1 ¹²²	45	3 43	4 24	4 58	19 55 20	4 50 70					
19	101	34.4	45.4	274	30.4 ¹³⁴	+17	02.8 ¹²³	50	16	4 05	43	20 09 15	32 76					
20	116	34.3	44.7	289	02.9 ¹³⁵	+16	50.4 ¹²⁴	52	3 02	3 55	36	16 12	23 79					
21	131	34.2	44.0	303	35.4 ¹³⁵		38.0 ¹²⁴	54	2 45	45	28	23 10	13 82					
22	146	34.2	43.2	318	08.0 ¹³⁶		25.6 ¹²⁴	56	2 25	32	19	32 6	4 02 86					
23	161	34.1	42.5	332	40.8 ¹³⁸		13.0 ¹²⁶	58	1 58	18	4 09	41 3	3 50 89					
24	176	34.0	-16 41.8	347	13.6 ¹³⁸	+16	00.4 ¹²⁶	60 S	1 16	3 01	3 58	20 51 0	3 35 95					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 15 ^h 10 ^m 3			Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +1.4 PMG: 10 ^h 05 ^m			Mag: -1.9 PMG: 8 ^h 03 ^m			Mag: 0.0 PMG: 0 ^h 53 ^m					
	hG ♈ Dec			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	°	'	°	°	°	°	°	'	°	°	'	°			
0	131	48.6	153 25.5	-10 41.9	208 46.9	-23 33.3	238 54.3	-21 48.5	346 39.9	+15 16.9								
1	146	51.1	168 25.1	40.7	223 47.3	33.2	253 56.3	48.5	1 42.6	17.0								
2	161	53.5	183 24.6	39.5	238 47.7	33.0	268 58.3	48.6	16 45.2	17.0								
3	176	56.0	198 24.2	38.3	253 48.2	32.9	284 00.3	48.6	31 47.9	17.1								
4	191	58.5	213 23.7	37.2	268 48.6	32.8	299 02.4	48.7	46 50.6	17.2								
5	207	00.9	228 23.2	-10 36.0	283 49.1	-23 32.6	314 04.4	-21 48.7	61 53.2	+15 17.3								
6	222	03.4	243 22.8	-10 34.8	298 49.5	-23 32.5	329 06.4	-21 48.8	76 55.9	+15 17.3								
7	237	05.9	258 22.3	33.6	313 49.9	32.3	344 08.5	48.8	91 58.5	17.4								
8	252	08.3	273 21.9	32.4	328 50.4	32.2	359 10.5	48.9	107 01.2	17.5								
9	267	10.8	288 21.4	31.2	343 50.8	32.1	14 12.5	48.9	122 03.8	17.5								
10	282	13.3	303 20.9	30.1	358 51.3	31.9	29 14.6	49.0	137 06.5	17.6								
11	297	15.7	318 20.5	-10 28.9	13 51.7	-23 31.8	44 16.6	-21 49.0	152 09.2	+15 17.7								
12	312	18.2	333 20.0	-10 27.7	28 52.1	-23 31.6	59 18.6	-21 49.0	167 11.8	+15 17.7								
13	327	20.6	348 19.6	26.5	43 52.6	31.5	74 20.6	49.1	182 14.5	17.8								
14	342	23.1	3 19.1	25.3	58 53.0	31.3	89 22.7	49.1	197 17.1	17.9								
15	357	25.6	18 18.7	24.1	73 53.5	31.2	104 24.7	49.2	212 19.8	18.0								
16	12	28.0	33 18.2	22.9	88 53.9	31.0	119 26.7	49.2	227 22.5	18.0								
17	27	30.5	48 17.8	-10 21.7	103 54.3	-23 30.9	134 28.8	-21 49.3	242 25.1	+15 18.1								
18	42	33.0	63 17.3	-10 20.6	118 54.8	-23 30.7	149 30.8	-21 49.3	257 27.8	+15 18.2								
19	57	35.4	78 16.8	19.4	133 55.2	30.6	164 32.8	49.4	272 30.4	18.2								
20	72	37.9	93 16.4	18.2	148 55.7	30.5	179 34.9	49.4	287 33.1	18.3								
21	87	40.4	108 15.9	17.0	163 56.1	30.3	194 36.9	49.5	302 35.7	18.4								
22	102	42.8	123 15.5	15.8	178 56.5	30.2	209 38.9	49.5	317 38.4	18.4								
23	117	45.3	138 15.0	14.6	193 57.0	30.0	224 41.0	49.6	332 41.1	18.5								
24	132	47.7	153 14.6	-10 13.4	208 57.4	-23 29.9	239 43.0	-21 49.6	347 43.7	+15 18.6								
Dif	—			-5	+12	+4	+1	+20	0	+27	+1							

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: 14 ^d 8 PHE { SD: 15/1 PMG: 0 ^h 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	34.0	-16	41.8	347	13.6	+16	00.4	60 N	16 18	17 05	17 56	17 57 86	8 49	**	
1	191	34.0		41.1	1	46.5 ¹³⁹	+15	47.7 ¹²⁷	58	28	12	17 59	18 04 82	41	3	
2	206	33.9		40.3	16	19.4 ¹³⁹		35.0 ¹²⁷	56	37	17	18 02	10 79	34	5	
3	221	33.8		39.6	30	52.5 ¹⁴¹		22.3 ¹²⁷	54	44	23	05	16 76	27		
4	236	33.7		38.9	45	25.6 ¹⁴¹	+15	09.4 ¹²⁹	52	51	27	08	21 73	21	11	
5	251	33.7	-16	38.1	59	58.8 ¹⁴²	+14	56.5 ¹²⁹	50	16 57	17 32	18 10	18 26 71	8 16	13	
6	266	33.6	-16	37.4	74	32.1 ¹⁴³	+14	43.6 ¹²⁹	45	17 10	17 41	18 16	18 36 66	8 04	18	
7	281	33.5		36.7	89	05.5 ¹⁴⁴		30.6 ¹³⁰	40	21	49	22	44 62	7 54	22	
8	296	33.5		35.9	103	38.9 ¹⁴⁴		17.6 ¹³⁰	35	30	17 57	27	51 58	46	25	
9	311	33.4		35.2	118	12.5 ¹⁴⁶	+14	04.5 ¹³¹	30	39	18 04	32	18 57 55	38	29	
10	326	33.3		34.5	132	46.1 ¹⁴⁶	+13	51.3 ¹³²	20	17 53	16	42	19 08 50	25	34	
11	341	33.3	-16	33.7	147	19.7 ¹⁴⁶	+13	38.2 ¹³¹	10 N	18 05	18 27	18 53	19 17 45	7 14	38	
12	356	33.2	-16	33.0	161	53.5 ¹⁴⁸	+13	24.9 ¹³³	0	18 17	18 39	19 04	19 26 41	7 03	43	
13	11	33.1		32.3	176	27.3 ¹⁴⁸	+13	11.6 ¹³³	10 S	29	18 51	17	34 37	6 52	47	
14	26	33.1		31.5	191	01.2 ¹⁴⁹	+12	58.3 ¹³³	20	42	19 05	33	44 32	41	51	
15	41	33.0		30.8	205	35.1 ¹⁴⁹		45.0 ¹³³	30	18 57	23	19 53	19 54 27	28	56	
16	56	32.9		30.1	220	09.2 ¹⁵¹		31.5 ¹³⁵	35	19 06	33	20 06	20 00 24	20	59	
17	71	32.9	-16	29.3	234	43.3 ¹⁵¹	+12	18.1 ¹³⁴	40	19 16	19 46	20 22	20 07 21	6 11	63	
18	86	32.8	-16	28.6	249	17.4 ¹⁵¹	+12	04.6 ¹³⁵	45	19 28	20 01	20 42	20 15 17	6 00	68	
19	101	32.7		27.9	263	51.7 ¹⁵³	+11	51.1 ¹³⁵	50	42	20	21 08	24 12	5 48	72	
20	116	32.7		27.1	278	26.0 ¹⁵³		37.5 ¹³⁶	52	49	29	21	28 10	42	75	
21	131	32.6		26.4	293	00.3 ¹⁵³		23.9 ¹³⁶	54	19 56	39	37	33 8	35	78	
22	146	32.5		25.6	307	34.7 ¹⁵⁴	+11	10.3 ¹³⁶	56	20 05	20 51	21 56	38 5	28	81	
23	161	32.5		24.9	322	09.2 ¹⁵⁵	+10	56.6 ¹³⁷	58	14	21 05	22 21	44 2	19	85	
24	176	32.4	-16	24.2	336	43.8 ¹⁵⁶	+10	42.9 ¹³⁷	60 S	20 25	21 21	22 57	20 51 **	5 10	88	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 15 ^h 06 ^m 3		Mag: -3.9 PMG: 13 ^h 47 ^m		Mag: +1.4 PMG: 10 ^h 04 ^m		Mag: -1.9 PMG: 8 ^h 00 ^m		Mag: 0.0 PMG: 0 ^h 49 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	132	47.7	153	14.6	-10	13.4	239	43.0	-21	49.6						
1	147	50.2	168	14.1		12.2	254	45.0		49.6						
2	162	52.7	183	13.7		11.0	269	47.1		49.7						
3	177	55.1	198	13.2		09.8	284	49.1		49.7						
4	192	57.6	213	12.8		08.6	299	51.1		49.8						
5	208	00.1	228	12.3	-10	07.5	314	53.2	-21	49.8						
6	223	02.5	243	11.9	-10	06.3	329	55.2	-21	49.9						
7	238	05.0	258	11.4		05.1	344	57.2		49.9						
8	253	07.5	273	11.0		03.9	359	59.3		50.0						
9	268	09.9	288	10.5		02.7	15	01.3		50.0						
10	283	12.4	303	10.1		01.5	30	03.3		50.1						
11	298	14.9	318	09.6	-10	00.3	45	05.4	-21	50.1						
12	313	17.3	333	09.2	-9	59.1	60	07.4	-21	50.1						
13	328	19.8	348	08.8		57.9	75	09.4		50.2						
14	343	22.2	3	08.3		56.7	90	11.5		50.2						
15	358	24.7	18	07.9		55.5	105	13.5		50.3						
16	13	27.2	33	07.4		54.3	120	15.6		50.3						
17	28	29.6	48	07.0	-9	53.1	135	17.6	-21	50.4						
18	43	32.1	63	06.5	-9	51.9	150	19.6	-21	50.4						
19	58	34.6	78	06.1		50.7	165	21.7		50.5						
20	73	37.0	93	05.6		49.5	180	23.7		50.5						
21	88	39.5	108	05.2		48.3	195	25.7		50.6						
22	103	42.0	123	04.8		47.1	210	27.8		50.6						
23	118	44.4	138	04.3		45.9	225	29.8		50.6						
24	133	46.9	153	03.9	-9	44.7	240	31.9	-21	50.7						
Dif	—		-4		+12		+20		0							
					+4		+2		+27							
									+1							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 9				Edad: 15 ^d 8 PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6 SD: 15'0 PMG: 1 ^h 36 ^m R°: 40 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	176	32.4	-16	24.2	336	43.8	+10	42.9	60 N	6 31	7 21	8 08	19 23	83	8 48	**				
1	191	32.4		23.4	351	18.4		29.2	58	28	15	7 58	26	80	44	2				
2	206	32.3		22.7	5	53.1		15.4	56	25	09	50	29	77	39	5				
3	221	32.2		21.9	20	27.8	+10	01.6	54	22	7 04	42	32	74	36	7				
4	236	32.2		21.2	35	02.6	+9	47.8	52	19	6 59	36	34	72	32	10				
5	251	32.1	-16	20.5	49	37.4	+9	33.9	50	6 17	6 55	7 30	19 37	69	8 29	12				
6	266	32.0	-16	19.7	64	12.3	+9	20.0	45	6 11	6 46	7 17	19 42	64	8 22	16				
7	281	32.0		19.0	78	47.3	+9	06.1	40	05	38	7 06	46	60	16	20				
8	296	31.9		18.2	93	22.3	+8	52.2	35	6 00	30	6 57	49	57	11	24				
9	311	31.9		17.5	107	57.3		38.2	30	5 55	24	49	52	54	8 07	26				
10	326	31.8		16.7	122	32.4		24.2	20	45	12	35	19 58	48	7 59	32				
11	341	31.7	-16	16.0	137	07.6	+8	10.2	10 N	5 35	6 00	6 22	20 02	44	7 52	36				
12	356	31.7	-16	15.2	151	42.8	+7	56.2	0	5 24	5 49	6 10	20 07	39	7 46	40				
13	11	31.6		14.5	166	18.1		42.2	10 S	5 11	37	5 58	11	35	39	45				
14	26	31.6		13.7	180	53.4		28.1	20	4 55	22	46	16	31	32	49				
15	41	31.5		13.0	195	28.7	+7	14.0	30	35	5 05	31	21	26	24	54				
16	56	31.4		12.3	210	04.1	+6	59.9	35	22	4 55	22	24	23	19	58				
17	71	31.4	-16	11.5	224	39.6	+6	45.8	40	4 06	4 42	5 12	20 28	19	7 14	61				
18	86	31.3	-16	10.8	239	15.0	+6	31.6	45	3 46	4 28	5 01	20 32	15	7 08	65				
19	101	31.3		10.0	253	50.5		17.5	50	20	09	4 46	36	11	7 00	70				
20	116	31.2		09.3	268	26.1	+6	03.3	52	3 07	4 00	40	38	9	6 57	72				
21	131	31.2		08.5	283	01.7	+5	49.1	54	2 51	3 49	32	41	6	53	75				
22	146	31.1		07.8	297	37.3		34.9	56	32	38	24	43	5	49	77				
23	161	31.1		07.0	312	13.0		20.7	58	2 08	24	14	46	2	44	81				
24	176	31.0	-16	06.3	326	48.7	+5	06.4	60 S	1 32	3 07	4 04	20 49	**	6 38	85				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 02 ^m 4				Mag: -3.9 PMG: 13 ^h 48 ^m				Mag: +1.4 PMG: 10 ^h 03 ^m				Mag: -1.9 PMG: 7 ^h 57 ^m				Mag: 0.0 PMG: 0 ^h 45 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	46.9	153	03.9	-9	44.7	209	08.0	-23	26.1	240	31.9	-21	50.7	348	47.5	+15	20.3		
1	148	49.4	168	03.4		43.5	224	08.4		26.0	255	33.9		50.7	3	50.2		20.3		
2	163	51.8	183	03.0		42.3	239	08.9		25.8	270	35.9		50.8	18	52.8		20.4		
3	178	54.3	198	02.5		41.1	254	09.3		25.7	285	38.0		50.8	33	55.5		20.5		
4	193	56.7	213	02.1		39.9	269	09.7		25.5	300	40.0		50.9	48	58.2		20.5		
5	208	59.2	228	01.7	-9	38.7	284	10.2	-23	25.3	315	42.0	-21	50.9	64	00.8	+15	20.6		
6	224	01.7	243	01.2	-9	37.5	299	10.6	-23	25.2	330	44.1	-21	51.0	79	03.5	+15	20.7		
7	239	04.1	258	00.8		36.3	314	11.1		25.0	345	46.1		51.0	94	06.1		20.8		
8	254	06.6	273	00.4		35.1	329	11.5		24.8	0	48.2		51.0	109	08.8		20.8		
9	269	09.1	287	59.9		33.9	344	11.9		24.7	15	50.2		51.1	124	11.5		20.9		
10	284	11.5	302	59.5		32.6	359	12.4		24.5	30	52.2		51.1	139	14.1		21.0		
11	299	14.0	317	59.0	-9	31.4	14	12.8	-23	24.3	45	54.3	-21	51.2	154	16.8	+15	21.0		
12	314	16.5	332	58.6	-9	30.2	29	13.3	-23	24.2	60	56.3	-21	51.2	169	19.4	+15	21.1		
13	329	18.9	347	58.2		29.0	44	13.7		24.0	75	58.4		51.3	184	22.1		21.2		
14	344	21.4	2	57.7		27.8	59	14.1		23.9	91	00.4		51.3	199	24.8		21.2		
15	359	23.8	17	57.3		26.6	74	14.6		23.7	106	02.4		51.4	214	27.4		21.3		
16	14	26.3	32	56.9		25.4	89	15.0		23.5	121	04.5		51.4	229	30.1		21.4		
17	29	28.8	47	56.4	-9	24.2	104	15.5	-23	23.4	136	06.5	-21	51.4	244	32.7	+15	21.5		
18	44	31.2	62	56.0	-9	23.0	119	15.9	-23	23.2	151	08.6	-21	51.5	259	35.4	+15	21.5		
19	59	33.7	77	55.6		21.8	134	16.4		23.0	166	10.6		51.5	274	38.1		21.6		
20	74	36.2	92	55.1		20.6	149	16.8		22.8	181	12.6		51.6	289	40.7		21.7		
21	89	38.6	107	54.7		19.3	164	17.2		22.7	196	14.7		51.6	304	43.4		21.7		
22	104	41.1	122	54.3		18.1	179	17.7		22.5	211	16.7		51.7	319	46.0		21.8		
23	119	43.6	137	53.8		16.9	194	18.1		22.3	226	18.8		51.7	334	48.7		21.9		
24	134	46.0	152	53.4	-9	15.7	209	18.6	-23	22.2	241	20.8	-21	51.8	349	51.4	+15	21.9		
Dif	—				-4 +12				+4 +2				+20 0				+27 +1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 16 ^d 8 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3										
	PMG: 12 ^h 14 ^m 0			SD: 14 ^h 9 PMG: 2 ^h 16 ^m R°: 40 ^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	31.0	-16 06.3	326	48.7	+5 06.4	60 N	16 24	17 10	18 00	20 46 81	8 47 **		
1	191	30.9	05.5	341	24.5 ¹⁶⁸	+4 52.2 ¹⁴²	58	33	16	03	46 78	46 1		
2	206	30.9	04.7	356	00.3 ¹⁶⁸	38.0 ¹⁴²	56	41	21	06	46 75	44 4		
3	221	30.8	04.0	10	36.1 ¹⁶⁸	23.7 ¹⁴³	54	48	26	09	46 72	43 7		
4	236	30.8	03.2	25	11.9 ¹⁶⁸	+4 09.5 ¹⁴²	52	16 55	31	11	46 70	42 9		
5	251	30.7	-16 02.5	39	47.8 ¹⁶⁹	+3 55.2 ¹⁴³	50	17 00	17 35	18 13	20 46 68	8 41 11		
6	266	30.7	-16 01.7	54	23.7 ¹⁶⁹	+3 40.9 ¹⁴³	45	17 13	17 44	18 19	20 46 63	8 38 16		
7	281	30.6	01.0	68	59.6 ¹⁶⁹	26.6 ¹⁴³	40	23	52	24	46 59	36 20		
8	296	30.6	-16 00.2	83	35.6 ¹⁷⁰	+3 12.3 ¹⁴³	35	32	17 59	29	46 56	35 22		
9	311	30.5	-15 59.5	98	11.6 ¹⁷⁰	+2 58.0 ¹⁴³	30	40	18 05	34	46 53	33 26		
10	326	30.5	58.7	112	47.6 ¹⁷⁰	43.8 ¹⁴²	20	17 54	17	43	46 48	31 30		
11	341	30.4	-15 58.0	127	23.6 ¹⁷⁰	+2 29.5 ¹⁴³	10 N	18 06	18 28	18 53	20 46 43	8 28 35		
12	356	30.4	-15 57.2	141	59.7 ¹⁷¹	+2 15.2 ¹⁴³	0	18 17	18 39	19 04	20 46 39	8 26 39		
13	11	30.3	56.4	156	35.8 ¹⁷¹	+2 00.9 ¹⁴³	10 S	29	18 51	17	46 35	24 43		
14	26	30.3	55.7	171	11.9 ¹⁷¹	+1 46.6 ¹⁴³	20	41	19 05	32	47 30	21 48		
15	41	30.2	54.9	185	48.0 ¹⁷¹	32.3 ¹⁴³	30	18 56	21	19 52	47 25	18 54		
16	56	30.2	54.2	200	24.1 ¹⁷¹	18.0 ¹⁴³	35	19 04	31	20 04	47 22	17 56		
17	71	30.1	-15 53.4	215	00.3 ¹⁷²	+1 03.7 ¹⁴³	40	19 14	19 43	20 19	20 47 19	8 15 60		
18	86	30.1	-15 52.6	229	36.5 ¹⁷²	+0 49.4 ¹⁴³	45	19 25	19 58	20 38	20 47 16	8 13 63		
19	101	30.0	51.9	244	12.6 ¹⁷¹	35.1 ¹⁴³	50	39	20 16	21 04	47 11	10 69		
20	116	30.0	51.1	258	48.8 ¹⁷²	20.8 ¹⁴³	52	45	25	16	47 9	09 71		
21	131	29.9	50.4	273	25.1 ¹⁷³	+0 06.5 ¹⁴³	54	19 52	35	31	47 7	08 73		
22	146	29.9	49.6	288	01.3 ¹⁷²	-0 07.8 ¹⁴³	56	20 00	46	21 49	48 4	06 76		
23	161	29.8	48.8	302	37.5 ¹⁷²	22.0 ¹⁴²	58	09	20 59	22 12	48 1	05 78		
24	176	29.8	-15 48.1	317	13.8 ¹⁷³	-0 36.3 ¹⁴³	60 S	20 20	21 14	22 43	20 48 **	8 03 82		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 58 ^m 5		Mag: -3.9 PMG: 13 ^h 49 ^m		Mag: +1.4 PMG: 10 ^h 02 ^m		Mag: -2.0 PMG: 7 ^h 54 ^m		Mag: 0.0 PMG: 0 ^h 40 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	134	46.0	152 53.4	-9 15.7	209 18.6	-23 22.2	241 20.8	-21 51.8	349 51.4	+15 21.9
1	149	48.5	167 53.0	14.5	224 19.0	22.0	256 22.9	51.8	4 54.0	22.0
2	164	51.0	182 52.5	13.3	239 19.4	21.8	271 24.9	51.8	19 56.7	22.1
3	179	53.4	197 52.1	12.1	254 19.9	21.7	286 26.9	51.9	34 59.3	22.2
4	194	55.9	212 51.7	10.9	269 20.3	21.5	301 29.0	51.9	50 02.0	22.2
5	209	58.3	227 51.2	-9 09.6	284 20.8	-23 21.3	316 31.0	-21 52.0	65 04.7	+15 22.3
6	225	00.8	242 50.8	-9 08.4	299 21.2	-23 21.1	331 33.1	-21 52.0	80 07.3	+15 22.4
7	240	03.3	257 50.4	07.2	314 21.6	21.0	346 35.1	52.1	95 10.0	22.4
8	255	05.7	272 50.0	06.0	329 22.1	20.8	1 37.2	52.1	110 12.6	22.5
9	270	08.2	287 49.5	04.8	344 22.5	20.6	16 39.2	52.1	125 15.3	22.6
10	285	10.7	302 49.1	03.6	359 23.0	20.4	31 41.3	52.2	140 18.0	22.6
11	300	13.1	317 48.7	-9 02.4	14 23.4	-23 20.3	46 43.3	-21 52.2	155 20.6	+15 22.7
12	315	15.6	332 48.2	-9 01.1	29 23.8	-23 20.1	61 45.3	-21 52.3	170 23.3	+15 22.8
13	330	18.1	347 47.8	-8 59.9	44 24.3	19.9	76 47.4	52.3	185 25.9	22.9
14	345	20.5	2 47.4	58.7	59 24.7	19.7	91 49.4	52.4	200 28.6	22.9
15	0	23.0	17 47.0	57.5	74 25.2	19.6	106 51.5	52.4	215 31.3	23.0
16	15	25.4	32 46.5	56.3	89 25.6	19.4	121 53.5	52.5	230 33.9	23.1
17	30	27.9	47 46.1	-8 55.0	104 26.0	-23 19.2	136 55.6	-21 52.5	245 36.6	+15 23.1
18	45	30.4	62 45.7	-8 53.8	119 26.5	-23 19.0	151 57.6	-21 52.5	260 39.2	+15 23.2
19	60	32.8	77 45.3	52.6	134 26.9	18.9	166 59.7	52.6	275 41.9	23.3
20	75	35.3	92 44.8	51.4	149 27.4	18.7	182 01.7	52.6	290 44.6	23.3
21	90	37.8	107 44.4	50.2	164 27.8	18.5	197 03.8	52.7	305 47.2	23.4
22	105	40.2	122 44.0	48.9	179 28.3	18.3	212 05.8	52.7	320 49.9	23.5
23	120	42.7	137 43.6	47.7	194 28.7	18.1	227 07.9	52.8	335 52.5	23.6
24	135	45.2	152 43.2	-8 46.5	209 29.1	-23 18.0	242 09.9	-21 52.8	350 55.2	+15 23.6
Dif	—		-4 +12		+4 +2		+20 0		+27 +1	

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: 17 ^d 8 PHE { SD: 14/8 PMG: 2 ^h 56 ^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	176	29.8	-15 48.1	317	13.8	-0	36.3	60 N	6 27	7 17	8 03	22 07	84	8 46	**		
1	191	29.7		331	50.0 ¹⁷²	-0	50.6 ¹⁴³	58	24	11	7 54		04 80	47	2		
2	206	29.7		346	26.3 ¹⁷³	-1	04.8 ¹⁴²	56	21	06	46	22 01	76	48	5		
3	221	29.6		1	02.6 ¹⁷³		19.0 ¹⁴²	54	19	7 01	39	21 58	74	50	6		
4	236	29.6		15	38.8 ¹⁷²		33.3 ¹⁴³	52	16	6 56	32		56 71	51	9		
5	251	29.6	-15 44.2	30	15.1 ¹⁷³	-1	47.5 ¹⁴²	50	6 14	6 52	7 27	21 54	69	8 52	11		
6	266	29.5	-15 43.5	44	51.4 ¹⁷³	-2	01.7 ¹⁴²	45	6 09	6 43	7 14	21 49	64	8 54	15		
7	281	29.5		59	27.7 ¹⁷³		15.9 ¹⁴²	40	6 04	36	7 04		45 60	56	19		
8	296	29.4		74	04.0 ¹⁷³		30.1 ¹⁴²	35	5 59	29	6 55		42 56	57	23		
9	311	29.4		88	40.3 ¹⁷³		44.2 ¹⁴¹	30	54	23	47		39 53	8 59	25		
10	326	29.3		103	16.5 ¹⁷²	-2	58.4 ¹⁴²	20	45	11	34		34 48	9 01	31		
11	341	29.3	-15 39.6	117	52.8 ¹⁷³	-3	12.5 ¹⁴¹	10 N	5 35	6 00	6 22	21 29	44	9 03	35		
12	356	29.3	-15 38.9	132	29.1 ¹⁷³	-3	26.6 ¹⁴¹	0	5 24	5 49	6 11	21 25	40	9 05	39		
13	11	29.2		147	05.4 ¹⁷³		40.7 ¹⁴¹	10 S	5 12	37	5 59		21 36	07	43		
14	26	29.2		161	41.6 ¹⁷²	-3	54.8 ¹⁴¹	20	4 56	24	47		17 31	09	48		
15	41	29.1		36.6	176 17.9 ¹⁷³	-4	08.9 ¹⁴¹	30	37	5 07	33		12 26	12	53		
16	56	29.1		35.8	190 54.2 ¹⁷³		22.9 ¹⁴⁰	35	24	4 57	24		09 24	13	56		
17	71	29.0	-15 35.0	205	30.4 ¹⁷²	-4	37.0 ¹⁴¹	40	4 09	4 45	5 15	21 06	20	9 15	59		
18	86	29.0	-15 34.2	220	06.6 ¹⁷²	-4	51.0 ¹⁴⁰	45	3 50	4 31	5 03	21 03	16	9 16	64		
19	101	29.0		33.5	234 42.9 ¹⁷³	-5	05.0 ¹⁴⁰	50	25	13	4 50	20 58	12	19	68		
20	116	28.9		32.7	249 19.1 ¹⁷²		19.0 ¹⁴⁰	52	3 12	4 04	43		56 10	20	70		
21	131	28.9		31.9	263 55.3 ¹⁷²		32.9 ¹³⁹	54	2 58	3 54	36		54 7	21	73		
22	146	28.8		31.2	278 31.4 ¹⁷¹	-5	46.8 ¹³⁹	56	40	43	28		52 5	22	76		
23	161	28.8		30.4	293 07.6 ¹⁷²	-6	00.7 ¹³⁹	58	2 17	30	19		49 2	23	79		
24	176	28.8	-15 29.6	307	43.8 ¹⁷²	-6	14.6 ¹³⁹	60 S	1 45	3 14	4 09	20 46	**	9 25	82		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 54 ^m 5		Mag: -3.9 PMG: 13 ^h 50 ^m		Mag: +1.4 PMG: 10 ^h 02 ^m		Mag: -2.0 PMG: 7 ^h 50 ^m		Mag: 0.0 PMG: 0 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	45.2	152	43.2	-8	46.5	209	29.1	-23	18.0
1	150	47.6	167	42.7		45.3	224	29.6		17.8
2	165	50.1	182	42.3		44.1	239	30.0		17.6
3	180	52.6	197	41.9		42.8	254	30.5		17.4
4	195	55.0	212	41.5		41.6	269	30.9		17.2
5	210	57.5	227	41.1	-8	40.4	284	31.3	-23	17.0
6	225	59.9	242	40.6	-8	39.2	299	31.8	-23	16.9
7	241	02.4	257	40.2		37.9	314	32.2		16.7
8	256	04.9	272	39.8		36.7	329	32.7		16.5
9	271	07.3	287	39.4		35.5	344	33.1		16.3
10	286	09.8	302	39.0		34.3	359	33.5		16.1
11	301	12.3	317	38.5	-8	33.0	14	34.0	-23	15.9
12	316	14.7	332	38.1	-8	31.8	29	34.4	-23	15.8
13	331	17.2	347	37.7		30.6	44	34.9		15.6
14	346	19.7	2	37.3		29.3	59	35.3		15.4
15	1	22.1	17	36.9		28.1	74	35.8		15.2
16	16	24.6	32	36.5		26.9	89	36.2		15.0
17	31	27.1	47	36.0	-8	25.7	104	36.6	-23	14.8
18	46	29.5	62	35.6	-8	24.4	119	37.1	-23	14.6
19	61	32.0	77	35.2		23.2	134	37.5		14.4
20	76	34.4	92	34.8		22.0	149	38.0		14.3
21	91	36.9	107	34.4		20.7	164	38.4		14.1
22	106	39.4	122	34.0		19.5	179	38.8		13.9
23	121	41.8	137	33.5		18.3	194	39.3		13.7
24	136	44.3	152	33.1	-8	17.1	209	39.7	-23	13.5
Dif	—		-4 +12		+4 +2		+20 0		+27 +1	

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: 18 ^d 8 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 40 ^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	176	28.8	-15	29.6	307	43.8	-6	14.6	60 N	16 29	17 15	18 05	23 31 86		8 44 **					
1	191	28.7		28.8	322	19.9 ¹⁷¹		28.5 ¹³⁹	58	38	20	07	24 82		49 2					
2	206	28.7		28.1	336	56.0 ¹⁷¹		42.3 ¹³⁸	56	45	25	10	17 79		53 5					
3	221	28.7		27.3	351	32.1 ¹⁷¹	-6	56.1 ¹³⁸	54	52	30	12	12 75		8 56 8					
4	236	28.6		26.5	6	08.2 ¹⁷¹	-7	09.9 ¹³⁸	52	16 58	34	14	07 73		9 00 10					
5	251	28.6	-15	25.7	20	44.2 ¹⁷⁰	-7	23.6 ¹³⁷	50	17 04	17 38	18 16	23 03 70		9 03 12					
6	266	28.5	-15	25.0	35	20.3 ¹⁷¹	-7	37.4 ¹³⁸	45	17 16	17 47	18 21	22 53 65		9 09 18					
7	281	28.5		24.2	49	56.3 ¹⁷⁰	-7	51.1 ¹³⁷	40	26	17 54	26	45 61		15 21					
8	296	28.5		23.4	64	32.2 ¹⁶⁹	-8	04.7 ¹³⁶	35	34	18 01	31	38 58		20 24					
9	311	28.4		22.6	79	08.2 ¹⁷⁰		18.3 ¹³⁶	30	42	07	35	32 55		24 27					
10	326	28.4		21.8	93	44.1 ¹⁶⁹		32.0 ¹³⁷	20	17 55	18	44	22 50		32 31					
11	341	28.4	-15	21.1	108	20.0 ¹⁶⁹	-8	45.5 ¹³⁵	10 N	18 07	18 28	18 53	22 13 46		9 38 36					
12	356	28.3	-15	20.3	122	55.9 ¹⁶⁹	-8	59.1 ¹³⁶	0	18 18	18 39	19 04	22 05 41		9 44 41					
13	11	28.3		19.5	137	31.7 ¹⁶⁸	-9	12.6 ¹³⁵	10 S	29	18 51	16	21 57 37		50 45					
14	26	28.3		18.7	152	07.5 ¹⁶⁸		26.0 ¹³⁴	20	41	19 04	31	48 33		9 57 49					
15	41	28.2		17.9	166	43.3 ¹⁶⁸		39.5 ¹³⁵	30	18 54	20	19 50	38 28		10 05 54					
16	56	28.2		17.2	181	19.0 ¹⁶⁷	-9	52.9 ¹³⁴	35	19 02	30	20 02	33 25		09 57					
17	71	28.2	-15	16.4	195	54.8 ¹⁶⁸	-10	06.3 ¹³⁴	40	19 12	19 41	20 17	21 26 22		10 14 60					
18	86	28.1	-15	15.6	210	30.4 ¹⁶⁶	-10	19.6 ¹³³	45	19 22	19 55	20 35	21 19 18		10 20 64					
19	101	28.1		14.8	225	06.0 ¹⁶⁶		32.9 ¹³³	50	36	20 12	20 59	10 14		27 69					
20	116	28.1		14.0	239	41.6 ¹⁶⁶		46.1 ¹³²	52	42	21	21 11	06 11		30 72					
21	131	28.0		13.2	254	17.2 ¹⁶⁶	-10	59.4 ¹³³	54	49	30	25	21 01 9		34 74					
22	146	28.0		12.5	268	52.7 ¹⁶⁵	-11	12.5 ¹³¹	56	19 56	41	21 42	20 57 6		38 77					
23	161	28.0		11.7	283	28.2 ¹⁶⁵		25.7 ¹³²	58	20 05	20 53	22 03	51 3		42 81					
24	176	28.0	-15	10.9	298	03.6 ¹⁶⁴	-11	38.8 ¹³¹	60 S	20 15	21 08	22 32	20 45 **		10 47 85					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 50 ^m 6				Mag: -3.9 PMG: 13 ^h 50 ^m				Mag: +1.4 PMG: 10 ^h 01 ^m				Mag: -2.0 PMG: 7 ^h 47 ^m				Mag: 0.0 PMG: 0 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	136	44.3	152	33.1	-8	17.1	209	39.7	-23	13.5	242	59.1	-21	53.8	351	59.1	+15	25.3		
1	151	46.8	167	32.7		15.8	224	40.2		13.3	258	01.1		53.9	7	01.7		25.4		
2	166	49.2	182	32.3		14.6	239	40.6		13.1	273	03.2		53.9	22	04.4		25.4		
3	181	51.7	197	31.9		13.4	254	41.1		12.9	288	05.3		53.9	37	07.1		25.5		
4	196	54.2	212	31.5		12.1	269	41.5		12.7	303	07.3		54.0	52	09.7		25.6		
5	211	56.6	227	31.1	-8	10.9	284	41.9	-23	12.5	318	09.4	-21	54.0	67	12.4	+15	25.7		
6	226	59.1	242	30.7	-8	09.7	299	42.4	-23	12.3	333	11.4	-21	54.1	82	15.0	+15	25.7		
7	242	01.5	257	30.3		08.4	314	42.8		12.1	348	13.5		54.1	97	17.7		25.8		
8	257	04.0	272	29.8		07.2	329	43.3		12.0	3	15.5		54.1	112	20.4		25.9		
9	272	06.5	287	29.4		06.0	344	43.7		11.8	18	17.6		54.2	127	23.0		25.9		
10	287	08.9	302	29.0		04.7	359	44.1		11.6	33	19.6		54.2	142	25.7		26.0		
11	302	11.4	317	28.6	-8	03.5	14	44.6	-23	11.4	48	21.7	-21	54.3	157	28.4	+15	26.1		
12	317	13.9	332	28.2	-8	02.2	29	45.0	-23	11.2	63	23.7	-21	54.3	172	31.0	+15	26.1		
13	332	16.3	347	27.8	-8	01.0	44	45.5		11.0	78	25.8		54.4	187	33.7		26.2		
14	347	18.8	2	27.4	-7	59.8	59	45.9		10.8	93	27.9		54.4	202	36.3		26.3		
15	2	21.3	17	27.0		58.5	74	46.4		10.6	108	29.9		54.4	217	39.0		26.4		
16	17	23.7	32	26.6		57.3	89	46.8		10.4	123	32.0		54.5	232	41.7		26.4		
17	32	26.2	47	26.2	-7	56.1	104	47.2	-23	10.2	138	34.0	-21	54.5	247	44.3	+15	26.5		
18	47	28.7	62	25.8	-7	54.8	119	47.7	-23	10.0	153	36.1	-21	54.6	262	47.0	+15	26.6		
19	62	31.1	77	25.4		53.6	134	48.1		09.8	168	38.1		54.6	277	49.6		26.6		
20	77	33.6	92	24.9		52.3	149	48.6		09.6	183	40.2		54.6	292	52.3		26.7		
21	92	36.0	107	24.5		51.1	164	49.0		09.4	198	42.2		54.7	307	55.0		26.8		
22	107	38.5	122	24.1		49.9	179	49.5		09.2	213	44.3		54.7	322	57.6		26.8		
23	122	41.0	137	23.7		48.6	194	49.9		09.0	228	46.4		54.8	338	00.3		26.9		
24	137	43.4	152	23.3	-7	47.4	209	50.3	-23	08.8	243	48.4	-21	54.8	353	03.0	+15	27.0		
Dif	—				-4 +12				+4 +2				+21 0				+27 +1			

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: 19 ^d 8 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 SD: 14/7 PMG: 4 ^h 15 ^m R°: 42 ^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	176	28.0	-15	10.9	298	03.6	-11	38.8	60 N	6 23	7 12	7 58	**	**	**	8 43	**	**
1	191	27.9		10.1	312	39.0 ¹⁶⁴	-11	51.8 ¹³⁰	58	20	07	49	**	**	**	51	3	
2	206	27.9		09.3	327	14.3 ¹⁶³	-12	04.8 ¹³⁰	56	18	7 02	42	**	**	**	8 58	7	
3	221	27.9		08.5	341	49.6 ¹⁶³		17.8 ¹³⁰	54	15	6 57	35	**	**	**	9 04	1	
4	236	27.8		07.7	356	24.9 ¹⁶³		30.7 ¹²⁹	52	13	53	29	**	**	**	10 13		
5	251	27.8	-15	07.0	11	00.1 ¹⁶²	-12	43.6 ¹²⁹	50	6 11	6 49	7 23	**	**	**	9 15	15	
6	266	27.8	-15	06.2	25	35.2 ¹⁶¹	-12	56.5 ¹²⁹	45	6 06	6 41	7 12	23	58	67	9 27	19	
7	281	27.8		05.4	40	10.3 ¹⁶¹	-13	09.3 ¹²⁸	40	6 02	34	7 02	46	63		36	24	
8	296	27.7		04.6	54	45.4 ¹⁶¹		22.0 ¹²⁷	35	5 57	27	6 53	36	60		44	27	
9	311	27.7		03.8	69	20.4 ¹⁶⁰		34.7 ¹²⁷	30	53	21	46	27	57		9 51	30	
10	326	27.7		03.0	83	55.3 ¹⁵⁹	-13	47.4 ¹²⁷	20	44	10	33	23	12	52	10 03	35	
11	341	27.6	-15	02.2	98	30.2 ¹⁵⁹	-14	00.0 ¹²⁶	10 N	5 35	6 00	6 22	22	59	48	10 14	39	
12	356	27.6	-15	01.4	113	05.1 ¹⁵⁹	-14	12.5 ¹²⁵	0	5 24	5 49	6 11	22	46	45	10 25	42	
13	11	27.6	-15	00.6	127	39.9 ¹⁵⁸		25.0 ¹²⁵	10 S	5 12	38	6 00	34	41		35	46	
14	26	27.6	-14	59.8	142	14.6 ¹⁵⁷		37.5 ¹²⁵	20	4 58	25	5 48	21	37		46	51	
15	41	27.5		59.1	156	49.2 ¹⁵⁶	-14	49.9 ¹²⁴	30	39	5 09	34	22	06	32	10 59	55	
16	56	27.5		58.3	171	23.9 ¹⁵⁷	-15	02.2 ¹²³	35	27	4 59	26	21	58	29	11 06	58	
17	71	27.5	-14	57.5	185	58.4 ¹⁵⁵	-15	14.5 ¹²³	40	4 12	4 48	5 17	21	48	26	11 14	62	
18	86	27.5	-14	56.7	200	32.9 ¹⁵⁵	-15	26.7 ¹²²	45	3 54	4 34	5 06	21	37	22	11 24	66	
19	101	27.4		55.9	215	07.3 ¹⁵⁴		38.9 ¹²²	50	30	17	4 53	24	17		36	71	
20	116	27.4		55.1	229	41.7 ¹⁵⁴	-15	51.0 ¹²¹	52	18	4 08	47	17	15		42	73	
21	131	27.4		54.3	244	16.0 ¹⁵³	-16	03.1 ¹²¹	54	3 04	3 59	40	10	12		48	76	
22	146	27.4		53.5	258	50.2 ¹⁵²		15.1 ¹²⁰	56	2 47	48	33	21	03	8	11 55	80	
23	161	27.4		52.7	273	24.4 ¹⁵²		27.1 ¹²⁰	58	2 26	36	24	20	54	5	12 03	83	
24	176	27.3	-14	51.9	287	58.5 ¹⁵¹	-16	38.9 ¹¹⁸	60 S	1 58	3 21	4 15	20	44	1	12 12	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 46 ^m 7		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +1.4 PMG: 10 ^h 00 ^m		Mag: -2.0 PMG: 7 ^h 44 ^m		Mag: 0.0 PMG: 0 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	137	43.4	152	23.3	209	50.3	243	48.4	353	03.0
1	152	45.9	167	22.9	224	50.8	258	50.5	8	05.6
2	167	48.4	182	22.5	239	51.2	273	52.5	23	08.3
3	182	50.8	197	22.1	254	51.7	288	54.6	38	10.9
4	197	53.3	212	21.7	269	52.1	303	56.6	53	13.6
5	212	55.8	227	21.3	284	52.6	318	58.7	68	16.3
6	227	58.2	242	20.9	299	53.0	334	00.8	83	18.9
7	243	00.7	257	20.5	314	53.4	349	02.8	98	21.6
8	258	03.1	272	20.1	329	53.9	4	04.9	113	24.2
9	273	05.6	287	19.7	344	54.3	19	06.9	128	26.9
10	288	08.1	302	19.3	359	54.8	34	09.0	143	29.6
11	303	10.5	317	18.9	14	55.2	49	11.1	158	32.2
12	318	13.0	332	18.5	29	55.7	64	13.1	173	34.9
13	333	15.5	347	18.1	44	56.1	79	15.2	188	37.6
14	348	17.9	2	17.7	59	56.5	94	17.2	203	40.2
15	3	20.4	17	17.3	74	57.0	109	19.3	218	42.9
16	18	22.9	32	16.9	89	57.4	124	21.4	233	45.5
17	33	25.3	47	16.5	104	57.9	139	23.4	248	48.2
18	48	27.8	62	16.1	119	58.3	154	25.5	263	50.9
19	63	30.3	77	15.7	134	58.8	169	27.5	278	53.5
20	78	32.7	92	15.3	149	59.2	184	29.6	293	56.2
21	93	35.2	107	14.9	164	59.6	199	31.7	308	58.9
22	108	37.6	122	14.5	180	00.1	214	33.7	324	01.5
23	123	40.1	137	14.1	195	00.5	229	35.8	339	04.2
24	138	42.6	152	13.7	210	01.0	244	37.9	354	06.8
Dif	—		-4	+12	+4	+2	+21	0	+27	+1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2				Edad: 20 ^d 8 PHE { 4 ^h : 54 ⁴ / ₄ 12 ^h : 54 ⁵ / ₅ 20 ^h : 54 ⁶ / ₆ PMG: 4 ^h 57 ^m R°: 45 ^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	176	27.3	-14	51.9	287	58.5	-16	38.9	60 N	16 34	17 20	18 09	0 57 92		8 42 1					
1	191	27.3		51.1	302	32.5 ¹⁵⁰	-16	50.8 ¹¹⁹	58	42	25	11	46 86		8 54 6					
2	206	27.3		50.3	317	06.5 ¹⁵⁰	-17	02.5 ¹¹⁷	56	50	29	14	36 82		9 05 10					
3	221	27.3		49.5	331	40.4 ¹⁴⁹		14.2 ¹¹⁷	54	16 56	34	16	27 78		14 14					
4	236	27.2		48.7	346	14.2 ¹⁴⁸		25.9 ¹¹⁷	52	17 02	38	18	20 75		23 16					
5	251	27.2	-14	47.9	0	48.0 ¹⁴⁸	-17	37.5 ¹¹⁶	50	17 07	17 41	18 20	0 13 72		9 30 19					
6	266	27.2	-14	47.1	15	21.7 ¹⁴⁷	-17	49.0 ¹¹⁵	45	17 19	17 49	18 24	** ** *		9 46 25					
7	281	27.2		46.3	29	55.3 ¹⁴⁶	-18	00.4 ¹¹⁴	40	28	17 56	28	** ** *		10 00 28					
8	296	27.2		45.5	44	28.8 ¹⁴⁵		11.8 ¹¹⁴	35	36	18 03	32	** ** *		11 31					
9	311	27.1		44.7	59	02.3 ¹⁴⁵		23.1 ¹¹³	30	44	08	37	** ** *		21 34					
10	326	27.1		43.9	73	35.6 ¹⁴³		34.4 ¹¹³	20	17 56	19	45	** ** *		38 38					
11	341	27.1	-14	43.1	88	09.0 ¹⁴⁴	-18	45.5 ¹¹¹	10 N	18 07	18 29	18 54	23 47 51		10 53 42					
12	356	27.1	-14	42.3	102	42.2 ¹⁴²	-18	56.6 ¹¹¹	0	18 18	18 39	19 04	23 31 47		11 07 46					
13	11	27.1		41.5	117	15.3 ¹⁴¹	-19	07.7 ¹¹¹	10 S	28	18 50	15	23 15 44		21 50					
14	26	27.1		40.7	131	48.4 ¹⁴¹		18.6 ¹⁰⁹	20	40	19 03	30	22 58 41		37 53					
15	41	27.0		39.9	146	21.4 ¹⁴⁰		29.5 ¹⁰⁹	30	18 53	18	19 48	38 37		11 54 58					
16	56	27.0		39.1	160	54.3 ¹³⁹		40.3 ¹⁰⁸	35	19 01	27	20 00	27 34		12 04 61					
17	71	27.0	-14	38.3	175	27.1 ¹³⁸	-19	51.1 ¹⁰⁸	40	19 09	19 39	20 14	22 14 31		12 16 64					
18	86	27.0	-14	37.5	189	59.9 ¹³⁸	-20	01.7 ¹⁰⁶	45	19 20	19 52	20 32	21 59 28		12 30 68					
19	101	27.0		36.7	204	32.6 ¹³⁷		12.3 ¹⁰⁶	50	32	20 09	20 55	41 22		47 73					
20	116	27.0		35.9	219	05.1 ¹³⁵		22.8 ¹⁰⁵	52	38	17	21 06	32 20		12 55 76					
21	131	26.9		35.1	233	37.6 ¹³⁵		33.3 ¹⁰⁵	54	45	26	20	22 17		13 04 79					
22	146	26.9		34.3	248	10.0 ¹³⁴		43.6 ¹⁰³	56	19 52	36	36	21 11 14		15 82					
23	161	26.9		33.5	262	42.4 ¹³⁴	-20	53.9 ¹⁰³	58	20 00	20 48	21 55	20 59 9		26 88					
24	176	26.9	-14	32.7	277	14.6 ¹³²	-21	04.1 ¹⁰²	60 S	20 09	21 01	22 21	20 45 2		13 40 94					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 42 ^m 7				Mag: -3.9 PMG: 13 ^h 51 ^m				Mag: +1.4 PMG: 10 ^h 00 ^m				Mag: -2.0 PMG: 7 ^h 40 ^m				Mag: 0.0 PMG: 0 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	138	42.6	152	13.7	-7	17.5	210	01.0	-23	03.8	244	37.9	-21	55.8	354	06.8	+15	28.7		
1	153	45.0	167	13.3		16.3	225	01.4		03.6	259	39.9		55.8	9	09.5		28.7		
2	168	47.5	182	12.9		15.0	240	01.9		03.4	274	42.0		55.9	24	12.2		28.8		
3	183	50.0	197	12.5		13.8	255	02.3		03.2	289	44.0		55.9	39	14.8		28.9		
4	198	52.4	212	12.1		12.5	270	02.7		03.0	304	46.1		55.9	54	17.5		28.9		
5	213	54.9	227	11.7	-7	11.3	285	03.2	-23	02.8	319	48.2	-21	56.0	69	20.2	+15	29.0		
6	228	57.4	242	11.4	-7	10.0	300	03.6	-23	02.6	334	50.2	-21	56.0	84	22.8	+15	29.1		
7	243	59.8	257	11.0		08.8	315	04.1		02.3	349	52.3		56.1	99	25.5		29.1		
8	259	02.3	272	10.6		07.5	330	04.5		02.1	4	54.4		56.1	114	28.1		29.2		
9	274	04.8	287	10.2		06.3	345	05.0		01.9	19	56.4		56.1	129	30.8		29.3		
10	289	07.2	302	09.8		05.0	0	05.4		01.7	34	58.5		56.2	144	33.5		29.4		
11	304	09.7	317	09.4	-7	03.8	15	05.8	-23	01.5	50	00.6	-21	56.2	159	36.1	+15	29.4		
12	319	12.1	332	09.0	-7	02.5	30	06.3	-23	01.3	65	02.6	-21	56.3	174	38.8	+15	29.5		
13	334	14.6	347	08.6	-7	01.3	45	06.7		01.0	80	04.7		56.3	189	41.5		29.6		
14	349	17.1	2	08.2	-7	00.0	60	07.2		00.8	95	06.7		56.3	204	44.1		29.6		
15	4	19.5	17	07.8	-6	58.8	75	07.6		00.6	110	08.8		56.4	219	46.8		29.7		
16	19	22.0	32	07.4		57.5	90	08.1		00.4	125	10.9		56.4	234	49.4		29.8		
17	34	24.5	47	07.0	-6	56.3	105	08.5	-23	00.2	140	12.9	-21	56.4	249	52.1	+15	29.8		
18	49	26.9	62	06.6	-6	55.0	120	09.0	-23	00.0	155	15.0	-21	56.5	264	54.8	+15	29.9		
19	64	29.4	77	06.3		53.8	135	09.4	-22	59.7	170	17.1		56.5	279	57.4		30.0		
20	79	31.9	92	05.9		52.5	150	09.8		59.5	185	19.1		56.6	295	00.1		30.1		
21	94	34.3	107	05.5		51.2	165	10.3		59.3	200	21.2		56.6	310	02.8		30.1		
22	109	36.8	122	05.1		50.0	180	10.7		59.1	215	23.3		56.6	325	05.4		30.2		
23	124	39.2	137	04.7		48.7	195	11.2		58.9	230	25.3		56.7	340	08.1		30.3		
24	139	41.7	152	04.3	-6	47.5	210	11.6	-22	58.6	245	27.4	-21	56.7	355	10.7	+15	30.3		
Dif	—		-4		+13		+4		+2		+21		0		+27		+1			

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: 21 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 SD: 14'9 PMG: 5 ^h 42 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.9	-14	32.7	277	14.6	-21	04.1	60 N	6 18	7 07	7 53	2 29	97	8 43	4
1	191	26.9		31.9	291	46.8 ¹³²		14.2 ¹⁰¹	58	16	7 02	44	2 12	89	9 00	12
2	206	26.9		31.1	306	18.8 ¹³⁰		24.2 ¹⁰⁰	56	14	6 58	37	1 58	83	15	17
3	221	26.9		30.3	320	50.8 ¹³⁰		34.1 ⁹⁹	54	12	54	31	45	80	28	21
4	236	26.8		29.4	335	22.7 ¹²⁹		44.0 ⁹⁹	52	10	50	25	35	76	39	24
5	251	26.8	-14	28.6	349	54.5 ¹²⁸	-21	53.7 ⁹⁷	50	6 08	6 46	7 20	1 25	74	9 49	27
6	266	26.8	-14	27.8	4	26.2 ¹²⁷	-22	03.4 ⁹⁷	45	6 04	6 38	7 09	1 05	68	10 11	31
7	281	26.8		27.0	18	57.8 ¹²⁶		13.0 ⁹⁶	40	6 00	32	7 00	0 49	65	28	34
8	296	26.8		26.2	33	29.3 ¹²⁵		22.5 ⁹⁵	35	5 56	25	6 52	36	61	42	38
9	311	26.8		25.4	48	00.7 ¹²⁴		31.9 ⁹⁴	30	51	20	44	24	59	10 55	40
10	326	26.8		24.6	62	32.1 ¹²⁴		41.2 ⁹³	20	43	09	32	0 04	54	11 16	44
11	341	26.8	-14	23.8	77	03.3 ¹²²	-22	50.4 ⁹²	10 N	5 34	6 00	6 21	** ** *	**	11 35	47
12	356	26.8	-14	23.0	91	34.5 ¹²²	-22	59.5 ⁹¹	0	5 25	5 49	6 11	** ** *	**	11 53	50
13	11	26.7		22.2	106	05.5 ¹²⁰	-23	08.5 ⁹⁰	10 S	5 13	39	6 00	23	59	50	12 11
14	26	26.7		21.3	120	36.5 ¹²⁰		17.4 ⁸⁹	20	4 59	26	5 49	39	46	30	56
15	41	26.7		20.5	135	07.4 ¹¹⁹		26.3 ⁸⁹	30	41	11	36	15	44	12 52	59
16	56	26.7		19.7	149	38.1 ¹¹⁷		35.0 ⁸⁷	35	29	5 01	28	23	01	42	13 05
17	71	26.7	-14	18.9	164	08.8 ¹¹⁷	-23	43.6 ⁸⁶	40	4 15	4 50	5 20	22	45	39	13 20
18	86	26.7	-14	18.1	178	39.4 ¹¹⁶	-23	52.1 ⁸⁵	45	3 57	4 37	5 09	22	27	35	13 38
19	101	26.7		17.3	193	09.9 ¹¹⁵	-24	00.6 ⁸⁵	50	34	21	4 57	22	03	32	14 00
20	116	26.7		16.5	207	40.3 ¹¹⁴		08.9 ⁸³	52	23	13	51	21	52	29	11 75
21	131	26.7		15.6	222	10.6 ¹¹³		17.1 ⁸²	54	3 10	4 04	45	39	26	23	79
22	146	26.7		14.8	236	40.8 ¹¹²		25.2 ⁸¹	56	2 54	3 53	37	25	22	37	83
23	161	26.7		14.0	251	10.9 ¹¹¹		33.2 ⁸⁰	58	34	42	29	21	08	16	14 54
24	176	26.7	-14	13.2	265	40.9 ¹¹⁰	-24	41.1 ⁷⁹	60 S	2 09	3 28	4 20	20	47	8	15 14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 14 ^h 38 ^m 8		Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: +1.4 PMG: 9 ^h 59 ^m			Mag: -2.0 PMG: 7 ^h 37 ^m			Mag: 0.0 PMG: 0 ^h 19 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	139	41.7	152	04.3	-6	47.5	210	11.6	-22	58.6	245	27.4	-21	56.7	355	10.7
1	154	44.2	167	03.9		46.2	225	12.1		58.4	260	29.5		56.8	10	13.4
2	169	46.6	182	03.5		45.0	240	12.5		58.2	275	31.6		56.8	25	16.1
3	184	49.1	197	03.2		43.7	255	13.0		58.0	290	33.6		56.8	40	18.7
4	199	51.6	212	02.8		42.5	270	13.4		57.7	305	35.7		56.9	55	21.4
5	214	54.0	227	02.4	-6	41.2	285	13.8	-22	57.5	320	37.8	-21	56.9	70	24.1
6	229	56.5	242	02.0	-6	39.9	300	14.3	-22	57.3	335	39.8	-21	57.0	85	26.7
7	244	59.0	257	01.6		38.7	315	14.7		57.1	350	41.9		57.0	100	29.4
8	260	01.4	272	01.2		37.4	330	15.2		56.8	5	44.0		57.0	115	32.0
9	275	03.9	287	00.8		36.2	345	15.6		56.6	20	46.0		57.1	130	34.7
10	290	06.4	302	00.4		34.9	0	16.1		56.4	35	48.1		57.1	145	37.4
11	305	08.8	317	00.1	-6	33.6	15	16.5	-22	56.2	50	50.2	-21	57.1	160	40.0
12	320	11.3	331	59.7	-6	32.4	30	17.0	-22	55.9	65	52.2	-21	57.2	175	42.7
13	335	13.7	346	59.3		31.1	45	17.4		55.7	80	54.3		57.2	190	45.4
14	350	16.2	1	58.9		29.9	60	17.8		55.5	95	56.4		57.3	205	48.0
15	5	18.7	16	58.5		28.6	75	18.3		55.3	110	58.5		57.3	220	50.7
16	20	21.1	31	58.1		27.3	90	18.7		55.0	126	00.5		57.3	235	53.3
17	35	23.6	46	57.8	-6	26.1	105	19.2	-22	54.8	141	02.6	-21	57.4	250	56.0
18	50	26.1	61	57.4	-6	24.8	120	19.6	-22	54.6	156	04.7	-21	57.4	265	58.7
19	65	28.5	76	57.0		23.6	135	20.1		54.3	171	06.7		57.5	281	01.3
20	80	31.0	91	56.6		22.3	150	20.5		54.1	186	08.8		57.5	296	04.0
21	95	33.5	106	56.2		21.0	165	21.0		53.9	201	10.9		57.5	311	06.7
22	110	35.9	121	55.9		19.8	180	21.4		53.7	216	13.0		57.6	326	09.3
23	125	38.4	136	55.5		18.5	195	21.9		53.4	231	15.0		57.6	341	12.0
24	140	40.9	151	55.1	-6	17.3	210	22.3	-22	53.2	246	17.1	-21	57.6	356	14.6
Dif	—		-4		+13		+4		+2		+21		0		+27	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2				Edad: 22 ^d 8 PHE { 4 ^h : 55 ^m 2 12 ^h : 55 ^m 4 20 ^h : 55 ^m 7 R°: 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	h m	h m			
0	176	26.7	-14	13.2	265	40.9	-24	41.1	60 N	16 40	17 24	18 14	4 06	97	8 47	12				
1	191	26.7		12.4	280	10.8 ¹⁰⁹		48.9	58	47	29	16	3 41	87	9 12	22				
2	206	26.6		11.6	294	40.6 ¹⁰⁸	-24	56.5	56	16 54	34	18	21	81	32	28				
3	221	26.6		10.7	309	10.3 ¹⁰⁷	-25	04.1	54	17 00	38	19	3 05	77	9 49	32				
4	236	26.6		09.9	323	39.9 ¹⁰⁶		11.6	52	06	41	21	2 51	74	10 03	35				
5	251	26.6	-14	09.1	338	09.4 ¹⁰⁵	-25	18.9	50	17 11	17 45	18 23	2 39	71	10 16	37				
6	266	26.6	-14	08.3	352	38.8 ¹⁰⁴	-25	26.1	45	17 22	17 52	18 27	2 13	68	10 42	41				
7	281	26.6		07.5	7	08.2 ¹⁰⁴		33.2	40	31	17 59	31	1 54	64	11 02	44				
8	296	26.6		06.6	21	37.4 ¹⁰²		40.2	35	38	18 04	34	37	62	20	45				
9	311	26.6		05.8	36	06.5 ¹⁰¹		47.0	30	45	10	38	1 23	60	11 35	47				
10	326	26.6		05.0	50	35.5 ¹⁰⁰	-25	53.8	20	17 57	20	46	0 58	57	12 00	50				
11	341	26.6	-14	04.2	65	04.5 ¹⁰⁰	-26	00.4	10 N	18 08	18 29	18 54	0 38	54	12 22	52				
12	356	26.6	-14	03.4	79	33.3 ⁹⁸	-26	06.9	0	18 18	18 39	19 04	0 18	52	12 43	54				
13	11	26.6		02.5	94	02.1 ⁹⁸		13.3	10 S	28	18 49	15	** ** *	**	13 03	56				
14	26	26.6		01.7	108	30.7 ⁹⁶		19.5	20	39	19 02	28	** ** *	**	26	57				
15	41	26.6		00.9	122	59.3 ⁹⁶		25.6	30	51	16	46	23	59	51	13 51	60			
16	56	26.6	-14	00.1	137	27.7 ⁹⁴		31.6	35	18 59	25	19 57	43	50	14 07	61				
17	71	26.6	-13	59.3	151	56.1 ⁹⁴	-26	37.5	40	19 07	19 36	20 11	23	24	49	14 24	63			
18	86	26.6	-13	58.4	166	24.3 ⁹²	-26	43.2	45	19 17	19 49	20 28	23	02	48	14 46	65			
19	101	26.6		57.6	180	52.5 ⁹²		48.8	50	29	20 05	20 50	22	35	44	15 13	68			
20	116	26.6		56.8	195	20.6 ⁹¹		54.3	52	34	12	21 01	21	43		26	71			
21	131	26.6		56.0	209	48.6 ⁹⁰	-26	59.7	54	40	21	14	22	05	41	15 42	72			
22	146	26.6		55.1	224	16.5 ⁸⁹	-27	04.9	56	47	31	29	21	47	38	16 00	75			
23	161	26.6		54.3	238	44.3 ⁸⁸		09.9	58	19 55	42	21 47	21	24	34	22	80			
24	176	26.6	-13	53.5	253	12.0 ⁸⁷	-27	14.9	60 S	20 04	20 55	22 10	20	55	24	16 51	90			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 34 ^m 9				Mag: -3.9 PMG: 13 ^h 53 ^m				Mag: +1.3 PMG: 9 ^h 58 ^m				Mag: -2.0 PMG: 7 ^h 34 ^m				Mag: 0.0 PMG: 0 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	140	40.9	151	55.1	-6	17.3	210	22.3	-22	53.2	246	17.1	-21	57.6	356	14.6	+15	32.0		
1	155	43.3	166	54.7		16.0	225	22.7		53.0	261	19.2		57.7	11	17.3		32.1		
2	170	45.8	181	54.3		14.7	240	23.2		52.7	276	21.2		57.7	26	20.0		32.1		
3	185	48.2	196	53.9		13.5	255	23.6		52.5	291	23.3		57.8	41	22.6		32.2		
4	200	50.7	211	53.6		12.2	270	24.1		52.3	306	25.4		57.8	56	25.3		32.3		
5	215	53.2	226	53.2	-6	10.9	285	24.5	-22	52.0	321	27.5	-21	57.8	71	28.0	+15	32.4		
6	230	55.6	241	52.8	-6	09.7	300	25.0	-22	51.8	336	29.5	-21	57.9	86	30.6	+15	32.4		
7	245	58.1	256	52.4		08.4	315	25.4		51.6	351	31.6		57.9	101	33.3		32.5		
8	261	00.6	271	52.1		07.1	330	25.9		51.3	6	33.7		57.9	116	35.9		32.6		
9	276	03.0	286	51.7		05.9	345	26.3		51.1	21	35.8		58.0	131	38.6		32.6		
10	291	05.5	301	51.3		04.6	0	26.8		50.9	36	37.8		58.0	146	41.3		32.7		
11	306	08.0	316	50.9	-6	03.3	15	27.2	-22	50.6	51	39.9	-21	58.1	161	43.9	+15	32.8		
12	321	10.4	331	50.5	-6	02.1	30	27.6	-22	50.4	66	42.0	-21	58.1	176	46.6	+15	32.8		
13	336	12.9	346	50.2	-6	00.8	45	28.1		50.1	81	44.1		58.1	191	49.3		32.9		
14	351	15.3	1	49.8	-5	59.5	60	28.5		49.9	96	46.1		58.2	206	51.9		33.0		
15	6	17.8	16	49.4		58.3	75	29.0		49.7	111	48.2		58.2	221	54.6		33.0		
16	21	20.3	31	49.0		57.0	90	29.4		49.4	126	50.3		58.2	236	57.2		33.1		
17	36	22.7	46	48.7	-5	55.7	105	29.9	-22	49.2	141	52.4	-21	58.3	251	59.9	+15	33.2		
18	51	25.2	61	48.3	-5	54.5	120	30.3	-22	49.0	156	54.5	-21	58.3	267	02.6	+15	33.3		
19	66	27.7	76	47.9		53.2	135	30.8		48.7	171	56.5		58.4	282	05.2		33.3		
20	81	30.1	91	47.5		51.9	150	31.2		48.5	186	58.6		58.4	297	07.9		33.4		
21	96	32.6	106	47.2		50.7	165	31.7		48.2	202	00.7		58.4	312	10.6		33.5		
22	111	35.1	121	46.8		49.4	180	32.1		48.0	217	02.8		58.5	327	13.2		33.5		
23	126	37.5	136	46.4		48.1	195	32.6		47.8	232	04.8		58.5	342	15.9		33.6		
24	141	40.0	151	46.0	-5	46.9	210	33.0	-22	47.5	247	06.9	-21	58.5	357	18.5	+15	33.7		
Dif	—		-4		+13		+4		+2		+21		0		+27		+1			

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: 23 ^d 8	PHE { 4 ^h : 55/9 12 ^h : 56/2 20 ^h : 56/4 R°: 57 ^m	Dec		Dif			R°		R°					
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	26.6	-13	53.5	253	12.0	-27	14.9	48	60 N	6 14	7 03	7 47	5 43	79	8 59	38	
1	191	26.6		52.6	267	39.6	86	19.7	48	58	12	6 58	40	5 08	72	9 34	46	
2	206	26.6		51.8	282	07.1	85	24.3	46	56	10	54	33	4 42	69	10 00	49	
3	221	26.6		51.0	296	34.6	85	28.8	45	54	08	50	27	22	67	21	50	
4	236	26.6		50.2	311	01.9	83	33.2	44	52	07	46	22	4 05	65	38	51	
5	251	26.6	-13	49.3	325	29.2	83	-27	37.4	42	50	6 05	6 43	7 17	3 50	65	10 53	52
6	266	26.6	-13	48.5	339	56.4	82	-27	41.5	41	45	6 01	6 36	7 06	3 21	62	11 23	53
7	281	26.6		47.7	354	23.5	81	45.5	40	40	5 57	29	6 57	2 58	61	11 46	54	
8	296	26.6		46.9	8	50.5	80	49.3	38	35	54	24	50	39	60	12 05	55	
9	311	26.6		46.0	23	17.4	79	52.9	36	30	50	18	43	2 23	59	22	55	
10	326	26.6		45.2	37	44.3	79	56.4	35	20	42	6 08	31	1 55	58	12 50	56	
11	341	26.6	-13	44.4	52	11.0	77	-27	59.8	34	10 N	5 34	5 59	6 21	1 32	57	13 14	57
12	356	26.7	-13	43.5	66	37.7	77	-28	03.0	32	0	5 25	5 50	6 11	1 10	56	13 37	57
13	11	26.7		42.7	81	04.3	76	06.0	30	10 S	14	39	6 01	0 49	54	13 59	57	
14	26	26.7		41.9	95	30.8	75	08.9	29	20	5 00	27	5 50	0 25	53	14 23	58	
15	41	26.7		41.0	109	57.3	75	11.7	28	30	4 43	12	38	*** ** *	**	14 51	58	
16	56	26.7		40.2	124	23.7	74	14.3	26	35	31	5 04	30	*** ** *	**	15 08	58	
17	71	26.7	-13	39.4	138	50.0	73	-28	16.7	24	40	4 18	4 53	5 22	*** ** *	**	15 27	59
18	86	26.7	-13	38.5	153	16.2	72	-28	19.0	23	45	4 01	4 40	5 12	23 50	60	15 51	59
19	101	26.7		37.7	167	42.4	72	21.1	21	50	3 39	24	5 00	19	61	16 21	59	
20	116	26.7		36.9	182	08.5	71	23.1	20	52	28	17	4 55	23 04	61	37	58	
21	131	26.7		36.0	196	34.5	70	24.9	18	54	15	4 08	49	22 46	61	16 54	59	
22	146	26.7		35.2	211	00.4	69	26.5	16	56	3 00	3 59	42	22 25	61	17 15	59	
23	161	26.7		34.4	225	26.3	69	28.0	15	58	2 42	47	34	21 58	61	17 42	59	
24	176	26.7	-13	33.5	239	52.1	68	-28	29.4	14	60 S	2 19	3 34	4 26	21 19	62	18 21	58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 14 ^h 30 ^m 9		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +1.3 PMG: 9 ^h 58 ^m		Mag: -2.0 PMG: 7 ^h 30 ^m		Mag: 0.0 PMG: 0 ^h 11 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	141	40.0	151	46.0	-5	46.9	210	33.0	-22	47.5	
1	156	42.5	166	45.7		45.6	225	33.4		47.3	
2	171	44.9	181	45.3		44.3	240	33.9		47.0	
3	186	47.4	196	44.9		43.1	255	34.3		46.8	
4	201	49.8	211	44.5		41.8	270	34.8		46.5	
5	216	52.3	226	44.2	-5	40.5	285	35.2	-22	46.3	
6	231	54.8	241	43.8	-5	39.2	300	35.7	-22	46.1	
7	246	57.2	256	43.4		38.0	315	36.1		45.8	
8	261	59.7	271	43.1		36.7	330	36.6		45.6	
9	277	02.2	286	42.7		35.4	345	37.0		45.3	
10	292	04.6	301	42.3		34.2	0	37.5		45.1	
11	307	07.1	316	41.9	-5	32.9	15	37.9	-22	44.8	
12	322	09.6	331	41.6	-5	31.6	30	38.4	-22	44.6	
13	337	12.0	346	41.2		30.3	45	38.8		44.3	
14	352	14.5	1	40.8		29.1	60	39.3		44.1	
15	7	17.0	16	40.5		27.8	75	39.7		43.8	
16	22	19.4	31	40.1		26.5	90	40.2		43.6	
17	37	21.9	46	39.7	-5	25.2	105	40.6	-22	43.3	
18	52	24.3	61	39.4	-5	24.0	120	41.1	-22	43.1	
19	67	26.8	76	39.0		22.7	135	41.5		42.8	
20	82	29.3	91	38.6		21.4	150	41.9		42.6	
21	97	31.7	106	38.3		20.1	165	42.4		42.3	
22	112	34.2	121	37.9		18.9	180	42.8		42.1	
23	127	36.7	136	37.5		17.6	195	43.3		41.8	
24	142	39.1	151	37.1	-5	16.3	210	43.7	-22	41.6	
Dif	—		-4	+13		+4	+2	+21	0	+27	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 24 ^d 8 PHE { 4 ^h : 56 ^h /7 12 ^h : 57 ^h /0 20 ^h : 57 ^h /3 PMG: 8 ^h 20 ^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	176	26.7	-13	33.5	239	52.1	-28	29.4	60 N	16 45	17 29	18 18	7 02 37	9 37 85				
1	191	26.8		32.7	254	17.9		30.5	58	52	34	20	6 20 45	10 20 77				
2	206	26.8		31.9	268	43.6		31.5	56	16 59	38	21	5 51 48	10 49 73				
3	221	26.8		31.0	283	09.3		32.4	54	17 04	41	23	29 50	11 11 71				
4	236	26.8		30.2	297	34.8		33.0	52	09	45	24	5 10 52	29 70				
5	251	26.8	-13	29.3	312	00.4	-28	33.5	50	17 14	17 48	18 26	4 55 52	11 45 68				
6	266	26.8	-13	28.5	326	25.8	-28	33.9	45	17 24	17 55	18 29	4 23 54	12 16 66				
7	281	26.8		27.7	340	51.3		34.0	40	33	18 01	33	3 59 55	12 40 65				
8	296	26.8		26.8	355	16.6		34.0	35	40	06	36	39 56	13 00 64				
9	311	26.8		26.0	9	42.0		33.9	30	47	11	40	3 22 56	17 63				
10	326	26.9		25.1	24	07.2		33.5	20	17 58	21	47	2 53 57	13 46 61				
11	341	26.9	-13	24.3	38	32.5	-28	33.0	10 N	18 08	18 30	18 55	2 29 57	14 11 60				
12	356	26.9	-13	23.5	52	57.7	-28	32.4	0	18 18	18 39	19 04	2 06 58	14 34 58				
13	11	26.9		22.6	67	22.8		31.5	10 S	27	18 49	14	1 43 59	14 56 58				
14	26	26.9		21.8	81	47.9		30.5	20	38	19 00	27	1 18 59	15 21 56				
15	41	26.9		20.9	96	13.0		29.3	30	50	15	44	0 50 59	15 49 54				
16	56	26.9		20.1	110	38.0		28.0	35	18 57	23	19 55	33 60	16 06 53				
17	71	27.0	-13	19.3	125	03.0	-28	26.4	40	19 05	19 33	20 08	0 13 60	16 26 51				
18	86	27.0	-13	18.4	139	28.0	-28	24.7	45	19 14	19 46	20 24	*** ** *	16 50 49				
19	101	27.0		17.6	153	52.9		22.8	50	25	20 01	46	*** ** *	17 20 46				
20	116	27.0		16.7	168	17.8		20.8	52	30	08	20 56	*** ** *	35 44				
21	131	27.0		15.9	182	42.7		18.6	54	36	16	21 08	23 47 80	17 53 42				
22	146	27.0		15.0	197	07.6		16.1	56	43	25	22	23 26 84	18 14 38				
23	161	27.0		14.2	211	32.4		13.6	58	50	36	21 39	22 59 90	18 41 33				
24	176	27.1	-13	13.4	225	57.2	-28	10.8	60 S	19 58	20 48	22 01	22 21 100	19 19 23				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 27 ^m 0		Mag: -3.9 PMG: 13 ^h 54 ^m			Mag: +1.3 PMG: 9 ^h 57 ^m			Mag: -2.0 PMG: 7 ^h 27 ^m			Mag: 0.0 PMG: 0 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	142	39.1	151	37.1	-5	16.3	210	43.7	-22	41.6	247	56.9	-21	59.4	358	22.5	+15	35.3
1	157	41.6	166	36.8		15.0	225	44.2		41.3	262	58.9		59.5	13	25.1		35.4
2	172	44.1	181	36.4		13.8	240	44.6		41.1	278	01.0		59.5	28	27.8		35.5
3	187	46.5	196	36.0		12.5	255	45.1		40.8	293	03.1		59.5	43	30.4		35.5
4	202	49.0	211	35.7		11.2	270	45.5		40.6	308	05.2		59.6	58	33.1		35.6
5	217	51.5	226	35.3	-5	09.9	285	46.0	-22	40.3	323	07.3	-21	59.6	73	35.8	+15	35.7
6	232	53.9	241	35.0	-5	08.7	300	46.4	-22	40.1	338	09.4	-21	59.6	88	38.4	+15	35.8
7	247	56.4	256	34.6		07.4	315	46.9		39.8	353	11.5		59.7	103	41.1		35.8
8	262	58.8	271	34.2		06.1	330	47.3		39.6	8	13.5		59.7	118	43.8		35.9
9	278	01.3	286	33.9		04.8	345	47.8		39.3	23	15.6		59.7	133	46.4		36.0
10	293	03.8	301	33.5		03.6	0	48.2		39.0	38	17.7		59.8	148	49.1		36.0
11	308	06.2	316	33.1	-5	02.3	15	48.7	-22	38.8	53	19.8	-21	59.8	163	51.7	+15	36.1
12	323	08.7	331	32.8	-5	01.0	30	49.1	-22	38.5	68	21.9	-21	59.9	178	54.4	+15	36.2
13	338	11.2	346	32.4	-4	59.7	45	49.6		38.3	83	24.0		59.9	193	57.1		36.2
14	353	13.6	1	32.0		58.4	60	50.0		38.0	98	26.1	-21	59.9	208	59.7		36.3
15	8	16.1	16	31.7		57.2	75	50.5		37.8	113	28.1	-22	00.0	224	02.4		36.4
16	23	18.6	31	31.3		55.9	90	50.9		37.5	128	30.2		00.0	239	05.1		36.4
17	38	21.0	46	30.9	-4	54.6	105	51.4	-22	37.2	143	32.3	-22	00.0	254	07.7	+15	36.5
18	53	23.5	61	30.6	-4	53.3	120	51.8	-22	37.0	158	34.4	-22	00.1	269	10.4	+15	36.6
19	68	26.0	76	30.2		52.0	135	52.3		36.7	173	36.5		00.1	284	13.0		36.6
20	83	28.4	91	29.9		50.8	150	52.7		36.5	188	38.6		00.1	299	15.7		36.7
21	98	30.9	106	29.5		49.5	165	53.2		36.2	203	40.7		00.2	314	18.4		36.8
22	113	33.3	121	29.1		48.2	180	53.6		35.9	218	42.8		00.2	329	21.0		36.9
23	128	35.8	136	28.8		46.9	195	54.1		35.7	233	44.9		00.2	344	23.7		36.9
24	143	38.3	151	28.4	-4	45.6	210	54.5	-22	35.4	248	46.9	-22	00.3	359	26.4	+15	37.0
Dif	—		-4		+13		+4		+3		+21		0		+27		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			Edad: 26 ^d 8 PHE { 4 ^h : 58 ^s / 12 ^h : 58 ^s / 20 ^h : 59 ^s / R°: 57 ^m											
	PMG: 12 ^h 14 ^m 1			PMG: 10 ^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
0	176	27.6	-12 53.0	211	51.6	-26 11.8	71	60 N	16 50	17 34	18 23	7 51	4	12 53	114
1	191	27.6	52.1	226	16.5	-26 04.7	71	58	16 57	38	24	28	11	13 16	106
2	206	27.6	51.3	240	41.5	-25 57.4	73	56	17 03	42	25	7 09	17	34	100
3	221	27.6	50.4	255	06.4	49.9	75	54	08	45	27	6 53	22	13 50	95
4	236	27.7	49.5	269	31.4	42.3	76	52	13	48	28	39	25	14 03	91
5	251	27.7	-12 48.7	283	56.5	-25 34.4	79	50	17 18	17 51	18 29	6 27	28	14 15	88
6	266	27.7	-12 47.8	298	21.5	-25 26.4	80	45	17 27	17 57	18 32	6 01	35	14 39	82
7	281	27.7	47.0	312	46.7	18.3	81	40	35	18 03	35	5 41	39	14 58	77
8	296	27.8	46.1	327	11.8	09.9	84	35	42	08	38	24	42	15 14	73
9	311	27.8	45.3	341	37.0	-25 01.5	84	30	48	13	41	5 09	46	28	70
10	326	27.8	44.4	356	02.2	-24 52.8	87	20	17 59	22	48	4 45	49	15 51	65
11	341	27.9	-12 43.5	10	27.4	-24 44.0	88	10 N	18 09	18 30	18 55	4 23	54	16 12	60
12	356	27.9	-12 42.7	24	52.7	-24 35.0	90	0	18 18	18 39	19 03	4 03	57	16 30	56
13	11	27.9	41.8	39	18.1	25.8	92	10 S	27	48	13	3 42	61	16 49	52
14	26	27.9	41.0	53	43.5	16.5	93	20	36	18 59	26	3 21	64	17 09	47
15	41	28.0	40.1	68	08.9	-24 07.0	95	30	48	19 13	42	2 55	70	31	42
16	56	28.0	39.3	82	34.4	-23 57.4	96	35	18 54	21	19 53	40	72	17 44	40
17	71	28.0	-12 38.4	96	59.9	-23 47.6	98	40	19 02	19 31	20 05	2 23	75	18 00	35
18	86	28.1	-12 37.5	111	25.5	-23 37.6	100	45	19 11	19 42	20 21	2 02	80	18 17	31
19	101	28.1	36.7	125	51.1	27.5	101	50	21	19 57	41	1 35	86	40	24
20	116	28.1	35.8	140	16.8	17.2	103	52	26	20 04	20 51	22	89	18 50	22
21	131	28.2	35.0	154	42.5	-23 06.8	104	54	32	11	21 02	1 07	93	19 02	18
22	146	28.2	34.1	169	08.3	-22 56.2	106	56	38	20	16	0 50	97	15	15
23	161	28.2	33.2	183	34.1	45.5	107	58	45	30	32	29	103	31	9
24	176	28.2	-12 32.4	198	00.0	-22 34.6	109	60 S	19 53	20 42	21 51	0 01	113	19 50	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 19 ^m 2		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.3 PMG: 9 ^h 55 ^m		Mag: -2.0 PMG: 7 ^h 20 ^m		Mag: 0.0 PMG: 23 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	144	37.4	151 19.8	-4 14.8	211 05.3	-22 29.0	249 37.2	-22 01.1	0 30.2	+15 38.6
1	159	39.9	166 19.5	13.5	226 05.8	28.7	264 39.2	01.1	15 32.9	38.7
2	174	42.3	181 19.1	12.3	241 06.2	28.5	279 41.3	01.2	30 35.6	38.8
3	189	44.8	196 18.8	11.0	256 06.7	28.2	294 43.4	01.2	45 38.2	38.8
4	204	47.3	211 18.4	09.7	271 07.1	27.9	309 45.5	01.2	60 40.9	38.9
5	219	49.7	226 18.1	-4 08.4	286 07.6	-22 27.6	324 47.6	-22 01.3	75 43.6	+15 39.0
6	234	52.2	241 17.7	-4 07.1	301 08.0	-22 27.4	339 49.7	-22 01.3	90 46.2	+15 39.1
7	249	54.7	256 17.3	05.8	316 08.5	27.1	354 51.8	01.3	105 48.9	39.1
8	264	57.1	271 17.0	04.5	331 08.9	26.8	9 53.9	01.4	120 51.5	39.2
9	279	59.6	286 16.6	03.2	346 09.4	26.5	24 56.0	01.4	135 54.2	39.3
10	295	02.1	301 16.3	02.0	1 09.8	26.3	39 58.1	01.5	150 56.9	39.3
11	310	04.5	316 15.9	-4 00.7	16 10.3	-22 26.0	55 00.2	-22 01.5	165 59.5	+15 39.4
12	325	07.0	331 15.6	-3 59.4	31 10.7	-22 25.7	70 02.3	-22 01.5	181 02.2	+15 39.5
13	340	09.4	346 15.2	58.1	46 11.2	25.4	85 04.4	01.6	196 04.9	39.5
14	355	11.9	1 14.9	56.8	61 11.7	25.2	100 06.5	01.6	211 07.5	39.6
15	10	14.4	16 14.5	55.5	76 12.1	24.9	115 08.6	01.6	226 10.2	39.7
16	25	16.8	31 14.2	54.2	91 12.6	24.6	130 10.7	01.7	241 12.8	39.7
17	40	19.3	46 13.8	-3 52.9	106 13.0	-22 24.3	145 12.8	-22 01.7	256 15.5	+15 39.8
18	55	21.8	61 13.5	-3 51.6	121 13.5	-22 24.1	160 14.9	-22 01.7	271 18.2	+15 39.9
19	70	24.2	76 13.1	50.4	136 13.9	23.8	175 17.0	01.8	286 20.8	39.9
20	85	26.7	91 12.8	49.1	151 14.4	23.5	190 19.1	01.8	301 23.5	40.0
21	100	29.2	106 12.4	47.8	166 14.8	23.2	205 21.2	01.8	316 26.1	40.1
22	115	31.6	121 12.1	46.5	181 15.3	22.9	220 23.3	01.9	331 28.8	40.1
23	130	34.1	136 11.7	45.2	196 15.7	22.6	235 25.4	01.9	346 31.5	40.2
24	145	36.6	151 11.4	-3 43.9	211 16.2	-22 22.4	250 27.5	-22 01.9	1 34.1	+15 40.3
Dif	—		-4 +13		+5 +3		+21 0		+27 +1	

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: 28 ^d 8 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'3 R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	176	29.1	-12	11.6	184	38.5	-17	31.2	60 N	16 55	17 39	18 28	7 56 **		16 39	107		
1	191	29.1		10.7	199	05.9	84	16.9 ¹⁴³	58	17 02		43	46 4		47	103		
2	206	29.2		09.8	213	33.3	84	-17 02.6 ¹⁴³	56	07		46	38 8		16 55	98		
3	221	29.2		09.0	228	00.8	85	-16 48.1 ¹⁴⁵	54	12		49	30 11		17 01	95		
4	236	29.3		08.1	242	28.3	85	33.5 ¹⁴⁶	52	17		52	23 15		07	92		
5	251	29.3	-12	07.2	256	55.9	86	-16 18.9 ¹⁴⁶	50	17 21	17 54	18 32	7 17 17		17 12	89		
6	266	29.3	-12	06.3	271	23.5	86	-16 04.1 ¹⁴⁸	45	17 30	18 00	18 35	7 03 24		17 24	82		
7	281	29.4		05.5	285	51.3	88	-15 49.2 ¹⁴⁹	40	38	05	37	6 52 28		33	77		
8	296	29.4		04.6	300	19.0	87	34.2 ¹⁵⁰	35	44	10	40	43 32		41	73		
9	311	29.5		03.7	314	46.9	89	19.1 ¹⁵¹	30	17 50	14	42	34 36		17 48	69		
10	326	29.5		02.8	329	14.8	89	-15 03.8 ¹⁵³	20	18 00	22	48	20 42		18 00	62		
11	341	29.6	-12	02.0	343	42.7	89	-14 48.5 ¹⁵³	10 N	18 09	18 30	18 55	6 07 47		18 10	57		
12	356	29.6	-12	01.1	358	10.7	90	-14 33.1 ¹⁵⁴	0	18 17	18 39	19 03	5 55 52		18 20	52		
13	11	29.6	-12	00.2	12	38.8	91	17.7 ¹⁵⁴	10 S	26	48	13	43 57		30	46		
14	26	29.7	-11	59.3	27	06.9	91	-14 02.1 ¹⁵⁶	20	35	18 58	25	30 63		40	40		
15	41	29.7		58.5	41	35.1	92	-13 46.4 ¹⁵⁷	30	46	19 11	40	15 69		51	34		
16	56	29.8		57.6	56	03.3	92	30.6 ¹⁵⁸	35	52	19	19 50	5 06 73		18 58	30		
17	71	29.8	-11	56.7	70	31.6	93	-13 14.8 ¹⁵⁸	40	18 59	19 28	20 02	4 56 78		19 05	27		
18	86	29.9	-11	55.8	84	59.9	93	-12 58.8 ¹⁶⁰	45	19 08	19 39	20 17	4 44 83		19 14	21		
19	101	29.9		55.0	99	28.3	94	42.8 ¹⁶⁰	50	18	53	36	30 89		24	16		
20	116	30.0		54.1	113	56.7	94	26.7 ¹⁶¹	52	22	19 59	46	23 92		28	14		
21	131	30.0		53.2	128	25.2	95	-12 10.5 ¹⁶²	54	28	20 07	20 57	16 95		34	10		
22	146	30.0		52.3	142	53.8	96	-11 54.2 ¹⁶³	56	33	15	21 09	4 07 100		39	7		
23	161	30.1		51.4	157	22.3	95	37.9 ¹⁶³	58	40	24	24	3 58 104		46	3		
24	176	30.1	-11	50.6	171	51.0	97	-11 21.5 ¹⁶⁴	60 S	19 47	20 35	21 42	3 47 109		19 53	**		
UT	ARIES				VENUS				MARTE				JÚPITER					
	PMG: 14 ^h 11 ^m 3				Mag: -3.9 PMG: 13 ^h 56 ^m				Mag: +1.3 PMG: 9 ^h 54 ^m				Mag: -2.0 PMG: 7 ^h 14 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♃			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	146	35.7	151	03.0	-3	12.9	211	27.1	-22	15.5	251	18.0	-22	02.7	2	38.0		
1	161	38.2	166	02.7		11.6	226	27.5		15.2	266	20.1		02.7	17	40.7		
2	176	40.6	181	02.4		10.3	241	28.0		14.9	281	22.2		02.8	32	43.3		
3	191	43.1	196	02.0		09.0	256	28.4		14.6	296	24.3		02.8	47	46.0		
4	206	45.5	211	01.7		07.7	271	28.9		14.3	311	26.4		02.8	62	48.7		
5	221	48.0	226	01.3	-3	06.4	286	29.4	-22	14.0	326	28.5	-22	02.9	77	51.3		
6	236	50.5	241	01.0	-3	05.1	301	29.8	-22	13.7	341	30.6	-22	02.9	92	54.0		
7	251	52.9	256	00.6		03.8	316	30.3		13.4	356	32.7		02.9	107	56.6		
8	266	55.4	271	00.3		02.5	331	30.7		13.1	11	34.8		03.0	122	59.3		
9	281	57.9	286	00.0	-3	01.2	346	31.2		12.8	26	37.0		03.0	138	02.0		
10	297	00.3	300	59.6	-2	59.9	1	31.6		12.6	41	39.1		03.0	153	04.6		
11	312	02.8	315	59.3	-2	58.6	16	32.1	-22	12.3	56	41.2	-22	03.1	168	07.3		
12	327	05.3	330	58.9	-2	57.3	31	32.5	-22	12.0	71	43.3	-22	03.1	183	09.9		
13	342	07.7	345	58.6		56.0	46	33.0		11.7	86	45.4		03.1	198	12.6		
14	357	10.2	0	58.2		54.8	61	33.5		11.4	101	47.5		03.2	213	15.3		
15	12	12.7	15	57.9		53.5	76	33.9		11.1	116	49.6		03.2	228	17.9		
16	27	15.1	30	57.6		52.2	91	34.4		10.8	131	51.7		03.2	243	20.6		
17	42	17.6	45	57.2	-2	50.9	106	34.8	-22	10.5	146	53.8	-22	03.3	258	23.2		
18	57	20.0	60	56.9	-2	49.6	121	35.3	-22	10.2	161	55.9	-22	03.3	273	25.9		
19	72	22.5	75	56.5		48.3	136	35.7		09.9	176	58.1		03.3	288	28.6		
20	87	25.0	90	56.2		47.0	151	36.2		09.6	192	00.2		03.4	303	31.2		
21	102	27.4	105	55.9		45.7	166	36.7		09.3	207	02.3		03.4	318	33.9		
22	117	29.9	120	55.5		44.4	181	37.1		09.0	222	04.4		03.4	333	36.5		
23	132	32.4	135	55.2		43.1	196	37.6		08.7	237	06.5		03.4	348	39.2		
24	147	34.8	150	54.8	-2	41.8	211	38.0	-22	08.4	252	08.6	-22	03.5	3	41.9		
Dif	—		-3		+13		+5		+3		+21		0		+27			

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: 0 ^d 3 PHE { 4 ^h : 60/5 12 ^h : 60/6 20 ^h : 60/6 R°: 51 ^m SD: 16:4 PMG: 12 ^h 59 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	30.1	-11	50.6	171	51.0	-11	21.5	60 N	5 59	6 48	7 31	7 55	**	18 26	106
1	191	30.2		49.7	186	19.7	97	-11 05.0	165	58	44	25	50	3	30	101
2	206	30.2		48.8	200	48.4	97	-10 48.4	166	56	58	41	19	46	6	33
3	221	30.3		47.9	215	17.2	98		166	54	57	38	14	41	10	36
4	236	30.3		47.0	229	46.0	98	-10 15.1	167	52	56	35	10	38	12	39
5	251	30.4	-11	46.2	244	14.9	99	-9 58.3	168	50	5 55	6 33	7 06	7 34	15	88
6	266	30.4	-11	45.3	258	43.8	99	-9 41.5	168	45	5 53	6 27	6 57	7 27	21	82
7	281	30.5		44.4	273	12.7	99		169	40	50	22	50	20	26	77
8	296	30.5		43.5	287	41.7	100	-9 07.7	169	35	48	17	43	15	30	72
9	311	30.6		42.6	302	10.7	100	-8 50.6	171	30	45	13	38	10	34	68
10	326	30.6		41.8	316	39.8	101		170	20	39	6 05	28	7 02	40	62
11	341	30.7	-11	40.9	331	08.9	101	-8 16.5	171	10 N	5 33	5 58	6 19	6 54	46	56
12	356	30.7	-11	40.0	345	38.1	102	-7 59.3	172	0	5 25	5 49	6 11	6 47	51	50
13	11	30.8		39.1	0	07.3	102		172	10 S	16	41	6 02	40	56	45
14	26	30.8		38.2	14	36.5	102		173	20	5 04	30	5 53	33	62	40
15	41	30.9		37.3	29	05.7	102	-7 07.5	173	30	4 48	18	42	24	69	33
16	56	30.9		36.5	43	35.0	103	-6 50.2	173	35	38	10	36	19	73	30
17	71	31.0	-11	35.6	58	04.4	104	-6 32.8	174	40	4 26	5 01	5 29	6 14	76	25
18	86	31.0	-11	34.7	72	33.7	103	-6 15.3	175	45	4 12	4 50	5 21	6 07	82	21
19	101	31.1		33.8	87	03.1	104	-5 57.9	174	50	3 52	36	11	5 59	88	14
20	116	31.1		32.9	101	32.5	104		175	52	43	29	06	55	91	12
21	131	31.2		32.0	116	01.9	104		176	54	32	22	5 01	51	94	9
22	146	31.2		31.2	130	31.4	105	-5 05.2	176	56	20	14	4 56	47	97	7
23	161	31.3		30.3	145	00.9	105	-4 47.6	176	58	3 05	4 05	49	42	101	3
24	176	31.4	-11	29.4	159	30.4	105	-4 30.0	176	60 S	2 46	3 54	4 42	5 36	106	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 07 ^m 4		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +1.3 PMG: 9 ^h 53 ^m		Mag: -2.0 PMG: 7 ^h 10 ^m		Mag: 0.0 PMG: 23 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	147	34.8	150	54.8	211	38.0	252	08.6	3	41.9
1	162	37.3	165	54.5	226	38.5	267	10.7	18	44.5
2	177	39.8	180	54.2	241	38.9	282	12.8	33	47.2
3	192	42.2	195	53.8	256	39.4	297	15.0	48	49.8
4	207	44.7	210	53.5	271	39.9	312	17.1	63	52.5
5	222	47.2	225	53.1	286	40.3	327	19.2	78	55.2
6	237	49.6	240	52.8	301	40.8	342	21.3	93	57.8
7	252	52.1	255	52.5	316	41.2	357	23.4	109	00.5
8	267	54.5	270	52.1	331	41.7	12	25.5	124	03.1
9	282	57.0	285	51.8	346	42.1	27	27.6	139	05.8
10	297	59.5	300	51.4	1	42.6	42	29.8	154	08.5
11	313	01.9	315	51.1	16	43.1	57	31.9	169	11.1
12	328	04.4	330	50.8	31	43.5	72	34.0	184	13.8
13	343	06.9	345	50.4	46	44.0	87	36.1	199	16.4
14	358	09.3	0	50.1	61	44.4	102	38.2	214	19.1
15	13	11.8	15	49.8	76	44.9	117	40.3	229	21.8
16	28	14.3	30	49.4	91	45.4	132	42.4	244	24.4
17	43	16.7	45	49.1	106	45.8	147	44.6	259	27.1
18	58	19.2	60	48.7	121	46.3	162	46.7	274	29.7
19	73	21.6	75	48.4	136	46.7	177	48.8	289	32.4
20	88	24.1	90	48.1	151	47.2	192	50.9	304	35.1
21	103	26.6	105	47.7	166	47.6	207	53.0	319	37.7
22	118	29.0	120	47.4	181	48.1	222	55.1	334	40.4
23	133	31.5	135	47.1	196	48.6	237	57.3	349	43.0
24	148	34.0	150	46.7	211	49.0	252	59.4	4	45.7
Dif	—		-3	+13	+5	+3	+21	0	+27	+1

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: 4 ^d 3 SD: 16/3 PMG: 16 ^h 25 ^m	PHE { 4 ^h : 59/8 12 ^h : 59/6 20 ^h : 59/4 R°: 55 ^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	176	36.0	-10 24.8	122	41.6	+15 53.0	60 N	5 49	6 37	7 20	7 53	2	***	***	***	***	***	***
1	191	36.1	23.9	137	09.7	+16 07.7	58	49	34	15	8 04	8	***	***	***	***	***	***
2	206	36.2	23.0	151	37.8	22.3	56	49	32	10	14	13	***	***	***	***	***	***
3	221	36.2	22.1	166	05.8	36.8	54	49	30	06	23	17	***	***	***	***	***	***
4	236	36.3	21.1	180	33.7	+16 51.2	52	48	27	7 02	31	20	***	***	***	***	***	***
5	251	36.4	-10 20.2	195	01.6	+17 05.5	50	5 48	6 25	6 58	8 38	24	***	***	***	***	***	***
6	266	36.5	-10 19.3	209	29.4	+17 19.7	45	5 47	6 21	6 51	8 53	30	***	***	***	***	***	***
7	281	36.5	18.4	223	57.2	33.7	40	45	17	44	9 06	34	23	56	76			
8	296	36.6	17.5	238	24.9	+17 47.7	35	44	13	39	17	38	43	72				
9	311	36.7	16.6	252	52.5	+18 01.5	30	42	10	34	27	41	31	69				
10	326	36.8	15.7	267	20.1	15.3	20	37	6 03	25	43	47	23	11	64			
11	341	36.8	-10 14.8	281	47.7	+18 28.9	10 N	5 32	5 56	6 17	9 58	51	22	54	60			
12	356	36.9	-10 13.9	296	15.1	+18 42.3	0	5 25	5 49	6 10	10 12	55	22	38	56			
13	11	37.0	13.0	310	42.5	+18 55.7	10 S	16	41	6 03	26	59	22	52				
14	26	37.1	12.0	325	09.9	+19 09.0	20	5 06	32	5 55	41	64	22	04	49			
15	41	37.2	11.1	339	37.2	22.1	30	4 52	21	45	10 58	69	21	45	44			
16	56	37.2	10.2	354	04.4	35.1	35	43	14	40	11 08	73	34	41				
17	71	37.3	-10 09.3	8	31.5	+19 47.9	40	4 32	5 06	5 34	11 20	76	21	21	37			
18	86	37.4	-10 08.4	22	58.6	+20 00.7	45	4 18	4 56	5 27	11 34	81	21	05	33			
19	101	37.5	07.5	37	25.7	13.3	50	4 01	44	18	51	87	20	47	27			
20	116	37.6	06.6	51	52.6	25.8	52	3 53	38	14	11 59	91	38	24				
21	131	37.6	05.7	66	19.6	38.1	54	43	31	09	12 08	94	28	21				
22	146	37.7	04.7	80	46.4	+20 50.4	56	32	24	5 05	18	99	17	16				
23	161	37.8	03.8	95	13.2	+21 02.4	58	19	15	4 59	30	105	20	05	10			
24	176	37.9	-10 02.9	109	39.9	+21 14.4	60 S	3 03	4 06	4 53	12 43	113	19	50	3			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 13 ^h 51 ^m 6			Mag: -3.9 PMG: 13 ^h 59 ^m			Mag: +1.3 PMG: 9 ^h 50 ^m			Mag: -2.1 PMG: 6 ^h 57 ^m			Mag: 0.0 PMG: 23 ^h 24 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'		
0	151	31.4	150 22.9	-0 36.7	212 22.4	-21 37.6	255 32.6	-22 06.3	7 57.1	+15 49.9								
1	166	33.8	165 22.6	35.4	227 22.8	37.3	270 34.7	06.4	22 59.8	50.0								
2	181	36.3	180 22.3	34.1	242 23.3	36.9	285 36.8	06.4	38 02.4	50.0								
3	196	38.8	195 22.0	32.8	257 23.8	36.6	300 39.0	06.4	53 05.1	50.1								
4	211	41.2	210 21.6	31.5	272 24.2	36.2	315 41.1	06.4	68 07.7	50.2								
5	226	43.7	225 21.3	-0 30.2	287 24.7	-21 35.9	330 43.3	-22 06.5	83 10.4	+15 50.2								
6	241	46.2	240 21.0	-0 28.9	302 25.2	-21 35.5	345 45.4	-22 06.5	98 13.0	+15 50.3								
7	256	48.6	255 20.7	27.6	317 25.6	35.2	0 47.5	06.5	113 15.7	50.4								
8	271	51.1	270 20.3	26.3	332 26.1	34.9	15 49.7	06.6	128 18.3	50.4								
9	286	53.6	285 20.0	25.0	347 26.6	34.5	30 51.8	06.6	143 21.0	50.5								
10	301	56.0	300 19.7	23.7	2 27.0	34.2	45 54.0	06.6	158 23.7	50.6								
11	316	58.5	315 19.4	-0 22.3	17 27.5	-21 33.8	60 56.1	-22 06.6	173 26.3	+15 50.6								
12	332	00.9	330 19.1	-0 21.0	32 28.0	-21 33.5	75 58.2	-22 06.7	188 29.0	+15 50.7								
13	347	03.4	345 18.7	19.7	47 28.4	33.1	91 00.4	06.7	203 31.6	50.8								
14	2	05.9	0 18.4	18.4	62 28.9	32.8	106 02.5	06.7	218 34.3	50.8								
15	17	08.3	15 18.1	17.1	77 29.4	32.5	121 04.7	06.7	233 36.9	50.9								
16	32	10.8	30 17.8	15.8	92 29.8	32.1	136 06.8	06.8	248 39.6	50.9								
17	47	13.3	45 17.4	-0 14.5	107 30.3	-21 31.8	151 08.9	-22 06.8	263 42.3	+15 51.0								
18	62	15.7	60 17.1	-0 13.2	122 30.8	-21 31.4	166 11.1	-22 06.8	278 44.9	+15 51.1								
19	77	18.2	75 16.8	11.9	137 31.2	31.1	181 13.2	06.9	293 47.6	51.1								
20	92	20.7	90 16.5	10.6	152 31.7	30.7	196 15.4	06.9	308 50.2	51.2								
21	107	23.1	105 16.1	09.3	167 32.2	30.4	211 17.5	06.9	323 52.9	51.3								
22	122	25.6	120 15.8	08.0	182 32.6	30.0	226 19.6	06.9	338 55.5	51.3								
23	137	28.1	135 15.5	06.7	197 33.1	29.7	241 21.8	07.0	353 58.2	51.4								
24	152	30.5	150 15.2	-0 05.4	212 33.6	-21 29.3	256 23.9	-22 07.0	9 00.8	+15 51.5								
Dif	—		-3	+13	+5	+3	+21	0	+27	+1								

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		Edad: 5 ^d 3	PHE {	4 ^h : 59 ^h 2 12 ^h : 58 ^h 9 20 ^h : 58 ^h 7 R°: 59 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 13 ^m 4														
	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	37.9	-10 02.9		109 39.9	+21 14.4	60 N	17 11	17 54	18 42	7 55 6		1 36 112		
1	191	38.0	02.0		124 06.6	77 26.2	58	16	56	42	8 12 16		19 103		
2	206	38.0	01.1		138 33.2	76 37.9	56	20	17 58	41	27 21		1 05 97		
3	221	38.1	-10 00.2		152 59.7	75 +21 49.4	54	24	18 00	41	40 26		0 53 92		
4	236	38.2	-9 59.3		167 26.2	75 +22 00.8	52	28	02	41	8 51 30		42 89		
5	251	38.3	-9 58.3		181 52.6	74 +22 12.1	50	17 31	18 04	18 42	9 02 32		0 32 86		
6	266	38.4	-9 57.4		196 18.9	73 +22 23.2	45	17 39	18 08	18 42	9 23 37		0 12 80		
7	281	38.5	56.5		210 45.2	73 34.1	40	45	12	43	40 42	** ** *			
8	296	38.5	55.6		225 11.5	73 45.0	35	50	15	45	9 55 44	** ** *			
9	311	38.6	54.7		239 37.6	71 +22 55.6	30	17 54	19	47	10 08 47	** ** *			
10	326	38.7	53.8		254 03.7	71 +23 06.1	20	18 03	25	51	30 51	** ** *			
11	341	38.8	-9 52.8		268 29.8	71 +23 16.5	10 N	18 10	18 31	18 56	10 49 54		23 54 61		
12	356	38.9	-9 51.9		282 55.8	70 +23 26.7	0	18 17	18 38	19 02	11 07 58		23 34 59		
13	11	39.0	51.0		297 21.7	69 36.8	10 S	24	45	10	25 61		23 14 56		
14	26	39.1	50.1		311 47.6	69 46.7	20	31	18 54	20	11 45 64		22 53 54		
15	41	39.1	49.2		326 13.4	68 +23 56.5	30	40	19 05	34	12 07 68		29 50		
16	56	39.2	48.3		340 39.2	68 +24 06.1	35	45	11	42	21 70		22 15 48		
17	71	39.3	-9 47.3		355 04.9	67 +24 15.6	40	18 51	19 19	19 53	12 36 74		21 58 46		
18	86	39.4	-9 46.4		9 30.6	67 +24 24.9	45	18 58	19 28	20 05	12 55 77		21 38 43		
19	101	39.5	45.5		23 56.2	66 34.0	50	19 06	40	22	13 18 83		14 37		
20	116	39.6	44.6		38 21.7	65 43.0	52	10	46	30	30 85		21 02 35		
21	131	39.7	43.7		52 47.2	65 +24 51.8	54	14	52	39	42 89		20 49 31		
22	146	39.7	42.7		67 12.7	65 +25 00.5	56	19	19 59	20 50	13 57 94		33 27		
23	161	39.8	41.8		81 38.1	64 09.0	58	24	20 07	21 02	14 15 100		20 15 21		
24	176	39.9	-9 40.9		96 03.4	63 +25 17.3	60 S	19 30	20 16	21 17	14 36 112		19 53 10		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO	
	PMG: 13 ^h 47 ^m 7		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: +1.3 PMG: 9 ^h 49 ^m		Mag: -2.1 PMG: 6 ^h 53 ^m			Mag: 0.0 PMG: 23 ^h 20 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	
0	152	30.5	150 15.2	-0 05.4	212 33.6	-21 29.3	256 23.9	-22 07.0	9 00.8	+15 51.5	
1	167	33.0	165 14.8	04.0	227 34.1	29.0	271 26.1	07.0	24 03.5	51.5	
2	182	35.4	180 14.5	02.7	242 34.5	28.6	286 28.2	07.0	39 06.2	51.6	
3	197	37.9	195 14.2	01.4	257 35.0	28.3	301 30.4	07.1	54 08.8	51.7	
4	212	40.4	210 13.9	-0 00.1	272 35.5	27.9	316 32.5	07.1	69 11.5	51.7	
5	227	42.8	225 13.6	+0 01.2	287 35.9	-21 27.6	331 34.7	-22 07.1	84 14.1	+15 51.8	
6	242	45.3	240 13.2	+0 02.5	302 36.4	-21 27.2	346 36.8	-22 07.2	99 16.8	+15 51.8	
7	257	47.8	255 12.9	03.8	317 36.9	26.9	1 38.9	07.2	114 19.4	51.9	
8	272	50.2	270 12.6	05.1	332 37.3	26.5	16 41.1	07.2	129 22.1	52.0	
9	287	52.7	285 12.3	06.4	347 37.8	26.2	31 43.2	07.2	144 24.7	52.0	
10	302	55.2	300 11.9	07.7	2 38.3	25.8	46 45.4	07.3	159 27.4	52.1	
11	317	57.6	315 11.6	+0 09.0	17 38.8	-21 25.5	61 47.5	-22 07.3	174 30.0	+15 52.2	
12	333	00.1	330 11.3	+0 10.3	32 39.2	-21 25.1	76 49.7	-22 07.3	189 32.7	+15 52.2	
13	348	02.6	345 11.0	11.6	47 39.7	24.8	91 51.8	07.3	204 35.4	52.3	
14	3 05.0	0 10.7	12.9	62 40.2	24.4	106 54.0	07.4	219 38.0	52.4		
15	18 07.5	15 10.3	14.3	77 40.6	24.0	121 56.1	07.4	234 40.7	52.4		
16	33 09.9	30 10.0	15.6	92 41.1	23.7	136 58.3	07.4	249 43.3	52.5		
17	48 12.4	45 09.7	+0 16.9	107 41.6	-21 23.3	152 00.4	-22 07.4	264 46.0	+15 52.6		
18	63 14.9	60 09.4	+0 18.2	122 42.1	-21 23.0	167 02.6	-22 07.5	279 48.6	+15 52.6		
19	78 17.3	75 09.1	19.5	137 42.5	22.6	182 04.7	07.5	294 51.3	52.7		
20	93 19.8	90 08.7	20.8	152 43.0	22.3	197 06.8	07.5	309 53.9	52.7		
21	108 22.3	105 08.4	22.1	167 43.5	21.9	212 09.0	07.6	324 56.6	52.8		
22	123 24.7	120 08.1	23.4	182 43.9	21.6	227 11.1	07.6	339 59.2	52.9		
23	138 27.2	135 07.8	24.7	197 44.4	21.2	242 13.3	07.6	355 01.9	52.9		
24	153 29.7	150 07.4	+0 26.0	212 44.9	-21 20.8	257 15.4	-22 07.6	10 04.6	+15 53.0		
Dif	—	-3	+13	+5	+4	+21	0	+27	+1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 3			Edad: 6 ^d 3	PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'0 R°: 59 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	39.9	-9 40.9	96	03.4	+25 17.3	82	60 N	5 44	6 32	7 14	8 01	20	3 28	104
1	191	40.0	40.0	110	28.7	25.5	80	58	44	29	09	28 30		3 02	93
2	206	40.1	39.1	124	54.0	33.5	79	56	44	27	05	8 48	36	2 42	87
3	221	40.2	38.1	139	19.2	41.4	77	54	44	25	7 01	9 06	39	25	83
4	236	40.3	37.2	153	44.3	49.1	75	52	44	23	6 58	21 42		2 11	80
5	251	40.4	-9 36.3	168	09.5	+25 56.6	73	50	5 44	6 22	6 54	9 34	44	1 58	78
6	266	40.5	-9 35.4	182	34.5	+26 03.9	72	45	5 44	6 18	6 47	10 00	48	1 32	74
7	281	40.5	34.5	196	59.6	11.1	70	40	43	14	41	22 50		1 12	70
8	296	40.6	33.5	211	24.6	18.1	69	35	41	11	36	39 52		0 55	68
9	311	40.7	32.6	225	49.5	25.0	67	30	40	08	32	10 55	53	40	67
10	326	40.8	31.7	240	14.5	31.7	65	20	36	6 02	24	11 21	55	0 15	64
11	341	40.9	-9 30.8	254	39.3	+26 38.2	63	10 N	5 31	5 55	6 17	11 43	58	** ** *	**
12	356	41.0	-9 29.8	269	04.2	+26 44.5	62	0	5 25	5 49	6 10	12 05	58	** ** *	**
13	11	41.1	28.9	283	29.0	50.7	60	10 S	17	42	6 03	26 60		** ** *	**
14	26	41.2	28.0	297	53.8	+26 56.6	59	20	5 07	33	5 56	12 49	62	23 47	57
15	41	41.3	27.1	312	18.6	+27 02.5	58	30	4 54	22	47	13 15	65	19	56
16	56	41.4	26.1	326	43.3	08.1	56	35	45	16	42	31 66		23 03	55
17	71	41.5	-9 25.2	341	08.0	+27 13.6	55	40	4 35	5 08	5 36	13 50	67	22 44	54
18	86	41.6	-9 24.3	355	32.7	+27 18.9	53	45	4 22	4 59	5 30	14 12	69	22 21	53
19	101	41.6	23.4	9 57.3	56	24.0	51	50	4 05	47	21	41 71		21 51	51
20	116	41.7	22.4	24 22.0	57	29.0	50	52	3 57	42	18	14 55	73	37	50
21	131	41.8	21.5	38 46.6	56	33.7	47	54	48	36	14	15 11	75	20	48
22	146	41.9	20.6	53 11.2	56	38.3	46	56	38	29	09	31 77		21 00	46
23	161	42.0	19.7	67 35.8	56	42.7	44	58	25	21	5 04	15 55	82	20 36	41
24	176	42.1	-9 18.7	82 00.3	55	+27 47.0	43	60 S	3 11	4 12	4 58	16 28	92	20 03	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 13 ^h 43 ^m 8		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.3 PMG: 9 ^h 49 ^m		Mag: -2.1 PMG: 6 ^h 50 ^m		Mag: 0.0 PMG: 23 ^h 16 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	153	29.7	150	07.4	+0 26.0	212	44.9	-21 20.8	257	15.4	-22 07.6				
1	168	32.1	165	07.1	27.3	227	45.4	20.5	272	17.6	07.7				
2	183	34.6	180	06.8	28.6	242	45.8	20.1	287	19.7	07.7				
3	198	37.1	195	06.5	29.9	257	46.3	19.8	302	21.9	07.7				
4	213	39.5	210	06.2	31.2	272	46.8	19.4	317	24.0	07.7				
5	228	42.0	225	05.8	+0 32.6	287	47.2	-21 19.0	332	26.2	-22 07.8				
6	243	44.4	240	05.5	+0 33.9	302	47.7	-21 18.7	347	28.3	-22 07.8				
7	258	46.9	255	05.2	35.2	317	48.2	18.3	2 30.5		07.8				
8	273	49.4	270	04.9	36.5	332	48.7	18.0	17 32.6		07.8				
9	288	51.8	285	04.6	37.8	347	49.1	17.6	32 34.8		07.9				
10	303	54.3	300	04.2	39.1	2 49.6	17.2		47 37.0		07.9				
11	318	56.8	315	03.9	+0 40.4	17 50.1	-21 16.9		62 39.1	-22 07.9					
12	333	59.2	330	03.6	+0 41.7	32 50.6	-21 16.5		77 41.3	-22 07.9					
13	349	01.7	345	03.3	43.0	47 51.0	16.1		92 43.4	08.0					
14	4 04.2	0 03.0	44.3	62 51.5	15.8	107 45.6	08.0		107 45.6	08.0					
15	19 06.6	15 02.6	45.6	77 52.0	15.4	122 47.7	08.0		122 47.7	08.0					
16	34 09.1	30 02.3	46.9	92 52.4	15.1	137 49.9	08.0		137 49.9	08.0					
17	49 11.5	45 02.0	+0 48.2	107 52.9	-21 14.7	152 52.0	-22 08.1		152 52.0	-22 08.1					
18	64 14.0	60 01.7	+0 49.5	122 53.4	-21 14.3	167 54.2	-22 08.1		167 54.2	-22 08.1					
19	79 16.5	75 01.4	50.9	137 53.9	14.0	182 56.3	08.1		182 56.3	08.1					
20	94 18.9	90 01.1	52.2	152 54.3	13.6	197 58.5	08.1		197 58.5	08.1					
21	109 21.4	105 00.7	53.5	167 54.8	13.2	213 00.6	08.2		213 00.6	08.2					
22	124 23.9	120 00.4	54.8	182 55.3	12.9	228 02.8	08.2		228 02.8	08.2					
23	139 26.3	135 00.1	56.1	197 55.8	12.5	243 05.0	08.2		243 05.0	08.2					
24	154 28.8	149 59.8	+0 57.4	212 56.2	-21 12.1	258 07.1	-22 08.3		258 07.1	-22 08.3					
Dif	—		-3	+13		+5	+4		+22	0		+27		+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 1			Edad: 7 ^d 3 PHE { 4 ^h : 57:8 12 ^h : 57:6 20 ^h : 57:4 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	42.1	-9 18.7	82	00.3	+27 47.0	41	60 N	17 16	17 58	18 47	8 21 53	5 12 70		
1	191	42.2	17.8	96	24.9	56	51.1	58	21	18 01	46	8 58 55	4 35 67		
2	206	42.3	16.9	110	49.4	55	55.0	56	25	02	46	9 24 57	4 09 65		
3	221	42.4	16.0	125	14.0	56	+27 58.7	54	28	04	45	9 45 57	3 48 65		
4	236	42.5	15.0	139	38.5	55	+28 02.2	52	32	06	45	10 03 57	31 64		
5	251	42.6	-9 14.1	154	03.0	55	+28 05.6	50	17 35	18 07	18 45	10 18 58	3 16 63		
6	266	42.7	-9 13.2	168	27.5	55	+28 08.8	45	17 41	18 11	18 45	10 48 58	2 46 63		
7	281	42.8	12.3	182	52.1	56	11.8	40	47	14	46	11 12 58	22 63		
8	296	42.9	11.3	197	16.6	55	14.6	35	52	17	47	31 59	2 03 62		
9	311	43.0	10.4	211	41.1	55	17.3	30	17 56	20	48	11 48 58	1 47 61		
10	326	43.1	09.5	226	05.6	55	19.7	20	18 03	26	51	12 16 59	1 19 60		
11	341	43.2	-9 08.5	240	30.2	56	+28 22.0	10 N	18 10	18 31	18 56	12 41 58	0 55 60		
12	356	43.3	-9 07.6	254	54.7	55	+28 24.2	0	18 16	18 37	19 02	13 03 59	0 33 59		
13	11	43.4	06.7	269	19.3	56	26.1	10 S	23	44	09	26 58	0 10 59		
14	26	43.5	05.8	283	43.8	55	27.9	20	30	18 52	19	13 51 58	** ** *		
15	41	43.6	04.8	298	08.4	56	29.5	30	38	19 02	31	14 20 57	** ** *		
16	56	43.7	03.9	312	33.0	56	30.9	35	43	09	39	37 57	23 58 61		
17	71	43.8	-9 03.0	326	57.6	56	+28 32.1	40	18 48	19 16	19 49	14 57 56	23 38 62		
18	86	43.9	-9 02.0	341	22.2	56	+28 33.2	45	18 54	19 25	20 02	15 21 56	23 14 63		
19	101	44.0	01.1	355	46.9	57	34.1	50	19 02	36	17	15 52 55	22 42 65		
20	116	44.1	-9 00.2	10	11.6	57	34.8	52	06	41	25	16 08 54	27 65		
21	131	44.2	-8 59.2	24	36.3	57	35.3	54	09	47	34	26 54	22 08 67		
22	146	44.3	58.3	39	01.0	57	35.7	56	14	19 53	44	16 48 53	21 46 68		
23	161	44.4	57.4	53	25.8	58	35.9	58	18	20 01	20 55	17 17 51	21 17 70		
24	176	44.5	-8 56.4	67	50.5	57	+28 35.9	60 S	19 24	20 09	21 09	18 00 45	20 34 76		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 39 ^m 8		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.3 PMG: 9 ^h 48 ^m		Mag: -2.1 PMG: 6 ^h 47 ^m		Mag: 0.0 PMG: 23 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	28.8	149 59.8	+0 57.4	212 56.2	-21 12.1	258 07.1	-22 08.3	11 08.2	+15 54.5
1	169	31.3	164 59.5	+0 58.7	227 56.7	11.8	273 09.3	08.3	26 10.9	54.6
2	184	33.7	179 59.1	+1 00.0	242 57.2	11.4	288 11.4	08.3	41 13.5	54.7
3	199	36.2	194 58.8	+1 01.3	257 57.7	11.0	303 13.6	08.3	56 16.2	54.7
4	214	38.7	209 58.5	02.6	272 58.1	10.6	318 15.7	08.4	71 18.8	54.8
5	229	41.1	224 58.2	+1 03.9	287 58.6	-21 10.3	333 17.9	-22 08.4	86 21.5	+15 54.8
6	244	43.6	239 57.9	+1 05.2	302 59.1	-21 09.9	348 20.1	-22 08.4	101 24.1	+15 54.9
7	259	46.0	254 57.5	06.5	317 59.6	09.5	3 22.2	08.4	116 26.8	55.0
8	274	48.5	269 57.2	07.8	333 00.0	09.2	18 24.4	08.5	131 29.4	55.0
9	289	51.0	284 56.9	09.1	348 00.5	08.8	33 26.5	08.5	146 32.1	55.1
10	304	53.4	299 56.6	10.5	3 01.0	08.4	48 28.7	08.5	161 34.8	55.2
11	319	55.9	314 56.3	+1 11.8	18 01.5	-21 08.1	63 30.8	-22 08.5	176 37.4	+15 55.2
12	334	58.4	329 56.0	+1 13.1	33 02.0	-21 07.7	78 33.0	-22 08.6	191 40.1	+15 55.3
13	350	00.8	344 55.6	14.4	48 02.4	07.3	93 35.2	08.6	206 42.7	55.3
14	5 03.3	359 55.3	15.7	63 02.9	06.9	108 37.3	08.6	221 45.4	55.4	
15	20 05.8	14 55.0	17.0	78 03.4	06.6	123 39.5	08.6	236 48.0	55.5	
16	35 08.2	29 54.7	18.3	93 03.9	06.2	138 41.6	08.7	251 50.7	55.5	
17	50 10.7	44 54.4	+1 19.6	108 04.3	-21 05.8	153 43.8	-22 08.7	266 53.3	+15 55.6	
18	65 13.2	59 54.0	+1 20.9	123 04.8	-21 05.4	168 46.0	-22 08.7	281 56.0	+15 55.7	
19	80 15.6	74 53.7	22.2	138 05.3	05.1	183 48.1	08.7	296 58.6	55.7	
20	95 18.1	89 53.4	23.5	153 05.8	04.7	198 50.3	08.8	312 01.3	55.8	
21	110 20.5	104 53.1	24.8	168 06.2	04.3	213 52.4	08.8	327 03.9	55.9	
22	125 23.0	119 52.8	26.1	183 06.7	03.9	228 54.6	08.8	342 06.6	55.9	
23	140 25.5	134 52.5	27.4	198 07.2	03.6	243 56.8	08.8	357 09.2	56.0	
24	155 27.9	149 52.1	+1 28.7	213 07.7	-21 03.2	258 58.9	-22 08.9	12 11.9	+15 56.0	
Dif	—	-3	+13	+5	+4	+22	0	+27	+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 8 ^d 3	PHE { 4 ^h : 57'2 12 ^h : 57'0 20 ^h : 56'8 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	44.5	-8 56.4	67	50.5	+28 35.9	2	60 N	5 38	6 26	7 08		9 14	90	6 22	27
1	191	44.6		82	15.4		3	58	39	24	04		9 53	81	5 42	37
2	206	44.7		96	40.2		5	56	40	22	7 00		10 21	76	5 14	42
3	221	44.8		111	05.1		7	54	40	21	6 57		10 42	74	4 53	44
4	236	44.9		125	30.1		8	52	40	19	53		11 00	72	35	46
5	251	45.0	-8 51.8	139	55.0	+28 33.4	10	50	5 40	6 18	6 50		11 16	69	4 19	48
6	266	45.1	-8 50.9	154	20.1	+28 32.4	12	45	5 40	6 14	6 44		11 46	67	3 49	50
7	281	45.2		168	45.1		14	40	40	11	39		12 10	65		25 51
8	296	45.3		183	10.2		15	35	39	08	34		30	63	3 05	53
9	311	45.4		197	35.4		17	30	38	06	30		12 46	62	2 48	54
10	326	45.5		212	00.6		18	20	34	6 00	22		13 15	59	2 19	55
11	341	45.6	-8 46.2	226	25.9	+28 24.8	21	10 N	5 30	5 55	6 16		13 39	58	1 55	56
12	356	45.7	-8 45.2	240	51.2	+28 22.7	22	0	5 24	5 49	6 10		14 02	56	1 32	57
13	11	45.8		255	16.5		23	10 S	17	42	6 03		24	55	1 09	58
14	26	45.9		269	42.0		25	20	5 08	34	5 56		14 49	52	0 44	59
15	41	46.0		284	07.5		27	30	4 55	24	48		15 17	50	0 15	61
16	56	46.1		298	33.0		29	35	47	18	44		34	48	** ** *	**
17	71	46.2	-8 40.6	312	58.6	+28 10.1	30	40	4 37	5 11	5 39		15 53	47	** ** *	**
18	86	46.3	-8 39.6	327	24.3	+28 07.1	32	45	4 25	5 02	5 32		16 17	44	** ** *	**
19	101	46.4		341	50.0		33	50	09	4 51	25		16 47	40	23	47 74
20	116	46.5		356	15.8	+28 00.6	35	52	4 02	46	21		17 02	38		32 76
21	131	46.6		10	41.7	+27 57.1	36	54	3 53	40	18		20	35	23	15 79
22	146	46.7		25	07.6		38	56		34	13		17	41	31	22 54 83
23	161	46.9		39	33.6		40	58	32	26	09		18	08	25	22 27 90
24	176	47.0	-8 34.0	53	59.7	+27 45.7		60 S	3 18	4 18	5 03		18 45	14	21	50 101
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 13 ^h 35 ^m 9			Mag: -3.9 PMG: 14 ^h 01 ^m			Mag: +1.3 PMG: 9 ^h 47 ^m			Mag: -2.1 PMG: 6 ^h 43 ^m			Mag: 0.0 PMG: 23 ^h 07 ^m			
	hG ♈		Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	155	27.9	149 52.1	+1 28.7	213 07.7	-21 03.2	258 58.9	-22 08.9	12 11.9	+15 56.0						
1	170	30.4	164 51.8	30.1	228 08.2	02.8	274 01.1	08.9	27 14.5	56.1						
2	185	32.9	179 51.5	31.4	243 08.6	02.4	289 03.3	08.9	42 17.2	56.2						
3	200	35.3	194 51.2	32.7	258 09.1	02.1	304 05.4	08.9	57 19.8	56.2						
4	215	37.8	209 50.9	34.0	273 09.6	01.7	319 07.6	08.9	72 22.5	56.3						
5	230	40.3	224 50.6	+1 35.3	288 10.1	-21 01.3	334 09.7	-22 09.0	87 25.1	+15 56.4						
6	245	42.7	239 50.2	+1 36.6	303 10.5	-21 00.9	349 11.9	-22 09.0	102 27.8	+15 56.4						
7	260	45.2	254 49.9	37.9	318 11.0	00.5	4 14.1	09.0	117 30.4	56.5						
8	275	47.7	269 49.6	39.2	333 11.5	-21 00.2	19 16.2	09.0	132 33.1	56.5						
9	290	50.1	284 49.3	40.5	348 12.0	-20 59.8	34 18.4	09.1	147 35.7	56.6						
10	305	52.6	299 49.0	41.8	3 12.5	59.4	49 20.6	09.1	162 38.4	56.7						
11	320	55.0	314 48.7	+1 43.1	18 12.9	-20 59.0	64 22.7	-22 09.1	177 41.0	+15 56.7						
12	335	57.5	329 48.3	+1 44.4	33 13.4	-20 58.6	79 24.9	-22 09.1	192 43.7	+15 56.8						
13	351	00.0	344 48.0	45.7	48 13.9	58.3	94 27.1	09.2	207 46.3	56.8						
14	6	02.4	359 47.7	47.0	63 14.4	57.9	109 29.2	09.2	222 49.0	56.9						
15	21	04.9	14 47.4	48.3	78 14.9	57.5	124 31.4	09.2	237 51.6	57.0						
16	36	07.4	29 47.1	49.6	93 15.3	57.1	139 33.6	09.2	252 54.3	57.0						
17	51	09.8	44 46.8	+1 50.9	108 15.8	-20 56.7	154 35.7	-22 09.3	267 56.9	+15 57.1						
18	66	12.3	59 46.4	+1 52.2	123 16.3	-20 56.3	169 37.9	-22 09.3	282 59.6	+15 57.2						
19	81	14.8	74 46.1	53.6	138 16.8	56.0	184 40.1	09.3	298 02.2	57.2						
20	96	17.2	89 45.8	54.9	153 17.2	55.6	199 42.2	09.3	313 04.9	57.3						
21	111	19.7	104 45.5	56.2	168 17.7	55.2	214 44.4	09.4	328 07.5	57.3						
22	126	22.2	119 45.2	57.5	183 18.2	54.8	229 46.6	09.4	343 10.2	57.4						
23	141	24.6	134 44.9	+1 58.8	198 18.7	54.4	244 48.7	09.4	358 12.8	57.5						
24	156	27.1	149 44.5	+2 00.1	213 19.2	-20 54.0	259 50.9	-22 09.4	13 15.5	+15 57.5						
Dif	—		-3	+13	+5	+4	+22	0	+27	+1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 10 ^d 3 PHE { 4 ^h : 56 ^m 0 12 ^h : 55 ^m 9 20 ^h : 55 ^m 7 R°: 47 ^m												
	PMG: 12 ^h 12 ^m 6			SD: 15 ^h 3 PMG: 22 ^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	176	49.6	-8 11.5	40	50.1	+25 26.5	75	60 N	5 33	6 21	7 03	12 26	98	6 59	2	
1	191	49.7	10.5	55	18.3	19.0	75	58	34	19	6 59	12 46	92	37	10	
2	206	49.8	09.6	69	46.6	93	76	56	35	18	55	13 03	87	20	14	
3	221	49.9	08.6	84	15.0	+25 03.6	78	54	36	16	52	17 83		6 05	18	
4	236	50.0	07.7	98	43.5	+24 55.7	79	52	36	15	49	30 79		5 52	22	
5	251	50.2	-8 06.8	113	12.1	+24 47.7	80	50	5 37	6 14	6 46	13 41	76	5 41	24	
6	266	50.3	-8 05.8	127	40.8	+24 39.6	81	45	5 37	6 11	6 41	14 04	70	5 17	29	
7	281	50.4	04.9	142	09.6	31.3	83	40	37	08	36	22 66		4 58	33	
8	296	50.5	03.9	156	38.5	99	83	35	37	06	31	37 63		42	36	
9	311	50.6	03.0	171	07.5 ¹⁰⁰	14.5	85	30	36	6 04	28	14 50	61	28	38	
10	326	50.7	02.0	185	36.5 ¹⁰⁰	+24 05.9	86	20	33	5 59	21	15 13	55	4 04	43	
11	341	50.9	-8 01.1	200	05.7 ¹⁰²	+23 57.2	87	10 N	5 29	5 54	6 15	15 32	52	3 43	47	
12	356	51.0	-8 00.1	214	35.0 ¹⁰³	+23 48.3	89	0	5 24	5 48	6 09	15 50	48	3 23	51	
13	11	51.1	-7 59.2	229	04.4 ¹⁰⁴	39.4	89	10 S	17	42	6 03	16 08	44	3 04	53	
14	26	51.2	58.3	243	33.8 ¹⁰⁴	30.3	91	20	5 09	35	5 57	27 40		2 43	57	
15	41	51.3	57.3	258	03.4 ¹⁰⁶	21.2	91	30	4 57	26	50	16 49	36	18	62	
16	56	51.4	56.4	272	33.0 ¹⁰⁶	11.9	93	35	49	20	46	17 02	33	2 03	65	
17	71	51.5	-7 55.4	287	02.8 ¹⁰⁸	+23 02.5	94	40	4 40	5 13	5 41	17 16	30	1 47	67	
18	86	51.7	-7 54.5	301	32.7 ¹⁰⁹	+22 53.0	95	45	4 28	5 05	5 35	17 34	26	1 26	72	
19	101	51.8	53.5	316	02.6 ¹⁰⁹	43.4	96	50	13	4 55	28	17 55	21	1 01	76	
20	116	51.9	52.6	330	32.7 ¹¹¹	33.7	97	52	4 06	50	25	18 06	17	0 48	80	
21	131	52.0	51.6	345	02.8 ¹¹¹	23.9	98	54	3 58	44	22	17 15		34	83	
22	146	52.1	50.7	359	33.0 ¹¹²	14.0	99	56	49	38	18	30 11		0 17	87	
23	161	52.3	49.7	14	03.4 ¹¹⁴	+22 04.0 ¹⁰⁰		58	38	31	13	18 45	7	** ** *	**	
24	176	52.4	-7 48.8	28	33.8 ¹¹⁴	+21 53.9 ¹⁰¹		60 S	3 25	4 24	5 09	19 03	1	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 13 ^h 28 ^m 0		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.3 PMG: 9 ^h 46 ^m		Mag: -2.1 PMG: 6 ^h 36 ^m		Mag: 0.0 PMG: 22 ^h 59 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	157	26.2	149	36.9	+2 31.4	213	30.7	-20 44.7	14	19.0	+15 59.0				
1	172	28.7	164	36.6	32.7	228	31.2	44.3	29	21.7	59.1				
2	187	31.1	179	36.3	34.0	243	31.7	43.9	44	24.3	59.1				
3	202	33.6	194	36.0	35.3	258	32.2	43.5	59	27.0	59.2				
4	217	36.1	209	35.7	36.6	273	32.7	43.1	74	29.6	59.2				
5	232	38.5	224	35.4	+2 37.9	288	33.2	-20 42.7	89	32.3	+15 59.3				
6	247	41.0	239	35.1	+2 39.2	303	33.6	-20 42.3	104	34.9	+15 59.4				
7	262	43.5	254	34.7	40.5	318	34.1	41.9	119	37.6	59.4				
8	277	45.9	269	34.4	41.8	333	34.6	41.5	134	40.2	59.5				
9	292	48.4	284	34.1	43.1	348	35.1	41.1	149	42.9	59.6				
10	307	50.9	299	33.8	44.4	3	35.6	40.7	164	45.5	59.6				
11	322	53.3	314	33.5	+2 45.7	18	36.1	-20 40.3	179	48.2	+15 59.7				
12	337	55.8	329	33.2	+2 47.0	33	36.5	-20 39.9	194	50.8	+15 59.7				
13	352	58.3	344	32.8	48.3	48	37.0	39.5	209	53.4	59.8				
14	8	00.7	359	32.5	49.6	63	37.5	39.1	224	56.1	59.9				
15	23	03.2	14	32.2	50.9	78	38.0	38.7	239	58.7	+15 59.9				
16	38	05.6	29	31.9	52.2	93	38.5	38.3	255	01.4	+16 00.0				
17	53	08.1	44	31.6	+2 53.5	108	39.0	-20 37.9	270	04.0	+16 00.0				
18	68	10.6	59	31.3	+2 54.8	123	39.5	-20 37.5	285	06.7	+16 00.1				
19	83	13.0	74	30.9	56.1	138	39.9	37.1	300	09.3	00.2				
20	98	15.5	89	30.6	57.4	153	40.4	36.7	315	12.0	00.2				
21	113	18.0	104	30.3	+2 58.7	168	40.9	36.3	330	14.6	00.3				
22	128	20.4	119	30.0	+3 00.0	183	41.4	35.9	345	17.3	00.3				
23	143	22.9	134	29.7	+3 01.3	198	41.9	35.5	246	33.2	00.4				
24	158	25.4	149	29.4	+3 02.6	213	42.4	-20 35.1	261	35.3	+16 00.5				
Dif	—		-3	+13		+5	+4		+22	0		+26		+	

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 16 ^d 3	PHE	SD: 14 ^h 7	R ^o : 39 ^m									
	PMG: 12 ^h 11 ^m 3														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	08.1	-5 53.9		337	29.2	-4 36.9	60 N	5 15	6 04	6 45	21 12	85	6 57	**
1	192	08.2		52.9	352	05.4 ¹⁷²	-4 51.0 ¹⁴¹	58	18	03	42		06 82	7 00	2
2	207	08.4		52.0	6	41.6 ¹⁷²	-5 05.0 ¹⁴⁰	56	20	03	40	21 01	78		03 5
3	222	08.5		51.0	21	17.7 ¹⁷¹		54	22	02	38	20 57	75	06	
4	237	08.7		50.0	35	53.9 ¹⁷²	33.0 ¹⁴⁰	52	23	02	36		53 72	08	10
5	252	08.8	-5 49.1		50	30.1 ¹⁷²	-5 47.0 ¹⁴⁰	50	5 24	6 02	6 34	20 49	70	7 11	12
6	267	09.0	-5 48.1		65	06.2 ¹⁷¹	-6 00.9 ¹³⁹	45	5 27	6 01	6 30	20 42	64	7 16	16
7	282	09.1		47.1	79	42.3 ¹⁷¹	14.9 ¹⁴⁰	40	28	6 00	27	35	61	20	20
8	297	09.3		46.2	94	18.4 ¹⁷¹	28.8 ¹³⁹	35	29	5 58	24	30	57	24	23
9	312	09.4		45.2	108	54.5 ¹⁷¹	42.6 ¹³⁸	30	29	57	21	25	54	27	26
10	327	09.5		44.2	123	30.6 ¹⁷¹	-6 56.5 ¹³⁹	20	29	54	16	16	50	32	32
11	342	09.7	-5 43.3		138	06.6 ¹⁷⁰	-7 10.3 ¹³⁸	10 N	5 27	5 51	6 12	20 09	45	7 37	36
12	357	09.8	-5 42.3		152	42.6 ¹⁷⁰	-7 24.1 ¹³⁸	0	5 23	5 47	6 08	20 02	41	7 42	40
13	12	10.0		41.3	167	18.6 ¹⁷⁰	37.9 ¹³⁸	10 S	18	43	6 04	19 56	36	47	44
14	27	10.1		40.4	181	54.6 ¹⁷⁰	-7 51.6 ¹³⁷	20	11	37	5 59	49	32	52	48
15	42	10.3		39.4	196	30.6 ¹⁷⁰	-8 05.3 ¹³⁷	30	5 02	30	54	41	27	7 57	54
16	57	10.4		38.4	211	06.5 ¹⁶⁹	19.0 ¹³⁷	35	4 55	25	51	36	24	8 01	56
17	72	10.6	-5 37.4		225	42.4 ¹⁶⁹	-8 32.6 ¹³⁶	40	4 47	5 20	5 47	19 31	21	8 04	60
18	87	10.7	-5 36.5		240	18.2 ¹⁶⁸	-8 46.2 ¹³⁶	45	4 38	5 13	5 43	19 25	17	8 09	64
19	102	10.9		35.5	254	54.1 ¹⁶⁹	-8 59.8 ¹³⁶	50	25	05	38	18	12	14	69
20	117	11.0		34.5	269	29.9 ¹⁶⁸	-9 13.3 ¹³⁵	52	19	5 01	36	14	11	16	72
21	132	11.1		33.6	284	05.7 ¹⁶⁸	26.9 ¹³⁶	54	12	4 57	33	11	8	19	74
22	147	11.3		32.6	298	41.4 ¹⁶⁷	40.3 ¹³⁴	56	4 05	52	31	07	5	22	77
23	162	11.4		31.6	313	17.2 ¹⁶⁸	-9 53.8 ¹³⁵	58	3 56	47	27	19 02	3	25	80
24	177	11.6	-5 30.7		327	52.8 ¹⁶⁶	-10 07.2 ¹³⁴	60 S	3 45	4 40	5 24	18 57	**	8 29	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 04 ^m 4		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: +1.2 PMG: 9 ^h 41 ^m		Mag: -2.1 PMG: 6 ^h 15 ^m		Mag: +0.1 PMG: 22 ^h 33 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	163	21.0	148	51.2	+5 37.7	214	41.7	-19 44.0	265	59.3	-22 13.0	20	39.4	+16 07.4	
1	178	23.5	163	50.9	39.0	229	42.2	43.5	281	01.5	13.0	35	42.0	07.5	
2	193	26.0	178	50.6	40.3	244	42.7	43.1	296	03.7	13.0	50	44.7	07.5	
3	208	28.4	193	50.2	41.5	259	43.2	42.6	311	05.9	13.0	65	47.3	07.6	
4	223	30.9	208	49.9	42.8	274	43.7	42.2	326	08.1	13.1	80	49.9	07.7	
5	238	33.4	223	49.6	+5 44.1	289	44.2	-19 41.7	341	10.4	-22 13.1	95	52.6	+16 07.7	
6	253	35.8	238	49.3	+5 45.4	304	44.7	-19 41.3	356	12.6	-22 13.1	110	55.2	+16 07.8	
7	268	38.3	253	49.0	46.7	319	45.2	40.8	11	14.8	13.1	125	57.8	07.8	
8	283	40.8	268	48.6	47.9	334	45.7	40.4	26	17.0	13.1	141	00.5	07.9	
9	298	43.2	283	48.3	49.2	349	46.2	39.9	41	19.2	13.1	156	03.1	07.9	
10	313	45.7	298	48.0	50.5	4	46.7	39.5	56	21.5	13.2	171	05.7	08.0	
11	328	48.1	313	47.7	+5 51.8	19	47.2	-19 39.0	71	23.7	-22 13.2	186	08.4	+16 08.0	
12	343	50.6	328	47.3	+5 53.1	34	47.7	-19 38.6	86	25.9	-22 13.2	201	11.0	+16 08.1	
13	358	53.1	343	47.0	54.3	49	48.2	38.1	101	28.1	13.2	216	13.6	08.2	
14	13	55.5	358	46.7	55.6	64	48.7	37.7	116	30.3	13.2	231	16.3	08.2	
15	28	58.0	13	46.4	56.9	79	49.2	37.2	131	32.6	13.3	246	18.9	08.3	
16	44	00.5	28	46.1	58.2	94	49.7	36.8	146	34.8	13.3	261	21.5	08.3	
17	59	02.9	43	45.7	+5 59.5	109	50.2	-19 36.3	161	37.0	-22 13.3	276	24.2	+16 08.4	
18	74	05.4	58	45.4	+6 00.7	124	50.8	-19 35.9	176	39.2	-22 13.3	291	26.8	+16 08.4	
19	89	07.9	73	45.1	02.0	139	51.3	35.4	191	41.4	13.3	306	29.4	08.5	
20	104	10.3	88	44.8	03.3	154	51.8	34.9	206	43.7	13.3	321	32.1	08.5	
21	119	12.8	103	44.4	04.6	169	52.3	34.5	221	45.9	13.4	336	34.7	08.6	
22	134	15.3	118	44.1	05.8	184	52.8	34.0	236	48.1	13.4	351	37.3	08.7	
23	149	17.7	133	43.8	07.1	199	53.3	33.6	251	50.3	13.4	6	40.0	08.7	
24	164	20.2	148	43.5	+6 08.4	214	53.8	-19 33.1	266	52.6	-22 13.4	21	42.6	+16 08.8	
Dif	—		-3	+13		+5	+5		+22		0	+26		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 17 ^d 3 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1													
	PMG: 12 ^h 11 ^m 1			SD: 14 ^h 7 PMG: 2 ^h 12 ^m R°: 41 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	177	11.6	-5 30.7	327	52.8	-10 07.2		60 N	17 41	18 23	19 11	22 37 89		6 55 **			
1	192	11.7		342	28.5 ¹⁶⁷	20.5 ¹³³		58	44	23	09	28 84		7 02 3			
2	207	11.9		357	04.1 ¹⁶⁶	33.9 ¹³⁴		56	46	23	06	19 80		08 6			
3	222	12.0		11	39.7 ¹⁶⁶	-10 47.1 ¹³²		54	48	23	04	12 76		13 9			
4	237	12.2		26	15.2 ¹⁶⁵	-11 00.4 ¹³³		52	50	23	02	22 05 74		18 12			
5	252	12.3	-5 25.8	40	50.7 ¹⁶⁵	-11 13.6 ¹³²		50	17 51	18 24	19 01	21 59 71		7 23 13			
6	267	12.5	-5 24.8	55	26.2 ¹⁶⁵	-11 26.8 ¹³²		45	17 55	18 24	18 58	21 46 66		7 32 19			
7	282	12.6		70	01.6 ¹⁶⁴	39.9 ¹³¹		40	17 58	25	56	36 62		40 22			
8	297	12.8		84	37.0 ¹⁶⁴	-11 53.0 ¹³¹		35	18 00	26	55	27 58		47 26			
9	312	12.9		99	12.3 ¹⁶³	-12 06.0 ¹³⁰		30	03	27	54	19 56		7 53 29			
10	327	13.1		113	47.6 ¹⁶³	19.0 ¹³⁰		20	07	29	55	21 06 50		8 04 33			
11	342	13.2	-5 20.0	128	22.9 ¹⁶³	-12 31.9 ¹²⁹		10 N	18 11	18 32	18 56	20 54 47		8 13 38			
12	357	13.4	-5 19.0	142	58.1 ¹⁶²	-12 44.8 ¹²⁹		0	18 14	18 35	18 59	20 43 43		8 22 41			
13	12	13.5		157	33.3 ¹⁶²	-12 57.7 ¹²⁹		10 S	18	39	19 04	32 39		31 45			
14	27	13.7		172	08.4 ¹⁶¹	-13 10.5 ¹²⁸		20	22	44	10	21 35		40 50			
15	42	13.8		186	43.5 ¹⁶¹	23.2 ¹²⁷		30	27	51	19	08 30		51 55			
16	57	14.0		201	18.5 ¹⁶⁰	36.0 ¹²⁸		35	30	18 55	25	20 00 28		8 57 58			
17	72	14.1	-5 14.1	215	53.5 ¹⁶⁰	-13 48.6 ¹²⁶		40	18 33	19 00	19 33	19 52 24		9 04 62			
18	87	14.3	-5 13.2	230	28.4 ¹⁵⁹	-14 01.2 ¹²⁶		45	18 37	19 06	19 42	19 42 20		9 13 65			
19	102	14.4		245	03.3 ¹⁵⁹	13.8 ¹²⁶		50	41	14	54	30 16		23 70			
20	117	14.6		259	38.1 ¹⁵⁸	26.3 ¹²⁵		52	43	18	19 59	25 13		28 72			
21	132	14.7		274	12.9 ¹⁵⁸	38.7 ¹²⁴		54	46	22	20 06	19 10		33 75			
22	147	14.9		288	47.6 ¹⁵⁷	-14 51.1 ¹²⁴		56	48	26	13	12 8		39 78			
23	162	15.0		303	22.2 ¹⁵⁶	-15 03.4 ¹²³		58	51	31	22	19 05 4		45 82			
24	177	15.2	-5 07.3	317	56.8 ¹⁵⁶	-15 15.7 ¹²³		60 S	18 54	19 37	20 31	18 56 0		9 53 86			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 00 ^m 5			Mag: -3.9 PMG: 14 ^h 05 ^m			Mag: +1.2 PMG: 9 ^h 40 ^m			Mag: -2.1 PMG: 6 ^h 12 ^m			Mag: +0.1 PMG: 22 ^h 29 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	164	20.2		148	43.5	+6 08.4	214	53.8	-19 33.1	266	52.6	-22 13.4	21	42.6	+16 08.8		
1	179	22.6		163	43.1	09.7	229	54.3	32.7	281	54.8	13.4	36	45.2	08.8		
2	194	25.1		178	42.8	10.9	244	54.8	32.2	296	57.0	13.5	51	47.9	08.9		
3	209	27.6		193	42.5	12.2	259	55.3	31.8	311	59.2	13.5	66	50.5	08.9		
4	224	30.0		208	42.2	13.5	274	55.8	31.3	327	01.5	13.5	81	53.1	09.0		
5	239	32.5		223	41.8	+6 14.8	289	56.3	-19 30.8	342	03.7	-22 13.5	96	55.8	+16 09.0		
6	254	35.0		238	41.5	+6 16.0	304	56.8	-19 30.4	357	05.9	-22 13.5	111	58.4	+16 09.1		
7	269	37.4		253	41.2	17.3	319	57.3	29.9	12	08.1	13.5	127	01.0	09.1		
8	284	39.9		268	40.9	18.6	334	57.8	29.5	27	10.4	13.6	142	03.7	09.2		
9	299	42.4		283	40.5	19.9	349	58.3	29.0	42	12.6	13.6	157	06.3	09.3		
10	314	44.8		298	40.2	21.1	4	58.8	28.5	57	14.8	13.6	172	08.9	09.3		
11	329	47.3		313	39.9	+6 22.4	19	59.4	-19 28.1	72	17.0	-22 13.6	187	11.6	+16 09.4		
12	344	49.8		328	39.6	+6 23.7	34	59.9	-19 27.6	87	19.3	-22 13.6	202	14.2	+16 09.4		
13	359	52.2		343	39.2	25.0	50	00.4	27.2	102	21.5	13.6	217	16.8	09.5		
14	14	54.7		358	38.9	26.2	65	00.9	26.7	117	23.7	13.7	232	19.5	09.5		
15	29	57.1		13	38.6	27.5	80	01.4	26.2	132	26.0	13.7	247	22.1	09.6		
16	44	59.6		28	38.3	28.8	95	01.9	25.8	147	28.2	13.7	262	24.7	09.6		
17	60	02.1		43	37.9	+6 30.1	110	02.4	-19 25.3	162	30.4	-22 13.7	277	27.3	+16 09.7		
18	75	04.5		58	37.6	+6 31.3	125	02.9	-19 24.9	177	32.6	-22 13.7	292	30.0	+16 09.7		
19	90	07.0		73	37.3	32.6	140	03.4	24.4	192	34.9	13.7	307	32.6	09.8		
20	105	09.5		88	37.0	33.9	155	03.9	23.9	207	37.1	13.8	322	35.2	09.8		
21	120	11.9		103	36.6	35.1	170	04.4	23.5	222	39.3	13.8	337	37.9	09.9		
22	135	14.4		118	36.3	36.4	185	04.9	23.0	237	41.6	13.8	352	40.5	10.0		
23	150	16.9		133	36.0	37.7	200	05.5	22.5	252	43.8	13.8	7	43.1	10.0		
24	165	19.3		148	35.6	+6 39.0	215	06.0	-19 22.1	267	46.0	-22 13.8	22	45.8	+16 10.1		
Dif	—			-3 +13			+5 +5			+22 0			+26 +1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 18 ^d 3 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2													
	PMG: 12 ^h 10 ^m 9			SD: 14'7 PMG: 2 ^h 53 ^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	15.2	-5 07.3	317	56.8	-15 15.7			60 N	5	10	5	58	6	39	**	**
1	192	15.3	06.4	332	31.4 ¹⁵⁶	28.0 ¹²³			58	12	58	37	23	52	87	7	05
2	207	15.5	05.4	347	05.9 ¹⁵⁵	40.1 ¹²¹			56	15	58	35	39	83		14	9
3	222	15.6	04.4	1	40.3 ¹⁵⁴	-15 52.2 ¹²¹			54	17	58	33	28	79		22	1
4	237	15.8	03.4	16	14.7 ¹⁵⁴	-16 04.3 ¹²¹			52	19	58	31	19	75		30	14
5	252	15.9	-5 02.5	30	49.0 ¹⁵³	-16 16.3 ¹²⁰			50	5	20	5	58	6	30	23	10
6	267	16.1	-5 01.5	45	23.3 ¹⁵³	-16 28.2 ¹¹⁹			45	5	23	5	57	6	26	22	52
7	282	16.2	-5 00.5	59	57.5 ¹⁵²	40.1 ¹¹⁹			40	25	56	23	38	63		8	02
8	297	16.4	-4 59.5	74	31.6 ¹⁵¹	-16 51.9 ¹¹⁸			35	26	56	21	25	61		13	29
9	312	16.5	58.6	89	05.7 ¹⁵¹	-17 03.6 ¹¹⁷			30	27	55	19	22	15	57	22	32
10	327	16.7	57.6	103	39.7 ¹⁵⁰	15.3 ¹¹⁷			20	27	53	15	21	56	53	37	37
11	342	16.8	-4 56.6	118	13.6 ¹⁴⁹	-17 26.9 ¹¹⁶			10 N	5	26	5	50	6	11	21	41
12	357	17.0	-4 55.6	132	47.5 ¹⁴⁹	-17 38.5 ¹¹⁶			0	5	23	5	47	6	08	21	26
13	12	17.2	54.7	147	21.3 ¹⁴⁸	-17 50.0 ¹¹⁵			10 S	18	43	04	21	11	43	16	48
14	27	17.3	53.7	161	55.0 ¹⁴⁷	-18 01.4 ¹¹⁴			20	12	38	6	00	20	56	38	30
15	42	17.5	52.7	176	28.7 ¹⁴⁷	12.7 ¹¹³			30	5	03	31	5	55	38	34	46
16	57	17.6	51.7	191	02.3 ¹⁴⁶	24.0 ¹¹³			35	4	57	27	53	28	31	9	55
17	72	17.8	-4 50.8	205	35.9 ¹⁴⁶	-18 35.2 ¹¹²			40	4	50	5	22	5	50	20	16
18	87	17.9	-4 49.8	220	09.3 ¹⁴⁴	-18 46.3 ¹¹¹			45	4	41	5	16	5	46	20	02
19	102	18.1	48.8	234	42.7 ¹⁴⁴	-18 57.4 ¹¹¹			50	29	09	42	19	46	20	33	72
20	117	18.2	47.8	249	16.1 ¹⁴⁴	-19 08.4 ¹¹⁰			52	23	05	40	38	17		40	75
21	132	18.4	46.9	263	49.3 ¹⁴²	19.3 ¹⁰⁹			54	17	5	01	37	29	15	48	78
22	147	18.5	45.9	278	22.5 ¹⁴²	30.1 ¹⁰⁸			56	10	4	57	35	20	11	10	57
23	162	18.7	44.9	292	55.6 ¹⁴¹	40.9 ¹⁰⁸			58	4	01	52	32	19	09	6	11
24	177	18.8	-4 43.9	307	28.7 ¹⁴¹	-19 51.6 ¹⁰⁷			60 S	3	52	4	46	5	29	18	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 56 ^m 6		Mag: -3.9 PMG: 14 ^h 06 ^m		Mag: +1.2 PMG: 9 ^h 39 ^m		Mag: -2.1 PMG: 6 ^h 08 ^m		Mag: +0.1 PMG: 22 ^h 25 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	165	19.3	148	35.6	+6 39.0	215 06.0	-19 22.1	267 46.0	-22 13.8	22 45.8
1	180	21.8	163	35.3	40.2	230 06.5	21.6	282 48.3	13.8	37 48.4
2	195	24.2	178	35.0	41.5	245 07.0	21.2	297 50.5	13.9	52 51.0
3	210	26.7	193	34.7	42.8	260 07.5	20.7	312 52.7	13.9	67 53.6
4	225	29.2	208	34.3	44.0	275 08.0	20.2	327 54.9	13.9	82 56.3
5	240	31.6	223	34.0	+6 45.3	290 08.5	-19 19.8	342 57.2	-22 13.9	97 58.9
6	255	34.1	238	33.7	+6 46.6	305 09.0	-19 19.3	357 59.4	-22 13.9	113 01.5
7	270	36.6	253	33.4	47.8	320 09.5	18.8	13 01.6	13.9	128 04.2
8	285	39.0	268	33.0	49.1	335 10.0	18.4	28 03.9	14.0	143 06.8
9	300	41.5	283	32.7	50.4	350 10.5	17.9	43 06.1	14.0	158 09.4
10	315	44.0	298	32.4	51.7	5 11.1	17.4	58 08.3	14.0	173 12.0
11	330	46.4	313	32.0	+6 52.9	20 11.6	-19 17.0	73 10.6	-22 14.0	188 14.7
12	345	48.9	328	31.7	+6 54.2	35 12.1	-19 16.5	88 12.8	-22 14.0	203 17.3
13	0	51.4	343	31.4	55.5	50 12.6	16.0	103 15.0	14.0	218 19.9
14	15	53.8	358	31.1	56.7	65 13.1	15.5	118 17.3	14.1	233 22.6
15	30	56.3	13	30.7	58.0	80 13.6	15.1	133 19.5	14.1	248 25.2
16	45	58.7	28	30.4	+6 59.3	95 14.1	14.6	148 21.8	14.1	263 27.8
17	61	01.2	43	30.1	+7 00.5	110 14.6	-19 14.1	163 24.0	-22 14.1	278 30.4
18	76	03.7	58	29.7	+7 01.8	125 15.1	-19 13.7	178 26.2	-22 14.1	293 33.1
19	91	06.1	73	29.4	03.1	140 15.7	13.2	193 28.5	14.1	308 35.7
20	106	08.6	88	29.1	04.3	155 16.2	12.7	208 30.7	14.2	323 38.3
21	121	11.1	103	28.8	05.6	170 16.7	12.3	223 32.9	14.2	338 41.0
22	136	13.5	118	28.4	06.9	185 17.2	11.8	238 35.2	14.2	353 43.6
23	151	16.0	133	28.1	08.1	200 17.7	11.3	253 37.4	14.2	8 46.2
24	166	18.5	148	27.8	+7 09.4	215 18.2	-19 10.8	268 39.7	-22 14.2	23 48.8
Dif	—		-3 +13		+5 +5		+22 0		+26 +1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 19 ^d 3 PHE { 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:5						Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 10 ^m 6			SD: 14:8 PMG: 3 ^h 37 ^m R°: 46 ^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		
0	177	18.8	-4 43.9	307	28.7	-19 51.6		60 N	17 46	18 28	19 16	0 06 94		6 54 2		
1	192	19.0		322	01.6 ¹³⁹	-20 02.2 ¹⁰⁶		58	48	27	13	** ** *		7 10 8		
2	207	19.2		336	34.5 ¹³⁹	12.7 ¹⁰⁵		56	50	27	10	** ** *		23 13		
3	222	19.3		351	07.3 ¹³⁸	23.2 ¹⁰⁵		54	52	27	08	** ** *		34 17		
4	237	19.5		5	40.1 ¹³⁸	33.6 ¹⁰⁴		52	53	27	06	** ** *		44 21		
5	252	19.6	-4 39.1	20	12.7 ¹³⁶	-20 43.8 ¹⁰²		50	17 55	18 27	19 04	** ** *		7 53 23		
6	267	19.8	-4 38.1	34	45.3 ¹³⁶	-20 54.1 ¹⁰³		45	17 57	18 27	19 01	** ** *		8 13 28		
7	282	19.9		49	17.8 ¹³⁵	-21 04.2 ¹⁰¹		40	18 00	27	18 58	23 41 64		29 31		
8	297	20.1		63	50.2 ¹³⁴	14.2 ¹⁰⁰		35	02	27	57	26 60		42 34		
9	312	20.2		78	22.6 ¹³⁴	24.2 ¹⁰⁰		30	04	28	56	23 12 59		8 54 36		
10	327	20.4		92	54.8 ¹³²	34.0 ⁹⁸		20	08	30	55	22 49 56		9 14 41		
11	342	20.6	-4 33.2	107	27.0 ¹³²	-21 43.8 ⁹⁸		10 N	18 11	18 32	18 56	22 30 52		9 31 45		
12	357	20.7	-4 32.2	121	59.1 ¹³¹	-21 53.5 ⁹⁷		0	18 14	18 35	18 59	22 12 49		9 48 47		
13	12	20.9		136	31.2 ¹³¹	-22 03.1 ⁹⁶		10 S	17	38	19 03	21 54 46		10 04 51		
14	27	21.0		151	03.1 ¹²⁹	12.6 ⁹⁵		20	21	43	08	34 44		22 54		
15	42	21.2		165	35.0 ¹²⁹	22.1 ⁹⁵		30	25	49	17	21 12 40		42 58		
16	57	21.3		180	06.7 ¹²⁷	31.4 ⁹³		35	27	53	22	20 59 38		10 54 61		
17	72	21.5	-4 27.3	194	38.4 ¹²⁷	-22 40.6 ⁹²		40	18 30	18 57	19 29	20 45 35		11 08 64		
18	87	21.7	-4 26.4	209	10.1 ¹²⁷	-22 49.8 ⁹²		45	18 33	19 03	19 38	20 27 32		11 25 67		
19	102	21.8		223	41.6 ¹²⁵	-22 58.8 ⁹⁰		50	37	10	49	20 06 27		45 72		
20	117	22.0		238	13.0 ¹²⁴	-23 07.8 ⁹⁰		52	39	13	19 54	19 55 25		11 55 75		
21	132	22.1		252	44.4 ¹²⁴	16.6 ⁸⁸		54	41	17	20 00	44 21		12 06 78		
22	147	22.3		267	15.7 ¹²³	25.4 ⁸⁸		56	43	21	07	31 17		18 82		
23	162	22.5		281	46.9 ¹²²	34.1 ⁸⁷		58	45	26	15	19 15 13		33 87		
24	177	22.6	-4 20.5	296	18.0 ¹²¹	-23 42.6 ⁸⁵		60 S	18 48	19 31	20 24	18 57 5		12 50 96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 52 ^m 7		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +1.2 PMG: 9 ^h 38 ^m			Mag: -2.2 PMG: 6 ^h 04 ^m			Mag: +0.1 PMG: 22 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	166	18.5	148	27.8	+7 09.4	215	18.2	-19 10.8	268	39.7	-22 14.2	23 48.8	+16 11.3			
1	181	20.9	163	27.4		230	18.7	10.4	283	41.9	14.2	38 51.5	11.4			
2	196	23.4	178	27.1		245	19.2	09.9	298	44.1	14.3	53 54.1	11.5			
3	211	25.8	193	26.8		260	19.8	09.4	313	46.4	14.3	68 56.7	11.5			
4	226	28.3	208	26.4		275	20.3	08.9	328	48.6	14.3	83 59.4	11.6			
5	241	30.8	223	26.1	+7 15.7	290	20.8	-19 08.5	343	50.8	-22 14.3	99 02.0	+16 11.6			
6	256	33.2	238	25.8	+7 17.0	305	21.3	-19 08.0	358	53.1	-22 14.3	114 04.6	+16 11.7			
7	271	35.7	253	25.4		320	21.8	07.5	13 55.3		14.3	129 07.2	11.7			
8	286	38.2	268	25.1		335	22.3	07.0	28 57.6		14.4	144 09.9	11.8			
9	301	40.6	283	24.8		350	22.8	06.6	43 59.8		14.4	159 12.5	11.8			
10	316	43.1	298	24.5		5 23.3		06.1	59 02.1		14.4	174 15.1	11.9			
11	331	45.6	313	24.1	+7 23.3	20 23.9	-19 05.6		74 04.3	-22 14.4		189 17.7	+16 11.9			
12	346	48.0	328	23.8	+7 24.5	35 24.4	-19 05.1		89 06.5	-22 14.4		204 20.4	+16 12.0			
13	1	50.5	343	23.5		50 24.9	04.7		104 08.8		14.4	219 23.0	12.0			
14	16	53.0	358	23.1		65 25.4	04.2		119 11.0		14.5	234 25.6	12.1			
15	31	55.4	13 22.8		28.3	80 25.9	03.7		134 13.3		14.5	249 28.2	12.1			
16	46	57.9	28 22.5		29.6	95 26.4	03.2		149 15.5		14.5	264 30.9	12.2			
17	62	00.3	43 22.1	+7 30.8		110 26.9	-19 02.8		164 17.8	-22 14.5		279 33.5	+16 12.2			
18	77	02.8	58 21.8	+7 32.1		125 27.5	-19 02.3		179 20.0	-22 14.5		294 36.1	+16 12.3			
19	92	05.3	73 21.5		33.4	140 28.0	01.8		194 22.2		14.5	309 38.7	12.3			
20	107	07.7	88 21.1		34.6	155 28.5	01.3		209 24.5		14.5	324 41.4	12.4			
21	122	10.2	103 20.8		35.9	170 29.0	00.8		224 26.7		14.6	339 44.0	12.4			
22	137	12.7	118 20.5		37.1	185 29.5	-19 00.4		239 29.0		14.6	354 46.6	12.5			
23	152	15.1	133 20.1		38.4	200 30.0	-18 59.9		254 31.2		14.6	9 49.2	12.6			
24	167	17.6	148 19.8	+7 39.6		215 30.6	-18 59.4		269 33.5	-22 14.6		24 51.9	+16 12.6			
Dif	—		-3	+13		+5	+5		+22	0		+26	+1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 4			Edad: 20 ^d 3 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 SD: 14'9 PMG: 4 ^h 23 ^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	177	22.6	-4	20.5	296	18.0	-23	42.6	85	60 N	5 03	5 52	6 33	1 40	97
1	192	22.8		19.5	310	49.0 ¹²⁰		51.1	85	58	07	52	31	19	87
2	207	22.9		18.5	325	19.9 ¹¹⁹	-23	59.4	83	56	10	53	30	1 02	81
3	222	23.1		17.5	339	50.8 ¹¹⁹	-24	07.7	83	54	12	53	28	0 47	77
4	237	23.2		16.6	354	21.6 ¹¹⁸		15.8	81	52	14	53	27	34	74
5	252	23.4	-4	15.6	8	52.3 ¹¹⁷	-24	23.9	81	50	5 16	5 53	6 25	0 23	71
6	267	23.6	-4	14.6	23	22.9 ¹¹⁶	-24	31.8	79	45	5 19	5 53	6 23	0 00	67
7	282	23.7		13.6	37	53.4 ¹¹⁵		39.6	78	40	22	53	20	** ** *	9 00
8	297	23.9		12.7	52	23.8 ¹¹⁴		47.4	78	35	24	53	18	** ** *	16 42
9	312	24.0		11.7	66	54.1 ¹¹³	-24	55.0	76	30	25	52	16	** ** *	30 44
10	327	24.2		10.7	81	24.4 ¹¹³	-25	02.5	75	20	26	51	13	23 45	56
11	342	24.4	-4	09.7	95	54.5 ¹¹¹	-25	09.9	74	10 N	5 25	5 49	6 10	23 22	55
12	357	24.5	-4	08.7	110	24.6 ¹¹¹	-25	17.2	73	0	5 22	5 46	6 07	23 01	53
13	12	24.7		07.8	124	54.6 ¹¹⁰		24.3	71	10 S	18	43	04	22 40	52
14	27	24.8		06.8	139	24.5 ¹⁰⁹		31.4	71	20	13	39	6 01	22 18	49
15	42	25.0		05.8	153	54.4 ¹⁰⁹		38.3	69	30	5 05	33	5 57	21 52	47
16	57	25.2		04.8	168	24.1 ¹⁰⁷		45.1	68	35	4 59	29	54	37	46
17	72	25.3	-4	03.8	182	53.7 ¹⁰⁶	-25	51.8	67	40	4 52	5 24	5 52	21 20	43
18	87	25.5	-4	02.9	197	23.3 ¹⁰⁶	-25	58.4	66	45	4 44	5 19	5 49	20 59	41
19	102	25.7		01.9	211	52.8 ¹⁰⁵	-26	04.9	65	50	33	12	45	33	37
20	117	25.8	-4	00.9	226	22.2 ¹⁰⁴		11.2	63	52	28	09	43	20	35
21	132	26.0	-3	59.9	240	51.5 ¹⁰³		17.5	63	54	22	05	41	20 05	33
22	147	26.1		58.9	255	20.7 ¹⁰²		23.6	61	56	15	5 01	39	19 48	30
23	162	26.3		58.0	269	49.9 ¹⁰²		29.5	59	58	4 07	4 57	37	28	24
24	177	26.5	-3	57.0	284	18.9 ¹⁰⁰	-26	35.4	59	60 S	3 58	4 51	5 34	19 02	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 48 ^m 7		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: +1.2 PMG: 9 ^h 38 ^m		Mag: -2.2 PMG: 6 ^h 01 ^m		Mag: +0.1 PMG: 22 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	17.6	148	19.8	215	30.6	269	33.5	205	51.9
1	182	20.1	163	19.5	230	31.1	284	35.7	39	54.5
2	197	22.5	178	19.1	245	31.6	299	38.0	54	57.1
3	212	25.0	193	18.8	260	32.1	314	40.2	69	59.7
4	227	27.5	208	18.5	275	32.6	329	42.4	85	02.4
5	242	29.9	223	18.1	290	33.1	344	44.7	100	05.0
6	257	32.4	238	17.8	305	33.6	359	46.9	115	07.6
7	272	34.8	253	17.5	320	34.2	14	49.2	130	10.2
8	287	37.3	268	17.1	335	34.7	29	51.4	145	12.9
9	302	39.8	283	16.8	350	35.2	44	53.7	160	15.5
10	317	42.2	298	16.4	5	35.7	59	55.9	175	18.1
11	332	44.7	313	16.1	20	36.2	74	58.2	190	20.7
12	347	47.2	328	15.8	35	36.8	90	00.4	205	23.4
13	2	49.6	343	15.4	50	37.3	105	02.7	220	26.0
14	17	52.1	358	15.1	65	37.8	120	04.9	235	28.6
15	32	54.6	13	14.8	80	38.3	135	07.2	250	31.2
16	47	57.0	28	14.4	95	38.8	150	09.4	265	33.8
17	62	59.5	43	14.1	110	39.3	165	11.7	280	36.5
18	78	01.9	58	13.8	125	39.9	180	13.9	295	39.1
19	93	04.4	73	13.4	140	40.4	195	16.2	310	41.7
20	108	06.9	88	13.1	155	40.9	210	18.4	325	44.3
21	123	09.3	103	12.7	170	41.4	225	20.7	340	47.0
22	138	11.8	118	12.4	185	41.9	240	22.9	355	49.6
23	153	14.3	133	12.1	200	42.5	255	25.2	10	52.2
24	168	16.7	148	11.7	215	43.0	270	27.4	25	54.8
Dif	—		-3	+13	+5	+5	+22	0	+26	+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 21 ^d 3 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5											
	PMG: 12 ^h 10 ^m 1		SD: 15 ^h 0 PMG: 5 ^h 14 ^m R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	177	26.5	-3	57.0	284	18.9	-26 35.4	60 N	17 51	18 33	19 21	3 17 89	7 03 23	
1	192	26.6		56.0	298	47.9	41.1	58	53	32	18	2 46 79	35 33	
2	207	26.8		55.0	313	16.8	99 46.7	56	54	31	15	23 73	7 58 38	
3	222	26.9		54.0	327	45.6	98 52.2	54	56	31	12	2 04 70	8 18 40	
4	237	27.1		53.1	342	14.4	98 -26 57.5	52	57	30	10	1 48 68	34 43	
5	252	27.3	-3	52.1	356	43.0	96 -27 02.7	50	17 58	18 30	19 08	1 34 67	8 48 44	
6	267	27.4	-3	51.1	11	11.6	96 -27 07.8	45	18 00	18 29	19 03	1 07 63	9 17 46	
7	282	27.6		50.1	25	40.1	95 12.8	40	02	29	19 01	0 45 61	39 48	
8	297	27.8		49.1	40	08.5	94 17.6	35	04	29	18 58	26 60	9 58 49	
9	312	27.9		48.1	54	36.8	93 22.3	30	05	29	57	0 11 58	10 14 50	
10	327	28.1		47.2	69	05.1	93 26.8	20	08	30	56	** ** *	10 41 52	
11	342	28.2	-3	46.2	83	33.3	92 -27 31.2	10 N	18 11	18 32	18 56	** ** *	11 04 54	
12	357	28.4	-3	45.2	98	01.4	91 -27 35.5	0	18 13	18 34	18 58	23 54 56	11 26 55	
13	12	28.6		44.2	112	29.4	90 39.7	10 S	16	37	19 02	32 55	11 48 55	
14	27	28.7		43.2	126	57.3	89 43.7	20	19	41	07	23 07 55	12 12 56	
15	42	28.9		42.3	141	25.2	89 47.5	30	22	46	14	22 39 55	39 58	
16	57	29.1		41.3	155	53.0	88 51.2	35	24	50	20	23 54	12 55 59	
17	72	29.2	-3	40.3	170	20.8	88 -27 54.8	40	18 27	18 54	19 26	22 03 54	13 14 59	
18	87	29.4	-3	39.3	184	48.4	86 -27 58.3	45	18 29	18 59	19 34	21 40 53	13 37 60	
19	102	29.6		38.3	199	16.0	86 -28 01.6	50	33	19 05	44	21 10 52	14 07 61	
20	117	29.7		37.3	213	43.5	85 04.7	52	34	08	49	20 55 52	21 63	
21	132	29.9		36.4	228	11.0	85 07.7	54	36	12	19 55	38 51	38 64	
22	147	30.1		35.4	242	38.4	84 10.6	56	38	15	20 01	20 18 49	14 58 66	
23	162	30.2		34.4	257	05.7	83 13.3	58	40	20	09	19 52 47	15 24 68	
24	177	30.4	-3	33.4	271	32.9	82 -28 15.9	60 S	18 42	19 25	20 17	19 17 42	15 59 73	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 44 ^m 8		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 37 ^m		Mag: -2.2 PMG: 5 ^h 57 ^m		Mag: +0.1 PMG: 22 ^h 12 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	168	16.7	148	11.7	+8 09.7	215 43.0	-18 47.8	270 27.4	-22 15.0	25 54.8	+16 13.8
1	183	19.2	163	11.4	11.0	230 43.5	47.3	285 29.7	15.0	40 57.4	13.9
2	198	21.7	178	11.1	12.2	245 44.0	46.8	300 32.0	15.0	56 00.1	13.9
3	213	24.1	193	10.7	13.5	260 44.5	46.3	315 34.2	15.0	71 02.7	14.0
4	228	26.6	208	10.4	14.7	275 45.0	45.8	330 36.5	15.0	86 05.3	14.0
5	243	29.1	223	10.0	+8 16.0	290 45.6	-18 45.3	345 38.7	-22 15.0	101 07.9	+16 14.1
6	258	31.5	238	09.7	+8 17.2	305 46.1	-18 44.8	0 41.0	-22 15.1	116 10.6	+16 14.1
7	273	34.0	253	09.4	18.5	320 46.6	44.3	15 43.2	15.1	131 13.2	14.2
8	288	36.4	268	09.0	19.7	335 47.1	43.8	30 45.5	15.1	146 15.8	14.2
9	303	38.9	283	08.7	21.0	350 47.6	43.4	45 47.7	15.1	161 18.4	14.3
10	318	41.4	298	08.3	22.2	5 48.2	42.9	60 50.0	15.1	176 21.0	14.3
11	333	43.8	313	08.0	+8 23.5	20 48.7	-18 42.4	75 52.3	-22 15.1	191 23.7	+16 14.4
12	348	46.3	328	07.7	+8 24.7	35 49.2	-18 41.9	90 54.5	-22 15.1	206 26.3	+16 14.4
13	3	48.8	343	07.3	26.0	50 49.7	41.4	105 56.8	15.2	221 28.9	14.5
14	18	51.2	358	07.0	27.2	65 50.3	40.9	120 59.0	15.2	236 31.5	14.5
15	33	53.7	13	06.6	28.5	80 50.8	40.4	136 01.3	15.2	251 34.1	14.6
16	48	56.2	28	06.3	29.7	95 51.3	39.9	151 03.5	15.2	266 36.8	14.6
17	63	58.6	43	06.0	+8 31.0	110 51.8	-18 39.4	166 05.8	-22 15.2	281 39.4	+16 14.7
18	79	01.1	58	05.6	+8 32.2	125 52.3	-18 38.9	181 08.1	-22 15.2	296 42.0	+16 14.7
19	94	03.6	73	05.3	33.4	140 52.9	38.4	196 10.3	15.2	311 44.6	14.8
20	109	06.0	88	04.9	34.7	155 53.4	37.9	211 12.6	15.3	326 47.2	14.8
21	124	08.5	103	04.6	35.9	170 53.9	37.4	226 14.8	15.3	341 49.9	14.9
22	139	10.9	118	04.3	37.2	185 54.4	36.9	241 17.1	15.3	356 52.5	14.9
23	154	13.4	133	03.9	38.4	200 55.0	36.4	256 19.4	15.3	11 55.1	15.0
24	169	15.9	148	03.6	+8 39.7	215 55.5	-18 35.9	271 21.6	-22 15.3	26 57.7	+16 15.0
Dif	—		-3	+12		+5	+5	+23	0	+26	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 22 ^d 3	PHE {	4 ^h : 55'8 12 ^h : 56'0 20 ^h : 56'3										
	PMG: 12 ^h 09 ^m 8							SD: 15'2			PMG: 6 ^h 07 ^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	177	30.4	-3	271	32.9	-28	15.9	60 N	4	57	5	46	6	27	4	46
1	192	30.5		286	00.1		18.3	58	5	01	47	26	4	05	55	8
2	207	30.7		300	27.2		20.6	56		04	48	24	3	36	56	36
3	222	30.9		314	54.3		22.7	54		07	48	23	3	14	57	8
4	237	31.0		329	21.3		24.7	52		09	49	22	2	56	57	9
5	252	31.2	-3	343	48.2	-28	26.5	50	5	12	5	49	6	21	2	41
6	267	31.4	-3	358	15.1	-28	28.2	45	5	16	5	50	6	19	2	10
7	282	31.5		12	41.9		29.7	40	19		50	17	1	46	56	
8	297	31.7		27	08.7		31.0	35	21		50	16		26	57	10
9	312	31.9		41	35.4		32.2	30	22		50	14	1	09	57	11
10	327	32.0		56	02.1		33.3	20	24		49	11	0	41	56	33
11	342	32.2	-3	70	28.7	-28	34.2	10 N	5	24	5	48	6	09	0	17
12	357	32.4	-3	84	55.3	-28	34.9	0	5	22	5	46	6	07	**	**
13	12	32.5		99	21.8		35.5	10 S	19		43	04	**	**	**	12
14	27	32.7		113	48.2		35.9	20	13		39	6	01	**	**	12
15	42	32.9		128	14.6		36.2	30	06		34	5	58	23	34	61
16	57	33.0		142	41.0		36.3	35	5	01	31	56	23	17	62	13
17	72	33.2	-3	157	07.3	-28	36.3	40	4	55	5	27	5	54	22	57
18	87	33.4	-3	171	33.6	-28	36.1	45	4	47	5	22	5	51	22	33
19	102	33.5		185	59.9		35.7	50	36		16	48	22	02	67	15
20	117	33.7		200	26.1		35.2	52	32		13	47	21	47	68	24
21	132	33.9		214	52.2		34.5	54	26		09	45		29	70	15
22	147	34.0		229	18.4		33.6	56	20		06	43	21	07	72	16
23	162	34.2		243	44.5		32.6	58	12	5	01	41	20	39	76	16
24	177	34.4	-3	258	10.5	-28	31.4	60 S	4	04	4	57	5	39	19	59
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 40 ^m 9		Mag: -3.9 PMG: 14 ^h 08 ^m			Mag: +1.2 PMG: 9 ^h 36 ^m			Mag: -2.2 PMG: 5 ^h 54 ^m			Mag: +0.1 PMG: 22 ^h 08 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	169	15.9	148	03.6	+8	39.7	215	55.5	-18	35.9	271	21.6	-22	15.3	26	57.7
1	184	18.3	163	03.2		40.9	230	56.0		35.4	286	23.9		15.3	42	00.3
2	199	20.8	178	02.9		42.2	245	56.5		34.9	301	26.1		15.3	57	03.0
3	214	23.3	193	02.5		43.4	260	57.0		34.4	316	28.4		15.4	72	05.6
4	229	25.7	208	02.2		44.6	275	57.6		33.9	331	30.7		15.4	87	08.2
5	244	28.2	223	01.9	+8	45.9	290	58.1	-18	33.5	346	32.9	-22	15.4	102	10.8
6	259	30.7	238	01.5	+8	47.1	305	58.6	-18	33.0	1	35.2	-22	15.4	117	13.4
7	274	33.1	253	01.2		48.4	320	59.1		32.5	16	37.4		15.4	132	16.0
8	289	35.6	268	00.8		49.6	335	59.7		32.0	31	39.7		15.4	147	18.7
9	304	38.1	283	00.5		50.8	351	00.2		31.5	46	42.0		15.4	162	21.3
10	319	40.5	298	00.1		52.1	6	00.7		31.0	61	44.2		15.5	177	23.9
11	334	43.0	312	59.8	+8	53.3	21	01.2	-18	30.5	76	46.5	-22	15.5	192	26.5
12	349	45.4	327	59.4	+8	54.6	36	01.8	-18	30.0	91	48.8	-22	15.5	207	29.1
13	4	47.9	342	59.1		55.8	51	02.3		29.5	106	51.0		15.5	222	31.7
14	19	50.4	357	58.8		57.0	66	02.8		29.0	121	53.3		15.5	237	34.4
15	34	52.8	12	58.4		58.3	81	03.3		28.5	136	55.6		15.5	252	37.0
16	49	55.3	27	58.1	+8	59.5	96	03.9		28.0	151	57.8		15.5	267	39.6
17	64	57.8	42	57.7	+9	00.7	111	04.4	-18	27.4	167	00.1	-22	15.6	282	42.2
18	80	00.2	57	57.4	+9	02.0	126	04.9	-18	26.9	182	02.4	-22	15.6	297	44.8
19	95	02.7	72	57.0		03.2	141	05.4		26.4	197	04.6		15.6	312	47.5
20	110	05.2	87	56.7		04.5	156	06.0		25.9	212	06.9		15.6	327	50.1
21	125	07.6	102	56.3		05.7	171	06.5		25.4	227	09.2		15.6	342	52.7
22	140	10.1	117	56.0		06.9	186	07.0		24.9	242	11.4		15.6	357	55.3
23	155	12.5	132	55.6		08.2	201	07.5		24.4	257	13.7		15.6	12	57.9
24	170	15.0	147	55.3	+9	09.4	216	08.1	-18	23.9	272	16.0	-22	15.7	28	00.5
Dif	—		-3	+12		+5	+5		+23		0	+26		0		

UT	SOL			 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 23 ^d 3	PHE $\left\{ \begin{array}{l} 4^h: 56/6 \\ 12^h: 56/9 \\ 20^h: 57/2 \end{array} \right.$	SD: 15 ^h 4	PMG: 7 ^h 03 ^m			R°: 57 ^m						
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	34.4	-3 09.8	258	10.5	-28 31.4	13	60 N	17 56	18 38	19 27	5 40	20	8 29	100	
1	192	34.6	08.8	272	36.6	71 30.1	15	58	57	37	23	5 00	31	9 09	88	
2	207	34.7	07.8	287	02.6	70 28.6	17	56	58	35	19	4 32	37	37	82	
3	222	34.9	06.8	301	28.5	69 26.9	17	54	17 59	35	16	4 11	39	9 59	78	
4	237	35.1	05.9	315	54.5	70 25.0	19	52	18 00	34	13	3 53	42	10 16	76	
5	252	35.2	-3 04.9	330	20.4	69 -28 23.0	20	50	18 01	18 33	19 11	3 37	44	10 32	73	
6	267	35.4	-3 03.9	344	46.3	69 -28 20.9	21	45	18 03	18 32	19 06	3 06	48	11 02	70	
7	282	35.6	02.9	359	12.2	69 18.5	24	40	04	31	03	2 42	50	26	68	
8	297	35.7	01.9	13	38.0	68 16.0	25	35	06	31	19 00	23	50	11 46	65	
9	312	35.9	-3 00.9	28	03.9	69 13.4	26	30	07	31	18 58	2 06	52	12 02	64	
10	327	36.1	-3 00.0	42	29.7	68 10.6	28	20	09	31	56	1 37	54	30	62	
11	342	36.2	-2 59.0	56	55.5	68 -28 07.6	30	10 N	18 11	18 32	18 56	1 13	55	12 55	59	
12	357	36.4	-2 58.0	71	21.3	68 -28 04.4	32	0	18 13	18 34	18 58	0 50	57	13 17	57	
13	12	36.6	57.0	85	47.0	67 -28 01.1	33	10 S	15	36	19 00	27	58	13 39	55	
14	27	36.7	56.0	100	12.8	68 -27 57.6	35	20	17	39	05	0 02	60	14 03	53	
15	42	36.9	55.0	114	38.6	68 53.9	37	30	20	44	12	***	***	***	31	49
16	57	37.1	54.0	129	04.3	67 50.1	38	35	22	47	17	***	***	***	14	47
17	72	37.3	-2 53.1	143	30.1	68 -27 46.1	40	40	18 23	18 51	19 23	***	***	***	15	06
18	87	37.4	-2 52.1	157	55.8	67 -27 41.9	42	45	18 26	18 55	19 30	23	38	75	15	29
19	102	37.6	51.1	172	21.5	67 37.6	43	50	28	19 01	40	23	09	80	15	59
20	117	37.8	50.1	186	47.3	68 33.1	45	52	30	04	44	22	55	82	16	13
21	132	37.9	49.1	201	13.0	67 28.4	47	54	31	07	49	39	85	30	32	
22	147	38.1	48.1	215	38.7	67 23.5	49	56	32	10	19 55	22	19	90	16	49
23	162	38.3	47.1	230	04.5	68 18.5	50	58	34	14	20 02	21	55	96	17	14
24	177	38.4	-2 46.2	244	30.2	67 -27 13.4	51	60 S	18 36	19 18	20 10	21 22	107	17	47	12

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG 12 ^h 36 ^m 9		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: +1.2 PMG: 9 ^h 35 ^m		Mag: -2.2 PMG: 5 ^h 50 ^m			Mag: +0.1 PMG: 22 ^h 04 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	170	15.0	147	55.3	+9 09.4	216 08.1	-18 23.9	272 16.0	-22 15.7	28 00.5	+16 16.2	
1	185	17.5	162	54.9	10.6	231 08.6	23.4	287 18.2	15.7	43 03.1	16.3	
2	200	19.9	177	54.6	11.9	246 09.1	22.9	302 20.5	15.7	58 05.8	16.3	
3	215	22.4	192	54.3	13.1	261 09.6	22.4	317 22.8	15.7	73 08.4	16.4	
4	230	24.9	207	53.9	14.3	276 10.2	21.9	332 25.0	15.7	88 11.0	16.4	
5	245	27.3	222	53.6	+9 15.6	291 10.7	-18 21.4	347 27.3	-22 15.7	103 13.6	+16 16.5	
6	260	29.8	237	53.2	+9 16.8	306 11.2	-18 20.9	2 29.6	-22 15.7	118 16.2	+16 16.5	
7	275	32.3	252	52.9	18.0	321 11.8	20.4	17 31.8	15.7	133 18.8	16.6	
8	290	34.7	267	52.5	19.3	336 12.3	19.9	32 34.1	15.8	148 21.5	16.6	
9	305	37.2	282	52.2	20.5	351 12.8	19.4	47 36.4	15.8	163 24.1	16.7	
10	320	39.7	297	51.8	21.7	6 13.3	18.9	62 38.7	15.8	178 26.7	16.7	
11	335	42.1	312	51.5	+9 23.0	21 13.9	-18 18.4	77 40.9	-22 15.8	193 29.3	+16 16.7	
12	350	44.6	327	51.1	+9 24.2	36 14.4	-18 17.8	92 43.2	-22 15.8	208 31.9	+16 16.8	
13	5 47.0	342 50.8	25.4	51 14.9	17.3	107 45.5	15.8	223 34.5	16.8			
14	20 49.5	357 50.4	26.6	66 15.4	16.8	122 47.7	15.8	238 37.1	16.9			
15	35 52.0	12 50.1	27.9	81 16.0	16.3	137 50.0	15.9	253 39.8	16.9			
16	50 54.4	27 49.7	29.1	96 16.5	15.8	152 52.3	15.9	268 42.4	17.0			
17	65 56.9	42 49.4	+9 30.3	111 17.0	-18 15.3	167 54.6	-22 15.9	283 45.0	+16 17.0			
18	80 59.4	57 49.0	+9 31.6	126 17.6	-18 14.8	182 56.8	-22 15.9	298 47.6	+16 17.1			
19	96 01.8	72 48.7	32.8	141 18.1	14.3	197 59.1	15.9	313 50.2	17.1			
20	111 04.3	87 48.3	34.0	156 18.6	13.8	213 01.4	15.9	328 52.8	17.2			
21	126 06.8	102 48.0	35.2	171 19.1	13.3	228 03.7	15.9	343 55.4	17.2			
22	141 09.2	117 47.6	36.5	186 19.7	12.7	243 05.9	15.9	358 58.1	17.3			
23	156 11.7	132 47.3	37.7	201 20.2	12.2	258 08.2	16.0	14 00.7	17.3			
24	171 14.2	147 46.9	+9 38.9	216 20.7	-18 11.7	273 10.5	-22 16.0	29 03.3	+16 17.4			
Dif	—	-3	+12	+5	+5	+23	0	+26	0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 09 ^m 3			Edad: 24 ^d 3	PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'1 R°: 56 ^m												
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	177	38.4	-2	244	30.2	-27	13.4	60 N	4 51	5 40	6 21	6 00	6	10 09	111		
1	192	38.6		258	56.0		54	58	55	41	20	5 31	15	37	102		
2	207	38.8		273	21.7	-27	02.5	55	56	42	19	5 09	21	10 59	95		
3	222	39.0		287	47.5	-26	56.9	56	54	43	18	4 50	27	11 17	90		
4	237	39.1		302	13.3		59	52	05	44	18	35	30	32	87		
5	252	39.3	-2	316	39.0	-26	45.0	60	50	5 07	5 45	6 17	4 21	33	11 45	84	
6	267	39.5	-2	331	04.8	-26	38.8	62	45	5 12	5 46	6 15	3 54	37	12 12	78	
7	282	39.6		345	30.6		63	40	16	47	14	32	41	34	73		
8	297	39.8		359	56.5		65	35	18	48	13	3 13	45	12 51	70		
9	312	40.0		14	22.3		67	30	20	48	12	2 58	46	13 06	68		
10	327	40.2		28	48.2		68	20	22	48	10	31	51	32	63		
11	342	40.3	-2	43	14.1	-26	05.5	70	10 N	5 23	5 47	6 08	2 08	54	13 54	59	
12	357	40.5	-2	57	40.0	-25	58.4	71	0	5 21	5 45	6 06	1 47	56	14 14	56	
13	12	40.7		72	05.9		74	10 S	19	43	04	25	60	34	52		
14	27	40.8		86	31.9		74	20	14	40	6 02	1 02	62	14 56	48		
15	42	41.0		100	57.8		77	30	07	35	5 59	0 35	66	15 20	44		
16	57	41.2		115	23.8		78	35	5 03	32	58	19	69	35	41		
17	72	41.4	-2	129	49.9	-25	20.1	80	40	4 57	5 29	5 56	0 01	71	15 52	37	
18	87	41.5	-2	144	15.9	-25	12.0	81	45	4 50	5 24	5 54	** ** *	**	16 12	33	
19	102	41.7		158	42.0	-25	03.7	83	50	40	19	51	** ** *	**	36	28	
20	117	41.9		173	08.1	-24	55.3	84	52	35	16	50	** ** *	**	16 48	26	
21	132	42.1		187	34.2		87	54	30	13	49	** ** *	**	17 02	22		
22	147	42.2		202	00.4		87	56	24	10	48	23	49	97	18	17	
23	162	42.4		216	26.6		90	58	18	06	46	31	103	36	12		
24	177	42.6	-2	230	52.9	-24	19.9	90	60 S	4 10	5 02	5 44	23 09	111	17 59	4	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 33 ^m 0		Mag: -3.9 PMG: 14 ^h 09 ^m			Mag: +1.2 PMG: 9 ^h 34 ^m			Mag: -2.2 PMG: 5 ^h 46 ^m			Mag: +0.1 PMG: 22 ^h 00 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	171	14.2	147	46.9	+9	38.9	216	20.7	-18	11.7	273	10.5	-22	16.0			
1	186	16.6	162	46.5		40.1	231	21.3		11.2	288	12.8		16.0			
2	201	19.1	177	46.2		41.4	246	21.8		10.7	303	15.0		16.0			
3	216	21.5	192	45.8		42.6	261	22.3		10.2	318	17.3		16.0			
4	231	24.0	207	45.5		43.8	276	22.9		09.7	333	19.6		16.0			
5	246	26.5	222	45.1	+9	45.0	291	23.4	-18	09.2	348	21.9	-22	16.0			
6	261	28.9	237	44.8	+9	46.3	306	23.9	-18	08.6	3	24.1	-22	16.0			
7	276	31.4	252	44.4		47.5	321	24.5		08.1	18	26.4		16.1			
8	291	33.9	267	44.1		48.7	336	25.0		07.6	33	28.7		16.1			
9	306	36.3	282	43.7		49.9	351	25.5		07.1	48	31.0		16.1			
10	321	38.8	297	43.4		51.2	6	26.0		06.6	63	33.3		16.1			
11	336	41.3	312	43.0	+9	52.4	21	26.6	-18	06.1	78	35.5	-22	16.1			
12	351	43.7	327	42.7	+9	53.6	36	27.1	-18	05.6	93	37.8	-22	16.1			
13	6	46.2	342	42.3		54.8	51	27.6		05.0	108	40.1		16.1			
14	21	48.7	357	41.9		56.0	66	28.2		04.5	123	42.4		16.1			
15	36	51.1	12	41.6		57.3	81	28.7		04.0	138	44.7		16.2			
16	51	53.6	27	41.2		58.5	96	29.2		03.5	153	46.9		16.2			
17	66	56.0	42	40.9	+9	59.7	111	29.8	-18	03.0	168	49.2	-22	16.2			
18	81	58.5	57	40.5	+10	00.9	126	30.3	-18	02.5	183	51.5	-22	16.2			
19	97	01.0	72	40.2		02.1	141	30.8		01.9	198	53.8		16.2			
20	112	03.4	87	39.8		03.4	156	31.4		01.4	213	56.1		16.2			
21	127	05.9	102	39.5		04.6	171	31.9		00.9	228	58.3		16.2			
22	142	08.4	117	39.1		05.8	186	32.4	-18	00.4	244	00.6		16.2			
23	157	10.8	132	38.7		07.0	201	33.0	-17	59.9	259	02.9		16.3			
24	172	13.3	147	38.4	+10	08.2	216	33.5	-17	59.3	274	05.2	-22	16.3			
Dif	—		-4		+12		+5		+5		+23		0		+26		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 25 ^d 3 PHE { 4 ^h : 58 ^m /4 12 ^h : 58 ^m /8 20 ^h : 59 ^m /1										
	PMG: 12 ^h 09 ^m 0			SD: 15 ^h 9 PMG: 8 ^h 56 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	42.6	-2 22.5	230	52.9	-24 19.9	72	60 N	18 01	18 43	19 32	6 06 1	12 00 112	
1	192	42.7	21.5	245	19.1	10.6	93	58	02	41	27	5 46 9	19 104	
2	207	42.9	20.5	259	45.5	74	94	56	03	40	23	30 14	34 99	
3	222	43.1	19.5	274	11.8	73	95	54	03	38	20	17 17	47 95	
4	237	43.3	18.5	288	38.2	74	97	52	04	37	17	5 05 21	12 59 91	
5	252	43.4	-2 17.5	303	04.6	74	99	50	18 04	18 36	19 14	4 54 24	13 09 88	
6	267	43.6	-2 16.6	317	31.1	75	100	45	18 05	18 35	19 09	4 31 31	13 30 82	
7	282	43.8	15.6	331	57.6	75	102	40	06	33	05	4 13 35	13 47 77	
8	297	44.0	14.6	346	24.1	75	103	35	07	32	02	3 58 38	14 01 73	
9	312	44.1	13.6	0	50.7	76	105	30	08	32	19 00	44 42	14 69	
10	327	44.3	12.6	15	17.3	76	106	20	09	31	18 57	22 46	35 63	
11	342	44.5	-2 11.6	29	44.0	77	107	10 N	18 11	18 32	18 56	3 02 51	14 53 58	
12	357	44.7	-2 10.6	44	10.7	77	109	0	18 12	18 33	18 57	2 43 55	15 10 54	
13	12	44.8	09.6	58	37.4	77	111	10 S	14	35	18 59	25 59	26 50	
14	27	45.0	08.7	73	04.2	78	112	20	16	38	19 03	2 04 64	15 44 45	
15	42	45.2	07.7	87	31.0	78	113	30	18	42	09	1 41 69	16 04 39	
16	57	45.4	06.7	101	57.9	79	115	35	19	44	14	28 71	16 36	
17	72	45.5	-2 05.7	116	24.8	79	117	40	18 20	18 47	19 19	1 12 75	16 29 32	
18	87	45.7	-2 04.7	130	51.8	80	117	45	18 22	18 51	19 26	0 53 80	16 45 28	
19	102	45.9	03.7	145	18.8	80	119	50	24	56	35	29 86	17 04 22	
20	117	46.1	02.7	159	45.9	81	121	52	25	18 59	39	17 89	14 18	
21	132	46.2	01.7	174	13.0	81	122	54	26	19 02	44	0 04 93	24 15	
22	147	46.4	-2 00.8	188	40.1	81	123	56	27	05	50	** ** *	35 11	
23	162	46.6	-1 59.8	203	07.3	82	125	58	29	08	19 56	** ** *	17 48 7	
24	177	46.8	-1 58.8	217	34.5	82	125	60 S	18 30	19 12	20 03	** ** *	18 03 1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 29 ^m 1		Mag: -3.9 PMG: 14 ^h 10 ^m			Mag: +1.2 PMG: 9 ^h 33 ^m			Mag: -2.2 PMG: 5 ^h 43 ^m			Mag: +0.1 PMG: 21 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	172	13.3	147 38.4	+10 08.2	216 33.5	-17 59.3	274 05.2	-22 16.3	30 06.0	+16 18.5				
1	187	15.8	162 38.0	09.4	231 34.0	58.8	289 07.5	16.3	45 08.6	18.5				
2	202	18.2	177 37.7	10.7	246 34.6	58.3	304 09.8	16.3	60 11.2	18.6				
3	217	20.7	192 37.3	11.9	261 35.1	57.8	319 12.1	16.3	75 13.8	18.6				
4	232	23.2	207 36.9	13.1	276 35.6	57.3	334 14.3	16.3	90 16.4	18.7				
5	247	25.6	222 36.6	+10 14.3	291 36.2	-17 56.7	349 16.6	-22 16.3	105 19.0	+16 18.7				
6	262	28.1	237 36.2	+10 15.5	306 36.7	-17 56.2	4 18.9	-22 16.3	120 21.6	+16 18.8				
7	277	30.5	252 35.9	16.7	321 37.2	55.7	19 21.2	16.3	135 24.2	18.8				
8	292	33.0	267 35.5	17.9	336 37.8	55.2	34 23.5	16.4	150 26.8	18.9				
9	307	35.5	282 35.1	19.2	351 38.3	54.6	49 25.8	16.4	165 29.4	18.9				
10	322	37.9	297 34.8	20.4	6 38.8	54.1	64 28.1	16.4	180 32.1	19.0				
11	337	40.4	312 34.4	+10 21.6	21 39.4	-17 53.6	79 30.3	-22 16.4	195 34.7	+16 19.0				
12	352	42.9	327 34.1	+10 22.8	36 39.9	-17 53.1	94 32.6	-22 16.4	210 37.3	+16 19.1				
13	7	45.3	342 33.7	24.0	51 40.5	52.6	109 34.9	16.4	225 39.9	19.1				
14	22	47.8	357 33.3	25.2	66 41.0	52.0	124 37.2	16.4	240 42.5	19.1				
15	37	50.3	12 33.0	26.4	81 41.5	51.5	139 39.5	16.4	255 45.1	19.2				
16	52	52.7	27 32.6	27.6	96 42.1	51.0	154 41.8	16.5	270 47.7	19.2				
17	67	55.2	42 32.3	+10 28.9	111 42.6	-17 50.5	169 44.1	-22 16.5	285 50.3	+16 19.3				
18	82	57.6	57 31.9	+10 30.1	126 43.1	-17 49.9	184 46.4	-22 16.5	300 52.9	+16 19.3				
19	98	00.1	72 31.5	31.3	141 43.7	49.4	199 48.6	16.5	315 55.5	19.4				
20	113	02.6	87 31.2	32.5	156 44.2	48.9	214 50.9	16.5	330 58.1	19.4				
21	128	05.0	102 30.8	33.7	171 44.7	48.4	229 53.2	16.5	346 00.7	19.5				
22	143	07.5	117 30.4	34.9	186 45.3	47.8	244 55.5	16.5	1 03.3	19.5				
23	158	10.0	132 30.1	36.1	201 45.8	47.3	259 57.8	16.5	16 06.0	19.6				
24	173	12.4	147 29.7	+10 37.3	216 46.4	-17 46.8	275 00.1	-22 16.5	31 08.6	+16 19.6				
Dif	—		-4	+12	+5	+5	+23	0	+26	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 7			Edad: 26 ^d 3 PHE { SD: 16 ^h 1 PMG: 9 ^h 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m			
0	177	46.8	-1	58.8	217	34.5	-19	56.9	60 N	4 45	5 34	6 15	6 07	0	13 52 109			
1	192	46.9		57.8	232	01.8	83	44.1	58	49	36	15	5 55	5	14 03 104			
2	207	47.1		56.8	246	29.2	84	31.3	56	53	37	14	44	9	13 99			
3	222	47.3		55.8	260	56.5	83	18.3	54	4 57	38	13	34	13	22 95			
4	237	47.5		54.8	275	23.9	84	19	52	5 00	39	13	26	16	30 92			
5	252	47.6	-1	53.8	289	51.4	85	18	50	5 03	5 40	6 13	5 18	19	14 37 89			
6	267	47.8	-1	52.8	304	18.9	85	18	45	5 08	5 42	6 12	5 02	24	14 52 82			
7	282	48.0		51.9	318	46.5	86	25.0	40	12	44	11	4 48	30	15 04 77			
8	297	48.2		50.9	333	14.1	86	18	35	15	45	10	36	34	14 73			
9	312	48.3		49.9	347	41.7	86	17	30	18	45	09	26	37	23 69			
10	327	48.5		48.9	2	09.4	87	43.8	20	20	46	08	4 08	43	38 63			
11	342	48.7	-1	47.9	16	37.1	87	17	10 N	5 21	5 46	6 07	3 53	48	15 51 58			
12	357	48.9	-1	46.9	31	04.9	88	17	0	5 21	5 45	6 05	3 38	53	16 04 52			
13	12	49.1		45.9	45	32.8	89	17	10 S	19	43	04	24	58	16 47			
14	27	49.2		44.9	60	00.6	88	16	20	15	40	03	3 08	63	29 42			
15	42	49.4		44.0	74	28.5	89	32.7	30	09	37	6 01	2 50	69	43 36			
16	57	49.6		43.0	88	56.5	90	18.1	35	5 04	34	5 59	39	73	16 52 32			
17	72	49.8	-1	42.0	103	24.5	90	16	40	4 59	5 31	5 58	2 27	77	17 01 28			
18	87	49.9	-1	41.0	117	52.5	90	15	45	4 52	5 27	5 57	2 13	82	17 13 23			
19	102	50.1		40.0	132	20.6	91	33.8	50	44	22	55	1 55	88	26 17			
20	117	50.3		39.0	146	48.7	91	18.8	52	39	20	54	46	92	32 15			
21	132	50.5		38.0	161	16.9	92	15	54	35	17	53	37	95	39 11			
22	147	50.6		37.0	175	45.1	92	14	56	29	14	52	26	100	46 9			
23	162	50.8		36.0	190	13.4	93	33.2	58	23	11	50	14	104	17 55 4			
24	177	51.0	-1	35.1	204	41.6	92	14	60 S	4 16	5 07	5 49	1 00	110	18 04 0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 25 ^m 1			Mag: -3.9 PMG: 14 ^h 10 ^m			Mag: +1.2 PMG: 9 ^h 33 ^m			Mag: -2.2 PMG: 5 ^h 39 ^m			Mag: +0.1 PMG: 21 ^h 52 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	173	12.4		147	29.7	+10	216	46.4	-17	275	00.1	-22	31	08.6	+16			
1	188	14.9		162	29.4		231	46.9		290	02.4		46	11.2				
2	203	17.4		177	29.0		246	47.4		305	04.7		61	13.8				
3	218	19.8		192	28.6		261	48.0		320	07.0		76	16.4				
4	233	22.3		207	28.3		276	48.5		335	09.3		91	19.0				
5	248	24.8		222	27.9	+10	291	49.0	-17	350	11.6	-22	106	21.6	+16			
6	263	27.2		237	27.5	+10	306	49.6	-17	5	13.9	-22	121	24.2	+16			
7	278	29.7		252	27.2		321	50.1		20	16.1		136	26.8				
8	293	32.1		267	26.8		336	50.7		35	18.4		151	29.4				
9	308	34.6		282	26.4		351	51.2		50	20.7		166	32.0				
10	323	37.1		297	26.1		6	51.7		65	23.0		181	34.6				
11	338	39.5		312	25.7	+10	21	52.3	-17	80	25.3	-22	196	37.2	+16			
12	353	42.0		327	25.3	+10	36	52.8	-17	95	27.6	-22	211	39.8	+16			
13	8	44.5		342	25.0		51	53.4		110	29.9		226	42.4				
14	23	46.9		357	24.6		66	53.9		125	32.2		241	45.0				
15	38	49.4		12	24.2		81	54.4		140	34.5		256	47.6				
16	53	51.9		27	23.9		96	55.0		155	36.8		271	50.2				
17	68	54.3		42	23.5	+10	111	55.5	-17	170	39.1	-22	286	52.9	+16			
18	83	56.8		57	23.1	+10	126	56.0	-17	185	41.4	-22	301	55.5	+16			
19	98	59.3		72	22.8	+11	141	56.6		200	43.7		316	58.1				
20	114	01.7		87	22.4		156	57.1		215	46.0		332	00.7				
21	129	04.2		102	22.0		171	57.7		230	48.3		347	03.3				
22	144	06.6		117	21.7		186	58.2		245	50.6		2	05.9				
23	159	09.1		132	21.3		201	58.8		260	52.9		17	08.5				
24	174	11.6		147	20.9	+11	216	59.3	-17	275	55.2	-22	32	11.1	+16			
Dif	—			-4			+12			+23			0			+26		

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 5			Edad: 27 ^d 3 PHE { 4 ^h : 60 ^h /2 12 ^h : 60 ^h /5 20 ^h : 60 ^h /7 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	177	51.0	-1 35.1	204	41.6	-14 17.7	94	60 N	18 06	18 48	19 37	6 07 0	15 41 107		
1	192	51.2	34.1	219	10.0	-14 02.2	155	58	06	46	32	6 00 3	47 103		
2	207	51.4	33.1	233	38.3	-13 46.6	156	56	07	44	28	5 53 7	52 99		
3	222	51.5	32.1	248	06.7	-13 30.9	157	54	07	42	24	47 11	15 57 95		
4	237	51.7	31.1	262	35.2	-13 15.1	158	52	07	41	20	42 13	16 02 91		
5	252	51.9	-1 30.1	277	03.6	-12 59.2	159	50	18 07	18 40	19 18	5 37 16	16 06 88		
6	267	52.1	-1 29.1	291	32.2	-12 43.3	159	45	18 08	18 37	19 11	5 26 22	16 14 83		
7	282	52.2	28.1	306	00.7	-12 27.2	161	40	08	35	07	18 26	21 77		
8	297	52.4	27.1	320	29.3	-12 11.0	162	35	09	34	04	10 31	27 73		
9	312	52.6	26.2	334	57.9	-11 54.8	162	30	09	33	19 01	5 03 35	32 69		
10	327	52.8	25.2	349	26.5	-11 38.5	163	20	10	32	18 58	4 51 41	41 62		
11	342	53.0	-1 24.2	3	55.2	-11 22.0	165	10 N	18 11	18 32	18 56	4 41 47	16 49 56		
12	357	53.1	-1 23.2	18	23.9	-11 05.5	165	0	18 12	18 32	18 56	4 31 52	16 56 51		
13	12	53.3	22.2	32	52.7	-10 49.0	165	10 S	13	34	18 58	22 57	17 03 46		
14	27	53.5	21.2	47	21.4	-10 32.3	167	20	14	36	19 01	4 11 63	11 40		
15	42	53.7	20.2	61	50.2	-10 15.6	167	30	15	39	07	3 59 69	19 34		
16	57	53.9	19.2	76	19.0	-9 58.8	168	35	16	41	11	52 73	24 30		
17	72	54.0	-1 18.2	90	47.9	-9 41.9	169	40	18 17	18 44	19 16	3 44 78	17 29 26		
18	87	54.2	-1 17.3	105	16.8	-9 25.0	169	45	18 18	18 48	19 22	3 35 82	17 36 21		
19	102	54.4	16.3	119	45.7	-9 08.0	170	50	20	52	30	23 89	43 16		
20	117	54.6	15.3	134	14.6	-8 50.9	171	52	20	54	34	18 92	47 12		
21	132	54.7	14.3	148	43.5	-8 33.8	171	54	21	56	39	12 95	50 10		
22	147	54.9	13.3	163	12.5	-8 16.6	172	56	22	18 59	44	3 06 99	55 6		
23	162	55.1	12.3	177	41.5	-7 59.3	173	58	23	19 02	50	2 58 103	17 59 3		
24	177	55.3	-1 11.3	192	10.5	-7 42.0	173	60 S	18 24	19 06	19 56	2 50 108	18 04 **		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 21 ^m 2			Mag: -3.9 PMG: 14 ^h 11 ^m			Mag: +1.2 PMG: 9 ^h 32 ^m			Mag: -2.2 PMG: 5 ^h 35 ^m			Mag: +0.1 PMG: 21 ^h 47 ^m		
h	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
0	174	11.6	147 20.9	147 20.9	+11 06.1	216 59.3	-17 34.0	275 55.2	-22 16.8	32 11.1	+16 20.7				
1	189	14.0	162 20.6	162 20.6	07.3	231 59.8	33.5	290 57.5	16.8	47 13.7	20.7				
2	204	16.5	177 20.2	177 20.2	08.5	247 00.4	33.0	305 59.8	16.8	62 16.3	20.8				
3	219	19.0	192 19.8	192 19.8	09.7	262 00.9	32.4	321 02.1	16.8	77 18.9	20.8				
4	234	21.4	207 19.4	207 19.4	10.9	277 01.5	31.9	336 04.4	16.9	92 21.5	20.8				
5	249	23.9	222 19.1	222 19.1	+11 12.1	292 02.0	-17 31.4	351 06.7	-22 16.9	107 24.1	+16 20.9				
6	264	26.4	237 18.7	237 18.7	+11 13.3	307 02.5	-17 30.8	6 09.0	-22 16.9	122 26.7	+16 20.9				
7	279	28.8	252 18.3	252 18.3	14.5	322 03.1	30.3	21 11.3	16.9	137 29.3	21.0				
8	294	31.3	267 18.0	267 18.0	15.7	337 03.6	29.7	36 13.6	16.9	152 31.9	21.0				
9	309	33.7	282 17.6	282 17.6	16.9	352 04.2	29.2	51 15.9	16.9	167 34.5	21.1				
10	324	36.2	297 17.2	297 17.2	18.1	7 04.7	28.7	66 18.2	16.9	182 37.1	21.1				
11	339	38.7	312 16.8	312 16.8	+11 19.3	22 05.3	-17 28.1	81 20.5	-22 16.9	197 39.7	+16 21.2				
12	354	41.1	327 16.5	327 16.5	+11 20.5	37 05.8	-17 27.6	96 22.8	-22 16.9	212 42.3	+16 21.2				
13	9	43.6	342 16.1	342 16.1	21.7	52 06.3	27.1	111 25.1	17.0	227 44.9	21.2				
14	24	46.1	357 15.7	357 15.7	22.9	67 06.9	26.5	126 27.4	17.0	242 47.5	21.3				
15	39	48.5	12 15.3	12 15.3	24.0	82 07.4	26.0	141 29.7	17.0	257 50.1	21.3				
16	54	51.0	27 15.0	27 15.0	25.2	97 08.0	25.4	156 32.0	17.0	272 52.7	21.4				
17	69	53.5	42 14.6	42 14.6	+11 26.4	112 08.5	-17 24.9	171 34.3	-22 17.0	287 55.3	+16 21.4				
18	84	55.9	57 14.2	57 14.2	+11 27.6	127 09.1	-17 24.4	186 36.6	-22 17.0	302 57.9	+16 21.5				
19	99	58.4	72 13.9	72 13.9	28.8	142 09.6	23.8	201 38.9	17.0	318 00.5	21.5				
20	115	00.9	87 13.5	87 13.5	30.0	157 10.1	23.3	216 41.2	17.0	333 03.1	21.5				
21	130	03.3	102 13.1	102 13.1	31.2	172 10.7	22.7	231 43.5	17.0	348 05.7	21.6				
22	145	05.8	117 12.7	117 12.7	32.4	187 11.2	22.2	246 45.8	17.0	3 08.3	21.6				
23	160	08.2	132 12.3	132 12.3	33.5	202 11.8	21.7	261 48.1	17.1	18 10.9	21.7				
24	175	10.7	147 12.0	147 12.0	+11 34.7	217 12.3	-17 21.1	276 50.5	-22 17.1	33 13.5	+16 21.7				
Dif	—		-4		+12	+5	+5	+23	0	+26	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 2			Edad: 28 ^d 3 PHE { 4 ^h : 60 ^m 9 12 ^h : 61 ^m 0 20 ^h : 61 ^m 1 R°: 51 ^m							Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil		Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	55.3	-1 11.3	192	10.5	-7 42.0	60 N	4 38	5 28	6 09	6 07	**	17 28	108
1	192	55.5	10.3	206	39.5 ¹⁰⁰	24.6 ¹⁷⁴	58	44	30	09	03	3	30	103
2	207	55.6	09.3	221	08.6 ¹⁰¹	-7 07.2 ¹⁷⁴	56	48	32	09	6 00	7	31	99
3	222	55.8	08.4	235	37.6 ¹⁰⁰	-6 49.7 ¹⁷⁵	54	52	33	09	5 58	9	32	96
4	237	56.0	07.4	250	06.7 ¹⁰¹	32.2 ¹⁷⁵	52	55	35	08	55	13	33	93
5	252	56.2	-1 06.4	264	35.8 ¹⁰¹	-6 14.6 ¹⁷⁶	50	4 58	5 36	6 08	5 53	15	17 34	90
6	267	56.4	-1 05.4	279	04.9 ¹⁰¹	-5 57.0 ¹⁷⁶	45	5 04	5 39	6 08	5 48	21	17 37	83
7	282	56.5	04.4	293	34.0 ¹⁰¹	39.3 ¹⁷⁷	40	09	41	08	44	26	38	78
8	297	56.7	03.4	308	03.2 ¹⁰²	21.6 ¹⁷⁷	35	13	42	07	41	30	40	73
9	312	56.9	02.4	322	32.3 ¹⁰¹	-5 03.8 ¹⁷⁸	30	15	43	07	38	33	41	70
10	327	57.1	01.4	337	01.5 ¹⁰²	-4 46.0 ¹⁷⁸	20	19	44	06	32	40	43	63
11	342	57.3	-1 00.4	351	30.6 ¹⁰¹	-4 28.2 ¹⁷⁸	10 N	5 20	5 45	6 06	5 28	45	17 45	57
12	357	57.4	-0 59.5	5 59.8 ¹⁰²	-4 10.3 ¹⁷⁹	0	0	5 20	5 44	6 05	5 23	51	17 47	51
13	12	57.6	58.5	20 29.0 ¹⁰²	-3 52.4 ¹⁷⁹	10 S	19	19	43	04	19	56	49	46
14	27	57.8	57.5	34 58.1 ¹⁰¹	34.4 ¹⁸⁰	20	15	15	41	03	14	62	51	40
15	42	58.0	56.5	49 27.3 ¹⁰²	-3 16.5 ¹⁷⁹	30	10	10	38	02	08	70	53	33
16	57	58.2	55.5	63 56.5 ¹⁰²	-2 58.5 ¹⁸⁰	35	06	06	36	01	05	73	54	30
17	72	58.4	-0 54.5	78 25.7 ¹⁰²	-2 40.5 ¹⁸⁰	40	5 01	5 01	5 33	6 00	5 02	77	17 55	26
18	87	58.5	-0 53.5	92 54.9 ¹⁰²	-2 22.4 ¹⁸¹	45	4 55	4 55	5 30	5 59	4 57	83	17 57	21
19	102	58.7	52.5	107 24.0 ¹⁰¹	-2 04.3 ¹⁸¹	50	47	47	25	58	52	89	59	15
20	117	58.9	51.5	121 53.2 ¹⁰²	-1 46.2 ¹⁸¹	52	43	43	23	57	50	92	17 59	13
21	132	59.1	50.6	136 22.4 ¹⁰²	28.1 ¹⁸¹	54	39	39	21	57	47	96	18 00	10
22	147	59.3	49.6	150 51.6 ¹⁰²	-1 10.0 ¹⁸¹	56	34	34	18	56	45	98	01	7
23	162	59.4	48.6	165 20.7 ¹⁰¹	-0 51.9 ¹⁸¹	58	28	28	16	55	41	103	02	3
24	177	59.6	-0 47.6	179 49.9 ¹⁰²	-0 33.7 ¹⁸²	60 S	4 21	4 21	5 12	5 54	4 38	107	18 03	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 17 ^m 3		Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: +1.2 PMG: 9 ^h 31 ^m			Mag: -2.2 PMG: 5 ^h 32 ^m			Mag: +0.1 PMG: 21 ^h 43 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	175	10.7	147	12.0	+11 34.7	217	12.3	-17 21.1	276	50.5	-22 17.1	33	13.5	+16 21.7
1	190	13.2	162	11.6	35.9	232	12.9	20.6	291	52.8	17.1	48	16.1	21.8
2	205	15.6	177	11.2	37.1	247	13.4	20.0	306	55.1	17.1	63	18.7	21.8
3	220	18.1	192	10.8	38.3	262	14.0	19.5	321	57.4	17.1	78	21.3	21.8
4	235	20.6	207	10.5	39.5	277	14.5	18.9	336	59.7	17.1	93	23.9	21.9
5	250	23.0	222	10.1	+11 40.7	292	15.1	-17 18.4	352	02.0	-22 17.1	108	26.5	+16 21.9
6	265	25.5	237	09.7	+11 41.8	307	15.6	-17 17.9	7 04.3	-22 17.1	123	29.1	+16 22.0	
7	280	28.0	252	09.3	43.0	322	16.1	17.3	22 06.6	17.1	138	31.7	22.0	
8	295	30.4	267	09.0	44.2	337	16.7	16.8	37 08.9	17.1	153	34.3	22.1	
9	310	32.9	282	08.6	45.4	352	17.2	16.2	52 11.2	17.2	168	36.9	22.1	
10	325	35.3	297	08.2	46.6	7 17.8	15.7	15.7	67 13.5	17.2	183	39.5	22.1	
11	340	37.8	312	07.8	+11 47.7	22 18.3	-17 15.1	15.1	82 15.9	-22 17.2	198	42.1	+16 22.2	
12	355	40.3	327	07.4	+11 48.9	37 18.9	-17 14.6	14.6	97 18.2	-22 17.2	213	44.7	+16 22.2	
13	10	42.7	342	07.1	50.1	52 19.4	14.0	14.0	112 20.5	17.2	228	47.3	22.3	
14	25	45.2	357	06.7	51.3	67 20.0	13.5	13.5	127 22.8	17.2	243	49.9	22.3	
15	40	47.7	12 06.3	52.5	52.5	82 20.5	12.9	12.9	142 25.1	17.2	258	52.5	22.3	
16	55	50.1	27 05.9	53.6	53.6	97 21.1	12.4	12.4	157 27.4	17.2	273	55.1	22.4	
17	70	52.6	42 05.5	+11 54.8	54.8	112 21.6	-17 11.9	11.9	172 29.7	-22 17.2	288	57.7	+16 22.4	
18	85	55.1	57 05.2	+11 56.0	56.0	127 22.2	-17 11.3	11.3	187 32.0	-22 17.2	304	00.3	+16 22.5	
19	100	57.5	72 04.8	57.2	57.2	142 22.7	10.8	10.8	202 34.3	17.3	319	02.9	22.5	
20	116	00.0	87 04.4	58.4	58.4	157 23.3	10.2	10.2	217 36.7	17.3	334	05.5	22.6	
21	131	02.5	102 04.0	+11 59.5	59.5	172 23.8	09.7	09.7	232 39.0	17.3	349	08.1	22.6	
22	146	04.9	117 03.6	+12 00.7	00.7	187 24.4	09.1	09.1	247 41.3	17.3	4 10.7	22.6		
23	161	07.4	132 03.2	01.9	01.9	202 24.9	08.6	08.6	262 43.6	17.3	19 13.3	22.7		
24	176	09.8	147 02.9	+12 03.1	03.1	217 25.4	-17 08.0	08.0	277 45.9	-22 17.3	34 15.9	+16 22.7		
Dif	—		-4	+12		+5	+5		+23	0		+26		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 9			Edad: 29 ^d 3 PHE { 4 ^h : 61 ^h 2 12 ^h : 61 ^h 3 20 ^h : 61 ^h 3 PMG: 12 ^h 26 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	59.6	-0	179	49.9	-0	33.7	60 N	18	11	18	53	19	43	6 06 **
1	192	59.8		194	19.0 ¹⁰¹	-0	15.6 ¹⁸¹	58	11	50	37	06	4	13	105
2	208	00.0		208	48.2 ¹⁰²	+0	02.6 ¹⁸²	56	11	48	32	07	7	10	101
3	223	00.2		223	17.3 ¹⁰¹		20.8 ¹⁸²	54	11	46	28	07	10	08	97
4	238	00.3		237	46.4 ¹⁰¹		38.9 ¹⁸¹	52	11	44	24	08	13	06	93
5	253	00.5	-0	252	15.5 ¹⁰¹	+0	57.1 ¹⁸²	50	18	11	18	43	19	21	6 08 16
6	268	00.7	-0	266	44.6 ¹⁰¹	+1	15.3 ¹⁸²	45	18	11	18	40	19	14	6 09 21
7	283	00.9		281	13.7 ¹⁰¹		33.5 ¹⁸²	40	10	38	09	10	26	18	56 79
8	298	01.1		295	42.7 ¹⁰⁰	+1	51.6 ¹⁸¹	35	10	36	05	11	30	53	75
9	313	01.3		310	11.8 ¹⁰¹	+2	09.8 ¹⁸²	30	11	34	19	02	11	34	51 70
10	328	01.4		324	40.8 ¹⁰⁰		27.9 ¹⁸¹	20	11	33	18	58	12	41	46 64
11	343	01.6	-0	339	09.8 ¹⁰⁰	+2	46.1 ¹⁸²	10 N	18	11	18	32	18	56	6 13 47
12	358	01.8	-0	353	38.8 ¹⁰⁰	+3	04.2 ¹⁸¹	0	18	11	18	32	18	56	6 14 52
13	13	02.0		8	07.7 ⁹⁹		22.3 ¹⁸¹	10 S	12	33	18	57	15	57	35 47
14	28	02.2		22	36.7 ¹⁰⁰		40.4 ¹⁸¹	20	12	34	19	00	16	63	31 41
15	43	02.3		37	05.6 ⁹⁹	+3	58.5 ¹⁸¹	30	13	37	04	18	70	26	35
16	58	02.5		51	34.5 ⁹⁹	+4	16.5 ¹⁸⁰	35	13	38	08	18	74	24	31
17	73	02.7	-0	66	03.3 ⁹⁸	+4	34.5 ¹⁸⁰	40	18	14	18	41	19	12	6 19 79
18	88	02.9	-0	80	32.1 ⁹⁸	+4	52.5 ¹⁸⁰	45	18	14	18	44	19	18	6 20 84
19	103	03.1		95	00.9 ⁹⁸	+5	10.5 ¹⁸⁰	50	15	48	26	21	90	14	16
20	118	03.3		109	29.7 ⁹⁸		28.5 ¹⁸⁰	52	16	49	29	22	93	12	13
21	133	03.4		123	58.4 ⁹⁷	+5	46.4 ¹⁷⁹	54	16	51	33	23	96	10	10
22	148	03.6		138	27.1 ⁹⁷	+6	04.2 ¹⁷⁸	56	17	54	38	23	100	08	7
23	163	03.8		152	55.8 ⁹⁷		22.1 ¹⁷⁹	58	17	56	43	24	104	05	4
24	178	04.0	-0	167	24.4 ⁹⁶	+6	39.9 ¹⁷⁸	60 S	18	18	18	59	19	50	6 25 108
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 13 ^m 3		Mag: -3.9 PMG: 14 ^h 12 ^m			Mag: +1.2 PMG: 9 ^h 30 ^m			Mag: -2.2 PMG: 5 ^h 28 ^m			Mag: +0.1 PMG: 21 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	176	09.8		147	02.9	+12	217	25.4	-17	277	45.9	-22	34	15.9	+16
1	191	12.3		162	02.5		232	26.0		292	48.2		49	18.5	
2	206	14.8		177	02.1		247	26.5		307	50.6		64	21.1	
3	221	17.2		192	01.7		262	27.1		322	52.9		79	23.7	
4	236	19.7		207	01.3		277	27.6		337	55.2		94	26.3	
5	251	22.2		222	00.9	+12	292	28.2	-17	352	57.5	-22	109	28.9	+16
6	266	24.6		237	00.6	+12	307	28.7	-17	7	59.8	-22	124	31.5	+16
7	281	27.1		252	00.2		322	29.3		23	02.1		139	34.1	
8	296	29.6		266	59.8		337	29.8		38	04.5		154	36.7	
9	311	32.0		281	59.4		352	30.4		53	06.8		169	39.2	
10	326	34.5		296	59.0		7	30.9		68	09.1		184	41.8	
11	341	36.9		311	58.6	+12	22	31.5	-17	83	11.4	-22	199	44.4	+16
12	356	39.4		326	58.2	+12	37	32.0	-17	98	13.7	-22	214	47.0	+16
13	11	41.9		341	57.9		52	32.6		113	16.0		229	49.6	
14	26	44.3		356	57.5		67	33.1	-17	128	18.4		244	52.2	
15	41	46.8		11	57.1		82	33.7	-16	143	20.7		259	54.8	
16	56	49.3		26	56.7		97	34.3		158	23.0		274	57.4	
17	71	51.7		41	56.3	+12	112	34.8	-16	173	25.3	-22	290	00.0	+16
18	86	54.2		56	55.9	+12	127	35.4	-16	188	27.6	-22	305	02.6	+16
19	101	56.7		71	55.5		142	35.9		203	30.0		320	05.2	
20	116	59.1		86	55.1		157	36.5		218	32.3		335	07.8	
21	132	01.6		101	54.8		172	37.0		233	34.6		350	10.4	
22	147	04.1		116	54.4		187	37.6		248	36.9		5	13.0	
23	162	06.5		131	54.0		202	38.1		263	39.3		20	15.6	
24	177	09.0		146	53.6	+12	217	38.7	-16	278	41.6	-22	35	18.2	+16
Dif	—		-4		+12	+6		+6	+23		0		+26		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 07 ^m 6			Edad: 0 ^d 9 PHE { 4 ^h : 61'3 12 ^h : 61'2 20 ^h : 61'1 R ^o : 55 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R ^o	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	04.0	-0	167	24.4	+6 39.9	60 N	4	32	5	22	6 03	6 05	0	21 06 113
1	193	04.2		181	53.0	+6 57.6	58	38	24		03	10	4	20 58 108	
2	208	04.4		196	21.6	+7 15.4	56	42	26		03	14	8	51 103	
3	223	04.5		210	50.1	33.0	54	47	28		04	17	12	45 99	
4	238	04.7		225	18.6	+7 50.6	52	50	30		04	21	14	39 96	
5	253	04.9	-0	239	47.0	+8 08.2	50	4	54	5	32	6 04	6 24	17	20 35 91
6	268	05.1	-0	254	15.4	+8 25.7	45	5	01	5	35	6 04	6 30	24	20 24 85
7	283	05.3		268	43.7	+8 43.2	40	06	37		04	36	29	15 80	
8	298	05.5		283	12.0	+9 00.6	35	10	39		04	41	33	08 75	
9	313	05.6		297	40.3	18.0	30	13	41		04	45	37	20 01 72	
10	328	05.8		312	08.5	35.3	20	17	43		05	6 53	43	19 50 65	
11	343	06.0	-0	326	36.7	+9 52.5	10 N	5	19	5	44	6 04	7 00	48	19 40 60
12	358	06.2	-0	341	04.8	+10 09.7	0	5	20	5	44	6 04	7 06	54	19 31 55
13	13	06.4		355	32.9	26.8	10 S	19	43		04	12	59	22 50	
14	28	06.6		10	00.9	+10 43.8	20	16	42		04	19	65	12 45	
15	43	06.7		24	28.9	+11 00.8	30	11	39		03	28	71	19 01 39	
16	58	06.9		38	56.8	17.7	35	08	37		03	32	75	18 55 35	
17	73	07.1	-0	53	24.7	+11 34.5	40	5	04	5	35	6 02	7 38	79	18 48 30
18	88	07.3	-0	67	52.5	+11 51.2	45	4	58	5	32	6 02	7 44	85	18 40 25
19	103	07.5		82	20.2	+12 07.9	50	51	29		01	51	92	30 19	
20	118	07.7		96	47.9	24.5	52	47	27		01	55	95	25 17	
21	133	07.9		111	15.6	41.0	54	43	25		00	7 59	98	20 13	
22	148	08.0		125	43.2	+12 57.4	56	38	23		00	8 03	102	15 9	
23	163	08.2		140	10.7	+13 13.7	58	33	20		59	8 08	107	09 5	
24	178	08.4	-0	154	38.2	+13 30.0	60 S	4	27	5	17	5 59	8 13	113	18 02 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 09 ^m 4		Mag: -4.0 PMG: 14 ^h 13 ^m		Mag: +1.2 PMG: 9 ^h 29 ^m		Mag: -2.2 PMG: 5 ^h 24 ^m		Mag: +0.1 PMG: 21 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	'	°	'
0	177	09.0	146	53.6	+12	31.1	217	38.7	-16	54.8
1	192	11.4	161	53.2		32.3	232	39.2		54.2
2	207	13.9	176	52.8		33.4	247	39.8		53.6
3	222	16.4	191	52.4		34.6	262	40.3		53.1
4	237	18.8	206	52.0		35.7	277	40.9		52.5
5	252	21.3	221	51.6	+12	36.9	292	41.4	-16	52.0
6	267	23.8	236	51.2	+12	38.1	307	42.0	-16	51.4
7	282	26.2	251	50.9		39.2	322	42.5		50.9
8	297	28.7	266	50.5		40.4	337	43.1		50.3
9	312	31.2	281	50.1		41.5	352	43.6		49.7
10	327	33.6	296	49.7		42.7	7	44.2		49.2
11	342	36.1	311	49.3	+12	43.9	22	44.8	-16	48.6
12	357	38.6	326	48.9	+12	45.0	37	45.3	-16	48.1
13	12	41.0	341	48.5		46.2	52	45.9		47.5
14	27	43.5	356	48.1		47.3	67	46.4		46.9
15	42	45.9	11	47.7		48.5	82	47.0		46.4
16	57	48.4	26	47.3		49.6	97	47.5		45.8
17	72	50.9	41	46.9	+12	50.8	112	48.1	-16	45.3
18	87	53.3	56	46.5	+12	51.9	127	48.6	-16	44.7
19	102	55.8	71	46.1		53.1	142	49.2		44.1
20	117	58.3	86	45.7		54.3	157	49.8		43.6
21	133	00.7	101	45.3		55.4	172	50.3		43.0
22	148	03.2	116	44.9		56.6	187	50.9		42.5
23	163	05.7	131	44.5		57.7	202	51.4		41.9
24	178	08.1	146	44.2	+12	58.9	217	52.0	-16	41.3
Dif	—		-4	+12		+6	+6	+23		0
										+26
										0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 07 ^m 3			Edad: 1 ^d 9 PHE { 4 ^h : 61'0 12 ^h : 60'8 20 ^h : 60'6 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	
0	178	08.4	-0 00.1	154	38.2	+13 30.0	60 N	18 16	18 58	19 48		6 05 1		22 59 117	
1	193	08.6	+0 00.9	169	05.6 ⁸⁴	+13 46.1 ¹⁶¹	58	15	55	42		14 7		46 109	
2	208	08.8		183	32.9 ⁸³	+14 02.2 ¹⁶¹	56	15	52	37		22 11		34 103	
3	223	09.0		198	00.2 ⁸³	18.2 ¹⁶⁰	54	15	50	32		29 16		24 98	
4	238	09.1		212	27.5 ⁸³	34.0 ¹⁵⁸	52	14	48	28		35 19		15 94	
5	253	09.3	+0 04.8	226	54.7 ⁸²	+14 49.8 ¹⁵⁸	50	18 14	18 46	19 24		6 41 22		22 06 91	
6	268	09.5	+0 05.8	241	21.8 ⁸¹	+15 05.5 ¹⁵⁷	45	18 13	18 42	19 17		6 54 28		21 49 85	
7	283	09.7		255	48.8 ⁸⁰	21.0 ¹⁵⁵	40	13	40	11		7 05 33		35 80	
8	298	09.9		270	15.8 ⁸⁰	36.5 ¹⁵⁵	35	12	37	07		14 37		23 76	
9	313	10.1		284	42.7 ⁷⁹	+15 51.9 ¹⁵⁴	30	12	36	19 04		22 40		21 13 72	
10	328	10.3		299	09.6 ⁷⁹	+16 07.1 ¹⁵²	20	11	33	18 59		36 46		20 55 67	
11	343	10.4	+0 10.8	313	36.4 ⁷⁸	+16 22.3 ¹⁵²	10 N	18 11	18 32	18 56		7 48 52		20 40 62	
12	358	10.6	+0 11.7	328	03.1 ⁷⁷	+16 37.3 ¹⁵⁰	0	18 11	18 31	18 55		8 00 56		20 26 58	
13	13	10.8		342	29.8 ⁷⁷	+16 52.2 ¹⁴⁹	10 S	10	31	56		11 61		20 12 53	
14	28	11.0		356	56.4 ⁷⁶	+17 07.0 ¹⁴⁸	20	10	32	18 58		24 66		19 57 49	
15	43	11.2		11	22.9 ⁷⁵	21.7 ¹⁴⁷	30	10	34	19 02		39 72		40 43	
16	58	11.4		25	49.3 ⁷⁴	36.2 ¹⁴⁵	35	10	36	05		47 76		30 40	
17	73	11.5	+0 16.7	40	15.7 ⁷⁴	+17 50.7 ¹⁴⁵	40	18 11	18 38	19 09		8 57 80		19 18 36	
18	88	11.7	+0 17.7	54	42.1 ⁷⁴	+18 05.0 ¹⁴³	45	18 11	18 40	19 14		9 09 85		19 05 31	
19	103	11.9		69	08.3 ⁷²	19.2 ¹⁴²	50	11	43	21		23 92		18 49 25	
20	118	12.1		83	34.5 ⁷²	33.3 ¹⁴¹	52	11	45	24		30 95		42 22	
21	133	12.3		98	00.7 ⁷²	+18 47.2 ¹³⁹	54	11	46	28		37 99		33 19	
22	148	12.5		112	26.7 ⁷⁰	+19 01.0 ¹³⁸	56	11	48	32		45 104		24 14	
23	163	12.7		126	52.7 ⁷⁰	14.7 ¹³⁷	58	12	51	37		9 55 109		14 8	
24	178	12.8	+0 23.6	141	18.7 ⁷⁰	+19 28.2 ¹³⁵	60 S	18 12	18 53	19 43		10 06 116		18 02 1	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 05 ^m 5			Mag: -4.0 PMG: 14 ^h 13 ^m			Mag: +1.2 PMG: 9 ^h 28 ^m			Mag: -2.2 PMG: 5 ^h 21 ^m			Mag: +0.2 PMG: 21 ^h 31 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	178	08.1		146	44.2	+12 58.9	217	52.0	-16 41.3	279	37.4	-22 17.7	36	20.4	+16 24.7
1	193	10.6		161	43.8	+13 00.0	232	52.5	40.8	294	39.8	17.7	51	22.9	24.7
2	208	13.0		176	43.4	+13 01.2	247	53.1	40.2	309	42.1	17.7	66	25.5	24.7
3	223	15.5		191	43.0	02.3	262	53.6	39.6	324	44.4	17.7	81	28.1	24.8
4	238	18.0		206	42.6	03.5	277	54.2	39.1	339	46.8	17.8	96	30.7	24.8
5	253	20.4		221	42.2	+13 04.6	292	54.8	-16 38.5	354	49.1	-22 17.8	111	33.3	+16 24.9
6	268	22.9		236	41.8	+13 05.7	307	55.3	-16 37.9	9	51.4	-22 17.8	126	35.9	+16 24.9
7	283	25.4		251	41.4	06.9	322	55.9	37.4	24	53.8	17.8	141	38.5	24.9
8	298	27.8		266	41.0	08.0	337	56.4	36.8	39	56.1	17.8	156	41.1	25.0
9	313	30.3		281	40.6	09.2	352	57.0	36.3	54	58.4	17.8	171	43.7	25.0
10	328	32.8		296	40.2	10.3	7	57.6	35.7	70	00.8	17.8	186	46.2	25.1
11	343	35.2		311	39.8	+13 11.5	22	58.1	-16 35.1	85	03.1	-22 17.8	201	48.8	+16 25.1
12	358	37.7		326	39.4	+13 12.6	37	58.7	-16 34.6	100	05.4	-22 17.8	216	51.4	+16 25.1
13	13	40.2		341	39.0	13.8	52	59.2	34.0	115	07.8	17.8	231	54.0	25.2
14	28	42.6		356	38.6	14.9	67	59.8	33.4	130	10.1	17.8	246	56.6	25.2
15	43	45.1		11	38.2	16.1	83	00.3	32.9	145	12.4	17.8	261	59.2	25.2
16	58	47.5		26	37.8	17.2	98	00.9	32.3	160	14.8	17.8	277	01.8	25.3
17	73	50.0		41	37.4	+13 18.3	113	01.5	-16 31.7	175	17.1	-22 17.9	292	04.4	+16 25.3
18	88	52.5		56	37.0	+13 19.5	128	02.0	-16 31.1	190	19.4	-22 17.9	307	06.9	+16 25.4
19	103	54.9		71	36.6	20.6	143	02.6	30.6	205	21.8	17.9	322	09.5	25.4
20	118	57.4		86	36.1	21.8	158	03.1	30.0	220	24.1	17.9	337	12.1	25.4
21	133	59.9		101	35.7	22.9	173	03.7	29.4	235	26.5	17.9	352	14.7	25.5
22	149	02.3		116	35.3	24.0	188	04.3	28.9	250	28.8	17.9	7	17.3	25.5
23	164	04.8		131	34.9	25.2	203	04.8	28.3	265	31.1	17.9	22	19.9	25.5
24	179	07.3		146	34.5	+13 26.3	218	05.4	-16 27.7	280	33.5	-22 17.9	37	22.5	+16 25.6
Dif	—			-4 +11			+6 +6			+23 0			+26 0		

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 2 ^d 9 PHE { 4 ^h : 60'4 12 ^h : 60'2 20 ^h : 59'9 R°: 59 ^m													
	PMG: 12 ^h 07 ^m 0			SD: 16'5 PMG: 15 ^h 10 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m
0	178	12.8	+0	23.6	141	18.7	+19	28.2	60 N	4	25	5	15	5	57	6	06
1	193	13.0		24.6	155	44.5	68	41.6	58	31	18	58		21	12	***	***
2	208	13.2		25.6	170	10.3	68	+19	54.9	37	21	58		33	19	***	***
3	223	13.4		26.6	184	36.0	67	+20	08.1	41	23	59		45	22	***	***
4	238	13.6		27.6	199	01.7	67	21.0	52	46	25	5	59	6	54	27	23
5	253	13.8	+0	28.5	213	27.3	66	+20	33.9	4	49	5	27	6	00	7	03
6	268	14.0	+0	29.5	227	52.8	65	+20	46.6	4	57	5	31	6	00	7	22
7	283	14.1		30.5	242	18.3	65	+20	59.2	5	02	34	01	38	39	22	55
8	298	14.3		31.5	256	43.7	64	+21	11.6	07	36	02		7	51	43	39
9	313	14.5		32.5	271	09.0	63	23.9	30	10	38	02		8	02	47	25
10	328	14.7		33.5	285	34.3	63	36.0	20	15	41	03		22	51	22	02
11	343	14.9	+0	34.5	299	59.5	62	+21	48.0	5	18	5	42	6	03	8	40
12	358	15.1	+0	35.5	314	24.6	61	+21	59.8	5	19	5	43	6	04	8	56
13	13	15.3		36.4	328	49.7	61	+22	11.4	19	43	04		9	12	63	21
14	28	15.5		37.4	343	14.7	60	23.0	10 S	20	17	42	04	30	67	20	46
15	43	15.6		38.4	357	39.7	60	34.3	30	13	40	04		9	51	72	23
16	58	15.8		39.4	12	04.6	59	45.5	35	10	39	04		10	03	75	20
17	73	16.0	+0	40.4	26	29.4	58	+22	56.5	5	06	5	37	6	04	10	17
18	88	16.2	+0	41.4	40	54.2	58	+23	07.4	5	01	5	35	6	04	10	34
19	103	16.4		42.4	55	18.9	57	18.1	50	4	54	32	04	10	55	88	14
20	118	16.6		43.3	69	43.5	56	28.7	52	51	30	04		11	05	92	19
21	133	16.8		44.3	84	08.1	56	39.1	54	47	29	04		16	96	18	52
22	148	16.9		45.3	98	32.7	56	49.3	56	43	27	04		29	101	38	23
23	163	17.1		46.3	112	57.2	55	+23	59.3	38	25	04		11	44	108	22
24	178	17.3	+0	47.3	127	21.6	54	+24	09.2	4	32	5	22	6	04	12	02

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 12 ^h 01 ^m 5		Mag: -4.0 PMG: 14 ^h 14 ^m			Mag: +1.2 PMG: 9 ^h 27 ^m			Mag: -2.2 PMG: 5 ^h 17 ^m			Mag: +0.2 PMG: 21 ^h 27 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	179	07.3	146	34.5	+13	218	05.4	-16	280	33.5	-22	37	22.5	+16			
1	194	09.7	161	34.1		233	05.9		295	35.8		52	25.1				
2	209	12.2	176	33.7		248	06.5		310	38.1		67	27.6				
3	224	14.6	191	33.3		263	07.1		325	40.5		82	30.2				
4	239	17.1	206	32.9		278	07.6		340	42.8		97	32.8				
5	254	19.6	221	32.5	+13	293	08.2	-16	355	45.2	-22	112	35.4	+16			
6	269	22.0	236	32.1	+13	308	08.7	-16	10	47.5	-22	127	38.0	+16			
7	284	24.5	251	31.7		323	09.3		25	49.8		142	40.6				
8	299	27.0	266	31.3		338	09.9		40	52.2		157	43.2				
9	314	29.4	281	30.9		353	10.4		55	54.5		172	45.7				
10	329	31.9	296	30.5		8	11.0	22.0	70	56.9		187	48.3				
11	344	34.4	311	30.1	+13	23	11.6	-16	85	59.2	-22	202	50.9	+16			
12	359	36.8	326	29.7	+13	38	12.1	-16	101	01.6	-22	217	53.5	+16			
13	14	39.3	341	29.3		53	12.7	20.3	116	03.9		232	56.1				
14	29	41.8	356	28.8		68	13.2	19.7	131	06.2		247	58.7				
15	44	44.2	11	28.4		83	13.8	19.2	146	08.6		263	01.2				
16	59	46.7	26	28.0		98	14.4	18.6	161	10.9		278	03.8				
17	74	49.1	41	27.6	+13	113	14.9	-16	176	13.3	-22	293	06.4	+16			
18	89	51.6	56	27.2	+13	128	15.5	-16	191	15.6	-22	308	09.0	+16			
19	104	54.1	71	26.8		143	16.1	16.9	206	18.0		323	11.6				
20	119	56.5	86	26.4		158	16.6	16.3	221	20.3		338	14.2				
21	134	59.0	101	26.0		173	17.2	15.7	236	22.7		353	16.7				
22	150	01.5	116	25.6		188	17.8	15.1	251	25.0		8	19.3				
23	165	03.9	131	25.2		203	18.3	14.6	266	27.4		23	21.9				
24	180	06.4	146	24.7	+13	218	18.9	-16	281	29.7	-22	38	24.5	+16			
Dif	—		-4			+11			+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 7			Edad: 3 ^d 9 PHE { 4 ^h : 59/7 12 ^h : 59/4 20 ^h : 59/1 R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	17.3	+0 47.3	127	21.6	+24 09.2	54	60 N	18 21	19 03	19 53	6 11	13	0 56	113
1	193	17.5	48.3	141	46.0	19.0	98	58	20	18 59	47	33	24	35	101
2	208	17.7	49.3	156	10.3	28.5	95	56	19	56	41	6 52	30	17	95
3	223	17.9	50.3	170	34.6	37.9	94	54	18	54	36	7 07	35	0 02	90
4	238	18.1	51.2	184	58.8	47.1	92	52	18	51	32	21	38	***	***
5	253	18.3	+0 52.2	199	23.0	+24 56.1	90	50	18 17	18 49	19 28	7 33	40	***	***
6	268	18.4	+0 53.2	213	47.2	+25 05.0	89	45	18 16	18 45	19 20	7 57	46	***	***
7	283	18.6	54.2	228	11.3	13.7	87	40	15	42	13	8 17	49	***	***
8	298	18.8	55.2	242	35.3	22.2	85	35	14	39	09	34	51	23	52
9	313	19.0	56.2	256	59.3	30.5	83	30	13	37	19 05	8 49	52	36	65
10	328	19.2	57.2	271	23.3	38.6	81	20	12	34	18 59	9 13	56	23	09
11	343	19.4	+0 58.1	285	47.2	+25 46.6	80	10 N	18 11	18 32	18 56	9 35	58	22	45
12	358	19.6	+0 59.1	300	11.1	+25 54.4	78	0	18 10	18 31	18 55	9 55	61	22	24
13	13	19.8	+1 00.1	314	35.0	+26 02.0	76	10 S	09	30	55	10 15	63	22	02
14	28	19.9	01.1	328	58.8	09.5	75	20	09	31	18 56	10 37	65	21	39
15	43	20.1	02.1	343	22.6	16.7	72	30	08	32	19 00	11 03	68	21	12
16	58	20.3	03.1	357	46.3	23.8	71	35	08	33	02	18	69	20	57
17	73	20.5	+1 04.1	12	10.0	+26 30.7	69	40	18 07	18 34	19 06	11 35	72	20	38
18	88	20.7	+1 05.0	26	33.7	+26 37.4	67	45	18 07	18 36	19 10	11 56	75	20	16
19	103	20.9	06.0	40	57.4	43.9	65	50	07	39	17	12 23	79	19	49
20	118	21.1	07.0	55	21.1	50.3	64	52	06	40	20	37	80	35	46
21	133	21.3	08.0	69	44.7	+26 56.4	61	54	06	41	23	12 52	83	19	44
22	148	21.4	09.0	84	08.3	+27 02.4	60	56	06	43	27	13 10	87	19	01
23	163	21.6	10.0	98	31.9	08.2	58	58	06	45	31	13 32	93	18	39
24	178	21.8	+1 11.0	112	55.5	+27 13.8	56	60 S	18 06	18 47	19 37	14 00	105	18	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 57 ^m 6		Mag: -4.0 PMG: 14 ^h 15 ^m		Mag: +1.2 PMG: 9 ^h 26 ^m		Mag: -2.2 PMG: 5 ^h 13 ^m		Mag: +0.2 PMG: 21 ^h 23 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♏	Dec	
h	°	°	°	°	°	°	°	°	°	
0	180	06.4	146 24.7	+13 53.4	218 18.9	-16 14.0	281 29.7	-22 18.1	38 24.5	+16 26.5
1	195	08.9	161 24.3	54.6	233 19.4	13.4	296 32.1	18.1	53 27.1	26.5
2	210	11.3	176 23.9	55.7	248 20.0	12.8	311 34.4	18.1	68 29.7	26.6
3	225	13.8	191 23.5	56.8	263 20.6	12.3	326 36.7	18.1	83 32.2	26.6
4	240	16.3	206 23.1	57.9	278 21.1	11.7	341 39.1	18.1	98 34.8	26.6
5	255	18.7	221 22.7	+13 59.1	293 21.7	-16 11.1	356 41.4	-22 18.1	113 37.4	+16 26.7
6	270	21.2	236 22.3	+14 00.2	308 22.3	-16 10.5	11 43.8	-22 18.1	128 40.0	+16 26.7
7	285	23.6	251 21.8	01.3	323 22.8	09.9	26 46.1	18.1	143 42.6	26.7
8	300	26.1	266 21.4	02.4	338 23.4	09.4	41 48.5	18.1	158 45.1	26.8
9	315	28.6	281 21.0	03.5	353 24.0	08.8	56 50.8	18.1	173 47.7	26.8
10	330	31.0	296 20.6	04.7	8 24.5	08.2	71 53.2	18.1	188 50.3	26.8
11	345	33.5	311 20.2	+14 05.8	23 25.1	-16 07.6	86 55.5	-22 18.2	203 52.9	+16 26.9
12	0	36.0	326 19.8	+14 06.9	38 25.7	-16 07.0	101 57.9	-22 18.2	218 55.5	+16 26.9
13	15	38.4	341 19.4	08.0	53 26.2	06.5	117 00.2	18.2	233 58.0	26.9
14	30	40.9	356 18.9	09.1	68 26.8	05.9	132 02.6	18.2	249 00.6	27.0
15	45	43.4	11 18.5	10.2	83 27.4	05.3	147 05.0	18.2	264 03.2	27.0
16	60	45.8	26 18.1	11.4	98 27.9	04.7	162 07.3	18.2	279 05.8	27.1
17	75	48.3	41 17.7	+14 12.5	113 28.5	-16 04.1	177 09.7	-22 18.2	294 08.4	+16 27.1
18	90	50.8	56 17.3	+14 13.6	128 29.1	-16 03.6	192 12.0	-22 18.2	309 10.9	+16 27.1
19	105	53.2	71 16.9	14.7	143 29.6	03.0	207 14.4	18.2	324 13.5	27.2
20	120	55.7	86 16.4	15.8	158 30.2	02.4	222 16.7	18.2	339 16.1	27.2
21	135	58.1	101 16.0	16.9	173 30.8	01.8	237 19.1	18.2	354 18.7	27.2
22	151	00.6	116 15.6	18.0	188 31.3	01.2	252 21.4	18.2	9 21.3	27.3
23	166	03.1	131 15.2	19.2	203 31.9	00.7	267 23.8	18.2	24 23.8	27.3
24	181	05.5	146 14.8	+14 20.3	218 32.5	-16 00.1	282 26.1	-22 18.2	39 26.4	+16 27.3
Dif	—	—	-4	+11	+6	+6	+24	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 06 ^m 4			Edad: 4 ^d 9 SD: 16'1 PMG: 17 ^h 10 ^m	PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2 R°: 60 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	21.8	+1	11.0	112	55.5	+27	13.8	60 N	4	19	5	09	5	51
1	193	22.0		11.9	127	19.0	45	19.2	58	25	13	52	6	57	48
2	208	22.2		12.9	141	42.6	46	24.4	56	31	16	53	7	22	51
3	223	22.4		13.9	156	06.1	45	29.4	54	36	18	54	42	53	32
4	238	22.6		14.9	170	29.6	45	34.3	52	41	21	54	7	59	54
5	253	22.8	+1	15.9	184	53.1	45	+27	50	4	45	5	23	5	55
6	268	22.9	+1	16.9	199	16.7	46	+27	45	4	53	5	27	5	57
7	283	23.1		17.9	213	40.2	45	47.7	43	4	59	31	58	9	06
8	298	23.3		18.8	228	03.7	45	51.8	41	5	04	34	5	59	25
9	313	23.5		19.8	242	27.2	45	55.7	39	30	08	36	6	00	9
10	328	23.7		20.8	256	50.7	45	+27	20	13	39	01	10	09	59
11	343	23.9	+1	21.8	271	14.3	46	+28	10 N	5	17	5	41	6	02
12	358	24.1	+1	22.8	285	37.8	45	+28	0	5	18	5	42	6	03
13	13	24.3		23.8	300	01.3	45	09.5	10 S	19	43	04	11	18	61
14	28	24.4		24.8	314	24.9	46	12.5	20	17	43	05	11	42	61
15	43	24.6		25.7	328	48.5	46	15.3	30	14	42	06	12	11	61
16	58	24.8		26.7	343	12.1	46	17.9	28	11	41	06	27	62	21
17	73	25.0	+1	27.7	357	35.7	46	+28	40	5	08	5	39	6	06
18	88	25.2	+1	28.7	11	59.3	46	+28	45	5	03	5	38	6	07
19	103	25.4		29.7	26	23.0	47	24.6	50	4	57	35	07	42	62
20	118	25.6		30.7	40	46.7	47	26.4	52	54	34	08	13	57	62
21	133	25.8		31.6	55	10.4	47	28.1	17	54	51	33	08	14	15
22	148	26.0		32.6	69	34.1	47	29.6	15	56	47	31	08	14	37
23	163	26.1		33.6	83	57.9	48	30.9	13	58	43	29	08	15	05
24	178	26.3	+1	34.6	98	21.7	48	+28	60 S	4	38	5	27	6	09
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 53 ^m 7			Mag: -4.0 PMG: 14 ^h 15 ^m			Mag: +1.2 PMG: 9 ^h 25 ^m			Mag: -2.3 PMG: 5 ^h 09 ^m			Mag: +0.2 PMG: 21 ^h 19 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	181	05.5		146	14.8	+14	218	32.5	-16	282	26.1	-22	39	26.4	+16
1	196	08.0		161	14.3		233	33.0	-15	297	28.5		54	29.0	
2	211	10.5		176	13.9		248	33.6		312	30.8		69	31.6	
3	226	12.9		191	13.5		263	34.2		327	33.2		84	34.2	
4	241	15.4		206	13.1		278	34.7		342	35.6		99	36.7	
5	256	17.9		221	12.7	+14	293	35.3	-15	357	37.9	-22	114	39.3	+16
6	271	20.3		236	12.2	+14	308	35.9	-15	12	40.3	-22	129	41.9	+16
7	286	22.8		251	11.8		323	36.5		27	42.6		144	44.5	
8	301	25.2		266	11.4		338	37.0		42	45.0		159	47.0	
9	316	27.7		281	11.0		353	37.6		57	47.3		174	49.6	
10	331	30.2		296	10.5		8	38.2		72	49.7		189	52.2	
11	346	32.6		311	10.1	+14	23	38.7	-15	87	52.1	-22	204	54.8	+16
12	1	35.1		326	09.7	+14	38	39.3	-15	102	54.4	-22	219	57.3	+16
13	16	37.6		341	09.3		53	39.9		117	56.8		234	59.9	
14	31	40.0		356	08.9		68	40.4		132	59.1		250	02.5	
15	46	42.5		11	08.4		83	41.0		148	01.5		265	05.1	
16	61	45.0		26	08.0		98	41.6		163	03.9		280	07.7	
17	76	47.4		41	07.6	+14	113	42.2	-15	178	06.2	-22	295	10.2	+16
18	91	49.9		56	07.2	+14	128	42.7	-15	193	08.6	-22	310	12.8	+16
19	106	52.4		71	06.7		143	43.3		208	11.0		325	15.4	
20	121	54.8		86	06.3		158	43.9		223	13.3		340	18.0	
21	136	57.3		101	05.9		173	44.4		238	15.7		355	20.5	
22	151	59.7		116	05.4		188	45.0		253	18.0		10	23.1	
23	167	02.2		131	05.0		203	45.6		268	20.4		25	25.7	
24	182	04.7		146	04.6	+14	218	46.2	-15	283	22.8	-22	40	28.3	+16
Dif	—			-4	+11		+6	+6		+24	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 06 ^m 1			Edad: 5 ^d 9 SD: 15'8 PMG: 18 ^h 10 ^m	PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4 R°: 57 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	26.3	+1	34.6	98	21.7	+28	32.0	60 N	18 26	19 08	19 59	7 05	82	4 16	40
1	193	26.5		35.6	112	45.6	49	32.9	58	24	04	52	7 45	75	3 35	47
2	208	26.7		36.6	127	09.4	48	33.7	56	23	19 01	46	8 13	72	3 08	49
3	223	26.9		37.5	141	33.4	50	34.3	54	22	18 58	40	35	70	2 46	51
4	238	27.1		38.5	155	57.3	49	34.7	52	21	55	35	8 53	68	28	53
5	253	27.3	+1	39.5	170	21.3	50	+28 34.9	50	18 20	18 53	19 31	9 08	67	2 12	54
6	268	27.5	+1	40.5	184	45.4	51	+28 34.9	45	18 18	18 48	19 22	9 39	65	1 41	56
7	283	27.6		41.5	199	09.5	51	34.7	40	17	44	16	10 03	64	1 17	57
8	298	27.8		42.5	213	33.7	52	34.4	35	15	41	10	23	62	0 58	56
9	313	28.0		43.4	227	57.9	52	33.9	30	14	38	06	10 40	61	41	57
10	328	28.2		44.4	242	22.1	52	33.2	20	12	34	19 00	11 08	60	0 12	58
11	343	28.4	+1	45.4	256	46.5	54	+28 32.3	10 N	18 11	18 32	18 56	11 33	59	** ** *	**
12	358	28.6	+1	46.4	271	10.9	54	+28 31.3	0	18 09	18 30	18 54	11 56	57	** ** *	**
13	13	28.8		47.4	285	35.3	54	30.1	10 S	08	29	53	12 19	56	** ** *	**
14	28	29.0		48.4	299	59.8	55	28.7	20	07	29	54	12 43	55	23 37	60
15	43	29.2		49.3	314	24.4	56	27.1	30	06	29	57	13 12	53	23 09	62
16	58	29.3		50.3	328	49.0	56	25.4	35	05	30	18 59	29	52	22 52	64
17	73	29.5	+1	51.3	343	13.7	57	+28 23.5	40	18 04	18 31	19 02	13 49	50	22 32	67
18	88	29.7	+1	52.3	357	38.5	58	+28 21.4	45	18 03	18 32	19 07	14 13	48	22 09	68
19	103	29.9		53.3	12	03.3	58	19.1	50	02	34	12	44	45	21 38	72
20	118	30.1		54.3	26	28.2	59	16.7	52	02	35	15	14 59	44	23	74
21	133	30.3		55.2	40	53.2	60	14.1	54	01	37	18	15 17	41	21 05	76
22	148	30.5		56.2	55	18.3	61	11.4	56	01	38	21	15 39	38	20 43	80
23	163	30.7		57.2	69	43.4	61	08.5	58	00	39	25	16 07	32	20 15	86
24	178	30.9	+1	58.2	84	08.7	63	+28 05.4	60 S	18 00	18 41	19 30	16 48	21	19 35	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 49 ^m 7		Mag: -4.0 PMG: 14 ^h 16 ^m		Mag: +1.2 PMG: 9 ^h 25 ^m		Mag: -2.3 PMG: 5 ^h 06 ^m		Mag: +0.2 PMG: 21 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	182	04.7	146	04.6	+14	46.7	218	46.2	-15	46.0
1	197	07.1	161	04.2		47.8	233	46.7		45.4
2	212	09.6	176	03.7		48.9	248	47.3		44.8
3	227	12.1	191	03.3		50.0	263	47.9		44.2
4	242	14.5	206	02.9		51.1	278	48.5		43.6
5	257	17.0	221	02.4	+14	52.2	293	49.0	-15	43.1
6	272	19.5	236	02.0	+14	53.3	308	49.6	-15	42.5
7	287	21.9	251	01.6		54.4	323	50.2		41.9
8	302	24.4	266	01.2		55.5	338	50.7		41.3
9	317	26.9	281	00.7		56.6	353	51.3		40.7
10	332	29.3	296	00.3		57.7	8	51.9		40.1
11	347	31.8	310	59.9	+14	58.8	23	52.5	-15	39.5
12	2	34.2	325	59.4	+14	59.8	38	53.0	-15	38.9
13	17	36.7	340	59.0	+15	00.9	53	53.6		38.3
14	32	39.2	355	58.6		02.0	68	54.2		37.7
15	47	41.6	10	58.1		03.1	83	54.8		37.1
16	62	44.1	25	57.7		04.2	98	55.3		36.5
17	77	46.6	40	57.3	+15	05.3	113	55.9	-15	36.0
18	92	49.0	55	56.8	+15	06.4	128	56.5	-15	35.4
19	107	51.5	70	56.4		07.4	143	57.1		34.8
20	122	54.0	85	56.0		08.5	158	57.6		34.2
21	137	56.4	100	55.5		09.6	173	58.2		33.6
22	152	58.9	115	55.1		10.7	188	58.8		33.0
23	168	01.4	130	54.7		11.8	203	59.4		32.4
24	183	03.8	145	54.2	+15	12.9	218	59.9	-15	31.8
Dif	—		-4		+11		+6		+6	
								+24		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 8			Edad: 6 ^d 9 SD: 15'6 PMG: 19 ^h 07 ^m	PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'6 R°: 52 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	30.9	+1	58.2	84	08.7	+28	05.4	60 N	4 12	5 03	5 45	8 27	100	4 56	13
1	193	31.0	+1	59.2	98	34.0	+28	02.1	58	19	07	46	9 00	91	4 22	23
2	208	31.2	+2	00.2	112	59.3	+27	58.7	56	25	10	48	25	84	3 57	29
3	223	31.4		01.1	127	24.8		55.1	54	31	13	49	9 45	80	37	33
4	238	31.6		02.1	141	50.4		51.4	52	36	16	50	10 01	77	21	35
5	253	31.8	+2	03.1	156	16.0	+27	47.5	50	4 40	5 18	5 51	10 15	75	3 06	38
6	268	32.0	+2	04.1	170	41.7	+27	43.5	45	4 49	5 23	5 53	10 44	70	2 37	42
7	283	32.2		05.1	185	07.5		39.3	40	4 56	27	55	11 07	67	2 14	44
8	298	32.4		06.0	199	33.4		34.9	35	5 01	31	56	25	65	1 54	47
9	313	32.6		07.0	213	59.4		30.4	30	05	33	57	11 41	63	38	49
10	328	32.8		08.0	228	25.5		25.7	20	12	37	5 59	12 08	60	1 10	52
11	343	32.9	+2	09.0	242	51.7	+27	20.9	10 N	5 16	5 40	6 01	12 32	56	0 46	54
12	358	33.1	+2	10.0	257	18.0	+27	15.9	0	5 18	5 42	6 03	12 53	54	0 24	56
13	13	33.3		11.0	271	44.3		10.8	10 S	19	43	04	13 15	51	0 01	58
14	28	33.5		11.9	286	10.8		05.6	20	18	43	05	13 38	48	** ** *	**
15	43	33.7		12.9	300	37.3	+27	00.1	30	15	43	07	14 05	44	** ** *	**
16	58	33.9		13.9	315	04.0	+26	54.6	35	13	42	08	21	42	23 56	65
17	73	34.1	+2	14.9	329	30.8	+26	48.9	40	5 10	5 41	6 08	14 39	40	23 39	67
18	88	34.3	+2	15.9	343	57.6	+26	43.0	45	5 06	5 40	6 09	15 01	36	23 17	71
19	103	34.5		16.8	358	24.6		37.1	50	5 01	38	11	29	31	22 50	76
20	118	34.6		17.8	12	51.6		30.9	52	4 58	37	11	43	28	37	79
21	133	34.8		18.8	27	18.8		24.7	54	55	36	12	15 58	26	21	83
22	148	35.0		19.8	41	46.0		18.3	56	51	35	12	16 17	21	22 03	87
23	163	35.2		20.8	56	13.4		11.7	58	48	34	13	16 39	16	21 41	93
24	178	35.4	+2	21.7	70	40.8	+26	05.0	60 S	4 43	5 32	6 14	17 09	6	21 12	103

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 45 ^m 8		Mag: -4.0 PMG: 14 ^h 17 ^m		Mag: +1.2 PMG: 9 ^h 24 ^m		Mag: -2.3 PMG: 5 ^h 02 ^m		Mag: +0.2 PMG: 21 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	183	03.8	145	54.2	+15	12.9	218	59.9	-15	31.8				
1	198	06.3	160	53.8		13.9	234	00.5		31.2				
2	213	08.7	175	53.4		15.0	249	01.1		30.6				
3	228	11.2	190	52.9		16.1	264	01.7		30.0				
4	243	13.7	205	52.5		17.2	279	02.2		29.4				
5	258	16.1	220	52.0	+15	18.3	294	02.8	-15	28.8				
6	273	18.6	235	51.6	+15	19.3	309	03.4	-15	28.2				
7	288	21.1	250	51.2		20.4	324	04.0		27.6				
8	303	23.5	265	50.7		21.5	339	04.6		27.0				
9	318	26.0	280	50.3		22.6	354	05.1		26.4				
10	333	28.5	295	49.9		23.6	9	05.7		25.8				
11	348	30.9	310	49.4	+15	24.7	24	06.3	-15	25.2				
12	3	33.4	325	49.0	+15	25.8	39	06.9	-15	24.6				
13	18	35.9	340	48.5		26.9	54	07.4		24.0				
14	33	38.3	355	48.1		27.9	69	08.0		23.4				
15	48	40.8	10	47.7		29.0	84	08.6		22.8				
16	63	43.2	25	47.2		30.1	99	09.2		22.2				
17	78	45.7	40	46.8	+15	31.1	114	09.8	-15	21.6				
18	93	48.2	55	46.3	+15	32.2	129	10.3	-15	21.0				
19	108	50.6	70	45.9		33.3	144	10.9		20.4				
20	123	53.1	85	45.5		34.3	159	11.5		19.8				
21	138	55.6	100	45.0		35.4	174	12.1		19.2				
22	153	58.0	115	44.6		36.5	189	12.7		18.6				
23	169	00.5	130	44.1		37.6	204	13.2		18.0				
24	184	03.0	145	43.7	+15	38.6	219	13.8	-15	17.4				
Dif	—		-4	+11		+6	+6		+24		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 05 ^m 5			Edad: 7 ^d 9 PHE { SD: 15'4 PMG: 19 ^h 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	35.4	+2	21.7	70	40.8	+26 05.0	60 N	18 31	19 13	20 05	10 07 100	5 09 4	
1	193	35.6		22.7	85	08.4 86	+25 58.2 68	58	29	09	19 57	31 91	4 45 12	
2	208	35.8		23.7	99	36.1 87	51.3 69	56	27	05	50	10 49 87	26 17	
3	223	36.0		24.7	114	03.8 87	44.2 71	54	26	19 01	44	11 05 82	4 10 21	
4	238	36.2		25.7	128	31.7 89	37.0 72	52	24	18 59	39	18 79	3 56 24	
5	253	36.3	+2	26.6	142	59.7 90	+25 29.7 73	50	18 23	18 56	19 35	11 30 76	3 44 27	
6	268	36.5	+2	27.6	157	27.7 90	+25 22.3 74	45	18 21	18 50	19 25	11 54 71	3 19 31	
7	283	36.7		28.6	171	55.9 92	14.7 76	40	19	46	18	12 14 67	2 58 36	
8	298	36.9		29.6	186	24.2 93	+25 07.0 77	35	17	42	12	30 64	41 39	
9	313	37.1		30.6	200	52.6 94	+24 59.1 79	30	15	39	07	12 44 61	27 41	
10	328	37.3		31.5	215	21.1 95	51.2 79	20	13	35	19 01	13 08 56	2 02 45	
11	343	37.5	+2	32.5	229	49.7 96	+24 43.1 81	10 N	18 11	18 32	18 56	13 28 53	1 40 48	
12	358	37.7	+2	33.5	244	18.4 97	+24 34.9 82	0	18 09	18 29	18 53	13 47 49	1 20 51	
13	13	37.9		34.5	258	47.3 99	26.6 83	10 S	07	28	52	14 06 46	0 59 55	
14	28	38.1		35.5	273	16.2 99	18.2 84	20	05	27	53	26 42	37 58	
15	43	38.2		36.4	287	45.2 100	09.7 85	30	03	27	55	14 49 38	0 11 63	
16	58	38.4		37.4	302	14.4 102	+24 01.1 86	35	02	27	57	15 03 35	** ** *	
17	73	38.6	+2	38.4	316	43.6 102	+23 52.3 88	40	18 01	18 28	18 59	15 19 31	** ** *	
18	88	38.8	+2	39.4	331	12.9 103	+23 43.4 89	45	17 59	18 29	19 03	15 37 28	** ** *	
19	103	39.0		40.3	345	42.4 105	34.4 90	50	58	30	08	16 00 23	** ** *	
20	118	39.2		41.3	0	11.9 105	25.4 90	52	57	31	10	11 20	23 56 79	
21	133	39.4		42.3	14	41.6 107	16.2 92	54	56	32	13	24 16	44 82	
22	148	39.6		43.3	29	11.4 108	+23 06.9 93	56	56	33	16	38 13	30 86	
23	163	39.8		44.3	43	41.2 108	+22 57.5 94	58	55	34	20	16 55 8	23 14 91	
24	178	39.9	+2	45.2	58	11.2 110	+22 48.0 95	60 S	17 54	18 35	19 24	17 15 1	22 55 97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 41 ^m 9		Mag: -4.0 PMG: 14 ^h 18 ^m		Mag: +1.2 PMG: 9 ^h 23 ^m		Mag: -2.3 PMG: 4 ^h 58 ^m		Mag: +0.2 PMG: 21 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	184	03.0	145	43.7	+15	38.6	219	13.8	-15	17.4	285	16.6	-22	18.6	42	31.7	+16	29.7
1	199	05.4	160	43.2		39.7	234	14.4		16.8	300	19.0		18.6	57	34.2		29.8
2	214	07.9	175	42.8		40.7	249	15.0		16.2	315	21.4		18.6	72	36.8		29.8
3	229	10.3	190	42.3		41.8	264	15.6		15.6	330	23.8		18.6	87	39.4		29.8
4	244	12.8	205	41.9		42.9	279	16.1		15.0	345	26.1		18.7	102	41.9		29.9
5	259	15.3	220	41.5	+15	43.9	294	16.7	-15	14.4	0	28.5	-22	18.7	117	44.5	+16	29.9
6	274	17.7	235	41.0	+15	45.0	309	17.3	-15	13.8	15	30.9	-22	18.7	132	47.1	+16	29.9
7	289	20.2	250	40.6		46.1	324	17.9		13.2	30	33.3		18.7	147	49.6		29.9
8	304	22.7	265	40.1		47.1	339	18.5		12.6	45	35.7		18.7	162	52.2		30.0
9	319	25.1	280	39.7		48.2	354	19.0		12.0	60	38.0		18.7	177	54.8		30.0
10	334	27.6	295	39.2		49.2	9	19.6		11.4	75	40.4		18.7	192	57.3		30.0
11	349	30.1	310	38.8	+15	50.3	24	20.2	-15	10.8	90	42.8	-22	18.7	207	59.9	+16	30.1
12	4	32.5	325	38.3	+15	51.4	39	20.8	-15	10.2	105	45.2	-22	18.7	223	02.5	+16	30.1
13	19	35.0	340	37.9		52.4	54	21.4		09.6	120	47.6		18.7	238	05.0		30.1
14	34	37.5	355	37.4		53.5	69	22.0		09.0	135	50.0		18.7	253	07.6		30.2
15	49	39.9	10	37.0		54.5	84	22.5		08.4	150	52.4		18.7	268	10.1		30.2
16	64	42.4	25	36.5		55.6	99	23.1		07.8	165	54.7		18.7	283	12.7		30.2
17	79	44.8	40	36.1	+15	56.6	114	23.7	-15	07.2	180	57.1	-22	18.7	298	15.3	+16	30.3
18	94	47.3	55	35.6	+15	57.7	129	24.3	-15	06.6	195	59.5	-22	18.7	313	17.8	+16	30.3
19	109	49.8	70	35.2		58.7	144	24.9		05.9	211	01.9		18.7	328	20.4		30.3
20	124	52.2	85	34.7	+15	59.8	159	25.4		05.3	226	04.3		18.7	343	23.0		30.3
21	139	54.7	100	34.3	+16	00.8	174	26.0		04.7	241	06.7		18.7	358	25.5		30.4
22	154	57.2	115	33.8		01.9	189	26.6		04.1	256	09.1		18.7	13	28.1		30.4
23	169	59.6	130	33.4		03.0	204	27.2		03.5	271	11.4		18.7	28	30.7		30.4
24	185	02.1	145	32.9	+16	04.0	219	27.8	-15	02.9	286	13.8	-22	18.7	43	33.2	+16	30.5
Dif	—		-4		+11		+6		+6		+24		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 2			Edad: 8 ^d 9 PHE { 4 ^h : 55/7 12 ^h : 55/5 20 ^h : 55/3 R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	39.9	+2	45.2	58	11.2	+22	48.0	60 N	4 05	4 57	5 39	11 47	93	5 13	1
1	193	40.1		46.2	72	41.3 ¹¹¹		38.4	58	13	5 01	41	12 02	89	4 57	6
2	208	40.3		47.2	87	11.5 ¹¹²		28.7	56	19	05	42	16	84	43	10
3	223	40.5		48.2	101	41.7 ¹¹²		18.9	54	25	08	44	27	81	31	14
4	238	40.7		49.1	116	12.1 ¹¹⁴	+22	09.0	52	31	11	45	37	78	20	17
5	253	40.9	+2	50.1	130	42.6 ¹¹⁵	+21	59.0	50	4 35	5 14	5 46	12 46	75	4 11	19
6	268	41.1	+2	51.1	145	13.2 ¹¹⁶	+21	48.9	45	4 45	5 20	5 49	13 05	69	3 50	25
7	283	41.3		52.1	159	43.9 ¹¹⁷		38.7	40	52	24	51	21	65	34	28
8	298	41.5		53.1	174	14.7 ¹¹⁸		28.4	35	4 58	28	53	34	61	20	32
9	313	41.6		54.0	188	45.6 ¹¹⁹		18.1	30	5 03	31	55	13 45	58	3 08	34
10	328	41.8		55.0	203	16.6 ¹²⁰	+21	07.6	20	10	36	5 58	14 04	53	2 47	39
11	343	42.0	+2	56.0	217	47.6 ¹²⁰	+20	57.1	10 N	5 14	5 39	6 00	14 21	49	2 28	44
12	358	42.2	+2	57.0	232	18.8 ¹²²	+20	46.4	0	5 17	5 41	6 02	14 36	45	2 11	47
13	13	42.4		57.9	246	50.1 ¹²³		35.7	10 S	19	43	04	14 52	41	1 54	51
14	28	42.6		58.9	261	21.5 ¹²⁴		24.9	20	18	44	06	15 08	37	35	55
15	43	42.8	+2	59.9	275	53.0 ¹²⁵		14.0	30	16	44	08	27	32	14	59
16	58	43.0	+3	00.9	290	24.5 ¹²⁵	+20	03.1	35	15	44	09	38	29	1 01	62
17	73	43.2	+3	01.8	304	56.2 ¹²⁷	+19	52.0	40	5 12	5 43	6 10	15 50	26	0 46	66
18	88	43.4	+3	02.8	319	27.9 ¹²⁷	+19	40.9	45	5 09	5 43	6 12	16 05	22	0 28	71
19	103	43.5		03.8	333	59.8 ¹²⁹		29.7	50	04	41	14	23	16	0 06	76
20	118	43.7		04.8	348	31.7 ¹²⁹		18.4	52	5 01	41	14	31	14	** ** *	**
21	133	43.9		05.7	3	03.8 ¹³¹	+19	07.0	54	4 59	40	15	40	12	** ** *	**
22	148	44.1		06.7	17	35.9 ¹³¹	+18	55.6	56	56	39	16	16 51	8	** ** *	**
23	163	44.3		07.7	32	08.1 ¹³²		44.1	58	52	38	17	17 03	4	** ** *	**
24	178	44.5	+3	08.7	46	40.4 ¹³³	+18	32.5	60 S	4 48	5 37	6 18	17 16	0	** ** *	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 11 ^h 37 ^m 9		Mag: -4.0 PMG: 14 ^h 18 ^m			Mag: +1.1 PMG: 9 ^h 22 ^m			Mag: -2.3 PMG: 4 ^h 54 ^m			Mag: +0.2 PMG: 21 ^h 02 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	185	02.1	145	32.9	+16	04.0	219	27.8	-15	02.9	286	13.8	-22	18.7	43	33.2
1	200	04.6	160	32.5		05.0	234	28.4		02.3	301	16.2		18.7	58	35.8
2	215	07.0	175	32.0		06.1	249	29.0		01.7	316	18.6		18.7	73	38.3
3	230	09.5	190	31.6		07.1	264	29.5		01.1	331	21.0		18.7	88	40.9
4	245	12.0	205	31.1		08.2	279	30.1	-15	00.5	346	23.4		18.8	103	43.5
5	260	14.4	220	30.7	+16	09.2	294	30.7	-14	59.9	1	25.8	-22	18.8	118	46.0
6	275	16.9	235	30.2	+16	10.3	309	31.3	-14	59.3	16	28.2	-22	18.8	133	48.6
7	290	19.3	250	29.7		11.3	324	31.9		58.7	31	30.6		18.8	148	51.2
8	305	21.8	265	29.3		12.4	339	32.5		58.0	46	32.9		18.8	163	53.7
9	320	24.3	280	28.8		13.4	354	33.0		57.4	61	35.3		18.8	178	56.3
10	335	26.7	295	28.4		14.5	9	33.6		56.8	76	37.7		18.8	193	58.8
11	350	29.2	310	27.9	+16	15.5	24	34.2	-14	56.2	91	40.1	-22	18.8	209	01.4
12	5	31.7	325	27.5	+16	16.5	39	34.8	-14	55.6	106	42.5	-22	18.8	224	04.0
13	20	34.1	340	27.0		17.6	54	35.4		55.0	121	44.9		18.8	239	06.5
14	35	36.6	355	26.6		18.6	69	36.0		54.4	136	47.3		18.8	254	09.1
15	50	39.1	10	26.1		19.7	84	36.6		53.8	151	49.7		18.8	269	11.7
16	65	41.5	25	25.6		20.7	99	37.1		53.2	166	52.1		18.8	284	14.2
17	80	44.0	40	25.2	+16	21.7	114	37.7	-14	52.5	181	54.5	-22	18.8	299	16.8
18	95	46.4	55	24.7	+16	22.8	129	38.3	-14	51.9	196	56.9	-22	18.8	314	19.3
19	110	48.9	70	24.3		23.8	144	38.9		51.3	211	59.3		18.8	329	21.9
20	125	51.4	85	23.8		24.9	159	39.5		50.7	227	01.7		18.8	344	24.5
21	140	53.8	100	23.3		25.9	174	40.1		50.1	242	04.1		18.8	359	27.0
22	155	56.3	115	22.9		26.9	189	40.7		49.5	257	06.5		18.8	14	29.6
23	170	58.8	130	22.4		28.0	204	41.3		48.9	272	08.9		18.8	29	32.1
24	186	01.2	145	22.0	+16	29.0	219	41.8	-14	48.3	287	11.2	-22	18.8	44	34.7
Dif	—		-5 +10			+6 +6			+24 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 9			Edad: 9 ^d 9 PHE { 4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:9 R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	44.5	+3 08.7	46	40.4	+18 32.5	60 N	18 35	19 18	20 11	13 20 88	5 14	0	
1	193	44.7	09.7	61	12.8 ¹³⁴	20.9 ¹¹⁶	58	33	13	20 02	31 83	5 03	4	
2	208	44.9	10.6	75	45.3 ¹³⁵	+18 09.1 ¹¹⁸	56	31	09	19 55	40 80	4 53	8	
3	223	45.1	11.6	90	17.9 ¹³⁶	+17 57.3 ¹¹⁸	54	30	05	49	48 76	45	10	
4	238	45.2	12.6	104	50.5 ¹³⁶	45.5 ¹¹⁸	52	28	19 02	43	13 55 74	37	13	
5	253	45.4	+3 13.6	119	23.3 ¹³⁸	+17 33.6 ¹¹⁹	50	18 26	18 59	19 38	14 01 72	4 30	15	
6	268	45.6	+3 14.5	133	56.1 ¹³⁸	+17 21.6 ¹²⁰	45	18 23	18 53	19 28	14 14 67	4 15	20	
7	283	45.8	15.5	148	29.0 ¹³⁹	+17 09.5 ¹²¹	40	21	48	20	26 62	4 02	24	
8	298	46.0	16.5	163	02.0 ¹⁴⁰	+16 57.4 ¹²¹	35	19	44	14	35 59	3 52	27	
9	313	46.2	17.4	177	35.1 ¹⁴¹	45.2 ¹²²	30	17	41	09	43 56	42	31	
10	328	46.4	18.4	192	08.2 ¹⁴¹	33.0 ¹²²	20	13	35	19 01	14 57 51	26	35	
11	343	46.6	+3 19.4	206	41.4 ¹⁴²	+16 20.6 ¹²⁴	10 N	18 11	18 32	18 56	15 10 46	3 12	39	
12	358	46.8	+3 20.4	221	14.8 ¹⁴⁴	+16 08.3 ¹²³	0	18 08	18 29	18 53	15 21 42	2 58	44	
13	13	46.9	21.3	235	48.2 ¹⁴⁴	+15 55.9 ¹²⁴	10 S	06	27	51	33 38	45	47	
14	28	47.1	22.3	250	21.6 ¹⁴⁴	43.4 ¹²⁵	20	03	25	51	45 34	30	52	
15	43	47.3	23.3	264	55.2 ¹⁴⁶	30.8 ¹²⁶	30	18 01	25	52	15 59 28	13	58	
16	58	47.5	24.3	279	28.8 ¹⁴⁶	18.2 ¹²⁶	35	17 59	24	54	16 07 25	2 03	61	
17	73	47.7	+3 25.2	294	02.5 ¹⁴⁷	+15 05.6 ¹²⁶	40	17 58	18 25	18 56	16 16 22	1 52	64	
18	88	47.9	+3 26.2	308	36.2 ¹⁴⁷	+14 52.9 ¹²⁷	45	17 56	18 25	18 59	16 27 18	1 39	68	
19	103	48.1	27.2	323	10.1 ¹⁴⁹	40.1 ¹²⁸	50	54	26	19 03	39 14	22	74	
20	118	48.3	28.2	337	44.0 ¹⁴⁹	27.3 ¹²⁸	52	53	26	05	45 11	15	76	
21	133	48.5	29.1	352	18.0 ¹⁵⁰	14.5 ¹²⁸	54	52	27	08	52 8	1 06	79	
22	148	48.6	30.1	6	52.0 ¹⁵⁰	+14 01.6 ¹²⁹	56	50	27	11	16 59 6	0 56	83	
23	163	48.8	31.1	21	26.1 ¹⁵¹	+13 48.6 ¹³⁰	58	49	28	14	17 07 3	45	86	
24	178	49.0	+3 32.1	36	00.3 ¹⁵²	+13 35.6 ¹³⁰	60 S	17 48	18 29	19 17	17 16 **	0 32	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 34 ^m 0		Mag: -4.0 PMG: 14 ^h 19 ^m		Mag: +1.1 PMG: 9 ^h 21 ^m		Mag: -2.3 PMG: 4 ^h 50 ^m		Mag: +0.2 PMG: 20 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	01.2	145 22.0	+16 29.0	219 41.8	-14 48.3	287 11.2	-22 18.8	44 34.7	+16 31.2
1	201	03.7	160 21.5	30.0	234 42.4	47.6	302 13.6	18.8	59 37.2	31.2
2	216	06.2	175 21.0	31.1	249 43.0	47.0	317 16.0	18.8	74 39.8	31.2
3	231	08.6	190 20.6	32.1	264 43.6	46.4	332 18.4	18.8	89 42.4	31.3
4	246	11.1	205 20.1	33.1	279 44.2	45.8	347 20.8	18.8	104 44.9	31.3
5	261	13.6	220 19.7	+16 34.2	294 44.8	-14 45.2	2 23.2	-22 18.8	119 47.5	+16 31.3
6	276	16.0	235 19.2	+16 35.2	309 45.4	-14 44.6	17 25.6	-22 18.8	134 50.0	+16 31.3
7	291	18.5	250 18.7	36.2	324 46.0	44.0	32 28.0	18.8	149 52.6	31.4
8	306	20.9	265 18.3	37.2	339 46.5	43.3	47 30.4	18.9	164 55.2	31.4
9	321	23.4	280 17.8	38.3	354 47.1	42.7	62 32.8	18.9	179 57.7	31.4
10	336	25.9	295 17.3	39.3	9 47.7	42.1	77 35.2	18.9	195 00.3	31.5
11	351	28.3	310 16.9	+16 40.3	24 48.3	-14 41.5	92 37.6	-22 18.9	210 02.8	+16 31.5
12	6	30.8	325 16.4	+16 41.3	39 48.9	-14 40.9	107 40.0	-22 18.9	225 05.4	+16 31.5
13	21	33.3	340 15.9	42.4	54 49.5	40.3	122 42.4	18.9	240 07.9	31.5
14	36	35.7	355 15.5	43.4	69 50.1	39.6	137 44.8	18.9	255 10.5	31.6
15	51	38.2	10 15.0	44.4	84 50.7	39.0	152 47.2	18.9	270 13.1	31.6
16	66	40.7	25 14.6	45.4	99 51.3	38.4	167 49.6	18.9	285 15.6	31.6
17	81	43.1	40 14.1	+16 46.5	114 51.9	-14 37.8	182 52.0	-22 18.9	300 18.2	+16 31.6
18	96	45.6	55 13.6	+16 47.5	129 52.4	-14 37.2	197 54.4	-22 18.9	315 20.7	+16 31.7
19	111	48.1	70 13.1	48.5	144 53.0	36.6	212 56.8	18.9	330 23.3	31.7
20	126	50.5	85 12.7	49.5	159 53.6	35.9	227 59.3	18.9	345 25.8	31.7
21	141	53.0	100 12.2	50.5	174 54.2	35.3	243 01.7	18.9	0 28.4	31.8
22	156	55.4	115 11.7	51.6	189 54.8	34.7	258 04.1	18.9	15 30.9	31.8
23	171	57.9	130 11.3	52.6	204 55.4	34.1	273 06.5	18.9	30 33.5	31.8
24	187	00.4	145 10.8	+16 53.6	219 56.0	-14 33.5	288 08.9	-22 18.9	45 36.1	+16 31.8
Dif	—		-5	+10	+6	+6	+24	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 04 ^m 6			Edad: 10 ^d 9 PHE { SD: 14'9 PMG: 22 ^h 13 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	178	49.0	+3	32.1	36	00.3	+13	35.6	3	58	4	50	5	33	14	48
1	193	49.2		33.0	50	34.6 ¹⁵³		22.6 ¹³⁰	58	4	06	55	35	14	54	84
2	208	49.4		34.0	65	08.9 ¹⁵³	+13	09.5 ¹³¹	56	14	4	59	37	15	00	77
3	223	49.6		35.0	79	43.3 ¹⁵⁴	+12	56.4 ¹³¹	54	20	5	03	39	04	75	5
4	238	49.8		35.9	94	17.7 ¹⁵⁴		43.2 ¹³²	52	26		07	41	09	72	50
5	253	50.0	+3	36.9	108	52.2 ¹⁵⁵	+12	30.0 ¹³²	50	4	31	5	10	5	42	15
6	268	50.2	+3	37.9	123	26.8 ¹⁵⁶	+12	16.7 ¹³³	45	4	41	5	16	5	45	15
7	283	50.3		38.9	138	01.4 ¹⁵⁶	+12	03.4 ¹³³	40	49		21	48	28	61	26
8	298	50.5		39.8	152	36.1 ¹⁵⁷	+11	50.1 ¹³³	35	4	55	25	50	34	57	19
9	313	50.7		40.8	167	10.9 ¹⁵⁸		36.7 ¹³⁴	30	5	00	28	52	39	54	13
10	328	50.9		41.8	181	45.7 ¹⁵⁸		23.3 ¹³⁴	20	08		34	56	48	49	4
11	343	51.1	+3	42.7	196	20.5 ¹⁵⁸	+11	09.8 ¹³⁵	10 N	5	13	5	38	5	59	15
12	358	51.3	+3	43.7	210	55.4 ¹⁵⁹	+10	56.3 ¹³⁵	0	5	17	5	41	6	01	16
13	13	51.5		44.7	225	30.4 ¹⁶⁰		42.8 ¹³⁵	10 S	18		43	04	11	36	32
14	28	51.7		45.7	240	05.4 ¹⁶⁰		29.2 ¹³⁶	20	19		44	06	19	31	22
15	43	51.9		46.6	254	40.5 ¹⁶¹		15.7 ¹³⁵	30	18		45	09	27	27	11
16	58	52.0		47.6	269	15.6 ¹⁶¹	+10	02.0 ¹³⁷	35	16		46	11	32	24	3
17	73	52.2	+3	48.6	283	50.8 ¹⁶²	+9	48.4 ¹³⁶	40	5	14	5	45	6	13	16
18	88	52.4	+3	49.5	298	26.0 ¹⁶²	+9	34.7 ¹³⁷	45	5	11	5	45	6	14	16
19	103	52.6		50.5	313	01.3 ¹⁶³		21.0 ¹³⁷	50	07		45	17	53	11	36
20	118	52.8		51.5	327	36.6 ¹⁶³	+9	07.2 ¹³⁸	52	05		44	18	16	56	10
21	133	53.0		52.5	342	11.9 ¹⁶³	+8	53.5 ¹³⁷	54	03		44	19	17	00	8
22	148	53.2		53.4	356	47.4 ¹⁶⁵		39.7 ¹³⁸	56	5	00	43	20	05	4	19
23	163	53.4		54.4	11	22.8 ¹⁶⁴		25.8 ¹³⁹	58	4	57	43	22	10	1	11
24	178	53.6	+3	55.4	25	58.3 ¹⁶⁵	+8	12.0 ¹³⁸	60 S	4	53	5	42	6	23	17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 30 ^m 1		Mag: -4.0 PMG: 14 ^h 20 ^m			Mag: +1.1 PMG: 9 ^h 20 ^m			Mag: -2.3 PMG: 4 ^h 47 ^m			Mag: +0.2 PMG: 20 ^h 54 ^m				
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	187	00.4	145	10.8	+16	53.6	219	56.0	-14	33.5	288	08.9	-22	18.9		
1	202	02.8	160	10.3		54.6	234	56.6		32.8	303	11.3		18.9		
2	217	05.3	175	09.9		55.6	249	57.2		32.2	318	13.7		18.9		
3	232	07.8	190	09.4		56.6	264	57.8		31.6	333	16.1		18.9		
4	247	10.2	205	08.9		57.7	279	58.4		31.0	348	18.5		18.9		
5	262	12.7	220	08.5	+16	58.7	294	59.0	-14	30.4	3	20.9	-22	18.9		
6	277	15.2	235	08.0	+16	59.7	309	59.5	-14	29.7	18	23.3	-22	18.9		
7	292	17.6	250	07.5	+17	00.7	325	00.1		29.1	33	25.7		18.9		
8	307	20.1	265	07.0		01.7	340	00.7		28.5	48	28.1		18.9		
9	322	22.5	280	06.6		02.7	355	01.3		27.9	63	30.5		18.9		
10	337	25.0	295	06.1		03.7	10	01.9		27.3	78	32.9		18.9		
11	352	27.5	310	05.6	+17	04.7	25	02.5	-14	26.6	93	35.3	-22	18.9		
12	7	29.9	325	05.1	+17	05.7	40	03.1	-14	26.0	108	37.8	-22	18.9		
13	22	32.4	340	04.7		06.8	55	03.7		25.4	123	40.2		18.9		
14	37	34.9	355	04.2		07.8	70	04.3		24.8	138	42.6		18.9		
15	52	37.3	10	03.7		08.8	85	04.9		24.1	153	45.0		18.9		
16	67	39.8	25	03.3		09.8	100	05.5		23.5	168	47.4		18.9		
17	82	42.3	40	02.8	+17	10.8	115	06.1	-14	22.9	183	49.8	-22	18.9		
18	97	44.7	55	02.3	+17	11.8	130	06.7	-14	22.3	198	52.2	-22	18.9		
19	112	47.2	70	01.8		12.8	145	07.3		21.7	213	54.6		19.0		
20	127	49.7	85	01.3		13.8	160	07.9		21.0	228	57.0		19.0		
21	142	52.1	100	00.9		14.8	175	08.4		20.4	243	59.4		19.0		
22	157	54.6	115	00.4		15.8	190	09.0		19.8	259	01.9		19.0		
23	172	57.0	129	59.9		16.8	205	09.6		19.2	274	04.3		19.0		
24	187	59.5	144	59.4	+17	17.8	220	10.2	-14	18.5	289	06.7	-22	19.0		
Dif	—		-5		+10		+6		+6		+24		0		+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 3			Edad: 11 ^d 9 PHE { SD: 14'8 PMG: 22 ^h 53 ^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	178	53.6	+3 55.4	25	58.3	+8 12.0	60 N	18 40	19 23	20 16	16 12 82	5 13 **		
1	193	53.7		40	33.8 ¹⁶⁵	+7 58.1 ¹³⁹	58	38	18	07	15 78	09 2		
2	208	53.9		55	09.4 ¹⁶⁶	44.2 ¹³⁹	56	35	13	20 00	17 75	06 4		
3	223	54.1		69	45.0 ¹⁶⁶	30.3 ¹³⁹	54	33	09	19 53	19 73	03 0		
4	238	54.3	+3 59.2	84	20.7 ¹⁶⁷	16.3 ¹⁴⁰	52	31	06	47	21 70	5 00 9		
5	253	54.5	+4 00.2	98	56.4 ¹⁶⁷	+7 02.4 ¹³⁹	50	18 30	19 02	19 42	16 22 68	4 57 12		
6	268	54.7	+4 01.2	113	32.1 ¹⁶⁷	+6 48.4 ¹⁴⁰	45	18 26	18 56	19 31	16 26 63	4 52 16		
7	283	54.9		128	07.8 ¹⁶⁷	34.4 ¹⁴⁰	40	23	50	22	29 59	47 20		
8	298	55.1		142	43.6 ¹⁶⁸	20.4 ¹⁴⁰	35	20	46	16	31 56	43 23		
9	313	55.2		157	19.5 ¹⁶⁹	+6 06.3 ¹⁴¹	30	18	42	10	33 53	40 25		
10	328	55.4		171	55.3 ¹⁶⁸	+5 52.3 ¹⁴⁰	20	14	36	19 02	37 48	34 30		
11	343	55.6	+4 06.0	186	31.2 ¹⁶⁹	+5 38.2 ¹⁴¹	10 N	18 11	18 32	18 56	16 40 44	4 28 35		
12	358	55.8	+4 07.0	201	07.1 ¹⁶⁹	+5 24.1 ¹⁴¹	0	18 08	18 28	18 52	16 43 39	4 23 39		
13	13	56.0		215	43.1 ¹⁷⁰	+5 10.0 ¹⁴¹	10 S	05	26	50	47 34	18 43		
14	28	56.2		230	19.1 ¹⁷⁰	+4 55.9 ¹⁴¹	20	18 02	24	49	50 30	12 48		
15	43	56.4		244	55.1 ¹⁷⁰	41.8 ¹⁴¹	30	17 58	22	50	54 25	05 54		
16	58	56.6		259	31.1 ¹⁷⁰	27.6 ¹⁴²	35	56	22	51	56 22	4 02 56		
17	73	56.7	+4 11.8	274	07.1 ¹⁷⁰	+4 13.5 ¹⁴¹	40	17 54	18 21	18 53	16 58 19	3 57 60		
18	88	56.9	+4 12.8	288	43.2 ¹⁷¹	+3 59.3 ¹⁴²	45	17 52	18 21	18 55	17 01 15	3 52 64		
19	103	57.1		303	19.3 ¹⁷¹	45.1 ¹⁴²	50	49	21	18 59	04 11	46 69		
20	118	57.3		317	55.4 ¹⁷¹	31.0 ¹⁴¹	52	48	22	19 01	06 9	44 71		
21	133	57.5		332	31.6 ¹⁷²	16.8 ¹⁴²	54	47	22	03	08 6	41 73		
22	148	57.7		347	07.8 ¹⁷²	+3 02.6 ¹⁴²	56	45	22	05	09 5	37 76		
23	163	57.9		1	43.9 ¹⁷¹	+2 48.4 ¹⁴²	58	43	22	08	11 2	33 80		
24	178	58.1	+4 18.6	16	20.1 ¹⁷²	+2 34.1 ¹⁴³	60 S	17 42	18 23	19 11	17 14 **	3 29 83		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 26 ^m 2		Mag: -4.0 PMG: 14 ^h 20 ^m			Mag: +1.1 PMG: 9 ^h 19 ^m			Mag: -2.3 PMG: 4 ^h 43 ^m			Mag: +0.2 PMG: 20 ^h 50 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	187	59.5	144	59.4	+17 17.8	220	10.2	-14 18.5	289	06.7	-22 19.0	46	37.3	+16 32.5
1	203	02.0	159	59.0		235	10.8		304	09.1		61	39.9	
2	218	04.4	174	58.5		250	11.4		319	11.5		76	42.4	
3	233	06.9	189	58.0		265	12.0		334	13.9		91	45.0	
4	248	09.4	204	57.5		280	12.6		349	16.3		106	47.5	
5	263	11.8	219	57.0	+17 22.8	295	13.2	-14 15.4	4	18.8	-22 19.0	121	50.1	+16 32.6
6	278	14.3	234	56.6	+17 23.8	310	13.8	-14 14.8	19	21.2	-22 19.0	136	52.6	+16 32.6
7	293	16.8	249	56.1		325	14.4		34	23.6		151	55.2	
8	308	19.2	264	55.6		340	15.0		49	26.0		166	57.7	
9	323	21.7	279	55.1		355	15.6		64	28.4		182	00.3	
10	338	24.1	294	54.6		10	16.2		79	30.8		197	02.8	
11	353	26.6	309	54.2	+17 28.7	25	16.8	-14 11.6	94	33.3	-22 19.0	212	05.4	+16 32.8
12	8	29.1	324	53.7	+17 29.7	40	17.4	-14 11.0	109	35.7	-22 19.0	227	07.9	+16 32.8
13	23	31.5	339	53.2		55	18.0		124	38.1		242	10.5	
14	38	34.0	354	52.7		70	18.6		139	40.5		257	13.0	
15	53	36.5	9	52.2		85	19.2		154	42.9		272	15.6	
16	68	38.9	24	51.7		100	19.8		169	45.3		287	18.1	
17	83	41.4	39	51.3	+17 34.7	115	20.4	-14 07.9	184	47.8	-22 19.0	302	20.7	+16 32.9
18	98	43.9	54	50.8	+17 35.7	130	21.0	-14 07.2	199	50.2	-22 19.0	317	23.2	+16 32.9
19	113	46.3	69	50.3		145	21.6		214	52.6		332	25.8	
20	128	48.8	84	49.8		160	22.2		229	55.0		347	28.3	
21	143	51.3	99	49.3		175	22.8		244	57.4		2	30.9	
22	158	53.7	114	48.8		190	23.4		259	59.9		17	33.4	
23	173	56.2	129	48.3		205	24.0		275	02.3		32	36.0	
24	188	58.6	144	47.9	+17 41.6	220	24.6	-14 03.5	290	04.7	-22 19.0	47	38.5	+16 33.1
Dif	—		-5 +10			+6 +6			+24 0			+25 0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 12 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /1 20 ^h : 54 ^m /1										
	PMG: 12 ^h 04 ^m 0			SD: 14 ^h 8 PMG: 23 ^h 32 ^m R ^o : 39 ^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	58.1	+4	16	20.1	+2	34.1	3	51	4	44	5	27	17 34 82
1	193	58.2		30	56.3 ¹⁷²		19.9 ¹⁴²	4	00	49	29	33	79	11 1
2	208	58.4		45	32.6 ¹⁷³	+2	05.7 ¹⁴²	08	54	32		32	76	10 4
3	223	58.6		60	08.8 ¹⁷²	+1	51.5 ¹⁴²	14	4	58	34	32	73	10 6
4	238	58.8		74	45.1 ¹⁷³		37.3 ¹⁴²	20	5	02	36	31	70	09 9
5	253	59.0	+4	89	21.4 ¹⁷³	+1	23.0 ¹⁴³	4	26	5	05	5	38	17 30 69
6	268	59.2	+4	103	57.6 ¹⁷²	+1	08.8 ¹⁴²	4	37	5	12	5	42	17 29 63
7	283	59.4		118	33.9 ¹⁷³	+0	54.6 ¹⁴²	45	18	45		28	59	07 19
8	298	59.6		133	10.2 ¹⁷³		40.3 ¹⁴³	52	22	48		27	56	06 22
9	313	59.7		147	46.5 ¹⁷³		26.1 ¹⁴²	4	58	26	50	26	53	05 26
10	328	59.9		162	22.9 ¹⁷⁴	+0	11.9 ¹⁴²	5	06	32	54	25	48	04 31
11	344	00.1	+4	176	59.2 ¹⁷³	-0	02.3 ¹⁴²	5	12	5	36	5	58	17 24 43
12	359	00.3	+4	191	35.5 ¹⁷³	-0	16.6 ¹⁴³	5	16	5	40	6	01	17 22 40
13	14	00.5		206	11.8 ¹⁷³		30.8 ¹⁴²	18	43	04	07	21	35	01 43
14	29	00.7		220	48.2 ¹⁷⁴		45.0 ¹⁴²	19	45	07		20	31	5 00 48
15	44	00.9		235	24.5 ¹⁷³	-0	59.2 ¹⁴²	19	46	10		19	25	4 59 53
16	59	01.1		250	00.9 ¹⁷⁴	-1	13.4 ¹⁴²	18	47	12		18	23	58 56
17	74	01.2	+4	264	37.2 ¹⁷³	-1	27.6 ¹⁴²	5	16	5	47	6	15	17 17 20
18	89	01.4	+4	279	13.5 ¹⁷³	-1	41.8 ¹⁴²	5	14	5	48	6	17	17 16 16
19	104	01.6		293	49.9 ¹⁷⁴	-1	56.0 ¹⁴²	10	48	20		15	11	4 56 64
20	119	01.8		308	26.2 ¹⁷³	-2	10.1 ¹⁴¹	08	48	21		15	9	55 68
21	134	02.0		323	02.5 ¹⁷³		24.3 ¹⁴²	06	47	23		14	7	55 70
22	149	02.2		337	38.9 ¹⁷⁴		38.4 ¹⁴¹	04	47	24		14	4	54 73
23	164	02.4		352	15.2 ¹⁷³	-2	52.6 ¹⁴²	5	01	47	26	13	1	53 76
24	179	02.5	+4	6	51.5 ¹⁷³	-3	06.7 ¹⁴¹	4	58	5	47	6	28	17 12 **

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 22 ^m 2		Mag: -4.0 PMG: 14 ^h 21 ^m			Mag: +1.1 PMG: 9 ^h 18 ^m			Mag: -2.3 PMG: 4 ^h 39 ^m			Mag: +0.2 PMG: 20 ^h 46 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°
0	188	58.6	144	47.9	+17	220	24.6	-14	290	04.7	-22	47	38.5	+16
1	204	01.1	159	47.4		235	25.2		305	07.1		62	41.1	
2	219	03.6	174	46.9		250	25.8		320	09.5		77	43.6	
3	234	06.0	189	46.4		265	26.4		335	12.0		92	46.2	
4	249	08.5	204	45.9		280	27.0		350	14.4		107	48.7	
5	264	11.0	219	45.4	+17	295	27.6	-14	5	16.8	-22	122	51.2	+16
6	279	13.4	234	44.9	+17	310	28.2	-13	20	19.2	-22	137	53.8	+16
7	294	15.9	249	44.4		325	28.8		35	21.7		152	56.3	
8	309	18.4	264	44.0		340	29.4		50	24.1		167	58.9	
9	324	20.8	279	43.5		355	30.0		65	26.5		183	01.4	
10	339	23.3	294	43.0		10	30.6		80	28.9		198	04.0	
11	354	25.8	309	42.5	+17	25	31.2	-13	95	31.4	-22	213	06.5	+16
12	9	28.2	324	42.0	+17	40	31.8	-13	110	33.8	-22	228	09.1	+16
13	24	30.7	339	41.5		55	32.4		125	36.2		243	11.6	
14	39	33.1	354	41.0		70	33.0		140	38.6		258	14.2	
15	54	35.6	9	40.5		85	33.6		155	41.1		273	16.7	
16	69	38.1	24	40.0		100	34.2		170	43.5		288	19.2	
17	84	40.5	39	39.5	+17	115	34.8	-13	185	45.9	-22	303	21.8	+16
18	99	43.0	54	39.0	+17	130	35.4	-13	200	48.3	-22	318	24.3	+16
19	114	45.5	69	38.5	+18	145	36.0		215	50.8		333	26.9	
20	129	47.9	84	38.1		160	36.6		230	53.2		348	29.4	
21	144	50.4	99	37.6		175	37.2		245	55.6		3	32.0	
22	159	52.9	114	37.1		190	37.8		260	58.1		18	34.5	
23	174	55.3	129	36.6		205	38.4		276	00.5		33	37.0	
24	189	57.8	144	36.1	+18	220	39.0	-13	291	02.9	-22	48	39.6	+16
Dif	—		-5	+10		+6	+6		+24		0	+25		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 7			Edad: 13 ^d 9 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: ***m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	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	02.5	+4 41.8	6	51.5	-3 06.7	60 N	18 45	19 28	20 22	18 56 84		5 10 **	
1	194	02.7		21	27.8 ¹⁷³	20.8 ¹⁴¹	58	42	23	13	52 80		12 2	
2	209	02.9		36	04.1 ¹⁷³	34.9 ¹⁴¹	56	39	18	20 04	48 77		14 5	
3	224	03.1		50	40.4 ¹⁷³	-3 49.0 ¹⁴¹	54	37	13	19 57	45 74		16 7	
4	239	03.3		65	16.7 ¹⁷³	-4 03.0 ¹⁴⁰	52	35	09	51	41 72		18 9	
5	254	03.5	+4 46.6	79	52.9 ¹⁷²	-4 17.1 ¹⁴¹	50	18 33	19 06	19 45	18 39 69		5 20 11	
6	269	03.7	+4 47.5	94	29.2 ¹⁷³	-4 31.1 ¹⁴⁰	45	18 28	18 58	19 34	18 32 65		5 23 16	
7	284	03.8		109	05.4 ¹⁷²	45.1 ¹⁴⁰	40	25	52	25	27 61		26 20	
8	299	04.0		123	41.7 ¹⁷³	-4 59.1 ¹⁴⁰	35	22	47	17	23 57		28 23	
9	314	04.2		138	17.9 ¹⁷²	-5 13.1 ¹⁴⁰	30	19	43	11	19 54		31 26	
10	329	04.4		152	54.1 ¹⁷²	27.1 ¹⁴⁰	20	14	37	19 02	13 48		35 30	
11	344	04.6	+4 52.3	167	30.2 ¹⁷¹	-5 41.0 ¹³⁹	10 N	18 11	18 32	18 56	18 07 44		5 38 35	
12	359	04.8	+4 53.3	182	06.4 ¹⁷²	-5 54.9 ¹³⁹	0	18 07	18 28	18 52	18 02 40		5 41 40	
13	14	05.0		196	42.5 ¹⁷¹	-6 08.8 ¹³⁹	10 S	03	25	49	17 56 36		44 44	
14	29	05.2		211	18.7 ¹⁷²	22.7 ¹³⁹	20	18 00	22	47	51 31		48 48	
15	44	05.3		225	54.7 ¹⁷⁰	36.5 ¹³⁸	30	17 56	20	48	44 27		52 53	
16	59	05.5		240	30.8 ¹⁷¹	-6 50.3 ¹³⁸	35	54	19	48	41 24		54 56	
17	74	05.7	+4 58.1	255	06.9 ¹⁷¹	-7 04.1 ¹³⁸	40	17 51	18 18	18 50	17 37 20		5 57 59	
18	89	05.9	+4 59.1	269	42.9 ¹⁷⁰	-7 17.9 ¹³⁸	45	17 48	18 18	18 52	17 32 17		6 00 63	
19	104	06.1	+5 00.0	284	18.9 ¹⁷⁰	31.6 ¹³⁷	50	45	17	55	26 13		03 69	
20	119	06.3	+5 01.0	298	54.9 ¹⁷⁰	45.3 ¹³⁷	52	43	17	56	24 10		05 71	
21	134	06.4		313	30.8 ¹⁶⁹	-7 59.0 ¹³⁷	54	42	17	18 58	21 8		07 73	
22	149	06.6		328	06.8 ¹⁷⁰	-8 12.7 ¹³⁷	56	40	17	19 00	18 5		09 76	
23	164	06.8		342	42.6 ¹⁶⁸	26.3 ¹³⁶	58	38	17	02	14 3		11 79	
24	179	07.0	+5 04.8	357	18.5 ¹⁶⁹	-8 39.9 ¹³⁶	60 S	17 36	18 17	19 05	17 11 **		6 14 82	
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO		
	PMG: 11 ^h 18 ^m 3			Mag: -4.0 PMG: 14 ^h 22 ^m			Mag: +1.1 PMG: 9 ^h 17 ^m			Mag: -2.3 PMG: 4 ^h 35 ^m		Mag: +0.2 PMG: 20 ^h 42 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	189	57.8		144	36.1	+18 04.9	220	39.0	-13 48.3	291	02.9	-22 19.0	48 39.6	+16 33.7
1	205	00.2		159	35.6	05.9	235	39.6	47.6	306	05.4	19.0	63 42.1	33.7
2	220	02.7		174	35.1	06.8	250	40.2	47.0	321	07.8	19.0	78 44.7	33.7
3	235	05.2		189	34.6	07.8	265	40.8	46.3	336	10.2	19.0	93 47.2	33.7
4	250	07.6		204	34.1	08.7	280	41.4	45.7	351	12.6	19.0	108 49.8	33.7
5	265	10.1		219	33.6	+18 09.7	295	42.0	-13 45.1	6	15.1	-22 19.0	123 52.3	+16 33.8
6	280	12.6		234	33.1	+18 10.7	310	42.6	-13 44.4	21	17.5	-22 19.0	138 54.8	+16 33.8
7	295	15.0		249	32.6	11.6	325	43.2	43.8	36	19.9	19.0	153 57.4	33.8
8	310	17.5		264	32.1	12.6	340	43.8	43.2	51	22.4	19.1	168 59.9	33.8
9	325	20.0		279	31.6	13.5	355	44.4	42.5	66	24.8	19.1	184 02.5	33.9
10	340	22.4		294	31.1	14.5	10	45.0	41.9	81	27.2	19.1	199 05.0	33.9
11	355	24.9		309	30.6	+18 15.4	25	45.6	-13 41.2	96	29.7	-22 19.1	214 07.5	+16 33.9
12	10	27.4		324	30.1	+18 16.4	40	46.2	-13 40.6	111	32.1	-22 19.1	229 10.1	+16 33.9
13	25	29.8		339	29.6	17.3	55	46.8	40.0	126	34.5	19.1	244 12.6	33.9
14	40	32.3		354	29.1	18.3	70	47.4	39.3	141	37.0	19.1	259 15.2	34.0
15	55	34.7		9	28.6	19.3	85	48.0	38.7	156	39.4	19.1	274 17.7	34.0
16	70	37.2		24	28.1	20.2	100	48.6	38.0	171	41.8	19.1	289 20.3	34.0
17	85	39.7		39	27.6	+18 21.2	115	49.2	-13 37.4	186	44.3	-22 19.1	304 22.8	+16 34.0
18	100	42.1		54	27.1	+18 22.1	130	49.9	-13 36.8	201	46.7	-22 19.1	319 25.3	+16 34.1
19	115	44.6		69	26.6	23.1	145	50.5	36.1	216	49.2	19.1	334 27.9	34.1
20	130	47.1		84	26.1	24.0	160	51.1	35.5	231	51.6	19.1	349 30.4	34.1
21	145	49.5		99	25.6	24.9	175	51.7	34.8	246	54.0	19.1	4 33.0	34.1
22	160	52.0		114	25.1	25.9	190	52.3	34.2	261	56.5	19.1	19 35.5	34.1
23	175	54.5		129	24.6	26.8	205	52.9	33.6	276	58.9	19.1	34 38.0	34.2
24	190	56.9		144	24.1	+18 27.8	220	53.5	-13 32.9	292	01.3	-22 19.1	49 40.6	+16 34.2
Dif	—			-5 +10			+6 +6			+24 0		+25 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 4			Edad: 14 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 0 ^h 11 ^m R°: 41 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	179	07.0	+5	04.8	357	18.5	-8	39.9	60 N	3	44	4	38	5	21	20	20			
1	194	07.2		05.8	11	54.3 ¹⁶⁸	-8	53.5 ¹³⁶	58	3	53	43	24		12	83				
2	209	07.4		06.7	26	30.1 ¹⁶⁸	-9	07.0 ¹³⁵	56	4	02	48	27		20	05				
3	224	07.6		07.7	41	05.9 ¹⁶⁸		20.5 ¹³⁵	54	09	53	29		19	59	76				
4	239	07.7		08.7	55	41.6 ¹⁶⁷		34.0 ¹³⁵	52	15	4	57	31		53	73				
5	254	07.9	+5	09.6	70	17.3 ¹⁶⁷	-9	47.4 ¹³⁴	50	4	21	5	01	5	33	19	48			
6	269	08.1	+5	10.6	84	53.0 ¹⁶⁷	-10	00.8 ¹³⁴	45	4	33	5	08	5	38	19	37			
7	284	08.3		11.5	99	28.6 ¹⁶⁶		14.1 ¹³³	40	42	14	42		28	61		46			
8	299	08.5		12.5	114	04.2 ¹⁶⁶		27.5 ¹³⁴	35	49	19	45		20	58		51			
9	314	08.7		13.5	128	39.8 ¹⁶⁶		40.7 ¹³²	30	4	55	24	48		13	55		5		
10	329	08.9		14.4	143	15.3 ¹⁶⁵	-10	54.0 ¹³³	20	5	04	30	52		19	01	51	6		
11	344	09.0	+5	15.4	157	50.8 ¹⁶⁵	-11	07.2 ¹³²	10 N	5	11	5	35	5	56	18	51	46	6	
12	359	09.2	+5	16.3	172	26.2 ¹⁶⁴	-11	20.4 ¹³²	0	5	15	5	39	6	00	18	42	42	6	
13	14	09.4		17.3	187	01.6 ¹⁶⁴		33.5 ¹³¹	10 S	18	43	04		32	38		28	45		
14	29	09.6		18.2	201	37.0 ¹⁶⁴		46.6 ¹³¹	20	20	45	07		22	34		36	49		
15	44	09.8		19.2	216	12.3 ¹⁶³	-11	59.6 ¹³⁰	30	20	48	12		11	29		45	54		
16	59	10.0		20.2	230	47.5 ¹⁶²	-12	12.6 ¹³⁰	35	19	49	14		18	05	26		50	58	
17	74	10.1	+5	21.1	245	22.8 ¹⁶³	-12	25.5 ¹²⁹	40	5	18	5	49	6	17	17	57	23	6	
18	89	10.3	+5	22.1	259	57.9 ¹⁶¹	-12	38.4 ¹²⁹	45	5	16	5	50	6	20	17	49	19	7	
19	104	10.5		23.0	274	33.1 ¹⁶²	-12	51.3 ¹²⁹	50	13	51	23		39	14		12	70		
20	119	10.7		24.0	289	08.2 ¹⁶¹	-13	04.1 ¹²⁸	52	12	51	25		34	12		16	72		
21	134	10.9		24.9	303	43.2 ¹⁶⁰		16.9 ¹²⁸	54	10	51	26		29	9		20	75		
22	149	11.1		25.9	318	18.2 ¹⁶⁰		29.6 ¹²⁷	56	08	51	28		23	7		25	78		
23	164	11.2		26.8	332	53.1 ¹⁵⁹		42.2 ¹²⁶	58	06	51	30		17	3		30	82		
24	179	11.4	+5	27.8	347	28.0 ¹⁵⁹	-13	54.8 ¹²⁶	60 S	5	03	5	51	6	33	17	10	**	7	36
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 11 ^h 14 ^m 4		Mag: -4.0 PMG: 14 ^h 23 ^m			Mag: +1.1 PMG: 9 ^h 16 ^m			Mag: -2.3 PMG: 4 ^h 31 ^m			Mag: +0.2 PMG: 20 ^h 38 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	190	56.9	144	24.1	+18	27.8	220	53.5	-13	32.9	292	01.3	-22	19.1	49	40.6	+16	34.2		
1	205	59.4	159	23.6		28.7	235	54.1		32.3	307	03.8		19.1	64	43.1		34.2		
2	221	01.8	174	23.1		29.7	250	54.7		31.6	322	06.2		19.1	79	45.6		34.2		
3	236	04.3	189	22.6		30.6	265	55.3		31.0	337	08.7		19.1	94	48.2		34.3		
4	251	06.8	204	22.1		31.6	280	55.9		30.4	352	11.1		19.1	109	50.7		34.3		
5	266	09.2	219	21.6	+18	32.5	295	56.5	-13	29.7	7	13.5	-22	19.1	124	53.3	+16	34.3		
6	281	11.7	234	21.0	+18	33.4	310	57.1	-13	29.1	22	16.0	-22	19.1	139	55.8	+16	34.3		
7	296	14.2	249	20.5		34.4	325	57.7		28.4	37	18.4		19.1	154	58.3		34.3		
8	311	16.6	264	20.0		35.3	340	58.3		27.8	52	20.9		19.1	170	00.9		34.4		
9	326	19.1	279	19.5		36.3	355	58.9		27.1	67	23.3		19.1	185	03.4		34.4		
10	341	21.6	294	19.0		37.2	10	59.6		26.5	82	25.7		19.1	200	05.9		34.4		
11	356	24.0	309	18.5	+18	38.1	26	00.2	-13	25.9	97	28.2	-22	19.1	215	08.5	+16	34.4		
12	11	26.5	324	18.0	+18	39.1	41	00.8	-13	25.2	112	30.6	-22	19.1	230	11.0	+16	34.4		
13	26	29.0	339	17.5		40.0	56	01.4		24.6	127	33.1		19.1	245	13.6		34.5		
14	41	31.4	354	17.0		40.9	71	02.0		23.9	142	35.5		19.1	260	16.1		34.5		
15	56	33.9	9	16.5		41.9	86	02.6		23.3	157	38.0		19.1	275	18.6		34.5		
16	71	36.3	24	16.0		42.8	101	03.2		22.6	172	40.4		19.1	290	21.2		34.5		
17	86	38.8	39	15.4	+18	43.7	116	03.8	-13	22.0	187	42.8	-22	19.1	305	23.7	+16	34.6		
18	101	41.3	54	14.9	+18	44.7	131	04.4	-13	21.3	202	45.3	-22	19.1	320	26.2	+16	34.6		
19	116	43.7	69	14.4		45.6	146	05.0		20.7	217	47.7		19.1	335	28.8		34.6		
20	131	46.2	84	13.9		46.5	161	05.6		20.1	232	50.2		19.1	350	31.3		34.6		
21	146	48.7	99	13.4		47.4	176	06.2		19.4	247	52.6		19.1	5	33.8		34.6		
22	161	51.1	114	12.9		48.4	191	06.9		18.8	262	55.1		19.1	20	36.4		34.7		
23	176	53.6	129	12.4		49.3	206	07.5		18.1	277	57.5		19.1	35	38.9		34.7		
24	191	56.1	144	11.9	+18	50.2	221	08.1	-13	17.5	293	00.0	-22	19.1	50	41.4	+16	34.7		
Dif	—		-5			+9	+6			+6	+24			0	+25			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 1			Edad: 15 ^d 9 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1 SD: 14:7 PMG: 0 ^h 52 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	11.4	+5 27.8	347	28.0	-13 54.8	60 N	18 50	19 34	20 29	21 48	92	5 08	**	
1	194	11.6	28.8	2	02.8 ¹⁵⁸	-14 07.4 ¹²⁶	58	47	27	18	35	86	17	4	
2	209	11.8	29.7	16	37.6 ¹⁵⁸	19.9 ¹²⁵	56	43	22	09	24	82	25	7	
3	224	12.0	30.7	31	12.3 ¹⁵⁷	32.4 ¹²⁵	54	41	17	20 02	15	77	32	11	
4	239	12.2	31.6	45	47.0 ¹⁵⁷	44.8 ¹²⁴	52	38	13	19 55	21 06	75	38	14	
5	254	12.3	+5 32.6	60	21.6 ¹⁵⁶	-14 57.1 ¹²³	50	18 36	19 09	19 49	20 58	73	5 44	16	
6	269	12.5	+5 33.5	74	56.2 ¹⁵⁶	-15 09.4 ¹²³	45	18 31	19 01	19 36	20 42	67	5 57	21	
7	284	12.7	34.5	89	30.7 ¹⁵⁵	21.6 ¹²²	40	27	18 54	27	29	63	6 07	25	
8	299	12.9	35.4	104	05.1 ¹⁵⁴	33.8 ¹²²	35	23	49	19	18	60	16	28	
9	314	13.1	36.4	118	39.5 ¹⁵⁴	45.9 ¹²¹	30	20	44	13	20 08	57	24	31	
10	329	13.3	37.4	133	13.9 ¹⁵⁴	-15 58.0 ¹²¹	20	15	37	19 03	19 52	52	38	36	
11	344	13.4	+5 38.3	147	48.1 ¹⁵²	-16 10.0 ¹²⁰	10 N	18 10	18 32	18 56	19 37	49	6 50	40	
12	359	13.6	+5 39.3	162	22.4 ¹⁵³	-16 21.9 ¹¹⁹	0	18 06	18 27	18 51	19 24	45	7 02	43	
13	14	13.8	40.2	176	56.5 ¹⁵¹	33.8 ¹¹⁹	10 S	18 02	23	48	19 10	42	13	47	
14	29	14.0	41.2	191	30.6 ¹⁵¹	45.6 ¹¹⁸	20	17 58	20	46	18 56	38	25	52	
15	44	14.2	42.1	206	04.6 ¹⁵⁰	-16 57.4 ¹¹⁸	30	54	17	45	40	33	39	57	
16	59	14.4	43.1	220	38.6 ¹⁵⁰	-17 09.0 ¹¹⁶	35	51	16	46	31	30	48	59	
17	74	14.5	+5 44.0	235	12.5 ¹⁴⁹	-17 20.7 ¹¹⁷	40	17 48	18 15	18 46	18 20	27	7 57	62	
18	89	14.7	+5 45.0	249	46.4 ¹⁴⁹	-17 32.2 ¹¹⁵	45	17 45	18 14	18 48	18 08	23	8 08	66	
19	104	14.9	45.9	264	20.1 ¹⁴⁷	43.7 ¹¹⁵	50	41	13	50	17 53	18	22	71	
20	119	15.1	46.9	278	53.8 ¹⁴⁷	-17 55.1 ¹¹⁴	52	39	13	52	46	16	28	74	
21	134	15.3	47.8	293	27.5 ¹⁴⁷	-18 06.5 ¹¹⁴	54	37	12	53	38	13	35	77	
22	149	15.4	48.8	308	01.1 ¹⁴⁶	17.8 ¹¹³	56	35	12	55	30	9	43	80	
23	164	15.6	49.7	322	34.6 ¹⁴⁵	29.0 ¹¹²	58	32	12	57	20	6	8 52	84	
24	179	15.8	+5 50.7	337	08.0 ¹⁴⁴	-18 40.1 ¹¹¹	60 S	17 30	18 11	18 59	17 09	1	9 02	89	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 10 ^m 4		Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: +1.1 PMG: 9 ^h 15 ^m			Mag: -2.3 PMG: 4 ^h 27 ^m			Mag: +0.2 PMG: 20 ^h 34 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	191	56.1	144	11.9	+18 50.2	221	08.1	-13 17.5	293	00.0	-22 19.1	50	41.4	+16 34.7
1	206	58.5	159	11.4	51.1	236	08.7	16.8	308	02.4	19.1	65	44.0	34.7
2	222	01.0	174	10.8	52.1	251	09.3	16.2	323	04.9	19.1	80	46.5	34.7
3	237	03.4	189	10.3	53.0	266	09.9	15.5	338	07.3	19.1	95	49.0	34.8
4	252	05.9	204	09.8	53.9	281	10.5	14.9	353	09.8	19.1	110	51.6	34.8
5	267	08.4	219	09.3	+18 54.8	296	11.1	-13 14.2	8	12.2	-22 19.1	125	54.1	+16 34.8
6	282	10.8	234	08.8	+18 55.8	311	11.7	-13 13.6	23	14.6	-22 19.1	140	56.6	+16 34.8
7	297	13.3	249	08.3	56.7	326	12.4	12.9	38	17.1	19.1	155	59.2	34.8
8	312	15.8	264	07.7	57.6	341	13.0	12.3	53	19.5	19.1	171	01.7	34.9
9	327	18.2	279	07.2	58.5	356	13.6	11.6	68	22.0	19.1	186	04.2	34.9
10	342	20.7	294	06.7	+18 59.4	11	14.2	11.0	83	24.4	19.1	201	06.8	34.9
11	357	23.2	309	06.2	+19 00.3	26	14.8	-13 10.3	98	26.9	-22 19.1	216	09.3	+16 34.9
12	12	25.6	324	05.7	+19 01.3	41	15.4	-13 09.7	113	29.3	-22 19.1	231	11.8	+16 34.9
13	27	28.1	339	05.2	02.2	56	16.0	09.0	128	31.8	19.1	246	14.4	35.0
14	42	30.6	354	04.6	03.1	71	16.6	08.4	143	34.2	19.1	261	16.9	35.0
15	57	33.0	9	04.1	04.0	86	17.2	07.7	158	36.7	19.1	276	19.4	35.0
16	72	35.5	24	03.6	04.9	101	17.9	07.1	173	39.2	19.1	291	22.0	35.0
17	87	37.9	39	03.1	+19 05.8	116	18.5	-13 06.4	188	41.6	-22 19.1	306	24.5	+16 35.0
18	102	40.4	54	02.6	+19 06.7	131	19.1	-13 05.8	203	44.1	-22 19.1	321	27.0	+16 35.1
19	117	42.9	69	02.0	07.7	146	19.7	05.1	218	46.5	19.1	336	29.6	35.1
20	132	45.3	84	01.5	08.6	161	20.3	04.5	233	49.0	19.1	351	32.1	35.1
21	147	47.8	99	01.0	09.5	176	20.9	03.8	248	51.4	19.1	6	34.6	35.1
22	162	50.3	114	00.5	10.4	191	21.5	03.2	263	53.9	19.1	21	37.2	35.1
23	177	52.7	129	00.0	11.3	206	22.1	02.5	278	56.3	19.1	36	39.7	35.1
24	192	55.2	143	59.4	+19 12.2	221	22.8	-13 01.9	293	58.8	-22 19.1	51	42.2	+16 35.2
Dif	—		-5 +9			+6 +6			+25 0			+25 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 8			Edad: 16 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 PMG: 1 ^h 34 ^m R°: 46 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	179	15.8	+5	50.7	337	08.0	-18	40.1	60 N	3	36	4	31	5	15	23	20	96			
1	194	16.0		51.6	351	41.4 ¹⁴⁴	-18	51.2 ¹¹¹	58		47		37	18	23	01	88	21	7		
2	209	16.2		52.6	6	14.7 ¹⁴³	-19	02.2 ¹¹⁰	56	3	56	43	21	22	46	81	32	12			
3	224	16.4		53.5	20	47.9 ¹⁴²		13.1 ¹⁰⁹	54	4	03	48	24		32	78	43	15			
4	239	16.5		54.5	35	21.1 ¹⁴²		23.9 ¹⁰⁸	52		10	52	27		21	74	5	52	18		
5	254	16.7	+5	55.4	49	54.2 ¹⁴¹	-19	34.7 ¹⁰⁸	50	4	16	4	56	5	29	22	11	71	6	00	21
6	269	16.9	+5	56.4	64	27.2 ¹⁴⁰	-19	45.4 ¹⁰⁷	45	4	29	5	04	5	34	21	49	67	6	18	25
7	284	17.1		57.3	79	00.2 ¹⁴⁰	-19	56.0 ¹⁰⁶	40		39	11	38		32	63	32	30			
8	299	17.3		58.3	93	33.1 ¹³⁹	-20	06.5 ¹⁰⁵	35		46	16	42		18	60	44	33			
9	314	17.4	+5	59.2	108	05.9 ¹³⁸		16.9 ¹⁰⁴	30	4	53	21	45		21	05	58	6	55	35	
10	329	17.6	+6	00.2	122	38.6 ¹³⁷		27.3 ¹⁰⁴	20	5	03	28	51		20	44	54	7	14	39	
11	344	17.8	+6	01.1	137	11.3 ¹³⁷	-20	37.6 ¹⁰³	10 N	5	10	5	34	5	55	20	26	51	7	30	43
12	359	18.0	+6	02.1	151	43.9 ¹³⁶	-20	47.8 ¹⁰²	0	5	15	5	39	6	00	20	09	48	7	45	46
13	14	18.2		03.0	166	16.4 ¹³⁵	-20	57.9 ¹⁰¹	10 S		18	43	04		19	52	45	8	00	50	
14	29	18.3		04.0	180	48.8 ¹³⁴	-21	07.9 ¹⁰⁰	20		20	46	08		34	41		17	53		
15	44	18.5		04.9	195	21.2 ¹³⁴		17.9 ¹⁰⁰	30		21	49	13		13	38		36	57		
16	59	18.7		05.9	209	53.5 ¹³³		27.7 ⁹⁸	35		21	50	15		19	01	35		47	60	
17	74	18.9	+6	06.8	224	25.7 ¹³²	-21	37.5 ⁹⁸	40	5	20	5	51	6	19	18	47	33	8	59	64
18	89	19.1	+6	07.8	238	57.8 ¹³¹	-21	47.2 ⁹⁷	45	5	19	5	53	6	22	18	31	29	9	14	67
19	104	19.2		08.7	253	29.9 ¹³¹	-21	56.8 ⁹⁶	50		16	54	26		11	24		33	72		
20	119	19.4		09.7	268	01.9 ¹³⁰	-22	06.3 ⁹⁵	52		15	54	28		18	02	22		42	75	
21	134	19.6		10.6	282	33.8 ¹²⁹		15.7 ⁹⁴	54		14	55	30		17	51	19		9	52	78
22	149	19.8		11.6	297	05.6 ¹²⁸		25.0 ⁹³	56		12	55	32		39	16		10	03	82	
23	164	20.0		12.5	311	37.3 ¹²⁷		34.2 ⁹²	58		10	56	35		26	10		16	87		
24	179	20.1	+6	13.5	326	09.0 ¹²⁷	-22	43.3 ⁹¹	60 S	5	08	5	56	6	38	17	10	4	10	31	94

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 06 ^m 5		Mag: -4.0 PMG: 14 ^h 25 ^m			Mag: +1.1 PMG: 9 ^h 14 ^m			Mag: -2.3 PMG: 4 ^h 23 ^m			Mag: +0.2 PMG: 20 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	192	55.2	143	59.4	+19	12.2	221	22.8	-13	01.9	293	58.8	-22	19.1	51	42.2	+16	35.2
1	207	57.7	158	58.9		13.1	236	23.4		01.2	309	01.2		19.1	66	44.8		35.2
2	223	00.1	173	58.4		14.0	251	24.0	-13	00.6	324	03.7		19.1	81	47.3		35.2
3	238	02.6	188	57.9		14.9	266	24.6	-12	59.9	339	06.1		19.1	96	49.8		35.2
4	253	05.1	203	57.4		15.8	281	25.2		59.3	354	08.6		19.1	111	52.3		35.2
5	268	07.5	218	56.8	+19	16.7	296	25.8	-12	58.6	9	11.1	-22	19.1	126	54.9	+16	35.3
6	283	10.0	233	56.3	+19	17.6	311	26.4	-12	58.0	24	13.5	-22	19.1	141	57.4	+16	35.3
7	298	12.4	248	55.8		18.5	326	27.1		57.3	39	16.0		19.1	156	59.9		35.3
8	313	14.9	263	55.3		19.4	341	27.7		56.7	54	18.4		19.1	172	02.5		35.3
9	328	17.4	278	54.7		20.3	356	28.3		56.0	69	20.9		19.1	187	05.0		35.3
10	343	19.8	293	54.2		21.2	11	28.9		55.4	84	23.4		19.1	202	07.5		35.4
11	358	22.3	308	53.7	+19	22.1	26	29.5	-12	54.7	99	25.8	-22	19.1	217	10.0	+16	35.4
12	13	24.8	323	53.2	+19	23.0	41	30.1	-12	54.0	114	28.3	-22	19.1	232	12.6	+16	35.4
13	28	27.2	338	52.6		23.9	56	30.7		53.4	129	30.7		19.0	247	15.1		35.4
14	43	29.7	353	52.1		24.8	71	31.4		52.7	144	33.2		19.0	262	17.6		35.4
15	58	32.2	8	51.6		25.7	86	32.0		52.1	159	35.6		19.0	277	20.2		35.4
16	73	34.6	23	51.0		26.6	101	32.6		51.4	174	38.1		19.0	292	22.7		35.5
17	88	37.1	38	50.5	+19	27.5	116	33.2	-12	50.8	189	40.6	-22	19.0	307	25.2	+16	35.5
18	103	39.5	53	50.0	+19	28.4	131	33.8	-12	50.1	204	43.0	-22	19.0	322	27.7	+16	35.5
19	118	42.0	68	49.5		29.3	146	34.4		49.5	219	45.5		19.0	337	30.3		35.5
20	133	44.5	83	48.9		30.1	161	35.1		48.8	234	48.0		19.0	352	32.8		35.5
21	148	46.9	98	48.4		31.0	176	35.7		48.1	249	50.4		19.0	7	35.3		35.6
22	163	49.4	113	47.9		31.9	191	36.3		47.5	264	52.9		19.0	22	37.8		35.6
23	178	51.9	128	47.3		32.8	206	36.9		46.8	279	55.3		19.0	37	40.4		35.6
24	193	54.3	143	46.8	+19	33.7	221	37.5	-12	46.2	294	57.8	-22	19.0	52	42.9	+16	35.6
Dif	—		-5		+9		+6		+7		+25		0		+25			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 5			Edad: 17 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 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	h m m		
0	179	20.1	+6	13.5	326	09.0	-22 43.3	60 N	18 55	19 39	20 35	** ** *	5 09	5	
1	194	20.3		14.4	340	40.6 ¹²⁶	-22 52.4	58	51	32	24	** ** *	28	14	
2	209	20.5		15.4	355	12.1 ¹²⁵	-23 01.3	56	48	26	14	** ** *	44	19	
3	224	20.7		16.3	9	43.6 ¹²⁵		54	44	21	20 06	23 50	73	5 58	
4	239	20.9		17.3	24	14.9 ¹²³		52	42	16	19 59	35 70	6	10 26	
5	254	21.0	+6	18.2	38	46.2 ¹²³	-23 27.5	50	18 39	19 12	19 53	23 22	68	6 21	
6	269	21.2	+6	19.2	53	17.4 ¹²²	-23 36.1	45	18 33	19 03	19 39	22 56	64	6 43	
7	284	21.4		20.1	67	48.6 ¹²²		40	29	18 56	29	35 62	7	02 36	
8	299	21.6		21.0	82	19.6 ¹²⁰	-23 52.8	35	25	51	21	18 60	17	39	
9	314	21.8		22.0	96	50.6 ¹²⁰	-24 01.1	30	21	46	14	22 03	58	30	
10	329	21.9		22.9	111	21.5 ¹¹⁹		20	16	38	19 04	21 38	56	7 53	
11	344	22.1	+6	23.9	125	52.3 ¹¹⁸	-24 17.2	10 N	18 10	18 32	18 56	21 17	53	8 13	
12	359	22.3	+6	24.8	140	23.0 ¹¹⁷	-24 25.1	0	18 06	18 27	18 51	20 57	51	8 31	
13	14	22.5		25.8	154	53.7 ¹¹⁷		10 S	18 01	22	47	37 49	8	50 52	
14	29	22.7		26.7	169	24.2 ¹¹⁵		20	17 56	19	44	20 15	47	9 10	
15	44	22.8		27.7	183	54.7 ¹¹⁵		30	51	15	43	19 51	44	33 58	
16	59	23.0		28.6	198	25.1 ¹¹⁴	-24 55.7	35	48	14	43	36 43	9	47 60	
17	74	23.2	+6	29.6	212	55.5 ¹¹⁴	-25 03.0	40	17 45	18 12	18 43	19 20	40	10 03	
18	89	23.4	+6	30.5	227	25.7 ¹¹²	-25 10.3	45	17 41	18 10	18 44	19 00	38	10 21	
19	104	23.5		31.4	241	55.9 ¹¹²		50	36	09	46	18 35	34	45 70	
20	119	23.7		32.4	256	26.0 ¹¹¹		52	34	08	47	24 31	10	57 72	
21	134	23.9		33.3	270	56.1 ¹¹¹		54	32	07	48	18 10	29	11 10	
22	149	24.1		34.3	285	26.0 ¹⁰⁹		56	30	07	50	17 55	24	25 79	
23	164	24.3		35.2	299	55.9 ¹⁰⁹		58	27	06	51	36 20	11	43 85	
24	179	24.4	+6	36.2	314	25.7 ¹⁰⁸	-25 51.4	60 S	17 24	18 05	18 53	17 14	10	12 05	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 11 ^h 02 ^m 6		Mag: -4.0 PMG: 14 ^h 25 ^m		Mag: +1.1 PMG: 9 ^h 13 ^m		Mag: -2.3 PMG: 4 ^h 19 ^m			Mag: +0.3 PMG: 20 ^h 26 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	193	54.3	143	46.8	+19	33.7	221	37.5	-12	46.2	294	57.8	-22	19.0	52	42.9	+16	35.6
1	208	56.8	158	46.3		34.6	236	38.1		45.5	310	00.3		19.0	67	45.4		35.6
2	223	59.3	173	45.7		35.5	251	38.8		44.9	325	02.7		19.0	82	48.0		35.6
3	239	01.7	188	45.2		36.3	266	39.4		44.2	340	05.2		19.0	97	50.5		35.7
4	254	04.2	203	44.7		37.2	281	40.0		43.5	355	07.7		19.0	112	53.0		35.7
5	269	06.7	218	44.1	+19	38.1	296	40.6	-12	42.9	10	10.1	-22	19.0	127	55.5	+16	35.7
6	284	09.1	233	43.6	+19	39.0	311	41.2	-12	42.2	25	12.6	-22	19.0	142	58.1	+16	35.7
7	299	11.6	248	43.1		39.9	326	41.8		41.6	40	15.1		19.0	158	00.6		35.7
8	314	14.0	263	42.6		40.7	341	42.5		40.9	55	17.5		19.0	173	03.1		35.7
9	329	16.5	278	42.0		41.6	356	43.1		40.3	70	20.0		19.0	188	05.6		35.8
10	344	19.0	293	41.5		42.5	11	43.7		39.6	85	22.5		19.0	203	08.2		35.8
11	359	21.4	308	40.9	+19	43.4	26	44.3	-12	38.9	100	24.9	-22	19.0	218	10.7	+16	35.8
12	14	23.9	323	40.4	+19	44.3	41	44.9	-12	38.3	115	27.4	-22	19.0	233	13.2	+16	35.8
13	29	26.4	338	39.9		45.1	56	45.6		37.6	130	29.9		19.0	248	15.7		35.8
14	44	28.8	353	39.3		46.0	71	46.2		37.0	145	32.3		19.0	263	18.2		35.8
15	59	31.3	8	38.8		46.9	86	46.8		36.3	160	34.8		19.0	278	20.8		35.9
16	74	33.8	23	38.3		47.8	101	47.4		35.6	175	37.3		19.0	293	23.3		35.9
17	89	36.2	38	37.7	+19	48.6	116	48.0	-12	35.0	190	39.7	-22	19.0	308	25.8	+16	35.9
18	104	38.7	53	37.2	+19	49.5	131	48.6	-12	34.3	205	42.2	-22	19.0	323	28.3	+16	35.9
19	119	41.2	68	36.7		50.4	146	49.3		33.7	220	44.7		19.0	338	30.9		35.9
20	134	43.6	83	36.1		51.2	161	49.9		33.0	235	47.1		19.0	353	33.4		35.9
21	149	46.1	98	35.6		52.1	176	50.5		32.3	250	49.6		19.0	8	35.9		36.0
22	164	48.5	113	35.0		53.0	191	51.1		31.7	265	52.1		19.0	23	38.4		36.0
23	179	51.0	128	34.5		53.8	206	51.7		31.0	280	54.6		19.0	38	41.0		36.0
24	194	53.5	143	34.0	+19	54.7	221	52.4	-12	30.4	295	57.0	-22	19.0	53	43.5	+16	36.0
Dif	—		-5		+9		+6		+7		+25		0		+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 02 ^m 2			Edad: 18 ^d 9 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 55'0 PMG: 3 ^h 09 ^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	179	24.4	+6 36.2	314	25.7	-25 51.4		60 N	3 29	4 25	5 09		0 56 91	5 14 16		
1	194	24.6		328	55.4 ¹⁰⁷	-25 57.8	64	58	40	32	13		29 81	5 42 26		
2	209	24.8		343	25.1 ¹⁰⁷	-26 04.1	63	56	50	37	16		0 08 76	6 03 31		
3	224	25.0		357	54.6 ¹⁰⁵		62	54	3 58	43	19		** ** *	21 35		
4	239	25.1		12	24.1 ¹⁰⁵		61	52	4 05	47	22		** ** *	36 37		
5	254	25.3	+6 40.9	26	53.6 ¹⁰⁵	-26 22.4	60	50	4 11	4 52	5 25		** ** *	6 49 39		
6	269	25.5	+6 41.8	41	22.9 ¹⁰³	-26 28.2	58	45	4 25	5 01	5 31		** ** *	7 16 42		
7	284	25.7		55	52.2 ¹⁰³		57	40		35	08	35	23 37 57	38 44		
8	299	25.9		70	21.4 ¹⁰²		56	35		43	14	39	18 57	7 56 46		
9	314	26.0		84	50.5 ¹⁰¹		54	30	4 50	19	43		23 01 57	8 11 47		
10	329	26.2		99	19.6 ¹⁰¹		54	20	5 01	27	49		22 34 55	8 37 50		
11	344	26.4	+6 46.5	113	48.6 ¹⁰⁰	-26 55.5	52	10 N	5 08	5 33	5 54		22 10 54	9 00 51		
12	359	26.6	+6 47.5	128	17.5 ⁹⁹	-27 00.5	50	0	5 14	5 38	5 59		21 48 54	9 21 53		
13	14	26.7		142	46.4 ⁹⁹		50	10 S	18	43	6 04		26 53	9 42 54		
14	29	26.9		157	15.2 ⁹⁸		48	20	21	46	09		21 02 52	10 05 55		
15	44	27.1		171	43.9 ⁹⁷		46	30	22	50	14		20 35 51	31 58		
16	59	27.3		186	12.5 ⁹⁶		46	35	22	52	17		19 50	10 47 58		
17	74	27.4	+6 52.2	200	41.1 ⁹⁶	-27 23.9	44	40	5 22	5 53	6 21		20 00 49	11 05 60		
18	89	27.6	+6 53.1	215	09.6 ⁹⁵	-27 28.2	43	45	5 21	5 55	6 25		19 38 47	11 27 62		
19	104	27.8		229	38.1 ⁹⁵		41	50	19	57	29		19 09 46	11 55 64		
20	119	28.0		244	06.5 ⁹⁴		40	52	19	58	31		18 55 45	12 09 65		
21	134	28.1		258	34.8 ⁹³		39	54	17	58	34		39 43	25 67		
22	149	28.3		273	03.0 ⁹²		37	56	16	5 59	36		18 19 41	12 44 70		
23	164	28.5		287	31.2 ⁹²		36	58	14	6 00	39		17 56 37	13 08 73		
24	179	28.7	+6 58.7	301	59.4 ⁹²	-27 51.0	35	60 S	5 12	6 01	6 42		17 24 30	13 39 81		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 58 ^m 6			Mag: -4.0 PMG: 14 ^h 26 ^m			Mag: +1.1 PMG: 9 ^h 12 ^m			Mag: -2.4 PMG: 4 ^h 15 ^m			Mag: +0.3 PMG: 20 ^h 22 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	
0	194	53.5		143	34.0	+19 54.7		221	52.4	-12 30.4	295	57.0	-22 19.0	53	43.5	+16 36.0
1	209	55.9		158	33.4	55.6		236	53.0	29.7	310	59.5	19.0	68	46.0	36.0
2	224	58.4		173	32.9	56.4		251	53.6	29.0	326	02.0	19.0	83	48.5	36.0
3	240	00.9		188	32.3	57.3		266	54.2	28.4	341	04.4	19.0	98	51.0	36.1
4	255	03.3		203	31.8	58.2		281	54.9	27.7	356	06.9	19.0	113	53.6	36.1
5	270	05.8		218	31.3	+19 59.0		296	55.5	-12 27.0	11	09.4	-22 19.0	128	56.1	+16 36.1
6	285	08.3		233	30.7	+19 59.9		311	56.1	-12 26.4	26	11.9	-22 19.0	143	58.6	+16 36.1
7	300	10.7		248	30.2	+20 00.7		326	56.7	25.7	41	14.3	19.0	159	01.1	36.1
8	315	13.2		263	29.6	01.6		341	57.3	25.1	56	16.8	19.0	174	03.6	36.1
9	330	15.6		278	29.1	02.5		356	58.0	24.4	71	19.3	19.0	189	06.2	36.2
10	345	18.1		293	28.5	03.3		11	58.6	23.7	86	21.8	19.0	204	08.7	36.2
11	0	20.6		308	28.0	+20 04.2		26	59.2	-12 23.1	101	24.2	-22 19.0	219	11.2	+16 36.2
12	15	23.0		323	27.5	+20 05.0		41	59.8	-12 22.4	116	26.7	-22 19.0	234	13.7	+16 36.2
13	30	25.5		338	26.9	05.9		57	00.4	21.7	131	29.2	19.0	249	16.2	36.2
14	45	28.0		353	26.4	06.7		72	01.1	21.1	146	31.7	19.0	264	18.8	36.2
15	60	30.4		8	25.8	07.6		87	01.7	20.4	161	34.2	19.0	279	21.3	36.2
16	75	32.9		23	25.3	08.4		102	02.3	19.7	176	36.6	19.0	294	23.8	36.3
17	90	35.4		38	24.7	+20 09.3		117	02.9	-12 19.1	191	39.1	-22 19.0	309	26.3	+16 36.3
18	105	37.8		53	24.2	+20 10.1		132	03.6	-12 18.4	206	41.6	-22 19.0	324	28.8	+16 36.3
19	120	40.3		68	23.6	11.0		147	04.2	17.7	221	44.1	19.0	339	31.4	36.3
20	135	42.8		83	23.1	11.8		162	04.8	17.1	236	46.5	19.0	354	33.9	36.3
21	150	45.2		98	22.6	12.7		177	05.4	16.4	251	49.0	19.0	9	36.4	36.3
22	165	47.7		113	22.0	13.5		192	06.1	15.8	266	51.5	19.0	24	38.9	36.4
23	180	50.1		128	21.5	14.4		207	06.7	15.1	281	54.0	19.0	39	41.4	36.4
24	195	52.6		143	20.9	+20 15.2		222	07.3	-12 14.4	296	56.5	-22 19.0	54	43.9	+16 36.4
Dif	—			-5 +9			+6 +7			+25 0			+25 0			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 19 ^d 9 PHE { 4 ^h : 55:1 12 ^h : 55:3 20 ^h : 55:5											
	PMG: 12 ^h 01 ^m 9		SD: 15:0 PMG: 4 ^h 01 ^m R°: 54 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	28.7	+6 58.7	301	59.4	91	–27 51.0	60 N	19 00	19 44	20 41	2 27 68	5 30 46	
1	194	28.8	+6 59.7	316	27.5	91	54.3	58	18 56	37	29	1 50 63	6 08 49	
2	209	29.0	+7 00.6	330	55.5	90	–27 57.4	56	52	31	19	24 61	34 52	
3	224	29.2	01.5	345	23.5	90	–28 00.5	54	48	25	11	1 03 60	6 56 51	
4	239	29.4	02.5	359	51.4	89	03.4	52	45	20	20 03	0 45 60	7 13 53	
5	254	29.5	+7 03.4	14	19.2	88	–28 06.1	50	18 42	19 16	19 56	0 30 60	7 28 53	
6	269	29.7	+7 04.4	28	47.0	88	–28 08.7	45	18 36	19 06	19 42	0 00 59	7 58 54	
7	284	29.9	05.3	43	14.8	88	11.2	40	31	18 59	31	** ** *	8 22 54	
8	299	30.1	06.2	57	42.5	87	13.5	35	26	52	23	** ** *	42 54	
9	314	30.2	07.2	72	10.1	86	15.7	30	23	47	15	23 58 52	8 58 55	
10	329	30.4	08.1	86	37.7	86	17.7	20	16	38	19 04	29 54	9 27 54	
11	344	30.6	+7 09.0	101	05.3	86	–28 19.6	10 N	18 10	18 32	18 56	23 04 55	9 51 54	
12	359	30.8	+7 10.0	115	32.8	85	–28 21.3	0	18 05	18 26	18 50	22 42 55	10 14 54	
13	14	30.9	10.9	130	00.2	84	22.9	10 S	18 00	21	46	22 19 56	10 36 55	
14	29	31.1	11.8	144	27.6	84	24.3	20	17 55	17	43	21 54 57	11 00 55	
15	44	31.3	12.8	158	55.0	84	25.6	30	49	13	41	26 57	29 54	
16	59	31.5	13.7	173	22.3	83	26.8	35	46	11	40	21 09 58	11 45 55	
17	74	31.6	+7 14.6	187	49.6	83	–28 27.8	40	17 42	18 09	18 40	20 49 59	12 05 54	
18	89	31.8	+7 15.6	202	16.9	83	–28 28.6	45	17 37	18 07	18 41	20 25 60	12 29 54	
19	104	32.0	16.5	216	44.1	82	29.3	50	32	05	42	19 55 60	12 59 54	
20	119	32.2	17.4	231	11.2	81	29.8	52	30	04	43	40 60	13 14 54	
21	134	32.3	18.4	245	38.4	82	30.2	54	27	03	44	22 61	32 53	
22	149	32.5	19.3	260	05.5	81	30.4	56	25	02	45	19 00 63	13 54 52	
23	164	32.7	20.2	274	32.5	80	30.5	58	21	01	46	18 33 64	14 21 51	
24	179	32.8	+7 21.2	288	59.6	81	–28 30.4	60 S	17 18	18 00	18 48	17 54 67	15 00 48	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 54 ^m 7		Mag: –4.0 PMG: 14 ^h 27 ^m			Mag: +1.1 PMG: 9 ^h 11 ^m			Mag: –2.4 PMG: 4 ^h 12 ^m			Mag: +0.3 PMG: 20 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	195	52.6	143 20.9	+20 15.2	222 07.3	–12 14.4	296 56.5	–22 19.0	54 43.9	+16 36.4				
1	210	55.1	158 20.4	16.1	237 07.9	13.8	311 58.9	19.0	69 46.5	36.4				
2	225	57.5	173 19.8	16.9	252 08.5	13.1	327 01.4	19.0	84 49.0	36.4				
3	241	00.0	188 19.3	17.7	267 09.2	12.4	342 03.9	18.9	99 51.5	36.4				
4	256	02.5	203 18.7	18.6	282 09.8	11.8	357 06.4	18.9	114 54.0	36.4				
5	271	04.9	218 18.2	+20 19.4	297 10.4	–12 11.1	12 08.9	–22 18.9	129 56.5	+16 36.5				
6	286	07.4	233 17.6	+20 20.3	312 11.0	–12 10.4	27 11.3	–22 18.9	144 59.0	+16 36.5				
7	301	09.9	248 17.1	21.1	327 11.7	09.7	42 13.8	18.9	160 01.6	36.5				
8	316	12.3	263 16.5	21.9	342 12.3	09.1	57 16.3	18.9	175 04.1	36.5				
9	331	14.8	278 16.0	22.8	357 12.9	08.4	72 18.8	18.9	190 06.6	36.5				
10	346	17.3	293 15.4	23.6	12 13.5	07.7	87 21.3	18.9	205 09.1	36.5				
11	1	19.7	308 14.9	+20 24.4	27 14.2	–12 07.1	102 23.8	–22 18.9	220 11.6	+16 36.5				
12	16	22.2	323 14.3	+20 25.3	42 14.8	–12 06.4	117 26.3	–22 18.9	235 14.1	+16 36.6				
13	31	24.6	338 13.8	26.1	57 15.4	05.7	132 28.7	18.9	250 16.7	36.6				
14	46	27.1	353 13.2	26.9	72 16.0	05.1	147 31.2	18.9	265 19.2	36.6				
15	61	29.6	8 12.6	27.8	87 16.7	04.4	162 33.7	18.9	280 21.7	36.6				
16	76	32.0	23 12.1	28.6	102 17.3	03.7	177 36.2	18.9	295 24.2	36.6				
17	91	34.5	38 11.5	+20 29.4	117 17.9	–12 03.1	192 38.7	–22 18.9	310 26.7	+16 36.6				
18	106	37.0	53 11.0	+20 30.3	132 18.6	–12 02.4	207 41.2	–22 18.9	325 29.2	+16 36.6				
19	121	39.4	68 10.4	31.1	147 19.2	01.7	222 43.7	18.9	340 31.7	36.7				
20	136	41.9	83 09.9	31.9	162 19.8	01.1	237 46.1	18.9	355 34.3	36.7				
21	151	44.4	98 09.3	32.7	177 20.4	–12 00.4	252 48.6	18.9	10 36.8	36.7				
22	166	46.8	113 08.8	33.6	192 21.1	–11 59.7	267 51.1	18.9	25 39.3	36.7				
23	181	49.3	128 08.2	34.4	207 21.7	59.0	282 53.6	18.9	40 41.8	36.7				
24	196	51.8	143 07.6	+20 35.2	222 22.3	–11 58.4	297 56.1	–22 18.9	55 44.3	+16 36.7				
Dif	—		–6	+8	+6	+7	+25	0	+25					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 7			Edad: 20 ^d 9 PHE { 4 ^h : 55 ^h /7 12 ^h : 55 ^h /9 20 ^h : 56 ^h /2 PMG: 4 ^h 55 ^m R ^o : 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	32.8	+7	21.2	288	59.6	-28	30.4	60 N	3 21	4 18	5 03	3 35	29	6 16	86		
1	194	33.0			303	26.6	80	30.2	58	33	26	07	2 53	39	6 57	77		
2	209	33.2			317	53.6	80	29.8	56	43	32	11	25	42	7 26	72		
3	224	33.4			332	20.5	79	29.3	54	3 52	38	15	2 03	45	7 47	70		
4	239	33.5			346	47.5	80	28.6	52	4 00	43	18	1 45	46	8 06	68		
5	254	33.7	+7	25.8	1	14.4	79	-28	50	4 07	4 47	5 21	1 30	47	8 21	67		
6	269	33.9	+7	26.8	15	41.2	78	-28	45	4 21	4 57	5 27	0 59	49	8 52	64		
7	284	34.1			30	08.1	79	25.6	40	32	5 05	32	34	51	9 16	62		
8	299	34.2			44	34.9	78	24.3	35	40	11	37	0 15	51	36	61		
9	314	34.4			59	01.8	79	22.8	30	48	16	41	**	**	**	9 53	60	
10	329	34.6			73	28.6	78	21.2	20	4 59	25	47	**	**	**	10 21	58	
11	344	34.7	+7	31.4	87	55.3	77	-28	10 N	5 07	5 32	5 53	23	59	53	10 45	57	
12	359	34.9	+7	32.4	102	22.1	78	-28	0	5 13	5 38	5 58	23	37	55	11 08	55	
13	14	35.1			116	48.9	78	15.4	10 S	18	42	6 04	23	15	57	31	53	
14	29	35.3			131	15.6	77	13.1	20	21	47	09	22	51	60	11 55	52	
15	44	35.4			145	42.4	78	10.7	30	23	51	15	23	63		12 23	50	
16	59	35.6			160	09.1	77	08.2	35	24	53	19	22	07	64	40	48	
17	74	35.8	+7	37.0	174	35.8	77	-28	40	5 24	5 55	6 23	21	48	66	12 59	47	
18	89	35.9	+7	37.9	189	02.5	77	-28	45	5 24	5 58	6 27	21	25	69	13 23	44	
19	104	36.1			203	29.2	77	-27	50	22	6 00	32	20	55	73	13 53	41	
20	119	36.3			217	55.9	77	56.4	52	22	01	35	40	75		14 08	39	
21	134	36.4			232	22.6	77	53.0	54	21	02	37	23	78		25	37	
22	149	36.6			246	49.3	77	49.5	56	20	03	40	20	03	81	14	46	33
23	164	36.8			261	16.1	78	45.8	58	19	04	44	19	37	86	15	12	28
24	179	37.0	+7	43.5	275	42.8	77	-27	60 S	5 17	6 05	6 47	19	01	96	15	48	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 50 ^m 8		Mag: -4.0 PMG: 14 ^h 28 ^m		Mag: +1.1 PMG: 9 ^h 10 ^m		Mag: -2.4 PMG: 4 ^h 08 ^m		Mag: +0.3 PMG: 20 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	196	51.8	143	07.6	+20	35.2	222	22.3	-11	58.4	297	56.1	-22	18.9	55	44.3	+16	36.7
1	211	54.2	158	07.1		36.0	237	22.9		57.7	312	58.6		18.9	70	46.8		36.7
2	226	56.7	173	06.5		36.9	252	23.6		57.0	328	01.1		18.9	85	49.3		36.7
3	241	59.1	188	06.0		37.7	267	24.2		56.4	343	03.6		18.9	100	51.9		36.8
4	257	01.6	203	05.4		38.5	282	24.8		55.7	358	06.0		18.9	115	54.4		36.8
5	272	04.1	218	04.9	+20	39.3	297	25.4	-11	55.0	13	08.5	-22	18.9	130	56.9	+16	36.8
6	287	06.5	233	04.3	+20	40.1	312	26.1	-11	54.3	28	11.0	-22	18.9	145	59.4	+16	36.8
7	302	09.0	248	03.7		41.0	327	26.7		53.7	43	13.5		18.9	161	01.9		36.8
8	317	11.5	263	03.2		41.8	342	27.3		53.0	58	16.0		18.9	176	04.4		36.8
9	332	13.9	278	02.6		42.6	357	28.0		52.3	73	18.5		18.9	191	06.9		36.8
10	347	16.4	293	02.1		43.4	12	28.6		51.6	88	21.0		18.9	206	09.4		36.8
11	2	18.9	308	01.5	+20	44.2	27	29.2	-11	51.0	103	23.5	-22	18.9	221	11.9	+16	36.9
12	17	21.3	323	00.9	+20	45.0	42	29.8	-11	50.3	118	26.0	-22	18.9	236	14.5	+16	36.9
13	32	23.8	338	00.4		45.8	57	30.5		49.6	133	28.5		18.9	251	17.0		36.9
14	47	26.2	352	59.8		46.7	72	31.1		49.0	148	31.0		18.9	266	19.5		36.9
15	62	28.7	7	59.3		47.5	87	31.7		48.3	163	33.5		18.9	281	22.0		36.9
16	77	31.2	22	58.7		48.3	102	32.4		47.6	178	36.0		18.8	296	24.5		36.9
17	92	33.6	37	58.1	+20	49.1	117	33.0	-11	46.9	193	38.5	-22	18.8	311	27.0	+16	36.9
18	107	36.1	52	57.6	+20	49.9	132	33.6	-11	46.3	208	40.9	-22	18.8	326	29.5	+16	36.9
19	122	38.6	67	57.0		50.7	147	34.3		45.6	223	43.4		18.8	341	32.0		37.0
20	137	41.0	82	56.4		51.5	162	34.9		44.9	238	45.9		18.8	356	34.5		37.0
21	152	43.5	97	55.9		52.3	177	35.5		44.2	253	48.4		18.8	11	37.1		37.0
22	167	46.0	112	55.3		53.1	192	36.1		43.6	268	50.9		18.8	26	39.6		37.0
23	182	48.4	127	54.7		53.9	207	36.8		42.9	283	53.4		18.8	41	42.1		37.0
24	197	50.9	142	54.2	+20	54.7	222	37.4	-11	42.2	298	55.9	-22	18.8	56	44.6	+16	37.0
Dif	—		-6		+8		+6		+7		+25		0		+25		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 4			Edad: 21 ^d 9 PHE { SD: 15'3 PMG: 5 ^h 50 ^m 4 ^h : 56'4 12 ^h : 56'7 20 ^h : 57'0 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	179	37.0	+7 43.5	275	42.8	-27 42.0	40	60 N	19 05	19 50	20 48	4 04 10	7 42 104		
1	194	37.1		290	09.5	77 38.0	40	58	19 00	42	35	3 32 20	8 14 94		
2	209	37.3		304	36.2	77 33.9	41	56	18 56	35	24	3 07 27	38 88		
3	224	37.5		319	02.9	77 29.6	43	54	52	29	15	2 48 30	8 57 84		
4	239	37.6		333	29.6	77 25.1	45	52	48	24	07	31 34	9 14 80		
5	254	37.8	+7 48.1	347	56.4	78 -27 20.5	46	50	18 45	19 19	20 00	2 17 36	9 28 77		
6	269	38.0	+7 49.1	2	23.1	77 -27 15.8	47	45	18 39	19 09	19 45	1 48 40	9 56 73		
7	284	38.1	50.0	16	49.9	78 10.8	50	40	33	19 01	34	25 43	10 18 70		
8	299	38.3	50.9	31	16.7	78 05.8	50	35	28	18 54	25	1 06 46	37 66		
9	314	38.5	51.9	45	43.4	77 -27 00.5	53	30	24	48	17	0 50 47	10 53 64		
10	329	38.6	52.8	60	10.3	79 -26 55.1	54	20	17	39	19 05	0 23 50	11 19 61		
11	344	38.8	+7 53.7	74	37.1	78 -26 49.6	55	10 N	18 10	18 32	18 56	** ** *	11 42 57		
12	359	39.0	+7 54.6	89	03.9	78 -26 43.9	57	0	18 05	18 26	18 50	** ** *	12 03 55		
13	14	39.2	55.6	103	30.8	79 38.0	59	10 S	17 59	20	45	** ** *	24 52		
14	29	39.3	56.5	117	57.6	78 32.0	60	20	53	15	41	23 51 61	12 47 48		
15	44	39.5	57.4	132	24.5	79 25.9	61	30	47	11	38	26 65	13 13 45		
16	59	39.7	58.3	146	51.4	79 19.5	64	35	43	08	38	23 11 68	28 43		
17	74	39.8	+7 59.3	161	18.4	80 -26 13.1	64	40	17 39	18 06	18 37	22 54 71	13 46 39		
18	89	40.0	+8 00.2	175	45.3	79 -26 06.4	67	45	17 34	18 03	18 37	22 34 75	14 07 36		
19	104	40.2	01.1	190	12.3	80 -25 59.7	67	50	28	18 01	38	22 08 80	34 31		
20	119	40.3	02.0	204	39.3	80 52.7	70	52	25	17 59	38	21 55 84	14 47 28		
21	134	40.5	02.9	219	06.3	80 45.6	71	54	23	58	39	41 87	15 02 25		
22	149	40.7	03.9	233	33.4	81 38.4	72	56	19	57	40	24 91	19 21		
23	164	40.8	04.8	248	00.5	81 31.0	74	58	16	55	41	21 03 98	15 40 15		
24	179	41.0	+8 05.7	262	27.6	81 -25 23.5	75	60 S	17 12	17 54	18 42	20 37 106	16 06 7		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 46 ^m 8			Mag: -4.0 PMG: 14 ^h 29 ^m			Mag: +1.1 PMG: 9 ^h 09 ^m			Mag: -2.4 PMG: 4 ^h 04 ^m			Mag: +0.3 PMG: 20 ^h 10 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec
h	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	197	50.9	142 54.2	+20 54.7	222 37.4	-11 42.2	298 55.9	-22 18.8	56 44.6	+16 37.0					
1	212	53.4	157 53.6	55.5	237 38.0	41.5	313 58.4	18.8	71 47.1	37.0					
2	227	55.8	172 53.1	56.3	252 38.7	40.9	329 00.9	18.8	86 49.6	37.0					
3	242	58.3	187 52.5	57.1	267 39.3	40.2	344 03.4	18.8	101 52.1	37.1					
4	258	00.7	202 51.9	57.9	282 39.9	39.5	359 05.9	18.8	116 54.6	37.1					
5	273	03.2	217 51.4	+20 58.7	297 40.6	-11 38.8	14 08.4	-22 18.8	131 57.1	+16 37.1					
6	288	05.7	232 50.8	+20 59.5	312 41.2	-11 38.2	29 10.9	-22 18.8	146 59.6	+16 37.1					
7	303	08.1	247 50.2	+21 00.3	327 41.8	37.5	44 13.4	18.8	162 02.1	37.1					
8	318	10.6	262 49.7	01.1	342 42.5	36.8	59 15.9	18.8	177 04.6	37.1					
9	333	13.1	277 49.1	01.9	357 43.1	36.1	74 18.4	18.8	192 07.1	37.1					
10	348	15.5	292 48.5	02.7	12 43.7	35.4	89 20.9	18.8	207 09.7	37.1					
11	3	18.0	307 47.9	+21 03.5	27 44.4	-11 34.8	104 23.4	-22 18.8	222 12.2	+16 37.2					
12	18	20.5	322 47.4	+21 04.3	42 45.0	-11 34.1	119 25.9	-22 18.8	237 14.7	+16 37.2					
13	33	22.9	337 46.8	05.1	57 45.6	33.4	134 28.4	18.8	252 17.2	37.2					
14	48	25.4	352 46.2	05.8	72 46.2	32.7	149 30.9	18.8	267 19.7	37.2					
15	63	27.9	7 45.7	06.6	87 46.9	32.1	164 33.4	18.8	282 22.2	37.2					
16	78	30.3	22 45.1	07.4	102 47.5	31.4	179 35.9	18.8	297 24.7	37.2					
17	93	32.8	37 44.5	+21 08.2	117 48.1	-11 30.7	194 38.4	-22 18.8	312 27.2	+16 37.2					
18	108	35.2	52 44.0	+21 09.0	132 48.8	-11 30.0	209 40.9	-22 18.8	327 29.7	+16 37.2					
19	123	37.7	67 43.4	09.8	147 49.4	29.3	224 43.4	18.8	342 32.2	37.2					
20	138	40.2	82 42.8	10.6	162 50.0	28.7	239 45.9	18.7	357 34.7	37.2					
21	153	42.6	97 42.2	11.3	177 50.7	28.0	254 48.4	18.7	12 37.2	37.3					
22	168	45.1	112 41.7	12.1	192 51.3	27.3	269 50.9	18.7	27 39.7	37.3					
23	183	47.6	127 41.1	12.9	207 51.9	26.6	284 53.5	18.7	42 42.2	37.3					
24	198	50.0	142 40.5	+21 13.7	222 52.6	-11 25.9	299 56.0	-22 18.7	57 44.7	+16 37.3					
Dif	—	—	-6	+8	+6	+7	+25	0	+25	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 1			Edad: 22 ^d 9 PHE { 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'9 PMG: 6 ^h 45 ^m R°: 53 ^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	179	41.0	+8	05.7	262	27.6	-25	23.5	60 N	3	14	4	12	4	57		4	14	4
1	194	41.2		06.6	276	54.8	82	15.8	58	26	20	5	02	3	52	11	9	48	100
2	209	41.3		07.6	291	21.9	81	-25	07.9	56	37	27	06	34	16		10	06	94
3	224	41.5		08.5	305	49.2	83	-25	00.0	54	47	33	10	18	20		21	90	
4	239	41.7		09.4	320	16.4	82	-24	51.8	52	3	55	38	13	3	05	23	34	86
5	254	41.8	+8	10.3	334	43.7	83	-24	43.5	50	4	02	4	43	5	16	2	53	26
6	269	42.0	+8	11.2	349	11.0	83	-24	35.1	45	4	17	4	53	5	23	2	28	32
7	284	42.2		12.2	3	38.3	83	26.5	40	28	5	01	29	2	08	36		28	72
8	299	42.3		13.1	18	05.7	84	17.8	35	38	08	34	1	52	39		43	69	
9	314	42.5		14.0	32	33.1	84	-24	08.9	30	45	14	38	37	43		11	57	66
10	329	42.7		14.9	47	00.6	85	-23	59.9	20	4	57	23	46	1	13	47	12	20
11	344	42.8	+8	15.8	61	28.1	85	-23	50.7	10 N	5	06	5	31	5	52	0	52	50
12	359	43.0	+8	16.8	75	55.6	85	-23	41.4	0	5	13	5	37	5	58	0	32	54
13	14	43.2		17.7	90	23.1	85	32.0	10 S	18	42	6	04	0	12	57		13	16
14	29	43.3		18.6	104	50.7	86	22.4	20	22	47	10		**	**	**		35	45
15	44	43.5		19.5	119	18.4	87	12.7	30	24	52	16		**	**	**		13	58
16	59	43.7		20.4	133	46.0	86	-23	02.8	35	25	55	20		**	**	**	14	11
17	74	43.8	+8	21.4	148	13.8	88	-22	52.8	40	5	26	5	57	6	25	**	**	**
18	89	44.0	+8	22.3	162	41.5	87	-22	42.6	45	5	26	6	00	6	30	23	49	78
19	104	44.1		23.2	177	09.3	88	32.4	50	25	03	35		28	85		15	05	23
20	119	44.3		24.1	191	37.1	88	21.9	52	25	04	38		19	87		15	20	
21	134	44.5		25.0	206	05.0	89	11.4	54	24	05	41		23	08	91		27	17
22	149	44.6		26.0	220	32.9	89	-22	00.7	56	24	07	44		22	55	95	40	13
23	164	44.8		26.9	235	00.9	90	-21	49.8	58	23	08	48		41	100		15	55
24	179	45.0	+8	27.8	249	28.9	90	-21	38.9	60 S	5	22	6	10	6	52	22	23	107

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 10 ^h 42 ^m 9		Mag: -4.0 PMG: 14 ^h 30 ^m			Mag: +1.1 PMG: 9 ^h 08 ^m			Mag: -2.4 PMG: 4 ^h 00 ^m			Mag: +0.3 PMG: 20 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	198	50.0	142	40.5	+21	13.7	222	52.6	-11	25.9	299	56.0	-22	18.7				
1	213	52.5	157	39.9		14.5	237	53.2		25.3	314	58.5		18.7				
2	228	55.0	172	39.4		15.2	252	53.8		24.6	330	01.0		18.7				
3	243	57.4	187	38.8		16.0	267	54.5		23.9	345	03.5		18.7				
4	258	59.9	202	38.2		16.8	282	55.1		23.2	0	06.0		18.7				
5	274	02.4	217	37.6	+21	17.6	297	55.8	-11	22.5	15	08.5	-22	18.7				
6	289	04.8	232	37.1	+21	18.3	312	56.4	-11	21.9	30	11.0	-22	18.7				
7	304	07.3	247	36.5		19.1	327	57.0		21.2	45	13.5		18.7				
8	319	09.7	262	35.9		19.9	342	57.7		20.5	60	16.0		18.7				
9	334	12.2	277	35.3		20.6	357	58.3		19.8	75	18.5		18.7				
10	349	14.7	292	34.8		21.4	12	58.9		19.1	90	21.0		18.7				
11	4	17.1	307	34.2	+21	22.2	27	59.6	-11	18.5	105	23.5	-22	18.7				
12	19	19.6	322	33.6	+21	23.0	43	00.2	-11	17.8	120	26.1	-22	18.7				
13	34	22.1	337	33.0		23.7	58	00.8		17.1	135	28.6		18.7				
14	49	24.5	352	32.5		24.5	73	01.5		16.4	150	31.1		18.7				
15	64	27.0	7	31.9		25.3	88	02.1		15.7	165	33.6		18.7				
16	79	29.5	22	31.3		26.0	103	02.7		15.0	180	36.1		18.7				
17	94	31.9	37	30.7	+21	26.8	118	03.4	-11	14.4	195	38.6	-22	18.7				
18	109	34.4	52	30.1	+21	27.5	133	04.0	-11	13.7	210	41.1	-22	18.7				
19	124	36.8	67	29.6		28.3	148	04.7		13.0	225	43.6		18.7				
20	139	39.3	82	29.0		29.1	163	05.3		12.3	240	46.1		18.7				
21	154	41.8	97	28.4		29.8	178	05.9		11.6	255	48.7		18.6				
22	169	44.2	112	27.8		30.6	193	06.6		10.9	270	51.2		18.6				
23	184	46.7	127	27.2		31.3	208	07.2		10.3	285	53.7		18.6				
24	199	49.2	142	26.7	+21	32.1	223	07.8	-11	09.6	300	56.2	-22	18.6				
Dif	—		-6			+8	+6			+7	+25			0	+25			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/0 PMG: 12 ^h 00 ^m 9			Edad: 23 ^d 9 PHE { 4 ^h : 58/2 12 ^h : 58/5 20 ^h : 58/8 SD: 15/8 PMG: 7 ^h 38 ^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	179	45.0	+8	27.8	249	28.9	-21 38.9	60 N	19 10	19 55	20 55	4 18 1	11 14 106	
1	194	45.1		28.7	263	56.9	27.8 ¹¹¹	58	04	47	41	4 03 6	28 100	
2	209	45.3		29.6	278	25.0	16.5 ¹¹³	56	19 00	40	30	3 50 10	40 96	
3	224	45.5		30.5	292	53.1	91 -21 05.2 ¹¹³	54	18 56	33	20	38 15	11 51 91	
4	239	45.6		31.4	307	21.3	92 -20 53.7 ¹¹⁵	52	52	27	11	28 18	12 00 88	
5	254	45.8	+8	32.4	321	49.5	92 -20 42.0 ¹¹⁷	50	18 48	19 22	20 04	3 19 21	12 08 86	
6	269	45.9	+8	33.3	336	17.7	92 -20 30.3 ¹¹⁷	45	18 41	19 11	19 48	3 00 26	12 26 79	
7	284	46.1		34.2	350	46.0	93 18.4 ¹¹⁹	40	35	19 03	36	2 44 31	40 75	
8	299	46.3		35.1	5	14.3	93 -20 06.4 ¹²⁰	35	30	18 56	26	31 35	12 52 71	
9	314	46.4		36.0	19	42.7	94 -19 54.3 ¹²¹	30	25	50	18	20 37	13 03 67	
10	329	46.6		36.9	34	11.1	94 42.0 ¹²³	20	17	40	19 06	2 00 43	21 61	
11	344	46.8	+8	37.9	48	39.5	94 -19 29.6 ¹²⁴	10 N	18 10	18 32	18 57	1 42 48	13 36 56	
12	359	46.9	+8	38.8	63	08.0	95 -19 17.1 ¹²⁵	0	18 04	18 25	18 49	1 26 52	13 51 51	
13	14	47.1		39.7	77	36.5	95 -19 04.5 ¹²⁶	10 S	17 58	19	44	1 09 57	14 05 47	
14	29	47.2		40.6	92	05.1	96 -18 51.7 ¹²⁸	20	52	14	39	0 52 61	20 42	
15	44	47.4		41.5	106	33.7	96 38.9 ¹²⁸	30	44	08	36	31 67	37 36	
16	59	47.6		42.4	121	02.3	96 25.9 ¹³⁰	35	40	06	35	19 70	47 33	
17	74	47.7	+8	43.3	135	31.0	97 -18 12.8 ¹³¹	40	17 36	18 03	18 34	0 05 74	14 59 28	
18	89	47.9	+8	44.2	149	59.7	97 -17 59.6 ¹³²	45	17 30	18 00	18 34	*** ** *	15 12 24	
19	104	48.0		45.2	164	28.5	98 46.2 ¹³⁴	50	24	17 57	34	*** ** *	28 18	
20	119	48.2		46.1	178	57.3	98 32.8 ¹³⁴	52	21	55	34	*** ** *	35 16	
21	134	48.4		47.0	193	26.1	98 19.2 ¹³⁶	54	18	54	34	*** ** *	44 12	
22	149	48.5		47.9	207	55.0	99 -17 05.5 ¹³⁷	56	14	52	35	*** ** *	15 53 9	
23	164	48.7		48.8	222	23.9	99 -16 51.7 ¹³⁸	58	10	50	35	*** ** *	16 03 6	
24	179	48.9	+8	49.7	236	52.8	99 -16 37.8 ¹³⁹	60 S	17 06	17 48	18 36	*** ** *	16 15 1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 39 ^m 0		Mag: -4.0 PMG: 14 ^h 31 ^m		Mag: +1.1 PMG: 9 ^h 07 ^m		Mag: -2.4 PMG: 3 ^h 56 ^m		Mag: +0.3 PMG: 20 ^h 02 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	199	49.2	142	26.7	+21 32.1	223 07.8	-11 09.6	300 56.2	-22 18.6	58 44.8	+16 37.5
1	214	51.6	157	26.1	32.9	238 08.5	08.9	315 58.7	18.6	73 47.3	37.5
2	229	54.1	172	25.5	33.6	253 09.1	08.2	331 01.2	18.6	88 49.8	37.5
3	244	56.6	187	24.9	34.4	268 09.7	07.5	346 03.7	18.6	103 52.3	37.6
4	259	59.0	202	24.3	35.1	283 10.4	06.8	1 06.3	18.6	118 54.8	37.6
5	275	01.5	217	23.7	+21 35.9	298 11.0	-11 06.2	16 08.8	-22 18.6	133 57.3	+16 37.6
6	290	04.0	232	23.2	+21 36.6	313 11.7	-11 05.5	31 11.3	-22 18.6	148 59.8	+16 37.6
7	305	06.4	247	22.6	37.4	328 12.3	04.8	46 13.8	18.6	164 02.3	37.6
8	320	08.9	262	22.0	38.1	343 12.9	04.1	61 16.3	18.6	179 04.8	37.6
9	335	11.3	277	21.4	38.9	358 13.6	03.4	76 18.8	18.6	194 07.3	37.6
10	350	13.8	292	20.8	39.6	13 14.2	02.7	91 21.4	18.6	209 09.8	37.6
11	5	16.3	307	20.2	+21 40.4	28 14.9	-11 02.0	106 23.9	-22 18.6	224 12.3	+16 37.6
12	20	18.7	322	19.7	+21 41.1	43 15.5	-11 01.4	121 26.4	-22 18.6	239 14.8	+16 37.6
13	35	21.2	337	19.1	41.9	58 16.1	-11 00.7	136 28.9	18.6	254 17.3	37.6
14	50	23.7	352	18.5	42.6	73 16.8	-11 00.0	151 31.4	18.6	269 19.8	37.7
15	65	26.1	7	17.9	43.3	88 17.4	-10 59.3	166 34.0	18.6	284 22.3	37.7
16	80	28.6	22	17.3	44.1	103 18.1	58.6	181 36.5	18.6	299 24.8	37.7
17	95	31.1	37	16.7	+21 44.8	118 18.7	-10 57.9	196 39.0	-22 18.6	314 27.3	+16 37.7
18	110	33.5	52	16.1	+21 45.6	133 19.3	-10 57.2	211 41.5	-22 18.6	329 29.8	+16 37.7
19	125	36.0	67	15.5	46.3	148 20.0	56.6	226 44.0	18.5	344 32.3	37.7
20	140	38.5	82	15.0	47.0	163 20.6	55.9	241 46.6	18.5	359 34.8	37.7
21	155	40.9	97	14.4	47.8	178 21.3	55.2	256 49.1	18.5	14 37.3	37.7
22	170	43.4	112	13.8	48.5	193 21.9	54.5	271 51.6	18.5	29 39.7	37.7
23	185	45.8	127	13.2	49.2	208 22.5	53.8	286 54.1	18.5	44 42.2	37.7
24	200	48.3	142	12.6	+21 50.0	223 23.2	-10 53.1	301 56.6	-22 18.5	59 44.7	+16 37.7
Dif	—		-6		+7	+6	+7	+25	0	+25	0

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 00 ^m 6			Edad: 24 ^d 9 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 4 20 ^h : 59 ^m 7 PMG: 8 ^h 30 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	48.9	+ 8	49.7	236	52.8	- 16	37.8	60 N	3 06	4 05	4 51	4 19	**	13 00 105
1	194	49.0		50.6	251	21.8 ¹⁰⁰		23.8 ¹⁴⁰	58	19	14	4 56	09 4		08 100
2	209	49.2		51.5	265	50.8 ¹⁰⁰	- 16	09.7 ¹⁴¹	56	31	21	5 01	4 00 8		16 96
3	224	49.3		52.4	280	19.8 ¹⁰⁰	- 15	55.5 ¹⁴²	54	41	28	05	3 53 11		22 93
4	239	49.5		53.4	294	48.9 ¹⁰¹		41.2 ¹⁴³	52	49	33	09	46 14		28 90
5	254	49.7	+ 8	54.3	309	18.0 ¹⁰¹	- 15	26.8 ¹⁴⁴	50	3 57	4 38	5 12	3 40 17		13 34 86
6	269	49.8	+ 8	55.2	323	47.2 ¹⁰²	- 15	12.2 ¹⁴⁶	45	4 13	4 49	5 20	3 26 23		13 45 80
7	284	50.0		56.1	338	16.4 ¹⁰²	- 14	57.6 ¹⁴⁶	40	25	4 58	26	15 27		13 55 75
8	299	50.1		57.0	352	45.6 ¹⁰²		42.9 ¹⁴⁷	35	35	5 05	31	3 06 31		14 03 71
9	314	50.3		57.9	7	14.8 ¹⁰²		28.0 ¹⁴⁹	30	43	12	36	2 57 35		10 67
10	329	50.4		58.8	21	44.1 ¹⁰³	- 14	13.1 ¹⁴⁹	20	4 55	22	44	43 40		22 61
11	344	50.6	+ 8	59.7	36	13.4 ¹⁰³	- 13	58.1 ¹⁵⁰	10 N	5 05	5 30	5 51	2 30 46		14 32 56
12	359	50.8	+ 9	00.6	50	42.7 ¹⁰³	- 13	43.0 ¹⁵¹	0	5 12	5 36	5 57	2 18 51		14 42 50
13	14	50.9		01.5	65	12.1 ¹⁰⁴		27.8 ¹⁵²	10 S	18	42	6 04	2 06 55		14 52 45
14	29	51.1		02.4	79	41.4 ¹⁰³	- 13	12.4 ¹⁵⁴	20	22	48	10	1 53 61		15 02 40
15	44	51.2		03.3	94	10.8 ¹⁰⁴	- 12	57.1 ¹⁵³	30	26	53	18	38 67		13 34
16	59	51.4		04.3	108	40.3 ¹⁰⁵		41.6 ¹⁵⁵	35	27	56	22	29 71		20 30
17	74	51.6	+ 9	05.2	123	09.7 ¹⁰⁴	- 12	26.0 ¹⁵⁶	40	5 28	5 59	6 27	1 19 75		15 27 27
18	89	51.7	+ 9	06.1	137	39.2 ¹⁰⁵	- 12	10.3 ¹⁵⁷	45	5 28	6 02	6 32	1 07 80		15 36 22
19	104	51.9		07.0	152	08.7 ¹⁰⁵	- 11	54.6 ¹⁵⁷	50	28	06	39	0 53 86		46 16
20	119	52.0		07.9	166	38.2 ¹⁰⁵		38.8 ¹⁵⁸	52	28	07	42	46 89		51 13
21	134	52.2		08.8	181	07.8 ¹⁰⁶		22.9 ¹⁵⁹	54	28	09	45	39 92		15 56 11
22	149	52.3		09.7	195	37.3 ¹⁰⁵	- 11	06.9 ¹⁶⁰	56	28	11	48	30 96		16 02 7
23	164	52.5		10.6	210	06.9 ¹⁰⁶	- 10	50.8 ¹⁶¹	58	27	13	52	21 100		09 3
24	179	52.7	+ 9	11.5	224	36.5 ¹⁰⁶	- 10	34.7 ¹⁶¹	60 S	5 26	6 15	6 57	0 10 105		16 16 **

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 35 ^m 0		Mag: -4.0 PMG: 14 ^h 32 ^m		Mag: +1.1 PMG: 9 ^h 06 ^m		Mag: -2.4 PMG: 3 ^h 52 ^m		Mag: +0.3 PMG: 19 ^h 58 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	200	48.3	142	12.6	+21	50.0	223	23.2	-10	53.1	301	56.6	-22	18.5	59	44.7	+16	37.7
1	215	50.8	157	12.0		50.7	238	23.8		52.4	316	59.2		18.5	74	47.2		37.7
2	230	53.2	172	11.4		51.4	253	24.5		51.7	332	01.7		18.5	89	49.7		37.7
3	245	55.7	187	10.8		52.2	268	25.1		51.0	347	04.2		18.5	104	52.2		37.8
4	260	58.2	202	10.2		52.9	283	25.7		50.4	2	06.7		18.5	119	54.7		37.8
5	276	00.6	217	09.7	+21	53.6	298	26.4	-10	49.7	17	09.3	-22	18.5	134	57.2	+16	37.8
6	291	03.1	232	09.1	+21	54.4	313	27.0	-10	49.0	32	11.8	-22	18.5	149	59.7	+16	37.8
7	306	05.6	247	08.5		55.1	328	27.7		48.3	47	14.3		18.5	165	02.2		37.8
8	321	08.0	262	07.9		55.8	343	28.3		47.6	62	16.8		18.5	180	04.7		37.8
9	336	10.5	277	07.3		56.5	358	28.9		46.9	77	19.4		18.5	195	07.2		37.8
10	351	13.0	292	06.7		57.3	13	29.6		46.2	92	21.9		18.5	210	09.7		37.8
11	6	15.4	307	06.1	+21	58.0	28	30.2	-10	45.5	107	24.4	-22	18.5	225	12.2	+16	37.8
12	21	17.9	322	05.5	+21	58.7	43	30.9	-10	44.8	122	26.9	-22	18.5	240	14.7	+16	37.8
13	36	20.3	337	04.9	+21	59.4	58	31.5		44.2	137	29.5		18.5	255	17.2		37.8
14	51	22.8	352	04.3	+22	00.2	73	32.2		43.5	152	32.0		18.4	270	19.7		37.8
15	66	25.3	7	03.7		00.9	88	32.8		42.8	167	34.5		18.4	285	22.2		37.8
16	81	27.7	22	03.1		01.6	103	33.4		42.1	182	37.0		18.4	300	24.6		37.8
17	96	30.2	37	02.5	+22	02.3	118	34.1	-10	41.4	197	39.6	-22	18.4	315	27.1	+16	37.9
18	111	32.7	52	01.9	+22	03.0	133	34.7	-10	40.7	212	42.1	-22	18.4	330	29.6	+16	37.9
19	126	35.1	67	01.3		03.7	148	35.4		40.0	227	44.6		18.4	345	32.1		37.9
20	141	37.6	82	00.8		04.5	163	36.0		39.3	242	47.2		18.4	0	34.6		37.9
21	156	40.1	97	00.2		05.2	178	36.7		38.6	257	49.7		18.4	15	37.1		37.9
22	171	42.5	111	59.6		05.9	193	37.3		37.9	272	52.2		18.4	30	39.6		37.9
23	186	45.0	126	59.0		06.6	208	37.9		37.2	287	54.8		18.4	45	42.1		37.9
24	201	47.4	141	58.4	+22	07.3	223	38.6	-10	36.6	302	57.3	-22	18.4	60	44.6	+16	37.9
Dif	—		-6		+7		+6		+7		+25		0		+25		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 4			Edad: 25 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 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	m
0	179	52.7	+9 11.5	224	36.5	-10 34.7	60 N	19 15	20 01	21 02	4 18	0	14 45	105
1	194	52.8		239	06.1 ¹⁰⁶	18.4 ¹⁶³	58	09	19 52	20 47	13	3	48	101
2	209	53.0		253	35.7 ¹⁰⁶	-10 02.1 ¹⁶³	56	19 04	44	35	08	7	52	97
3	224	53.1		268	05.4 ¹⁰⁷	-9 45.8 ¹⁶³	54	18 59	37	25	04	10	55	93
4	239	53.3		282	35.1 ¹⁰⁷	29.3 ¹⁶⁵	52	55	31	16	4 00	13	14 58	90
5	254	53.4	+9 16.0	297	04.7 ¹⁰⁶	-9 12.8 ¹⁶⁵	50	18 52	19 26	20 08	3 57	15	15 00	88
6	269	53.6	+9 16.9	311	34.4 ¹⁰⁷	-8 56.2 ¹⁶⁶	45	18 44	19 14	19 51	3 49	21	15 05	82
7	284	53.8		326	04.1 ¹⁰⁷	39.6 ¹⁶⁶	40	37	19 05	38	42	26	10	76
8	299	53.9		340	33.8 ¹⁰⁷	22.8 ¹⁶⁸	35	31	18 57	28	37	29	14	72
9	314	54.1		355	03.5 ¹⁰⁷	-8 06.1 ¹⁶⁷	30	26	51	20	32	33	17	68
10	329	54.2		9	33.2 ¹⁰⁷	-7 49.2 ¹⁶⁹	20	18	40	19 07	23	40	23	61
11	344	54.4	+9 21.4	24	03.0 ¹⁰⁸	-7 32.3 ¹⁶⁹	10 N	18 10	18 32	18 57	3 16	45	15 28	55
12	359	54.5	+9 22.3	38	32.7 ¹⁰⁷	-7 15.3 ¹⁷⁰	0	18 04	18 25	18 49	3 09	50	15 32	51
13	14	54.7		53	02.4 ¹⁰⁷	-6 58.3 ¹⁷⁰	10 S	17 57	18	43	3 01	56	37	45
14	29	54.8		67	32.2 ¹⁰⁸	41.2 ¹⁷¹	20	50	12	38	2 54	61	42	39
15	44	55.0		82	01.9 ¹⁰⁷	24.1 ¹⁷¹	30	42	06	34	45	68	47	33
16	59	55.1		96	31.7 ¹⁰⁸	-6 06.9 ¹⁷²	35	38	03	33	40	71	50	29
17	74	55.3	+9 26.8	111	01.4 ¹⁰⁷	-5 49.7 ¹⁷²	40	17 33	18 00	18 31	2 34	76	15 54	25
18	89	55.5	+9 27.7	125	31.1 ¹⁰⁷	-5 32.4 ¹⁷³	45	17 27	17 56	18 30	2 27	81	15 58	20
19	104	55.6		140	00.9 ¹⁰⁸	-5 15.0 ¹⁷⁴	50	20	53	30	19	87	16 02	15
20	119	55.8		154	30.6 ¹⁰⁷	-4 57.6 ¹⁷⁴	52	17	51	30	15	90	04	13
21	134	55.9		169	00.3 ¹⁰⁷	40.2 ¹⁷⁴	54	13	49	30	11	93	07	9
22	149	56.1		183	30.0 ¹⁰⁷	22.7 ¹⁷⁵	56	09	47	30	06	97	09	7
23	164	56.2		197	59.8 ¹⁰⁸	-4 05.2 ¹⁷⁵	58	05	45	30	2 01	100	12	3
24	179	56.4	+9 33.1	212	29.5 ¹⁰⁷	-3 47.7 ¹⁷⁵	60 S	17 00	17 43	18 31	1 55	105	16 15	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 31 ^m 1		Mag: -4.0 PMG: 14 ^h 33 ^m		Mag: +1.1 PMG: 9 ^h 05 ^m		Mag: -2.4 PMG: 3 ^h 48 ^m		Mag: +0.3 PMG: 19 ^h 54 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	201	47.4	141	58.4	+22	07.3	223	38.6	-10	36.6	302	57.3	-22	18.4	60	44.6	+16	37.9
1	216	49.9	156	57.8		08.0	238	39.2		35.9	317	59.8		18.4	75	47.1		37.9
2	231	52.4	171	57.2		08.7	253	39.9		35.2	333	02.3		18.4	90	49.6		37.9
3	246	54.8	186	56.6		09.4	268	40.5		34.5	348	04.9		18.4	105	52.1		37.9
4	261	57.3	201	56.0		10.1	283	41.2		33.8	3	07.4		18.4	120	54.5		37.9
5	276	59.8	216	55.4	+22	10.8	298	41.8	-10	33.1	18	09.9	-22	18.4	135	57.0	+16	37.9
6	292	02.2	231	54.8	+22	11.6	313	42.5	-10	32.4	33	12.5	-22	18.4	150	59.5	+16	37.9
7	307	04.7	246	54.2		12.3	328	43.1		31.7	48	15.0		18.4	166	02.0		37.9
8	322	07.2	261	53.6		13.0	343	43.7		31.0	63	17.5		18.3	181	04.5		37.9
9	337	09.6	276	53.0		13.7	358	44.4		30.3	78	20.1		18.3	196	07.0		38.0
10	352	12.1	291	52.4		14.4	13	45.0		29.6	93	22.6		18.3	211	09.5		38.0
11	7	14.6	306	51.8	+22	15.1	28	45.7	-10	28.9	108	25.1	-22	18.3	226	12.0	+16	38.0
12	22	17.0	321	51.2	+22	15.8	43	46.3	-10	28.2	123	27.7	-22	18.3	241	14.5	+16	38.0
13	37	19.5	336	50.6		16.5	58	47.0		27.5	138	30.2		18.3	256	17.0		38.0
14	52	21.9	351	50.0		17.2	73	47.6		26.9	153	32.8		18.3	271	19.4		38.0
15	67	24.4	6	49.4		17.8	88	48.3		26.2	168	35.3		18.3	286	21.9		38.0
16	82	26.9	21	48.8		18.5	103	48.9		25.5	183	37.8		18.3	301	24.4		38.0
17	97	29.3	36	48.2	+22	19.2	118	49.6	-10	24.8	198	40.4	-22	18.3	316	26.9	+16	38.0
18	112	31.8	51	47.6	+22	19.9	133	50.2	-10	24.1	213	42.9	-22	18.3	331	29.4	+16	38.0
19	127	34.3	66	47.0		20.6	148	50.8		23.4	228	45.4		18.3	346	31.9		38.0
20	142	36.7	81	46.4		21.3	163	51.5		22.7	243	48.0		18.3	1	34.4		38.0
21	157	39.2	96	45.8		22.0	178	52.1		22.0	258	50.5		18.3	16	36.9		38.0
22	172	41.7	111	45.2		22.7	193	52.8		21.3	273	53.0		18.3	31	39.3		38.0
23	187	44.1	126	44.6		23.4	208	53.4		20.6	288	55.6		18.3	46	41.8		38.0
24	202	46.6	141	43.9	+22	24.1	223	54.1	-10	19.9	303	58.1	-22	18.3	61	44.3	+16	38.0
Dif	—		-6		+7		+6		+7		+25		0		+25		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 1			Edad: 26 ^d 9	PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1 R°: 51 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	56.4	+9 33.1	212	29.5	-3 47.7	176	60 N	2 58	3 59	4 45	4 18	**	16 30	108
1	194	56.5	34.0	226	59.2 ¹⁰⁷	30.1 ¹⁷⁶		58	3 12	4 08	51	16	3	29	103
2	209	56.7	34.9	241	28.8 ¹⁰⁶	-3 12.4 ¹⁷⁷		56	25	16	4 56	15	7	29	99
3	224	56.8	35.8	255	58.5 ¹⁰⁷	-2 54.8 ¹⁷⁶		54	35	22	5 00	14	9	28	96
4	239	57.0	36.7	270	28.2 ¹⁰⁷	37.1 ¹⁷⁷		52	44	29	04	13	12	28	92
5	254	57.1	+9 37.6	284	57.8 ¹⁰⁶	-2 19.4 ¹⁷⁷		50	3 52	4 34	5 08	4 12	15	16 28	89
6	269	57.3	+9 38.5	299	27.4 ¹⁰⁶	-2 01.6 ¹⁷⁸		45	4 09	4 46	5 16	4 10	20	16 27	83
7	284	57.4	39.4	313	57.0 ¹⁰⁶	-1 43.8 ¹⁷⁸		40	21	4 55	23	08	25	26	78
8	299	57.6	40.3	328	26.6 ¹⁰⁶	26.0 ¹⁷⁸		35	32	5 03	29	06	30	26	73
9	314	57.7	41.2	342	56.2 ¹⁰⁶	-1 08.2 ¹⁷⁸		30	40	09	34	05	33	25	70
10	329	57.9	42.1	357	25.7 ¹⁰⁵	-0 50.3 ¹⁷⁹		20	4 54	20	42	03	39	24	63
11	344	58.1	+9 43.0	11	55.3 ¹⁰⁶	-0 32.5 ¹⁷⁸		10 N	5 04	5 29	5 50	4 01	45	16 23	57
12	359	58.2	+9 43.9	26	24.7 ¹⁰⁴	-0 14.6 ¹⁷⁹		0	5 11	5 36	5 57	3 59	51	16 23	51
13	14	58.4	44.8	40	54.2 ¹⁰⁵	+0 03.3 ¹⁷⁹		10 S	18	42	6 04	57	56	22	46
14	29	58.5	45.7	55	23.7 ¹⁰⁵	21.2 ¹⁷⁹		20	23	48	11	55	62	21	40
15	44	58.7	46.6	69	53.1 ¹⁰⁴	39.2 ¹⁸⁰		30	27	55	19	53	68	20	34
16	59	58.8	47.5	84	22.5 ¹⁰⁴	+0 57.1 ¹⁷⁹		35	28	5 58	23	51	73	19	31
17	74	59.0	+9 48.4	98	51.8 ¹⁰³	+1 15.0 ¹⁷⁹		40	5 30	6 01	6 29	3 50	77	16 19	26
18	89	59.1	+9 49.3	113	21.2 ¹⁰⁴	+1 33.0 ¹⁸⁰		45	5 31	6 05	6 34	3 48	82	16 18	21
19	104	59.3	50.1	127	50.5 ¹⁰³	+1 50.9 ¹⁷⁹		50	31	09	42	46	88	17	16
20	119	59.4	51.0	142	19.7 ¹⁰²	+2 08.9 ¹⁸⁰		52	31	11	45	45	91	17	12
21	134	59.6	51.9	156	48.9 ¹⁰²	26.9 ¹⁸⁰		54	31	12	48	44	94	16	10
22	149	59.7	52.8	171	18.1 ¹⁰²	+2 44.8 ¹⁷⁹		56	31	14	52	43	98	16	6
23	164	59.9	53.7	185	47.3 ¹⁰²	+3 02.8 ¹⁸⁰		58	31	17	6 57	41	102	15	3
24	180	00.0	+9 54.6	200	16.4 ¹⁰¹	+3 20.7 ¹⁷⁹		60 S	5 31	6 19	7 02	3 40	106	16 15	**
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 27 ^m 2			Mag: -4.1 PMG: 14 ^h 34 ^m			Mag: +1.1 PMG: 9 ^h 04 ^m			Mag: -2.4 PMG: 3 ^h 43 ^m			Mag: +0.3 PMG: 19 ^h 50 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	202	46.6	141 43.9	+22 24.1	223 54.1	-10 19.9		303 58.1	-22 18.3	61 44.3	+16 38.0				
1	217	49.0	156 43.3	24.8	238 54.7	19.2		319 00.7	18.2	76 46.8	38.0				
2	232	51.5	171 42.7	25.4	253 55.4	18.5		334 03.2	18.2	91 49.3	38.0				
3	247	54.0	186 42.1	26.1	268 56.0	17.8		349 05.7	18.2	106 51.8	38.0				
4	262	56.4	201 41.5	26.8	283 56.7	17.1		4 08.3	18.2	121 54.3	38.1				
5	277	58.9	216 40.9	+22 27.5	298 57.3	-10 16.4		19 10.8	-22 18.2	136 56.8	+16 38.1				
6	293	01.4	231 40.3	+22 28.2	313 58.0	-10 15.7		34 13.4	-22 18.2	151 59.2	+16 38.1				
7	308	03.8	246 39.7	28.8	328 58.6	15.0		49 15.9	18.2	167 01.7	38.1				
8	323	06.3	261 39.1	29.5	343 59.3	14.3		64 18.5	18.2	182 04.2	38.1				
9	338	08.8	276 38.5	30.2	358 59.9	13.6		79 21.0	18.2	197 06.7	38.1				
10	353	11.2	291 37.9	30.9	14 00.6	12.9		94 23.5	18.2	212 09.2	38.1				
11	8 13.7	306 37.3	+22 31.6	29 01.2	-10 12.2	109 26.1		-22 18.2	227 11.7	+16 38.1					
12	23 16.2	321 36.7	+22 32.2	44 01.9	-10 11.5	124 28.6		-22 18.2	242 14.1	+16 38.1					
13	38 18.6	336 36.1	32.9	59 02.5	10.8	139 31.2		18.2	257 16.6	38.1					
14	53 21.1	351 35.5	33.6	74 03.2	10.1	154 33.7		18.2	272 19.1	38.1					
15	68 23.5	6 34.8	34.2	89 03.8	09.4	169 36.3		18.2	287 21.6	38.1					
16	83 26.0	21 34.2	34.9	104 04.5	08.8	184 38.8		18.2	302 24.1	38.1					
17	98 28.5	36 33.6	+22 35.6	119 05.1	-10 08.1	199 41.3		-22 18.1	317 26.6	+16 38.1					
18	113 30.9	51 33.0	+22 36.3	134 05.8	-10 07.4	214 43.9		-22 18.1	332 29.1	+16 38.1					
19	128 33.4	66 32.4	36.9	149 06.4	06.7	229 46.4		18.1	347 31.5	38.1					
20	143 35.9	81 31.8	37.6	164 07.1	06.0	244 49.0		18.1	2 34.0	38.1					
21	158 38.3	96 31.2	38.3	179 07.7	05.3	259 51.5		18.1	17 36.5	38.1					
22	173 40.8	111 30.6	38.9	194 08.4	04.6	274 54.1		18.1	32 39.0	38.1					
23	188 43.3	126 30.0	39.6	209 09.0	03.9	289 56.6		18.1	47 41.5	38.1					
24	203 45.7	141 29.4	+22 40.3	224 09.7	-10 03.2	304 59.2		-22 18.1	62 44.0	+16 38.1					
Dif	—		-6	+7	+6	+7		+25	0	+25	0				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 9		Edad: 27 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	00.0	+9 54.6	200	16.4	+3 20.7	60 N	19 20	20 06	21 09	4 17	0	18 18	112
1	195	00.2	55.5	214	45.5 ¹⁰¹	38.6 ¹⁷⁹	58	13	19 57	20 53	19	4	12	108
2	210	00.3	56.4	229	14.5 ¹⁰⁰	+3 56.6 ¹⁸⁰	56	08	49	40	22	7	08	103
3	225	00.5	57.3	243	43.5 ¹⁰⁰	+4 14.5 ¹⁷⁹	54	19 03	41	29	23	11	04	99
4	240	00.6	58.2	258	12.4 ⁹⁹	32.4 ¹⁷⁹	52	18 59	35	20	25	14	18 00	96
5	255	00.8	+9 59.1	272	41.3 ⁹⁹	+4 50.3 ¹⁷⁹	50	18 55	19 29	20 11	4 27	16	17 57	92
6	270	00.9	+9 59.9	287	10.2 ⁹⁹	+5 08.1 ¹⁷⁸	45	18 46	19 17	19 54	4 30	23	17 50	86
7	285	01.0	+10 00.8	301	39.0 ⁹⁸	26.0 ¹⁷⁹	40	39	19 07	41	33	28	44	80
8	300	01.2	01.7	316	07.7 ⁹⁷	+5 43.8 ¹⁷⁸	35	33	18 59	30	36	32	39	76
9	315	01.3	02.6	330	36.4 ⁹⁷	+6 01.6 ¹⁷⁸	30	28	52	21	38	36	35	72
10	330	01.5	03.5	345	05.1 ⁹⁷	19.3 ¹⁷⁷	20	18	41	19 07	42	42	27	65
11	345	01.6	+10 04.4	359	33.7 ⁹⁶	+6 37.1 ¹⁷⁸	10 N	18 11	18 32	18 57	4 46	48	17 20	60
12	0	01.8	+10 05.3	14	02.2 ⁹⁵	+6 54.8 ¹⁷⁷	0	18 03	18 24	18 49	4 50	52	17 14	54
13	15	01.9	06.2	28	30.7 ⁹⁵	+7 12.5 ¹⁷⁷	10 S	17 56	17	42	53	58	08	49
14	30	02.1	07.1	42	59.1 ⁹⁴	30.1 ¹⁷⁶	20	48	11	37	4 57	64	17 01	44
15	45	02.2	07.9	57	27.5 ⁹⁴	+7 47.7 ¹⁷⁶	30	40	04	32	5 01	71	16 54	37
16	60	02.4	08.8	71	55.8 ⁹³	+8 05.2 ¹⁷⁵	35	35	18 01	30	04	75	50	33
17	75	02.5	+10 09.7	86	24.1 ⁹³	+8 22.8 ¹⁷⁶	40	17 30	17 57	18 29	5 07	79	16 45	29
18	90	02.7	+10 10.6	100	52.3 ⁹²	+8 40.2 ¹⁷⁴	45	17 23	17 53	18 27	5 10	85	16 39	24
19	105	02.8	11.5	115	20.4 ⁹¹	+8 57.6 ¹⁷⁴	50	16	49	26	14	91	33	17
20	120	03.0	12.4	129	48.5 ⁹¹	+9 15.0 ¹⁷⁴	52	12	47	26	16	94	29	15
21	135	03.1	13.3	144	16.5 ⁹⁰	32.3 ¹⁷³	54	09	45	26	18	98	26	12
22	150	03.3	14.1	158	44.4 ⁸⁹	+9 49.6 ¹⁷³	56	04	42	25	21	101	22	9
23	165	03.4	15.0	173	12.3 ⁸⁹	+10 06.8 ¹⁷²	58	17 00	40	25	23	106	18	5
24	180	03.5	+10 15.9	187	40.1 ⁸⁸	+10 24.0 ¹⁷²	60 S	16 55	17 37	18 25	5 26	111	16 14	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 23 ^m 2		Mag: -4.1 PMG: 14 ^h 35 ^m		Mag: +1.1 PMG: 9 ^h 03 ^m		Mag: -2.4 PMG: 3 ^h 39 ^m		Mag: +0.3 PMG: 19 ^h 46 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	203	45.7	141 29.4	+22 40.3	224 09.7	-10 03.2	304 59.2	-22 18.1	62 44.0	+16 38.1
1	218	48.2	156 28.7	40.9	239 10.3	02.5	320 01.7	18.1	77 46.4	38.1
2	233	50.6	171 28.1	41.6	254 11.0	01.8	335 04.3	18.1	92 48.9	38.1
3	248	53.1	186 27.5	42.2	269 11.6	01.1	350 06.8	18.1	107 51.4	38.1
4	263	55.6	201 26.9	42.9	284 12.3	-10 00.4	5 09.4	18.1	122 53.9	38.1
5	278	58.0	216 26.3	+22 43.5	299 12.9	-9 59.7	20 11.9	-22 18.1	137 56.4	+16 38.2
6	294	00.5	231 25.7	+22 44.2	314 13.6	-9 59.0	35 14.5	-22 18.1	152 58.8	+16 38.2
7	309	03.0	246 25.1	44.9	329 14.2	58.3	50 17.0	18.1	168 01.3	38.2
8	324	05.4	261 24.5	45.5	344 14.9	57.6	65 19.6	18.0	183 03.8	38.2
9	339	07.9	276 23.8	46.2	359 15.5	56.9	80 22.1	18.0	198 06.3	38.2
10	354	10.4	291 23.2	46.8	14 16.2	56.2	95 24.7	18.0	213 08.8	38.2
11	9	12.8	306 22.6	+22 47.5	29 16.8	-9 55.5	110 27.2	-22 18.0	228 11.2	+16 38.2
12	24	15.3	321 22.0	+22 48.1	44 17.5	-9 54.8	125 29.8	-22 18.0	243 13.7	+16 38.2
13	39	17.8	336 21.4	48.8	59 18.1	54.1	140 32.3	18.0	258 16.2	38.2
14	54	20.2	351 20.8	49.4	74 18.8	53.4	155 34.9	18.0	273 18.7	38.2
15	69	22.7	6 20.2	50.1	89 19.4	52.7	170 37.4	18.0	288 21.2	38.2
16	84	25.1	21 19.5	50.7	104 20.1	52.0	185 40.0	18.0	303 23.6	38.2
17	99	27.6	36 18.9	+22 51.4	119 20.7	-9 51.3	200 42.5	-22 18.0	318 26.1	+16 38.2
18	114	30.1	51 18.3	+22 52.0	134 21.4	-9 50.5	215 45.1	-22 18.0	333 28.6	+16 38.2
19	129	32.5	66 17.7	52.7	149 22.0	49.8	230 47.6	18.0	348 31.1	38.2
20	144	35.0	81 17.1	53.3	164 22.7	49.1	245 50.2	18.0	3 33.6	38.2
21	159	37.5	96 16.5	53.9	179 23.3	48.4	260 52.8	18.0	18 36.0	38.2
22	174	39.9	111 15.8	54.6	194 24.0	47.7	275 55.3	17.9	33 38.5	38.2
23	189	42.4	126 15.2	55.2	209 24.6	47.0	290 57.9	17.9	48 41.0	38.2
24	204	44.9	141 14.6	+22 55.9	224 25.3	-9 46.3	306 00.4	-22 17.9	63 43.5	+16 38.2
Dif	—	—	-6	+7	+7	+7	+26	0	+25	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 29 ^d 9 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 1 20 ^h : 61 ^h 0													
	PMG: 11 ^h 59 ^m 4			SD: 16 ^h 7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	180	07.0	+10 37.1	174	25.1	+16 52.5	69	60 N	19 25	20 12	21 16	4 18 3	22 08 120				
1	195	07.1		188	51.0	+17 07.5	150	58	18	20 02	21 00	29 10	21 51 110				
2	210	07.3	38.8	203	16.8	22.3	148	56	12	19 53	20 46	39 15	36 103				
3	225	07.4	39.7	217	42.5	37.1	148	54	07	45	34	48 20	24 98				
4	240	07.6	40.6	232	08.1	+17 51.7	146	52	19 02	39	24	4 56 23	13 94				
5	255	07.7	+10 41.4	246	33.7	+18 06.2	145	50	18 58	19 32	20 15	5 03 27	21 03 91				
6	270	07.8	+10 42.3	260	59.1	+18 20.6	144	45	18 49	19 20	19 57	5 19 32	20 43 85				
7	285	08.0	43.2	275	24.5	34.8	142	40	41	09	43	32 37	26 81				
8	300	08.1	44.1	289	49.8	+18 49.0	142	35	35	19 01	32	43 41	13 76				
9	315	08.3	44.9	304	15.0	+19 03.0	140	30	29	18 53	23	5 53 44	20 01 73				
10	330	08.4	45.8	318	40.1	16.8	138	20	19	42	19 08	6 09 51	19 40 69				
11	345	08.5	+10 46.7	333	05.1	+19 30.5	137	10 N	18 11	18 32	18 57	6 24 55	19 22 65				
12	0	08.7	+10 47.6	347	30.1	+19 44.1	136	0	18 03	18 24	18 48	6 38 60	19 06 61				
13	15	08.8	48.4	1	54.9	+19 57.6	135	10 S	17 55	16	41	6 52 64	18 50 57				
14	30	09.0	49.3	16	19.7	+20 10.9	133	20	47	09	35	7 08 68	32 53				
15	45	09.1	50.2	30	44.4	24.1	132	30	38	18 02	30	25 75	12 48				
16	60	09.2	51.1	45	09.0	37.1	130	35	33	17 58	28	36 77	18 01 45				
17	75	09.4	+10 51.9	59	33.5	+20 50.0	129	40	17 27	17 54	18 26	7 47 82	17 47 42				
18	90	09.5	+10 52.8	73	58.0	+21 02.7	127	45	17 20	17 50	18 24	8 02 86	17 32 37				
19	105	09.6	53.7	88	22.4	15.3	126	50	12	45	22	19 93	13 30				
20	120	09.8	54.5	102	46.6	27.7	124	52	08	43	22	27 97	17 04 27				
21	135	09.9	55.4	117	10.8	40.0	123	54	04	40	21	36 101	16 54 23				
22	150	10.1	56.3	131	35.0	+21 52.1	121	56	17 00	38	21	47 106	43 18				
23	165	10.2	57.2	145	59.0	+22 04.0	119	58	16 55	35	20	8 59 112	30 13				
24	180	10.3	+10 58.0	160	23.0	+22 15.8	118	60 S	16 49	17 32	18 20	9 13 121	16 15 4				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 15 ^m 4		Mag: -4.1 PMG: 14 ^h 37 ^m			Mag: +1.1 PMG: 9 ^h 01 ^m			Mag: -2.4 PMG: 3 ^h 31 ^m			Mag: +0.3 PMG: 19 ^h 38 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	205	44.0	140	59.7	+23 10.9		224	41.0	-9 29.4		307	01.9	-22 17.8				
1	220	46.5	155	59.1	11.5		239	41.7	28.7		322	04.4	17.7				
2	235	48.9	170	58.4	12.1		254	42.3	28.0		337	07.0	17.7				
3	250	51.4	185	57.8	12.7		269	43.0	27.3		352	09.6	17.7				
4	265	53.9	200	57.2	13.3		284	43.7	26.6		7	12.1	17.7				
5	280	56.3	215	56.6	+23 13.9		299	44.3	-9 25.9		22	14.7	-22 17.7				
6	295	58.8	230	55.9	+23 14.5		314	45.0	-9 25.2		37	17.3	-22 17.7				
7	311	01.2	245	55.3	15.1		329	45.6	24.5		52	19.8	17.7				
8	326	03.7	260	54.7	15.7		344	46.3	23.8		67	22.4	17.7				
9	341	06.2	275	54.1	16.3		359	46.9	23.1		82	25.0	17.7				
10	356	08.6	290	53.4	16.9		14	47.6	22.4		97	27.5	17.7				
11	11	11.1	305	52.8	+23 17.5		29	48.3	-9 21.6		112	30.1	-22 17.7				
12	26	13.6	320	52.2	+23 18.1		44	48.9	-9 20.9		127	32.7	-22 17.7				
13	41	16.0	335	51.6	18.7		59	49.6	20.2		142	35.2	17.6				
14	56	18.5	350	50.9	19.3		74	50.2	19.5		157	37.8	17.6				
15	71	21.0	5	50.3	19.9		89	50.9	18.8		172	40.4	17.6				
16	86	23.4	20	49.7	20.5		104	51.6	18.1		187	42.9	17.6				
17	101	25.9	35	49.1	+23 21.1		119	52.2	-9 17.4		202	45.5	-22 17.6				
18	116	28.3	50	48.4	+23 21.7		134	52.9	-9 16.7		217	48.1	-22 17.6				
19	131	30.8	65	47.8	22.3		149	53.5	16.0		232	50.6	17.6				
20	146	33.3	80	47.2	22.9		164	54.2	15.3		247	53.2	17.6				
21	161	35.7	95	46.5	23.5		179	54.9	14.6		262	55.8	17.6				
22	176	38.2	110	45.9	24.1		194	55.5	13.9		277	58.4	17.6				
23	191	40.7	125	45.3	24.7		209	56.2	13.1		293	00.9	17.6				
24	206	43.1	140	44.6	+23 25.3		224	56.8	-9 12.4		308	03.5	-22 17.6				
Dif	—		-6		+6		+7		+7		+26		0		+25		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 2 ^d 5 PHE { 4 ^h : 60'1 12 ^h : 59'8 20 ^h : 59'5 PMG: 14 ^h 55 ^m R°: 63 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	180	13.6	+11	18.8	145	38.3	+26	07.1	60 N	19 29	20 18	21 24	4 30 28	0 08 104				
1	195	13.7		19.7	160	00.8	35	14.4	58	22	20 07	21 06	4 58 38	*** ** *				
2	210	13.9		20.5	174	23.2	34	21.6	56	16	19 58	20 52	5 20 43	*** ** *				
3	225	14.0		21.4	188	45.6	34	28.5	54	11	50	39	37 47	*** ** *				
4	240	14.1		22.3	203	08.0	34	35.3	52	06	42	29	5 53 48	*** ** *				
5	255	14.3	+11	23.1	217	30.3	33	+26 41.8	50	19 01	19 36	20 19	6 06 50	23 55 63				
6	270	14.4	+11	24.0	231	52.7	34	+26 48.2	45	18 51	19 22	20 00	6 33 54	23 24 64				
7	285	14.5		24.8	246	14.9	32	+26 54.3	40	43	11	19 46	6 55 56	23 01 63				
8	300	14.6		25.7	260	37.2	33	+27 00.3	35	36	19 02	34	7 13 57	22 41 63				
9	315	14.8		26.6	274	59.5	33	06.1	30	30	18 55	24	29 58	22 25 63				
10	330	14.9		27.4	289	21.7	32	11.6	20	20	42	19 09	7 55 61	21 57 62				
11	345	15.0	+11	28.3	303	43.9	32	+27 17.0	10 N	18 11	18 32	18 57	8 18 62	21 32 63				
12	0	15.2	+11	29.1	318	06.1	32	+27 22.2	0	18 02	18 23	18 48	8 40 63	21 10 62				
13	15	15.3		30.0	332	28.3	32	27.1	10 S	17 54	16	40	9 02 64	20 48 62				
14	30	15.4		30.8	346	50.5	32	31.9	20	45	08	34	25 65	20 23 62				
15	45	15.6		31.7	1	12.7	32	36.5	30	36	18 00	28	9 52 67	19 55 62				
16	60	15.7		32.6	15	34.8	31	40.9	35	30	17 56	25	10 08 68	39 61				
17	75	15.8	+11	33.4	29	57.0	32	+27 45.0	40	17 24	17 51	18 23	10 27 69	19 20 60				
18	90	16.0	+11	34.3	44	19.2	32	+27 49.0	45	17 17	17 47	18 21	10 50 70	18 56 60				
19	105	16.1		35.1	58	41.4	32	52.8	50	08	41	19	11 19 72	26 58				
20	120	16.2		36.0	73	03.6	32	56.4	52	04	39	18	34 73	18 12 57				
21	135	16.3		36.8	87	25.8	32	+27 59.7	54	17 00	36	17	11 51 74	17 55 56				
22	150	16.5		37.7	101	48.0	32	+28 02.9	56	16 55	33	16	12 11 76	34 55				
23	165	16.6		38.5	116	10.2	32	05.9	58	49	30	16	12 36 80	17 09 51				
24	180	16.7	+11	39.4	130	32.5	33	+28 08.6	60 S	16 43	17 27	18 15	13 11 86	16 34 45				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 07 ^m 5		Mag: -4.1 PMG: 14 ^h 39 ^m		Mag: +1.0 PMG: 8 ^h 59 ^m		Mag: -2.4 PMG: 3 ^h 23 ^m		Mag: +0.3 PMG: 19 ^h 30 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	207	42.3	140	29.5	+23	39.1	225	12.7	-8	55.4	309	05.3	-22	17.3	66	41.4	+16	38.2
1	222	44.7	155	28.8		39.6	240	13.4		54.7	324	07.9		17.3	81	43.9		38.2
2	237	47.2	170	28.2		40.2	255	14.0		53.9	339	10.5		17.3	96	46.3		38.2
3	252	49.7	185	27.6		40.8	270	14.7		53.2	354	13.1		17.3	111	48.8		38.2
4	267	52.1	200	26.9		41.3	285	15.4		52.5	9	15.7		17.3	126	51.3		38.2
5	282	54.6	215	26.3	+23	41.9	300	16.0	-8	51.8	24	18.2	-22	17.3	141	53.7	+16	38.2
6	297	57.1	230	25.7	+23	42.4	315	16.7	-8	51.1	39	20.8	-22	17.3	156	56.2	+16	38.2
7	312	59.5	245	25.0		43.0	330	17.4		50.4	54	23.4		17.3	171	58.6		38.2
8	328	02.0	260	24.4		43.5	345	18.0		49.7	69	26.0		17.3	187	01.1		38.2
9	343	04.5	275	23.7		44.1	0	18.7		49.0	84	28.6		17.3	202	03.6		38.2
10	358	06.9	290	23.1		44.6	15	19.3		48.2	99	31.2		17.3	217	06.0		38.2
11	13	09.4	305	22.5	+23	45.2	30	20.0	-8	47.5	114	33.7	-22	17.2	232	08.5	+16	38.2
12	28	11.8	320	21.8	+23	45.7	45	20.7	-8	46.8	129	36.3	-22	17.2	247	11.0	+16	38.2
13	43	14.3	335	21.2		46.3	60	21.3		46.1	144	38.9		17.2	262	13.4		38.2
14	58	16.8	350	20.6		46.8	75	22.0		45.4	159	41.5		17.2	277	15.9		38.1
15	73	19.2	5	19.9		47.4	90	22.7		44.7	174	44.1		17.2	292	18.3		38.1
16	88	21.7	20	19.3		47.9	105	23.3		44.0	189	46.7		17.2	307	20.8		38.1
17	103	24.2	35	18.6	+23	48.5	120	24.0	-8	43.2	204	49.3	-22	17.2	322	23.3	+16	38.1
18	118	26.6	50	18.0	+23	49.0	135	24.7	-8	42.5	219	51.8	-22	17.2	337	25.7	+16	38.1
19	133	29.1	65	17.4		49.6	150	25.3		41.8	234	54.4		17.2	352	28.2		38.1
20	148	31.6	80	16.7		50.1	165	26.0		41.1	249	57.0		17.2	7	30.7		38.1
21	163	34.0	95	16.1		50.7	180	26.7		40.4	264	59.6		17.2	22	33.1		38.1
22	178	36.5	110	15.4		51.2	195	27.3		39.7	280	02.2		17.1	37	35.6		38.1
23	193	39.0	125	14.8		51.7	210	28.0		39.0	295	04.8		17.1	52	38.0		38.1
24	208	41.4	140	14.2	+23	52.3	225	28.7	-8	38.2	310	07.4	-22	17.1	67	40.5	+16	38.1
Dif	—		-6		+5		+7		+7		+26		0		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/9 PMG: 11 ^h 58 ^m 8			Edad: 3 ^d 5 PHE { 4 ^h : 59/2 12 ^h : 58/9 20 ^h : 58/6 R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	16.7	+11	39.4	130	32.5	+28	08.6	26	60 N	2 33	3 39	4 27	4 58	69	1 52	61	
1	195	16.9		40.3	144	54.7	32	11.2	26	58	2 51	50	34	5 36	67	1 15	62	
2	210	17.0		41.1	159	17.0	33	13.6	24	56	3 05	3 59	41	6 03	66	0 48	63	
3	225	17.1		42.0	173	39.4	34	15.8	22	54	18	4 07	46	24	65	27	63	
4	240	17.2		42.8	188	01.7	33	17.7	19	52	28	15	51	41	66	0 10	63	
5	255	17.4	+11	43.7	202	24.1	34	+28	19.5	18	50	3 38	4 21	4 56	6 56	65	** ** *	
6	270	17.5	+11	44.5	216	46.5	34	+28	21.1	16	45	3 57	4 35	5 06	7 27	64	** ** *	
7	285	17.6		45.4	231	09.0	35	22.5	14	40	4 12	46	14	7 51	63	** ** *		
8	300	17.8		46.2	245	31.5	35	23.7	12	35	23	4 55	21	8 10	64	23 44	53	
9	315	17.9		47.1	259	54.0	35	24.7	10	30	33	5 03	27	27	63	23 28	53	
10	330	18.0		47.9	274	16.6	36	25.5	8	20	4 49	15	38	8 56	62	22 59	56	
11	345	18.1	+11	48.8	288	39.2	36	+28	26.1	6	10 N	5 00	5 25	5 47	9 20	62	22 35	58
12	0	18.3	+11	49.6	303	01.9	37	+28	26.5	4	0	5 10	5 34	5 55	9 43	61	22 12	60
13	15	18.4		50.5	317	24.6	37	26.7	2	10 S	18	42	6 04	10 06	60	21 50	60	
14	30	18.5		51.3	331	47.4	38	26.7	0	20	24	50	13	30	60	21 25	62	
15	45	18.6		52.2	346	10.3	39	26.6	1	30	30	5 58	22	10 59	58	20 57	64	
16	60	18.8		53.0	0	33.2	39	26.2	4	35	33	6 02	28	11 16	58	40	65	
17	75	18.9	+11	53.9	14	56.1	39	+28	25.6	6	40	5 35	6 07	6 35	11 36	57	20 20	66
18	90	19.0	+11	54.7	29	19.2	41	+28	24.9	7	45	5 38	6 12	6 42	12 00	56	19 56	68
19	105	19.2		55.6	43	42.3	41	24.0	9	50	40	18	51	31	54	24	72	
20	120	19.3		56.4	58	05.4	41	22.9	11	52	41	20	55	12 47	52	19 09	72	
21	135	19.4		57.3	72	28.7	43	21.6	13	54	42	23	6 59	13 05	51	18 51	74	
22	150	19.5		58.1	86	52.0	43	20.1	15	56	42	26	7 04	27	49	29	77	
23	165	19.7		59.0	101	15.4	44	18.4	17	58	43	29	10	13 56	44	18 00	81	
24	180	19.8	+11	59.8	115	38.8	44	+28	16.6	18	60 S	5 44	6 33	7 16	14 37	36	17 19	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 03 ^m 6		Mag: -4.1 PMG: 14 ^h 40 ^m		Mag: +1.0 PMG: 8 ^h 58 ^m		Mag: -2.4 PMG: 3 ^h 19 ^m		Mag: +0.3 PMG: 19 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	208	41.4	140	14.2	+23	52.3	225	28.7	-8	38.2	310	07.4	-22	17.1	67	40.5	+16	38.1
1	223	43.9	155	13.5		52.8	240	29.3		37.5	325	10.0		17.1	82	43.0		38.1
2	238	46.3	170	12.9		53.3	255	30.0		36.8	340	12.5		17.1	97	45.4		38.1
3	253	48.8	185	12.2		53.9	270	30.7		36.1	355	15.1		17.1	112	47.9		38.1
4	268	51.3	200	11.6		54.4	285	31.3		35.4	10	17.7		17.1	127	50.3		38.1
5	283	53.7	215	11.0	+23	54.9	300	32.0	-8	34.7	25	20.3	-22	17.1	142	52.8	+16	38.1
6	298	56.2	230	10.3	+23	55.5	315	32.7	-8	33.9	40	22.9	-22	17.1	157	55.2	+16	38.1
7	313	58.7	245	09.7		56.0	330	33.3		33.2	55	25.5		17.1	172	57.7		38.1
8	329	01.1	260	09.0		56.5	345	34.0		32.5	70	28.1		17.1	188	00.2		38.1
9	344	03.6	275	08.4		57.1	0	34.7		31.8	85	30.7		17.0	203	02.6		38.1
10	359	06.1	290	07.8		57.6	15	35.3		31.1	100	33.3		17.0	218	05.1		38.1
11	14	08.5	305	07.1	+23	58.1	30	36.0	-8	30.4	115	35.9	-22	17.0	233	07.5	+16	38.1
12	29	11.0	320	06.5	+23	58.6	45	36.7	-8	29.6	130	38.5	-22	17.0	248	10.0	+16	38.1
13	44	13.5	335	05.8		59.2	60	37.3		28.9	145	41.0		17.0	263	12.5		38.1
14	59	15.9	350	05.2	+23	59.7	75	38.0		28.2	160	43.6		17.0	278	14.9		38.1
15	74	18.4	5	04.5	+24	00.2	90	38.7		27.5	175	46.2		17.0	293	17.4		38.1
16	89	20.8	20	03.9		00.7	105	39.3		26.8	190	48.8		17.0	308	19.8		38.0
17	104	23.3	35	03.3	+24	01.2	120	40.0	-8	26.1	205	51.4	-22	17.0	323	22.3	+16	38.0
18	119	25.8	50	02.6	+24	01.8	135	40.7	-8	25.3	220	54.0	-22	17.0	338	24.7	+16	38.0
19	134	28.2	65	02.0		02.3	150	41.3		24.6	235	56.6		16.9	353	27.2		38.0
20	149	30.7	80	01.3		02.8	165	42.0		23.9	250	59.2		16.9	8	29.7		38.0
21	164	33.2	95	00.7		03.3	180	42.7		23.2	266	01.8		16.9	23	32.1		38.0
22	179	35.6	110	00.0		03.8	195	43.4		22.5	281	04.4		16.9	38	34.6		38.0
23	194	38.1	124	59.4		04.3	210	44.0		21.8	296	07.0		16.9	53	37.0		38.0
24	209	40.6	139	58.8	+24	04.8	225	44.7	-8	21.0	311	09.6	-22	16.9	68	39.5	+16	38.0
Dif	—		-6		+5		+7		+7		+26		0		+25			

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 4			Edad: 5 ^d 5 SD: 15 ^h 6 PMG: 17 ^h 53 ^m	PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 0 20 ^h : 56 ^m 7 R°: 51 ^m										
	hG ☉	Dec				Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	22.7	+12	20.0	101	29.8	+26 40.6	60 N	2 24	3 33	4 22	7 46	102	3 15	8
1	195	22.8		20.8	115	55.7	34.6	58	43	44	29	8 12	93	2 49	16
2	210	23.0		21.7	130	21.8	28.5	56	2 59	3 54	36	32	88	28	21
3	225	23.1		22.5	144	47.9	22.2	54	3 12	4 03	42	8 49	84	2 11	25
4	240	23.2		23.4	159	14.2	15.8	52	23	10	47	9 04	80	1 56	28
5	255	23.3	+12	24.2	173	40.6	+26 09.2	50	3 33	4 17	4 52	9 16	78	1 43	31
6	270	23.4	+12	25.0	188	07.1	+26 02.5	45	3 53	4 31	5 03	9 42	73	1 16	36
7	285	23.6		25.9	202	33.8	+25 55.7	40	4 08	43	11	10 03	68	0 55	39
8	300	23.7		26.7	217	00.5	48.7	35	21	4 52	19	20	65	37	42
9	315	23.8		27.5	231	27.4	41.6	30	31	5 00	25	34	63	0 21	45
10	330	23.9		28.4	245	54.4	34.3	20	47	14	36	10 59	59	** ** *	**
11	345	24.0	+12	29.2	260	21.5	+25 26.9	10 N	4 59	5 25	5 46	11 21	55	** ** *	**
12	0	24.1	+12	30.0	274	48.7	+25 19.4	0	5 09	5 34	5 55	11 41	51	** ** *	**
13	15	24.3		30.9	289	16.1	11.8	10 S	18	42	6 04	12 00	49	23 48	53
14	30	24.4		31.7	303	43.6	+25 04.0	20	25	51	13	22	45	28	57
15	45	24.5		32.5	318	11.1	+24 56.1	30	31	5 59	24	12 46	41	23 05	61
16	60	24.6		33.4	332	38.9	48.1	35	34	6 04	30	13 01	38	22 51	65
17	75	24.7	+12	34.2	347	06.7	+24 39.9	40	5 37	6 09	6 37	13 17	35	22 35	68
18	90	24.8	+12	35.0	1	34.6	+24 31.7	45	5 40	6 14	6 44	13 37	31	22 17	72
19	105	25.0		35.9	16	02.7	23.3	50	43	20	54	14 02	25	21 53	78
20	120	25.1		36.7	30	30.9	14.8	52	44	23	6 58	14	22	41	81
21	135	25.2		37.5	44	59.2	+24 06.1	54	45	26	7 03	27	20	28	84
22	150	25.3		38.3	59	27.7	+23 57.4	56	46	30	08	14 43	15	21 13	88
23	165	25.4		39.2	73	56.2	48.6	58	47	33	14	15 01	11	20 55	94
24	180	25.5	+12	40.0	88	24.9	+23 39.6	60 S	5 48	6 37	7 21	15 24	3	20 33	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 55 ^m 7		Mag: -4.1 PMG: 14 ^h 42 ^m		Mag: +1.0 PMG: 8 ^h 56 ^m		Mag: -2.5 PMG: 3 ^h 11 ^m		Mag: +0.3 PMG: 19 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	210	39.7	139	43.3	+24	16.8	226	00.8	-8	03.8	312	12.0	-22	16.7	69	38.4	+16	37.9
1	225	42.2	154	42.6		17.3	241	01.5		03.0	327	14.6		16.6	84	40.8		37.9
2	240	44.6	169	42.0		17.7	256	02.1		02.3	342	17.2		16.6	99	43.3		37.9
3	255	47.1	184	41.3		18.2	271	02.8		01.6	357	19.8		16.6	114	45.7		37.8
4	270	49.6	199	40.7		18.7	286	03.5		00.9	12	22.4		16.6	129	48.2		37.8
5	285	52.0	214	40.0	+24	19.2	301	04.1	-8	00.2	27	25.0	-22	16.6	144	50.6	+16	37.8
6	300	54.5	229	39.4	+24	19.7	316	04.8	-7	59.4	42	27.6	-22	16.6	159	53.1	+16	37.8
7	315	56.9	244	38.7		20.1	331	05.5		58.7	57	30.2		16.6	174	55.5		37.8
8	330	59.4	259	38.1		20.6	346	06.2		58.0	72	32.8		16.6	189	58.0		37.8
9	346	01.9	274	37.4		21.1	1	06.8		57.3	87	35.5		16.6	205	00.4		37.8
10	1	04.3	289	36.8		21.6	16	07.5		56.5	102	38.1		16.5	220	02.9		37.8
11	16	06.8	304	36.1	+24	22.0	31	08.2	-7	55.8	117	40.7	-22	16.5	235	05.3	+16	37.8
12	31	09.3	319	35.5	+24	22.5	46	08.9	-7	55.1	132	43.3	-22	16.5	250	07.8	+16	37.8
13	46	11.7	334	34.8		23.0	61	09.5		54.4	147	45.9		16.5	265	10.2		37.8
14	61	14.2	349	34.2		23.5	76	10.2		53.7	162	48.5		16.5	280	12.6		37.8
15	76	16.7	4	33.5		23.9	91	10.9		52.9	177	51.1		16.5	295	15.1		37.8
16	91	19.1	19	32.9		24.4	106	11.6		52.2	192	53.7		16.5	310	17.5		37.8
17	106	21.6	34	32.2	+24	24.9	121	12.2	-7	51.5	207	56.3	-22	16.5	325	20.0	+16	37.7
18	121	24.1	49	31.6	+24	25.3	136	12.9	-7	50.8	222	58.9	-22	16.5	340	22.4	+16	37.7
19	136	26.5	64	30.9		25.8	151	13.6		50.0	238	01.5		16.4	355	24.9		37.7
20	151	29.0	79	30.3		26.2	166	14.3		49.3	253	04.2		16.4	10	27.3		37.7
21	166	31.4	94	29.6		26.7	181	14.9		48.6	268	06.8		16.4	25	29.8		37.7
22	181	33.9	109	29.0		27.2	196	15.6		47.9	283	09.4		16.4	40	32.2		37.7
23	196	36.4	124	28.3		27.6	211	16.3		47.2	298	12.0		16.4	55	34.7		37.7
24	211	38.8	139	27.7	+24	28.1	226	17.0	-7	46.4	313	14.6	-22	16.4	70	37.1	+16	37.7
Dif	—		-6		+5		+7		+7		+26		0		+24		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 6 ^d 5	PHE {	4 ^h : 56'4 12 ^h : 56'2 20 ^h : 55'9									
	PMG: 11 ^h 58 ^m 2								SD: 15°4	PMG: 18 ^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	h m	h m		
0	180	25.5	+12 40.0	88	24.9	+23 39.6	91	60 N	19 39	20 29	21 41	9 28 96	3 23 2		
1	195	25.7	40.8	102	53.7	30.5	91	58	31	17	20	9 45 91	3 05 8		
2	210	25.8	41.7	117	22.6	21.3	92	56	24	20 07	21 03	10 00 86	2 49 13		
3	225	25.9	42.5	131	51.6	12.0	93	54	18	19 58	20 49	13 82	36 16		
4	240	26.0	43.3	146	20.8	+23 02.6	94	52	12	50	38	24 79	24 19		
5	255	26.1	+12 44.1	160	50.0	+22 53.1	95	50	19 07	19 43	20 27	10 34 76	2 14 22		
6	270	26.2	+12 45.0	175	19.4	+22 43.5	96	45	18 56	19 28	20 07	10 55 70	1 52 27		
7	285	26.3	45.8	189	48.9	33.8	97	40	47	16	19 51	11 11 67	34 31		
8	300	26.5	46.6	204	18.5	24.0	98	35	39	19 06	38	25 63	19 35		
9	315	26.6	47.5	218	48.2	14.1	99	30	33	18 58	27	37 60	1 06 37		
10	330	26.7	48.3	233	18.1	+22 04.1	100	20	21	44	19 11	11 58 55	0 44 42		
11	345	26.8	+12 49.1	247	48.1	+21 54.0	101	10 N	18 11	18 33	18 58	12 16 51	0 24 46		
12	0	26.9	+12 49.9	262	18.1	+21 43.8	102	0	18 02	18 23	18 47	12 32 47	0 06 49		
13	15	27.0	50.8	276	48.3	33.6	102	10 S	17 52	14	39	12 49 43	** ** *		
14	30	27.1	51.6	291	18.6	23.2	104	20	43	18 05	31	13 07 39	** ** *		
15	45	27.3	52.4	305	49.0	12.7	105	30	32	17 56	24	27 34	** ** *		
16	60	27.4	53.2	320	19.6	+21 02.2	105	35	25	51	21	39 31	23 56 61		
17	75	27.5	+12 54.0	334	50.2	+20 51.5	107	40	17 18	17 46	18 18	13 52 28	23 43 65		
18	90	27.6	+12 54.9	349	21.0	+20 40.8	107	45	17 10	17 40	18 15	14 08 24	23 29 69		
19	105	27.7	55.7	3	51.8	30.0	108	50	17 00	34	12	27 19	11 74		
20	120	27.8	56.5	18	22.8	19.1	109	52	16 56	31	10	36 17	23 02 77		
21	135	27.9	57.3	32	53.9	+20 08.1	110	54	51	28	09	47 13	22 52 81		
22	150	28.0	58.2	47	25.0	+19 57.1	110	56	45	24	08	14 58 10	41 85		
23	165	28.2	59.0	61	56.3	45.9	112	58	39	20	06	15 12 5	29 88		
24	180	28.3	+12 59.8	76	27.7	+19 34.7	112	60 S	16 32	17 16	18 05	15 27 1	22 14 94		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG		Mag: -4.1		Mag: +1.0		Mag: -2.5		Mag: +0.4				
	9 ^h 51 ^m 8		PMG: 14 ^h 43 ^m		PMG: 8 ^h 54 ^m		PMG: 3 ^h 06 ^m		PMG: 19 ^h 14 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	211	38.8	139	27.7	+24 28.1	226	17.0	-7 46.4	313	14.6			
1	226	41.3	154	27.0	28.5	241	17.6	45.7	328	17.2			
2	241	43.8	169	26.4	29.0	256	18.3	45.0	343	19.8			
3	256	46.2	184	25.7	29.5	271	19.0	44.3	358	22.4			
4	271	48.7	199	25.1	29.9	286	19.7	43.5	13	25.0			
5	286	51.2	214	24.4	+24 30.4	301	20.3	-7 42.8	28	27.7			
6	301	53.6	229	23.8	+24 30.8	316	21.0	-7 42.1	43	30.3			
7	316	56.1	244	23.1	31.3	331	21.7	41.4	58	32.9			
8	331	58.6	259	22.5	31.7	346	22.4	40.6	73	35.5			
9	347	01.0	274	21.8	32.2	1	23.0	39.9	88	38.1			
10	2	03.5	289	21.2	32.6	16	23.7	39.2	103	40.7			
11	17	05.9	304	20.5	+24 33.1	31	24.4	-7 38.5	118	43.4			
12	32	08.4	319	19.9	+24 33.5	46	25.1	-7 37.7	133	46.0			
13	47	10.9	334	19.2	33.9	61	25.7	37.0	148	48.6			
14	62	13.3	349	18.6	34.4	76	26.4	36.3	163	51.2			
15	77	15.8	4	17.9	34.8	91	27.1	35.6	178	53.8			
16	92	18.3	19	17.3	35.3	106	27.8	34.8	193	56.4			
17	107	20.7	34	16.6	+24 35.7	121	28.4	-7 34.1	208	59.1			
18	122	23.2	49	15.9	+24 36.2	136	29.1	-7 33.4	224	01.7			
19	137	25.7	64	15.3	36.6	151	29.8	32.7	239	04.3			
20	152	28.1	79	14.6	37.0	166	30.5	31.9	254	06.9			
21	167	30.6	94	14.0	37.5	181	31.2	31.2	269	09.5			
22	182	33.0	109	13.3	37.9	196	31.8	30.5	284	12.1			
23	197	35.5	124	12.7	38.3	211	32.5	29.8	299	14.8			
24	212	38.0	139	12.0	+24 38.8	226	33.2	-7 29.0	314	17.4			
Dif	—		-7	+4		+7	+7		+26	0		+24	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 57 ^m 9				Edad: 8 ^d 5 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'7 R°: 40 ^m													
	hG ☉ Dec		hG ☾ Dif Dec Dif								Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	30.9	+13	19.4	65	30.2	+14	45.3	60 N	19	44	20	35	21	50	12	34 85	
1	195	31.0		20.2	80	03.9 ¹⁴⁷		32.6 ¹²⁷	58	36		22		27		41 81	3 26 **	
2	210	31.1		21.0	94	37.6 ¹⁴⁷		19.7 ¹²⁹	56	28		12	21	09		47 78	10 6	
3	225	31.2		21.8	109	11.5 ¹⁴⁹	+14	06.9 ¹²⁸	54	22	20	02	20	55		53 75	3 03 9	
4	240	31.3		22.6	123	45.4 ¹⁴⁹	+13	53.9 ¹³⁰	52	16	19	54		42	12	58 73	2 58 11	
5	255	31.4	+13	23.4	138	19.4 ¹⁵⁰	+13	41.0 ¹²⁹	50	19	10	19	46	20	31	13	03 70	2 52 14
6	270	31.5	+13	24.2	152	53.5 ¹⁵¹	+13	28.0 ¹³⁰	45	18	59	19	31	20	10	13	13 65	2 41 18
7	285	31.6		25.0	167	27.7 ¹⁵²		14.9 ¹³¹	40	49		18	19	53		21 61	31 22	
8	300	31.7		25.8	182	01.9 ¹⁵²	+13	01.8 ¹³¹	35	41	19	08		40	28	57	23 25	
9	315	31.8		26.6	196	36.2 ¹⁵³	+12	48.7 ¹³¹	30	34	18	59	29	34	55	15	28	15 28
10	330	31.9		27.5	211	10.5 ¹⁵³		35.5 ¹³²	20	22		45	19	11	45	49	2 02 34	
11	345	32.0	+13	28.3	225	45.0 ¹⁵⁵	+12	22.3 ¹³²	10 N	18	11	18	33	18	58	13	54 45	1 51 38
12	0	32.1	+13	29.1	240	19.5 ¹⁵⁵	+12	09.1 ¹³²	0	18	01	18	23	18	47	14	03 40	1 41 41
13	15	32.2		29.9	254	54.0 ¹⁵⁵	+11	55.8 ¹³³	10 S	17	52		13	38		11 37	30 46	
14	30	32.3		30.7	269	28.7 ¹⁵⁷		42.5 ¹³³	20	41	18	04		30	20	32	18 51	
15	45	32.4		31.5	284	03.3 ¹⁵⁶		29.1 ¹³⁴	30	30	17	54		23	31	27	1 05 56	
16	60	32.5		32.3	298	38.1 ¹⁵⁸		15.7 ¹³⁴	35	23		49	19		37	24	0 57 59	
17	75	32.6	+13	33.1	313	12.9 ¹⁵⁸	+11	02.3 ¹³⁴	40	17	16	17	44	18	15	14	43 21	0 48 63
18	90	32.7	+13	33.9	327	47.8 ¹⁵⁹	+10	48.8 ¹³⁵	45	17	07	17	37	18	12	14	51 17	0 38 66
19	105	32.8		34.7	342	22.7 ¹⁵⁹		35.3 ¹³⁵	50	16	57		30	08	15	00 13	25 72	
20	120	32.9		35.5	356	57.7 ¹⁶⁰		21.8 ¹³⁵	52	52		27	07		05	10	19 74	
21	135	33.0		36.3	11	32.7 ¹⁶⁰	+10	08.3 ¹³⁵	54	47		24	05		10	7	13 77	
22	150	33.1		37.1	26	07.8 ¹⁶¹	+9	54.7 ¹³⁶	56	41		20	03		15	5	0 06 79	
23	165	33.2		37.9	40	43.0 ¹⁶²		41.1 ¹³⁶	58	34		16	02		21	2	** ** *	
24	180	33.3	+13	38.7	55	18.2 ¹⁶²	+9	27.4 ¹³⁷	60 S	16	27	17	11	18	00	15	27 **	** ** *
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 43 ^m 9		Mag: -4.1 PMG: 14 ^h 45 ^m				Mag: +1.0 PMG: 8 ^h 52 ^m				Mag: -2.5 PMG: 2 ^h 58 ^m				Mag: +0.4 PMG: 19 ^h 07 ^m			
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	37.1	138	56.3	+24	48.8	226	49.5	-7	11.6	315	20.4	-22	15.8	72	34.3	+16	37.2
1	228	39.6	153	55.7		49.2	241	50.2		10.9	330	23.0		15.8	87	36.8		37.2
2	243	42.0	168	55.0		49.6	256	50.9		10.1	345	25.6		15.8	102	39.2		37.2
3	258	44.5	183	54.4		50.0	271	51.5		09.4	0	28.2		15.8	117	41.7		37.2
4	273	47.0	198	53.7		50.4	286	52.2		08.7	15	30.9		15.8	132	44.1		37.2
5	288	49.4	213	53.1	+24	50.8	301	52.9	-7	07.9	30	33.5	-22	15.8	147	46.5	+16	37.2
6	303	51.9	228	52.4	+24	51.2	316	53.6	-7	07.2	45	36.1	-22	15.8	162	49.0	+16	37.2
7	318	54.4	243	51.8		51.6	331	54.3		06.5	60	38.8		15.8	177	51.4		37.2
8	333	56.8	258	51.1		52.0	346	54.9		05.8	75	41.4		15.7	192	53.8		37.2
9	348	59.3	273	50.4		52.4	1	55.6		05.0	90	44.0		15.7	207	56.3		37.1
10	4	01.8	288	49.8		52.8	16	56.3		04.3	105	46.6		15.7	222	58.7		37.1
11	19	04.2	303	49.1	+24	53.2	31	57.0	-7	03.6	120	49.3	-22	15.7	238	01.1	+16	37.1
12	34	06.7	318	48.5	+24	53.6	46	57.7	-7	02.8	135	51.9	-22	15.7	253	03.6	+16	37.1
13	49	09.1	333	47.8		53.9	61	58.4		02.1	150	54.5		15.7	268	06.0		37.1
14	64	11.6	348	47.2		54.3	76	59.0		01.4	165	57.2		15.7	283	08.5		37.1
15	79	14.1	3	46.5		54.7	91	59.7	-7	00.7	180	59.8		15.7	298	10.9		37.1
16	94	16.5	18	45.9		55.1	107	00.4	-6	59.9	196	02.4		15.6	313	13.3		37.1
17	109	19.0	33	45.2	+24	55.5	122	01.1	-6	59.2	211	05.1	-22	15.6	328	15.8	+16	37.1
18	124	21.5	48	44.5	+24	55.9	137	01.8	-6	58.5	226	07.7	-22	15.6	343	18.2	+16	37.0
19	139	23.9	63	43.9		56.3	152	02.4		57.7	241	10.3		15.6	358	20.6		37.0
20	154	26.4	78	43.2		56.6	167	03.1		57.0	256	13.0		15.6	13	23.1		37.0
21	169	28.9	93	42.6		57.0	182	03.8		56.3	271	15.6		15.6	28	25.5		37.0
22	184	31.3	108	41.9		57.4	197	04.5		55.5	286	18.2		15.6	43	27.9		37.0
23	199	33.8	123	41.3		57.8	212	05.2		54.8	301	20.9		15.6	58	30.4		37.0
24	214	36.3	138	40.6	+24	58.2	227	05.9	-6	54.1	316	23.5	-22	15.5	73	32.8	+16	37.0
Dif	—		-7 +4		+7 +7		+26 0		+24 0									

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 7			Edad: 9 ^d 5 PHE { SD: 14'9 PMG: 20 ^h 53 ^m										
				R ^c : 39 ^m										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	33.3	+13 38.7	55	18.2	+9 27.4	60 N	2 05	3 19	4 10	13 59	82	3 25	**
1	195	33.4	39.5	69	53.4 ¹⁶²	13.7 ¹³⁷	58	28	32	19	14 02	79	20	2
2	210	33.5	40.3	84	28.8 ¹⁶⁴	+9 00.1 ¹³⁶	56	2 46	43	26	05 76		16	5
3	225	33.7	41.1	99	04.1 ¹⁶³	+8 46.3 ¹³⁸	54	3 00	3 53	33	08 73		12	
4	240	33.8	41.9	113	39.5 ¹⁶⁴	32.6 ¹³⁷	52	13	4 01	39	11 70		09	9
5	255	33.9	+13 42.7	128	15.0 ¹⁶⁵	+8 18.8 ¹³⁸	50	3 24	4 09	4 45	14 13	68	3 06	11
6	270	34.0	+13 43.5	142	50.5 ¹⁶⁵	+8 05.0 ¹³⁸	45	3 45	4 24	4 56	14 18	63	2 59	16
7	285	34.1	44.3	157	26.0 ¹⁶⁵	+7 51.2 ¹³⁸	40	4 02	37	5 06	22 59		53	20
8	300	34.1	45.1	172	01.6 ¹⁶⁶	37.4 ¹³⁸	35	15	47	14	25 57		48	23
9	315	34.2	45.9	186	37.2 ¹⁶⁶	23.5 ¹³⁹	30	26	4 56	21	29 53		43	26
10	330	34.3	46.7	201	12.9 ¹⁶⁷	+7 09.7 ¹³⁸	20	44	5 11	34	34 48		36	31
11	345	34.4	+13 47.5	215	48.6 ¹⁶⁷	+6 55.8 ¹³⁹	10 N	4 57	5 23	5 44	14 39	43	2 29	35
12	0	34.5	+13 48.3	230	24.3 ¹⁶⁷	+6 41.9 ¹³⁹	0	5 08	5 33	5 54	14 43	39	2 22	40
13	15	34.6	49.1	245	00.1 ¹⁶⁸	27.9 ¹⁴⁰	10 S	18	43	6 04	48 34		16	44
14	30	34.7	49.9	259	35.9 ¹⁶⁸	+6 14.0 ¹³⁹	20	26	5 52	14	52 31		09	48
15	45	34.8	50.7	274	11.8 ¹⁶⁹	+6 00.0 ¹⁴⁰	30	33	6 02	26	14 58	25	2 01	53
16	60	34.9	51.5	288	47.7 ¹⁶⁹	+5 46.0 ¹⁴⁰	35	37	07	33	15 01	22	1 56	57
17	75	35.0	+13 52.3	303	23.6 ¹⁶⁹	+5 32.0 ¹⁴⁰	40	5 41	6 13	6 41	15 04	19	1 51	60
18	90	35.1	+13 53.1	317	59.6 ¹⁷⁰	+5 18.0 ¹⁴⁰	45	5 44	6 19	6 49	15 08	16	1 44	65
19	105	35.2	53.9	332	35.5 ¹⁶⁹	+5 04.0 ¹⁴⁰	50	48	26	7 00	13 11		37	69
20	120	35.3	54.7	347	11.6 ¹⁷¹	+4 50.0 ¹⁴⁰	52	50	29	05	15 9		33	72
21	135	35.4	55.5	1	47.6 ¹⁷⁰	36.0 ¹⁴⁰	54	51	33	10	17 7		30	73
22	150	35.5	56.3	16	23.7 ¹⁷¹	21.9 ¹⁴¹	56	53	37	16	20 4		25	77
23	165	35.6	57.0	30	59.8 ¹⁷¹	+4 07.8 ¹⁴¹	58	55	41	23	23 1		20	80
24	180	35.7	+13 57.8	45	35.9 ¹⁷¹	+3 53.8 ¹⁴⁰	60 S	5 57	6 46	7 30	15 26	**	1 15	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 40 ^m 0		Mag: -4.1 PMG: 14 ^h 46 ^m		Mag: +1.0 PMG: 8 ^h 51 ^m		Mag: -2.5 PMG: 2 ^h 54 ^m		Mag: +0.4 PMG: 19 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	214	36.3	138 40.6	+24 58.2	227 05.9	-6 54.1	316 23.5	-22 15.5	73 32.8	+16 37.0
1	229	38.7	153 39.9	58.5	242 06.5	53.4	331 26.1	15.5	88 35.2	37.0
2	244	41.2	168 39.3	58.9	257 07.2	52.6	346 28.8	15.5	103 37.7	36.9
3	259	43.6	183 38.6	59.3	272 07.9	51.9	1 31.4	15.5	118 40.1	36.9
4	274	46.1	198 38.0	+24 59.7	287 08.6	51.2	16 34.0	15.5	133 42.5	36.9
5	289	48.6	213 37.3	+25 00.0	302 09.3	-6 50.4	31 36.7	-22 15.5	148 45.0	+16 36.9
6	304	51.0	228 36.7	+25 00.4	317 10.0	-6 49.7	46 39.3	-22 15.5	163 47.4	+16 36.9
7	319	53.5	243 36.0	00.8	332 10.6	49.0	61 42.0	15.5	178 49.8	36.9
8	334	56.0	258 35.4	01.1	347 11.3	48.2	76 44.6	15.4	193 52.3	36.9
9	349	58.4	273 34.7	01.5	2 12.0	47.5	91 47.2	15.4	208 54.7	36.9
10	5 00.9	288 34.0	01.9		17 12.7	46.8	106 49.9	15.4	223 57.1	36.8
11	20 03.4	303 33.4	+25 02.2		32 13.4	-6 46.0	121 52.5	-22 15.4	238 59.6	+16 36.8
12	35 05.8	318 32.7	+25 02.6		47 14.1	-6 45.3	136 55.1	-22 15.4	254 02.0	+16 36.8
13	50 08.3	333 32.1	03.0		62 14.8	44.6	151 57.8	15.4	269 04.4	36.8
14	65 10.7	348 31.4	03.3		77 15.4	43.9	167 00.4	15.4	284 06.8	36.8
15	80 13.2	3 30.8	03.7		92 16.1	43.1	182 03.1	15.3	299 09.3	36.8
16	95 15.7	18 30.1	04.1		107 16.8	42.4	197 05.7	15.3	314 11.7	36.8
17	110 18.1	33 29.4	+25 04.4		122 17.5	-6 41.7	212 08.3	-22 15.3	329 14.1	+16 36.8
18	125 20.6	48 28.8	+25 04.8		137 18.2	-6 40.9	227 11.0	-22 15.3	344 16.6	+16 36.7
19	140 23.1	63 28.1	05.1		152 18.9	40.2	242 13.6	15.3	359 19.0	36.7
20	155 25.5	78 27.5	05.5		167 19.5	39.5	257 16.3	15.3	14 21.4	36.7
21	170 28.0	93 26.8	05.8		182 20.2	38.7	272 18.9	15.3	29 23.9	36.7
22	185 30.5	108 26.2	06.2		197 20.9	38.0	287 21.5	15.3	44 26.3	36.7
23	200 32.9	123 25.5	06.5		212 21.6	37.3	302 24.2	15.2	59 28.7	36.7
24	215 35.4	138 24.9	+25 06.9		227 22.3	-6 36.5	317 26.8	-22 15.2	74 31.1	+16 36.7
Dif	—		-7	+4	+7	+7	+26	0	+24	0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9		Edad: 10 ^d 5	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1	SD: 14'8	PMG: 21 ^h 32 ^m			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
0	180	35.7	+13	57.8	45	35.9	+3 53.8	60 N	19 49	20 41	21 59	15 21	81	3 24	**
1	195	35.8		58.6	60	12.0 ¹⁷¹	39.7 ¹⁴¹	58	40	28	34	21	78	22	2
2	210	35.9	+13	59.4	74	48.2 ¹⁷²	25.6 ¹⁴¹	56	32	16	15	21	75	21	4
3	225	36.0	+14	00.2	89	24.4 ¹⁷²	+3 11.5 ¹⁴¹	54	25	20 06	21 00	21	72	19	7
4	240	36.1		01.0	104	00.6 ¹⁷²	+2 57.4 ¹⁴¹	52	19	19 57	20 47	21	70	18	9
5	255	36.2	+14	01.8	118	36.8 ¹⁷²	+2 43.3 ¹⁴¹	50	19 13	19 50	20 35	15 21	68	3 17	11
6	270	36.3	+14	02.6	133	13.1 ¹⁷³	+2 29.2 ¹⁴¹	45	19 01	19 33	20 13	15 21	63	3 15	15
7	285	36.4		03.4	147	49.3 ¹⁷²	15.1 ¹⁴¹	40	18 51	20	19 56	21	59	13	19
8	300	36.5		04.2	162	25.6 ¹⁷³	+2 01.0 ¹⁴¹	35	43	10	42	22	55	11	22
9	315	36.6		05.0	177	01.9 ¹⁷³	+1 46.8 ¹⁴²	30	35	19 00	30	22	52	09	26
10	330	36.7		05.7	191	38.2 ¹⁷³	32.7 ¹⁴¹	20	22	18 45	19 12	22	47	07	30
11	345	36.8	+14	06.5	206	14.5 ¹⁷³	+1 18.6 ¹⁴¹	10 N	18 11	18 33	18 58	15 22	43	3 04	35
12	0	36.8	+14	07.3	220	50.9 ¹⁷⁴	+1 04.5 ¹⁴¹	0	18 01	18 22	18 47	15 22	39	3 02	39
13	15	36.9		08.1	235	27.2 ¹⁷³	+0 50.3 ¹⁴²	10 S	17 51	12	37	22	35	3 00	43
14	30	37.0		08.9	250	03.6 ¹⁷⁴	36.2 ¹⁴¹	20	40	18 03	29	23	30	2 57	48
15	45	37.1		09.7	264	39.9 ¹⁷³	22.1 ¹⁴¹	30	28	17 53	21	23	25	54	53
16	60	37.2		10.5	279	16.3 ¹⁷⁴	+0 08.0 ¹⁴¹	35	21	47	17	23	23	53	55
17	75	37.3	+14	11.2	293	52.7 ¹⁷⁴	-0 06.2 ¹⁴²	40	17 13	17 41	18 13	15 23	20	2 51	59
18	90	37.4	+14	12.0	308	29.1 ¹⁷⁴	-0 20.3 ¹⁴¹	45	17 04	17 34	18 09	15 24	15	2 49	63
19	105	37.5		12.8	323	05.4 ¹⁷³	34.4 ¹⁴¹	50	16 53	27	05	24	11	46	68
20	120	37.6		13.6	337	41.8 ¹⁷⁴	-0 48.5 ¹⁴¹	52	48	23	03	24	9	45	70
21	135	37.7		14.4	352	18.2 ¹⁷⁴	-1 02.6 ¹⁴¹	54	42	20	18 01	24	7	43	73
22	150	37.8		15.2	6	54.6 ¹⁷⁴	16.7 ¹⁴¹	56	36	16	17 59	24	5	42	75
23	165	37.9		16.0	21	31.0 ¹⁷⁴	30.8 ¹⁴¹	58	29	11	57	24	2	40	78
24	180	38.0	+14	16.7	36	07.4 ¹⁷⁴	-1 44.8 ¹⁴⁰	60 S	16 21	17 06	17 55	15 25	**	2 38	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 36 ^m 1		Mag: -4.1 PMG: 14 ^h 47 ^m		Mag: +1.0 PMG: 8 ^h 50 ^m		Mag: -2.5 PMG: 2 ^h 50 ^m		Mag: +0.4 PMG: 18 ^h 59 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	215	35.4	138 24.9	+25 06.9	227 22.3	-6 36.5	317 26.8	-22 15.2	74 31.1	+16 36.7
1	230	37.9	153 24.2	07.2	242 23.0	35.8	332 29.5	15.2	89 33.6	36.6
2	245	40.3	168 23.5	07.6	257 23.7	35.1	347 32.1	15.2	104 36.0	36.6
3	260	42.8	183 22.9	07.9	272 24.3	34.3	2 34.8	15.2	119 38.4	36.6
4	275	45.2	198 22.2	08.3	287 25.0	33.6	17 37.4	15.2	134 40.9	36.6
5	290	47.7	213 21.6	+25 08.6	302 25.7	-6 32.9	32 40.1	-22 15.2	149 43.3	+16 36.6
6	305	50.2	228 20.9	+25 09.0	317 26.4	-6 32.1	47 42.7	-22 15.2	164 45.7	+16 36.6
7	320	52.6	243 20.3	09.3	332 27.1	31.4	62 45.3	15.1	179 48.1	36.6
8	335	55.1	258 19.6	09.7	347 27.8	30.7	77 48.0	15.1	194 50.6	36.6
9	350	57.6	273 18.9	10.0	2 28.5	29.9	92 50.6	15.1	209 53.0	36.5
10	6	00.0	288 18.3	10.3	17 29.2	29.2	107 53.3	15.1	224 55.4	36.5
11	21	02.5	303 17.6	+25 10.7	32 29.8	-6 28.5	122 55.9	-22 15.1	239 57.8	+16 36.5
12	36	05.0	318 17.0	+25 11.0	47 30.5	-6 27.7	137 58.6	-22 15.1	255 00.3	+16 36.5
13	51	07.4	333 16.3	11.3	62 31.2	27.0	153 01.2	15.1	270 02.7	36.5
14	66	09.9	348 15.7	11.7	77 31.9	26.3	168 03.9	15.0	285 05.1	36.5
15	81	12.4	3 15.0	12.0	92 32.6	25.5	183 06.5	15.0	300 07.6	36.5
16	96	14.8	18 14.3	12.3	107 33.3	24.8	198 09.2	15.0	315 10.0	36.4
17	111	17.3	33 13.7	+25 12.7	122 34.0	-6 24.1	213 11.8	-22 15.0	330 12.4	+16 36.4
18	126	19.7	48 13.0	+25 13.0	137 34.7	-6 23.3	228 14.4	-22 15.0	345 14.8	+16 36.4
19	141	22.2	63 12.4	13.3	152 35.3	22.6	243 17.1	15.0	0 17.3	36.4
20	156	24.7	78 11.7	13.7	167 36.0	21.9	258 19.7	15.0	15 19.7	36.4
21	171	27.1	93 11.1	14.0	182 36.7	21.1	273 22.4	14.9	30 22.1	36.4
22	186	29.6	108 10.4	14.3	197 37.4	20.4	288 25.0	14.9	45 24.5	36.3
23	201	32.1	123 09.8	14.6	212 38.1	19.7	303 27.7	14.9	60 27.0	36.3
24	216	34.5	138 09.1	+25 15.0	227 38.8	-6 18.9	318 30.3	-22 14.9	75 29.4	+16 36.3
Dif	—		-7	+3	+7	+7	+26	0	+24	0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 4			Edad: 11 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 Rº: 40 ^m																		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	180	38.0	+14	16.7	36	07.4	-1	44.8	60 N	1	55	3	13	4	05	16	42	83	3	22	**	
1	195	38.0		17.5	50	43.8	174	-1	58.9	58	2	20	26	14		39	79		24	2		
2	210	38.1		18.3	65	20.1	173	-2	13.0	56		39	38	22		36	76		25	5		
3	225	38.2		19.1	79	56.5	174		27.0	54	2	54	48	29		33	74		26			
4	240	38.3		19.9	94	32.9	174		41.1	52	3	08	3	57	35	31	71		27	10		
5	255	38.4	+14	20.6	109	09.3	174	-2	55.1	50	3	19	4	05	4	41	16	29	68	3	28	12
6	270	38.5	+14	21.4	123	45.6	173	-3	09.1	45	3	42	4	21	4	53	16	24	64	3	30	16
7	285	38.6		22.2	138	22.0	174		23.1	40	3	59	34	5	03	20	60		32	19		
8	300	38.7		23.0	152	58.3	173		37.1	35	4	13	45	12		17	57		33	23		
9	315	38.8		23.8	167	34.6	173	-3	51.1	30		24	4	54	19	14	54		35	25		
10	330	38.8		24.5	182	10.9	173	-4	05.0	20	42	5	09	32		09	49		37	31		
11	345	38.9	+14	25.3	196	47.2	173	-4	19.0	10 N	4	56	5	22	5	44	16	05	44	3	39	35
12	0	39.0	+14	26.1	211	23.5	173	-4	32.9	0	5	08	5	33	5	54	16	01	40	3	41	39
13	15	39.1		26.9	225	59.8	173	-4	46.8	10 S		18	43	6	04	15	57	36		43	43	
14	30	39.2		27.6	240	36.1	173	-5	00.7	20	26	5	52	15		53	31		45	48		
15	45	39.3		28.4	255	12.3	172		14.6	30	34	6	03	27		48	27		47	53		
16	60	39.4		29.2	269	48.5	172		28.4	35	38		08	34		46	23		48	56		
17	75	39.5	+14	30.0	284	24.7	172	-5	42.3	40	5	42	6	14	6	42	15	43	20	3	50	59
18	90	39.5	+14	30.8	299	00.9	172	-5	56.1	45	5	47	6	21	6	52	15	39	16	3	52	63
19	105	39.6		31.5	313	37.1	172	-6	09.9	50	51	29	7	03		35	12		54	68		
20	120	39.7		32.3	328	13.2	171		23.7	52	53	33		08		33	10		55	70		
21	135	39.8		33.1	342	49.3	171		37.4	54	54	36		14		31	7		56	72		
22	150	39.9		33.8	357	25.4	171	-6	51.1	56	56	40		20		29	5		57	75		
23	165	40.0		34.6	12	01.5	171	-7	04.8	58	5	58	45	27		26	2		3	58	79	
24	180	40.1	+14	35.4	26	37.5	170	-7	18.5	60 S	6	01	6	50	7	35	15	23	**	4	00	82
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG 9 ^h 32 ^m 1			Mag: -4.1 PMG: 14 ^h 48 ^m			Mag: +1.0 PMG: 8 ^h 49 ^m			Mag: -2.5 PMG: 2 ^h 45 ^m			Mag: +0.4 PMG: 18 ^h 55 ^m									
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	216	34.5	138	09.1	+25	15.0	227	38.8	-6	18.9	318	30.3	-22	14.9	75	29.4	+16	36.3				
1	231	37.0	153	08.4		15.3	242	39.5		18.2	333	33.0		14.9	90	31.8		36.3				
2	246	39.5	168	07.8		15.6	257	40.2		17.5	348	35.6		14.9	105	34.2		36.3				
3	261	41.9	183	07.1		15.9	272	40.8		16.7	3	38.3		14.9	120	36.7		36.3				
4	276	44.4	198	06.5		16.2	287	41.5		16.0	18	40.9		14.9	135	39.1		36.3				
5	291	46.8	213	05.8	+25	16.6	302	42.2	-6	15.3	33	43.6	-22	14.8	150	41.5	+16	36.2				
6	306	49.3	228	05.2	+25	16.9	317	42.9	-6	14.5	48	46.2	-22	14.8	165	43.9	+16	36.2				
7	321	51.8	243	04.5		17.2	332	43.6		13.8	63	48.9		14.8	180	46.3		36.2				
8	336	54.2	258	03.8		17.5	347	44.3		13.1	78	51.5		14.8	195	48.8		36.2				
9	351	56.7	273	03.2		17.8	2	45.0		12.3	93	54.2		14.8	210	51.2		36.2				
10	6	59.2	288	02.5		18.1	17	45.7		11.6	108	56.9		14.8	225	53.6		36.2				
11	22	01.6	303	01.9	+25	18.4	32	46.4	-6	10.8	123	59.5	-22	14.8	240	56.0	+16	36.2				
12	37	04.1	318	01.2	+25	18.7	47	47.0	-6	10.1	139	02.2	-22	14.7	255	58.5	+16	36.1				
13	52	06.6	333	00.6		19.1	62	47.7		09.4	154	04.8		14.7	271	00.9		36.1				
14	67	09.0	347	59.9		19.4	77	48.4		08.6	169	07.5		14.7	286	03.3		36.1				
15	82	11.5	2	59.3		19.7	92	49.1		07.9	184	10.1		14.7	301	05.7		36.1				
16	97	14.0	17	58.6		20.0	107	49.8		07.2	199	12.8		14.7	316	08.2		36.1				
17	112	16.4	32	57.9	+25	20.3	122	50.5	-6	06.4	214	15.4	-22	14.7	331	10.6	+16	36.1				
18	127	18.9	47	57.3	+25	20.6	137	51.2	-6	05.7	229	18.1	-22	14.7	346	13.0	+16	36.0				
19	142	21.3	62	56.6		20.9	152	51.9		05.0	244	20.7		14.6	1	15.4		36.0				
20	157	23.8	77	56.0		21.2	167	52.6		04.2	259	23.4		14.6	16	17.8		36.0				
21	172	26.3	92	55.3		21.5	182	53.3		03.5	274	26.1		14.6	31	20.3		36.0				
22	187	28.7	107	54.7		21.8	197	53.9		02.8	289	28.7		14.6	46	22.7		36.0				
23	202	31.2	122	54.0		22.1	212	54.6		02.0	304	31.4		14.6	61	25.1		36.0				
24	217	33.7	137	53.4	+25	22.4	227	55.3	-6	01.3	319	34.0	-22	14.6	76	27.5	+16	35.9				
Dif	—			-7			+3			+7			+27			0			+24			

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: 12 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: 42 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	**			
0	180	40.1	+14	35.4	26	37.5	-7	18.5	60 N	19 54	20 47	22 09	18 05 86	3 21				
1	195	40.2		36.2	41	13.6 ¹⁷¹		32.1 ¹³⁶	58	45	33	21 42	17 58 82	26	2			
2	210	40.2		36.9	55	49.6 ¹⁷⁰		45.8 ¹³⁷	56	36	21	22	52 78	30	5			
3	225	40.3		37.7	70	25.5 ¹⁶⁹	-7	59.4 ¹³⁶	54	29	10	21 05	47 75	33	8			
4	240	40.4		38.5	85	01.4 ¹⁶⁹	-8	12.9 ¹³⁵	52	22	20 01	20 51	42 72	37	10			
5	255	40.5	+14	39.2	99	37.3 ¹⁶⁹	-8	26.5 ¹³⁶	50	19 17	19 53	20 40	17 37 71	3 40	12			
6	270	40.6	+14	40.0	114	13.2 ¹⁶⁹	-8	40.0 ¹³⁵	45	19 04	19 36	20 16	17 28 65	3 46	17			
7	285	40.7		40.8	128	49.0 ¹⁶⁸	-8	53.4 ¹³⁴	40	18 53	22	19 58	20 61	51	22			
8	300	40.7		41.6	143	24.8 ¹⁶⁸	-9	06.9 ¹³⁵	35	44	11	44	14 57	3 56	24			
9	315	40.8		42.3	158	00.6 ¹⁶⁸		20.3 ¹³⁴	30	36	19 02	32	17 08 54	4 00	27			
10	330	40.9		43.1	172	36.3 ¹⁶⁷		33.7 ¹³⁴	20	23	18 46	19 13	16 58 49	08	32			
11	345	41.0	+14	43.9	187	12.0 ¹⁶⁷	-9	47.0 ¹³³	10 N	18 11	18 33	18 59	16 49 45	4 14	36			
12	0	41.1	+14	44.6	201	47.7 ¹⁶⁷	-10	00.3 ¹³³	0	18 01	18 22	18 47	16 41 41	4 20	41			
13	15	41.2		45.4	216	23.3 ¹⁶⁶		13.6 ¹³³	10 S	17 50	12	37	33 37	26	45			
14	30	41.2		46.2	230	58.9 ¹⁶⁶		26.9 ¹³³	20	39	18 02	28	24 33	33	49			
15	45	41.3		46.9	245	34.4 ¹⁶⁵		40.1 ¹³²	30	26	17 51	19	15 28	40	54			
16	60	41.4		47.7	260	09.9 ¹⁶⁵	-10	53.2 ¹³¹	35	19	45	15	09 26	44	57			
17	75	41.5	+14	48.5	274	45.4 ¹⁶⁵	-11	06.4 ¹³²	40	17 11	17 39	18 11	16 03 22	4 49	61			
18	90	41.6	+14	49.2	289	20.8 ¹⁶⁴	-11	19.4 ¹³⁰	45	17 01	17 32	18 06	15 55 19	4 55	64			
19	105	41.6		50.0	303	56.1 ¹⁶³		32.5 ¹³¹	50	16 49	23	02	47 14	5 02	69			
20	120	41.7		50.8	318	31.5 ¹⁶⁴		45.5 ¹³⁰	52	44	20	18 00	43 11	05	71			
21	135	41.8		51.5	333	06.7 ¹⁶²	-11	58.5 ¹³⁰	54	38	16	17 58	38 10	08	75			
22	150	41.9		52.3	347	42.0 ¹⁶³	-12	11.4 ¹²⁹	56	32	11	55	34 6	12	77			
23	165	42.0		53.0	2	17.1 ¹⁶¹		24.3 ¹²⁹	58	24	07	53	28 4	17	80			
24	180	42.0	+14	53.8	16	52.3 ¹⁶²	-12	37.1 ¹²⁸	60 S	16 16	17 01	17 51	15 22 0	5 22	84			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 9 ^h 28 ^m 2		Mag: -4.1 PMG: 14 ^h 49 ^m			Mag: +1.0 PMG: 8 ^h 48 ^m			Mag: -2.5 PMG: 2 ^h 41 ^m				Mag: +0.4 PMG: 18 ^h 51 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	217	33.7	137	53.4	+25	22.4	227	55.3	-6	01.3	319	34.0	-22	14.6	76	27.5	+16	35.9
1	232	36.1	152	52.7		22.7	242	56.0	-6	00.5	334	36.7		14.6	91	29.9		35.9
2	247	38.6	167	52.0		23.0	257	56.7	-5	59.8	349	39.3		14.5	106	32.4		35.9
3	262	41.1	182	51.4		23.2	272	57.4		59.1	4	42.0		14.5	121	34.8		35.9
4	277	43.5	197	50.7		23.5	287	58.1		58.3	19	44.7		14.5	136	37.2		35.9
5	292	46.0	212	50.1	+25	23.8	302	58.8	-5	57.6	34	47.3	-22	14.5	151	39.6	+16	35.9
6	307	48.4	227	49.4	+25	24.1	317	59.5	-5	56.9	49	50.0	-22	14.5	166	42.0	+16	35.8
7	322	50.9	242	48.8		24.4	333	00.2		56.1	64	52.6		14.5	181	44.5		35.8
8	337	53.4	257	48.1		24.7	348	00.9		55.4	79	55.3		14.5	196	46.9		35.8
9	352	55.8	272	47.5		25.0	3	01.6		54.7	94	57.9		14.4	211	49.3		35.8
10	7	58.3	287	46.8		25.3	18	02.2		53.9	110	00.6		14.4	226	51.7		35.8
11	23	00.8	302	46.1	+25	25.5	33	02.9	-5	53.2	125	03.3	-22	14.4	241	54.1	+16	35.8
12	38	03.2	317	45.5	+25	25.8	48	03.6	-5	52.4	140	05.9	-22	14.4	256	56.5	+16	35.7
13	53	05.7	332	44.8		26.1	63	04.3		51.7	155	08.6		14.4	271	59.0		35.7
14	68	08.2	347	44.2		26.4	78	05.0		51.0	170	11.2		14.4	287	01.4		35.7
15	83	10.6	2	43.5		26.7	93	05.7		50.2	185	13.9		14.4	302	03.8		35.7
16	98	13.1	17	42.9		26.9	108	06.4		49.5	200	16.6		14.3	317	06.2		35.7
17	113	15.6	32	42.2	+25	27.2	123	07.1	-5	48.8	215	19.2	-22	14.3	332	08.6	+16	35.7
18	128	18.0	47	41.6	+25	27.5	138	07.8	-5	48.0	230	21.9	-22	14.3	347	11.1	+16	35.6
19	143	20.5	62	40.9		27.8	153	08.5		47.3	245	24.6		14.3	2	13.5		35.6
20	158	22.9	77	40.3		28.0	168	09.2		46.5	260	27.2		14.3	17	15.9		35.6
21	173	25.4	92	39.6		28.3	183	09.9		45.8	275	29.9		14.3	32	18.3		35.6
22	188	27.9	107	38.9		28.6	198	10.6		45.1	290	32.5		14.2	47	20.7		35.6
23	203	30.3	122	38.3		28.8	213	11.2		44.3	305	35.2		14.2	62	23.1		35.6
24	218	32.8	137	37.6	+25	29.1	228	11.9	-5	43.6	320	37.9	-22	14.2	77	25.5	+16	35.5
Dif	—		-7		+3	+7		+7	+27		0		+24		0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 1			Edad: 13 ^d 5 PHE { SD: 14 ^h 7 PMG: 23 ^h 33 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	42.0	+14 53.8	16	52.3	-12 37.1	60 N	1 45	3 06	3 59	19 31	91	3 20	0
1	195	42.1	54.6	31	27.4 ¹⁶¹	-12 49.9 ¹²⁸	58	2 12	21	4 09	20 85	28	4	
2	210	42.2	55.3	46	02.4 ¹⁶⁰	-13 02.6 ¹²⁷	56	32	33	17	10 81	35	8	
3	225	42.3	56.1	60	37.4 ¹⁶⁰	15.3 ¹²⁷	54	2 49	43	25	19 02 77	41	1	
4	240	42.4	56.9	75	12.3 ¹⁵⁹	28.0 ¹²⁷	52	3 02	3 53	31	18 54 75	47	13	
5	255	42.4	+14 57.6	89	47.2 ¹⁵⁹	-13 40.6 ¹²⁶	50	3 14	4 01	4 37	18 48 71	3 52	15	
6	270	42.5	+14 58.4	104	22.0 ¹⁵⁸	-13 53.1 ¹²⁵	45	3 38	4 18	4 50	18 33 67	4 03	20	
7	285	42.6	59.1	118	56.8 ¹⁵⁸	-14 05.6 ¹²⁵	40	3 56	31	5 01	21 63	13	23	
8	300	42.7	+14 59.9	133	31.5 ¹⁵⁷	18.1 ¹²⁵	35	4 10	43	10	11 60	20	28	
9	315	42.8	+15 00.7	148	06.2 ¹⁵⁷	30.5 ¹²⁴	30	22	4 52	18	18 02 57	27	30	
10	330	42.8	01.4	162	40.8 ¹⁵⁶	42.8 ¹²³	20	41	5 08	31	17 47 52	40	34	
11	345	42.9	+15 02.2	177	15.3 ¹⁵⁵	-14 55.1 ¹²³	10 N	4 56	5 21	5 43	17 34 48	4 50	39	
12	0	43.0	+15 02.9	191	49.8 ¹⁵⁵	-15 07.4 ¹²³	0	5 07	5 32	5 54	17 22 44	5 01	42	
13	15	43.1	03.7	206	24.2 ¹⁵⁴	19.5 ¹²¹	10 S	18	43	6 04	17 10 41	11	46	
14	30	43.1	04.4	220	58.6 ¹⁵⁴	31.7 ¹²²	20	27	5 53	16	16 57 37	22	50	
15	45	43.2	05.2	235	32.9 ¹⁵³	43.7 ¹²⁰	30	36	6 04	29	43 32	34	56	
16	60	43.3	05.9	250	07.1 ¹⁵²	-15 55.7 ¹²⁰	35	40	10	36	35 29	41	59	
17	75	43.4	+15 06.7	264	41.3 ¹⁵²	-16 07.7 ¹²⁰	40	5 44	6 16	6 44	16 25 26	5 50	61	
18	90	43.5	+15 07.5	279	15.5 ¹⁵²	-16 19.6 ¹¹⁹	45	5 49	6 23	6 54	16 14 22	5 59	66	
19	105	43.5	08.2	293	49.5 ¹⁵⁰	31.4 ¹¹⁸	50	53	32	7 06	16 01 17	6 11	71	
20	120	43.6	09.0	308	23.5 ¹⁵⁰	43.2 ¹¹⁸	52	55	36	11	15 54 15	16	74	
21	135	43.7	09.7	322	57.4 ¹⁴⁹	-16 54.9 ¹¹⁷	54	5 58	40	17	48 12	23	76	
22	150	43.8	10.5	337	31.3 ¹⁴⁹	-17 06.5 ¹¹⁶	56	6 00	44	24	40 9	29	80	
23	165	43.8	11.2	352	05.1 ¹⁴⁸	18.1 ¹¹⁶	58	02	49	32	32 5	37	83	
24	180	43.9	+15 12.0	6	38.8 ¹⁴⁷	-17 29.6 ¹¹⁵	60 S	6 05	6 54	7 40	15 22 1	6 46	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 24 ^m 3		Mag: -4.1 PMG: 14 ^h 50 ^m		Mag: +1.0 PMG: 8 ^h 47 ^m		Mag: -2.5 PMG: 2 ^h 37 ^m		Mag: +0.4 PMG: 18 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	218	32.8	137 37.6	+25 29.1	228 11.9	-5 43.6	320 37.9	-22 14.2	77 25.5	+16 35.5
1	233	35.3	152 37.0	29.4	243 12.6	42.9	335 40.5	14.2	92 28.0	35.5
2	248	37.7	167 36.3	29.6	258 13.3	42.1	350 43.2	14.2	107 30.4	35.5
3	263	40.2	182 35.7	29.9	273 14.0	41.4	5 45.9	14.2	122 32.8	35.5
4	278	42.7	197 35.0	30.2	288 14.7	40.6	20 48.5	14.2	137 35.2	35.5
5	293	45.1	212 34.4	+25 30.4	303 15.4	-5 39.9	35 51.2	-22 14.1	152 37.6	+16 35.4
6	308	47.6	227 33.7	+25 30.7	318 16.1	-5 39.2	50 53.9	-22 14.1	167 40.0	+16 35.4
7	323	50.0	242 33.1	31.0	333 16.8	38.4	65 56.5	14.1	182 42.5	35.4
8	338	52.5	257 32.4	31.2	348 17.5	37.7	80 59.2	14.1	197 44.9	35.4
9	353	55.0	272 31.8	31.5	3 18.2	37.0	96 01.9	14.1	212 47.3	35.4
10	8 57.4	287 31.1	31.7	18 18.9	36.2	111 04.5	14.1	227 49.7	35.4	
11	23 59.9	302 30.4	+25 32.0	33 19.6	-5 35.5	126 07.2	-22 14.1	242 52.1	+16 35.3	
12	39 02.4	317 29.8	+25 32.2	48 20.3	-5 34.7	141 09.9	-22 14.0	257 54.5	+16 35.3	
13	54 04.8	332 29.1	32.5	63 21.0	34.0	156 12.5	14.0	272 56.9	35.3	
14	69 07.3	347 28.5	32.7	78 21.6	33.3	171 15.2	14.0	287 59.4	35.3	
15	84 09.8	2 27.8	33.0	93 22.3	32.5	186 17.9	14.0	303 01.8	35.3	
16	99 12.2	17 27.2	33.2	108 23.0	31.8	201 20.5	14.0	318 04.2	35.2	
17	114 14.7	32 26.5	+25 33.5	123 23.7	-5 31.0	216 23.2	-22 14.0	333 06.6	+16 35.2	
18	129 17.2	47 25.9	+25 33.7	138 24.4	-5 30.3	231 25.9	-22 13.9	348 09.0	+16 35.2	
19	144 19.6	62 25.2	34.0	153 25.1	29.6	246 28.5	13.9	3 11.4	35.2	
20	159 22.1	77 24.6	34.2	168 25.8	28.8	261 31.2	13.9	18 13.8	35.2	
21	174 24.5	92 23.9	34.5	183 26.5	28.1	276 33.9	13.9	33 16.2	35.2	
22	189 27.0	107 23.3	34.7	198 27.2	27.3	291 36.6	13.9	48 18.7	35.1	
23	204 29.5	122 22.6	35.0	213 27.9	26.6	306 39.2	13.9	63 21.1	35.1	
24	219 31.9	137 22.0	+25 35.2	228 28.6	-5 25.9	321 41.9	-22 13.9	78 23.5	+16 35.1	
Dif	—	-7	+3	+7	+7	+27	0	+24	0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 57 ^m 0			Edad: 14 ^d 5 PHE { SD: 14:7 PMG: **h **m 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2 R°: **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	180	43.9	+15	12.0	6	38.8	-17 29.6	60 N	19 59	20 53	22 20	21 02	94	3 20	1
1	195	44.0		12.7	21	12.5 ¹⁴⁷	41.0 ¹¹⁴	58	49	38	21 50	20 45	87	32	7
2	210	44.1		13.5	35	46.1 ¹⁴⁶	-17 52.4 ¹¹⁴	56	41	26	28	31	82	43	10
3	225	44.1		14.2	50	19.6 ¹⁴⁵	-18 03.7 ¹¹³	54	33	15	21 11	19	78	3 52	14
4	240	44.2		15.0	64	53.1 ¹⁴⁵	14.9 ¹¹²	52	26	20 05	20 56	20 09	75	4 00	17
5	255	44.3	+15	15.7	79	26.5 ¹⁴⁴	-18 26.1 ¹¹²	50	19 20	19 56	20 44	19 59	73	4 07	20
6	270	44.3	+15	16.5	93	59.8 ¹⁴³	-18 37.2 ¹¹¹	45	19 06	19 39	20 19	19 40	67	4 23	25
7	285	44.4		17.2	108	33.0 ¹⁴²	48.2 ¹¹⁰	40	18 55	25	20 01	24	63	36	28
8	300	44.5		18.0	123	06.2 ¹⁴²	-18 59.2 ¹¹⁰	35	46	13	19 46	19 11	60	48	31
9	315	44.6		18.7	137	39.3 ¹⁴¹	-19 10.1 ¹⁰⁹	30	38	19 03	33	18 59	58	4 57	34
10	330	44.6		19.5	152	12.4 ¹⁴¹	20.8 ¹⁰⁷	20	24	18 47	19 14	39	54	5 14	39
11	345	44.7	+15	20.2	166	45.3 ¹³⁹	-19 31.6 ¹⁰⁸	10 N	18 12	18 34	18 59	18 22	51	5 29	42
12	0	44.8	+15	21.0	181	18.2 ¹³⁹	-19 42.2 ¹⁰⁶	0	18 00	18 22	18 47	18 06	48	5 43	46
13	15	44.9		21.7	195	51.0 ¹³⁸	-19 52.8 ¹⁰⁶	10 S	17 49	11	36	17 51	44	5 57	49
14	30	44.9		22.5	210	23.8 ¹³⁸	-20 03.3 ¹⁰⁵	20	38	18 00	27	34	40	6 12	53
15	45	45.0		23.2	224	56.4 ¹³⁶	13.7 ¹⁰⁴	30	24	17 49	18	15	36	30	57
16	60	45.1		24.0	239	29.0 ¹³⁶	24.0 ¹⁰³	35	17	43	13	17 04	33	40	60
17	75	45.1	+15	24.7	254	01.5 ¹³⁵	-20 34.2 ¹⁰²	40	17 08	17 36	18 08	16 51	31	6 51	63
18	90	45.2	+15	25.4	268	34.0 ¹³⁵	-20 44.4 ¹⁰²	45	16 58	17 29	18 04	16 36	27	7 05	67
19	105	45.3		26.2	283	06.3 ¹³³	-20 54.5 ¹⁰¹	50	46	20	17 59	18 22	22	72	72
20	120	45.3		26.9	297	38.6 ¹³³	-21 04.5 ¹⁰⁰	52	40	16	56	09	20	30	75
21	135	45.4		27.7	312	10.8 ¹³²	14.4 ⁹⁹	54	34	12	54	16 00	17	39	78
22	150	45.5		28.4	326	42.9 ¹³¹	24.2 ⁹⁸	56	27	07	52	15 49	13	7 49	81
23	165	45.6		29.2	341	15.0 ¹³¹	33.9 ⁹⁷	58	20	17 02	49	37	9	8 00	87
24	180	45.6	+15	29.9	355	47.0 ¹³⁰	-21 43.5 ⁹⁶	60 S	16 11	16 57	17 46	15 23	3	8 14	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 20 ^m 3		Mag: -4.1 PMG: 14 ^h 51 ^m		Mag: +1.0 PMG: 8 ^h 46 ^m		Mag: -2.5 PMG: 2 ^h 33 ^m		Mag: +0.4 PMG: 18 ^h 43 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	219	31.9	137	22.0	+25	35.2	228	28.6	-5	25.9	321	41.9	-22	13.9	78	23.5	+16	35.1
1	234	34.4	152	21.3		35.4	243	29.3		25.1	336	44.6		13.8	93	25.9		35.1
2	249	36.9	167	20.7		35.7	258	30.0		24.4	351	47.2		13.8	108	28.3		35.1
3	264	39.3	182	20.0		35.9	273	30.7		23.6	6	49.9		13.8	123	30.7		35.0
4	279	41.8	197	19.4		36.2	288	31.4		22.9	21	52.6		13.8	138	33.1		35.0
5	294	44.3	212	18.7	+25	36.4	303	32.1	-5	22.2	36	55.3	-22	13.8	153	35.5	+16	35.0
6	309	46.7	227	18.1	+25	36.6	318	32.8	-5	21.4	51	57.9	-22	13.8	168	37.9	+16	35.0
7	324	49.2	242	17.4		36.9	333	33.5		20.7	67	00.6		13.7	183	40.4		35.0
8	339	51.7	257	16.8		37.1	348	34.2		19.9	82	03.3		13.7	198	42.8		34.9
9	354	54.1	272	16.1		37.3	3	34.9		19.2	97	05.9		13.7	213	45.2		34.9
10	9	56.6	287	15.5		37.5	18	35.6		18.5	112	08.6		13.7	228	47.6		34.9
11	24	59.0	302	14.8	+25	37.8	33	36.3	-5	17.7	127	11.3	-22	13.7	243	50.0	+16	34.9
12	40	01.5	317	14.1	+25	38.0	48	37.0	-5	17.0	142	14.0	-22	13.7	258	52.4	+16	34.9
13	55	04.0	332	13.5		38.2	63	37.6		16.2	157	16.6		13.6	273	54.8		34.8
14	70	06.4	347	12.8		38.4	78	38.3		15.5	172	19.3		13.6	288	57.2		34.8
15	85	08.9	2	12.2		38.7	93	39.0		14.8	187	22.0		13.6	303	59.6		34.8
16	100	11.4	17	11.5		38.9	108	39.7		14.0	202	24.7		13.6	319	02.0		34.8
17	115	13.8	32	10.9	+25	39.1	123	40.4	-5	13.3	217	27.3	-22	13.6	334	04.4	+16	34.8
18	130	16.3	47	10.2	+25	39.3	138	41.1	-5	12.5	232	30.0	-22	13.6	349	06.9	+16	34.7
19	145	18.8	62	09.6		39.5	153	41.8		11.8	247	32.7		13.6	4	09.3		34.7
20	160	21.2	77	08.9		39.8	168	42.5		11.1	262	35.4		13.5	19	11.7		34.7
21	175	23.7	92	08.3		40.0	183	43.2		10.3	277	38.1		13.5	34	14.1		34.7
22	190	26.1	107	07.7		40.2	198	43.9		09.6	292	40.7		13.5	49	16.5		34.7
23	205	28.6	122	07.0		40.4	213	44.6		08.8	307	43.4		13.5	64	18.9		34.6
24	220	31.1	137	06.4	+25	40.6	228	45.3	-5	08.1	322	46.1	-22	13.5	79	21.3	+16	34.6
Dif	—		-7 +2		+7 +7		+27 0		+24 0									

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9				Edad: 15 ^d 5 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5 PMG: 0 ^h 17 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	45.6	+15	29.9	355	47.0	-21	43.5	60 N	1	34	3	00	3	54	22	36	
1	195	45.7		30.6	10	18.9 ¹²⁹	-21	53.1 ⁹⁶	58	2	03	15	4	04	22	12	84	
2	210	45.8		31.4	24	50.7 ¹²⁸	-22	02.6 ⁹⁵	56	25	28	13		21	53	79	3	
3	225	45.8		32.1	39	22.4 ¹²⁷		11.9 ⁹³	54	43	39	20		37	75	4	06	
4	240	45.9		32.9	53	54.1 ¹²⁷		21.2 ⁹³	52	2	57	48	27	24	72	17	23	
5	255	46.0	+15	33.6	68	25.7 ¹²⁶	-22	30.4 ⁹²	50	3	10	3	57	4	34	21	12	
6	270	46.0	+15	34.3	82	57.2 ¹²⁵	-22	39.4 ⁹⁰	45	3	34	4	15	4	47	20	47	
7	285	46.1		35.1	97	28.6 ¹²⁴		48.4 ⁹⁰	40	3	53	29	4	58	27	63	5	
8	300	46.2		35.8	112	00.0 ¹²⁴	-22	57.3 ⁸⁹	35	4	08	40	5	08	20	11	60	
9	315	46.2		36.6	126	31.2 ¹²²	-23	06.1 ⁸⁸	30	20	4	50	16		19	57	58	
10	330	46.3		37.3	141	02.4 ¹²²		14.8 ⁸⁷	20	40	5	07	30	33	56	5	53	
11	345	46.4	+15	38.0	155	33.5 ¹²¹	-23	23.4 ⁸⁶	10 N	4	55	5	20	5	42	19	13	
12	0	46.4	+15	38.8	170	04.6 ¹²¹	-23	31.9 ⁸⁵	0	5	07	5	32	5	53	18	54	
13	15	46.5		39.5	184	35.5 ¹¹⁹		40.2 ⁸³	10 S	18		43	6	05	35	48	6	
14	30	46.6		40.2	199	06.4 ¹¹⁹		48.5 ⁸³	20	27	5	54	17	18	14	46	7	
15	45	46.6		41.0	213	37.2 ¹¹⁸	-23	56.7 ⁸²	30	37	6	05	30	17	51	42	27	
16	60	46.7		41.7	228	07.9 ¹¹⁷	-24	04.8 ⁸¹	35	41	11	38		37	41	40	60	
17	75	46.8	+15	42.4	242	38.5 ¹¹⁶	-24	12.7 ⁷⁹	40	5	46	6	18	6	46	17	22	
18	90	46.8	+15	43.2	257	09.1 ¹¹⁶	-24	20.6 ⁷⁹	45	5	51	6	26	6	57	17	03	
19	105	46.9		43.9	271	39.6 ¹¹⁵		28.3 ⁷⁷	50	56	35	7	09	16	40	31	34	
20	120	46.9		44.6	286	10.0 ¹¹⁴		35.9 ⁷⁶	52	5	58	39	15	29	28	45	73	
21	135	47.0		45.4	300	40.3 ¹¹³		43.5 ⁷⁶	54	6	01	43	21	17	25	8	57	
22	150	47.1		46.1	315	10.6 ¹¹³		50.9 ⁷⁴	56	03	48	28		16	02	22	9	
23	165	47.1		46.8	329	40.7 ¹¹¹	-24	58.2 ⁷³	58	06	53	36		15	46	16	27	
24	180	47.2	+15	47.6	344	10.8 ¹¹¹	-25	05.4 ⁷²	60 S	6	09	6	59	7	45	15	26	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 16 ^m 4		Mag: -4.2 PMG: 14 ^h 52 ^m				Mag: +1.0 PMG: 8 ^h 45 ^m				Mag: -2.5 PMG: 2 ^h 28 ^m				Mag: +0.4 PMG: 18 ^h 40 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	220	31.1	137	06.4	+25	40.6	228	45.3	-5	08.1	322	46.1	-22	13.5	79	21.3	+16	34.6
1	235	33.5	152	05.7		40.8	243	46.0		07.4	337	48.8		13.5	94	23.7		34.6
2	250	36.0	167	05.1		41.0	258	46.7		06.6	352	51.4		13.4	109	26.1		34.6
3	265	38.5	182	04.4		41.3	273	47.4		05.9	7	54.1		13.4	124	28.5		34.6
4	280	40.9	197	03.8		41.5	288	48.1		05.1	22	56.8		13.4	139	30.9		34.5
5	295	43.4	212	03.1	+25	41.7	303	48.8	-5	04.4	37	59.5	-22	13.4	154	33.3	+16	34.5
6	310	45.9	227	02.5	+25	41.9	318	49.5	-5	03.7	53	02.2	-22	13.4	169	35.7	+16	34.5
7	325	48.3	242	01.8		42.1	333	50.2		02.9	68	04.8		13.4	184	38.1		34.5
8	340	50.8	257	01.2		42.3	348	50.9		02.2	83	07.5		13.3	199	40.5		34.5
9	355	53.3	272	00.5		42.5	3	51.6		01.4	98	10.2		13.3	214	43.0		34.4
10	10	55.7	286	59.9		42.7	18	52.3	-5	00.7	113	12.9		13.3	229	45.4		34.4
11	25	58.2	301	59.2	+25	42.9	33	53.0	-4	59.9	128	15.6	-22	13.3	244	47.8	+16	34.4
12	41	00.6	316	58.6	+25	43.1	48	53.7	-4	59.2	143	18.2	-22	13.3	259	50.2	+16	34.4
13	56	03.1	331	57.9		43.3	63	54.4		58.5	158	20.9		13.3	274	52.6		34.4
14	71	05.6	346	57.3		43.5	78	55.1		57.7	173	23.6		13.2	289	55.0		34.3
15	86	08.0	1	56.6		43.7	93	55.8		57.0	188	26.3		13.2	304	57.4		34.3
16	101	10.5	16	56.0		43.9	108	56.5		56.2	203	29.0		13.2	319	59.8		34.3
17	116	13.0	31	55.3	+25	44.1	123	57.2	-4	55.5	218	31.7	-22	13.2	335	02.2	+16	34.3
18	131	15.4	46	54.7	+25	44.3	138	57.9	-4	54.7	233	34.3	-22	13.2	350	04.6	+16	34.2
19	146	17.9	61	54.0		44.4	153	58.6		54.0	248	37.0		13.2	5	07.0		34.2
20	161	20.4	76	53.4		44.6	168	59.3		53.3	263	39.7		13.1	20	09.4		34.2
21	176	22.8	91	52.8		44.8	184	00.0		52.5	278	42.4		13.1	35	11.8		34.2
22	191	25.3	106	52.1		45.0	199	00.7		51.8	293	45.1		13.1	50	14.2		34.2
23	206	27.8	121	51.5		45.2	214	01.4		51.0	308	47.8		13.1	65	16.6		34.1
24	221	30.2	136	50.8	+25	45.4	229	02.1	-4	50.3	323	50.4	-22	13.1	80	19.0	+16	34.1
Dif	—		-6		+2		+7		+7		+27		0		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 56 ^m 8			Edad: 16 ^d 5 PHE { 4 ^h : 54/6 12 ^h : 54/7 20 ^h : 54/8 SD: 14°9 PMG: 1 ^h 05 ^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	47.2	+15 47.6	344	10.8	-25 05.4	70	60 N	20 04	21 00	22 31	** ** *	3 26	13
1	195	47.3	48.3	358	40.8 ¹¹⁰	12.4	70	58	19 54	20 44	21 58	23 36	70	3 50
2	210	47.3	49.0	13	10.8 ¹¹⁰	19.4	70	56	45	30	35	23 12	66	4 10
3	225	47.4	49.8	27	40.6 ¹⁰⁸	26.2	68	54	36	19	16	22 52	65	26 3
4	240	47.5	50.5	42	10.4 ¹⁰⁸	33.0	68	52	29	09	21 01	36 63		40 34
5	255	47.5	+15 51.2	56	40.2 ¹⁰⁸	-25 39.6	66	50	19 23	20 00	20 48	22 21	63	4 53
6	270	47.6	+15 51.9	71	09.8 ¹⁰⁶	-25 46.0	64	45	19 09	19 41	20 22	21 53	60	5 18
7	285	47.6	52.7	85	39.4 ¹⁰⁶	52.4	64	40	18 57	27	20 03	30 59		39 42
8	300	47.7	53.4	100	08.9 ¹⁰⁵	-25 58.6	62	35	48	15	19 48	21 11	58	5 56
9	315	47.8	54.1	114	38.3 ¹⁰⁴	-26 04.8	62	30	39	19 05	35	20 55	57	6 10
10	330	47.8	54.8	129	07.6 ¹⁰³	10.8	60	20	24	18 48	15	29 55		35 49
11	345	47.9	+15 55.6	143	36.9 ¹⁰³	-26 16.6	58	10 N	18 12	18 34	19 00	20 05	55	6 57
12	0	47.9	+15 56.3	158	06.1 ¹⁰²	-26 22.4	58	0	18 00	18 22	18 47	19 44	53	7 18
13	15	48.0	57.0	172	35.3 ¹⁰²	28.0	56	10 S	17 49	18 11	36	23 52		7 38
14	30	48.1	57.7	187	04.3 ¹⁰⁰	33.5	55	20	37	17 59	26	19 00	50	8 00
15	45	48.1	58.5	201	33.3 ¹⁰⁰	38.8	53	30	23	48	16	18 33	49	25 58
16	60	48.2	59.2	216	02.3 ¹⁰⁰	44.1	53	35	15	41	11	18 48		40 60
17	75	48.2	+15 59.9	230	31.1 ⁹⁸	-26 49.2	51	40	17 06	17 34	18 06	18 00	46	8 58
18	90	48.3	+16 00.6	244	59.9 ⁹⁸	-26 54.2	50	45	16 55	17 26	18 01	17 38	45	9 19
19	105	48.4	01.4	259	28.7 ⁹⁸	-26 59.0	48	50	43	17	17 56	17 11	42	45 67
20	120	48.4	02.1	273	57.3 ⁹⁶	-27 03.7	47	52	37	13	53	16 57	41	9 58
21	135	48.5	02.8	288	25.9 ⁹⁶	08.3	46	54	30	08	51	42 39		10 13
22	150	48.5	03.5	302	54.5 ⁹⁶	12.8	45	56	23	17 03	48	24 36		31 73
23	165	48.6	04.2	317	23.0 ⁹⁵	17.1	43	58	15	16 58	45	16 02	32	10 53
24	180	48.6	+16 05.0	331	51.4 ⁹⁴	-27 21.2	41	60 S	16 06	16 52	17 42	15 34	23	11 20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 12 ^m 5		Mag: -4.2 PMG: 14 ^h 53 ^m		Mag: +1.0 PMG: 8 ^h 43 ^m		Mag: -2.5 PMG: 2 ^h 24 ^m		Mag: +0.4 PMG: 18 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	221	30.2	136 50.8	+25 45.4	229 02.1	-4 50.3	323 50.4	-22 13.1	80 19.0	+16 34.1
1	236	32.7	151 50.2	45.6	244 02.8	49.6	338 53.1	13.1	95 21.4	34.1
2	251	35.1	166 49.5	45.7	259 03.5	48.8	353 55.8	13.0	110 23.8	34.1
3	266	37.6	181 48.9	45.9	274 04.2	48.1	8 58.5	13.0	125 26.2	34.1
4	281	40.1	196 48.2	46.1	289 04.9	47.3	24 01.2	13.0	140 28.6	34.1
5	296	42.5	211 47.6	+25 46.3	304 05.6	-4 46.6	39 03.9	-22 13.0	155 31.0	+16 34.0
6	311	45.0	226 47.0	+25 46.5	319 06.3	-4 45.8	54 06.5	-22 13.0	170 33.4	+16 34.0
7	326	47.5	241 46.3	46.6	334 07.0	45.1	69 09.2	13.0	185 35.8	34.0
8	341	49.9	256 45.7	46.8	349 07.7	44.4	84 11.9	12.9	200 38.2	33.9
9	356	52.4	271 45.0	47.0	4 08.4	43.6	99 14.6	12.9	215 40.6	33.9
10	11	54.9	286 44.4	47.2	19 09.1	42.9	114 17.3	12.9	230 43.0	33.9
11	26	57.3	301 43.7	+25 47.3	34 09.8	-4 42.1	129 20.0	-22 12.9	245 45.4	+16 33.9
12	41	59.8	316 43.1	+25 47.5	49 10.5	-4 41.4	144 22.7	-22 12.9	260 47.8	+16 33.9
13	57	02.3	331 42.4	47.7	64 11.2	40.6	159 25.4	12.9	275 50.2	33.8
14	72	04.7	346 41.8	47.8	79 11.9	39.9	174 28.0	12.8	290 52.6	33.8
15	87	07.2	1 41.2	48.0	94 12.6	39.2	189 30.7	12.8	305 55.0	33.8
16	102	09.6	16 40.5	48.2	109 13.3	38.4	204 33.4	12.8	320 57.4	33.8
17	117	12.1	31 39.9	+25 48.3	124 14.0	-4 37.7	219 36.1	-22 12.8	335 59.8	+16 33.7
18	132	14.6	46 39.2	+25 48.5	139 14.7	-4 36.9	234 38.8	-22 12.8	351 02.2	+16 33.7
19	147	17.0	61 38.6	48.7	154 15.4	36.2	249 41.5	12.8	6 04.6	33.7
20	162	19.5	76 37.9	48.8	169 16.1	35.4	264 44.2	12.7	21 07.0	33.7
21	177	22.0	91 37.3	49.0	184 16.8	34.7	279 46.9	12.7	36 09.4	33.6
22	192	24.4	106 36.7	49.2	199 17.5	34.0	294 49.6	12.7	51 11.8	33.6
23	207	26.9	121 36.0	49.3	214 18.2	33.2	309 52.3	12.7	66 14.2	33.6
24	222	29.4	136 35.4	+25 49.5	229 18.9	-4 32.5	324 54.9	-22 12.7	81 16.6	+16 33.6
Dif	—		-6	+2	+7	+7	+27	0	+24	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15'9			Edad: 17 ^d 5 PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'2													
	PMG: 11 ^h 56 ^m 7			SD: 14'9 PMG: 1 ^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	m	
0	180	48.6	+16 05.0	331	51.4		-27 21.2	41	60 N	1 21	2 53	3 48	0 10	76	3 39	35	
1	195	48.7	05.7	346	19.8	94	25.3	41	58	1 55	3 09	3 59	** ** *	**	4 12	42	
2	210	48.8	06.4	0	48.1	93	29.2	39	56	2 18	23	4 08	** ** *	**	37	45	
3	225	48.8	07.1	15	16.3	92	33.0	38	54	27	34	16	23	57	49	4 57	
4	240	48.9	07.8	29	44.5	92	36.6	36	52	2 52	44	24	39	50	5 14	48	
5	255	48.9	+16 08.6	44	12.6	91	-27 40.1	35	50	3 05	3 53	4 30	23	24	50	5 28	
6	270	49.0	+16 09.3	58	40.7	91	-27 43.4	33	45	3 31	4 12	4 44	22	53	52	5 58	
7	285	49.0	10.0	73	08.7	90	46.6	32	40	3 50	26	4 56	29	52	6 21	51	
8	300	49.1	10.7	87	36.7	90	49.7	31	35	4 05	38	5 06	22	09	53	40	
9	315	49.1	11.4	102	04.6	89	52.6	29	30	18	4 49	14	21	52	54	6 56	
10	330	49.2	12.1	116	32.5	89	55.4	28	20	38	5 06	29	24	54	7 24	52	
11	345	49.3	+16 12.9	131	00.3	88	-27 58.0	26	10 N	4 54	5 20	5 41	21	00	54	7 47	
12	0	49.3	+16 13.6	145	28.1	88	-28 00.5	25	0	5 07	5 32	5 53	20	37	55	8 09	
13	15	49.4	14.3	159	55.9	88	02.9	24	10 S	18	43	6 05	20	15	55	32	
14	30	49.4	15.0	174	23.6	87	05.1	22	20	28	5 54	17	19	50	56	8 55	
15	45	49.5	15.7	188	51.2	86	07.2	21	30	38	6 06	31	22	56	9 23	56	
16	60	49.5	16.4	203	18.8	86	09.1	19	35	43	13	39	19	06	55	40	
17	75	49.6	+16 17.1	217	46.4	86	-28 10.8	17	40	5 48	6 20	6 48	18	46	56	9 59	
18	90	49.6	+16 17.8	232	13.9	85	-28 12.5	17	45	5 53	6 28	6 59	18	23	55	10 22	
19	105	49.7	18.6	246	41.4	85	13.9	14	50	5 59	37	7 12	17	53	55	10 52	
20	120	49.7	19.3	261	08.8	84	15.3	14	52	6 01	42	18	38	56	11 06	57	
21	135	49.8	20.0	275	36.3	85	16.5	12	54	04	46	24	21	55	24	57	
22	150	49.8	20.7	290	03.6	83	17.5	10	56	06	51	32	17	00	55	11 44	
23	165	49.9	21.4	304	31.0	84	18.4	9	58	09	6 57	40	16	34	55	12 10	
24	180	49.9	+16 22.1	318	58.3	83	-28 19.1	7	60 S	6 13	7 03	7 49	15	57	55	12 47	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 08 ^m 5		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: +1.0 PMG: 8 ^h 42 ^m			Mag: -2.5 PMG: 2 ^h 20 ^m			Mag: +0.4 PMG: 18 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	222	29.4	136	35.4	+25 49.5	229	18.9	-4 32.5	324	54.9	-22 12.7	81	16.6	+16 33.6
1	237	31.8	151	34.7	49.6	244	19.6	31.7	339	57.6	12.7	96	19.0	33.6
2	252	34.3	166	34.1	49.8	259	20.3	31.0	355	00.3	12.6	111	21.4	33.5
3	267	36.7	181	33.5	49.9	274	21.0	30.2	10	03.0	12.6	126	23.8	33.5
4	282	39.2	196	32.8	50.1	289	21.7	29.5	25	05.7	12.6	141	26.2	33.5
5	297	41.7	211	32.2	+25 50.2	304	22.4	-4 28.7	40	08.4	-22 12.6	156	28.6	+16 33.5
6	312	44.1	226	31.5	+25 50.4	319	23.1	-4 28.0	55	11.1	-22 12.6	171	31.0	+16 33.4
7	327	46.6	241	30.9	50.5	334	23.8	27.3	70	13.8	12.6	186	33.4	33.4
8	342	49.1	256	30.3	50.7	349	24.5	26.5	85	16.5	12.5	201	35.8	33.4
9	357	51.5	271	29.6	50.8	4	25.2	25.8	100	19.2	12.5	216	38.2	33.4
10	12	54.0	286	29.0	51.0	19	25.9	25.0	115	21.9	12.5	231	40.6	33.3
11	27	56.5	301	28.3	+25 51.1	34	26.6	-4 24.3	130	24.6	-22 12.5	246	43.0	+16 33.3
12	42	58.9	316	27.7	+25 51.3	49	27.3	-4 23.5	145	27.3	-22 12.5	261	45.4	+16 33.3
13	58	01.4	331	27.1	51.4	64	28.0	22.8	160	30.0	12.5	276	47.8	33.3
14	73	03.9	346	26.4	51.5	79	28.7	22.0	175	32.7	12.4	291	50.2	33.2
15	88	06.3	1	25.8	51.7	94	29.4	21.3	190	35.3	12.4	306	52.6	33.2
16	103	08.8	16	25.2	51.8	109	30.1	20.6	205	38.0	12.4	321	55.0	33.2
17	118	11.2	31	24.5	+25 52.0	124	30.8	-4 19.8	220	40.7	-22 12.4	336	57.4	+16 33.2
18	133	13.7	46	23.9	+25 52.1	139	31.5	-4 19.1	235	43.4	-22 12.4	351	59.8	+16 33.2
19	148	16.2	61	23.2	52.2	154	32.3	18.3	250	46.1	12.3	7	02.2	33.1
20	163	18.6	76	22.6	52.4	169	33.0	17.6	265	48.8	12.3	22	04.6	33.1
21	178	21.1	91	22.0	52.5	184	33.7	16.8	280	51.5	12.3	37	07.0	33.1
22	193	23.6	106	21.3	52.6	199	34.4	16.1	295	54.2	12.3	52	09.4	33.1
23	208	26.0	121	20.7	52.8	214	35.1	15.3	310	56.9	12.3	67	11.8	33.0
24	223	28.5	136	20.1	+25 52.9	229	35.8	-4 14.6	325	59.6	-22 12.3	82	14.1	+16 33.0
Dif	—		-6		+1	+7		+7	+27		0	+24		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 18 ^d 5	PHE { 4 ^h : 55 ^m /4 12 ^h : 55 ^m /6 20 ^h : 55 ^m /7	SD: 15 ^h 1			R°: 55 ^m							
	PMG: 11 ^h 56 ^m 6					PMG: 2 ^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	180	49.9	+16	22.1	318	58.3	-28	19.1	60 N	20 09	21 06	22 45	1 26 40	4 14 74		
1	195	50.0		22.8	333	25.6	83	19.7	58	19 58	20 49	22 07	0 46 46	4 54 69		
2	210	50.0		23.5	347	52.9	83	20.1	56	49	35	21 41	0 18 48	5 22 66		
3	225	50.1		24.2	2	20.1	82	20.4	54	40	23	22	** ** *	5 44 66		
4	240	50.1		24.9	16	47.3	82	20.5	52	32	13	21 06	** ** *	6 02 63		
5	255	50.2	+16	25.6	31	14.5	82	-28	50	19 26	20 03	20 52	** ** *	6 17 62		
6	270	50.2	+16	26.3	45	41.7	82	-28	45	19 11	19 44	20 26	23 45 42	6 48 60		
7	285	50.3		27.1	60	08.8	81	20.0	40	18 59	29	20 06	21 45	7 12 59		
8	300	50.3		27.8	74	36.0	82	19.5	35	49	17	19 50	23 02 47	31 59		
9	315	50.4		28.5	89	03.1	81	18.9	30	40	19 06	37	22 46 48	7 48 58		
10	330	50.4		29.2	103	30.2	81	18.1	20	25	18 49	16	22 18 51	8 16 57		
11	345	50.5	+16	29.9	117	57.3	81	-28	10 N	18 12	18 34	19 00	21 54 53	8 41 55		
12	0	50.5	+16	30.6	132	24.3	80	-28	0	18 00	18 22	18 47	21 32 54	9 03 55		
13	15	50.6		31.3	146	51.4	81	14.8	10 S	17 48	18 10	35	21 10 56	26 54		
14	30	50.6		32.0	161	18.4	80	13.4	20	35	17 58	25	20 46 58	9 50 53		
15	45	50.7		32.7	175	45.5	81	11.9	30	21	46	15	18 60	10 19 50		
16	60	50.7		33.4	190	12.5	80	10.2	35	13	39	10	20 01 62	35 50		
17	75	50.8	+16	34.1	204	39.5	80	-28	40	17 03	17 32	18 04	19 42 63	10 55 48		
18	90	50.8	+16	34.8	219	06.6	81	-28	45	16 53	17 24	17 59	19 18 66	11 18 47		
19	105	50.9		35.5	233	33.6	80	04.2	50	39	14	53	18 48 69	11 48 45		
20	120	50.9		36.2	248	00.6	80	-28	52	33	10	50	34 69	12 03 44		
21	135	51.0		36.9	262	27.6	80	-27	54	26	05	47	18 16 72	21 41		
22	150	51.0		37.6	276	54.6	80	56.8	56	19	17 00	44	17 55 75	12 42 38		
23	165	51.1		38.3	291	21.7	81	54.0	58	10	16 54	41	17 29 79	13 08 35		
24	180	51.1	+16	39.0	305	48.7	80	-27	60 S	16 01	16 47	17 38	16 52 88	13 45 26		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 04 ^m 6		Mag: -4.2 PMG: 14 ^h 55 ^m		Mag: +1.0 PMG: 8 ^h 41 ^m		Mag: -2.5 PMG: 2 ^h 16 ^m		Mag: +0.4 PMG: 18 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	28.5	136	20.1	+25	52.9	229	35.8	-4	14.6
1	238	31.0	151	19.4		53.0	244	36.5		13.9
2	253	33.4	166	18.8		53.1	259	37.2		13.1
3	268	35.9	181	18.2		53.3	274	37.9		12.4
4	283	38.4	196	17.5		53.4	289	38.6		11.6
5	298	40.8	211	16.9	+25	53.5	304	39.3	-4	10.9
6	313	43.3	226	16.2	+25	53.6	319	40.0	-4	10.1
7	328	45.7	241	15.6		53.8	334	40.7		09.4
8	343	48.2	256	15.0		53.9	349	41.4		08.6
9	358	50.7	271	14.3		54.0	4	42.1		07.9
10	13	53.1	286	13.7		54.1	19	42.8		07.2
11	28	55.6	301	13.1	+25	54.2	34	43.5	-4	06.4
12	43	58.1	316	12.4	+25	54.4	49	44.2	-4	05.7
13	59	00.5	331	11.8		54.5	64	44.9		04.9
14	74	03.0	346	11.2		54.6	79	45.6		04.2
15	89	05.5	1	10.5		54.7	94	46.3		03.4
16	104	07.9	16	09.9		54.8	109	47.0		02.7
17	119	10.4	31	09.3	+25	54.9	124	47.7	-4	01.9
18	134	12.9	46	08.7	+25	55.0	139	48.5	-4	01.2
19	149	15.3	61	08.0		55.1	154	49.2	-4	00.4
20	164	17.8	76	07.4		55.2	169	49.9	-3	59.7
21	179	20.2	91	06.8		55.3	184	50.6		59.0
22	194	22.7	106	06.1		55.4	199	51.3		58.2
23	209	25.2	121	05.5		55.5	214	52.0		57.5
24	224	27.6	136	04.9	+25	55.7	229	52.7	-3	56.7
Dif	—		-6		+1		+7		+7	
									+27	0
										+24
										0

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 56 ^m 6				Edad: 19 ^d 5 PHE { 4 ^h : 55°9 12 ^h : 56°1 20 ^h : 56°3 PMG: 3 ^h 45 ^m R°: 54 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	51.1	+16	39.0	305	48.7			-27	51.1		60 N	1 08	2 47	3 43	2 06	15	5 28	98		
1	195	51.2		39.7	320	15.7	80			48.0	31	58	1 46	3 03	3 54	1 32	24	6 03	87		
2	210	51.2		40.4	334	42.8	81			44.7	33	56	2 11	18	4 04	1 06	31	28	82		
3	225	51.2		41.1	349	09.8	80			41.3	34	54	31	30	12	0 46	34	6 48	78		
4	240	51.3		41.8	3	36.9	81			37.8	35	52	2 47	40	20	29	37	7 05	75		
5	255	51.3	+16	42.4	18	04.0	81			-27	34.1	37	50	3 01	3 49	4 27	0 14	39	7 19	73	
6	270	51.4	+16	43.1	32	31.1	81			-27	30.3	38	45	3 27	4 09	4 42	** ** *		7 48	69	
7	285	51.4		43.8	46	58.2	81			26.3	40	40	3 47	24	4 54	** ** *		8 11	66		
8	300	51.5		44.5	61	25.3	81			22.1	42	35	4 03	36	5 04	23 49	41	30	64		
9	315	51.5		45.2	75	52.4	81			17.8	43	30	16	4 47	13	34	43	8 46	62		
10	330	51.5		45.9	90	19.6	82			13.3	45	20	37	5 04	28	23 09	47	9 13	59		
11	345	51.6	+16	46.6	104	46.8	82			-27	08.7	46	10 N	4 53	5 19	5 41	22 47	50	9 36	57	
12	0	51.6	+16	47.3	119	14.0	82			-27	04.0	47	0	5 06	5 32	5 53	22 26	53	9 58	54	
13	15	51.7		48.0	133	41.2	82			-26	59.1	49	10 S	18	43	6 05	22 06	56	10 20	51	
14	30	51.7		48.7	148	08.4	82			54.0	51	20	29	5 55	18	21 44	59	10 43	49		
15	45	51.8		49.4	162	35.7	83			48.8	52	30	39	6 07	32	18	63	11 09	46		
16	60	51.8		50.1	177	03.0	83			43.4	54	35	44	14	41	21 03	65	25	44		
17	75	51.8	+16	50.8	191	30.3	83			-26	37.9	55	40	5 49	6 22	6 50	20 45	68	11 43	41	
18	90	51.9	+16	51.4	205	57.6	83			-26	32.3	56	45	5 55	6 30	7 01	20 24	72	12 05	38	
19	105	51.9		52.1	220	25.0	84			26.5	58	50	6 01	40	15	19 57	77	33	33		
20	120	52.0		52.8	234	52.4	84			20.5	60	52	04	44	21	43	80	12 47	30		
21	135	52.0		53.5	249	19.9	85			14.4	61	54	07	49	28	28	83	13 02	28		
22	150	52.0		54.2	263	47.3	84			08.2	62	56	10	6 55	36	19 10	87	20	24		
23	165	52.1		54.9	278	14.8	85			-26	01.8	64	58	13	7 00	44	18 48	93	13 43	18	
24	180	52.1	+16	55.6	292	42.4	86			-25	55.2	66	60 S	6 16	7 07	7 54	18 20	101	14 11	10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 00 ^m 7		Mag: -4.2 PMG: 14 ^h 56 ^m		Mag: +1.0 PMG: 8 ^h 40 ^m		Mag: -2.5 PMG: 2 ^h 11 ^m		Mag: +0.4 PMG: 18 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	224	27.6	136	04.9	+25	55.7	229	52.7	-3	56.7
1	239	30.1	151	04.2		55.8	244	53.4		56.0
2	254	32.6	166	03.6		55.9	259	54.1		55.2
3	269	35.0	181	03.0		55.9	274	54.8		54.5
4	284	37.5	196	02.4		56.0	289	55.5		53.7
5	299	40.0	211	01.7	+25	56.1	304	56.2	-3	53.0
6	314	42.4	226	01.1	+25	56.2	319	56.9	-3	52.2
7	329	44.9	241	00.5		56.3	334	57.6		51.5
8	344	47.4	255	59.8		56.4	349	58.3		50.8
9	359	49.8	270	59.2		56.5	4	59.0		50.0
10	14	52.3	285	58.6		56.6	19	59.7		49.3
11	29	54.7	300	58.0	+25	56.7	35	00.5	-3	48.5
12	44	57.2	315	57.3	+25	56.8	50	01.2	-3	47.8
13	59	59.7	330	56.7		56.9	65	01.9		47.0
14	75	02.1	345	56.1		57.0	80	02.6		46.3
15	90	04.6	0	55.4		57.0	95	03.3		45.5
16	105	07.1	15	54.8		57.1	110	04.0		44.8
17	120	09.5	30	54.2	+25	57.2	125	04.7	-3	44.0
18	135	12.0	45	53.6	+25	57.3	140	05.4	-3	43.3
19	150	14.5	60	52.9		57.4	155	06.1		42.5
20	165	16.9	75	52.3		57.4	170	06.8		41.8
21	180	19.4	90	51.7		57.5	185	07.5		41.0
22	195	21.9	105	51.1		57.6	200	08.2		40.3
23	210	24.3	120	50.4		57.7	215	08.9		39.6
24	225	26.8	135	49.8	+25	57.7	230	09.6	-3	38.8
Dif	—		-6		+1		+7		+7	
									+27	
									0	
									+24	
									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: 20 ^d 5 SD: 15/4 PMG: 4 ^h 39 ^m	PHE { 4 ^h : 56/5 12 ^h : 56/7 20 ^h : 57/0 R°: 53 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	52.1	+16	55.6	292	42.4	-25	55.2	60 N	20 14	21 12	23 01	2 21	6	7 06	104		
1	195	52.2		56.2	307	09.9	85	48.6	58	20 03	20 54	22 16	1 56	14	30	96		
2	210	52.2		56.9	321	37.5	86	41.7	56	19 52		40	21 48	37	18	7 50	90	
3	225	52.2		57.6	336	05.2	87	34.8	54		44	27	27	20	23	8 06	86	
4	240	52.3		58.3	350	32.8	86	27.6	52		36	16	21 10	1 06	26	20	82	
5	255	52.3	+16	59.0	5	00.5	87	-25	50	19 29	20 07	20 56	0 53	29	8 32	80		
6	270	52.3	+16	59.7	19	28.3	88	-25	45	19 14	19 47	20 29	0 27	34	8 57	74		
7	285	52.4	+17	00.3	33	56.1	88	-25	40	19 01	31	20 08	0 06	38	9 17	70		
8	300	52.4		01.0	48	23.9	88	-24	35	18 51	18	19 52	** ** *	**	34	66		
9	315	52.5		01.7	62	51.8	89	49.9	30		42	19 07	38	** ** *	9 48	64		
10	330	52.5		02.4	77	19.7	89	41.9	20		26	18 49	17	23 56	43	10 12	59	
11	345	52.5	+17	03.1	91	47.7	90	-24	10 N	18 12	18 35	19 00	23 37	47	10 33	55		
12	0	52.6	+17	03.8	106	15.7	90	-24	0	18 00	18 22	18 47	23 19	52	10 52	52		
13	15	52.6		04.4	120	43.7	90	17.2	10 S	17 48	18 09	35	23 02	55	11 11	49		
14	30	52.6		05.1	135	11.8	91	-24	20		34	17 57	24	22 43	59	32	44	
15	45	52.7		05.8	149	39.9	91	-24	30		20	45	13	21	65	11 55	40	
16	60	52.7		06.5	164	08.1	92	-23	35		11	38	08	22 08	68	12 09	37	
17	75	52.7	+17	07.1	178	36.3	92	-23	40	17 01	17 30	18 02	21 53	71	12 24	35		
18	90	52.8	+17	07.8	193	04.6	93	-23	45	16 50	17 21	17 56	21 36	75	12 43	30		
19	105	52.8		08.5	207	32.9	93	24.0	50		36	11	50	14	81	13 06	25	
20	120	52.9		09.2	222	01.2	93	14.7	52		30	06	47	21 03	84	17	23	
21	135	52.9		09.8	236	29.6	94	-23	54		23	17 01	44	20 51	87	30	19	
22	150	52.9		10.5	250	58.1	95	-22	56		15	16 56	41	37	92	13 44	15	
23	165	53.0		11.2	265	26.6	95	45.9	58	16 06	50	38	21	96	14 01	10		
24	180	53.0	+17	11.9	279	55.1	95	-22	60 S	15 56	16 43	17 34	20 01	104	14 21	4		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 56 ^m 7			Mag: -4.2 PMG: 14 ^h 57 ^m			Mag: +1.0 PMG: 8 ^h 39 ^m			Mag: -2.5 PMG: 2 ^h 07 ^m			Mag: +0.4 PMG: 18 ^h 20 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	225	26.8	135	49.8	+25	57.7	230	09.6	-3	38.8	328	09.4	-22	11.4	84	08.9	+16	31.8
1	240	29.2	150	49.2		57.8	245	10.4		38.1	343	12.1		11.4	99	11.3		31.7
2	255	31.7	165	48.6		57.9	260	11.1		37.3	358	14.8		11.4	114	13.6		31.7
3	270	34.2	180	48.0		58.0	275	11.8		36.6	13	17.5		11.3	129	16.0		31.7
4	285	36.6	195	47.3		58.0	290	12.5		35.8	28	20.3		11.3	144	18.4		31.7
5	300	39.1	210	46.7	+25	58.1	305	13.2	-3	35.1	43	23.0	-22	11.3	159	20.8	+16	31.6
6	315	41.6	225	46.1	+25	58.2	320	13.9	-3	34.3	58	25.7	-22	11.3	174	23.2	+16	31.6
7	330	44.0	240	45.5		58.2	335	14.6		33.6	73	28.4		11.3	189	25.6		31.6
8	345	46.5	255	44.8		58.3	350	15.3		32.8	88	31.1		11.2	204	28.0		31.5
9	0	49.0	270	44.2		58.4	5	16.0		32.1	103	33.8		11.2	219	30.3		31.5
10	15	51.4	285	43.6		58.4	20	16.7		31.3	118	36.5		11.2	234	32.7		31.5
11	30	53.9	300	43.0	+25	58.5	35	17.4	-3	30.6	133	39.2	-22	11.2	249	35.1	+16	31.5
12	45	56.3	315	42.4	+25	58.5	50	18.1	-3	29.8	148	42.0	-22	11.2	264	37.5	+16	31.4
13	60	58.8	330	41.7		58.6	65	18.8		29.1	163	44.7		11.1	279	39.9		31.4
14	76	01.3	345	41.1		58.7	80	19.6		28.4	178	47.4		11.1	294	42.3		31.4
15	91	03.7	0	40.5		58.7	95	20.3		27.6	193	50.1		11.1	309	44.6		31.4
16	106	06.2	15	39.9		58.8	110	21.0		26.9	208	52.8		11.1	324	47.0		31.3
17	121	08.7	30	39.3	+25	58.8	125	21.7	-3	26.1	223	55.5	-22	11.1	339	49.4	+16	31.3
18	136	11.1	45	38.7	+25	58.9	140	22.4	-3	25.4	238	58.2	-22	11.0	354	51.8	+16	31.3
19	151	13.6	60	38.0		58.9	155	23.1		24.6	254	01.0		11.0	9	54.2		31.2
20	166	16.1	75	37.4		59.0	170	23.8		23.9	269	03.7		11.0	24	56.6		31.2
21	181	18.5	90	36.8		59.0	185	24.5		23.1	284	06.4		11.0	39	58.9		31.2
22	196	21.0	105	36.2		59.1	200	25.2		22.4	299	09.1		11.0	55	01.3		31.2
23	211	23.5	120	35.6		59.1	215	25.9		21.6	314	11.8		11.0	70	03.7		31.1
24	226	25.9	135	34.9	+25	59.2	230	26.6	-3	20.9	329	14.5	-22	10.9	85	06.1	+16	31.1
Dif	—			-6	+1		+7	+7			+27	0			+24		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 21 ^d 5 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/7 PMG: 5 ^h 32 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	53.0	+17	11.9	279	55.1	-22	36.1	60 N	0 51	2 40	3 38	2 27	2	8 50	103		
1	195	53.0		12.5	294	23.7		26.1	58	1 36	2 58	3 50	2 10	7	9 06	97		
2	210	53.1		13.2	308	52.4		16.0	56	2 04	3 13	4 00	1 55	12	20	92		
3	225	53.1		13.9	323	21.0		05.8	54	25	25	09	43	16	32	88		
4	240	53.1		14.6	337	49.8		55.4	52	42	36	17	32	19	42	85		
5	255	53.1	+17	15.2	352	18.6		44.9	50	2 56	3 46	4 24	1 22	21	9 52	82		
6	270	53.2	+17	15.9	6	47.4		34.3	45	3 24	4 06	4 39	1 01	27	10 11	76		
7	285	53.2		16.6	21	16.3		23.6	40	3 44	21	4 51	0 44	31	27	72		
8	300	53.2		17.2	35	45.2		12.7	35	4 01	34	5 02	30	35	40	68		
9	315	53.3		17.9	50	14.2		01.7	30	14	4 45	11	0 17	38	10 52	64		
10	330	53.3		18.6	64	43.2		50.6	20	36	5 03	27	** ** *	**	11 11	60		
11	345	53.3	+17	19.3	79	12.2		39.4	10 N	4 52	5 18	5 40	** ** *	**	11 28	55		
12	0	53.4	+17	19.9	93	41.3		28.1	0	5 06	5 31	5 53	** ** *	**	11 44	50		
13	15	53.4		20.6	108	10.5		16.6	10 S	18	44	6 05	23 57	54	12 00	46		
14	30	53.4		21.3	122	39.7		05.1	20	29	5 56	19	42	59	16	42		
15	45	53.5		21.9	137	09.0		53.4	30	40	6 09	34	26	64	35	36		
16	60	53.5		22.6	151	38.3		41.6	35	45	16	42	16	68	46	33		
17	75	53.5	+17	23.3	166	07.6		29.6	40	5 51	6 24	6 52	23 04	72	12 59	29		
18	90	53.5	+17	23.9	180	37.0		17.6	45	5 57	6 32	7 04	22 51	77	13 13	25		
19	105	53.6		24.6	195	06.4		05.5	50	6 04	43	18	35	82	31	20		
20	120	53.6		25.2	209	35.9		53.2	52	07	47	24	27	85	40	16		
21	135	53.6		25.9	224	05.5		40.8	54	10	52	31	18	89	49	14		
22	150	53.7		26.6	238	35.0		28.4	56	13	6 58	39	22 09	92	13 59	11		
23	165	53.7		27.2	253	04.6		15.8	58	16	7 04	48	21 57	97	14 11	7		
24	180	53.7	+17	27.9	267	34.3		03.1	60 S	6 20	7 11	7 59	21 45	101	14 25	1		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 52 ^m 8		Mag: -4.2 PMG: 14 ^h 58 ^m				Mag: +1.0 PMG: 8 ^h 38 ^m				Mag: -2.5 PMG: 2 ^h 03 ^m				Mag: +0.4 PMG: 18 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	25.9	135	34.9	+25	59.2	230	26.6	-3	20.9	329	14.5	-22	10.9	85	06.1	+16	31.1
1	241	28.4	150	34.3		59.2	245	27.4		20.1	344	17.3		10.9	100	08.5		31.1
2	256	30.8	165	33.7		59.3	260	28.1		19.4	359	20.0		10.9	115	10.8		31.0
3	271	33.3	180	33.1		59.3	275	28.8		18.6	14	22.7		10.9	130	13.2		31.0
4	286	35.8	195	32.5		59.3	290	29.5		17.9	29	25.4		10.9	145	15.6		31.0
5	301	38.2	210	31.9	+25	59.4	305	30.2	-3	17.1	44	28.1	-22	10.8	160	18.0	+16	31.0
6	316	40.7	225	31.3	+25	59.4	320	30.9	-3	16.4	59	30.8	-22	10.8	175	20.4	+16	30.9
7	331	43.2	240	30.6		59.5	335	31.6		15.7	74	33.6		10.8	190	22.7		30.9
8	346	45.6	255	30.0		59.5	350	32.3		14.9	89	36.3		10.8	205	25.1		30.9
9	1	48.1	270	29.4		59.5	5	33.0		14.2	104	39.0		10.8	220	27.5		30.8
10	16	50.6	285	28.8		59.6	20	33.7		13.4	119	41.7		10.7	235	29.9		30.8
11	31	53.0	300	28.2	+25	59.6	35	34.5	-3	12.7	134	44.4	-22	10.7	250	32.3	+16	30.8
12	46	55.5	315	27.6	+25	59.6	50	35.2	-3	11.9	149	47.2	-22	10.7	265	34.6	+16	30.8
13	61	58.0	330	27.0		59.7	65	35.9		11.2	164	49.9		10.7	280	37.0		30.7
14	77	00.4	345	26.4		59.7	80	36.6		10.4	179	52.6		10.7	295	39.4		30.7
15	92	02.9	0	25.7		59.7	95	37.3		09.7	194	55.3		10.6	310	41.8		30.7
16	107	05.3	15	25.1		59.8	110	38.0		08.9	209	58.0		10.6	325	44.2		30.6
17	122	07.8	30	24.5	+25	59.8	125	38.7	-3	08.2	225	00.8	-22	10.6	340	46.5	+16	30.6
18	137	10.3	45	23.9	+25	59.8	140	39.4	-3	07.4	240	03.5	-22	10.6	355	48.9	+16	30.6
19	152	12.7	60	23.3		59.8	155	40.1		06.7	255	06.2		10.6	10	51.3		30.6
20	167	15.2	75	22.7		59.9	170	40.9		05.9	270	08.9		10.5	25	53.7		30.5
21	182	17.7	90	22.1		59.9	185	41.6		05.2	285	11.6		10.5	40	56.1		30.5
22	197	20.1	105	21.5		59.9	200	42.3		04.4	300	14.4		10.5	55	58.4		30.5
23	212	22.6	120	20.9		59.9	215	43.0		03.7	315	17.1		10.5	71	00.8		30.4
24	227	25.1	135	20.3	+25	59.9	230	43.7	-3	02.9	330	19.8	-22	10.5	86	03.2	+16	30.4
Dif	—		-6		0		+7		+7		+27		0		+24		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 4			Edad: 22 ^d 5 PHE { 4 ^h : 58/0 12 ^h : 58/2 20 ^h : 58/5 SD: 15/8 PMG: 6 ^h 23 ^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	180	53.7	+17 27.9	267	34.3	-18 03.1	60 N	20 19	21 19	23 24	2 29 0	10 33 101		
1	195	53.7	28.6	282	04.0 ¹⁰⁷	-17 50.3 ¹²⁸	58	20 07	21 00	22 26	17 5	43 97		
2	210	53.8	29.2	296	33.8 ¹⁰⁸	37.4 ¹²⁹	56	19 56	20 44	21 55	2 07 9	10 52 93		
3	225	53.8	29.9	311	03.5 ¹⁰⁷	24.4 ¹³⁰	54	47	31	33	1 59 11	11 00 89		
4	240	53.8	30.5	325	33.4 ¹⁰⁹	-17 11.3 ¹³¹	52	39	20	15	51 15	07 86		
5	255	53.8	+17 31.2	340	03.2 ¹⁰⁸	-16 58.1 ¹³²	50	19 32	20 10	21 01	1 43 18	11 14 83		
6	270	53.9	+17 31.9	354	33.1 ¹⁰⁹	-16 44.8 ¹³³	45	19 16	19 50	20 32	1 28 23	11 27 77		
7	285	53.9	32.5	9	03.1 ¹¹⁰	31.3 ¹³⁵	40	19 03	33	20 11	15 28	39 72		
8	300	53.9	33.2	23	33.1 ¹¹⁰	17.8 ¹³⁵	35	18 52	20	19 54	1 05 31	48 68		
9	315	53.9	33.8	38	03.1 ¹¹⁰	-16 04.2 ¹³⁶	30	43	19 09	40	0 55 35	11 56 65		
10	330	54.0	34.5	52	33.2 ¹¹¹	-15 50.5 ¹³⁷	20	27	18 50	18	39 40	12 11 58		
11	345	54.0	+17 35.1	67	03.3 ¹¹¹	-15 36.7 ¹³⁸	10 N	18 13	18 35	19 01	0 24 45	12 23 53		
12	0	54.0	+17 35.8	81	33.4 ¹¹¹	-15 22.8 ¹³⁹	0	18 00	18 22	18 47	0 11 49	12 34 49		
13	15	54.0	36.5	96	03.6 ¹¹²	-15 08.8 ¹⁴⁰	10 S	17 47	18 09	34	** ** *	46 44		
14	30	54.1	37.1	110	33.8 ¹¹²	-14 54.7 ¹⁴¹	20	34	17 57	23	** ** *	12 58 39		
15	45	54.1	37.8	125	04.0 ¹¹²	40.6 ¹⁴¹	30	18	43	12	** ** *	13 11 34		
16	60	54.1	38.4	139	34.3 ¹¹³	26.3 ¹⁴³	35	17 09	36	06	** ** *	19 30		
17	75	54.1	+17 39.1	154	04.6 ¹¹³	-14 12.0 ¹⁴³	40	16 59	17 28	18 00	** ** *	13 28 26		
18	90	54.2	+17 39.7	168	34.9 ¹¹³	-13 57.5 ¹⁴⁵	45	16 47	17 19	17 54	** ** *	13 38 22		
19	105	54.2	40.4	183	05.3 ¹¹⁴	43.0 ¹⁴⁵	50	33	08	47	23 57 83	51 16		
20	120	54.2	41.0	197	35.7 ¹¹⁴	28.4 ¹⁴⁶	52	26	17 03	44	52 86	13 56 14		
21	135	54.2	41.7	212	06.1 ¹¹⁴	-13 13.7 ¹⁴⁷	54	19	16 58	41	47 89	14 03 11		
22	150	54.2	42.3	226	36.6 ¹¹⁵	-12 58.9 ¹⁴⁸	56	11	52	38	41 92	10 7		
23	165	54.3	43.0	241	07.1 ¹¹⁵	44.0 ¹⁴⁹	58	16 02	46	34	34 96	18 4		
24	180	54.3	+17 43.6	255	37.6 ¹¹⁵	-12 29.1 ¹⁴⁹	60 S	15 51	16 39	17 30	23 26 101	14 26 0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 48 ^m 9		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +0.9 PMG: 8 ^h 37 ^m		Mag: -2.5 PMG: 1 ^h 58 ^m		Mag: +0.4 PMG: 18 ^h 13 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	227	25.1	135 20.3	+25 59.9	230 43.7	-3 02.9	330 19.8	-22 10.5	86 03.2	+16 30.4
1	242	27.5	150 19.6	+26 00.0	245 44.4	02.2	345 22.5	10.4	101 05.6	30.4
2	257	30.0	165 19.0	00.0	260 45.1	01.4	0 25.3	10.4	116 07.9	30.3
3	272	32.5	180 18.4	00.0	275 45.8	-3 00.7	15 28.0	10.4	131 10.3	30.3
4	287	34.9	195 17.8	00.0	290 46.5	-3 00.0	30 30.7	10.4	146 12.7	30.3
5	302	37.4	210 17.2	+26 00.0	305 47.3	-2 59.2	45 33.4	-22 10.4	161 15.1	+16 30.3
6	317	39.8	225 16.6	+26 00.0	320 48.0	-2 58.5	60 36.1	-22 10.3	176 17.4	+16 30.2
7	332	42.3	240 16.0	+26 00.0	335 48.7	57.7	75 38.9	10.3	191 19.8	30.2
8	347	44.8	255 15.4	+26 00.1	350 49.4	57.0	90 41.6	10.3	206 22.2	30.2
9	2	47.2	270 14.8	00.1	5 50.1	56.2	105 44.3	10.3	221 24.6	30.1
10	17	49.7	285 14.2	00.1	20 50.8	55.5	120 47.0	10.3	236 27.0	30.1
11	32	52.2	300 13.6	+26 00.1	35 51.5	-2 54.7	135 49.8	-22 10.2	251 29.3	+16 30.1
12	47	54.6	315 13.0	+26 00.1	50 52.2	-2 54.0	150 52.5	-22 10.2	266 31.7	+16 30.0
13	62	57.1	330 12.4	00.1	65 52.9	53.2	165 55.2	10.2	281 34.1	30.0
14	77	59.6	345 11.8	00.1	80 53.7	52.5	180 57.9	10.2	296 36.5	30.0
15	93	02.0	0 11.2	00.1	95 54.4	51.7	196 00.7	10.2	311 38.8	30.0
16	108	04.5	15 10.6	00.1	110 55.1	51.0	211 03.4	10.1	326 41.2	29.9
17	123	06.9	30 10.0	+26 00.1	125 55.8	-2 50.2	226 06.1	-22 10.1	341 43.6	+16 29.9
18	138	09.4	45 09.4	+26 00.1	140 56.5	-2 49.5	241 08.9	-22 10.1	356 46.0	+16 29.9
19	153	11.9	60 08.8	00.1	155 57.2	48.7	256 11.6	10.1	11 48.3	29.8
20	168	14.3	75 08.2	00.1	170 57.9	48.0	271 14.3	10.1	26 50.7	29.8
21	183	16.8	90 07.6	00.1	185 58.6	47.2	286 17.0	10.0	41 53.1	29.8
22	198	19.3	105 07.0	00.1	200 59.4	46.5	301 19.8	10.0	56 55.4	29.7
23	213	21.7	120 06.4	00.1	216 00.1	45.7	316 22.5	10.0	71 57.8	29.7
24	228	24.2	135 05.8	+26 00.1	231 00.8	-2 45.0	331 25.2	-22 10.0	87 00.2	+16 29.7
Dif	—	—	-6	0	+7	+7	+27	0	+24	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 23 ^d 5 SD: 16 ^h 0 PMG: 7 ^h 12 ^m	PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 3 R ^o : 48 ^m	Náutico	Civil		Hora	R ^o		Hora	R ^o			
	hG ☉	Dec	hG ☾	Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.3	+17	43.6	255	37.6	-12	29.1	60 N	0 28	2 33	3 33	2 29	0	12 14	101	
1	195	54.3		44.3	270	08.1 ¹¹⁵	-12	14.1 ¹⁵⁰	58	1 26	2 52	45	22	4	20	96	
2	210	54.3		44.9	284	38.7 ¹¹⁶	-11	59.0 ¹⁵¹	56	1 57	3 08	3 56	16	7	25	92	
3	225	54.3		45.6	299	09.2 ¹¹⁵		43.8 ¹⁵²	54	2 19	21	4 05	10	10	29	89	
4	240	54.4		46.2	313	39.9 ¹¹⁷		28.5 ¹⁵³	52		37	32	13		06	12	33 86
5	255	54.4	+17	46.9	328	10.5 ¹¹⁶	-11	13.2 ¹⁵³	50	2 52	3 42	4 21	2 01	15	12 37	83	
6	270	54.4	+17	47.5	342	41.1 ¹¹⁶	-10	57.8 ¹⁵⁴	45	3 20	4 03	4 36	1 51	21	12 44	78	
7	285	54.4		48.2	357	11.8 ¹¹⁷		42.3 ¹⁵⁵	40		42	19	4	49	43	25	51 72
8	300	54.4		48.8	11	42.5 ¹¹⁷		26.8 ¹⁵⁵	35	3 59	32	5 00	36	29	12	56	69
9	315	54.5		49.5	26	13.2 ¹¹⁷	-10	11.2 ¹⁵⁶	30	4 13	4 44	10	30	32	13	01	65
10	330	54.5		50.1	40	43.9 ¹¹⁷	-9	55.5 ¹⁵⁷	20		35	5 02	26		19	38	09 59
11	345	54.5	+17	50.7	55	14.6 ¹¹⁷	-9	39.7 ¹⁵⁸	10 N	4 52	5 18	5 40	1 09	44	13 16	54	
12	0	54.5	+17	51.4	69	45.3 ¹¹⁷	-9	23.9 ¹⁵⁸	0	5 06	5 31	5 53	1 00	48	13 23	48	
13	15	54.5		52.0	84	16.1 ¹¹⁸	-9	08.0 ¹⁵⁹	10 S		18	44	6	06	0	51	53 30 43
14	30	54.5		52.7	98	46.8 ¹¹⁷	-8	52.1 ¹⁵⁹	20		30	5 56	19		41	59	37 38
15	45	54.6		53.3	113	17.6 ¹¹⁸		36.1 ¹⁶⁰	30		41	6 10	35		30	65	45 31
16	60	54.6		54.0	127	48.4 ¹¹⁸		20.0 ¹⁶¹	35		47	17	44		24	68	49 28
17	75	54.6	+17	54.6	142	19.2 ¹¹⁸	-8	03.9 ¹⁶¹	40	5 53	6 25	6 54	0 16	73	13 54	25	
18	90	54.6	+17	55.2	156	50.0 ¹¹⁸	-7	47.7 ¹⁶²	45	5 59	6 35	7 06	0 08	77	14 00	20	
19	105	54.6		55.9	171	20.8 ¹¹⁸		31.4 ¹⁶³	50	6 06	45	21	**	**	**	07	14
20	120	54.6		56.5	185	51.6 ¹¹⁸	-7	15.1 ¹⁶³	52	09	50	27	**	**	**	10	12
21	135	54.7		57.2	200	22.4 ¹¹⁸	-6	58.8 ¹⁶³	54	12	6 56	35	**	**	**	14	9
22	150	54.7		57.8	214	53.2 ¹¹⁸		42.4 ¹⁶⁴	56	16	7 01	43	**	**	**	17	7
23	165	54.7		58.4	229	24.0 ¹¹⁸		25.9 ¹⁶⁵	58	20	08	7 53	**	**	**	22	3
24	180	54.7	+17	59.1	243	54.8 ¹¹⁸	-6	09.4 ¹⁶⁵	60 S	6 24	7 15	8 03	**	**	**	14 26	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 44 ^m 9		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: +0.9 PMG: 8 ^h 36 ^m		Mag: -2.5 PMG: 1 ^h 54 ^m		Mag: +0.4 PMG: 18 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	24.2	135	05.8	+26	00.1	231	00.8	-2	45.0
1	243	26.7	150	05.2	+26	00.0	246	01.5		44.2
2	258	29.1	165	04.6		00.0	261	02.2		43.5
3	273	31.6	180	04.0		00.0	276	02.9		42.7
4	288	34.1	195	03.4		00.0	291	03.6		42.0
5	303	36.5	210	02.8	+26	00.0	306	04.3	-2	41.3
6	318	39.0	225	02.2	+26	00.0	321	05.1	-2	40.5
7	333	41.4	240	01.6	+26	00.0	336	05.8		39.8
8	348	43.9	255	01.0	+25	59.9	351	06.5		39.0
9	3	46.4	270	00.4		59.9	6	07.2		38.3
10	18	48.8	284	59.8		59.9	21	07.9		37.5
11	33	51.3	299	59.2	+25	59.9	36	08.6	-2	36.8
12	48	53.8	314	58.6	+25	59.9	51	09.3	-2	36.0
13	63	56.2	329	58.0		59.8	66	10.1		35.3
14	78	58.7	344	57.4		59.8	81	10.8		34.5
15	94	01.2	359	56.8		59.8	96	11.5		33.8
16	109	03.6	14	56.2		59.8	111	12.2		33.0
17	124	06.1	29	55.6	+25	59.7	126	12.9	-2	32.3
18	139	08.6	44	55.0	+25	59.7	141	13.6	-2	31.5
19	154	11.0	59	54.4		59.7	156	14.3		30.8
20	169	13.5	74	53.9		59.6	171	15.1		30.0
21	184	15.9	89	53.3		59.6	186	15.8		29.3
22	199	18.4	104	52.7		59.6	201	16.5		28.5
23	214	20.9	119	52.1		59.5	216	17.2		27.8
24	229	23.3	134	51.5	+25	59.5	231	17.9	-2	27.0
Dif	—		-6	0		0	+7	+7		+27
										0
										+24
										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: 24 ^d 5 PHE { SD: 16'2 PMG: 8 ^h 00 ^m					4 ^h : 59'5 12 ^h : 59'8 20 ^h : 60'0 R°: 49 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	54.7	+17	59.1	243	54.8	-6	09.4	60 N	20 24	21 25	** **	2 29	**	13 55	102		
1	195	54.7	+17	59.7	258	25.7 ¹¹⁹	-5	52.8 ¹⁶⁶	58	11	21 05	22 36	26	3	56	98		
2	210	54.7	+18	00.3	272	56.5 ¹¹⁸		36.2 ¹⁶⁶	56	20 00	20 49	22 03	23	6	57	95		
3	225	54.7		01.0	287	27.3 ¹¹⁸		19.5 ¹⁶⁷	54	19 51	35	21 39	20	10	58	91		
4	240	54.8		01.6	301	58.1 ¹¹⁸	-5	02.8 ¹⁶⁷	52	42	24	20	18	12	13	59	88	
5	255	54.8	+18	02.3	316	28.8 ¹¹⁷	-4	46.1 ¹⁶⁷	50	19 35	20 13	21 05	2	16	15	14	00	85
6	270	54.8	+18	02.9	330	59.6 ¹¹⁸	-4	29.3 ¹⁶⁸	45	19 18	19 52	20 35	2	12	20	14	02	79
7	285	54.8		03.5	345	30.4 ¹¹⁸	-4	12.5 ¹⁶⁸	40	19 05	36	20 13	08	25	03	75		
8	300	54.8		04.2	0	01.2 ¹¹⁸	-3	55.6 ¹⁶⁹	35	18 54	22	19 56	05	28	05	70		
9	315	54.8		04.8	14	31.9 ¹¹⁷		38.7 ¹⁶⁹	30	44	19 10	41	2	02	32	06	67	
10	330	54.8		05.4	29	02.6 ¹¹⁷		21.8 ¹⁶⁹	20	28	18 51	19	1	57	38	08	60	
11	345	54.8	+18	06.0	43	33.4 ¹¹⁸	-3	04.8 ¹⁷⁰	10 N	18 13	18 35	19 01	1	53	43	14	10	54
12	0	54.9	+18	06.7	58	04.1 ¹¹⁷	-2	47.8 ¹⁷⁰	0	18 00	18 22	18 47	1	48	49	14	11	50
13	15	54.9		07.3	72	34.7 ¹¹⁶		30.7 ¹⁷¹	10 S	17 47	18 09	34	44	54	13	44		
14	30	54.9		07.9	87	05.4 ¹¹⁷	-2	13.7 ¹⁷⁰	20	33	17 56	22	40	59	15	38		
15	45	54.9		08.6	101	36.0 ¹¹⁶	-1	56.6 ¹⁷¹	30	17	42	11	35	66	16	33		
16	60	54.9		09.2	116	06.7 ¹¹⁷		39.4 ¹⁷²	35	17 08	34	18 05	32	69	17	29		
17	75	54.9	+18	09.8	130	37.3 ¹¹⁶	-1	22.3 ¹⁷¹	40	16 57	17 26	17 59	1	29	73	14	19	24
18	90	54.9	+18	10.5	145	07.8 ¹¹⁵	-1	05.1 ¹⁷²	45	16 45	17 17	17 52	1	25	78	14	20	20
19	105	54.9		11.1	159	38.4 ¹¹⁶	-0	47.9 ¹⁷²	50	30	06	45	20	85	21	15		
20	120	54.9		11.7	174	08.9 ¹¹⁵		30.7 ¹⁷²	52	23	17 01	42	18	87	22	12		
21	135	55.0		12.3	188	39.4 ¹¹⁵	-0	13.5 ¹⁷²	54	16	16 55	38	16	90	23	9		
22	150	55.0		13.0	203	09.9 ¹¹⁵	+0	03.8 ¹⁷³	56	16 07	49	34	13	93	24	6		
23	165	55.0		13.6	217	40.3 ¹¹⁴		21.1 ¹⁷³	58	15 57	42	31	10	97	25	3		
24	180	55.0	+18	14.2	232	10.7 ¹¹⁴	+0	38.4 ¹⁷³	60 S	15 46	16 35	17 26	1	07	101	14	26	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 41 ^m 0		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +0.9 PMG: 8 ^h 34 ^m		Mag: -2.5 PMG: 1 ^h 50 ^m		Mag: +0.4 PMG: 18 ^h 05 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	229	23.3	134	51.5	+25	59.5	231	17.9	-22	09.5	87	57.1	+16	28.9	
1	244	25.8	149	50.9		59.5	246	18.6		09.5	102	59.5		28.9	
2	259	28.3	164	50.3		59.4	261	19.3		09.4	118	01.8		28.9	
3	274	30.7	179	49.7		59.4	276	20.1		09.4	133	04.2		28.8	
4	289	33.2	194	49.1		59.4	291	20.8		09.4	148	06.6		28.8	
5	304	35.7	209	48.5	+25	59.3	306	21.5	-22	09.4	163	08.9	+16	28.8	
6	319	38.1	224	48.0	+25	59.3	321	22.2	-22	09.4	178	11.3	+16	28.7	
7	334	40.6	239	47.4		59.2	336	22.9		09.3	193	13.7		28.7	
8	349	43.0	254	46.8		59.2	351	23.6		09.3	208	16.1		28.7	
9	4	45.5	269	46.2		59.1	6	24.3		09.3	223	18.4		28.6	
10	19	48.0	284	45.6		59.1	21	25.1		09.3	238	20.8		28.6	
11	34	50.4	299	45.0	+25	59.0	36	25.8	-22	09.3	253	23.2	+16	28.6	
12	49	52.9	314	44.4	+25	59.0	51	26.5	-22	09.2	268	25.5	+16	28.5	
13	64	55.4	329	43.9		58.9	66	27.2		09.2	283	27.9		28.5	
14	79	57.8	344	43.3		58.9	81	27.9		09.2	298	30.3		28.5	
15	95	00.3	359	42.7		58.8	96	28.6		09.2	313	32.6		28.4	
16	110	02.8	14	42.1		58.8	111	29.4		09.2	328	35.0		28.4	
17	125	05.2	29	41.5	+25	58.7	126	30.1	-22	09.1	343	37.4	+16	28.4	
18	140	07.7	44	40.9	+25	58.7	141	30.8	-22	09.1	358	39.7	+16	28.3	
19	155	10.2	59	40.4		58.6	156	31.5		09.1	13	42.1		28.3	
20	170	12.6	74	39.8		58.6	171	32.2		09.1	28	44.5		28.3	
21	185	15.1	89	39.2		58.5	186	32.9		09.0	43	46.8		28.2	
22	200	17.5	104	38.6		58.4	201	33.7		09.0	58	49.2		28.2	
23	215	20.0	119	38.0		58.4	216	34.4		09.0	73	51.6		28.2	
24	230	22.5	134	37.5	+25	58.3	231	35.1	-22	09.0	88	53.9	+16	28.1	
Dif	—		-6	0		+7	+7		+27	0	+24		0		

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: 25 ^d 5 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 4 20 ^h : 60 ^m 6 PMG: 8 ^h 49 ^m R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.0	+18	14.2	232	10.7	+0	38.4	60 N	** **	2 27	3 28	2 28	0	15 37	107	
1	195	55.0		14.8	246	41.1 ¹¹⁴	+0	55.7 ¹⁷³	58	1 16	2 47	41	29	3	34	103	
2	210	55.0		15.5	261	11.4 ¹¹³	+1	13.0 ¹⁷³	56	1 49	3 03	3 52	29	7	32	98	
3	225	55.0		16.1	275	41.7 ¹¹³		30.3 ¹⁷³	54	2 13	17	4 01	30	10	29	95	
4	240	55.0		16.7	290	12.0 ¹¹³	+1	47.6 ¹⁷³	52		32	28	10	30	13	27	92
5	255	55.0	+18	17.3	304	42.2 ¹¹²	+2	05.0 ¹⁷⁴	50	2 47	3 39	4 18	2 31	15	15 25	89	
6	270	55.0	+18	17.9	319	12.3 ¹¹¹	+2	22.3 ¹⁷³	45	3 17	4 00	4 34	2 32	21	15 21	83	
7	285	55.0		18.6	333	42.5 ¹¹²		39.6 ¹⁷³	40	39	17	47	33	25	18	77	
8	300	55.0		19.2	348	12.6 ¹¹¹	+2	57.0 ¹⁷⁴	35	3 57	31	4 58	33	30	15	73	
9	315	55.0		19.8	2	42.6 ¹¹⁰	+3	14.3 ¹⁷³	30	4 11	4 42	5 08	34	33	13	68	
10	330	55.1		20.4	17	12.6 ¹¹⁰		31.7 ¹⁷⁴	20	34	5 01	25	35	40	08	63	
11	345	55.1	+18	21.0	31	42.6 ¹¹⁰	+3	49.0 ¹⁷³	10 N	4 51	5 17	5 39	2 36	45	15 04	57	
12	0	55.1	+18	21.7	46	12.5 ¹⁰⁹	+4	06.3 ¹⁷³	0	5 06	5 31	5 53	2 37	50	15 01	51	
13	15	55.1		22.3	60	42.3 ¹⁰⁸		23.6 ¹⁷³	10 S	19	44	6 06	38	56	14 57	46	
14	30	55.1		22.9	75	12.1 ¹⁰⁸		41.0 ¹⁷⁴	20	30	5 57	20	39	61	53	41	
15	45	55.1		23.5	89	41.9 ¹⁰⁸	+4	58.3 ¹⁷³	30	42	6 11	36	41	67	49	34	
16	60	55.1		24.1	104	11.5 ¹⁰⁶	+5	15.5 ¹⁷²	35	48	19	46	41	72	46	31	
17	75	55.1	+18	24.7	118	41.2 ¹⁰⁷	+5	32.8 ¹⁷³	40	5 54	6 27	6 56	2 42	76	14 43	27	
18	90	55.1	+18	25.4	133	10.8 ¹⁰⁶	+5	50.1 ¹⁷³	45	6 01	6 37	7 08	2 43	81	14 40	22	
19	105	55.1		26.0	147	40.3 ¹⁰⁵	+6	07.3 ¹⁷²	50	09	48	23	45	87	36	16	
20	120	55.1		26.6	162	09.7 ¹⁰⁴		24.5 ¹⁷²	52	12	53	30	45	90	34	14	
21	135	55.1		27.2	176	39.1 ¹⁰⁴		41.7 ¹⁷²	54	15	6 59	38	46	93	32	11	
22	150	55.1		27.8	191	08.5 ¹⁰⁴	+6	58.9 ¹⁷²	56	19	7 05	47	46	97	30	8	
23	165	55.1		28.4	205	37.7 ¹⁰²	+7	16.0 ¹⁷¹	58	23	11	7 57	47	101	28	4	
24	180	55.1	+18	29.0	220	06.9 ¹⁰²	+7	33.1 ¹⁷¹	60 S	6 27	7 19	8 08	2 48	105	14 25	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 37 ^m 1		Mag: -4.2 PMG: 15 ^h 02 ^m		Mag: +0.9 PMG: 8 ^h 33 ^m		Mag: -2.6 PMG: 1 ^h 45 ^m		Mag: +0.4 PMG: 18 ^h 02 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	230	22.5	134	37.5	+25	58.3	333	36.4	-22	09.0
1	245	24.9	149	36.9		58.3	348	39.2		09.0
2	260	27.4	164	36.3		58.2	3	41.9		08.9
3	275	29.9	179	35.7		58.1	18	44.7		08.9
4	290	32.3	194	35.1		58.1	33	47.4		08.9
5	305	34.8	209	34.6	+25	58.0	48	50.1	-22	08.9
6	320	37.3	224	34.0	+25	57.9	63	52.9	-22	08.9
7	335	39.7	239	33.4		57.8	78	55.6		08.8
8	350	42.2	254	32.8		57.8	93	58.4		08.8
9	5	44.6	269	32.3		57.7	109	01.1		08.8
10	20	47.1	284	31.7		57.6	124	03.8		08.8
11	35	49.6	299	31.1	+25	57.5	139	06.6	-22	08.7
12	50	52.0	314	30.5	+25	57.5	154	09.3	-22	08.7
13	65	54.5	329	30.0		57.4	169	12.1		08.7
14	80	57.0	344	29.4		57.3	184	14.8		08.7
15	95	59.4	359	28.8		57.2	199	17.6		08.7
16	111	01.9	14	28.2		57.2	214	20.3		08.6
17	126	04.4	29	27.7	+25	57.1	229	23.0	-22	08.6
18	141	06.8	44	27.1	+25	57.0	244	25.8	-22	08.6
19	156	09.3	59	26.5		56.9	259	28.5		08.6
20	171	11.8	74	26.0		56.8	274	31.3		08.5
21	186	14.2	89	25.4		56.7	289	34.0		08.5
22	201	16.7	104	24.8		56.6	304	36.8		08.5
23	216	19.1	119	24.3		56.6	319	39.5		08.5
24	231	21.6	134	23.7	+25	56.5	334	42.2	-22	08.5
Dif	—		-6		-1		+7		+27	
									0	
									+24	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			Edad: 26 ^d 5 PHE { 4 ^h : 60 ^h 7 12 ^h : 60 ^h 8 20 ^h : 60 ^h 9 SD: 16 ^h 5 PMG: 9 ^h 40 ^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	180	55.1	+18 29.0	220	06.9	+7 33.1	102	60 N	20 29	21 32	** **	2 28 0	17 24 114	
1	195	55.1	29.7	234	36.1	+7 50.2	171	58	15	21 11	22 48	32 5	17 107	
2	210	55.1	30.3	249	05.1	+8 07.2	170	56	20 04	20 54	22 10	36 9	10 103	
3	225	55.1	30.9	263	34.1	24.2	170	54	19 54	40	21 45	40 12	17 04 99	
4	240	55.1	31.5	278	03.1	41.2	170	52	45	27	25	43 15	16 59 95	
5	255	55.1	+18 32.1	292	31.9	+8 58.2	170	50	19 37	20 17	21 09	2 46 18	16 54 92	
6	270	55.1	+18 32.7	307	00.7	+9 15.1	169	45	19 21	19 55	20 38	2 53 23	16 44 85	
7	285	55.1	33.3	321	29.4	31.9	168	40	19 07	38	20 15	2 58 29	35 80	
8	300	55.1	33.9	335	58.1	+9 48.7	168	35	18 56	24	19 58	3 03 33	28 76	
9	315	55.1	34.5	350	26.6	+10 05.5	168	30	45	19 12	43	07 36	21 72	
10	330	55.1	35.1	4	55.1	22.2	167	20	28	18 52	20	15 42	11 65	
11	345	55.1	+18 35.7	19	23.5	+10 38.8	166	10 N	18 14	18 36	19 02	3 21 48	16 01 60	
12	0	55.1	+18 36.3	33	51.9	+10 55.4	166	0	18 00	18 22	18 47	3 27 54	15 52 55	
13	15	55.1	36.9	48	20.1	+11 12.0	166	10 S	17 46	18 08	34	34 58	43 50	
14	30	55.1	37.5	62	48.3	28.5	165	20	32	17 55	22	40 65	34 44	
15	45	55.1	38.2	77	16.3	+11 44.9	164	30	15	41	10	48 71	23 39	
16	60	55.1	38.8	91	44.3	+12 01.3	164	35	17 06	33	18 04	53 74	17 35	
17	75	55.1	+18 39.4	106	12.2	+12 17.6	163	40	16 55	17 24	17 57	3 58 79	15 10 31	
18	90	55.1	+18 40.0	120	40.1	+12 33.9	163	45	16 43	17 14	17 50	4 04 84	15 02 26	
19	105	55.1	40.6	135	07.8	+12 50.0	161	50	27	17 03	42	12 90	14 52 20	
20	120	55.1	41.2	149	35.5	+13 06.1	161	52	20	16 58	39	15 94	48 17	
21	135	55.1	41.8	164	03.0	22.2	161	54	12	52	35	19 97	43 14	
22	150	55.1	42.4	178	30.5	38.1	159	56	16 03	46	31	23 101	38 10	
23	165	55.1	43.0	192	57.9	+13 54.0	159	58	15 53	39	27	28 105	32 5	
24	180	55.1	+18 43.6	207	25.2	+14 09.8	158	60 S	15 42	16 31	17 23	4 33 111	14 25 1	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 33 ^m 2		Mag: -4.2 PMG: 15 ^h 03 ^m		Mag: +0.9 PMG: 8 ^h 32 ^m		Mag: -2.6 PMG: 1 ^h 41 ^m		Mag: +0.4 PMG: 17 ^h 58 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	231	21.6	134	23.7	+25 56.5	231 52.3	-1 51.1	334 42.2	-22 08.5	89 50.6	+16 27.3			
1	246	24.1	149	23.1	56.4	246 53.0	50.3	349 45.0	08.4	104 53.0	27.3			
2	261	26.5	164	22.6	56.3	261 53.7	49.6	4 47.7	08.4	119 55.3	27.2			
3	276	29.0	179	22.0	56.2	276 54.4	48.9	19 50.5	08.4	134 57.7	27.2			
4	291	31.5	194	21.4	56.1	291 55.2	48.1	34 53.2	08.4	150 00.1	27.2			
5	306	33.9	209	20.9	+25 56.0	306 55.9	-1 47.4	49 56.0	-22 08.3	165 02.4	+16 27.1			
6	321	36.4	224	20.3	+25 55.9	321 56.6	-1 46.6	64 58.7	-22 08.3	180 04.8	+16 27.1			
7	336	38.9	239	19.7	55.8	336 57.3	45.9	80 01.5	08.3	195 07.2	27.1			
8	351	41.3	254	19.2	55.7	351 58.0	45.1	95 04.2	08.3	210 09.5	27.0			
9	6	43.8	269	18.6	55.6	6 58.8	44.4	110 07.0	08.3	225 11.9	27.0			
10	21	46.3	284	18.0	55.5	21 59.5	43.6	125 09.7	08.2	240 14.2	26.9			
11	36	48.7	299	17.5	+25 55.4	37 00.2	-1 42.9	140 12.5	-22 08.2	255 16.6	+16 26.9			
12	51	51.2	314	16.9	+25 55.3	52 00.9	-1 42.1	155 15.2	-22 08.2	270 18.9	+16 26.9			
13	66	53.6	329	16.3	55.2	67 01.6	41.4	170 17.9	08.2	285 21.3	26.8			
14	81	56.1	344	15.8	55.1	82 02.3	40.6	185 20.7	08.1	300 23.7	26.8			
15	96	58.6	359	15.2	55.0	97 03.1	39.9	200 23.4	08.1	315 26.0	26.8			
16	112	01.0	14	14.7	54.9	112 03.8	39.1	215 26.2	08.1	330 28.4	26.7			
17	127	03.5	29	14.1	+25 54.8	127 04.5	-1 38.4	230 28.9	-22 08.1	345 30.7	+16 26.7			
18	142	06.0	44	13.5	+25 54.7	142 05.2	-1 37.6	245 31.7	-22 08.1	0 33.1	+16 26.7			
19	157	08.4	59	13.0	54.5	157 05.9	36.9	260 34.4	08.0	15 35.5	26.6			
20	172	10.9	74	12.4	54.4	172 06.7	36.1	275 37.2	08.0	30 37.8	26.6			
21	187	13.4	89	11.9	54.3	187 07.4	35.4	290 39.9	08.0	45 40.2	26.6			
22	202	15.8	104	11.3	54.2	202 08.1	34.6	305 42.7	08.0	60 42.5	26.5			
23	217	18.3	119	10.7	54.1	217 08.8	33.9	320 45.4	07.9	75 44.9	26.5			
24	232	20.7	134	10.2	+25 54.0	232 09.5	-1 33.1	335 48.2	-22 07.9	90 47.2	+16 26.4			
Dif	—		-6		-1	+7		+27		0		+24		0

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: 27 ^d 5 PHE { 4 ^h : 61 ^o 0 12 ^h : 61 ^o 0 20 ^h : 61 ^o 0 PMG: 10 ^h 34 ^m R ^o : 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	55.1	+18	43.6	207	25.2	+14 09.8	60 N	** **	2 20	3 23	2 28	3	19 18	119			
1	195	55.1		44.2	221	52.3	81 25.5 ¹⁵⁷	58	1 04	41	37	37	8	19 04	111			
2	210	55.1		44.8	236	19.5	82 41.2 ¹⁵⁷	56	1 42	2 58	48	45	12	18 53	105			
3	225	55.1		45.4	250	46.5	80 56.7 ¹⁵⁵	54	2 07	3 13	3 58	52	16	43	100			
4	240	55.1		45.9	265	13.4	79 +15 12.2 ¹⁵⁵	52	27	25	4 07	2 58	20	34	96			
5	255	55.1	+18	46.5	279	40.2	78 +15 27.6 ¹⁵⁴	50	2 43	3 35	4 15	3 04	23	18 26	93			
6	270	55.1	+18	47.1	294	06.9	77 +15 42.8 ¹⁵²	45	3 14	3 57	4 32	3 16	29	18 09	86			
7	285	55.1		47.7	308	33.5	76 +15 58.0 ¹⁵²	40	37	4 15	45	27	33	17 55	82			
8	300	55.1		48.3	323	00.1	76 +16 13.1 ¹⁵¹	35	3 55	29	4 57	36	37	44	77			
9	315	55.0		48.9	337	26.5	74 28.1 ¹⁵⁰	30	4 09	4 41	5 07	43	42	33	75			
10	330	55.0		49.5	351	52.8	73 43.0 ¹⁴⁹	20	33	5 00	24	3 57	47	16	69			
11	345	55.0	+18	50.1	6 19.1	73 +16 57.8 ¹⁴⁸	10 N	4 51	5 17	5 39	4 09	53	17 01	64				
12	0	55.0	+18	50.7	20 45.2	71 +17 12.5 ¹⁴⁷	0	5 06	5 31	5 53	4 21	57	16 47	59				
13	15	55.0		51.3	35 11.2	70 27.1 ¹⁴⁶	10 S	19	44	6 07	32	62	33	55				
14	30	55.0		51.9	49 37.2	70 41.5 ¹⁴⁴	20	31	5 58	21	45	67	18	51				
15	45	55.0		52.5	64 03.0	68 +17 55.9 ¹⁴⁴	30	43	6 12	38	4 59	73	16 02	44				
16	60	55.0		53.1	78 28.7	67 +18 10.1 ¹⁴²	35	49	20	47	5 07	77	15 52	41				
17	75	55.0	+18	53.7	92 54.4	67 +18 24.2 ¹⁴¹	40	5 56	6 29	6 58	5 17	81	15 41	37				
18	90	55.0	+18	54.2	107 19.9	65 +18 38.2 ¹⁴⁰	45	6 03	6 39	7 11	5 28	87	15 28	32				
19	105	55.0		54.8	121 45.3	64 +18 52.1 ¹³⁹	50	11	50	26	42	93	12	26				
20	120	55.0		55.4	136 10.7	64 +19 05.9 ¹³⁸	52	14	6 56	33	49	96	15 05	23				
21	135	55.0		56.0	150 35.9	62 19.5 ¹³⁶	54	18	7 02	41	5 56	100	14 57	19				
22	150	54.9		56.6	165 01.0	61 33.0 ¹³⁵	56	22	08	7 50	6 04	105	48	15				
23	165	54.9		57.2	179 26.1	61 46.4 ¹³⁴	58	26	15	8 01	13	111	37	10				
24	180	54.9	+18	57.8	193 51.0	59 +19 59.6 ¹³²	60 S	6 31	7 23	8 12	6 24	117	14 26	3				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 8 ^h 29 ^m 2			Mag: -4.2 PMG: 15 ^h 04 ^m			Mag: +0.9 PMG: 8 ^h 31 ^m			Mag: -2.6 PMG: 1 ^h 36 ^m			Mag: +0.5 PMG: 17 ^h 54 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	232	20.7	134	10.2	+25	54.0	232	09.5	-1	33.1	335	48.2	-22	07.9	90	47.2	+16	26.4
1	247	23.2	149	09.6		53.9	247	10.3		32.4	350	50.9		07.9	105	49.6		26.4
2	262	25.7	164	09.1		53.7	262	11.0		31.6	5	53.7		07.9	120	52.0		26.4
3	277	28.1	179	08.5		53.6	277	11.7		30.9	20	56.4		07.9	135	54.3		26.3
4	292	30.6	194	08.0		53.5	292	12.4		30.1	35	59.2		07.8	150	56.7		26.3
5	307	33.1	209	07.4	+25	53.4	307	13.1	-1	29.4	51	01.9	-22	07.8	165	59.0	+16	26.3
6	322	35.5	224	06.9	+25	53.3	322	13.9	-1	28.6	66	04.7	-22	07.8	181	01.4	+16	26.2
7	337	38.0	239	06.3		53.1	337	14.6		27.9	81	07.4		07.8	196	03.7		26.2
8	352	40.5	254	05.8		53.0	352	15.3		27.1	96	10.2		07.7	211	06.1		26.2
9	7	42.9	269	05.2		52.9	7	16.0		26.4	111	12.9		07.7	226	08.4		26.1
10	22	45.4	284	04.6		52.8	22	16.7		25.6	126	15.7		07.7	241	10.8		26.1
11	37	47.9	299	04.1	+25	52.6	37	17.5	-1	24.9	141	18.4	-22	07.7	256	13.2	+16	26.0
12	52	50.3	314	03.5	+25	52.5	52	18.2	-1	24.1	156	21.2	-22	07.7	271	15.5	+16	26.0
13	67	52.8	329	03.0		52.4	67	18.9		23.4	171	23.9		07.6	286	17.9		26.0
14	82	55.2	344	02.4		52.2	82	19.6		22.7	186	26.7		07.6	301	20.2		25.9
15	97	57.7	359	01.9		52.1	97	20.3		21.9	201	29.4		07.6	316	22.6		25.9
16	113	00.2	14	01.3		52.0	112	21.1		21.2	216	32.2		07.6	331	24.9		25.9
17	128	02.6	29	00.8	+25	51.8	127	21.8	-1	20.4	231	35.0	-22	07.5	346	27.3	+16	25.8
18	143	05.1	44	00.3	+25	51.7	142	22.5	-1	19.7	246	37.7	-22	07.5	1	29.6	+16	25.8
19	158	07.6	58	59.7		51.6	157	23.2		18.9	261	40.5		07.5	16	32.0		25.7
20	173	10.0	73	59.2		51.4	172	23.9		18.2	276	43.2		07.5	31	34.3		25.7
21	188	12.5	88	58.6		51.3	187	24.7		17.4	291	46.0		07.4	46	36.7		25.7
22	203	15.0	103	58.1		51.1	202	25.4		16.7	306	48.7		07.4	61	39.1		25.6
23	218	17.4	118	57.5		51.0	217	26.1		15.9	321	51.5		07.4	76	41.4		25.6
24	233	19.9	133	57.0	+25	50.8	232	26.8	-1	15.2	336	54.2	-22	07.4	91	43.8	+16	25.6
Dif	—			-6	-1		+7	+7			+28		0		+24			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: 28 ^d 5 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8 R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	54.9	+18 57.8	193	51.0	+19 59.6	60 N	20 33	21 38	** **	2 31	6	21 17	115		
1	195	54.9	58.3	208	15.8	+20 12.7	58	20	21 16	23 02	45	14	20 55	105		
2	210	54.9	58.9	222	40.6	25.7	56	20 08	20 58	22 18	2 57	20	38	98		
3	225	54.9	+18 59.5	237	05.2	38.5	54	19 57	44	21 51	3 08	25	23	94		
4	240	54.9	+19 00.1	251	29.7	+20 51.2	52	48	31	30	18	28	20 10	90		
5	255	54.9	+19 00.7	265	54.1	+21 03.8	50	19 40	20 20	21 13	3 27	31	19 59	87		
6	270	54.9	+19 01.3	280	18.5	+21 16.2	45	19 23	19 57	20 41	3 45	37	19 35	83		
7	285	54.9	01.8	294	42.7	28.5	40	19 09	40	18	4 00	42	17	78		
8	300	54.8	02.4	309	06.9	40.6	35	18 57	25	20 00	13	46	19 01	76		
9	315	54.8	03.0	323	30.9	+21 52.5	30	47	19 13	19 45	25	48	18 48	73		
10	330	54.8	03.6	337	54.8	+22 04.3	20	29	18 53	21	4 44	54	25	69		
11	345	54.8	+19 04.2	352	18.7	+22 16.0	10 N	18 14	18 36	19 03	5 02	57	18 05	66		
12	0	54.8	+19 04.7	6	42.5	+22 27.5	0	18 00	18 22	18 47	5 18	61	17 46	63		
13	15	54.8	05.3	21	06.1	38.8	10 S	17 46	18 08	34	34	65	28	60		
14	30	54.8	05.9	35	29.7	+22 50.0	20	31	17 54	21	5 52	69	17 09	56		
15	45	54.8	06.5	49	53.2	+23 01.0	30	14	40	09	6 12	74	16 46	52		
16	60	54.7	07.1	64	16.6	11.9	35	17 05	32	18 02	24	77	33	50		
17	75	54.7	+19 07.6	78	39.9	+23 22.5	40	16 53	17 23	17 55	6 38	81	16 18	47		
18	90	54.7	+19 08.2	93	03.1	+23 33.1	45	16 40	17 12	17 48	6 55	85	16 00	43		
19	105	54.7	08.8	107	26.2	43.4	50	25	17 01	40	7 15	92	15 38	37		
20	120	54.7	09.4	121	49.3	+23 53.6	52	17	16 55	36	25	95	28	34		
21	135	54.7	09.9	136	12.2	+24 03.6	54	09	49	33	36	99	16	30		
22	150	54.7	10.5	150	35.1	13.4	56	16 00	43	29	7 49	104	15 03	25		
23	165	54.6	11.1	164	57.9	23.1	58	15 50	35	24	8 04	110	14 47	19		
24	180	54.6	+19 11.6	179	20.6	+24 32.5	60 S	15 38	16 27	17 19	8 21	121	14 29	9		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 25 ^m 3		Mag: -4.2 PMG: 15 ^h 05 ^m		Mag: +0.9 PMG: 8 ^h 30 ^m		Mag: -2.6 PMG: 1 ^h 32 ^m		Mag: +0.5 PMG: 17 ^h 50 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	233	19.9	133 57.0	+25 50.8	232 26.8	-1 15.2	336 54.2	-22 07.4	91 43.8	+16 25.6
1	248	22.4	148 56.4	50.7	247 27.5	14.4	351 57.0	07.4	106 46.1	25.5
2	263	24.8	163 55.9	50.6	262 28.3	13.7	6 59.7	07.3	121 48.5	25.5
3	278	27.3	178 55.4	50.4	277 29.0	12.9	22 02.5	07.3	136 50.8	25.4
4	293	29.7	193 54.8	50.3	292 29.7	12.2	37 05.3	07.3	151 53.2	25.4
5	308	32.2	208 54.3	+25 50.1	307 30.4	-1 11.4	52 08.0	-22 07.3	166 55.5	+16 25.4
6	323	34.7	223 53.7	+25 50.0	322 31.2	-1 10.7	67 10.8	-22 07.2	181 57.9	+16 25.3
7	338	37.1	238 53.2	49.8	337 31.9	09.9	82 13.5	07.2	197 00.2	25.3
8	353	39.6	253 52.6	49.7	352 32.6	09.2	97 16.3	07.2	212 02.6	25.3
9	8	42.1	268 52.1	49.5	7 33.3	08.4	112 19.0	07.2	227 04.9	25.2
10	23	44.5	283 51.6	49.4	22 34.0	07.7	127 21.8	07.1	242 07.3	25.2
11	38	47.0	298 51.0	+25 49.2	37 34.8	-1 06.9	142 24.5	-22 07.1	257 09.6	+16 25.1
12	53	49.5	313 50.5	+25 49.0	52 35.5	-1 06.2	157 27.3	-22 07.1	272 12.0	+16 25.1
13	68	51.9	328 50.0	48.9	67 36.2	05.4	172 30.1	07.1	287 14.3	25.1
14	83	54.4	343 49.4	48.7	82 36.9	04.7	187 32.8	07.1	302 16.7	25.0
15	98	56.8	358 48.9	48.6	97 37.6	03.9	202 35.6	07.0	317 19.0	25.0
16	113	59.3	13 48.4	48.4	112 38.4	03.2	217 38.3	07.0	332 21.4	25.0
17	129	01.8	28 47.8	+25 48.2	127 39.1	-1 02.4	232 41.1	-22 07.0	347 23.7	+16 24.9
18	144	04.2	43 47.3	+25 48.1	142 39.8	-1 01.7	247 43.8	-22 07.0	2 26.1	+16 24.9
19	159	06.7	58 46.7	47.9	157 40.5	01.0	262 46.6	06.9	17 28.4	24.8
20	174	09.2	73 46.2	47.8	172 41.3	-1 00.2	277 49.4	06.9	32 30.8	24.8
21	189	11.6	88 45.7	47.6	187 42.0	-0 59.5	292 52.1	06.9	47 33.1	24.8
22	204	14.1	103 45.2	47.4	202 42.7	58.7	307 54.9	06.9	62 35.5	24.7
23	219	16.6	118 44.6	47.3	217 43.4	58.0	322 57.6	06.8	77 37.8	24.7
24	234	19.0	133 44.1	+25 47.1	232 44.1	-0 57.2	338 00.4	-22 06.8	92 40.2	+16 24.6
Dif	—	—	-5	-2	+7	+7	+28	0	+24	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 0 ^d 2 SD: 16 ^h 5 PMG: 12 ^h 34 ^m												PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 5 20 ^h : 60 ^m 3 R ^o : 65 ^m
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.6	+19	11.6	179	20.6	+24	32.5	60 N	** **	2 14	3 19	2 37	18	23 12	86	
1	195	54.6		12.2	193	43.3		41.8	58	0 50	36	33	2 59	28	22 40	80	
2	210	54.6		12.8	208	05.9		50.9	56	1 34	2 54	44	3 17	34	22 16	78	
3	225	54.6		13.4	222	28.3	+24	59.9	54	2 02	3 09	3 55	33	38	21 57	75	
4	240	54.6		13.9	236	50.8	+25	08.6	52	22	21	4 04	46	42	40	75	
5	255	54.5	+19	14.5	251	13.1	+25	17.2	50	2 39	3 32	4 12	3 58	44	21 26	74	
6	270	54.5	+19	15.1	265	35.4	+25	25.6	45	3 11	3 55	4 29	4 22	49	20 58	71	
7	285	54.5		15.6	279	57.6		33.7	40	35	4 13	43	42	52	35	71	
8	300	54.5		16.2	294	19.8		41.7	35	3 53	27	4 55	4 59	54	17	69	
9	315	54.5		16.8	308	41.9		49.5	30	4 08	4 39	5 06	5 13	56	20 01	68	
10	330	54.5		17.3	323	03.9	+25	57.2	20	32	5 00	23	38	59	19 34	67	
11	345	54.4	+19	17.9	337	25.9	+26	04.6	10 N	4 50	5 16	5 39	5 59	62	19 11	66	
12	0	54.4	+19	18.5	351	47.9	+26	11.8	0	5 05	5 31	5 53	6 19	64	18 49	65	
13	15	54.4		19.0	6	09.7		18.8	10 S	19	45	6 07	6 39	67	28	63	
14	30	54.4		19.6	20	31.6		25.7	20	32	5 58	22	7 01	69	18 05	62	
15	45	54.4		20.2	34	53.3		32.3	30	44	6 13	39	26	72	17 38	60	
16	60	54.3		20.7	49	15.1		38.7	35	51	21	6 49	41	74	23	58	
17	75	54.3	+19	21.3	63	36.8	+26	45.0	40	5 58	6 31	7 00	7 59	75	17 05	57	
18	90	54.3	+19	21.8	77	58.4	+26	51.0	45	6 05	6 41	7 13	8 20	78	16 43	55	
19	105	54.3		22.4	92	20.1	+26	56.8	50	13	53	29	8 47	81	15	52	
20	120	54.3		23.0	106	41.6	+27	02.5	52	17	6 58	36	9 00	84	16 02	50	
21	135	54.2		23.5	121	03.2		07.9	54	21	7 04	45	15	86	15 46	48	
22	150	54.2		24.1	135	24.7		13.1	56	25	11	7 54	33	90	28	44	
23	165	54.2		24.6	149	46.2		18.2	58	29	18	8 05	9 54	96	15 06	39	
24	180	54.2	+19	25.2	164	07.7	+27	23.0	60 S	6 34	7 27	8 17	10 22	107	14 38	28	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 21 ^m 4		Mag: -4.2 PMG: 15 ^h 06 ^m		Mag: +0.9 PMG: 8 ^h 29 ^m		Mag: -2.6 PMG: 1 ^h 28 ^m		Mag: +0.5 PMG: 17 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	234	19.0	133	44.1	+25	47.1	232	44.1	-0	57.2
1	249	21.5	148	43.6		46.9	247	44.9		56.5
2	264	24.0	163	43.0		46.7	262	45.6		55.7
3	279	26.4	178	42.5		46.6	277	46.3		55.0
4	294	28.9	193	42.0		46.4	292	47.0		54.2
5	309	31.3	208	41.4	+25	46.2	307	47.8	-0	53.5
6	324	33.8	223	40.9	+25	46.0	322	48.5	-0	52.7
7	339	36.3	238	40.4		45.9	337	49.2		52.0
8	354	38.7	253	39.9		45.7	352	49.9		51.2
9	9	41.2	268	39.3		45.5	7	50.7		50.5
10	24	43.7	283	38.8		45.3	22	51.4		49.7
11	39	46.1	298	38.3	+25	45.1	37	52.1	-0	49.0
12	54	48.6	313	37.8	+25	45.0	52	52.8	-0	48.2
13	69	51.1	328	37.2		44.8	67	53.5		47.5
14	84	53.5	343	36.7		44.6	82	54.3		46.7
15	99	56.0	358	36.2		44.4	97	55.0		46.0
16	114	58.5	13	35.7		44.2	112	55.7		45.2
17	130	00.9	28	35.2	+25	44.0	127	56.4	-0	44.5
18	145	03.4	43	34.6	+25	43.8	142	57.2	-0	43.8
19	160	05.8	58	34.1		43.7	157	57.9		43.0
20	175	08.3	73	33.6		43.5	172	58.6		42.3
21	190	10.8	88	33.1		43.3	187	59.3		41.5
22	205	13.2	103	32.6		43.1	203	00.1		40.8
23	220	15.7	118	32.0		42.9	218	00.8		40.0
24	235	18.2	133	31.5	+25	42.7	233	01.5	-0	39.3
Dif	—		-5	-2			+7	+7		
									+28	0
										+23
										0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8			Edad: 1 ^d 2	PHE { 4 ^h : 60'1 12 ^h : 59'8 20 ^h : 59'6	PMG: 13 ^h 39 ^m			R°: 63 ^m	Civil		Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec								hG ☾	Dif						Dec	Dif
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	h m	m			
0	180	54.2	+19	25.2	164	07.7	+27 23.0	60 N	20 38	21 45	** **	2 55	49	** **	**			
1	195	54.2		25.8	178	29.2	27.6 46	58	24	21	23 20	3 27	55	** **	**			
2	210	54.1		26.3	192	50.6	32.0 44	56	11	21 03	22 26	3 51	57	23 34	49			
3	225	54.1		26.9	207	12.1	36.2 42	54	20 01	20 48	21 57	4 11	58	23 12	52			
4	240	54.1		27.4	221	33.5	40.2 40	52	19 51	34	35	28 59		22 55	53			
5	255	54.1	+19	28.0	235	54.9	+27 44.0 38	50	19 43	20 23	21 17	4 42	60	22 40	54			
6	270	54.0	+19	28.5	250	16.3	+27 47.6 36	45	19 25	20 00	20 44	5 11	61	22 09	57			
7	285	54.0		29.1	264	37.7	51.0 34	40	19 11	19 42	20	34	62	21 46	58			
8	300	54.0		29.6	278	59.1	54.2 32	35	18 59	27	20 01	5 53	62	26	59			
9	315	54.0		30.2	293	20.5	57.1 29	30	48	19 14	19 46	6 09	63	21 09	60			
10	330	53.9		30.8	307	41.9	+27 59.9 28	20	30	18 54	22	6 37	63	20 41	61			
11	345	53.9	+19	31.3	322	03.4	+28 02.5 26	10 N	18 14	18 37	19 03	7 01	63	20 17	62			
12	0	53.9	+19	31.9	336	24.8	+28 04.8 23	0	18 00	18 22	18 47	7 23	64	19 54	63			
13	15	53.9		32.4	350	46.3	07.0 22	10 S	17 46	18 08	34	7 46	64	31	64			
14	30	53.9		33.0	5	07.8	08.9 19	20	30	17 54	21	8 10	64	19 07	64			
15	45	53.8		33.5	19	29.3	10.6 16	30	13	39	08	38	64	18 38	65			
16	60	53.8		34.1	33	50.8	12.2 13	35	17 03	30	18 01	8 55	64	21	66			
17	75	53.8	+19	34.6	48	12.3	+28 13.5 13	40	16 52	17 21	17 54	9 14	64	18 02	66			
18	90	53.7	+19	35.2	62	33.9	+28 14.6 11	45	16 38	17 11	17 46	9 38	64	17 38	66			
19	105	53.7		35.7	76	55.6	15.5 9	50	22	16 58	38	10 08	64	17 07	68			
20	120	53.7		36.2	91	17.2	16.2 7	52	15	53	34	24	63	16 52	68			
21	135	53.7		36.8	105	38.9	16.8 6	54	16 06	46	30	10 41	64	34	68			
22	150	53.6		37.3	120	00.7	17.1 3	56	15 57	40	26	11 03	63	16 12	70			
23	165	53.6		37.9	134	22.5	17.2 1	58	46	32	21	11 30	62	15 45	71			
24	180	53.6	+19	38.4	148	44.3	+28 17.1 1	60 S	15 33	16 24	17 16	12 09	60	15 06	73			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 17 ^m 4		Mag: -4.3 PMG: 15 ^h 06 ^m			Mag: +0.9 PMG: 8 ^h 27 ^m			Mag: -2.6 PMG: 1 ^h 23 ^m			Mag: +0.5 PMG: 17 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	235	18.2	133	31.5	+25	42.7	233	01.5	-0	39.3	339	06.7	-22	06.2	93	36.5	+16	23.7
1	250	20.6	148	31.0		42.5	248	02.2		38.5	354	09.4		06.2	108	38.8		23.7
2	265	23.1	163	30.5		42.3	263	03.0		37.8	9	12.2		06.2	123	41.2		23.6
3	280	25.6	178	30.0		42.1	278	03.7		37.0	24	15.0		06.2	138	43.5		23.6
4	295	28.0	193	29.5		41.9	293	04.4		36.3	39	17.7		06.2	153	45.9		23.5
5	310	30.5	208	29.0	+25	41.7	308	05.1	-0	35.5	54	20.5	-22	06.1	168	48.2	+16	23.5
6	325	33.0	223	28.4	+25	41.5	323	05.8	-0	34.8	69	23.3	-22	06.1	183	50.6	+16	23.5
7	340	35.4	238	27.9		41.3	338	06.6		34.0	84	26.0		06.1	198	52.9		23.4
8	355	37.9	253	27.4		41.1	353	07.3		33.3	99	28.8		06.1	213	55.3		23.4
9	10	40.3	268	26.9		40.9	8	08.0		32.5	114	31.6		06.0	228	57.6		23.3
10	25	42.8	283	26.4		40.7	23	08.7		31.8	129	34.3		06.0	243	59.9		23.3
11	40	45.3	298	25.9	+25	40.5	38	09.5	-0	31.0	144	37.1	-22	06.0	259	02.3	+16	23.3
12	55	47.7	313	25.4	+25	40.3	53	10.2	-0	30.3	159	39.8	-22	06.0	274	04.6	+16	23.2
13	70	50.2	328	24.9		40.1	68	10.9		29.6	174	42.6		05.9	289	07.0		23.2
14	85	52.7	343	24.4		39.8	83	11.6		28.8	189	45.4		05.9	304	09.3		23.1
15	100	55.1	358	23.9		39.6	98	12.4		28.1	204	48.1		05.9	319	11.7		23.1
16	115	57.6	13	23.4		39.4	113	13.1		27.3	219	50.9		05.9	334	14.0		23.0
17	131	00.1	28	22.9	+25	39.2	128	13.8	-0	26.6	234	53.7	-22	05.8	349	16.3	+16	23.0
18	146	02.5	43	22.3	+25	39.0	143	14.5	-0	25.8	249	56.4	-22	05.8	4	18.7	+16	23.0
19	161	05.0	58	21.8		38.8	158	15.3		25.1	264	59.2		05.8	19	21.0		22.9
20	176	07.5	73	21.3		38.6	173	16.0		24.3	280	02.0		05.8	34	23.4		22.9
21	191	09.9	88	20.8		38.3	188	16.7		23.6	295	04.7		05.7	49	25.7		22.8
22	206	12.4	103	20.3		38.1	203	17.4		22.8	310	07.5		05.7	64	28.1		22.8
23	221	14.8	118	19.8		37.9	218	18.2		22.1	325	10.3		05.7	79	30.4		22.8
24	236	17.3	133	19.3	+25	37.7	233	18.9	-0	21.3	340	13.1	-22	05.7	94	32.7	+16	22.7
Dif	—		-5	-2			+7	+7			+28		0		+23			0

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 2 ^d 2	PHE {	4 ^h : 59 ^h /3 12 ^h : 59 ^h /0 20 ^h : 58 ^h /7				Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 5															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.6	+19 38.4	148	44.3	+28 17.1	3	60 N	** **	2 08	3 14	3 44	91	0 38	38	
1	195	53.6	39.0	163	06.2	29 16.8	3	58	0 32	31	29	4 22	83	0 00	46	
2	210	53.5	39.5	177	28.1	29 16.3	5	56	1 26	2 49	41	4 48	80	** **	**	
3	225	53.5	40.1	191	50.2	31 15.6	7	54	1 56	3 05	3 52	5 09	77	** **	**	
4	240	53.5	40.6	206	12.2	30 14.7	9	52	2 18	18	4 01	27 75		23 48	35	
5	255	53.5	+19 41.1	220	34.4	+28 13.6	11	50	2 35	3 29	4 09	5 42	73	23 34	38	
6	270	53.4	+19 41.7	234	56.6	+28 12.3	13	45	3 08	3 53	4 27	6 12	71	23 06	42	
7	285	53.4	42.2	249	18.8	32 10.8	15	40	32	4 11	42	36 69		22 44	45	
8	300	53.4	42.8	263	41.2	34 09.2	16	35	3 51	26	4 54	6 55	68	25 48		
9	315	53.3	43.3	278	03.6	34 07.3	19	30	4 07	38	5 05	7 12	66	22 09	50	
10	330	53.3	43.8	292	26.1	35 05.3	20	20	31	4 59	23	7 40	64	21 42	53	
11	345	53.3	+19 44.4	306	48.6	+28 03.0	23	10 N	4 50	5 16	5 38	8 04	63	21 19	55	
12	0	53.2	+19 44.9	321	11.3	+28 00.6	24	0	5 05	5 31	5 53	8 27	61	20 57	58	
13	15	53.2	45.5	335	34.0	+27 57.9	27	10 S	19	45	6 07	8 50	59	35 60		
14	30	53.2	46.0	349	56.8	38 55.1	28	20	32	5 59	23	9 14	57	20 11	63	
15	45	53.2	46.5	4	19.8	40 52.1	30	30	45	6 14	40	42 55		19 43	67	
16	60	53.1	47.1	18	42.8	40 49.0	31	35	52	23	6 50	9 59	53	27 68		
17	75	53.1	+19 47.6	33	05.9	+27 45.6	34	40	5 59	6 32	7 02	10 18	52	19 08	70	
18	90	53.1	+19 48.1	47	29.0	+27 42.1	35	45	6 07	6 43	7 15	10 42	49	18 44	74	
19	105	53.0	48.7	61	52.3	43 38.3	38	50	16	6 55	31	11 12	45	15 77		
20	120	53.0	49.2	76	15.7	44 34.4	39	52	19	7 01	39	27 43		18 00	80	
21	135	53.0	49.7	90	39.2	45 30.4	40	54	23	07	48	11 45	40	17 42	84	
22	150	52.9	50.3	105	02.8	46 26.1	43	56	28	14	7 57	12 06	36	17 22	87	
23	165	52.9	50.8	119	26.5	47 21.7	44	58	32	22	8 08	12 32	31	16 56	93	
24	180	52.9	+19 51.3	133	50.3	+27 17.1	46	60 S	6 38	7 30	8 21	13 09	20	16 19	104	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 13 ^m 5		Mag: -4.3 PMG: 15 ^h 07 ^m		Mag: +0.9 PMG: 8 ^h 26 ^m		Mag: -2.6 PMG: 1 ^h 19 ^m		Mag: +0.5 PMG: 17 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	17.3	133 19.3	+25 37.7	233 18.9	-0 21.3	340 13.1	-22 05.7	94 32.7	+16 22.7
1	251	19.8	148 18.8	37.5	248 19.6	20.6	355 15.8	05.6	109 35.1	22.7
2	266	22.2	163 18.3	37.2	263 20.3	19.8	10 18.6	05.6	124 37.4	22.6
3	281	24.7	178 17.8	37.0	278 21.1	19.1	25 21.4	05.6	139 39.8	22.6
4	296	27.2	193 17.3	36.8	293 21.8	18.4	40 24.1	05.6	154 42.1	22.6
5	311	29.6	208 16.8	+25 36.6	308 22.5	-0 17.6	55 26.9	-22 05.5	169 44.4	+16 22.5
6	326	32.1	223 16.3	+25 36.3	323 23.3	-0 16.9	70 29.7	-22 05.5	184 46.8	+16 22.5
7	341	34.6	238 15.8	36.1	338 24.0	16.1	85 32.4	05.5	199 49.1	22.4
8	356	37.0	253 15.3	35.9	353 24.7	15.4	100 35.2	05.5	214 51.5	22.4
9	11	39.5	268 14.9	35.6	8 25.4	14.6	115 38.0	05.4	229 53.8	22.3
10	26	42.0	283 14.4	35.4	23 26.2	13.9	130 40.7	05.4	244 56.1	22.3
11	41	44.4	298 13.9	+25 35.2	38 26.9	-0 13.1	145 43.5	-22 05.4	259 58.5	+16 22.3
12	56	46.9	313 13.4	+25 34.9	53 27.6	-0 12.4	160 46.3	-22 05.4	275 00.8	+16 22.2
13	71	49.3	328 12.9	34.7	68 28.3	11.6	175 49.0	05.3	290 03.2	22.2
14	86	51.8	343 12.4	34.5	83 29.1	10.9	190 51.8	05.3	305 05.5	22.1
15	101	54.3	358 11.9	34.2	98 29.8	10.1	205 54.6	05.3	320 07.8	22.1
16	116	56.7	13 11.4	34.0	113 30.5	09.4	220 57.4	05.3	335 10.2	22.1
17	131	59.2	28 10.9	+25 33.8	128 31.2	-0 08.6	236 00.1	-22 05.2	350 12.5	+16 22.0
18	147	01.7	43 10.4	+25 33.5	143 32.0	-0 07.9	251 02.9	-22 05.2	5 14.8	+16 22.0
19	162	04.1	58 09.9	33.3	158 32.7	07.2	266 05.7	05.2	20 17.2	21.9
20	177	06.6	73 09.4	33.0	173 33.4	06.4	281 08.4	05.2	35 19.5	21.9
21	192	09.1	88 09.0	32.8	188 34.1	05.7	296 11.2	05.2	50 21.9	21.8
22	207	11.5	103 08.5	32.5	203 34.9	04.9	311 14.0	05.1	65 24.2	21.8
23	222	14.0	118 08.0	32.3	218 35.6	04.2	326 16.8	05.1	80 26.5	21.8
24	237	16.5	133 07.5	+25 32.1	233 36.3	-0 03.4	341 19.5	-22 05.1	95 28.9	+16 21.7
Dif	—		-5	-2	+7	+7	+28	0	+23	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8			Edad: 3 ^d 2	PHE {	4 ^h : 58' ⁴ 12 ^h : 58' ¹ 20 ^h : 57' ⁸ R°: 54 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 56 ^m 5																	
	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	52.9	+19 51.3	133	50.3	+27 17.1	48	60 N	20 43	21 51	** **	5 15 105	1 16 13					
1	195	52.8	51.8	148	14.2	12.3	48	58	28	27	** **	5 45 95	0 46 22					
2	210	52.8	52.4	162	38.2	07.4	49	56	15	21 07	22 35	6 08 89	23 28					
3	225	52.8	52.9	177	02.3	+27 02.3	51	54	20 04	20 51	22 03	26 85	0 04 32					
4	240	52.7	53.4	191	26.6	+26 57.0	53	52	19 54	38	21 39	42 82	** **	**				
5	255	52.7	+19 54.0	205	50.9	+26 51.6	54	50	19 46	20 26	21 21	6 55 80	** **	**				
6	270	52.7	+19 54.5	220	15.4	+26 46.0	56	45	19 27	20 02	20 47	7 23 74	23 48 32					
7	285	52.6	55.0	234	40.0	40.2	58	40	13	19 44	23	7 45 71	29 36					
8	300	52.6	55.5	249	04.7	34.3	59	35	19 00	29	20 03	8 03 68	23 13 39					
9	315	52.6	56.1	263	29.5	28.2	61	30	18 49	19 16	19 48	18 66	22 59 41					
10	330	52.5	56.6	277	54.4	22.0	62	20	31	18 55	23	8 44 62	35 46					
11	345	52.5	+19 57.1	292	19.5	+26 15.6	64	10 N	18 15	18 37	19 04	9 07 58	22 14 50					
12	0	52.5	+19 57.6	306	44.7	+26 09.1	65	0	18 00	18 22	18 48	9 28 55	21 55 53					
13	15	52.4	58.2	321	10.0	+26 02.4	63	10 S	17 45	18 08	33	9 49 52	35 57					
14	30	52.4	58.7	335	35.4	+25 55.6	68	20	30	17 53	20	10 11 49	21 14 61					
15	45	52.4	59.2	350	01.0	48.6	70	30	12	38	07	37 45	20 50 64					
16	60	52.3	+19 59.7	4	26.6	41.5	71	35	17 02	29	18 00	10 52 43	35 68					
17	75	52.3	+20 00.2	18	52.5	+25 34.2	73	40	16 50	17 20	17 53	11 10 40	20 18 71					
18	90	52.2	+20 00.8	33	18.4	+25 26.8	74	45	16 36	17 09	17 45	11 31 36	19 58 75					
19	105	52.2	01.3	47	44.4	19.2	76	50	20	16 56	36	11 57 31	32 81					
20	120	52.2	01.8	62	10.6	11.6	76	52	12	50	32	12 10 28	20 83					
21	135	52.1	02.3	76	37.0	+25 03.7	79	54	16 03	44	28	25 25	19 06 86					
22	150	52.1	02.8	91	03.4	+24 55.8	79	56	15 53	37	23	12 42 21	18 49 91					
23	165	52.1	03.4	105	30.0	47.7	81	58	42	29	18	13 03 15	29 97					
24	180	52.0	+20 03.9	119	56.7	+24 39.5	82	60 S	15 29	16 20	17 13	13 29 7	18 03 106					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 09 ^m 6		Mag: -4.3 PMG: 15 ^h 08 ^m			Mag: +0.9 PMG: 8 ^h 25 ^m			Mag: -2.6 PMG: 1 ^h 14 ^m			Mag: +0.5 PMG: 17 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	237	16.5	133	07.5	+25	32.1	233	36.3	-0	03.4	341	19.5	-22	05.1	95	28.9	+16	05.1
1	252	18.9	148	07.0		31.8	248	37.1		02.7	356	22.3		05.1	110	31.2		21.7
2	267	21.4	163	06.5		31.6	263	37.8		01.9	11	25.1		05.0	125	33.5		21.6
3	282	23.8	178	06.1		31.3	278	38.5		01.2	26	27.8		05.0	140	35.9		21.6
4	297	26.3	193	05.6		31.1	293	39.2	-0	00.4	41	30.6		05.0	155	38.2		21.5
5	312	28.8	208	05.1	+25	30.8	308	40.0	+0	00.3	56	33.4	-22	05.0	170	40.6	+16	21.5
6	327	31.2	223	04.6	+25	30.6	323	40.7	+0	01.0	71	36.2	-22	04.9	185	42.9	+16	21.5
7	342	33.7	238	04.1		30.3	338	41.4		01.8	86	38.9		04.9	200	45.2		21.4
8	357	36.2	253	03.6		30.0	353	42.1		02.5	101	41.7		04.9	215	47.6		21.4
9	12	38.6	268	03.2		29.8	8	42.9		03.3	116	44.5		04.9	230	49.9		21.3
10	27	41.1	283	02.7		29.5	23	43.6		04.0	131	47.3		04.8	245	52.2		21.3
11	42	43.6	298	02.2	+25	29.3	38	44.3	+0	04.8	146	50.0	-22	04.8	260	54.6	+16	21.2
12	57	46.0	313	01.7	+25	29.0	53	45.0	+0	05.5	161	52.8	-22	04.8	275	56.9	+16	21.2
13	72	48.5	328	01.3		28.8	68	45.8		06.3	176	55.6		04.8	290	59.2		21.2
14	87	50.9	343	00.8		28.5	83	46.5		07.0	191	58.4		04.7	306	01.6		21.1
15	102	53.4	358	00.3		28.2	98	47.2		07.8	207	01.1		04.7	321	03.9		21.1
16	117	55.9	12	59.8		28.0	113	48.0		08.5	222	03.9		04.7	336	06.2		21.0
17	132	58.3	27	59.4	+25	27.7	128	48.7	+0	09.2	237	06.7	-22	04.7	351	08.6	+16	21.0
18	148	00.8	42	58.9	+25	27.4	143	49.4	+0	10.0	252	09.4	-22	04.6	6	10.9	+16	20.9
19	163	03.3	57	58.4		27.2	158	50.1		10.7	267	12.2		04.6	21	13.2		20.9
20	178	05.7	72	57.9		26.9	173	50.9		11.5	282	15.0		04.6	36	15.6		20.9
21	193	08.2	87	57.5		26.6	188	51.6		12.2	297	17.8		04.5	51	17.9		20.8
22	208	10.7	102	57.0		26.4	203	52.3		13.0	312	20.6		04.5	66	20.2		20.8
23	223	13.1	117	56.5		26.1	218	53.1		13.7	327	23.3		04.5	81	22.6		20.7
24	238	15.6	132	56.1	+25	25.8	233	53.8	+0	14.5	342	26.1	-22	04.5	96	24.9	+16	20.7
Dif	—		-5		-3		+7		+7		+28		0		+23		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 4 ^d 2 PHE { 4 ^h : 57 ⁵ / ₅ 12 ^h : 57 ² / ₂ 20 ^h : 56 ⁹ / ₉ PMG: 16 ^h 36 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.0	+20	03.9	119	56.7	+24	39.5	60 N	** **	2 01	3 10	7 00	101	1 29	5		
1	195	52.0		04.4	134	23.5		31.1	58	** **	26	25	20	95	1 08	12		
2	210	51.9		04.9	148	50.5		22.6	56	1 18	2 45	38	37	90	0 51	16		
3	225	51.9		05.4	163	17.6		14.0	54	1 50	3 01	49	7 51	86	36	2		
4	240	51.9		05.9	177	44.8	+24	05.3	52	2 13	15	3 58	8 04	82	23	24		
5	255	51.8	+20	06.4	192	12.1	+23	56.4	50	2 31	3 26	4 07	8 15	79	0 12	26		
6	270	51.8	+20	07.0	206	39.6	+23	47.5	45	3 06	3 50	4 25	8 37	74	** **	**		
7	285	51.7		07.5	221	07.2		38.4	40	30	4 09	40	8 56	69	** **	**		
8	300	51.7		08.0	235	35.0		29.2	35	3 49	24	4 53	9 11	65	23	52	31	
9	315	51.7		08.5	250	02.9		19.9	30	4 05	37	5 04	24	63	40	35		
10	330	51.6		09.0	264	30.9		10.4	20	30	4 58	22	9 46	58	21	40		
11	345	51.6	+20	09.5	278	59.0	+23	00.9	10 N	4 49	5 16	5 38	10 05	54	23	04	44	
12	0	51.5	+20	10.0	293	27.2	+22	51.2	0	5 05	5 31	5 53	10 23	50	22	48	48	
13	15	51.5		10.5	307	55.6		41.5	10 S	20	5 45	6 08	10 41	47	32	52		
14	30	51.5		11.0	322	24.1		31.6	20	33	6 00	23	11 00	43	22	15	56	
15	45	51.4		11.5	336	52.8		21.6	30	46	16	41	22	38	21	54	62	
16	60	51.4		12.0	351	21.6		11.6	35	5 53	24	6 52	35	35	43	64		
17	75	51.3	+20	12.6	5	50.5	+22	01.4	40	6 01	6 34	7 03	11 50	31	21	29	68	
18	90	51.3	+20	13.1	20	19.5	+21	51.1	45	6 09	6 45	7 17	12 07	27	21	13	72	
19	105	51.3		13.6	34	48.6		40.7	50	18	6 58	34	28	22	20	53	77	
20	120	51.2		14.1	49	17.9		30.2	52	22	7 04	42	38	20	43	81		
21	135	51.2		14.6	63	47.3		19.7	54	26	10	7 51	12 50	16	32	84		
22	150	51.1		15.1	78	16.8	+21	09.0	56	30	17	8 01	13 03	12	20	88		
23	165	51.1		15.6	92	46.5	+20	58.3	58	35	25	12	18	8	20	06	92	
24	180	51.0	+20	16.1	107	16.2	+20	47.4	60 S	6 41	7 34	8 25	13 36	2	19	49	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 05 ^m 6		Mag: -4.3 PMG: 15 ^h 09 ^m		Mag: +0.9 PMG: 8 ^h 24 ^m		Mag: -2.6 PMG: 1 ^h 10 ^m		Mag: +0.5 PMG: 17 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	238	15.6	132	56.1	+25	25.8	233	53.8	+0	14.5	342	26.1	-22	04.5	96	24.9	+16	20.7
1	253	18.1	147	55.6		25.6	248	54.5		15.2	357	28.9		04.4	111	27.2		20.6
2	268	20.5	162	55.1		25.3	263	55.2		16.0	12	31.7		04.4	126	29.6		20.6
3	283	23.0	177	54.7		25.0	278	56.0		16.7	27	34.4		04.4	141	31.9		20.5
4	298	25.4	192	54.2		24.7	293	56.7		17.4	42	37.2		04.4	156	34.2		20.5
5	313	27.9	207	53.7	+25	24.5	308	57.4	+0	18.2	57	40.0	-22	04.3	171	36.6	+16	20.5
6	328	30.4	222	53.3	+25	24.2	323	58.2	+0	18.9	72	42.8	-22	04.3	186	38.9	+16	20.4
7	343	32.8	237	52.8		23.9	338	58.9		19.7	87	45.5		04.3	201	41.2		20.4
8	358	35.3	252	52.3		23.6	353	59.6		20.4	102	48.3		04.3	216	43.6		20.3
9	13	37.8	267	51.9		23.3	9	00.3		21.2	117	51.1		04.2	231	45.9		20.3
10	28	40.2	282	51.4		23.1	24	01.1		21.9	132	53.9		04.2	246	48.2		20.2
11	43	42.7	297	51.0	+25	22.8	39	01.8	+0	22.7	147	56.6	-22	04.2	261	50.6	+16	20.2
12	58	45.2	312	50.5	+25	22.5	54	02.5	+0	23.4	162	59.4	-22	04.2	276	52.9	+16	20.1
13	73	47.6	327	50.0		22.2	69	03.3		24.1	178	02.2		04.1	291	55.2		20.1
14	88	50.1	342	49.6		21.9	84	04.0		24.9	193	05.0		04.1	306	57.6		20.1
15	103	52.6	357	49.1		21.6	99	04.7		25.6	208	07.8		04.1	321	59.9		20.0
16	118	55.0	12	48.7		21.3	114	05.4		26.4	223	10.5		04.1	337	02.2		20.0
17	133	57.5	27	48.2	+25	21.0	129	06.2	+0	27.1	238	13.3	-22	04.0	352	04.6	+16	19.9
18	148	59.9	42	47.8	+25	20.8	144	06.9	+0	27.9	253	16.1	-22	04.0	7	06.9	+16	19.9
19	164	02.4	57	47.3		20.5	159	07.6		28.6	268	18.9		04.0	22	09.2		19.8
20	179	04.9	72	46.9		20.2	174	08.4		29.4	283	21.6		04.0	37	11.5		19.8
21	194	07.3	87	46.4		19.9	189	09.1		30.1	298	24.4		03.9	52	13.9		19.7
22	209	09.8	102	45.9		19.6	204	09.8		30.8	313	27.2		03.9	67	16.2		19.7
23	224	12.3	117	45.5		19.3	219	10.5		31.6	328	30.0		03.9	82	18.5		19.7
24	239	14.7	132	45.0	+25	19.0	234	11.3	+0	32.3	343	32.8	-22	03.9	97	20.9	+16	19.6
Dif	—		-5 -3		+7 +7		+28 0		+23 0									

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna												
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 5 ^d 2 SD: 15 ^h 4 PMG: 17 ^h 25 ^m	PHE { 4 ^h : 56 ^s 6 12 ^h : 56 ^s 3 20 ^h : 56 ^s 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 m	h m m	h m m	h m m												
0	180	51.0	+20	16.1	107	16.2	+20	47.4	60 N	20 47	21 58	** **	8 41 94	1 34 2														
1	195	51.0		16.6	121	46.1 ¹⁰⁹		36.5 ¹⁰⁹	58	32	32	** **	8 55 89	20 6														
2	210	50.9		17.1	136	16.1 ¹¹⁰		25.5 ¹¹⁰	56	19	21 12	22 44	9 07 84	1 07 11														
3	225	50.9		17.6	150	46.3 ¹¹²		14.4 ¹¹¹	54	20 07	20 55	22 09	17 81	0 57 13														
4	240	50.9		18.1	165	16.5 ¹¹²	+20	03.2 ¹¹²	52	19 57	41	21 44	26 78	47 16														
5	255	50.8	+20	18.6	179	46.9 ¹¹⁴	+19	51.9 ¹¹³	50	19 48	20 29	21 25	9 34 75	0 38 19														
6	270	50.8	+20	19.1	194	17.4 ¹¹⁵	+19	40.6 ¹¹³	45	19 30	20 05	20 50	9 51 70	0 20 24														
7	285	50.7		19.6	208	48.0 ¹¹⁶		29.1 ¹¹⁵	40	14	19 46	25	10 05 66	0 05 28														
8	300	50.7		20.1	223	18.7 ¹¹⁷		17.6 ¹¹⁵	35	19 02	30	20 05	16 63	** ** *														
9	315	50.6		20.6	237	49.5 ¹¹⁸	+19	06.0 ¹¹⁶	30	18 51	19 17	19 49	27 59	** ** *														
10	330	50.6		21.1	252	20.5 ¹²⁰	+18	54.4 ¹¹⁶	20	32	18 56	24	44 54	** ** *														
11	345	50.5	+20	21.6	266	51.5 ¹²⁰	+18	42.6 ¹¹⁸	10 N	18 15	18 38	19 04	10 59 50	23 48 39														
12	0	50.5	+20	22.1	281	22.7 ¹²²	+18	30.8 ¹¹⁸	0	18 00	18 22	18 48	11 13 46	23 36 43														
13	15	50.5		22.5	295	54.0 ¹²³		19.0 ¹¹⁸	10 S	17 45	18 08	33	28 41	24 48														
14	30	50.4		23.0	310	25.4 ¹²⁴	+18	07.0 ¹²⁰	20	29	17 53	20	11 43 37	23 11 52														
15	45	50.4		23.5	324	56.9 ¹²⁵	+17	55.0 ¹²⁰	30	11	37	18 06	12 00 32	22 56 57														
16	60	50.3		24.0	339	28.5 ¹²⁶		42.9 ¹²¹	35	17 01	28	17 59	10 28	47 61														
17	75	50.3	+20	24.5	354	00.2 ¹²⁷	+17	30.8 ¹²¹	40	16 49	17 18	17 51	12 21 25	22 37 64														
18	90	50.2	+20	25.0	8	32.0 ¹²⁸	+17	18.6 ¹²²	45	16 35	17 07	17 43	12 34 21	22 25 69														
19	105	50.2		25.5	23	04.0 ¹³⁰	+17	06.3 ¹²³	50	18	16 54	34	50 16	10 74														
20	120	50.1		26.0	37	36.0 ¹³⁰	+16	54.0 ¹²³	52	09	48	30	12 58 13	22 04 76														
21	135	50.1		26.5	52	08.1 ¹³¹		41.6 ¹²⁴	54	16 00	41	26	13 06 11	21 56 79														
22	150	50.0		27.0	66	40.4 ¹³³		29.1 ¹²⁵	56	15 50	34	21	15 8	48 82														
23	165	50.0		27.4	81	12.7 ¹³³		16.6 ¹²⁵	58	39	26	16	26 4	38 86														
24	180	49.9	+20	27.9	95	45.1 ¹³⁴	+16	04.0 ¹²⁶	60 S	15 25	16 17	17 10	13 38 0	21 27 91														
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 8 ^h 01 ^m 7				Mag: -4.3 PMG: 15 ^h 09 ^m				Mag: +0.9 PMG: 8 ^h 23 ^m				Mag: -2.6 PMG: 1 ^h 06 ^m				Mag: +0.5 PMG: 17 ^h 28 ^m											
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	239	14.7	132	45.0	+25	19.0	234	11.3	+0	32.3	343	32.8	-22	03.9	97	20.9	+16	19.6										
1	254	17.2	147	44.6		18.7	249	12.0		33.1	358	35.5		03.8	112	23.2		19.6										
2	269	19.7	162	44.1		18.4	264	12.7		33.8	13	38.3		03.8	127	25.5		19.5										
3	284	22.1	177	43.7		18.1	279	13.5		34.6	28	41.1		03.8	142	27.8		19.5										
4	299	24.6	192	43.2		17.8	294	14.2		35.3	43	43.9		03.8	157	30.2		19.4										
5	314	27.1	207	42.8	+25	17.5	309	14.9	+0	36.1	58	46.7	-22	03.7	172	32.5	+16	19.4										
6	329	29.5	222	42.4	+25	17.2	324	15.6	+0	36.8	73	49.4	-22	03.7	187	34.8	+16	19.3										
7	344	32.0	237	41.9		16.9	339	16.4		37.5	88	52.2		03.7	202	37.2		19.3										
8	359	34.4	252	41.5		16.6	354	17.1		38.3	103	55.0		03.7	217	39.5		19.2										
9	14	36.9	267	41.0		16.3	9	17.8		39.0	118	57.8		03.6	232	41.8		19.2										
10	29	39.4	282	40.6		16.0	24	18.6		39.8	134	00.6		03.6	247	44.1		19.2										
11	44	41.8	297	40.1	+25	15.7	39	19.3	+0	40.5	149	03.3	-22	03.6	262	46.5	+16	19.1										
12	59	44.3	312	39.7	+25	15.4	54	20.0	+0	41.3	164	06.1	-22	03.5	277	48.8	+16	19.1										
13	74	46.8	327	39.3		15.1	69	20.8		42.0	179	08.9		03.5	292	51.1		19.0										
14	89	49.2	342	38.8		14.7	84	21.5		42.7	194	11.7		03.5	307	53.5		19.0										
15	104	51.7	357	38.4		14.4	99	22.2		43.5	209	14.5		03.5	322	55.8		18.9										
16	119	54.2	12	37.9		14.1	114	22.9		44.2	224	17.2		03.4	337	58.1		18.9										
17	134	56.6	27	37.5	+25	13.8	129	23.7	+0	45.0	239	20.0	-22	03.4	353	00.4	+16	18.8										
18	149	59.1	42	37.1	+25	13.5	144	24.4	+0	45.7	254	22.8	-22	03.4	8	02.8	+16	18.8										
19	165	01.6	57	36.6		13.2	159	25.1		46.5	269	25.6		03.4	23	05.1		18.7										
20	180	04.0	72	36.2		12.9	174	25.9		47.2	284	28.4		03.3	38	07.4		18.7										
21	195	06.5	87	35.8		12.5	189	26.6		47.9	299	31.2		03.3	53	09.7		18.7										
22	210	08.9	102	35.3		12.2	204	27.3		48.7	314	33.9		03.3	68	12.1		18.6										
23	225	11.4	117	34.9		11.9	219	28.1		49.4	329	36.7		03.3	83	14.4		18.6										
24	240	13.9	132	34.5	+25	11.6	234	28.8	+0	50.2	344	39.5	-22	03.2	98	16.7	+16	18.5										
Dif	—				-4				-3				+7				+7				+28				0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8			Edad: 6 ^d 2	PHE	$\left\{ \begin{array}{l} 4^h: 55'8 \\ 12^h: 55'6 \\ 20^h: 55'3 \end{array} \right.$											
	PMG: 11 ^h 56 ^m 7																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	49.9	+20 27.9	95	45.1	+16 04.0	60 N	** **	1 55	3 06	10 15	88	1 36	0			
1	195	49.9	28.4	110	17.7 ¹³⁶	+15 51.4 ¹²⁶	58	** **	2 21	21	24	83	26	4			
2	210	49.8	28.9	124	50.3 ¹³⁶	38.7 ¹²⁷	56	1 09	41	34	31	80	18	7			
3	225	49.8	29.4	139	23.0 ¹³⁷	26.0 ¹²⁷	54	1 44	2 58	46	38	77	10	10			
4	240	49.7	29.9	153	55.8 ¹³⁸	13.2 ¹²⁸	52	2 09	3 12	3 56	44	74	1 03	13			
5	255	49.7	+20 30.4	168	28.7 ¹³⁹	+15 00.4 ¹²⁸	50	2 28	3 24	4 05	10 49	72	0 57	15			
6	270	49.6	+20 30.8	183	01.7 ¹⁴⁰	+14 47.5 ¹²⁹	45	3 03	3 48	4 23	11 01	67	0 44	20			
7	285	49.6	31.3	197	34.8 ¹⁴¹	34.6 ¹²⁹	40	28	4 07	39	11 62	33	23	27			
8	300	49.5	31.8	212	08.0 ¹⁴²	21.6 ¹³⁰	35	3 48	23	4 51	19 59	23	27	23			
9	315	49.5	32.3	226	41.3 ¹⁴³	+14 08.6 ¹³⁰	30	4 04	36	5 03	26 56	15	30				
10	330	49.4	32.8	241	14.6 ¹⁴³	+13 55.5 ¹³¹	20	29	4 58	22	38 51	0 01	35				
11	345	49.4	+20 33.3	255	48.1 ¹⁴⁵	+13 42.4 ¹³¹	10 N	4 49	5 15	5 38	11 49	46	** ** *	**			
12	0	49.3	+20 33.7	270	21.6 ¹⁴⁵	+13 29.2 ¹³²	0	5 05	5 31	5 53	11 59	42	** ** *	**			
13	15	49.3	34.2	284	55.2 ¹⁴⁶	16.0 ¹³²	10 S	20	5 46	6 08	12 09	38	** ** *	**			
14	30	49.2	34.7	299	28.9 ¹⁴⁷	+13 02.8 ¹³²	20	34	6 01	24	20 33	** ** *	**				
15	45	49.2	35.2	314	02.6 ¹⁴⁷	+12 49.5 ¹³³	30	47	17	42	32 28	23	53	55			
16	60	49.1	35.6	328	36.5 ¹⁴⁹	36.2 ¹³³	35	5 55	26	6 53	38 26	48	58				
17	75	49.1	+20 36.1	343	10.4 ¹⁴⁹	+12 22.9 ¹³³	40	6 02	6 35	7 05	12 46	22	23	41	62		
18	90	49.0	+20 36.6	357	44.4 ¹⁵⁰	+12 09.5 ¹³⁴	45	6 11	6 47	7 19	12 55	18	23	34	65		
19	105	49.0	37.1	12	18.5 ¹⁵¹	+11 56.1 ¹³⁴	50	20	7 00	37	13 06	14	24	71			
20	120	48.9	37.5	26	52.7 ¹⁵²	42.6 ¹³⁵	52	24	06	45	11 11	20	73				
21	135	48.9	38.0	41	26.9 ¹⁵²	29.1 ¹³⁵	54	28	13	7 54	17 9	15	76				
22	150	48.8	38.5	56	01.2 ¹⁵³	15.6 ¹³⁵	56	33	20	8 04	23 6	10	78				
23	165	48.7	39.0	70	35.5 ¹⁵³	+11 02.0 ¹³⁶	58	38	28	16	30 3	23	04	82			
24	180	48.7	+20 39.4	85	10.0 ¹⁵⁵	+10 48.4 ¹³⁶	60 S	6 44	7 37	8 29	13 38	**	22	58	85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 57 ^m 8		Mag: -4.3 PMG: 15 ^h 10 ^m		Mag: +0.9 PMG: 8 ^h 22 ^m		Mag: -2.6 PMG: 1 ^h 01 ^m		Mag: +0.5 PMG: 17 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	240	13.9	132 34.5	+25 11.6	234 28.8	+0 50.2	344 39.5	-22 03.2	98 16.7	+16 18.5
1	255	16.3	147 34.0	11.3	249 29.5	50.9	359 42.3	03.2	113 19.0	18.5
2	270	18.8	162 33.6	10.9	264 30.3	51.7	14 45.1	03.2	128 21.4	18.4
3	285	21.3	177 33.2	10.6	279 31.0	52.4	29 47.9	03.2	143 23.7	18.4
4	300	23.7	192 32.7	10.3	294 31.7	53.1	44 50.6	03.1	158 26.0	18.3
5	315	26.2	207 32.3	+25 10.0	309 32.4	+0 53.9	59 53.4	-22 03.1	173 28.3	+16 18.3
6	330	28.7	222 31.9	+25 09.6	324 33.2	+0 54.6	74 56.2	-22 03.1	188 30.7	+16 18.2
7	345	31.1	237 31.4	09.3	339 33.9	55.4	89 59.0	03.1	203 33.0	18.2
8	0	33.6	252 31.0	09.0	354 34.6	56.1	105 01.8	03.0	218 35.3	18.1
9	15	36.0	267 30.6	08.6	9 35.4	56.9	120 04.6	03.0	233 37.6	18.1
10	30	38.5	282 30.2	08.3	24 36.1	57.6	135 07.3	03.0	248 40.0	18.1
11	45	41.0	297 29.7	+25 08.0	39 36.8	+0 58.3	150 10.1	-22 02.9	263 42.3	+16 18.0
12	60	43.4	312 29.3	+25 07.7	54 37.6	+0 59.1	165 12.9	-22 02.9	278 44.6	+16 18.0
13	75	45.9	327 28.9	07.3	69 38.3	+0 59.8	180 15.7	02.9	293 46.9	17.9
14	90	48.4	342 28.5	07.0	84 39.0	+1 00.6	195 18.5	02.9	308 49.3	17.9
15	105	50.8	357 28.1	06.7	99 39.8	01.3	210 21.3	02.8	323 51.6	17.8
16	120	53.3	12 27.6	06.3	114 40.5	02.1	225 24.0	02.8	338 53.9	17.8
17	135	55.8	27 27.2	+25 06.0	129 41.2	+1 02.8	240 26.8	-22 02.8	353 56.2	+16 17.7
18	150	58.2	42 26.8	+25 05.6	144 41.9	+1 03.5	255 29.6	-22 02.8	8 58.6	+16 17.7
19	166	00.7	57 26.4	05.3	159 42.7	04.3	270 32.4	02.7	24 00.9	17.6
20	181	03.2	72 26.0	05.0	174 43.4	05.0	285 35.2	02.7	39 03.2	17.6
21	196	05.6	87 25.6	04.6	189 44.1	05.8	300 38.0	02.7	54 05.5	17.5
22	211	08.1	102 25.1	04.3	204 44.9	06.5	315 40.8	02.7	69 07.8	17.5
23	226	10.5	117 24.7	03.9	219 45.6	07.2	330 43.5	02.6	84 10.2	17.4
24	241	13.0	132 24.3	+25 03.6	234 46.3	+1 08.0	345 46.3	-22 02.6	99 12.5	+16 17.4
Dif	—		-4	-3	+7	+7	+28	0	+23	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 7 ^d 2	PHE {	4 ^h : 55 ^m 1 12 ^h : 55 ^m 0 20 ^h : 54 ^m 8								
	PMG: 11 ^h 56 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	48.7	+20 39.4	85	10.0	+10 48.4	60 N	20 51	22 05	** **	11 43 83	1 36 **		
1	195	48.6	39.9	99	44.5 ¹⁵⁵	34.8 ¹³⁶	58	35	21 37	** **	47 80	30 2		
2	210	48.6	40.4	114	19.1 ¹⁵⁶	21.2 ¹³⁶	56	22	21 16	22 53	51 77	25 5		
3	225	48.5	40.9	128	53.7 ¹⁵⁶	+10 07.5 ¹³⁷	54	10	20 59	22 15	55 74	20 8		
4	240	48.5	41.3	143	28.4 ¹⁵⁷	+9 53.8 ¹³⁷	52	20 00	45	21 49	11 58 72	16 10		
5	255	48.4	+20 41.8	158	03.2 ¹⁵⁸	+9 40.1 ¹³⁷	50	19 51	20 32	21 29	12 01 69	1 12 12		
6	270	48.4	+20 42.3	172	38.0 ¹⁵⁸	+9 26.3 ¹³⁸	45	19 32	20 07	20 53	12 08 64	1 04 17		
7	285	48.3	42.7	187	12.9 ¹⁵⁹	+9 12.6 ¹³⁷	40	16	19 48	27	13 61	0 56 21		
8	300	48.3	43.2	201	47.8 ¹⁵⁹	+8 58.8 ¹³⁸	35	19 03	32	20 07	18 57	50 25		
9	315	48.2	43.7	216	22.8 ¹⁶⁰	45.0 ¹³⁸	30	18 52	19 18	19 51	22 54	45 27		
10	330	48.1	44.1	230	57.9 ¹⁶¹	31.1 ¹³⁹	20	32	18 56	25	29 49	36 32		
11	345	48.1	+20 44.6	245	33.0 ¹⁶¹	+8 17.3 ¹³⁸	10 N	18 16	18 38	19 05	12 35 44	0 27 37		
12	0	48.0	+20 45.1	260	08.1 ¹⁶¹	+8 03.4 ¹³⁹	0	18 00	18 23	18 48	12 41 40	0 19 41		
13	15	48.0	45.5	274	43.3 ¹⁶²	+7 49.5 ¹³⁹	10 S	17 45	18 07	33	47 35	12 45		
14	30	47.9	46.0	289	18.6 ¹⁶³	35.6 ¹³⁹	20	29	17 52	19	12 53 31	0 03 50		
15	45	47.9	46.5	303	53.9 ¹⁶³	21.6 ¹⁴⁰	30	10	36	18 05	13 00 26	** ** *		
16	60	47.8	46.9	318	29.3 ¹⁶⁴	+7 07.7 ¹³⁹	35	17 00	27	17 58	04 23	** ** *		
17	75	47.7	+20 47.4	333	04.7 ¹⁶⁴	+6 53.7 ¹⁴⁰	40	16 47	17 17	17 50	13 08 20	** ** *		
18	90	47.7	+20 47.8	347	40.2 ¹⁶⁵	+6 39.7 ¹⁴⁰	45	16 33	17 06	17 42	13 13 17	** ** *		
19	105	47.6	48.3	2	15.7 ¹⁶⁵	25.7 ¹⁴⁰	50	15	16 52	32	20 11	** ** *		
20	120	47.6	48.8	16	51.2 ¹⁶⁵	+6 11.7 ¹⁴⁰	52	16 07	46	28	22 10	** ** *		
21	135	47.5	49.2	31	26.8 ¹⁶⁶	+5 57.7 ¹⁴⁰	54	15 58	39	24	26 7	** ** *		
22	150	47.5	49.7	46	02.4 ¹⁶⁶	43.6 ¹⁴¹	56	48	32	19	29 5	** ** *		
23	165	47.4	50.1	60	38.1 ¹⁶⁷	29.6 ¹⁴⁰	58	36	23	13	33 2	** ** *		
24	180	47.3	+20 50.6	75	13.8 ¹⁶⁷	+5 15.5 ¹⁴¹	60 S	15 22	16 14	17 08	13 37 **	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG		Mag: -4.3		Mag: +0.9		Mag: -2.6		Mag: +0.5				
	7 ^h 53 ^m 8		PMG: 15 ^h 11 ^m		PMG: 8 ^h 21 ^m		PMG: 0 ^h 57 ^m		PMG: 17 ^h 20 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	241	13.0	132	24.3	+25 03.6	234	46.3	+1 08.0	345	46.3	-22 02.6		
1	256	15.5	147	23.9	03.2	249	47.1	08.7	0	49.1	02.6		
2	271	17.9	162	23.5	02.9	264	47.8	09.5	15	51.9	02.5		
3	286	20.4	177	23.1	02.5	279	48.5	10.2	30	54.7	02.5		
4	301	22.9	192	22.7	02.2	294	49.3	11.0	45	57.5	02.5		
5	316	25.3	207	22.3	+25 01.8	309	50.0	+1 11.7	61	00.3	-22 02.5		
6	331	27.8	222	21.9	+25 01.5	324	50.7	+1 12.4	76	03.0	-22 02.4		
7	346	30.3	237	21.4	01.1	339	51.5	13.2	91	05.8	02.4		
8	1	32.7	252	21.0	00.8	354	52.2	13.9	106	08.6	02.4		
9	16	35.2	267	20.6	00.4	9	52.9	14.7	121	11.4	02.4		
10	31	37.7	282	20.2	+25 00.1	24	53.7	15.4	136	14.2	02.3		
11	46	40.1	297	19.8	+24 59.7	39	54.4	+1 16.1	151	17.0	-22 02.3		
12	61	42.6	312	19.4	+24 59.4	54	55.1	+1 16.9	166	19.8	-22 02.3		
13	76	45.0	327	19.0	59.0	69	55.9	17.6	181	22.6	02.3		
14	91	47.5	342	18.6	58.7	84	56.6	18.4	196	25.3	02.2		
15	106	50.0	357	18.2	58.3	99	57.3	19.1	211	28.1	02.2		
16	121	52.4	12	17.8	57.9	114	58.0	19.8	226	30.9	02.2		
17	136	54.9	27	17.4	+24 57.6	129	58.8	+1 20.6	241	33.7	-22 02.1		
18	151	57.4	42	17.0	+24 57.2	144	59.5	+1 21.3	256	36.5	-22 02.1		
19	166	59.8	57	16.6	56.8	160	00.2	22.1	271	39.3	02.1		
20	182	02.3	72	16.2	56.5	175	01.0	22.8	286	42.1	02.1		
21	197	04.8	87	15.8	56.1	190	01.7	23.6	301	44.9	02.0		
22	212	07.2	102	15.4	55.8	205	02.4	24.3	316	47.6	02.0		
23	227	09.7	117	15.0	55.4	220	03.2	25.0	331	50.4	02.0		
24	242	12.1	132	14.6	+24 55.0	235	03.9	+1 25.8	346	53.2	-22 02.0		
Dif	—		-4	-4		+7	+7		+28	0		+23	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9			Edad: 8 ^d 2	PHE { 4 ^h : 54 ^h 6 12 ^h : 54 ^h 5 20 ^h : 54 ^h 4 R°: 39 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	47.3	+20 50.6	75	13.8	+5 15.5		60 N	** **	1 49	3 02	13 06	81	1 35	**	
1	195	47.3		89	49.6 ¹⁶⁸	+5 01.5 ¹⁴⁰		58	** **	2 16	18	07 78		32	2	
2	210	47.2		104	25.4 ¹⁶⁸	+4 47.4 ¹⁴¹		56	1 00	37	31	08 75		30	5	
3	225	47.2		119	01.2 ¹⁶⁸		33.3 ¹⁴¹	54	1 39	2 54	43	09 72		28		
4	240	47.1		133	37.0 ¹⁶⁸		19.2 ¹⁴¹	52	2 04	3 09	3 53	10 70		26	9	
5	255	47.0	+20 52.9	148	12.9 ¹⁶⁹	+4 05.1 ¹⁴¹		50	2 24	3 21	4 02	13 10	68	1 24	12	
6	270	47.0	+20 53.3	162	48.8 ¹⁶⁹	+3 51.0 ¹⁴¹		45	3 00	3 46	4 22	13 12	63	1 21	15	
7	285	46.9		177	24.8 ¹⁷⁰		36.9 ¹⁴¹	40	26	4 06	37	14 59		17	20	
8	300	46.9		192	00.7 ¹⁶⁹		22.8 ¹⁴¹	35	3 46	22	4 50	15 56		15	22	
9	315	46.8		206	36.7 ¹⁷⁰	+3 08.6 ¹⁴²		30	4 03	35	5 02	16 53		12	26	
10	330	46.7		221	12.8 ¹⁷¹	+2 54.5 ¹⁴¹		20	29	4 57	21	18 47		08	30	
11	345	46.7	+20 55.6	235	48.8 ¹⁷⁰	+2 40.4 ¹⁴¹		10 N	4 49	5 15	5 38	13 19	44	1 04	35	
12	0	46.6	+20 56.0	250	24.9 ¹⁷¹	+2 26.3 ¹⁴¹		0	5 05	5 31	5 53	13 21	39	1 00	40	
13	15	46.5		265	01.0 ¹⁷¹	+2 12.1 ¹⁴²		10 S	20	5 46	6 09	22 35		0 57	43	
14	30	46.5		279	37.1 ¹⁷¹	+1 58.0 ¹⁴¹		20	34	6 01	25	24 30		53	48	
15	45	46.4		294	13.2 ¹⁷¹		43.9 ¹⁴¹	30	48	18	44	26 25		48	53	
16	60	46.4		308	49.4 ¹⁷²		29.7 ¹⁴²	35	5 56	27	6 54	27 23		46	56	
17	75	46.3	+20 58.3	323	25.6 ¹⁷²	+1 15.6 ¹⁴¹		40	6 04	6 37	7 07	13 28	20	0 43	59	
18	90	46.2	+20 58.7	338	01.8 ¹⁷²	+1 01.5 ¹⁴¹		45	6 12	6 49	7 21	13 30	15	0 39	64	
19	105	46.2		352	38.0 ¹⁷²	+0 47.3 ¹⁴²		50	22	7 02	39	31 11		35	68	
20	120	46.1	+20 59.6	7	14.2 ¹⁷²		33.2 ¹⁴¹	52	26	08	47	32 9		33	71	
21	135	46.0	+21 00.1	21	50.4 ¹⁷²		19.1 ¹⁴¹	54	31	15	7 57	33 7		31	73	
22	150	46.0		36	26.7 ¹⁷³	+0 05.0 ¹⁴¹		56	36	23	8 07	34 4		28	76	
23	165	45.9		51	02.9 ¹⁷²	-0 09.1 ¹⁴¹		58	41	31	19	35 2		26	79	
24	180	45.9	+21 01.4	65	39.2 ¹⁷³	-0 23.2 ¹⁴¹		60 S	6 47	7 41	8 33	13 36	**	0 23	82	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 49 ^m 9			Mag: -4.3 PMG: 15 ^h 11 ^m			Mag: +0.9 PMG: 8 ^h 19 ^m			Mag: -2.6 PMG: 0 ^h 52 ^m			Mag: +0.5 PMG: 17 ^h 17 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	242	12.1	132 14.6	+24 55.0	235 03.9	+1 25.8	346 53.2	-22 02.0	100 08.2	+16 16.2						
1	257	14.6	147 14.3	54.6	250 04.6	26.5	1 56.0	01.9	115 10.5	16.2						
2	272	17.1	162 13.9	54.3	265 05.4	27.3	16 58.8	01.9	130 12.8	16.1						
3	287	19.5	177 13.5	53.9	280 06.1	28.0	32 01.6	01.9	145 15.1	16.1						
4	302	22.0	192 13.1	53.5	295 06.8	28.7	47 04.4	01.8	160 17.4	16.0						
5	317	24.5	207 12.7	+24 53.2	310 07.6	+1 29.5	62 07.2	-22 01.8	175 19.8	+16 16.0						
6	332	26.9	222 12.3	+24 52.8	325 08.3	+1 30.2	77 10.0	-22 01.8	190 22.1	+16 15.9						
7	347	29.4	237 11.9	52.4	340 09.0	31.0	92 12.7	01.8	205 24.4	15.9						
8	2 31.9	252 11.5	52.0	355 09.8	31.7	107 15.5	01.7	220 26.7	15.9							
9	17 34.3	267 11.1	51.7	10 10.5	32.4	122 18.3	01.7	235 29.0	15.8							
10	32 36.8	282 10.8	51.3	25 11.2	33.2	137 21.1	01.7	250 31.3	15.8							
11	47 39.3	297 10.4	+24 50.9	40 12.0	+1 33.9	152 23.9	-22 01.7	265 33.7	+16 15.7							
12	62 41.7	312 10.0	+24 50.5	55 12.7	+1 34.6	167 26.7	-22 01.6	280 36.0	+16 15.7							
13	77 44.2	327 09.6	50.1	70 13.4	35.4	182 29.5	01.6	295 38.3	15.6							
14	92 46.6	342 09.2	49.8	85 14.2	36.1	197 32.3	01.6	310 40.6	15.6							
15	107 49.1	357 08.8	49.4	100 14.9	36.9	212 35.1	01.6	325 42.9	15.5							
16	122 51.6	12 08.5	49.0	115 15.6	37.6	227 37.9	01.5	340 45.2	15.5							
17	137 54.0	27 08.1	+24 48.6	130 16.4	+1 38.3	242 40.6	-22 01.5	355 47.6	+16 15.4							
18	152 56.5	42 07.7	+24 48.2	145 17.1	+1 39.1	257 43.4	-22 01.5	10 49.9	+16 15.4							
19	167 59.0	57 07.3	47.8	160 17.8	39.8	272 46.2	01.4	25 52.2	15.3							
20	183 01.4	72 07.0	47.4	175 18.6	40.6	287 49.0	01.4	40 54.5	15.3							
21	198 03.9	87 06.6	47.1	190 19.3	41.3	302 51.8	01.4	55 56.8	15.2							
22	213 06.4	102 06.2	46.7	205 20.0	42.0	317 54.6	01.4	70 59.1	15.2							
23	228 08.8	117 05.8	46.3	220 20.8	42.8	332 57.4	01.3	86 01.4	15.1							
24	243 11.3	132 05.5	+24 45.9	235 21.5	+1 43.5	348 00.2	-22 01.3	101 03.8	+16 15.1							
Dif	—	-4	-4	+7	+7	+28	0	+23	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 0			Edad: 9 ^d 2 SD: 14'8 PMG: 20 ^h 09 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 40 ^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	h m
0	180	45.9	+21 01.4	65	39.2	-0	23.2	60 N	20 55	22 11	** **	14 27 82	1 34 **			
1	195	45.8		80	15.5 ¹⁷³		37.3 ¹⁴¹	58	39	21 42	** **	25 79	34 2			
2	210	45.7		94	51.8 ¹⁷³	-0	51.4 ¹⁴¹	56	25	20	23 04	23 76	35 4			
3	225	45.7		109	28.0 ¹⁷²	-1	05.5 ¹⁴¹	54	13	21 03	22 21	21 73	35			
4	240	45.6		124	04.3 ¹⁷³		19.5 ¹⁴⁰	52	20 03	20 48	21 53	20 70	35 10			
5	255	45.5	+21 03.6	138	40.6 ¹⁷³	-1	33.6 ¹⁴¹	50	19 53	20 35	21 33	14 18 68	1 36 11			
6	270	45.5	+21 04.0	153	16.9 ¹⁷³	-1	47.7 ¹⁴¹	45	19 34	20 09	20 56	14 15 64	1 36 16			
7	285	45.4		167	53.2 ¹⁷³	-2	01.7 ¹⁴⁰	40	18	19 49	29	13 59	37 19			
8	300	45.3		182	29.5 ¹⁷³		15.7 ¹⁴⁰	35	19 04	33	20 09	11 56	37 23			
9	315	45.3		197	05.8 ¹⁷³		29.7 ¹⁴⁰	30	18 53	19 20	19 52	09 53	38 25			
10	330	45.2		211	42.1 ¹⁷³		43.7 ¹⁴⁰	20	33	18 57	26	05 48	38 31			
11	345	45.1	+21 06.2	226	18.4 ¹⁷³	-2	57.7 ¹⁴⁰	10 N	18 16	18 39	19 06	14 03 43	1 39 35			
12	0	45.1	+21 06.6	240	54.7 ¹⁷³	-3	11.7 ¹⁴⁰	0	18 01	18 23	18 49	14 00 39	1 40 39			
13	15	45.0		255	31.0 ¹⁷³		25.7 ¹⁴⁰	10 S	17 45	18 07	33	13 57 35	40 43			
14	30	44.9		270	07.3 ¹⁷³		39.6 ¹³⁹	20	28	17 52	19	54 31	41 47			
15	45	44.9		284	43.5 ¹⁷²	-3	53.6 ¹⁴⁰	30	17 10	35	18 05	51 26	41 53			
16	60	44.8		299	19.8 ¹⁷³	-4	07.5 ¹³⁹	35	16 59	26	17 57	50 23	42 56			
17	75	44.7	+21 08.8	313	56.0 ¹⁷²	-4	21.4 ¹³⁹	40	16 46	17 16	17 49	13 48 19	1 42 59			
18	90	44.7	+21 09.2	328	32.3 ¹⁷³	-4	35.2 ¹³⁸	45	16 31	17 04	17 41	13 45 16	1 43 63			
19	105	44.6		343	08.5 ¹⁷²	-4	49.1 ¹³⁹	50	13	16 50	31	42 12	43 68			
20	120	44.5		357	44.7 ¹⁷²	-5	02.9 ¹³⁸	52	16 05	44	26	41 10	44 70			
21	135	44.5		12	20.9 ¹⁷²		16.8 ¹³⁹	54	15 56	37	22	40 7	44 72			
22	150	44.4		26	57.1 ¹⁷²		30.6 ¹³⁸	56	45	29	17	38 5	44 75			
23	165	44.3		41	33.2 ¹⁷¹		44.3 ¹³⁷	58	33	21	11	37 2	45 78			
24	180	44.3	+21 11.8	56	09.4 ¹⁷²	-5	58.1 ¹³⁸	60 S	15 18	16 11	17 05	13 35 **	1 45 81			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 46 ^m 0			Mag: -4.3 PMG: 15 ^h 12 ^m			Mag: +0.9 PMG: 8 ^h 18 ^m			Mag: -2.6 PMG: 0 ^h 48 ^m			Mag: +0.5 PMG: 17 ^h 13 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♏	Dec					
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	
0	243	11.3	132 05.5	+24 45.9	235 21.5	+1 43.5	348 00.2	-22 01.3	101 03.8	+16 15.1						
1	258	13.7	147 05.1	45.5	250 22.2	44.3	3 03.0	01.3	116 06.1	15.0						
2	273	16.2	162 04.7	45.1	265 23.0	45.0	18 05.8	01.2	131 08.4	15.0						
3	288	18.7	177 04.3	44.7	280 23.7	45.7	33 08.6	01.2	146 10.7	14.9						
4	303	21.1	192 04.0	44.3	295 24.4	46.5	48 11.4	01.2	161 13.0	14.9						
5	318	23.6	207 03.6	+24 43.9	310 25.2	+1 47.2	63 14.1	-22 01.2	176 15.3	+16 14.8						
6	333	26.1	222 03.2	+24 43.5	325 25.9	+1 48.0	78 16.9	-22 01.1	191 17.6	+16 14.8						
7	348	28.5	237 02.9	43.1	340 26.6	48.7	93 19.7	01.1	206 20.0	14.7						
8	3 31.0	252 02.5	42.7	355 27.4	49.4	108 22.5	01.1	221 22.3	14.7							
9	18 33.5	267 02.1	42.3	10 28.1	50.2	123 25.3	01.1	236 24.6	14.6							
10	33 35.9	282 01.8	41.9	25 28.8	50.9	138 28.1	01.0	251 26.9	14.6							
11	48 38.4	297 01.4	+24 41.5	40 29.6	+1 51.6	153 30.9	-22 01.0	266 29.2	+16 14.5							
12	63 40.9	312 01.1	+24 41.1	55 30.3	+1 52.4	168 33.7	-22 01.0	281 31.5	+16 14.5							
13	78 43.3	327 00.7	40.7	70 31.0	53.1	183 36.5	00.9	296 33.8	14.4							
14	93 45.8	342 00.3	40.3	85 31.8	53.9	198 39.3	00.9	311 36.1	14.4							
15	108 48.2	357 00.0	39.9	100 32.5	54.6	213 42.1	00.9	326 38.5	14.3							
16	123 50.7	11 59.6	39.5	115 33.2	55.3	228 44.9	00.9	341 40.8	14.3							
17	138 53.2	26 59.3	+24 39.1	130 34.0	+1 56.1	243 47.7	-22 00.8	356 43.1	+16 14.2							
18	153 55.6	41 58.9	+24 38.7	145 34.7	+1 56.8	258 50.4	-22 00.8	11 45.4	+16 14.2							
19	168 58.1	56 58.5	38.3	160 35.5	57.5	273 53.2	00.8	26 47.7	14.1							
20	184 00.6	71 58.2	37.9	175 36.2	58.3	288 56.0	00.8	41 50.0	14.1							
21	199 03.0	86 57.8	37.5	190 36.9	59.0	303 58.8	00.7	56 52.3	14.0							
22	214 05.5	101 57.5	37.0	205 37.7	+1 59.8	319 01.6	00.7	71 54.6	14.0							
23	229 08.0	116 57.1	36.6	220 38.4	+2 00.5	334 04.4	00.7	86 57.0	13.9							
24	244 10.4	131 56.8	+24 36.2	235 39.1	+2 01.2	349 07.2	-22 00.6	101 59.3	+16 13.9							
Dif	—	-4	-4	+7	+7	+28	0	+23	-1							

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1				Edad: 10 ^d 2 PHE { SD: 14 ^h 7 PMG: 20 ^h 49 ^m R°: 41 ^m 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1														
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	44.3	+21	11.8	56	09.4	-5	58.1	60 N	** **	1 42	2 58	15 49	85	1 33	**			
1	195	44.2		12.2	70	45.5 ¹⁷¹	-6	11.8 ¹³⁷	58	** **	2 12	3 15	44	80	36	3			
2	210	44.1		12.7	85	21.6 ¹⁷¹		25.5 ¹³⁷	56	0 49	33	29	39	77	39	6			
3	225	44.0		13.1	99	57.7 ¹⁷¹		39.2 ¹³⁷	54	1 33	2 51	41	34	75	42	8			
4	240	44.0		13.5	114	33.8 ¹⁷¹	-6	52.9 ¹³⁷	52	2 00	3 06	3 51	30	72	45	10			
5	255	43.9	+21	13.9	129	09.8 ¹⁷⁰	-7	06.5 ¹³⁶	50	2 21	3 19	4 00	15 26	70	1 47	12			
6	270	43.8	+21	14.4	143	45.8 ¹⁷⁰	-7	20.1 ¹³⁶	45	2 58	3 44	4 20	15 19	64	1 52	17			
7	285	43.8		14.8	158	21.8 ¹⁷⁰		33.7 ¹³⁶	40	3 25	4 04	36	12	61	1 56	21			
8	300	43.7		15.2	172	57.8 ¹⁷⁰	-7	47.3 ¹³⁶	35	3 45	21	4 49	07	57	2 00	24			
9	315	43.6		15.6	187	33.7 ¹⁶⁹	-8	00.8 ¹³⁵	30	4 02	34	5 01	15 02	54	03	27			
10	330	43.6		16.0	202	09.6 ¹⁶⁹		14.3 ¹³⁵	20	28	4 57	21	14 53	49	09	31			
11	345	43.5	+21	16.5	216	45.5 ¹⁶⁹	-8	27.8 ¹³⁵	10 N	4 48	5 15	5 38	14 46	45	2 14	36			
12	0	43.4	+21	16.9	231	21.4 ¹⁶⁹	-8	41.2 ¹³⁴	0	5 06	5 31	5 54	14 39	41	2 19	40			
13	15	43.3		17.3	245	57.2 ¹⁶⁸	-8	54.6 ¹³⁴	10 S	21	5 47	6 09	32	37	23	44			
14	30	43.3		17.7	260	33.0 ¹⁶⁸	-9	08.0 ¹³⁴	20	35	6 02	26	25	33	28	49			
15	45	43.2		18.1	275	08.7 ¹⁶⁷		21.3 ¹³³	30	49	19	45	17	28	34	54			
16	60	43.1		18.6	289	44.4 ¹⁶⁷		34.7 ¹³⁴	35	5 57	28	6 56	13	24	38	56			
17	75	43.1	+21	19.0	304	20.1 ¹⁶⁷	-9	47.9 ¹³²	40	6 05	6 39	7 08	14 07	22	2 41	60			
18	90	43.0	+21	19.4	318	55.7 ¹⁶⁶	-10	01.2 ¹³³	45	6 14	6 50	7 23	14 01	18	2 46	64			
19	105	42.9		19.8	333	31.3 ¹⁶⁶		14.4 ¹³²	50	24	7 04	41	13 54	13	51	69			
20	120	42.8		20.2	348	06.9 ¹⁶⁶		27.5 ¹³¹	52	28	11	50	51	11	54	70			
21	135	42.8		20.6	2	42.4 ¹⁶⁵		40.7 ¹³²	54	33	18	7 59	47	9	56	74			
22	150	42.7		21.0	17	17.9 ¹⁶⁵	-10	53.8 ¹³¹	56	38	25	8 10	43	6	2 59	76			
23	165	42.6		21.5	31	53.4 ¹⁶⁵	-11	06.8 ¹³⁰	58	44	34	23	39	3	3 03	79			
24	180	42.5	+21	21.9	46	28.8 ¹⁶⁴	-11	19.8 ¹³⁰	60 S	6 50	7 44	8 37	13 34	**	3 06	83			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 42 ^m 0			Mag: -4.3 PMG: 15 ^h 13 ^m			Mag: +0.9 PMG: 8 ^h 17 ^m			Mag: -2.6 PMG: 0 ^h 43 ^m			Mag: +0.5 PMG: 17 ^h 09 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	244	10.4		131	56.8	+24 36.2	235	39.1	+2 01.2	349	07.2	-22 00.6	101	59.3	+16 13.9				
1	259	12.9		146	56.4	35.8	250	39.9	02.0	4	10.0	00.6	117	01.6	13.8				
2	274	15.4		161	56.1	35.4	265	40.6	02.7	19	12.8	00.6	132	03.9	13.8				
3	289	17.8		176	55.7	35.0	280	41.3	03.4	34	15.6	00.6	147	06.2	13.7				
4	304	20.3		191	55.4	34.5	295	42.1	04.2	49	18.4	00.5	162	08.5	13.6				
5	319	22.7		206	55.0	+24 34.1	310	42.8	+2 04.9	64	21.2	-22 00.5	177	10.8	+16 13.6				
6	334	25.2		221	54.7	+24 33.7	325	43.5	+2 05.7	79	24.0	-22 00.5	192	13.1	+16 13.5				
7	349	27.7		236	54.3	33.3	340	44.3	06.4	94	26.8	00.4	207	15.4	13.5				
8	4	30.1		251	54.0	32.9	355	45.0	07.1	109	29.6	00.4	222	17.7	13.4				
9	19	32.6		266	53.7	32.4	10	45.7	07.9	124	32.4	00.4	237	20.1	13.4				
10	34	35.1		281	53.3	32.0	25	46.5	08.6	139	35.2	00.4	252	22.4	13.3				
11	49	37.5		296	53.0	+24 31.6	40	47.2	+2 09.3	154	37.9	-22 00.3	267	24.7	+16 13.3				
12	64	40.0		311	52.6	+24 31.2	55	47.9	+2 10.1	169	40.7	-22 00.3	282	27.0	+16 13.2				
13	79	42.5		326	52.3	30.7	70	48.7	10.8	184	43.5	00.3	297	29.3	13.2				
14	94	44.9		341	52.0	30.3	85	49.4	11.5	199	46.3	00.2	312	31.6	13.1				
15	109	47.4		356	51.6	29.9	100	50.1	12.3	214	49.1	00.2	327	33.9	13.1				
16	124	49.8		11	51.3	29.5	115	50.9	13.0	229	51.9	00.2	342	36.2	13.0				
17	139	52.3		26	50.9	+24 29.0	130	51.6	+2 13.8	244	54.7	-22 00.2	357	38.5	+16 13.0				
18	154	54.8		41	50.6	+24 28.6	145	52.4	+2 14.5	259	57.5	-22 00.1	12	40.8	+16 12.9				
19	169	57.2		56	50.3	28.2	160	53.1	15.2	275	00.3	00.1	27	43.1	12.9				
20	184	59.7		71	49.9	27.7	175	53.8	16.0	290	03.1	00.1	42	45.5	12.8				
21	200	02.2		86	49.6	27.3	190	54.6	16.7	305	05.9	-22 00.1	57	47.8	12.8				
22	215	04.6		101	49.3	26.9	205	55.3	17.4	320	08.7	-22 00.0	72	50.1	12.7				
23	230	07.1		116	48.9	26.4	220	56.0	18.2	335	11.5	00.0	87	52.4	12.7				
24	245	09.6		131	48.6	+24 26.0	235	56.8	+2 18.9	350	14.3	-22 00.0	102	54.7	+16 12.6				
Dif	—		-3		-4		+7		+7		+28		0		+23		-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2			Edad: 11 ^d 2 PHE { SD: 14 ^h 7 PMG: 21 ^h 30 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	42.5	+21 21.9	46	28.8	-11 19.8		60 N	20 59	22 18	** **	17 14 89		1 32 0
1	195	42.5		61	04.1 ¹⁶³	32.8 ¹³⁰		58	42	21 47	** **	17 04 84		39 3
2	210	42.4		75	39.4 ¹⁶³	45.8 ¹³⁰		56	28	24	23 17	16 56 80		45 7
3	225	42.3		90	14.7 ¹⁶³	-11 58.6 ¹²⁸		54	16	21 06	22 27	49 76		50 10
4	240	42.2		104	49.9 ¹⁶²	-12 11.5 ¹²⁹		52	20 05	20 51	21 58	42 74		55 12
5	255	42.2	+21 23.9	119	25.1 ¹⁶²	-12 24.3 ¹²⁸		50	19 56	20 38	21 37	16 36 71		1 59 15
6	270	42.1	+21 24.3	134	00.2 ¹⁶¹	-12 37.1 ¹²⁸		45	19 36	20 12	20 58	16 23 66		2 09 19
7	285	42.0		148	35.3 ¹⁶¹	-12 49.8 ¹²⁷		40	19	19 51	31	13 62		17 23
8	300	41.9		163	10.3 ¹⁶⁰	-13 02.5 ¹²⁷		35	19 06	35	20 10	16 04 59		24 26
9	315	41.9		177	45.3 ¹⁶⁰	15.1 ¹²⁶		30	18 54	19 21	19 53	15 56 56		30 29
10	330	41.8		192	20.2 ¹⁵⁹	27.7 ¹²⁶		20	34	18 58	27	42 52		40 34
11	345	41.7	+21 26.4	206	55.0 ¹⁵⁸	-13 40.2 ¹²⁵		10 N	18 17	18 40	19 06	15 31 47		2 50 38
12	0	41.6	+21 26.8	221	29.8 ¹⁵⁸	-13 52.7 ¹²⁵		0	18 01	18 23	18 49	15 20 43		2 59 41
13	15	41.6		236	04.6 ¹⁵⁸	-14 05.1 ¹²⁴		10 S	17 45	18 07	34	15 09 40		3 07 46
14	30	41.5		250	39.3 ¹⁵⁷	17.5 ¹²⁴		20	28	17 52	19	14 58 35		17 50
15	45	41.4		265	13.9 ¹⁵⁶	29.8 ¹²³		30	17 09	35	18 04	45 31		28 55
16	60	41.3		279	48.5 ¹⁵⁶	42.1 ¹²³		35	16 58	25	17 57	37 28		34 58
17	75	41.3	+21 28.8	294	23.0 ¹⁵⁵	-14 54.3 ¹²²		40	16 45	17 15	17 48	14 29 25		3 41 61
18	90	41.2	+21 29.2	308	57.5 ¹⁵⁵	-15 06.5 ¹²²		45	16 30	17 03	17 39	14 19 21		3 50 65
19	105	41.1		323	31.9 ¹⁵⁴	18.6 ¹²¹		50	12	16 49	29	07 16		4 00 70
20	120	41.0		338	06.2 ¹⁵³	30.7 ¹²¹		52	16 03	42	25	14 02 14		04 73
21	135	41.0		352	40.5 ¹⁵³	42.7 ¹²⁰		54	15 53	35	20	13 56 11		10 75
22	150	40.9		7	14.7 ¹⁵²	-15 54.6 ¹¹⁹		56	42	27	15	49 8		15 79
23	165	40.8		21	48.9 ¹⁵²	-16 06.5 ¹¹⁹		58	30	19	09	42 5		22 82
24	180	40.7	+21 31.6	36	23.0 ¹⁵¹	-16 18.4 ¹¹⁹		60 S	15 15	16 09	17 03	13 33 1		4 29 87
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 38 ^m 1		Mag: -4.3 PMG: 15 ^h 13 ^m			Mag: +0.9 PMG: 8 ^h 16 ^m			Mag: -2.6 PMG: 0 ^h 39 ^m			Mag: +0.5 PMG: 17 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	245	09.6	131	48.6	+24 26.0	235	56.8	+2 18.9	350	14.3	-22 00.0	102	54.7	+16 12.6
1	260	12.0	146	48.3	25.6	250	57.5	19.6	5	17.1	-21 59.9	117	57.0	12.6
2	275	14.5	161	48.0	25.1	265	58.2	20.4	20	19.9	59.9	132	59.3	12.5
3	290	17.0	176	47.6	24.7	280	59.0	21.1	35	22.7	59.9	148	01.6	12.5
4	305	19.4	191	47.3	24.2	295	59.7	21.8	50	25.5	59.9	163	03.9	12.4
5	320	21.9	206	47.0	+24 23.8	311	00.4	+2 22.6	65	28.3	-21 59.8	178	06.2	+16 12.4
6	335	24.3	221	46.7	+24 23.4	326	01.2	+2 23.3	80	31.1	-21 59.8	193	08.5	+16 12.3
7	350	26.8	236	46.3	22.9	341	01.9	24.1	95	33.9	59.8	208	10.8	12.3
8	5	29.3	251	46.0	22.5	356	02.6	24.8	110	36.7	59.7	223	13.1	12.2
9	20	31.7	266	45.7	22.0	11	03.4	25.5	125	39.5	59.7	238	15.4	12.1
10	35	34.2	281	45.4	21.6	26	04.1	26.3	140	42.3	59.7	253	17.7	12.1
11	50	36.7	296	45.1	+24 21.1	41	04.9	+2 27.0	155	45.0	-21 59.7	268	20.1	+16 12.0
12	65	39.1	311	44.7	+24 20.7	56	05.6	+2 27.7	170	47.8	-21 59.6	283	22.4	+16 12.0
13	80	41.6	326	44.4	20.2	71	06.3	28.5	185	50.6	59.6	298	24.7	11.9
14	95	44.1	341	44.1	19.8	86	07.1	29.2	200	53.4	59.6	313	27.0	11.9
15	110	46.5	356	43.8	19.3	101	07.8	29.9	215	56.2	59.5	328	29.3	11.8
16	125	49.0	11	43.5	18.9	116	08.5	30.7	230	59.0	59.5	343	31.6	11.8
17	140	51.5	26	43.2	+24 18.4	131	09.3	+2 31.4	246	01.8	-21 59.5	358	33.9	+16 11.7
18	155	53.9	41	42.8	+24 18.0	146	10.0	+2 32.1	261	04.6	-21 59.5	13	36.2	+16 11.7
19	170	56.4	56	42.5	17.5	161	10.7	32.9	276	07.4	59.4	28	38.5	11.6
20	185	58.8	71	42.2	17.1	176	11.5	33.6	291	10.2	59.4	43	40.8	11.6
21	201	01.3	86	41.9	16.6	191	12.2	34.3	306	13.0	59.4	58	43.1	11.5
22	216	03.8	101	41.6	16.2	206	12.9	35.1	321	15.8	59.3	73	45.4	11.5
23	231	06.2	116	41.3	15.7	221	13.7	35.8	336	18.6	59.3	88	47.7	11.4
24	246	08.7	131	41.0	+24 15.2	236	14.4	+2 36.5	351	21.4	-21 59.3	103	50.0	+16 11.4
Dif	—		-3	-4		+7	+7		+28	0		+23		-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 3			Edad: 12 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 3 PMG: 22 ^h 14 ^m Rº: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	180	40.7	+21	31.6	36	23.0	-16	18.4	60 N	** **	1 36	2 55	18 43	93	1 32	1
1	195	40.6		32.0	50	57.0 ¹⁵⁰		30.1 ¹¹⁷	58	** **	2 07	3 12	28 87		42	6
2	210	40.6		32.4	65	31.0 ¹⁵⁰		41.8 ¹¹⁷	56	0 38	30	26	16 82		1 52	9
3	225	40.5		32.7	80	04.9 ¹⁴⁹	-16	53.5 ¹¹⁷	54	1 28	2 48	38	18 05	79	2 00	13
4	240	40.4		33.1	94	38.7 ¹⁴⁸	-17	05.1 ¹¹⁶	52	1 56	3 03	49	17 56	75	07	16
5	255	40.3	+21	33.5	109	12.4 ¹⁴⁷	-17	16.6 ¹¹⁵	50	2 18	3 17	3 59	17 47	73	2 14	18
6	270	40.2	+21	33.9	123	46.1 ¹⁴⁷	-17	28.0 ¹¹⁴	45	2 56	3 43	4 19	17 29	68	2 28	23
7	285	40.2		34.3	138	19.7 ¹⁴⁶		39.4 ¹¹⁴	40	3 23	4 03	35	15 63		40	27
8	300	40.1		34.7	152	53.3 ¹⁴⁶	-17	50.7 ¹¹³	35	3 44	20	4 49	17 03	60	50	30
9	315	40.0		35.1	167	26.8 ¹⁴⁵	-18	02.0 ¹¹³	30	4 01	33	5 00	16 52	58	2 59	32
10	330	39.9		35.5	182	00.2 ¹⁴⁴		13.2 ¹¹²	20	28	4 56	20	34 53		3 14	37
11	345	39.8	+21	35.9	196	33.5 ¹⁴³	-18	24.3 ¹¹¹	10 N	4 48	5 15	5 38	16 18	50	3 28	41
12	0	39.8	+21	36.3	211	06.8 ¹⁴³	-18	35.3 ¹¹⁰	0	5 06	5 32	5 54	16 03	47	3 40	45
13	15	39.7		36.7	225	39.9 ¹⁴¹		46.3 ¹¹⁰	10 S	21	5 47	6 10	15 49	43	3 53	49
14	30	39.6		37.0	240	13.1 ¹⁴²	-18	57.2 ¹⁰⁹	20	36	6 03	27	33 39		4 07	52
15	45	39.5		37.4	254	46.1 ¹⁴⁰	-19	08.0 ¹⁰⁸	30	50	20	46	16 35		23	57
16	60	39.4		37.8	269	19.1 ¹⁴⁰		18.8 ¹⁰⁸	35	5 58	29	6 57	15 05	33	32	60
17	75	39.4	+21	38.2	283	51.9 ¹³⁸	-19	29.5 ¹⁰⁷	40	6 06	6 40	7 10	14 54	29	4 42	63
18	90	39.3	+21	38.6	298	24.8 ¹³⁹	-19	40.1 ¹⁰⁶	45	6 15	6 52	7 25	14 40	26	4 55	67
19	105	39.2		39.0	312	57.5 ¹³⁷	-19	50.6 ¹⁰⁵	50	26	7 06	44	23 21		5 10	72
20	120	39.1		39.4	327	30.1 ¹³⁶	-20	01.0 ¹⁰⁴	52	30	13	7 52	16 18		17	75
21	135	39.0		39.7	342	02.7 ¹³⁶		11.4 ¹⁰⁴	54	35	20	8 02	14 07	16	25	78
22	150	38.9		40.1	356	35.2 ¹³⁵		21.7 ¹⁰³	56	40	28	13	13 57	13	34	81
23	165	38.9		40.5	11	07.6 ¹³⁴		31.9 ¹⁰²	58	46	37	26	47 7		44	86
24	180	38.8	+21	40.9	25	40.0 ¹³⁴	-20	42.0 ¹⁰¹	60 S	6 52	7 47	8 41	13 34	3	5 56	91

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 34 ^m 2			Mag: -4.3 PMG: 15 ^h 14 ^m			Mag: +0.9 PMG: 8 ^h 15 ^m			Mag: -2.6 PMG: 0 ^h 34 ^m			Mag: +0.5 PMG: 17 ^h 02 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	246	08.7		131	41.0	+24	15.2	236	14.4	+2	36.5	351	21.4	-21	59.3
1	261	11.2		146	40.7		14.8	251	15.2		37.3	6	24.2		59.3
2	276	13.6		161	40.4		14.3	266	15.9		38.0	21	27.0		59.2
3	291	16.1		176	40.1		13.9	281	16.6		38.7	36	29.8		59.2
4	306	18.6		191	39.8		13.4	296	17.4		39.5	51	32.6		59.2
5	321	21.0		206	39.5	+24	12.9	311	18.1	+2	40.2	66	35.4	-21	59.1
6	336	23.5		221	39.2	+24	12.5	326	18.8	+2	40.9	81	38.2	-21	59.1
7	351	25.9		236	38.9		12.0	341	19.6		41.7	96	41.0		59.1
8	6	28.4		251	38.6		11.5	356	20.3		42.4	111	43.8		59.1
9	21	30.9		266	38.3		11.1	11	21.0		43.1	126	46.6		59.0
10	36	33.3		281	38.0		10.6	26	21.8		43.9	141	49.4		59.0
11	51	35.8		296	37.7	+24	10.1	41	22.5	+2	44.6	156	52.2	-21	59.0
12	66	38.3		311	37.4	+24	09.7	56	23.3	+2	45.3	171	55.0	-21	58.9
13	81	40.7		326	37.1		09.2	71	24.0		46.1	186	57.8		58.9
14	96	43.2		341	36.8		08.7	86	24.7		46.8	202	00.6		58.9
15	111	45.7		356	36.5		08.3	101	25.5		47.5	217	03.4		58.9
16	126	48.1		11	36.2		07.8	116	26.2		48.3	232	06.2		58.8
17	141	50.6		26	35.9	+24	07.3	131	26.9	+2	49.0	247	09.0	-21	58.8
18	156	53.1		41	35.6	+24	06.8	146	27.7	+2	49.7	262	11.8	-21	58.8
19	171	55.5		56	35.3		06.4	161	28.4		50.5	277	14.6		58.7
20	186	58.0		71	35.1		05.9	176	29.1		51.2	292	17.4		58.7
21	202	00.4		86	34.8		05.4	191	29.9		51.9	307	20.2		58.7
22	217	02.9		101	34.5		04.9	206	30.6		52.7	322	23.0		58.7
23	232	05.4		116	34.2		04.5	221	31.4		53.4	337	25.8		58.6
24	247	07.8		131	33.9	+24	04.0	236	32.1	+2	54.1	352	28.6	-21	58.6
Dif	—			-3			-5			+7			+28		
													0		
													+23		
													-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 11 ^h 57 ^m 5			Edad: 13 ^d 2 PHE { SD: 14'8 PMG: 23 ^h 01 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	38.8	+21	40.9	25	40.0	-20	42.0	60 N	21 03	22 24	** **	20 16	95	1 33	4		
1	195	38.7		41.3	40	12.2 ¹³²	-20	52.0 ¹⁰⁰	58	20 46	21 52	** **	19 55	86	1 48	10		
2	210	38.6		41.6	54	44.4 ¹³²	-21	02.0 ¹⁰⁰	56	31	28	23 33	38 81	2 01	15			
3	225	38.5		42.0	69	16.5 ¹³¹		11.9 ⁹⁹	54	19	21 09	22 33	24 76	13	18			
4	240	38.4		42.4	83	48.5 ¹³⁰		21.6 ⁹⁷	52	20 08	20 54	22 02	11 73	23	21			
5	255	38.4	+21	42.8	98	20.5 ¹³⁰	-21	31.3 ⁹⁷	50	19 58	20 40	21 40	19 00	71	2 32	24		
6	270	38.3	+21	43.1	112	52.3 ¹²⁸	-21	40.9 ⁹⁶	45	19 37	20 14	21 01	18 37	66	2 51	29		
7	285	38.2		43.5	127	24.1 ¹²⁸		50.4 ⁹⁵	40	21	19 53	20 33	18 64	3 07	32			
8	300	38.1		43.9	141	55.8 ¹²⁷	-21	59.9 ⁹⁵	35	19 07	36	20 12	18 03	61	20	35		
9	315	38.0		44.3	156	27.4 ¹²⁶	-22	09.2 ⁹³	30	18 55	19 22	19 55	17 50	58	31	38		
10	330	37.9		44.6	170	58.9 ¹²⁵		18.4 ⁹²	20	35	18 59	28	27 55	3 51	42			
11	345	37.9	+21	45.0	185	30.4 ¹²⁵	-22	27.6 ⁹²	10 N	18 17	18 40	19 07	17 08	52	4 09	45		
12	0	37.8	+21	45.4	200	01.7 ¹²³	-22	36.6 ⁹⁰	0	18 01	18 23	18 49	16 50	49	4 25	48		
13	15	37.7		45.8	214	33.0 ¹²³		45.6 ⁹⁰	10 S	17 45	18 08	34	32 47	42	51			
14	30	37.6		46.1	229	04.2 ¹²²	-22	54.4 ⁸⁸	20	28	17 52	19	16 12	45	4 59	55		
15	45	37.5		46.5	243	35.3 ¹²¹	-23	03.2 ⁸⁸	30	17 08	34	18 04	15 51	40	5 20	58		
16	60	37.4		46.9	258	06.4 ¹²¹		11.8 ⁸⁶	35	16 57	25	17 56	38 38	32	60			
17	75	37.3	+21	47.3	272	37.3 ¹¹⁹	-23	20.4 ⁸⁶	40	16 44	17 14	17 48	15 23	36	5 45	64		
18	90	37.3	+21	47.6	287	08.2 ¹¹⁹	-23	28.8 ⁸⁴	45	16 29	17 02	17 38	15 06	32	6 02	67		
19	105	37.2		48.0	301	39.0 ¹¹⁸		37.2 ⁸⁴	50	10	16 47	28	14 44	28	22	72		
20	120	37.1		48.4	316	09.7 ¹¹⁷		45.4 ⁸²	52	16 01	41	23	34 26	32	74			
21	135	37.0		48.7	330	40.3 ¹¹⁶	-23	53.6 ⁸²	54	15 51	33	19	23 22	43	77			
22	150	36.9		49.1	345	10.8 ¹¹⁵	-24	01.6 ⁸⁰	56	40	25	13	14 10	19	6 55	82		
23	165	36.8		49.5	359	41.3 ¹¹⁵		09.5 ⁷⁹	58	27	16	07	13 54	15	7 10	86		
24	180	36.7	+21	49.8	14	11.6 ¹¹³	-24	17.4 ⁷⁹	60 S	15 12	16 06	17 01	13 37	7	7 27	94		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 30 ^m 2		Mag: -4.3 PMG: 15 ^h 14 ^m			Mag: +0.9 PMG: 8 ^h 13 ^m			Mag: -2.6 PMG: 0 ^h 30 ^m			Mag: +0.5 PMG: 16 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	247	07.8	131	33.9	+24	04.0	236	32.1	+2	54.1	352	28.6	-21	58.6	104	45.3	+16	10.1
1	262	10.3	146	33.6		03.5	251	32.8		54.9	7	31.4		58.6	119	47.6		10.0
2	277	12.8	161	33.4		03.0	266	33.6		55.6	22	34.2		58.5	134	49.9		10.0
3	292	15.2	176	33.1		02.5	281	34.3		56.3	37	37.0		58.5	149	52.2		09.9
4	307	17.7	191	32.8		02.1	296	35.0		57.1	52	39.8		58.5	164	54.5		09.8
5	322	20.2	206	32.5	+24	01.6	311	35.8	+2	57.8	67	42.6	-21	58.5	179	56.8	+16	09.8
6	337	22.6	221	32.2	+24	01.1	326	36.5	+2	58.5	82	45.4	-21	58.4	194	59.1	+16	09.7
7	352	25.1	236	32.0		00.6	341	37.3	+2	59.2	97	48.2		58.4	210	01.4		09.7
8	7	27.6	251	31.7	+24	00.1	356	38.0	+3	00.0	112	51.0		58.4	225	03.7		09.6
9	22	30.0	266	31.4	+23	59.6	11	38.7	+3	00.7	127	53.8		58.3	240	06.0		09.6
10	37	32.5	281	31.1		59.1	26	39.5		01.4	142	56.6		58.3	255	08.3		09.5
11	52	34.9	296	30.9	+23	58.6	41	40.2	+3	02.2	157	59.4	-21	58.3	270	10.6	+16	09.5
12	67	37.4	311	30.6	+23	58.2	56	40.9	+3	02.9	173	02.2	-21	58.2	285	12.9	+16	09.4
13	82	39.9	326	30.3		57.7	71	41.7		03.6	188	05.0		58.2	300	15.2		09.3
14	97	42.3	341	30.1		57.2	86	42.4		04.4	203	07.8		58.2	315	17.5		09.3
15	112	44.8	356	29.8		56.7	101	43.2		05.1	218	10.6		58.2	330	19.8		09.2
16	127	47.3	11	29.5		56.2	116	43.9		05.8	233	13.4		58.1	345	22.1		09.2
17	142	49.7	26	29.3	+23	55.7	131	44.6	+3	06.6	248	16.2	-21	58.1	0	24.3	+16	09.1
18	157	52.2	41	29.0	+23	55.2	146	45.4	+3	07.3	263	19.0	-21	58.1	15	26.6	+16	09.1
19	172	54.7	56	28.7		54.7	161	46.1		08.0	278	21.8		58.0	30	28.9		09.0
20	187	57.1	71	28.5		54.2	176	46.8		08.7	293	24.6		58.0	45	31.2		09.0
21	202	59.6	86	28.2		53.7	191	47.6		09.5	308	27.4		58.0	60	33.5		08.9
22	218	02.0	101	27.9		53.2	206	48.3		10.2	323	30.2		58.0	75	35.8		08.9
23	233	04.5	116	27.7		52.7	221	49.1		10.9	338	33.0		57.9	90	38.1		08.8
24	248	07.0	131	27.4	+23	52.2	236	49.8	+3	11.7	353	35.8	-21	57.9	105	40.4	+16	08.7
Dif	—		-3			-5	+7		+7		+28		0		+23		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 15 ^d 2	PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/3	PMG: 11 ^h 57 ^m 8			R°: ***m						
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	34.6	+21 58.4	1	56.7	-26 50.0	48	60 N	21 07	22 31	*** **	23 15 **		1 47 27	m
1	195	34.5	58.7	16	25.2	95 54.8	48	58	20 49	21 56	*** **	22 37 53		2 17 35	
2	210	34.4	59.1	30	53.6	94 -26 59.4	46	56	34	32	*** **	22 10 54		40 39	
3	225	34.3	59.4	45	21.9	93 -27 04.0	46	54	21	21 12	22 39	21 49 54		2 59 42	
4	240	34.2	+21 59.8	59	50.1	92 08.3	43	52	10	20 56	22 06	31 55		3 15 43	
5	255	34.1	+22 00.1	74	18.3	92 -27 12.6	43	50	20 00	20 43	21 43	21 16 55		3 28 45	
6	270	34.0	+22 00.5	88	46.5	92 -27 16.7	41	45	19 39	20 16	21 03	20 46 55		3 56 48	
7	285	33.9	00.8	103	14.5	90 20.7	40	40	22	19 55	20 35	23 55		4 19 48	
8	300	33.8	01.2	117	42.5	90 24.5	38	35	19 08	38	20 14	20 03 55		37 50	
9	315	33.8	01.5	132	10.5	90 28.2	37	30	18 56	23	19 56	19 47 55		4 53 51	
10	330	33.7	01.8	146	38.4	89 31.8	36	20	36	19 00	29	19 19 55		5 20 52	
11	345	33.6	+22 02.2	161	06.2	88 -27 35.2	34	10 N	18 18	18 41	19 07	18 55 55		5 43 53	
12	0	33.5	+22 02.5	175	33.9	87 -27 38.5	33	0	18 01	18 24	18 50	18 32 55		6 05 54	
13	15	33.4	02.9	190	01.7	88 41.6	31	10 S	17 45	18 08	34	18 10 55		26 55	
14	30	33.3	03.2	204	29.3	86 44.6	30	20	28	17 51	19	17 46 55		6 50 55	
15	45	33.2	03.5	218	56.9	86 47.4	28	30	17 08	34	18 04	19 54		7 17 56	
16	60	33.1	03.9	233	24.5	86 50.1	27	35	16 56	24	17 55	17 02 54		33 57	
17	75	33.0	+22 04.2	247	52.0	85 -27 52.7	26	40	16 43	17 13	17 47	16 43 54		7 51 59	
18	90	32.9	+22 04.6	262	19.5	85 -27 55.1	24	45	16 28	17 01	17 38	16 20 53		8 14 59	
19	105	32.8	04.9	276	46.9	84 57.3	22	50	09	16 46	27	15 51 52		43 60	
20	120	32.7	05.2	291	14.2	83 -27 59.4	21	52	16 00	39	22	37 51		8 57 61	
21	135	32.6	05.6	305	41.6	84 -28 01.4	20	54	15 49	32	17	20 51		9 14 62	
22	150	32.5	05.9	320	08.9	83 03.2	18	56	38	24	12	15 00 50		33 64	
23	165	32.4	06.2	334	36.1	82 04.9	17	58	25	14	17 06	14 35 48		9 58 65	
24	180	32.3	+22 06.6	349	03.3	82 -28 06.4	15	60 S	15 09	16 04	16 59	14 02 44		10 31 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 22 ^m 4		Mag: -4.4 PMG: 15 ^h 15 ^m			Mag: +0.8 PMG: 8 ^h 11 ^m			Mag: -2.6 PMG: 0 ^h 21 ^m			Mag: +0.5 PMG: 16 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	249	06.1	131 21.5	+23 39.9	237 07.5	+3 29.2	354 43.1	-21 57.2	106 35.5	+16 07.4					
1	264	08.6	146 21.3	39.4	252 08.2	29.9	9 45.9	57.2	121 37.8	07.3					
2	279	11.0	161 21.0	38.9	267 09.0	30.6	24 48.7	57.1	136 40.1	07.3					
3	294	13.5	176 20.8	38.4	282 09.7	31.3	39 51.5	57.1	151 42.4	07.2					
4	309	16.0	191 20.6	37.9	297 10.4	32.1	54 54.3	57.1	166 44.7	07.2					
5	324	18.4	206 20.3	+23 37.3	312 11.2	+3 32.8	69 57.1	-21 57.0	181 47.0	+16 07.1					
6	339	20.9	221 20.1	+23 36.8	327 11.9	+3 33.5	84 59.9	-21 57.0	196 49.3	+16 07.1					
7	354	23.4	236 19.9	36.3	342 12.7	34.3	100 02.7	57.0	211 51.6	07.0					
8	9	25.8	251 19.7	35.7	357 13.4	35.0	115 05.5	57.0	226 53.9	06.9					
9	24	28.3	266 19.4	35.2	12 14.1	35.7	130 08.3	56.9	241 56.1	06.9					
10	39	30.8	281 19.2	34.7	27 14.9	36.4	145 11.1	56.9	256 58.4	06.8					
11	54	33.2	296 19.0	+23 34.2	42 15.6	+3 37.2	160 13.9	-21 56.9	272 00.7	+16 06.8					
12	69	35.7	311 18.8	+23 33.6	57 16.4	+3 37.9	175 16.7	-21 56.8	287 03.0	+16 06.7					
13	84	38.2	326 18.5	33.1	72 17.1	38.6	190 19.5	56.8	302 05.3	06.7					
14	99	40.6	341 18.3	32.6	87 17.8	39.3	205 22.3	56.8	317 07.6	06.6					
15	114	43.1	356 18.1	32.0	102 18.6	40.1	220 25.1	56.7	332 09.9	06.5					
16	129	45.5	11 17.9	31.5	117 19.3	40.8	235 27.9	56.7	347 12.2	06.5					
17	144	48.0	26 17.7	+23 31.0	132 20.0	+3 41.5	250 30.7	-21 56.7	2 14.5	+16 06.4					
18	159	50.5	41 17.4	+23 30.4	147 20.8	+3 42.2	265 33.5	-21 56.7	17 16.8	+16 06.4					
19	174	52.9	56 17.2	29.9	162 21.5	43.0	280 36.3	56.6	32 19.1	06.3					
20	189	55.4	71 17.0	29.4	177 22.3	43.7	295 39.1	56.6	47 21.4	06.3					
21	204	57.9	86 16.8	28.8	192 23.0	44.4	310 41.9	56.6	62 23.6	06.2					
22	220	00.3	101 16.6	28.3	207 23.7	45.1	325 44.7	56.5	77 25.9	06.1					
23	235	02.8	116 16.4	27.7	222 24.5	45.9	340 47.5	56.5	92 28.2	06.1					
24	250	05.3	131 16.2	+23 27.2	237 25.2	+3 46.6	355 50.3	-21 56.5	107 30.5	+16 06.0					
Dif	—		-2		-5	+7	+7	+28	0		+23		-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 2 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 8						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 9			SD: 15 ^h 1 PMG: 0 ^h 45 ^m R°: 55 ^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	m	m	m
0	180	32.3	+22 06.6	349	03.3		-28 06.4		60 N	** **	1 24	2 48	0 02	5	2 14	63
1	195	32.2	06.9	3	30.5	82	07.8	14	58	** **	1 59	3 06	23 30	31	2 52	62
2	210	32.1	07.2	17	57.6	81	09.0	12	56	** **	2 24	21	23 04	35	3 19	61
3	225	32.1	07.6	32	24.7	81	10.0	10	54	1 17	43	34	22 43	39	41	59
4	240	32.0	07.9	46	51.7	80	11.0	10	52	1 49	2 59	45	26	41	3 58	59
5	255	31.9	+22 08.2	61	18.8	81	-28 11.7	7	50	2 12	3 13	3 55	22 11	42	4 13	59
6	270	31.8	+22 08.5	75	45.8	80	-28 12.3	6	45	2 52	3 40	4 16	21 41	46	4 44	58
7	285	31.7	08.9	90	12.8	80	12.8	5	40	3 20	4 01	33	21 18	47	5 07	58
8	300	31.6	09.2	104	39.7	79	13.1	3	35	42	18	47	20 58	49	27	57
9	315	31.5	09.5	119	06.6	79	13.2	1	30	3 59	32	4 59	42	50	5 44	57
10	330	31.4	09.9	133	33.5	79	13.2	0	20	4 27	4 56	5 20	20 14	52	6 12	56
11	345	31.3	+22 10.2	148	00.4	79	-28 13.1	1	10 N	4 48	5 15	5 38	19 50	53	6 36	56
12	0	31.2	+22 10.5	162	27.2	78	-28 12.8	3	0	5 06	5 32	5 54	19 27	55	6 59	55
13	15	31.1	10.8	176	54.1	79	12.3	5	10 S	22	5 48	6 11	19 05	56	7 21	55
14	30	31.0	11.2	191	20.9	78	11.7	6	20	37	6 04	28	18 41	57	7 45	54
15	45	30.9	11.5	205	47.7	78	10.9	8	30	5 52	22	6 48	18 13	59	8 13	53
16	60	30.8	11.8	220	14.5	78	10.0	9	35	6 00	32	7 00	17 56	61	30	52
17	75	30.7	+22 12.1	234	41.3	78	-28 08.9	11	40	6 09	6 43	7 13	17 37	61	8 50	51
18	90	30.6	+22 12.4	249	08.1	78	-28 07.7	12	45	6 18	6 55	7 28	17 13	63	9 13	50
19	105	30.5	12.8	263	34.8	77	06.3	14	50	29	7 10	48	16 43	66	43	49
20	120	30.4	13.1	278	01.6	78	04.7	16	52	34	17	7 57	28	67	9 58	48
21	135	30.3	13.4	292	28.3	77	03.0	17	54	39	24	8 07	16 11	68	10 16	46
22	150	30.2	13.7	306	55.1	78	-28 01.2	18	56	45	33	18	15 50	70	10 37	44
23	165	30.1	14.0	321	21.8	77	-27 59.1	21	58	51	42	32	15 23	74	11 03	41
24	180	30.0	+22 14.4	335	48.6	78	-27 57.0	21	60 S	6 57	7 52	8 47	14 46	81	11 40	35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 18 ^m 4		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +0.8 PMG: 8 ^h 10 ^m		Mag: -2.6 PMG: 0 ^h 17 ^m		Mag: +0.5 PMG: 16 ^h 47 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	250	05.3	131	16.2	+23 27.2	237	25.2	+3 46.6	355	50.3	-21 56.5				
1	265	07.7	146	16.0	26.7	252	26.0	47.3	10	53.1	56.5				
2	280	10.2	161	15.8	26.1	267	26.7	48.0	25	55.9	56.4				
3	295	12.7	176	15.5	25.6	282	27.4	48.8	40	58.7	56.4				
4	310	15.1	191	15.3	25.0	297	28.2	49.5	56	01.6	56.4				
5	325	17.6	206	15.1	+23 24.5	312	28.9	+3 50.2	71	04.4	-21 56.3				
6	340	20.0	221	14.9	+23 23.9	327	29.6	+3 51.0	86	07.2	-21 56.3				
7	355	22.5	236	14.7	23.4	342	30.4	51.7	101	10.0	56.3				
8	10	25.0	251	14.5	22.8	357	31.1	52.4	116	12.8	56.2				
9	25	27.4	266	14.3	22.3	12	31.9	53.1	131	15.6	56.2				
10	40	29.9	281	14.1	21.7	27	32.6	53.9	146	18.4	56.2				
11	55	32.4	296	13.9	+23 21.2	42	33.3	+3 54.6	161	21.2	-21 56.2				
12	70	34.8	311	13.7	+23 20.6	57	34.1	+3 55.3	176	24.0	-21 56.1				
13	85	37.3	326	13.5	20.1	72	34.8	56.0	191	26.8	56.1				
14	100	39.8	341	13.3	19.5	87	35.6	56.7	206	29.6	56.1				
15	115	42.2	356	13.2	19.0	102	36.3	57.5	221	32.4	56.0				
16	130	44.7	11	13.0	18.4	117	37.0	58.2	236	35.2	56.0				
17	145	47.2	26	12.8	+23 17.9	132	37.8	+3 58.9	251	38.0	-21 56.0				
18	160	49.6	41	12.6	+23 17.3	147	38.5	+3 59.6	266	40.8	-21 55.9				
19	175	52.1	56	12.4	16.8	162	39.3	+4 00.4	281	43.6	55.9				
20	190	54.5	71	12.2	16.2	177	40.0	01.1	296	46.4	55.9				
21	205	57.0	86	12.0	15.7	192	40.7	01.8	311	49.2	55.9				
22	220	59.5	101	11.8	15.1	207	41.5	02.5	326	52.0	55.8				
23	236	01.9	116	11.6	14.5	222	42.2	03.3	341	54.8	55.8				
24	251	04.4	131	11.5	+23 14.0	237	42.9	+4 04.0	356	57.6	-21 55.8				
Dif	—		-2		-6	+7		+7	+28		0	+23		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 2	PHE { 4 ^h : 55 ^m /9 12 ^h : 56 ^m /1 20 ^h : 56 ^m /2										
	PMG: 11 ^h 58 ^m 1					SD: 15 ^h 2			PMG: 1 ^h 40 ^m		R°: 55 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	30.0	+22 14.4	335	48.6	-27 57.0	24	60 N	21 10	22 37	** **	0 07 21	3 17 94		
1	195	29.9	14.7	350	15.3	77 54.6	24	58	20 52	22 01	** **	** ** *	3 54 84		
2	210	29.8	15.0	4	42.1	78 52.2	24	56	37	21 35	** **	23 39 22	4 20 78		
3	225	29.7	15.3	19	08.8	77 49.5	27	54	23	21 15	22 44	22 25	40 76		
4	240	29.6	15.6	33	35.6	78 46.7	28	52	12	20 59	22 10	23 07 28	4 57 73		
5	255	29.5	+22 15.9	48	02.4	78 -27 43.8	29	50	20 02	20 45	21 47	22 53 32	5 12 71		
6	270	29.4	+22 16.2	62	29.1	77 -27 40.7	31	45	19 41	20 17	21 05	22 27 36	5 42 67		
7	285	29.3	16.6	76	55.9	78 37.4	33	40	24	19 56	20 37	22 05 40	6 05 65		
8	300	29.2	16.9	91	22.7	78 34.0	34	35	19 10	39	20 15	21 47 43	24 63		
9	315	29.1	17.2	105	49.6	79 30.4	36	30	18 57	24	19 57	32 45	6 41 61		
10	330	29.0	17.5	120	16.4	78 26.7	37	20	36	19 01	30	21 06 48	7 08 59		
11	345	28.9	+22 17.8	134	43.2	78 -27 22.8	39	10 N	18 18	18 41	19 08	20 43 51	7 32 56		
12	0	28.8	+22 18.1	149	10.1	79 -27 18.8	40	0	18 02	18 24	18 50	20 22 54	7 54 54		
13	15	28.7	18.4	163	37.0	79 14.6	42	10 S	17 45	18 08	34	20 01 57	8 16 52		
14	30	28.6	18.7	178	03.9	79 10.3	43	20	28	17 51	19	19 38 60	8 39 50		
15	45	28.5	19.0	192	30.9	80 05.8	45	30	17 08	34	18 03	19 12 63	9 06 48		
16	60	28.4	19.3	206	57.8	79 -27 01.2	46	35	16 56	24	17 55	18 57 64	22 46		
17	75	28.3	+22 19.6	221	24.8	80 -26 56.4	48	40	16 42	17 13	17 46	18 38 68	9 41 43		
18	90	28.2	+22 20.0	235	51.8	80 -26 51.4	50	45	16 27	17 00	17 37	18 16 71	10 03 41		
19	105	28.1	20.3	250	18.9	81 46.3	51	50	16 07	16 45	26	17 49 75	32 36		
20	120	28.0	20.6	264	45.9	80 41.1	52	52	15 58	38	21	35 77	10 46 34		
21	135	27.9	20.9	279	13.0	81 35.7	54	54	48	31	16	19 81	11 02 31		
22	150	27.8	21.2	293	40.2	82 30.1	56	56	36	22	10	17 00 85	21 28		
23	165	27.7	21.5	308	07.4	82 24.5	56	58	23	13	17 04	16 37 90	11 44 23		
24	180	27.5	+22 21.8	322	34.6	82 -26 18.6	59	60 S	15 07	16 02	16 57	16 07 99	12 15 14		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 14 ^m 5		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +0.8 PMG: 8 ^h 09 ^m		Mag: -2.6 PMG: 0 ^h 12 ^m		Mag: +0.5 PMG: 16 ^h 44 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	251	04.4	131	11.5	+23 14.0	237 42.9	+4 04.0	356 57.6	-21 55.8	108 25.4	+16 04.6
1	266	06.9	146	11.3	13.4	252 43.7	04.7	12 00.4	55.7	123 27.7	04.6
2	281	09.3	161	11.1	12.9	267 44.4	05.4	27 03.2	55.7	138 30.0	04.5
3	296	11.8	176	10.9	12.3	282 45.2	06.2	42 06.1	55.7	153 32.3	04.4
4	311	14.3	191	10.7	11.7	297 45.9	06.9	57 08.9	55.6	168 34.6	04.4
5	326	16.7	206	10.6	+23 11.2	312 46.6	+4 07.6	72 11.7	-21 55.6	183 36.9	+16 04.3
6	341	19.2	221	10.4	+23 10.6	327 47.4	+4 08.3	87 14.5	-21 55.6	198 39.2	+16 04.3
7	356	21.6	236	10.2	10.0	342 48.1	09.0	102 17.3	55.6	213 41.4	04.2
8	11	24.1	251	10.0	09.5	357 48.9	09.8	117 20.1	55.5	228 43.7	04.2
9	26	26.6	266	09.9	08.9	12 49.6	10.5	132 22.9	55.5	243 46.0	04.1
10	41	29.0	281	09.7	08.3	27 50.3	11.2	147 25.7	55.5	258 48.3	04.0
11	56	31.5	296	09.5	+23 07.8	42 51.1	+4 11.9	162 28.5	-21 55.4	273 50.6	+16 04.0
12	71	34.0	311	09.3	+23 07.2	57 51.8	+4 12.7	177 31.3	-21 55.4	288 52.9	+16 03.9
13	86	36.4	326	09.2	06.6	72 52.6	13.4	192 34.1	55.4	303 55.1	03.9
14	101	38.9	341	09.0	06.1	87 53.3	14.1	207 36.9	55.3	318 57.4	03.8
15	116	41.4	356	08.8	05.5	102 54.0	14.8	222 39.7	55.3	333 59.7	03.7
16	131	43.8	11 08.7	04.9	117 54.8	15.5	237 42.5	55.3	349 02.0	03.7	
17	146	46.3	26 08.5	+23 04.3	132 55.5	+4 16.3	252 45.3	-21 55.3	4 04.3	+16 03.6	
18	161	48.8	41 08.3	+23 03.8	147 56.3	+4 17.0	267 48.1	-21 55.2	19 06.6	+16 03.6	
19	176	51.2	56 08.2	03.2	162 57.0	17.7	282 50.9	55.2	34 08.9	03.5	
20	191	53.7	71 08.0	02.6	177 57.7	18.4	297 53.7	55.2	49 11.1	03.4	
21	206	56.1	86 07.9	02.0	192 58.5	19.2	312 56.5	55.1	64 13.4	03.4	
22	221	58.6	101 07.7	01.5	207 59.2	19.9	327 59.3	55.1	79 15.7	03.3	
23	237	01.1	116 07.5	00.9	222 59.9	20.6	343 02.2	55.1	94 18.0	03.3	
24	252	03.5	131 07.4	+23 00.3	238 00.7	+4 21.3	358 05.0	-21 55.0	109 20.3	+16 03.2	
Dif	—		-2	-6	+7	+7	+28	0	+23	-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58 ^m 2				Edad: 18 ^d 2 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 PMG: 2 ^h 35 ^m R°: 54 ^m												
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	27.5	+22	21.8	322	34.6	-26	18.6	60	N	1 19	2 46	0 28	7	4 51	103	
1	195	27.4		22.1	337	01.8		12.6	60	58	1 55	3 04	0 01	16	5 18	94	
2	210	27.3		22.4	351	29.1		06.5	61	56	2 21	19	23 47	18	38	89	
3	225	27.2		22.7	5	56.4	83	-26	00.2	63	54	1 12	41	33	23 47	18	5 56
4	240	27.1		23.0	20	23.8	84	-25	53.8	64	52	1 46	2 57	44	35	21	6 10
5	255	27.0	+22	23.3	34	51.2	84	-25	47.2	66	50	2 09	3 11	3 54	23 25	23	6 23
6	270	26.9	+22	23.6	49	18.6	84	-25	40.5	67	45	2 51	3 39	4 15	23 03	29	6 49
7	285	26.8		23.9	63	46.1	85		33.6	69	40	3 19	4 00	32	22 45	33	7 10
8	300	26.7		24.2	78	13.6	85		26.6	70	35	41	17	47	30	36	27
9	315	26.6		24.4	92	41.2	86		19.5	71	30	3 59	32	4 59	22 17	39	7 42
10	330	26.5		24.7	107	08.8	86		12.2	73	20	4 27	4 55	5 20	21 54	44	8 07
11	345	26.4	+22	25.0	121	36.5	87	-25	04.7	75	10 N	4 48	5 15	5 38	21 34	48	8 28
12	0	26.3	+22	25.3	136	04.2	87	-24	57.2	75	0	5 06	5 32	5 55	21 16	52	8 48
13	15	26.2		25.6	150	31.9	87		49.4	78	10 S	22	5 49	6 11	20 58	55	9 08
14	30	26.1		25.9	164	59.7	88		41.6	78	20	38	6 05	29	38	59	29
15	45	26.0		26.2	179	27.6	89		33.6	80	30	5 53	23	6 49	15	64	9
16	60	25.9		26.5	193	55.5	89		25.5	81	35	6 01	33	7 01	20 01	67	10
17	75	25.8	+22	26.8	208	23.4	89	-24	17.2	83	40	6 10	6 44	7 14	19 46	70	10
18	90	25.7	+22	27.1	222	51.5	91	-24	08.8	84	45	6 20	6 57	7 30	19 27	74	10
19	105	25.5		27.4	237	19.5	90	-24	00.3	85	50	31	7 12	50	19 04	80	11
20	120	25.4		27.6	251	47.6	91	-23	51.6	87	52	36	19	7 59	18 52	83	20
21	135	25.3		27.9	266	15.8	92		42.8	88	54	41	26	8 09	40	86	33
22	150	25.2		28.2	280	44.0	92		33.9	89	56	46	35	21	25	90	11
23	165	25.1		28.5	295	12.3	93		24.8	91	58	53	44	34	18 07	96	12
24	180	25.0	+22	28.8	309	40.6	93	-23	15.6	92	60 S	6 59	7 55	8 50	17 46	102	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 10 ^m 6		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 08 ^m		Mag: -2.6 PMG: 0 ^h 08 ^m		Mag: +0.5 PMG: 16 ^h 40 ^m	
	hG ♊		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	252	03.5	131	07.4	+23	00.3	238	00.7	+4	21.3
1	267	06.0	146	07.2	+22	59.7	253	01.4		22.0
2	282	08.5	161	07.1		59.1	268	02.2		22.8
3	297	10.9	176	06.9		58.6	283	02.9		23.5
4	312	13.4	191	06.8		58.0	298	03.6		24.2
5	327	15.9	206	06.6	+22	57.4	313	04.4	+4	24.9
6	342	18.3	221	06.5	+22	56.8	328	05.1	+4	25.6
7	357	20.8	236	06.3		56.2	343	05.9		26.4
8	12	23.3	251	06.2		55.6	358	06.6		27.1
9	27	25.7	266	06.0		55.1	13	07.3		27.8
10	42	28.2	281	05.9		54.5	28	08.1		28.5
11	57	30.6	296	05.7	+22	53.9	43	08.8	+4	29.2
12	72	33.1	311	05.6	+22	53.3	58	09.6	+4	30.0
13	87	35.6	326	05.4		52.7	73	10.3		30.7
14	102	38.0	341	05.3		52.1	88	11.0		31.4
15	117	40.5	356	05.1		51.5	103	11.8		32.1
16	132	43.0	11	05.0		50.9	118	12.5		32.8
17	147	45.4	26	04.9	+22	50.3	133	13.3	+4	33.6
18	162	47.9	41	04.7	+22	49.7	148	14.0	+4	34.3
19	177	50.4	56	04.6		49.2	163	14.7		35.0
20	192	52.8	71	04.5		48.6	178	15.5		35.7
21	207	55.3	86	04.3		48.0	193	16.2		36.4
22	222	57.8	101	04.2		47.4	208	17.0		37.1
23	238	00.2	116	04.1		46.8	223	17.7		37.9
24	253	02.7	131	03.9	+22	46.2	238	18.4	+4	38.6
Dif	—		-1 -6		+7		+7		+28 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 19 ^d 2	PHE {	4 ^h : 56 ^h 9 12 ^h : 57 ^h 1 20 ^h : 57 ^h 3									
	PMG: 11 ^h 58 ^m 4								SD: 15 ^h 5	PMG: 3 ^h 29 ^m	R°: 51 ^m	Civil	Náutico	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	25.0	+22 28.8	309	40.6	-23 15.6		60 N	21 13	22 43	** **	0 35 3	6 34 102		
1	195	24.9		324	09.0	-23 06.3	93	58	20 55	22 05	** **	17 9	6 52 96		
2	210	24.8		338	37.4	-22 56.8	95	56	39	21 38	** **	0 01 14	7 07 91		
3	225	24.7		353	05.9	47.2	95	54	26	18	22 50	** **	20 87		
4	240	24.6		7	34.5	37.5	97	52	14	21 01	22 14	23 56 16	31 84		
5	255	24.5	+22 30.2	22	03.1	-22 27.7	98	50	20 04	20 47	21 50	23 48 19	7 41 81		
6	270	24.4	+22 30.5	36	31.8	-22 17.7	100	45	19 42	20 19	21 07	23 32 23	8 02 75		
7	285	24.3		51	00.5	-22 07.6	101	40	25	19 58	20 38	18 28	19 71		
8	300	24.1		65	29.3	-21 57.4	102	35	19 11	40	20 16	23 06 32	33 67		
9	315	24.0		79	58.1	47.1	103	30	18 58	26	19 58	22 56 35	8 46 63		
10	330	23.9		94	27.0	36.6	105	20	37	19 02	31	38 40	9 06 59		
11	345	23.8	+22 31.9	108	55.9	-21 26.1	105	10 N	18 19	18 42	19 09	22 22 45	9 24 55		
12	0	23.7	+22 32.2	123	24.9	-21 15.4	107	0	18 02	18 24	18 51	22 08 49	9 41 50		
13	15	23.6		137	54.0	-21 04.6	108	10 S	17 45	18 08	34	21 53 53	9 58 46		
14	30	23.5		152	23.1	-20 53.6	110	20	28	17 51	19	37 58	10 15 42		
15	45	23.4		166	52.3	42.6	110	30	17 07	33	18 03	19 64	35 37		
16	60	23.3		181	21.5	31.4	112	35	16 55	23	17 55	21 08 67	10 47 34		
17	75	23.2	+22 33.5	195	50.8	-20 20.2	112	40	16 42	17 12	17 46	20 56 71	11 00 31		
18	90	23.1	+22 33.8	210	20.1	-20 08.8	114	45	16 26	16 59	17 36	20 41 76	11 16 26		
19	105	22.9		224	49.5	-19 57.3	115	50	16 06	44	25	24 81	35 21		
20	120	22.8		239	19.0	45.7	116	52	15 57	37	20	15 84	45 18		
21	135	22.7		253	48.5	34.0	117	54	46	29	15	20 06 87	11 55 15		
22	150	22.6		268	18.1	22.2	118	56	35	21	09	19 55 91	12 06 12		
23	165	22.5		282	47.7	-19 10.2	120	58	21	11	17 03	43 95	19 7		
24	180	22.4	+22 35.4	297	17.4	-18 58.2	120	60 S	15 05	16 00	16 56	19 28 101	12 34 2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 06 ^m 7		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 06 ^m		Mag: -2.6 PMG: 0 ^h 03 ^m		Mag: +0.5 PMG: 16 ^h 36 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	253	02.7	131	03.9	+22 46.2	238 18.4	+4 38.6	359 12.3	-21 54.3	110 15.0	+16 01.7
1	268	05.1	146	03.8	45.6	253 19.2	39.3	14 15.1	54.3	125 17.3	01.7
2	283	07.6	161	03.7	45.0	268 19.9	40.0	29 17.9	54.3	140 19.6	01.6
3	298	10.1	176	03.5	44.4	283 20.7	40.7	44 20.7	54.2	155 21.9	01.6
4	313	12.5	191	03.4	43.8	298 21.4	41.5	59 23.5	54.2	170 24.2	01.5
5	328	15.0	206	03.3	+22 43.2	313 22.1	+4 42.2	74 26.3	-21 54.2	185 26.4	+16 01.4
6	343	17.5	221	03.2	+22 42.6	328 22.9	+4 42.9	89 29.1	-21 54.1	200 28.7	+16 01.4
7	358	19.9	236	03.0	42.0	343 23.6	43.6	104 31.9	54.1	215 31.0	01.3
8	13	22.4	251	02.9	41.4	358 24.4	44.3	119 34.7	54.1	230 33.3	01.3
9	28	24.9	266	02.8	40.8	13 25.1	45.0	134 37.5	54.0	245 35.6	01.2
10	43	27.3	281	02.7	40.2	28 25.8	45.8	149 40.4	54.0	260 37.8	01.1
11	58	29.8	296	02.6	+22 39.6	43 26.6	+4 46.5	164 43.2	-21 54.0	275 40.1	+16 01.1
12	73	32.3	311	02.5	+22 39.0	58 27.3	+4 47.2	179 46.0	-21 53.9	290 42.4	+16 01.0
13	88	34.7	326	02.3	38.3	73 28.1	47.9	194 48.8	53.9	305 44.7	01.0
14	103	37.2	341	02.2	37.7	88 28.8	48.6	209 51.6	53.9	320 46.9	00.9
15	118	39.6	356	02.1	37.1	103 29.5	49.3	224 54.4	53.9	335 49.2	00.8
16	133	42.1	11	02.0	36.5	118 30.3	50.1	239 57.2	53.8	350 51.5	00.8
17	148	44.6	26	01.9	+22 35.9	133 31.0	+4 50.8	255 00.0	-21 53.8	5 53.8	+16 00.7
18	163	47.0	41	01.8	+22 35.3	148 31.8	+4 51.5	270 02.8	-21 53.8	20 56.1	+16 00.6
19	178	49.5	56	01.7	34.7	163 32.5	52.2	285 05.6	53.7	35 58.3	00.6
20	193	52.0	71	01.6	34.1	178 33.2	52.9	300 08.4	53.7	51 00.6	00.5
21	208	54.4	86	01.5	33.5	193 34.0	53.6	315 11.2	53.7	66 02.9	00.5
22	223	56.9	101	01.3	32.8	208 34.7	54.4	330 14.0	53.6	81 05.2	00.4
23	238	59.4	116	01.2	32.2	223 35.5	55.1	345 16.8	53.6	96 07.4	00.3
24	254	01.8	131	01.1	+22 31.6	238 36.2	+4 55.8	0 19.6	-21 53.6	111 09.7	+16 00.3
Dif	—		-1		-6	+7	+7	-8972	0	+23	-1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 6				Edad: 20 ^d 2 PHE { SD: 15 ^h 6 PMG: 4 ^h 20 ^m R°: 48 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	22.4	+22	35.4	297	17.4	-18	58.2	60 N	** **	1 13	2 43	0 38	1	8 16	100
1	195	22.3		35.7	311	47.1 ¹⁰⁷		46.1 ¹²¹	58	** **	1 52	3 02	26	5	28	95
2	210	22.2		36.0	326	16.9 ¹⁰⁸		33.8 ¹²³	56	** **	2 18	18	15	9	38	91
3	225	22.1		36.2	340	46.8 ¹⁰⁹		21.5 ¹²³	54	1 07	39	31	0 05	13	47	87
4	240	21.9		36.5	355	16.7 ¹⁰⁹	-18	09.0 ¹²⁵	52	1 43	2 55	43	** **	**	8 55	84
5	255	21.8	+22	36.7	9	46.6 ¹⁰⁹	-17	56.5 ¹²⁵	50	2 07	3 10	3 53	** **	**	9 02	81
6	270	21.7	+22	37.0	24	16.6 ¹¹⁰	-17	43.8 ¹²⁷	45	2 49	3 38	4 14	23 55	21	9 17	76
7	285	21.6		37.3	38	46.7 ¹¹¹		31.1 ¹²⁷	40	3 18	3 59	32	46	25	30	70
8	300	21.5		37.5	53	16.8 ¹¹¹		18.2 ¹²⁹	35	41	4 17	46	38	29	40	67
9	315	21.4		37.8	67	46.9 ¹¹¹	-17	05.3 ¹²⁹	30	3 58	31	4 59	31	32	9 49	64
10	330	21.3		38.1	82	17.2 ¹¹³	-16	52.2 ¹³¹	20	4 26	4 55	5 20	18	38	10 05	58
11	345	21.2	+22	38.3	96	47.4 ¹¹²	-16	39.1 ¹³¹	10 N	4 48	5 15	5 38	23 07	43	10 19	53
12	0	21.0	+22	38.6	111	17.7 ¹¹³	-16	25.9 ¹³²	0	5 06	5 33	5 55	22 57	47	10 31	49
13	15	20.9		38.8	125	48.1 ¹¹⁴	-16	12.6 ¹³³	10 S	23	5 49	6 12	46	53	44	44
14	30	20.8		39.1	140	18.5 ¹¹⁴	-15	59.1 ¹³⁵	20	38	6 06	30	35	58	10 57	39
15	45	20.7		39.4	154	48.9 ¹¹⁴		45.7 ¹³⁴	30	5 54	24	6 50	23	63	11 12	34
16	60	20.6		39.6	169	19.4 ¹¹⁵		32.1 ¹³⁶	35	6 02	34	7 02	15	67	21	30
17	75	20.5	+22	39.9	183	50.0 ¹¹⁶	-15	18.4 ¹³⁷	40	6 11	6 45	7 15	22 07	70	11 31	26
18	90	20.4	+22	40.1	198	20.6 ¹¹⁶	-15	04.6 ¹³⁸	45	6 21	6 58	7 31	21 57	75	11 42	22
19	105	20.3		40.4	212	51.2 ¹¹⁶	-14	50.8 ¹³⁸	50	32	7 13	7 51	45	81	11 56	17
20	120	20.1		40.6	227	21.9 ¹¹⁷		36.9 ¹³⁹	52	37	20	8 01	39	84	12 03	14
21	135	20.0		40.9	241	52.6 ¹¹⁷		22.9 ¹⁴⁰	54	42	28	11	33	86	10	11
22	150	19.9		41.1	256	23.4 ¹¹⁸	-14	08.8 ¹⁴¹	56	48	37	23	26	90	18	8
23	165	19.8		41.4	270	54.2 ¹¹⁸	-13	54.6 ¹⁴²	58	6 55	46	37	18	94	26	5
24	180	19.7	+22	41.7	285	25.0 ¹¹⁸	-13	40.3 ¹⁴³	60 S	7 02	7 57	8 53	21 09	98	12 36	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 02 ^m 7		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 05 ^m		Mag: -2.6 PMG: 23 ^h 54 ^m		Mag: +0.5 PMG: 16 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	254	01.8	131	01.1	+22	31.6	238	36.2	+4	55.8
1	269	04.3	146	01.0		31.0	253	36.9		56.5
2	284	06.8	161	00.9		30.4	268	37.7		57.2
3	299	09.2	176	00.8		29.8	283	38.4		57.9
4	314	11.7	191	00.7		29.2	298	39.2		58.7
5	329	14.1	206	00.6	+22	28.5	313	39.9	+4	59.4
6	344	16.6	221	00.5	+22	27.9	328	40.6	+5	00.1
7	359	19.1	236	00.5		27.3	343	41.4		00.8
8	14	21.5	251	00.4		26.7	358	42.1		01.5
9	29	24.0	266	00.3		26.1	13	42.9		02.2
10	44	26.5	281	00.2		25.4	28	43.6		02.9
11	59	28.9	296	00.1	+22	24.8	43	44.3	+5	03.7
12	74	31.4	311	00.0	+22	24.2	58	45.1	+5	04.4
13	89	33.9	325	59.9		23.6	73	45.8		05.1
14	104	36.3	340	59.8		22.9	88	46.6		05.8
15	119	38.8	355	59.7		22.3	103	47.3		06.5
16	134	41.2	10	59.6		21.7	118	48.0		07.2
17	149	43.7	25	59.6	+22	21.1	133	48.8	+5	07.9
18	164	46.2	40	59.5	+22	20.4	148	49.5	+5	08.6
19	179	48.6	55	59.4		19.8	163	50.3		09.4
20	194	51.1	70	59.3		19.2	178	51.0		10.1
21	209	53.6	85	59.2		18.5	193	51.7		10.8
22	224	56.0	100	59.2		17.9	208	52.5		11.5
23	239	58.5	115	59.1		17.3	223	53.2		12.2
24	255	01.0	130	59.0	+22	16.6	238	54.0	+5	12.9
Dif	—		-1		-6		+7		+7	
									+28	
									0	
									+23	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 58 ^m 8			Edad: 21 ^d 2 PHE { 4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'4 SD: 15'8 PMG: 5 ^h 08 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	180	19.7	+22	41.7	285	25.0	-13	40.3	60 N	21 16	22 49	** ** *	0 39	0
1	195	19.6		41.9	299	55.9 ¹¹⁹		26.0 ¹⁴³	58	20 57	22 08	** ** *	31	4
2	210	19.5		42.2	314	26.8 ¹¹⁹	-13	11.6 ¹⁴⁴	56	41	21 41	** ** *	24	7
3	225	19.3		42.4	328	57.8 ¹²⁰	-12	57.1 ¹⁴⁵	54	28	21	22 55	18	10
4	240	19.2		42.7	343	28.8 ¹²⁰		42.6 ¹⁴⁵	52	16	21 04	22 18	12	13
5	255	19.1	+22	42.9	357	59.8 ¹²⁰	-12	27.9 ¹⁴⁷	50	20 05	20 49	21 52	0 07	15
6	270	19.0	+22	43.1	12	30.9 ¹²¹	-12	13.2 ¹⁴⁷	45	19 44	20 21	21 09	** ** *	10 33
7	285	18.9		43.4	27	02.0 ¹²¹	-11	58.5 ¹⁴⁷	40	26	19 59	20 40	** ** *	40
8	300	18.8		43.6	41	33.1 ¹²¹		43.6 ¹⁴⁹	35	19 12	41	18	** ** *	47
9	315	18.6		43.9	56	04.3 ¹²²		28.7 ¹⁴⁹	30	18 59	27	20 00	** ** *	10 53
10	330	18.5		44.1	70	35.5 ¹²²	-11	13.7 ¹⁵⁰	20	38	19 02	19 31	23 56	37
11	345	18.4	+22	44.4	85	06.7 ¹²²	-10	58.7 ¹⁵⁰	10 N	18 19	18 42	19 09	23 50	42
12	0	18.3	+22	44.6	99	38.0 ¹²³	-10	43.6 ¹⁵¹	0	18 02	18 25	18 51	23 44	47
13	15	18.2		44.9	114	09.2 ¹²²		28.4 ¹⁵²	10 S	17 46	18 08	34	39	52
14	30	18.1		45.1	128	40.5 ¹²³	-10	13.2 ¹⁵²	20	28	17 51	19	33	57
15	45	18.0		45.3	143	11.9 ¹²⁴	-9	57.9 ¹⁵³	30	17 07	33	18 03	26	63
16	60	17.8		45.6	157	43.2 ¹²³		42.5 ¹⁵⁴	35	16 55	23	17 55	22	67
17	75	17.7	+22	45.8	172	14.6 ¹²⁴	-9	27.1 ¹⁵⁴	40	16 41	17 12	17 46	23 17	71
18	90	17.6	+22	46.1	186	46.0 ¹²⁴	-9	11.6 ¹⁵⁵	45	16 25	16 59	17 36	23 12	76
19	105	17.5		46.3	201	17.4 ¹²⁴	-8	56.1 ¹⁵⁵	50	16 05	43	24	06	81
20	120	17.4		46.5	215	48.9 ¹²⁵		40.5 ¹⁵⁶	52	15 56	36	19	23	03
21	135	17.2		46.8	230	20.3 ¹²⁴		24.9 ¹⁵⁶	54	45	28	14	22	59
22	150	17.1		47.0	244	51.8 ¹²⁵	-8	09.2 ¹⁵⁷	56	33	20	08	56	90
23	165	17.0		47.2	259	23.3 ¹²⁵	-7	53.4 ¹⁵⁸	58	19	16 10	17 02	52	93
24	180	16.9	+22	47.5	273	54.8 ¹²⁵	-7	37.6 ¹⁵⁸	60 S	15 03	15 59	16 55	22 47	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 58 ^m 8		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 04 ^m		Mag: -2.6 PMG: 23 ^h 50 ^m		Mag: +0.5 PMG: 16 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	255	01.0	130	59.0	238	54.0	+5	12.9	1	27.0
1	270	03.4	145	58.9	253	54.7		13.6	16	29.8
2	285	05.9	160	58.9	268	55.4		14.4	31	32.6
3	300	08.4	175	58.8	283	56.2		15.1	46	35.4
4	315	10.8	190	58.7	298	56.9		15.8	61	38.2
5	330	13.3	205	58.7	313	57.7	+5	16.5	76	41.0
6	345	15.7	220	58.6	328	58.4	+5	17.2	91	43.8
7	0	18.2	235	58.5	343	59.1		17.9	106	46.6
8	15	20.7	250	58.5	358	59.9		18.6	121	49.4
9	30	23.1	265	58.4	14	00.6		19.3	136	52.2
10	45	25.6	280	58.3	29	01.4		20.0	151	55.0
11	60	28.1	295	58.3	44	02.1	+5	20.8	166	57.8
12	75	30.5	310	58.2	59	02.8	+5	21.5	182	00.6
13	90	33.0	325	58.1	74	03.6		22.2	197	03.5
14	105	35.5	340	58.1	89	04.3		22.9	212	06.3
15	120	37.9	355	58.0	104	05.1		23.6	227	09.1
16	135	40.4	10	58.0	119	05.8		24.3	242	11.9
17	150	42.9	25	57.9	134	06.6	+5	25.0	257	14.7
18	165	45.3	40	57.9	149	07.3	+5	25.7	272	17.5
19	180	47.8	55	57.8	164	08.0		26.4	287	20.3
20	195	50.2	70	57.8	179	08.8		27.2	302	23.1
21	210	52.7	85	57.7	194	09.5		27.9	317	25.9
22	225	55.2	100	57.7	209	10.3		28.6	332	28.7
23	240	57.6	115	57.6	224	11.0		29.3	347	31.5
24	256	00.1	130	57.6	239	11.7	+5	30.0	2	34.3
Dif	—		-1	-6	+7	+7		+28	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: 22 ^d 2 PHE { SD: 15'9 PMG: 5 ^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	h m	m		
0	180	16.9	+22	47.5	273	54.8	-7	37.6	60 N	** **	1 08	2 41	0 39	0	11 34	98		
1	195	16.8		47.7	288	26.3 ¹²⁵		21.8 ¹⁵⁸	58	** **	1 49	3 00	35	3	36	94		
2	210	16.7		48.0	302	57.9 ¹²⁶	-7	05.9 ¹⁵⁹	56	** **	2 16	16	31	7	39	90		
3	225	16.5		48.2	317	29.4 ¹²⁵	-6	50.0 ¹⁵⁹	54	1 02	37	30	28	9	41	87		
4	240	16.4		48.4	332	01.0 ¹²⁶		34.0 ¹⁶⁰	52	1 40	2 54	42	25	12	43	84		
5	255	16.3	+22	48.6	346	32.5 ¹²⁵	-6	17.9 ¹⁶¹	50	2 05	3 08	3 52	0 22	14	11 44	82		
6	270	16.2	+22	48.9	1	04.1 ¹²⁶	-6	01.9 ¹⁶⁰	45	2 48	3 37	4 14	0 16	20	11 48	76		
7	285	16.1		49.1	15	35.7 ¹²⁶	-5	45.8 ¹⁶¹	40	3 18	3 59	31	11	24	51	71		
8	300	16.0		49.3	30	07.3 ¹²⁶		29.6 ¹⁶²	35	40	4 16	46	07	27	54	67		
9	315	15.8		49.6	44	38.9 ¹²⁶	-5	13.4 ¹⁶²	30	3 58	31	4 58	0 03	31	11 56	64		
10	330	15.7		49.8	59	10.5 ¹²⁶	-4	57.2 ¹⁶²	20	4 26	4 55	5 20	** **	** **	12 00	58		
11	345	15.6	+22	50.0	73	42.0 ¹²⁵	-4	40.9 ¹⁶³	10 N	4 48	5 15	5 38	** **	** **	12 03	53		
12	0	15.5	+22	50.3	88	13.6 ¹²⁶	-4	24.6 ¹⁶³	0	5 07	5 33	5 55	** **	** **	12 07	47		
13	15	15.4		50.5	102	45.2 ¹²⁶	-4	08.3 ¹⁶³	10 S	23	5 50	6 12	** **	** **	10	42		
14	30	15.2		50.7	117	16.8 ¹²⁶	-3	51.9 ¹⁶⁴	20	39	6 06	30	** **	** **	13	37		
15	45	15.1		50.9	131	48.4 ¹²⁶		35.5 ¹⁶⁴	30	5 55	25	6 51	** **	** **	17	31		
16	60	15.0		51.2	146	20.0 ¹²⁶		19.1 ¹⁶⁴	35	6 03	35	7 03	** **	** **	19	28		
17	75	14.9	+22	51.4	160	51.5 ¹²⁵	-3	02.6 ¹⁶⁵	40	6 12	6 46	7 17	** **	** **	12 22	23		
18	90	14.8	+22	51.6	175	23.1 ¹²⁶	-2	46.1 ¹⁶⁵	45	6 22	6 59	7 33	** **	** **	12 24	20		
19	105	14.6		51.8	189	54.6 ¹²⁵		29.6 ¹⁶⁵	50	34	7 15	7 53	** **	** **	28	14		
20	120	14.5		52.0	204	26.2 ¹²⁶	-2	13.1 ¹⁶⁵	52	39	22	8 02	** **	** **	29	12		
21	135	14.4		52.3	218	57.7 ¹²⁵	-1	56.5 ¹⁶⁶	54	44	30	13	** **	** **	31	9		
22	150	14.3		52.5	233	29.2 ¹²⁵		39.9 ¹⁶⁶	56	50	39	25	** **	** **	32	7		
23	165	14.2		52.7	248	00.7 ¹²⁵		23.3 ¹⁶⁶	58	6 56	48	39	** **	** **	34	3		
24	180	14.0	+22	52.9	262	32.2 ¹²⁵	-1	06.7 ¹⁶⁶	60 S	7 03	7 59	8 56	** **	** **	12 37	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 54 ^m 9		Mag: -4.4 PMG: 15 ^h 16 ^m				Mag: +0.8 PMG: 8 ^h 03 ^m				Mag: -2.6 PMG: 23 ^h 45 ^m				Mag: +0.5 PMG: 16 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	° /	° /	° /	° /	° /	° /	° /	° /	°	° /	° /	° /	° /	° /	° /	° /		
0	256	00.1	130	57.6	+22	01.3	239	11.7	+5	30.0	2	34.3	-21	52.1	112	58.9	+15	57.2
1	271	02.6	145	57.5	+22	00.6	254	12.5		30.7	17	37.1		52.1	128	01.1		57.2
2	286	05.0	160	57.5	+22	00.0	269	13.2		31.4	32	39.9		52.0	143	03.4		57.1
3	301	07.5	175	57.4	+21	59.3	284	14.0		32.1	47	42.7		52.0	158	05.7		57.1
4	316	10.0	190	57.4		58.7	299	14.7		32.8	62	45.5		52.0	173	07.9		57.0
5	331	12.4	205	57.4	+21	58.0	314	15.4	+5	33.5	77	48.3	-21	51.9	188	10.2	+15	56.9
6	346	14.9	220	57.3	+21	57.4	329	16.2	+5	34.3	92	51.2	-21	51.9	203	12.5	+15	56.9
7	1	17.3	235	57.3		56.7	344	16.9		35.0	107	54.0		51.9	218	14.7		56.8
8	16	19.8	250	57.2		56.0	359	17.7		35.7	122	56.8		51.9	233	17.0		56.7
9	31	22.3	265	57.2		55.4	14	18.4		36.4	137	59.6		51.8	248	19.3		56.7
10	46	24.7	280	57.2		54.7	29	19.1		37.1	153	02.4		51.8	263	21.6		56.6
11	61	27.2	295	57.1	+21	54.1	44	19.9	+5	37.8	168	05.2	-21	51.8	278	23.8	+15	56.5
12	76	29.7	310	57.1	+21	53.4	59	20.6	+5	38.5	183	08.0	-21	51.7	293	26.1	+15	56.5
13	91	32.1	325	57.1		52.8	74	21.4		39.2	198	10.8		51.7	308	28.4		56.4
14	106	34.6	340	57.0		52.1	89	22.1		39.9	213	13.6		51.7	323	30.6		56.3
15	121	37.1	355	57.0		51.4	104	22.8		40.6	228	16.4		51.6	338	32.9		56.3
16	136	39.5	10	57.0		50.8	119	23.6		41.3	243	19.2		51.6	353	35.2		56.2
17	151	42.0	25	57.0	+21	50.1	134	24.3	+5	42.0	258	22.0	-21	51.6	8	37.4	+15	56.1
18	166	44.5	40	56.9	+21	49.5	149	25.1	+5	42.8	273	24.8	-21	51.5	23	39.7	+15	56.1
19	181	46.9	55	56.9		48.8	164	25.8		43.5	288	27.6		51.5	38	42.0		56.0
20	196	49.4	70	56.9		48.1	179	26.6		44.2	303	30.4		51.5	53	44.2		56.0
21	211	51.8	85	56.9		47.5	194	27.3		44.9	318	33.2		51.4	68	46.5		55.9
22	226	54.3	100	56.9		46.8	209	28.0		45.6	333	36.0		51.4	83	48.8		55.8
23	241	56.8	115	56.8		46.2	224	28.8		46.3	348	38.8		51.4	98	51.0		55.8
24	256	59.2	130	56.8	+21	45.5	239	29.5	+5	47.0	3	41.6	-21	51.4	113	53.3	+15	55.7
Dif	—		0 -7				+7 +7				+28 0				+23 -1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 23 ^d 2	PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 3 20 ^h : 59 ^m 5										
	PMG: 11 ^h 59 ^m 2					SD: 16 ^h 1			SD: 6 ^h 43 ^m	R ^o : 48 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	14.0	+22 52.9	262	32.2	-1 06.7		60 N	21 19	22 55	** **	0 39 **		13 12 101	
1	195	13.9		277	03.6 ¹²⁴	-0 50.0 ¹⁶⁷		58	20 59	22 12	** **	38 3		10 97	
2	210	13.8		291	35.1 ¹²⁵	33.4 ¹⁶⁶		56	43	21 44	** **	38 6		09 93	
3	225	13.7		306	06.5 ¹²⁴	-0 16.7 ¹⁶⁷		54	30	23	23 01	37 10		08 90	
4	240	13.6		320	37.9 ¹²⁴	+0 00.0 ¹⁶⁷		52	18	21 06	22 21	37 12		07 87	
5	255	13.4	+22 54.0	335	09.3 ¹²⁴	+0 16.7 ¹⁶⁷		50	20 07	20 51	21 55	0 36 15		13 06 84	
6	270	13.3	+22 54.2	349	40.6 ¹²³	+0 33.4 ¹⁶⁷		45	19 45	20 22	21 11	0 36 19		13 04 78	
7	285	13.2	54.4	4	11.9 ¹²³	+0 50.1 ¹⁶⁷		40	28	20 00	20 41	35 24		02 74	
8	300	13.1	54.6	18	43.2 ¹²³	+1 06.9 ¹⁶⁸		35	13	19 42	19	34 28		01 69	
9	315	12.9	54.9	33	14.5 ¹²³	23.6 ¹⁶⁷		30	19 00	27	20 01	34 31		13 00 65	
10	330	12.8	55.1	47	45.7 ¹²²	40.4 ¹⁶⁸		20	18 39	19 03	19 32	33 37		12 58 59	
11	345	12.7	+22 55.3	62	16.9 ¹²²	+1 57.1 ¹⁶⁷		10 N	18 20	18 43	19 10	0 32 43		12 56 54	
12	0	12.6	+22 55.5	76	48.1 ¹²²	+2 13.9 ¹⁶⁸		0	18 03	18 25	18 51	0 31 48		12 54 49	
13	15	12.5	55.7	91	19.3 ¹²²	30.6 ¹⁶⁷		10 S	17 46	18 09	35	31 53		52 44	
14	30	12.3	55.9	105	50.4 ¹²¹	+2 47.4 ¹⁶⁸		20	28	17 52	19	30 58		50 38	
15	45	12.2	56.1	120	21.4 ¹²⁰	+3 04.1 ¹⁶⁷		30	17 07	33	18 03	29 65		48 32	
16	60	12.1	56.3	134	52.4 ¹²⁰	20.9 ¹⁶⁸		35	16 55	23	17 54	29 68		47 28	
17	75	12.0	+22 56.5	149	23.4 ¹²⁰	+3 37.6 ¹⁶⁷		40	16 41	17 11	17 45	0 28 73		12 45 25	
18	90	11.8	+22 56.7	163	54.4 ¹²⁰	+3 54.3 ¹⁶⁷		45	16 25	16 58	17 35	0 28 77		12 44 20	
19	105	11.7	56.9	178	25.3 ¹¹⁹	+4 11.1 ¹⁶⁸		50	16 05	43	24	27 83		42 15	
20	120	11.6	57.1	192	56.1 ¹¹⁸	27.8 ¹⁶⁷		52	15 55	35	19	27 85		41 12	
21	135	11.5	57.3	207	26.9 ¹¹⁸	+4 44.5 ¹⁶⁷		54	44	28	13	26 89		40 9	
22	150	11.4	57.5	221	57.7 ¹¹⁸	+5 01.2 ¹⁶⁷		56	32	19	07	26 92		39 6	
23	165	11.2	57.7	236	28.4 ¹¹⁷	17.9 ¹⁶⁷		58	18	16 09	17 01	25 96		37 4	
24	180	11.1	+22 58.0	250	59.0 ¹¹⁶	+5 34.5 ¹⁶⁶		60 S	15 01	15 58	16 54	0 25 99		12 36 0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 50 ^m 9		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 02 ^m		Mag: -2.6 PMG: 23 ^h 41 ^m		Mag: +0.5 PMG: 16 ^h 22 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	'	°	'	°	'	°	'	
0	256	59.2	130 56.8	+21 45.5	239 29.5	+5 47.0	3 41.6	-21 51.4	113 53.3	+15 55.7
1	272	01.7	145 56.8	44.8	254 30.3	47.7	18 44.5	51.3	128 55.6	55.6
2	287	04.2	160 56.8	44.2	269 31.0	48.4	33 47.3	51.3	143 57.8	55.6
3	302	06.6	175 56.8	43.5	284 31.7	49.1	48 50.1	51.3	159 00.1	55.5
4	317	09.1	190 56.8	42.8	299 32.5	49.8	63 52.9	51.2	174 02.4	55.4
5	332	11.6	205 56.8	+21 42.2	314 33.2	+5 50.5	78 55.7	-21 51.2	189 04.6	+15 55.4
6	347	14.0	220 56.7	+21 41.5	329 34.0	+5 51.2	93 58.5	-21 51.2	204 06.9	+15 55.3
7	2	16.5	235 56.7	40.8	344 34.7	51.9	109 01.3	51.1	219 09.2	55.2
8	17	19.0	250 56.7	40.1	359 35.4	52.6	124 04.1	51.1	234 11.4	55.2
9	32	21.4	265 56.7	39.5	14 36.2	53.4	139 06.9	51.1	249 13.7	55.1
10	47	23.9	280 56.7	38.8	29 36.9	54.1	154 09.7	51.0	264 16.0	55.0
11	62	26.3	295 56.7	+21 38.1	44 37.7	+5 54.8	169 12.5	-21 51.0	279 18.2	+15 55.0
12	77	28.8	310 56.7	+21 37.5	59 38.4	+5 55.5	184 15.3	-21 51.0	294 20.5	+15 54.9
13	92	31.3	325 56.7	36.8	74 39.1	56.2	199 18.1	51.0	309 22.8	54.8
14	107	33.7	340 56.7	36.1	89 39.9	56.9	214 20.9	50.9	324 25.0	54.8
15	122	36.2	355 56.7	35.4	104 40.6	57.6	229 23.7	50.9	339 27.3	54.7
16	137	38.7	10 56.7	34.8	119 41.4	58.3	244 26.5	50.9	354 29.6	54.6
17	152	41.1	25 56.7	+21 34.1	134 42.1	+5 59.0	259 29.3	-21 50.8	9 31.8	+15 54.6
18	167	43.6	40 56.7	+21 33.4	149 42.9	+5 59.7	274 32.1	-21 50.8	24 34.1	+15 54.5
19	182	46.1	55 56.7	32.7	164 43.6	+6 00.4	289 34.9	50.8	39 36.4	54.4
20	197	48.5	70 56.7	32.0	179 44.3	01.1	304 37.7	50.7	54 38.6	54.4
21	212	51.0	85 56.7	31.4	194 45.1	01.8	319 40.5	50.7	69 40.9	54.3
22	227	53.4	100 56.8	30.7	209 45.8	02.5	334 43.4	50.7	84 43.2	54.2
23	242	55.9	115 56.8	30.0	224 46.6	03.2	349 46.2	50.6	99 45.4	54.2
24	257	58.4	130 56.8	+21 29.3	239 47.3	+6 03.9	4 49.0	-21 50.6	114 47.7	+15 54.1
Dif	—		0	-7	+7	+7	+28	0	+23	-1

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 4				Edad: 24 ^d 2 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 8 20 ^h : 59 ^m 9 PMG: 7 ^h 31 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	11.1	+22	58.0	250	59.0	+5	34.5	60 N	** **	1 03	2 39	0 38	1	14	53	107	
1	195	11.0		58.2	265	29.6 ¹¹⁶	+5	51.2 ¹⁶⁷	58	** **	1 46	2 59	41	5	47	102		
2	210	10.9		58.4	280	00.2 ¹¹⁶	+6	07.8 ¹⁶⁶	56	** **	2 14	3 15	44	8	42	98		
3	225	10.7		58.6	294	30.7 ¹¹⁵		24.4 ¹⁶⁶	54	0 58	35	29	47	10	38	93		
4	240	10.6		58.8	309	01.1 ¹¹⁴		41.0 ¹⁶⁶	52	1 38	2 53	41	49	13	34	90		
5	255	10.5	+22	58.9	323	31.5 ¹¹⁴	+6	57.6 ¹⁶⁶	50	2 04	3 07	3 51	0 51	16	14	30	88	
6	270	10.4	+22	59.1	338	01.8 ¹¹³	+7	14.1 ¹⁶⁵	45	2 47	3 36	4 13	0 55	22	14	22	82	
7	285	10.2		59.3	352	32.1 ¹¹³		30.6 ¹⁶⁵	40	3 17	3 58	31	0 59	26	16	76		
8	300	10.1		59.5	7	02.3 ¹¹²	+7	47.1 ¹⁶⁵	35	40	4 16	46	1 02	31	10	72		
9	315	10.0		59.7	21	32.4 ¹¹¹	+8	03.6 ¹⁶⁵	30	3 58	31	4 58	05	34	14	05	69	
10	330	09.9	+22	59.9	36	02.5 ¹¹¹		20.0 ¹⁶⁴	20	4 26	4 55	5 20	10	40	13	57	62	
11	345	09.7	+23	00.1	50	32.5 ¹¹⁰	+8	36.4 ¹⁶⁴	10 N	4 48	5 15	5 38	1 15	45	13	50	56	
12	0	09.6	+23	00.3	65	02.5 ¹¹⁰	+8	52.7 ¹⁶³	0	5 07	5 33	5 56	1 19	50	13	43	51	
13	15	09.5		00.5	79	32.4 ¹⁰⁹	+9	09.0 ¹⁶³	10 S	24	5 50	6 13	24	55	36	46		
14	30	09.4		00.7	94	02.2 ¹⁰⁸		25.3 ¹⁶³	20	40	6 07	31	28	61	28	42		
15	45	09.2		00.9	108	31.9 ¹⁰⁷		41.5 ¹⁶²	30	5 56	25	6 52	34	67	20	36		
16	60	09.1		01.1	123	01.6 ¹⁰⁷	+9	57.7 ¹⁶²	35	6 04	36	7 04	37	71	15	32		
17	75	09.0	+23	01.3	137	31.1 ¹⁰⁵	+10	13.9 ¹⁶²	40	6 13	6 47	7 18	1 41	74	13	10	28	
18	90	08.9	+23	01.5	152	00.7 ¹⁰⁶	+10	30.0 ¹⁶¹	45	6 23	7 00	7 34	1 45	80	13	04	23	
19	105	08.7		01.6	166	30.1 ¹⁰⁴	+10	46.0 ¹⁶⁰	50	35	16	7 54	50	86	12	57	17	
20	120	08.6		01.8	180	59.5 ¹⁰⁴	+11	02.0 ¹⁶⁰	52	40	23	8 04	52	89	53	15		
21	135	08.5		02.0	195	28.7 ¹⁰²		18.0 ¹⁶⁰	54	45	31	15	55	92	49	12		
22	150	08.4		02.2	209	57.9 ¹⁰²		33.9 ¹⁵⁹	56	51	40	27	1 58	95	45	9		
23	165	08.2		02.4	224	27.1 ¹⁰²	+11	49.7 ¹⁵⁸	58	6 58	7 50	41	2 01	99	41	4		
24	180	08.1	+23	02.6	238	56.1 ¹⁰⁰	+12	05.5 ¹⁵⁸	60 S	7 05	8 01	8 58	2 04	105	12	36	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 47 ^m 0		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 8 ^h 00 ^m		Mag: -2.6 PMG: 23 ^h 36 ^m		Mag: +0.5 PMG: 16 ^h 18 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	257	58.4	130	56.8	+21	29.3	239	47.3	+6	03.9	4	49.0	-21	50.6	114	47.7	+15	54.1
1	273	00.8	145	56.8		28.6	254	48.0		04.6	19	51.8		50.6	129	50.0		54.0
2	288	03.3	160	56.8		28.0	269	48.8		05.3	34	54.6		50.5	144	52.2		54.0
3	303	05.8	175	56.8		27.3	284	49.5		06.0	49	57.4		50.5	159	54.5		53.9
4	318	08.2	190	56.8		26.6	299	50.3		06.7	65	00.2		50.5	174	56.7		53.9
5	333	10.7	205	56.9	+21	25.9	314	51.0	+6	07.4	80	03.0	-21	50.5	189	59.0	+15	53.8
6	348	13.2	220	56.9	+21	25.2	329	51.7	+6	08.1	95	05.8	-21	50.4	205	01.3	+15	53.7
7	3	15.6	235	56.9		24.5	344	52.5		08.8	110	08.6		50.4	220	03.5		53.7
8	18	18.1	250	56.9		23.9	359	53.2		09.5	125	11.4		50.4	235	05.8		53.6
9	33	20.6	265	56.9		23.2	14	54.0		10.2	140	14.2		50.3	250	08.1		53.5
10	48	23.0	280	57.0		22.5	29	54.7		11.0	155	17.0		50.3	265	10.3		53.5
11	63	25.5	295	57.0	+21	21.8	44	55.5	+6	11.7	170	19.8	-21	50.3	280	12.6	+15	53.4
12	78	27.9	310	57.0	+21	21.1	59	56.2	+6	12.4	185	22.6	-21	50.2	295	14.9	+15	53.3
13	93	30.4	325	57.1		20.4	74	56.9		13.1	200	25.4		50.2	310	17.1		53.3
14	108	32.9	340	57.1		19.7	89	57.7		13.8	215	28.2		50.2	325	19.4		53.2
15	123	35.3	355	57.1		19.0	104	58.4		14.5	230	31.0		50.1	340	21.6		53.1
16	138	37.8	10	57.1		18.4	119	59.2		15.2	245	33.8		50.1	355	23.9		53.1
17	153	40.3	25	57.2	+21	17.7	134	59.9	+6	15.9	260	36.6	-21	50.1	10	26.2	+15	53.0
18	168	42.7	40	57.2	+21	17.0	150	00.6	+6	16.6	275	39.4	-21	50.0	25	28.4	+15	52.9
19	183	45.2	55	57.3		16.3	165	01.4		17.3	290	42.2		50.0	40	30.7		52.8
20	198	47.7	70	57.3		15.6	180	02.1		18.0	305	45.0		50.0	55	33.0		52.8
21	213	50.1	85	57.3		14.9	195	02.9		18.7	320	47.8		50.0	70	35.2		52.7
22	228	52.6	100	57.4		14.2	210	03.6		19.4	335	50.6		49.9	85	37.5		52.6
23	243	55.0	115	57.4		13.5	225	04.4		20.1	350	53.5		49.9	100	39.7		52.6
24	258	57.5	130	57.5	+21	12.8	240	05.1	+6	20.8	5	56.3	-21	49.9	115	42.0	+15	52.5
Dif	—		0 -7		+7		+7		+28		0		+23		-1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 59 ^m 6			Edad: 25 ^d 2 SD: 16'3 PMG: 8 ^h 22 ^m					PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'2 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	180	08.1	+23 02.6	238	56.1	+12 05.5	100	60 N	21 21	23 00	** **	0 39 1	16 40 113	
1	195	08.0	02.8	253	25.1	21.2	157	58	21 01	22 15	** **	46 6	29 107	
2	210	07.9	02.9	267	53.9	36.9	157	56	20 45	21 46	** **	52 10	20 101	
3	225	07.7	03.1	282	22.7	98	156	54	31	25	23 05	0 57 14	11 98	
4	240	07.6	03.3	296	51.4	97	155	52	19	21 07	22 24	1 02 17	16 04 94	
5	255	07.5	+23 03.5	311	20.0	96	155	50	20 08	20 53	21 57	1 07 20	15 58 90	
6	270	07.3	+23 03.7	325	48.6	96	154	45	19 46	20 24	21 13	1 17 26	15 44 83	
7	285	07.2	03.9	340	17.0	94	154	40	29	20 01	20 43	25 31	32 79	
8	300	07.1	04.0	354	45.3	93	152	35	14	19 43	20	33 34	22 75	
9	315	07.0	04.2	9	13.6	93	152	30	19 01	28	20 02	39 38	15 14 71	
10	330	06.8	04.4	23	41.7	91	151	20	18 39	19 04	19 33	1 50 44	14 59 65	
11	345	06.7	+23 04.6	38	09.8	91	151	10 N	18 21	18 44	19 11	2 00 49	14 46 61	
12	0	06.6	+23 04.7	52	37.8	90	149	0	18 03	18 26	18 52	2 09 54	14 34 56	
13	15	06.5	04.9	67	05.7	89	149	10 S	17 46	18 09	35	19 58	22 52	
14	30	06.3	05.1	81	33.4	87	148	20	28	17 52	19	29 64	14 10 46	
15	45	06.2	05.3	96	01.1	87	147	30	17 07	33	18 03	41 70	13 56 40	
16	60	06.1	05.4	110	28.7	86	146	35	16 55	23	17 54	48 73	47 38	
17	75	05.9	+23 05.6	124	56.2	85	145	40	16 41	17 11	17 45	2 55 78	13 38 33	
18	90	05.8	+23 05.8	139	23.6	84	145	45	16 24	16 58	17 35	3 05 82	13 27 29	
19	105	05.7	06.0	153	50.9	83	143	50	16 04	42	24	16 89	14 22	
20	120	05.6	06.1	168	18.0	81	143	52	15 54	35	18	21 92	08 19	
21	135	05.4	06.3	182	45.1	81	141	54	43	27	13	27 96	13 01 16	
22	150	05.3	06.5	197	12.1	80	141	56	31	18	07	33 100	12 54 12	
23	165	05.2	06.6	211	39.0	79	139	58	17	16 08	17 00	40 105	45 8	
24	180	05.1	+23 06.8	226	05.8	78	139	60 S	15 00	15 57	16 53	3 49 110	12 36 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 43 ^m 1		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +0.8 PMG: 7 ^h 59 ^m		Mag: -2.6 PMG: 23 ^h 32 ^m		Mag: +0.5 PMG: 16 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	258	57.5	130	57.5	+21 12.8	240	05.1	+6 20.8	5	56.3	-21 49.9	115	42.0	+15 52.5
1	274	00.0	145	57.5	12.1	255	05.8	21.5	20	59.1	49.8	130	44.3	52.4
2	289	02.4	160	57.5	11.4	270	06.6	22.2	36	01.9	49.8	145	46.5	52.4
3	304	04.9	175	57.6	10.7	285	07.3	22.9	51	04.7	49.8	160	48.8	52.3
4	319	07.4	190	57.6	10.0	300	08.1	23.6	66	07.5	49.7	175	51.0	52.2
5	334	09.8	205	57.7	+21 09.3	315	08.8	+6 24.3	81	10.3	-21 49.7	190	53.3	+15 52.2
6	349	12.3	220	57.7	+21 08.6	330	09.5	+6 25.0	96	13.1	-21 49.7	205	55.6	+15 52.1
7	4	14.8	235	57.8	07.9	345	10.3	25.7	111	15.9	49.6	220	57.8	52.0
8	19	17.2	250	57.8	07.2	0	11.0	26.4	126	18.7	49.6	236	00.1	52.0
9	34	19.7	265	57.9	06.5	15	11.8	27.1	141	21.5	49.6	251	02.3	51.9
10	49	22.2	280	57.9	05.8	30	12.5	27.8	156	24.3	49.5	266	04.6	51.8
11	64	24.6	295	58.0	+21 05.1	45	13.3	+6 28.5	171	27.1	-21 49.5	281	06.9	+15 51.8
12	79	27.1	310	58.1	+21 04.4	60	14.0	+6 29.2	186	29.9	-21 49.5	296	09.1	+15 51.7
13	94	29.5	325	58.1	03.7	75	14.7	29.9	201	32.7	49.4	311	11.4	51.6
14	109	32.0	340	58.2	03.0	90	15.5	30.6	216	35.5	49.4	326	13.6	51.6
15	124	34.5	355	58.2	02.3	105	16.2	31.3	231	38.3	49.4	341	15.9	51.5
16	139	36.9	10	58.3	01.6	120	17.0	32.0	246	41.1	49.4	356	18.2	51.4
17	154	39.4	25	58.4	+21 00.9	135	17.7	+6 32.7	261	43.9	-21 49.3	11	20.4	+15 51.4
18	169	41.9	40	58.4	+21 00.2	150	18.4	+6 33.4	276	46.7	-21 49.3	26	22.7	+15 51.3
19	184	44.3	55	58.5	+20 59.5	165	19.2	34.1	291	49.5	49.3	41	24.9	51.2
20	199	46.8	70	58.6	58.8	180	19.9	34.7	306	52.3	49.2	56	27.2	51.2
21	214	49.3	85	58.6	58.1	195	20.7	35.4	321	55.1	49.2	71	29.5	51.1
22	229	51.7	100	58.7	57.3	210	21.4	36.1	336	57.9	49.2	86	31.7	51.0
23	244	54.2	115	58.8	56.6	225	22.2	36.8	352	00.7	49.1	101	34.0	51.0
24	259	56.7	130	58.9	+20 55.9	240	22.9	+6 37.5	7	03.5	-21 49.1	116	36.2	+15 50.9
Dif	—		+1		-7	+7		+7	+28		0	+23		-1

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: 26 ^d 2 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 3 20 ^h : 60 ^m 3 SD: 16 ^d 4 PMG: 9 ^h 16 ^m R°: 60 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	05.1	+23	06.8	226	05.8	+18	02.4	60 N	** **	0 59	2 38	0 40	4	18 33	116				
1	195	04.9		07.0	240	32.4	76	16.1 ¹³⁷	58	** **	1 44	2 58	0 52	10	16	107				
2	210	04.8		07.1	254	59.0	76	29.7 ¹³⁶	56	** **	2 13	3 14	1 02	16	18 01	101				
3	225	04.7		07.3	269	25.5	75	43.2 ¹³⁵	54	0 54	34	28	11	20	17 49	95				
4	240	04.5		07.5	283	51.8	73	+18 56.6 ¹³⁴	52	1 36	2 52	40	19	24	38	92				
5	255	04.4	+23	07.6	298	18.1	73	+19 09.9 ¹³³	50	2 02	3 07	3 51	1 27	26	17 28	89				
6	270	04.3	+23	07.8	312	44.2	71	+19 23.1 ¹³²	45	2 46	3 36	4 13	1 43	32	17 07	83				
7	285	04.1		08.0	327	10.3	71	36.2 ¹³¹	40	3 16	3 58	31	1 56	37	16 51	79				
8	300	04.0		08.1	341	36.2	69	+19 49.1 ¹²⁹	35	39	4 16	45	2 07	41	37	75				
9	315	03.9		08.3	356	02.1	69	+20 01.9 ¹²⁸	30	3 58	31	4 58	17	44	25	72				
10	330	03.8		08.4	10	27.8	67	14.6 ¹²⁷	20	4 26	4 56	5 20	34	49	16 04	68				
11	345	03.6	+23	08.6	24	53.4	66	+20 27.2 ¹²⁶	10 N	4 49	5 16	5 39	2 49	54	15 47	64				
12	0	03.5	+23	08.8	39	18.9	65	+20 39.6 ¹²⁴	0	5 07	5 34	5 56	3 03	58	15 30	60				
13	15	03.4		08.9	53	44.3	64	+20 51.9 ¹²³	10 S	24	5 51	6 13	17	63	15 14	56				
14	30	03.2		09.1	68	09.7	64	+21 04.1 ¹²²	20	40	6 08	32	33	67	14 56	53				
15	45	03.1		09.2	82	34.9	62	16.2 ¹²¹	30	5 56	26	6 53	3 51	72	36	48				
16	60	03.0		09.4	97	00.0	61	28.1 ¹¹⁹	35	6 05	37	7 05	4 01	76	25	44				
17	75	02.9	+23	09.5	111	24.9	59	+21 39.8 ¹¹⁷	40	6 14	6 48	7 19	4 13	80	14 11	41				
18	90	02.7	+23	09.7	125	49.8	59	+21 51.5 ¹¹⁷	45	6 24	7 02	7 35	4 27	85	13 56	36				
19	105	02.6		09.9	140	14.6	58	+22 02.9 ¹¹⁴	50	36	17	7 56	45	91	36	31				
20	120	02.5		10.0	154	39.3	57	14.3 ¹¹⁴	52	41	25	8 05	4 53	94	27	28				
21	135	02.3		10.2	169	03.9	56	25.5 ¹¹²	54	47	33	16	5 03	97	17	24				
22	150	02.2		10.3	183	28.4	55	36.5 ¹¹⁰	56	53	42	29	13	103	13 06	20				
23	165	02.1		10.5	197	52.7	53	47.4 ¹⁰⁹	58	6 59	7 52	8 43	25	109	12 53	14				
24	180	01.9	+23	10.6	212	17.0	53	+22 58.2 ¹⁰⁸	60 S	7 07	8 03	9 00	5 39	118	12 38	6				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 39 ^m 1				Mag: -4.5 PMG: 15 ^h 16 ^m				Mag: +0.8 PMG: 7 ^h 58 ^m				Mag: -2.6 PMG: 23 ^h 27 ^m				Mag: +0.5 PMG: 16 ^h 11 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	259	56.7	130	58.9	+20	55.9	240	22.9	+6	37.5	7	03.5	-21	49.1	116	36.2	+15	50.9		
1	274	59.1	145	58.9		55.2	255	23.6		38.2	22	06.3		49.1	131	38.5		50.8		
2	290	01.6	160	59.0		54.5	270	24.4		38.9	37	09.1		49.0	146	40.8		50.8		
3	305	04.0	175	59.1		53.8	285	25.1		39.6	52	11.9		49.0	161	43.0		50.7		
4	320	06.5	190	59.2		53.1	300	25.9		40.3	67	14.7		49.0	176	45.3		50.6		
5	335	09.0	205	59.2	+20	52.4	315	26.6	+6	41.0	82	17.5	-21	48.9	191	47.5	+15	50.5		
6	350	11.4	220	59.3	+20	51.6	330	27.3	+6	41.7	97	20.3	-21	48.9	206	49.8	+15	50.5		
7	5	13.9	235	59.4		50.9	345	28.1		42.4	112	23.1		48.9	221	52.0		50.4		
8	20	16.4	250	59.5		50.2	0	28.8		43.1	127	25.9		48.9	236	54.3		50.3		
9	35	18.8	265	59.6		49.5	15	29.6		43.8	142	28.7		48.8	251	56.6		50.3		
10	50	21.3	280	59.7		48.8	30	30.3		44.5	157	31.5		48.8	266	58.8		50.2		
11	65	23.8	295	59.8	+20	48.1	45	31.1	+6	45.2	172	34.3	-21	48.8	282	01.1	+15	50.1		
12	80	26.2	310	59.8	+20	47.4	60	31.8	+6	45.9	187	37.1	-21	48.7	297	03.3	+15	50.1		
13	95	28.7	325	59.9		46.6	75	32.5		46.6	202	39.9		48.7	312	05.6		50.0		
14	110	31.2	341	00.0		45.9	90	33.3		47.3	217	42.7		48.7	327	07.8		49.9		
15	125	33.6	356	00.1		45.2	105	34.0		48.0	232	45.5		48.6	342	10.1		49.9		
16	140	36.1	11	00.2		44.5	120	34.8		48.7	247	48.3		48.6	357	12.4		49.8		
17	155	38.5	26	00.3	+20	43.8	135	35.5	+6	49.4	262	51.2	-21	48.6	12	14.6	+15	49.7		
18	170	41.0	41	00.4	+20	43.0	150	36.2	+6	50.1	277	54.0	-21	48.5	27	16.9	+15	49.7		
19	185	43.5	56	00.5		42.3	165	37.0		50.8	292	56.8		48.5	42	19.1		49.6		
20	200	45.9	71	00.6		41.6	180	37.7		51.4	307	59.6		48.5	57	21.4		49.5		
21	215	48.4	86	00.7		40.9	195	38.5		52.1	323	02.4		48.4	72	23.6		49.4		
22	230	50.9	101	00.8		40.2	210	39.2		52.8	338	05.2		48.4	87	25.9		49.4		
23	245	53.3	116	00.9		39.4	225	40.0		53.5	353	08.0		48.4	102	28.1		49.3		
24	260	55.8	131	01.0	+20	38.7	240	40.7	+6	54.2	8	10.8	-21	48.4	117	30.4	+15	49.2		
Dif	—				+1 -7				+7 +7				+28 0				+23 -1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 7			Edad: 27 ^d 2 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 2 20 ^h : 60 ^h 1 R°: 63 ^m														
	PMG: 12 ^h 00 ^m 0			SD: 16 ^h 4 PMG: 10 ^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
0	180	01.9	+23	10.6	212	17.0	+22	58.2	60 N	21	23	23	05	**	**	0	44	12
1	195	01.8		10.8	226	41.2	+23	08.8	58	21	03	22	18	**	**	1	02	21
2	210	01.7		10.9	241	05.3		19.2	56	20	47	21	49	**	**	18	26	
3	225	01.5		11.1	255	29.3		50	54	33	27	23	10			31	31	
4	240	01.4		11.2	269	53.1		48	52	20	21	09	22	26		43	34	
5	255	01.3	+23	11.4	284	16.9	+23	49.6	50	20	10	20	54	21	59	1	53	37
6	270	01.2	+23	11.5	298	40.6	+23	59.4	45	19	47	20	25	21	14	2	15	42
7	285	01.0		11.6	313	04.2	+24	09.0	40	30	20	02	20	44		33	46	
8	300	00.9		11.8	327	27.7		45	35	15	19	44	21			2	48	49
9	315	00.8		11.9	341	51.1		44	30	19	02	29	20	02		3	01	52
10	330	00.6		12.1	356	14.5		44	20	18	40	19	04	19	34	23	56	
11	345	00.5	+23	12.2	10	37.7	+24	45.9	10 N	18	21	18	44	19	11	3	43	59
12	0	00.4	+23	12.4	25	00.9	+24	54.6	0	18	04	18	26	18	52	4	01	62
13	15	00.2		12.5	39	23.9	+25	03.3	10 S	17	46	18	09	35		20	65	
14	30	00.1		12.6	53	46.9		40	20	28	17	52	19			4	40	68
15	45	00.0		12.8	68	09.8		39	30	17	07	33	18	03		5	03	72
16	59	59.8		12.9	82	32.7		39	35	16	55	23	17	54		17	74	
17	74	59.7	+23	13.1	96	55.4	+25	35.9	40	16	41	17	11	17	45	5	33	77
18	89	59.6	+23	13.2	111	18.1	+25	43.7	45	16	24	16	58	17	35	5	52	81
19	104	59.4		13.3	125	40.7		36	50	16	04	42	23			6	16	86
20	119	59.3		13.5	140	03.2	+25	58.5	52	15	54	35	18			27	89	
21	134	59.2		13.6	154	25.7	+26	05.7	54	43	26	13				40	93	
22	149	59.1		13.8	168	48.1		34	56	30	18	07				6	56	97
23	164	58.9		13.9	183	10.4		33	58	15	16	07	17	00		7	14	103
24	179	58.8	+23	14.0	197	32.6	+26	26.1	60 S	14	59	15	56	16	52	7	37	114
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 35 ^m 2			Mag: -4.5 PMG: 15 ^h 16 ^m			Mag: +0.8 PMG: 7 ^h 57 ^m			Mag: -2.6 PMG: 23 ^h 23 ^m			Mag: +0.5 PMG: 16 ^h 08 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	260	55.8	131	01.0	+20	38.7	240	40.7	+6	54.2	8	10.8	-21	48.4	117	30.4	+15	49.2
1	275	58.3	146	01.1		38.0	255	41.4		54.9	23	13.6		48.3	132	32.7		49.2
2	291	00.7	161	01.2		37.3	270	42.2		55.6	38	16.4		48.3	147	34.9		49.1
3	306	03.2	176	01.3		36.5	285	42.9		56.3	53	19.2		48.3	162	37.2		49.0
4	321	05.6	191	01.4		35.8	300	43.7		57.0	68	22.0		48.2	177	39.4		49.0
5	336	08.1	206	01.6	+20	35.1	315	44.4	+6	57.7	83	24.8	-21	48.2	192	41.7	+15	48.9
6	351	10.6	221	01.7	+20	34.3	330	45.1	+6	58.4	98	27.6	-21	48.2	207	43.9	+15	48.8
7	6	13.0	236	01.8		33.6	345	45.9		59.1	113	30.4		48.1	222	46.2		48.7
8	21	15.5	251	01.9		32.9	0	46.6	+6	59.8	128	33.2		48.1	237	48.4		48.7
9	36	18.0	266	02.0		32.2	15	47.4	+7	00.5	143	36.0		48.1	252	50.7		48.6
10	51	20.4	281	02.1		31.4	30	48.1		01.1	158	38.8		48.0	267	52.9		48.5
11	66	22.9	296	02.3	+20	30.7	45	48.9	+7	01.8	173	41.6	-21	48.0	282	55.2	+15	48.5
12	81	25.4	311	02.4	+20	30.0	60	49.6	+7	02.5	188	44.4	-21	48.0	297	57.5	+15	48.4
13	96	27.8	326	02.5		29.2	75	50.3		03.2	203	47.2		47.9	312	59.7		48.3
14	111	30.3	341	02.6		28.5	90	51.1		03.9	218	50.0		47.9	328	02.0		48.3
15	126	32.8	356	02.8		27.8	105	51.8		04.6	233	52.8		47.9	343	04.2		48.2
16	141	35.2	11	02.9		27.0	120	52.6		05.3	248	55.6		47.9	358	06.5		48.1
17	156	37.7	26	03.0	+20	26.3	135	53.3	+7	06.0	263	58.4	-21	47.8	13	08.7	+15	48.1
18	171	40.1	41	03.1	+20	25.6	150	54.1	+7	06.7	279	01.2	-21	47.8	28	11.0	+15	48.0
19	186	42.6	56	03.3		24.8	165	54.8		07.4	294	04.0		47.8	43	13.2		47.9
20	201	45.1	71	03.4		24.1	180	55.5		08.1	309	06.8		47.7	58	15.5		47.8
21	216	47.5	86	03.5		23.4	195	56.3		08.7	324	09.6		47.7	73	17.7		47.8
22	231	50.0	101	03.7		22.6	210	57.0		09.4	339	12.4		47.7	88	20.0		47.7
23	246	52.5	116	03.8		21.9	225	57.8		10.1	354	15.2		47.6	103	22.2		47.6
24	261	54.9	131	03.9	+20	21.2	240	58.5	+7	10.8	9	18.0	-21	47.6	118	24.5	+15	47.6
Dif	—		+1		-7		+7		+7		+28		0		+23		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 2				Edad: 28 ^d 2 PHE { 4 ^h : 60 ^o 0 12 ^h : 59 ^o 9 20 ^h : 59 ^o 8 PMG: 11 ^h 19 ^m R ^o : 64 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	58.8	+23	14.0	197	32.6	+26	26.1	60 N	** **	0 55	2 37	0 56	31	22	12	60	
1	194	58.7		14.2	211	54.8	32	32.5	58	** **	1 43	2 57	1 23	40	21	36	61	
2	209	58.5		14.3	226	17.0	32	38.7	56	** **	2 12	3 13	1 44	46	21	10	62	
3	224	58.4		14.4	240	39.1	31	44.7	54	0 51	33	27	2 02	48	20	49	63	
4	239	58.3		14.5	255	01.1	30	50.6	52	1 34	2 51	40	17	51		32	63	
5	254	58.1	+23	14.7	269	23.1	30	+26 56.2	50	2 01	3 06	3 50	2 30	52	20	17	64	
6	269	58.0	+23	14.8	283	45.0	29	+27 01.6	45	2 46	3 35	4 13	2 57	56	19	47	64	
7	284	57.9		14.9	298	06.9	29	06.9	40	3 16	3 58	31	3 19	57		24	64	
8	299	57.7		15.1	312	28.7	28	11.9	35	39	4 16	45	37	59	19	05	64	
9	314	57.6		15.2	326	50.5	28	16.8	30	3 58	31	4 58	3 53	59	18	48	64	
10	329	57.5		15.3	341	12.3	28	21.4	20	4 27	4 56	5 20	4 19	61	18	20	64	
11	344	57.3	+23	15.4	355	34.0	27	+27 25.9	10 N	4 49	5 16	5 39	4 42	63	17	56	64	
12	359	57.2	+23	15.6	9	55.7	27	+27 30.1	0	5 08	5 34	5 57	5 03	64	17	34	64	
13	14	57.1		15.7	24	17.4	27	34.2	10 S	25	5 51	6 14	25	65	17	11	64	
14	29	56.9		15.8	38	39.1	27	38.0	20	41	6 08	32	5 48	66	16	48	63	
15	44	56.8		15.9	53	00.7	26	41.7	37	5 57	27	6 53	6 15	68		20	63	
16	59	56.7		16.1	67	22.3	26	45.1	34	6 06	37	7 06	31	69	16	03	63	
17	74	56.5	+23	16.2	81	43.9	26	+27 48.4	33	6 15	6 49	7 20	6 50	70	15	44	62	
18	89	56.4	+23	16.3	96	05.4	25	+27 51.4	30	6 25	7 02	7 36	7 13	70	15	21	62	
19	104	56.3		16.4	110	27.0	26	54.3	29	37	18	7 57	42	72	14	51	61	
20	119	56.1		16.5	124	48.5	25	56.9	26	42	26	8 07	7 56	73		37	60	
21	134	56.0		16.7	139	10.1	26	+27 59.3	24	48	34	18	8 13	74		20	59	
22	149	55.9		16.8	153	31.6	25	+28 01.5	22	6 54	43	30	33	76	14	00	57	
23	164	55.7		16.9	167	53.2	26	03.6	21	7 01	7 53	8 45	8 57	79	13	35	55	
24	179	55.6	+23	17.0	182	14.7	25	+28 05.4	18	7 08	8 05	9 02	9 31	85	13	00	51	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 31 ^m 3		Mag: -4.5 PMG: 15 ^h 16 ^m				Mag: +0.8 PMG: 7 ^h 56 ^m				Mag: -2.6 PMG: 23 ^h 18 ^m				Mag: +0.6 PMG: 16 ^h 04 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	261	54.9	131	03.9	+20	21.2	240	58.5	+7	10.8	9	18.0	-21	47.6	118	24.5	+15	47.6
1	276	57.4	146	04.1		20.4	255	59.3		11.5	24	20.8		47.6	133	26.7		47.5
2	291	59.9	161	04.2		19.7	271	00.0		12.2	39	23.5		47.5	148	29.0		47.4
3	307	02.3	176	04.4		18.9	286	00.7		12.9	54	26.3		47.5	163	31.2		47.3
4	322	04.8	191	04.5		18.2	301	01.5		13.6	69	29.1		47.5	178	33.5		47.3
5	337	07.3	206	04.6	+20	17.5	316	02.2	+7	14.3	84	31.9	-21	47.4	193	35.8	+15	47.2
6	352	09.7	221	04.8	+20	16.7	331	03.0	+7	15.0	99	34.7	-21	47.4	208	38.0	+15	47.1
7	7	12.2	236	04.9		16.0	346	03.7		15.6	114	37.5		47.4	223	40.3		47.1
8	22	14.6	251	05.1		15.2	1	04.4		16.3	129	40.3		47.4	238	42.5		47.0
9	37	17.1	266	05.2		14.5	16	05.2		17.0	144	43.1		47.3	253	44.8		46.9
10	52	19.6	281	05.4		13.8	31	05.9		17.7	159	45.9		47.3	268	47.0		46.9
11	67	22.0	296	05.5	+20	13.0	46	06.7	+7	18.4	174	48.7	-21	47.3	283	49.3	+15	46.8
12	82	24.5	311	05.7	+20	12.3	61	07.4	+7	19.1	189	51.5	-21	47.2	298	51.5	+15	46.7
13	97	27.0	326	05.8		11.5	76	08.2		19.8	204	54.3		47.2	313	53.8		46.6
14	112	29.4	341	06.0		10.8	91	08.9		20.5	219	57.1		47.2	328	56.0		46.6
15	127	31.9	356	06.2		10.0	106	09.6		21.1	234	59.9		47.1	343	58.3		46.5
16	142	34.4	11	06.3		09.3	121	10.4		21.8	250	02.7		47.1	359	00.5		46.4
17	157	36.8	26	06.5	+20	08.5	136	11.1	+7	22.5	265	05.5	-21	47.1	14	02.8	+15	46.4
18	172	39.3	41	06.6	+20	07.8	151	11.9	+7	23.2	280	08.3	-21	47.0	29	05.0	+15	46.3
19	187	41.8	56	06.8		07.0	166	12.6		23.9	295	11.1		47.0	44	07.3		46.2
20	202	44.2	71	07.0		06.3	181	13.4		24.6	310	13.9		47.0	59	09.5		46.1
21	217	46.7	86	07.1		05.6	196	14.1		25.3	325	16.7		46.9	74	11.8		46.1
22	232	49.1	101	07.3		04.8	211	14.8		26.0	340	19.5		46.9	89	14.0		46.0
23	247	51.6	116	07.5		04.1	226	15.6		26.6	355	22.3		46.9	104	16.3		45.9
24	262	54.1	131	07.6	+20	03.3	241	16.3	+7	27.3	10	25.1	-21	46.9	119	18.5	+15	45.9
Dif	—		+2		-7		+7		+7		+28		0		+23		-1	

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 : 59/6 12 ^h : 59/4 20 ^h : 59/2											
	PMG: 12 ^h 00 ^m 4			SD: 16/3 PMG: 12 ^h 23 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	55.6	+23	17.0	182	14.7	+28	05.4	60 N	21 25	23 09	** ** *	1 27	74	23 12 22
1	194	55.5		17.1	196	36.3	26	07.0	58	21 05	22 20	** ** *	2 03	72	22 37 32
2	209	55.3		17.2	210	57.8	25	08.4	56	20 48	21 50	** ** *	30	70	22 12 38
3	224	55.2		17.4	225	19.4	26	09.6	54	34	28	23 13	2 50	70	21 52 44
4	239	55.1		17.5	239	41.0	26	10.6	52	22	21 10	22 28	3 08	68	35 44
5	254	54.9	+23	17.6	254	02.6	26	+28	50	20 11	20 55	22 01	3 22	69	21 21 45
6	269	54.8	+23	17.7	268	24.2	26	+28	45	19 48	20 26	21 15	3 53	67	20 51 49
7	284	54.7		17.8	282	45.9	27	12.4	40	30	20 03	20 45	4 16	67	28 52
8	299	54.5		17.9	297	07.6	27	12.6	35	15	19 45	22	36	66	20 09 53
9	314	54.4		18.0	311	29.3	27	12.6	30	19 02	30	20 03	4 52	66	19 52 55
10	329	54.3		18.1	325	51.1	28	12.4	20	18 40	19 05	19 34	5 20	65	24 58
11	344	54.1	+23	18.2	340	12.9	28	+28	10 N	18 22	18 45	19 12	5 45	63	19 00 60
12	359	54.0	+23	18.4	354	34.7	28	+28	0	18 04	18 27	18 53	6 07	63	18 38 61
13	14	53.8		18.5	8	56.6	29	10.5	10 S	17 47	18 10	36	30	62	18 15 63
14	29	53.7		18.6	23	18.5	29	09.5	20	28	17 52	20	6 54	62	17 51 65
15	44	53.6		18.7	37	40.5	30	08.3	30	17 07	33	18 03	7 23	60	23 67
16	59	53.4		18.8	52	02.5	30	06.9	35	16 55	23	17 55	7 40	59	17 06 68
17	74	53.3	+23	18.9	66	24.6	31	+28	40	16 41	17 11	17 45	8 00	57	16 46 70
18	89	53.2	+23	19.0	80	46.7	31	+28	45	16 24	16 58	17 35	8 23	57	16 23 71
19	104	53.0		19.1	95	08.9	32	+28	50	16 03	42	23	8 54	54	15 52 75
20	119	52.9		19.2	109	31.2	33	+27	52	15 54	34	18	9 09	53	37 76
21	134	52.8		19.3	123	53.5	33	56.9	54	42	26	12	27	51	15 19 78
22	149	52.6		19.4	138	15.9	34	54.4	56	30	17	06	9 49	48	14 57 82
23	164	52.5		19.5	152	38.4	35	51.6	58	15 15	16 07	17 00	10 16	45	14 30 86
24	179	52.4	+23	19.6	167	01.0	36	+27	60 S	14 58	15 55	16 52	10 56	35	13 51 94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 27 ^m 3		Mag: -4.5 PMG: 15 ^h 15 ^m		Mag: +0.8 PMG: 7 ^h 55 ^m		Mag: -2.6 PMG: 23 ^h 14 ^m		Mag: +0.6 PMG: 16 ^h 00 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	262	54.1	131	07.6	+20	03.3	241	16.3	+7	27.3	119	18.5	+15	45.9		
1	277	56.5	146	07.8		02.6	256	17.1		28.0	134	20.8		45.8		
2	292	59.0	161	08.0		01.8	271	17.8		28.7	149	23.0		45.7		
3	308	01.5	176	08.2		01.0	286	18.6		29.4	164	25.3		45.6		
4	323	03.9	191	08.3	+20	00.3	301	19.3		30.1	179	27.5		45.6		
5	338	06.4	206	08.5	+19	59.5	316	20.0	+7	30.8	194	29.8	+15	45.5		
6	353	08.9	221	08.7	+19	58.8	331	20.8	+7	31.4	209	32.0	+15	45.4		
7	8	11.3	236	08.9		58.0	346	21.5		32.1	224	34.3		45.4		
8	23	13.8	251	09.0		57.3	1	22.3		32.8	239	36.5		45.3		
9	38	16.3	266	09.2		56.5	16	23.0		33.5	254	38.8		45.2		
10	53	18.7	281	09.4		55.8	31	23.8		34.2	269	41.0		45.1		
11	68	21.2	296	09.6	+19	55.0	46	24.5	+7	34.9	284	43.3	+15	45.1		
12	83	23.6	311	09.8	+19	54.3	61	25.2	+7	35.5	299	45.5	+15	45.0		
13	98	26.1	326	10.0		53.5	76	26.0		36.2	314	47.7		44.9		
14	113	28.6	341	10.2		52.8	91	26.7		36.9	329	50.0		44.9		
15	128	31.0	356	10.4		52.0	106	27.5		37.6	344	52.2		44.8		
16	143	33.5	11	10.5		51.2	121	28.2		38.3	359	54.5		44.7		
17	158	36.0	26	10.7	+19	50.5	136	29.0	+7	39.0	14	56.7	+15	44.6		
18	173	38.4	41	10.9	+19	49.7	151	29.7	+7	39.7	29	59.0	+15	44.6		
19	188	40.9	56	11.1		49.0	166	30.4		40.3	45	01.2		44.5		
20	203	43.4	71	11.3		48.2	181	31.2		41.0	60	03.5		44.4		
21	218	45.8	86	11.5		47.4	196	31.9		41.7	75	05.7		44.4		
22	233	48.3	101	11.7		46.7	211	32.7		42.4	90	08.0		44.3		
23	248	50.8	116	11.9		45.9	226	33.4		43.1	105	10.2		44.2		
24	263	53.2	131	12.1	+19	45.2	241	34.2	+7	43.7	120	12.5	+15	44.1		
Dif	—		+2		-8		+7		+7		+28		0		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 1 ^d 9	PHE {	4 ^h : 58 ^h /2 12 ^h : 57 ^h /9 20 ^h : 57 ^h /7 R°: 52 ^m			Civil			Hora	R°	Hora	R°
	PMG: 12 ^h 00 ^m 8								Náutico						
	hG ☉	Dec							hG ☾	Dif	Dec				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	49.1	+23 21.8	152	30.1	+25 44.5	72	60 N	21 26	23 12	** **	4 24 106	23 42	3	
1	194	49.0		166	55.2	37.3	72	58	21 06	22 21	** **	4 48 98	25	9	
2	209	48.8		181	20.4	29.9	74	56	20 49	21 52	** **	5 07 93	23 11	13	
3	224	48.7		195	45.7	22.4	75	54	35	29	23 16	24 87	22 58	17	
4	239	48.6		210	11.1	14.7	77	52	23	21 11	22 30	37 85	47	20	
5	254	48.4	+23 22.2	224	36.7	+25 06.9	78	50	20 12	20 56	22 02	5 50 81	22 38	22	
6	269	48.3	+23 22.2	239	02.4	+24 58.9	80	45	19 49	20 27	21 16	6 14 76	22 17	28	
7	284	48.2		253	28.2	50.8	81	40	31	20 04	20 46	34 72	22 00	32	
8	299	48.0		267	54.1	42.6	82	35	16	19 46	23	6 51 68	21 46	35	
9	314	47.9		282	20.2	34.2	84	30	19 03	31	20 04	7 05 66	33	39	
10	329	47.8		296	46.4	25.7	85	20	18 41	19 06	19 35	29 61	21 12	43	
11	344	47.6	+23 22.6	311	12.7	+24 17.1	86	10 N	18 22	18 45	19 12	7 50 57	20 53	48	
12	359	47.5	+23 22.7	325	39.1	+24 08.3	88	0	18 05	18 27	18 53	8 09 54	20 36	51	
13	14	47.3		340	05.7	+23 59.4	89	10 S	17 47	18 10	36	29 50	20 18	55	
14	29	47.2		354	32.4	50.4	90	20	29	17 53	20	8 49 46	19 59	59	
15	44	47.1		8	59.2	41.2	92	30	17 07	34	18 04	9 13 42	37	64	
16	59	46.9		23	26.2	31.9	93	35	16 55	23	17 55	27 39	24	67	
17	74	46.8	+23 23.1	37	53.3	+23 22.5	94	40	16 41	17 11	17 45	9 43 35	19 09	71	
18	89	46.7	+23 23.1	52	20.5	+23 13.0	95	45	16 24	16 58	17 35	10 02 31	18 51	75	
19	104	46.5		66	47.8	+23 03.3	97	50	16 03	42	23	26 26	28	81	
20	119	46.4		81	15.3	+22 53.6	97	52	15 53	34	18	37 23	17	84	
21	134	46.3		95	42.9	43.7	99	54	42	26	12	10 50 20	18 05	87	
22	149	46.1		110	10.6	33.7	100	56	30	17	06	11 05 15	17 51	91	
23	164	46.0		124	38.5	23.6	101	58	15 15	16 07	17 00	22 11	34	97	
24	179	45.8	+23 23.5	139	06.4	+22 13.4	102	60 S	14 58	15 55	16 52	11 43 4	17 14	104	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 19 ^m 5			Mag: -4.5 PMG: 15 ^h 15 ^m			Mag: +0.8 PMG: 7 ^h 52 ^m			Mag: -2.6 PMG: 23 ^h 05 ^m			Mag: +0.6 PMG: 15 ^h 53 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	°	'	°
0	264	52.4	131 17.4	+19 26.7	241 52.0	+8 00.1	12	39.2	-21 45.4	121 06.4	+15 42.4				
1	279	54.8	146 17.7	26.0	256 52.7	00.7	27	42.0	45.3	136 08.6	42.3				
2	294	57.3	161 17.9	25.2	271 53.5	01.4	42	44.8	45.3	151 10.8	42.2				
3	309	59.8	176 18.2	24.4	286 54.2	02.1	57	47.6	45.3	166 13.1	42.2				
4	325	02.2	191 18.4	23.6	301 55.0	02.8	72	50.4	45.2	181 15.3	42.1				
5	340	04.7	206 18.6	+19 22.9	316 55.7	+8 03.5	87	53.2	-21 45.2	196 17.6	+15 42.0				
6	355	07.1	221 18.9	+19 22.1	331 56.4	+8 04.1	102	56.0	-21 45.2	211 19.8	+15 42.0				
7	10	09.6	236 19.1	21.3	346 57.2	04.8	117	58.8	45.1	226 22.1	41.9				
8	25	12.1	251 19.4	20.5	1 57.9	05.5	133	01.6	45.1	241 24.3	41.8				
9	40	14.5	266 19.6	19.7	16 58.7	06.2	148	04.4	45.1	256 26.5	41.7				
10	55	17.0	281 19.9	19.0	31 59.4	06.8	163	07.2	45.1	271 28.8	41.7				
11	70	19.5	296 20.1	+19 18.2	47 00.2	+8 07.5	178	10.0	-21 45.0	286 31.0	+15 41.6				
12	85	21.9	311 20.4	+19 17.4	62 00.9	+8 08.2	193	12.7	-21 45.0	301 33.3	+15 41.5				
13	100	24.4	326 20.7	16.6	77 01.6	08.9	208	15.5	45.0	316 35.5	41.4				
14	115	26.9	341 20.9	15.9	92 02.4	09.5	223	18.3	44.9	331 37.8	41.4				
15	130	29.3	356 21.2	15.1	107 03.1	10.2	238	21.1	44.9	346 40.0	41.3				
16	145	31.8	11 21.4	14.3	122 03.9	10.9	253	23.9	44.9	1 42.2	41.2				
17	160	34.3	26 21.7	+19 13.5	137 04.6	+8 11.6	268	26.7	-21 44.8	16 44.5	+15 41.1				
18	175	36.7	41 22.0	+19 12.7	152 05.4	+8 12.2	283	29.5	-21 44.8	31 46.7	+15 41.1				
19	190	39.2	56 22.2	11.9	167 06.1	12.9	298	32.3	44.8	46 49.0	41.0				
20	205	41.6	71 22.5	11.2	182 06.8	13.6	313	35.1	44.7	61 51.2	40.9				
21	220	44.1	86 22.8	10.4	197 07.6	14.3	328	37.9	44.7	76 53.5	40.8				
22	235	46.6	101 23.0	09.6	212 08.3	14.9	343	40.6	44.7	91 55.7	40.8				
23	250	49.0	116 23.3	08.8	227 09.1	15.6	358	43.4	44.6	106 57.9	40.7				
24	265	51.5	131 23.6	+19 08.0	242 09.8	+8 16.3	13	46.2	-21 44.6	122 00.2	+15 40.6				
Dif	—			+3	-8	+7	+7	+28			0	+22	-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 9	PHE { 4 ^h : 57 ^h /4 12 ^h : 57 ^h /1 20 ^h : 56 ^h /8									
	PMG: 12 ^h 01 ^m 1													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	45.8	+23	23.5	139	06.4	+22	13.4	60 N	0 50	2 36	6 10 99	23 45 1	
1	194	45.7		23.6	153	34.6	+22	03.1	58	1 40	2 56	26 93	34 5	
2	209	45.6		23.7	168	02.8	+21	52.7	56	2 10	3 13	40 89	24 8	
3	224	45.4		23.7	182	31.2		42.1	54	0 46	33	6 51 86	15 11	
4	239	45.3		23.8	196	59.6		31.5	52	1 32	2 50	7 02 82	07 14	
5	254	45.2	+23	23.8	211	28.3	+21	20.8	50	2 00	3 06	7 11 79	23 00 17	
6	269	45.0	+23	23.9	225	57.0	+21	09.9	45	2 46	3 35	7 30 74	22 45 21	
7	284	44.9		24.0	240	25.9	+20	59.0	40	3 16	3 58	46 69	32 26	
8	299	44.8		24.0	254	54.9		48.0	35	39	4 16	7 59 66	21 30	
9	314	44.6		24.1	269	24.0		36.9	30	3 58	31	8 11 62	22 12 32	
10	329	44.5		24.1	283	53.3		25.7	20	4 27	4 56	30 57	21 55 38	
11	344	44.3	+23	24.2	298	22.6	+20	14.4	10 N	4 50	5 17	8 47 53	21 41 42	
12	359	44.2	+23	24.3	312	52.1	+20	03.0	0	5 09	5 35	9 03 49	21 27 46	
13	14	44.1		24.3	327	21.7	+19	51.5	10 S	26	5 52	19 44	21 13 51	
14	29	43.9		24.4	341	51.5		39.9	20	42	6 09	35 40	20 58 55	
15	44	43.8		24.4	356	21.3		28.3	30	5 58	28	9 55 35	41 61	
16	59	43.7		24.5	10	51.3		16.6	35	6 07	39	10 06 32	31 64	
17	74	43.5	+23	24.5	25	21.4	+19	04.8	40	6 16	6 51	10 18 29	20 20 67	
18	89	43.4	+23	24.6	39	51.6	+18	52.9	45	6 27	7 04	10 33 25	20 06 72	
19	104	43.3		24.6	54	21.9		40.9	50	39	20	10 52 18	19 49 77	
20	119	43.1		24.7	68	52.4		28.9	52	44	28	11 00 16	41 80	
21	134	43.0		24.7	83	22.9		16.7	54	50	36	10 13	32 83	
22	149	42.8		24.8	97	53.6	+18	04.6	56	6 56	45	20 10	22 87	
23	164	42.7		24.8	112	24.4	+17	52.3	58	7 02	7 55	33 5	19 11 91	
24	179	42.6	+23	24.9	126	55.3	+17	40.0	60 S	7 10	8 07	11 47 1	18 58 96	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO	
	PMG			Mag: -4.5			Mag: +0.8			Mag: -2.6			Mag: +0.6	
	6 ^h 15 ^m 5			PMG: 15 ^h 14 ^m			PMG: 7 ^h 51 ^m			PMG: 23 ^h 01 ^m			PMG: 15 ^h 50 ^m	
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	265	51.5		131	23.6	+19	242	09.8	+8	13	46.2	-21	122	00.2
1	280	54.0		146	23.9		257	10.6		28	49.0		137	02.4
2	295	56.4		161	24.1		272	11.3		43	51.8		152	04.7
3	310	58.9		176	24.4		287	12.0		58	54.6		167	06.9
4	326	01.4		191	24.7		302	12.8		73	57.4		182	09.1
5	341	03.8		206	25.0	+19	317	13.5	+8	89	00.2	-21	197	11.4
6	356	06.3		221	25.2	+19	332	14.3	+8	104	03.0	-21	212	13.6
7	11	08.7		236	25.5		347	15.0		119	05.7		227	15.9
8	26	11.2		251	25.8		2	15.8		134	08.5		242	18.1
9	41	13.7		266	26.1		17	16.5		149	11.3		257	20.3
10	56	16.1		281	26.4	+19	32	17.3		164	14.1		272	22.6
11	71	18.6		296	26.7	+18	47	18.0	+8	179	16.9	-21	287	24.8
12	86	21.1		311	27.0	+18	62	18.7	+8	194	19.7	-21	302	27.1
13	101	23.5		326	27.3		77	19.5		209	22.5		317	29.3
14	116	26.0		341	27.6		92	20.2		224	25.3		332	31.5
15	131	28.5		356	27.8		107	21.0		239	28.1		347	33.8
16	146	30.9		11	28.1		122	21.7		254	30.8		2	36.0
17	161	33.4		26	28.4	+18	137	22.5	+8	269	33.6	-21	17	38.3
18	176	35.9		41	28.7	+18	152	23.2	+8	284	36.4	-21	32	40.5
19	191	38.3		56	29.0		167	23.9		299	39.2		47	42.7
20	206	40.8		71	29.3		182	24.7		314	42.0		62	45.0
21	221	43.2		86	29.7		197	25.4		329	44.8		77	47.2
22	236	45.7		101	30.0		212	26.2		344	47.6		92	49.5
23	251	48.2		116	30.3		227	26.9		359	50.4		107	51.7
24	266	50.6		131	30.6	+18	242	27.7	+8	14	53.1	-21	122	53.9
Dif	—			+3	-8		+7	+7		+28	0		+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15:7 PMG: 12 ^h 01 ^m 3			Edad: 3 ^d 9 PHE { 4 ^h : 56.6 12 ^h : 56.3 20 ^h : 56.1 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	h m	h m	h m
0	179	42.6	+23	24.9	126	55.3	+17	40.0	60 N	21 27	23 14	** **	7 49	92	23 46	**
1	194	42.4		24.9	141	26.3 ¹²⁰		27.6 ¹²⁴	58	21 07	22 23	** **	7 59	88	39	3
2	209	42.3		25.0	155	57.4 ¹²¹		15.1 ¹²⁵	56	20 50	21 53	** **	8 09	83	32	6
3	224	42.2		25.0	170	28.7 ¹²³	+17	02.6 ¹²⁵	54	36	30	23 18	17	80	26	9
4	239	42.0		25.1	185	00.0 ¹²³	+16	50.0 ¹²⁶	52	23	21 12	22 31	24	77	21	12
5	254	41.9	+23	25.1	199	31.5 ¹²⁵	+16	37.3 ¹²⁷	50	20 12	20 57	22 03	8 30	75	23 17	13
6	269	41.7	+23	25.1	214	03.0 ¹²⁵	+16	24.6 ¹²⁷	45	19 50	20 27	21 17	8 44	69	23 06	19
7	284	41.6		25.2	228	34.7 ¹²⁷	+16	11.8 ¹²⁸	40	32	20 05	20 46	8 55	65	22 58	22
8	299	41.5		25.2	243	06.5 ¹²⁸	+15	59.0 ¹²⁸	35	17	19 46	23	9 05	61	51	25
9	314	41.3		25.3	257	38.3 ¹²⁸		46.1 ¹²⁹	30	19 04	31	20 04	13 59		44	29
10	329	41.2		25.3	272	10.3 ¹³⁰		33.2 ¹²⁹	20	18 42	19 06	19 35	27 54		33	33
11	344	41.1	+23	25.3	286	42.4 ¹³¹	+15	20.2 ¹³⁰	10 N	18 23	18 46	19 13	9 40	48	22 23	38
12	359	40.9	+23	25.4	301	14.6 ¹³²	+15	07.1 ¹³¹	0	18 05	18 27	18 54	9 52	44	22 13	43
13	14	40.8		25.4	315	46.8 ¹³²	+14	54.0 ¹³¹	10 S	17 47	18 10	37	10 03	40	22 04	47
14	29	40.7		25.5	330	19.2 ¹³⁴		40.8 ¹³²	20	29	17 53	20	15 36		21 53	52
15	44	40.5		25.5	344	51.7 ¹³⁵		27.6 ¹³²	30	17 08	34	18 04	30 30		42	57
16	59	40.4		25.5	359	24.2 ¹³⁵		14.4 ¹³²	35	16 55	23	17 55	38 27		35	60
17	74	40.2	+23	25.6	13	56.9 ¹³⁷	+14	01.1 ¹³³	40	16 41	17 12	17 46	10 47	24	21 27	64
18	89	40.1	+23	25.6	28	29.7 ¹³⁸	+13	47.7 ¹³⁴	45	16 24	16 58	17 35	10 58	19	21 18	68
19	104	40.0		25.6	43	02.5 ¹³⁸		34.4 ¹³³	50	16 04	42	24	11 10	15	06	74
20	119	39.8		25.7	57	35.4 ¹³⁹		20.9 ¹³⁵	52	15 54	35	18	16 13		21 01	76
21	134	39.7		25.7	72	08.4 ¹⁴⁰	+13	07.5 ¹³⁴	54	42	26	13	23 10		20 55	79
22	149	39.6		25.7	86	41.6 ¹⁴²	+12	53.9 ¹³⁶	56	30	17	06	30 7		49	81
23	164	39.4		25.8	101	14.7 ¹⁴¹		40.4 ¹³⁵	58	15 15	16 07	17 00	38 4		42	85
24	179	39.3	+23	25.8	115	48.0 ¹⁴³	+12	26.8 ¹³⁶	60 S	14 58	15 55	16 52	11 48	**	20 34	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 11 ^m 6		Mag: -4.5 PMG: 15 ^h 14 ^m		Mag: +0.8 PMG: 7 ^h 50 ^m		Mag: -2.6 PMG: 22 ^h 56 ^m		Mag: +0.6 PMG: 15 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	266	50.6	131	30.6	+18	49.1	242	27.7	+8	32.4
1	281	53.1	146	30.9		48.3	257	28.4		33.1
2	296	55.6	161	31.2		47.5	272	29.1		33.8
3	311	58.0	176	31.5		46.7	287	29.9		34.4
4	327	00.5	191	31.8		45.9	302	30.6		35.1
5	342	03.0	206	32.1	+18	45.1	317	31.4	+8	35.8
6	357	05.4	221	32.5	+18	44.3	332	32.1	+8	36.4
7	12	07.9	236	32.8		43.5	347	32.9		37.1
8	27	10.4	251	33.1		42.7	2	33.6		37.8
9	42	12.8	266	33.4		41.9	17	34.4		38.4
10	57	15.3	281	33.7		41.1	32	35.1		39.1
11	72	17.7	296	34.1	+18	40.3	47	35.8	+8	39.8
12	87	20.2	311	34.4	+18	39.5	62	36.6	+8	40.4
13	102	22.7	326	34.7		38.7	77	37.3		41.1
14	117	25.1	341	35.1		37.9	92	38.1		41.8
15	132	27.6	356	35.4		37.1	107	38.8		42.5
16	147	30.1	11	35.7		36.3	122	39.6		43.1
17	162	32.5	26	36.0	+18	35.5	137	40.3	+8	43.8
18	177	35.0	41	36.4	+18	34.7	152	41.0	+8	44.5
19	192	37.5	56	36.7		33.9	167	41.8		45.1
20	207	39.9	71	37.1		33.1	182	42.5		45.8
21	222	42.4	86	37.4		32.3	197	43.3		46.5
22	237	44.9	101	37.7		31.5	212	44.0		47.1
23	252	47.3	116	38.1		30.7	227	44.8		47.8
24	267	49.8	131	38.4	+18	29.9	242	45.5	+8	48.4
Dif	—		+3		-8		+7		+7	
									+28	
									0	
									+22	
									-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 01 ^m 5			Edad: 4 ^d 9 PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4 R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	39.3	+23 25.8	115	48.0	+12 26.8	60 N	** **	0 49	2 35	9 21	86	23 45	0
1	194	39.1	25.8	130	21.4 ¹⁴⁴	+12 13.2 ¹³⁶	58	** **	1 40	2 56	27 82		42	2
2	209	39.0	25.9	144	54.8 ¹⁴⁴	+11 59.5 ¹³⁷	56	** **	2 10	3 13	32 79		38	5
3	224	38.9	25.9	159	28.4 ¹⁴⁶	45.8 ¹³⁷	54	0 45	33	27	37 76		35	8
4	239	38.7	25.9	174	02.0 ¹⁴⁶	32.1 ¹³⁷	52	1 32	2 51	39	41 74		33	9
5	254	38.6	+23 25.9	188	35.7 ¹⁴⁷	+11 18.3 ¹³⁸	50	2 00	3 06	3 50	9 45 71	23 30	12	
6	269	38.5	+23 26.0	203	09.4 ¹⁴⁷	+11 04.6 ¹³⁷	45	2 46	3 36	4 13	9 53 67	23 25	16	
7	284	38.3	26.0	217	43.3 ¹⁴⁹	+10 50.7 ¹³⁹	40	3 16	3 58	31	10 00 63	20	20	
8	299	38.2	26.0	232	17.2 ¹⁴⁹	36.9 ¹³⁸	35	40	4 16	46	06 59	16	24	
9	314	38.1	26.0	246	51.2 ¹⁵⁰	23.0 ¹³⁹	30	3 58	32	4 59	12 55	13	26	
10	329	37.9	26.1	261	25.2 ¹⁵⁰	+10 09.1 ¹³⁹	20	4 27	4 57	5 21	21 50	06	32	
11	344	37.8	+23 26.1	275	59.4 ¹⁵²	+9 55.2 ¹³⁹	10 N	4 50	5 17	5 40	10 28 46	23 01	36	
12	359	37.6	+23 26.1	290	33.6 ¹⁵²	+9 41.2 ¹⁴⁰	0	5 09	5 35	5 58	10 36 41	22 56	40	
13	14	37.5	26.1	305	07.9 ¹⁵³	27.2 ¹⁴⁰	10 S	26	5 52	6 15	43 37	51	44	
14	29	37.4	26.2	319	42.2 ¹⁵³	+9 13.2 ¹⁴⁰	20	42	6 10	34	10 51 32	45	49	
15	44	37.2	26.2	334	16.6 ¹⁵⁴	+8 59.2 ¹⁴⁰	30	5 59	29	6 55	11 00 27	39	54	
16	59	37.1	26.2	348	51.1 ¹⁵⁵	45.1 ¹⁴¹	35	6 08	39	7 07	05 24	35	58	
17	74	37.0	+23 26.2	3	25.6 ¹⁵⁵	+8 31.1 ¹⁴⁰	40	6 17	6 51	7 22	11 11 21	22 31	61	
18	89	36.8	+23 26.2	18	00.2 ¹⁵⁶	+8 17.0 ¹⁴¹	45	6 27	7 05	7 39	11 17 17	22 26	65	
19	104	36.7	26.2	32	34.9 ¹⁵⁷	+8 02.9 ¹⁴¹	50	39	21	7 59	25 13	20	70	
20	119	36.6	26.3	47	09.6 ¹⁵⁷	+7 48.8 ¹⁴¹	52	44	28	8 09	29 10	17	72	
21	134	36.4	26.3	61	44.4 ¹⁵⁸	34.6 ¹⁴²	54	50	36	20	33 8	14	75	
22	149	36.3	26.3	76	19.2 ¹⁵⁸	20.5 ¹⁴¹	56	6 56	46	33	37 5	10	78	
23	164	36.1	26.3	90	54.1 ¹⁵⁹	+7 06.3 ¹⁴²	58	7 03	7 56	8 48	42 2	07	80	
24	179	36.0	+23 26.3	105	29.0 ¹⁵⁹	+6 52.1 ¹⁴²	60 S	7 11	8 08	9 05	11 47 0	22 02	85	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG 6 ^h 07 ^m 7		Mag: -4.5 PMG: 15 ^h 13 ^m		Mag: +0.8 PMG: 7 ^h 49 ^m		Mag: -2.6 PMG: 22 ^h 52 ^m			Mag: +0.6 PMG: 15 ^h 42 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	267	49.8	131 38.4	+18 29.9	242 45.5	+8 48.4	16	00.0	-21 43.1	123 47.6	+15 37.0	
1	282	52.2	146 38.8	29.1	257 46.3	49.1	31	02.8	43.1	138 49.9	36.9	
2	297	54.7	161 39.1	28.3	272 47.0	49.8	46	05.5	43.1	153 52.1	36.9	
3	312	57.2	176 39.5	27.5	287 47.7	50.4	61	08.3	43.1	168 54.3	36.8	
4	327	59.6	191 39.8	26.7	302 48.5	51.1	76	11.1	43.0	183 56.6	36.7	
5	343	02.1	206 40.2	+18 25.9	317 49.2	+8 51.8	91	13.9	-21 43.0	198 58.8	+15 36.6	
6	358	04.6	221 40.5	+18 25.1	332 50.0	+8 52.4	106	16.7	-21 43.0	214 01.0	+15 36.6	
7	13	07.0	236 40.9	24.3	347 50.7	53.1	121	19.5	42.9	229 03.3	36.5	
8	28	09.5	251 41.3	23.5	2 51.5	53.8	136	22.2	42.9	244 05.5	36.4	
9	43	12.0	266 41.6	22.7	17 52.2	54.4	151	25.0	42.9	259 07.7	36.3	
10	58	14.4	281 42.0	21.9	32 52.9	55.1	166	27.8	42.8	274 10.0	36.3	
11	73	16.9	296 42.3	+18 21.1	47 53.7	+8 55.8	181	30.6	-21 42.8	289 12.2	+15 36.2	
12	88	19.3	311 42.7	+18 20.3	62 54.4	+8 56.4	196	33.4	-21 42.8	304 14.4	+15 36.1	
13	103	21.8	326 43.1	19.5	77 55.2	57.1	211	36.2	42.8	319 16.7	36.0	
14	118	24.3	341 43.4	18.6	92 55.9	57.8	226	38.9	42.7	334 18.9	36.0	
15	133	26.7	356 43.8	17.8	107 56.7	58.4	241	41.7	42.7	349 21.1	35.9	
16	148	29.2	11 44.2	17.0	122 57.4	59.1	256	44.5	42.7	4 23.4	35.8	
17	163	31.7	26 44.5	+18 16.2	137 58.2	+8 59.7	271	47.3	-21 42.6	19 25.6	+15 35.7	
18	178	34.1	41 44.9	+18 15.4	152 58.9	+9 00.4	286	50.1	-21 42.6	34 27.9	+15 35.6	
19	193	36.6	56 45.3	14.6	167 59.6	01.1	301	52.8	42.6	49 30.1	35.6	
20	208	39.1	71 45.7	13.8	183 00.4	01.7	316	55.6	42.5	64 32.3	35.5	
21	223	41.5	86 46.0	13.0	198 01.1	02.4	331	58.4	42.5	79 34.6	35.4	
22	238	44.0	101 46.4	12.2	213 01.9	03.0	347	01.2	42.5	94 36.8	35.3	
23	253	46.5	116 46.8	11.4	228 02.6	03.7	2 04.0	42.5		109 39.0	35.3	
24	268	48.9	131 47.2	+18 10.5	243 03.4	+9 04.4	17 06.7	-21 42.4		124 41.3	+15 35.2	
Dif	—		+4	-8	+7	+7	+28		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 5 ^d 9	PHE	$\left\{ \begin{array}{l} 4^h: 55/2 \\ 12^h: 55/0 \\ 20^h: 54/8 \\ R^{\circ}: 39^m \end{array} \right.$																
	PMG: 12 ^h 01 ^m 7																					
	hG ☉			hG ☾					Civil	Náutico	Hora	R°	Hora	R°								
	h	o	'	h	o	'	o	h	m	h	m	h	m	m								
0	179	36.0	+23 26.3	105	29.0	+6 52.1	60 N	21 28	23 15	** **	10 47	82	23 45	**								
1	194	35.9	26.3	120	04.0 ¹⁶⁰	37.9 ¹⁴²	58	21 07	22 23	** **	49 79		44 2									
2	209	35.7	26.3	134	39.1 ¹⁶¹	23.7 ¹⁴²	56	20 50	21 53	** **	51 77		43 5									
3	224	35.6	26.4	149	14.2 ¹⁶¹	+6 09.5 ¹⁴²	54	36	31	23 19	53 74		43 7									
4	239	35.5	26.4	163	49.3 ¹⁶¹	+5 55.3 ¹⁴²	52	24	21 13	22 31	55 71		42 10									
5	254	35.3	+23 26.4	178	24.5 ¹⁶²	+5 41.0 ¹⁴³	50	20 13	20 58	22 03	10 56	69	23 42	12								
6	269	35.2	+23 26.4	192	59.8 ¹⁶³	+5 26.8 ¹⁴²	45	19 50	20 28	21 18	11 00	64	23 41	16								
7	284	35.0	26.4	207	35.0 ¹⁶²	+5 12.5 ¹⁴³	40	32	20 05	20 47	03 60		40 20									
8	299	34.9	26.4	222	10.4 ¹⁶⁴	+4 58.3 ¹⁴²	35	17	19 47	24	05 57		40 23									
9	314	34.8	26.4	236	45.8 ¹⁶⁴	44.0 ¹⁴³	30	19 04	32	20 05	07 54		39 26									
10	329	34.6	26.4	251	21.2 ¹⁶⁴	29.7 ¹⁴³	20	18 42	19 07	19 36	11 48		38 31									
11	344	34.5	+23 26.4	265	56.6 ¹⁶⁴	+4 15.4 ¹⁴³	10 N	18 23	18 46	19 13	11 14	44	23 37	35								
12	359	34.4	+23 26.4	280	32.1 ¹⁶⁵	+4 01.2 ¹⁴²	0	18 05	18 28	18 54	11 17	40	23 36	40								
13	14	34.2	26.4	295	07.7 ¹⁶⁶	+3 46.9 ¹⁴³	10 S	17 48	18 11	37	20 36		35 44									
14	29	34.1	26.4	309	43.2 ¹⁶⁵	32.6 ¹⁴³	20	29	17 53	21	23 31		34 49									
15	44	34.0	26.4	324	18.8 ¹⁶⁶	18.3 ¹⁴³	30	17 08	34	18 04	27 26		33 54									
16	59	33.8	26.4	338	54.5 ¹⁶⁷	+3 04.0 ¹⁴³	35	16 56	24	17 56	29 23		33 56									
17	74	33.7	+23 26.4	353	30.1 ¹⁶⁶	+2 49.7 ¹⁴³	40	16 41	17 12	17 46	11 32	19	23 32	60								
18	89	33.5	+23 26.4	8	05.8 ¹⁶⁷	+2 35.4 ¹⁴³	45	16 25	16 59	17 36	11 34	16	23 31	64								
19	104	33.4	26.4	22	41.6 ¹⁶⁸	21.1 ¹⁴³	50	16 04	42	24	38 11		30 68									
20	119	33.3	26.4	37	17.3 ¹⁶⁷	+2 06.8 ¹⁴³	52	15 54	35	19	39 9		29 71									
21	134	33.1	26.4	51	53.1 ¹⁶⁸	+1 52.6 ¹⁴²	54	43	27	13	41 7		29 73									
22	149	33.0	26.4	66	28.9 ¹⁶⁸	38.3 ¹⁴³	56	30	18	07	42 5		28 76									
23	164	32.9	26.4	81	04.8 ¹⁶⁹	24.0 ¹⁴³	58	15 15	16 07	17 00	44 2		27 79									
24	179	32.7	+23 26.4	95	40.7 ¹⁶⁹	+1 09.7 ¹⁴³	60 S	14 58	15 56	16 52	11 47	**	23 27	82								

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 03 ^m 7			Mag: -4.5 PMG: 15 ^h 12 ^m			Mag: +0.7 PMG: 7 ^h 47 ^m			Mag: -2.6 PMG: 22 ^h 47 ^m			Mag: +0.6 PMG: 15 ^h 39 ^m		
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄		
	h	o	'	h	o	'	h	o	'	h	o	'	h	o	'
0	268	48.9		131	47.2	+18 10.5	243	03.4	+9 04.4	17	06.7	-21 42.4	124	41.3	+15 35.2
1	283	51.4		146	47.6	09.7	258	04.1	05.0	32	09.5	42.4	139	43.5	35.1
2	298	53.8		161	48.0	08.9	273	04.9	05.7	47	12.3	42.4	154	45.7	35.0
3	313	56.3		176	48.3	08.1	288	05.6	06.4	62	15.1	42.3	169	48.0	35.0
4	328	58.8		191	48.7	07.3	303	06.3	07.0	77	17.9	42.3	184	50.2	34.9
5	344	01.2		206	49.1	+18 06.5	318	07.1	+9 07.7	92	20.6	-21 42.3	199	52.4	+15 34.8
6	359	03.7		221	49.5	+18 05.7	333	07.8	+9 08.3	107	23.4	-21 42.2	214	54.7	+15 34.7
7	14	06.2		236	49.9	04.8	348	08.6	09.0	122	26.2	42.2	229	56.9	34.6
8	29	08.6		251	50.3	04.0	3	09.3	09.7	137	29.0	42.2	244	59.1	34.6
9	44	11.1		266	50.7	03.2	18	10.1	10.3	152	31.8	42.1	260	01.3	34.5
10	59	13.6		281	51.1	02.4	33	10.8	11.0	167	34.5	42.1	275	03.6	34.4
11	74	16.0		296	51.5	+18 01.6	48	11.5	+9 11.6	182	37.3	-21 42.1	290	05.8	+15 34.3
12	89	18.5		311	51.9	+18 00.8	63	12.3	+9 12.3	197	40.1	-21 42.1	305	08.0	+15 34.3
13	104	21.0		326	52.3	+18 00.0	78	13.0	13.0	212	42.9	42.0	320	10.3	34.2
14	119	23.4		341	52.7	+17 59.1	93	13.8	13.6	227	45.6	42.0	335	12.5	34.1
15	134	25.9		356	53.1	58.3	108	14.5	14.3	242	48.4	42.0	350	14.7	34.0
16	149	28.3		11	53.5	57.5	123	15.3	14.9	257	51.2	41.9	5	17.0	34.0
17	164	30.8		26	53.9	+17 56.7	138	16.0	+9 15.6	272	54.0	-21 41.9	20	19.2	+15 33.9
18	179	33.3		41	54.3	+17 55.9	153	16.8	+9 16.2	287	56.8	-21 41.9	35	21.4	+15 33.8
19	194	35.7		56	54.8	55.1	168	17.5	16.9	302	59.5	41.8	50	23.7	33.7
20	209	38.2		71	55.2	54.2	183	18.2	17.6	318	02.3	41.8	65	25.9	33.6
21	224	40.7		86	55.6	53.4	198	19.0	18.2	333	05.1	41.8	80	28.1	33.6
22	239	43.1		101	56.0	52.6	213	19.7	18.9	348	07.9	41.8	95	30.4	33.5
23	254	45.6		116	56.4	51.8	228	20.5	19.5	3	10.6	41.7	110	32.6	33.4
24	269	48.1		131	56.8	+17 51.0	243	21.2	+9 20.2	18	13.4	-21 41.7	125	34.8	+15 33.3
Dif	—			+4			+7			+28			+22		
				-8			+7			0			-1		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 6 ^d 9	PHE { 4 ^h : 54 ^m /7 12 ^h : 54 ^m /6 20 ^h : 54 ^m /5	SD: 14 ^h 9	PMG: 18 ^h 06 ^m		R°: 40 ^m								
	PMG: 12 ^h 01 ^m 9																	
	hG ☉		Dec		hG ☾		Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	32.7	+23	26.4	95	40.7	+1	09.7	60 N	** **	0 49	2 36	12 09	83		23 44	**	
1	194	32.6		26.4	110	16.5 ¹⁶⁸	+0	55.5 ¹⁴²	58	** **	1 40	2 56	08 79		46	2		
2	209	32.5		26.4	124	52.4 ¹⁶⁹		41.2 ¹⁴³	56	** **	2 10	3 13	08 75		48	5		
3	224	32.3		26.4	139	28.4 ¹⁷⁰		26.9 ¹⁴³	54	0 45	33	27	07 73		50	8		
4	239	32.2		26.4	154	04.3 ¹⁶⁹	+0	12.7 ¹⁴²	52	1 32	2 51	40	06 71		52	10		
5	254	32.1	+23	26.4	168	40.3 ¹⁷⁰	-0	01.5 ¹⁴²	50	2 00	3 06	3 51	12 05	69	23 54	11		
6	269	31.9	+23	26.4	183	16.3 ¹⁷⁰	-0	15.8 ¹⁴³	45	2 46	3 36	4 13	12 04	63	23 57	16		
7	284	31.8		26.4	197	52.3 ¹⁷⁰		30.0 ¹⁴²	40	3 17	3 59	31	03 59		** **	** **		
8	299	31.6		26.4	212	28.3 ¹⁷⁰		44.2 ¹⁴²	35	40	4 17	4 46	02 56		** **	** **		
9	314	31.5		26.4	227	04.3 ¹⁷⁰	-0	58.4 ¹⁴²	30	3 59	32	5 00	12 01	53	** **	** **		
10	329	31.4		26.3	241	40.3 ¹⁷⁰	-1	12.6 ¹⁴²	20	4 28	4 57	22	11 59	48	** **	** **		
11	344	31.2	+23	26.3	256	16.4 ¹⁷¹	-1	26.8 ¹⁴²	10 N	4 50	5 18	5 41	11 58	44	** **	** **		
12	359	31.1	+23	26.3	270	52.4 ¹⁷⁰	-1	40.9 ¹⁴¹	0	5 09	5 36	5 58	11 57	39	** **	** **		
13	14	31.0		26.3	285	28.5 ¹⁷¹	-1	55.1 ¹⁴²	10 S	27	5 53	6 16	56 35		** **	** **		
14	29	30.8		26.3	300	04.6 ¹⁷¹	-2	09.2 ¹⁴¹	20	43	6 10	34	54 31		** **	** **		
15	44	30.7		26.3	314	40.6 ¹⁷⁰		23.3 ¹⁴¹	30	5 59	29	6 56	53 26		** **	** **		
16	59	30.6		26.3	329	16.7 ¹⁷¹		37.4 ¹⁴¹	35	6 08	40	7 08	52 23		** **	** **		
17	74	30.4	+23	26.2	343	52.8 ¹⁷¹	-2	51.5 ¹⁴¹	40	6 17	6 52	7 22	11 51	20	** **	** **		
18	89	30.3	+23	26.2	358	28.9 ¹⁷¹	-3	05.6 ¹⁴¹	45	6 28	7 05	7 39	11 50	16	** **	** **		
19	104	30.2		26.2	13	05.0 ¹⁷¹		19.7 ¹⁴¹	50	40	21	8 00	49 12		** **	** **		
20	119	30.0		26.2	27	41.1 ¹⁷¹		33.7 ¹⁴⁰	52	45	29	10	48 10		** **	** **		
21	134	29.9		26.2	42	17.1 ¹⁷⁰	-3	47.7 ¹⁴⁰	54	51	37	21	48 7		** **	** **		
22	149	29.7		26.2	56	53.2 ¹⁷¹	-4	01.7 ¹⁴⁰	56	6 57	46	34	47 5		** **	** **		
23	164	29.6		26.1	71	29.3 ¹⁷¹		15.7 ¹⁴⁰	58	7 04	7 56	8 48	46 3		** **	** **		
24	179	29.5	+23	26.1	86	05.4 ¹⁷¹	-4	29.6 ¹³⁹	60 S	7 11	8 08	9 06	11 46	**	** **	** **		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 59 ^m 8		Mag: -4.6 PMG: 15 ^h 12 ^m				Mag: +0.7 PMG: 7 ^h 46 ^m				Mag: -2.6 PMG: 22 ^h 43 ^m				Mag: +0.6 PMG: 15 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	269	48.1	131	56.8	+17	51.0	243	21.2	+9	20.2	18	13.4	-21	41.7	125	34.8	+15	33.3
1	284	50.5	146	57.3		50.1	258	22.0		20.8	33	16.2		41.7	140	37.1		33.3
2	299	53.0	161	57.7		49.3	273	22.7		21.5	48	19.0		41.6	155	39.3		33.2
3	314	55.4	176	58.1		48.5	288	23.5		22.2	63	21.8		41.6	170	41.5		33.1
4	329	57.9	191	58.5		47.7	303	24.2		22.8	78	24.5		41.6	185	43.7		33.0
5	345	00.4	206	59.0	+17	46.9	318	24.9	+9	23.5	93	27.3	-21	41.5	200	46.0	+15	32.9
6	0	02.8	221	59.4	+17	46.0	333	25.7	+9	24.1	108	30.1	-21	41.5	215	48.2	+15	32.9
7	15	05.3	236	59.8		45.2	348	26.4		24.8	123	32.9		41.5	230	50.4		32.8
8	30	07.8	252	00.3		44.4	3	27.2		25.4	138	35.6		41.5	245	52.7		32.7
9	45	10.2	267	00.7		43.6	18	27.9		26.1	153	38.4		41.4	260	54.9		32.6
10	60	12.7	282	01.1		42.7	33	28.7		26.7	168	41.2		41.4	275	57.1		32.6
11	75	15.2	297	01.6	+17	41.9	48	29.4	+9	27.4	183	44.0	-21	41.4	290	59.4	+15	32.5
12	90	17.6	312	02.0	+17	41.1	63	30.1	+9	28.1	198	46.7	-21	41.3	306	01.6	+15	32.4
13	105	20.1	327	02.5		40.3	78	30.9		28.7	213	49.5		41.3	321	03.8		32.3
14	120	22.6	342	02.9		39.5	93	31.6		29.4	228	52.3		41.3	336	06.0		32.2
15	135	25.0	357	03.4		38.6	108	32.4		30.0	243	55.1		41.3	351	08.3		32.2
16	150	27.5	12	03.8		37.8	123	33.1		30.7	258	57.8		41.2	6	10.5		32.1
17	165	29.9	27	04.2	+17	37.0	138	33.9	+9	31.3	274	00.6	-21	41.2	21	12.7	+15	32.0
18	180	32.4	42	04.7	+17	36.2	153	34.6	+9	32.0	289	03.4	-21	41.2	36	15.0	+15	31.9
19	195	34.9	57	05.1		35.3	168	35.4		32.6	304	06.1		41.1	51	17.2		31.8
20	210	37.3	72	05.6		34.5	183	36.1		33.3	319	08.9		41.1	66	19.4		31.8
21	225	39.8	87	06.1		33.7	198	36.8		33.9	334	11.7		41.1	81	21.6		31.7
22	240	42.3	102	06.5		32.9	213	37.6		34.6	349	14.5		41.0	96	23.9		31.6
23	255	44.7	117	07.0		32.0	228	38.3		35.2	4	17.2		41.0	111	26.1		31.5
24	270	47.2	132	07.4	+17	31.2	243	39.1	+9	35.9	19	20.0	-21	41.0	126	28.3	+15	31.5
Dif	—		+4		-8		+7		+7		+28		0		+22		-1	

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 1				Edad: 7 ^d 9 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3 R°: 40 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	179	29.5	+23	26.1	86	05.4	-4	29.6	60 N	21 28	23 14	** **	13 32 83		23 43 **					
1	194	29.3		26.1	100	41.4 ¹⁷⁰		43.6 ¹⁴⁰	58	21 08	22 23	** **	27 80		48 3					
2	209	29.2		26.1	115	17.5 ¹⁷¹	-4	57.5 ¹³⁹	56	20 51	21 53	** **	23 77		53 6					
3	224	29.1		26.0	129	53.5 ¹⁷⁰	-5	11.4 ¹³⁹	54	36	31	23 18	20 74		23 58 9					
4	239	28.9		26.0	144	29.6 ¹⁷¹		25.2 ¹³⁸	52	24	21 13	22 31	17 71		** ** *					
5	254	28.8	+23	26.0	159	05.6 ¹⁷⁰	-5	39.1 ¹³⁹	50	20 13	20 58	22 04	13 14 69		** ** *					
6	269	28.7	+23	26.0	173	41.6 ¹⁷⁰	-5	52.9 ¹³⁸	45	19 51	20 28	21 18	13 07 65		** ** *					
7	284	28.5		25.9	188	17.6 ¹⁷⁰	-6	06.7 ¹³⁸	40	33	20 05	20 47	13 02 60		0 00 20					
8	299	28.4		25.9	202	53.6 ¹⁷⁰		20.5 ¹³⁸	35	18	19 47	24	12 58 57		03 23					
9	314	28.3		25.9	217	29.6 ¹⁷⁰		34.2 ¹³⁷	30	19 04	32	20 05	54 54		05 26					
10	329	28.1		25.9	232	05.5 ¹⁶⁹	-6	47.9 ¹³⁷	20	18 42	19 07	19 36	47 49		09 31					
11	344	28.0	+23	25.8	246	41.5 ¹⁷⁰	-7	01.6 ¹³⁷	10 N	18 23	18 46	19 14	12 42 44		0 12 36					
12	359	27.9	+23	25.8	261	17.4 ¹⁶⁹	-7	15.3 ¹³⁷	0	18 06	18 28	18 55	12 36 40		0 16 39					
13	14	27.7		25.8	275	53.3 ¹⁶⁹		28.9 ¹³⁶	10 S	17 48	18 11	38	31 36		19 44					
14	29	27.6		25.7	290	29.2 ¹⁶⁹		42.5 ¹³⁶	20	30	17 54	21	25 32		23 48					
15	44	27.4		25.7	305	05.0 ¹⁶⁸	-7	56.0 ¹³⁵	30	17 09	35	18 05	19 27		27 53					
16	59	27.3		25.7	319	40.8 ¹⁶⁸	-8	09.6 ¹³⁶	35	16 56	24	17 56	15 24		29 56					
17	74	27.2	+23	25.6	334	16.6 ¹⁶⁸	-8	23.1 ¹³⁵	40	16 42	17 13	17 47	12 11 21		0 32 59					
18	89	27.0	+23	25.6	348	52.4 ¹⁶⁸	-8	36.6 ¹³⁵	45	16 25	16 59	17 36	12 06 17		0 35 63					
19	104	26.9		25.6	3	28.2 ¹⁶⁸	-8	50.0 ¹³⁴	50	16 04	43	24	12 01 12		38 69					
20	119	26.8		25.5	18	03.9 ¹⁶⁷	-9	03.4 ¹³⁴	52	15 54	35	19	11 58 10		40 71					
21	134	26.6		25.5	32	39.6 ¹⁶⁷		16.8 ¹³⁴	54	43	27	13	55 8		42 73					
22	149	26.5		25.5	47	15.3 ¹⁶⁷		30.1 ¹³³	56	31	18	07	52 6		44 76					
23	164	26.4		25.4	61	50.9 ¹⁶⁶		43.4 ¹³³	58	15 16	16 08	17 01	49 2		46 79					
24	179	26.2	+23	25.4	76	26.5 ¹⁶⁶	-9	56.7 ¹³³	60 S	14 58	15 56	16 53	11 45 **		0 49 82					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 55 ^m 9				Mag: -4.6 PMG: 15 ^h 11 ^m				Mag: +0.7 PMG: 7 ^h 45 ^m				Mag: -2.6 PMG: 22 ^h 38 ^m				Mag: +0.6 PMG: 15 ^h 32 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	47.2	132	07.4	+17	31.2	243	39.1	+9	35.9	19	20.0	-21	41.0	126	28.3	+15	31.5		
1	285	49.7	147	07.9		30.4	258	39.8		36.5	34	22.8		41.0	141	30.6		31.4		
2	300	52.1	162	08.4		29.5	273	40.6		37.2	49	25.6		40.9	156	32.8		31.3		
3	315	54.6	177	08.8		28.7	288	41.3		37.9	64	28.3		40.9	171	35.0		31.2		
4	330	57.0	192	09.3		27.9	303	42.1		38.5	79	31.1		40.9	186	37.2		31.1		
5	345	59.5	207	09.8	+17	27.1	318	42.8	+9	39.2	94	33.9	-21	40.8	201	39.5	+15	31.1		
6	1	02.0	222	10.2	+17	26.2	333	43.5	+9	39.8	109	36.6	-21	40.8	216	41.7	+15	31.0		
7	16	04.4	237	10.7		25.4	348	44.3		40.5	124	39.4		40.8	231	43.9		30.9		
8	31	06.9	252	11.2		24.6	3	45.0		41.1	139	42.2		40.7	246	46.2		30.8		
9	46	09.4	267	11.6		23.7	18	45.8		41.8	154	45.0		40.7	261	48.4		30.7		
10	61	11.8	282	12.1		22.9	33	46.5		42.4	169	47.7		40.7	276	50.6		30.7		
11	76	14.3	297	12.6	+17	22.1	48	47.3	+9	43.1	184	50.5	-21	40.7	291	52.8	+15	30.6		
12	91	16.8	312	13.1	+17	21.3	63	48.0	+9	43.7	199	53.3	-21	40.6	306	55.1	+15	30.5		
13	106	19.2	327	13.6		20.4	78	48.8		44.4	214	56.0		40.6	321	57.3		30.4		
14	121	21.7	342	14.0		19.6	93	49.5		45.0	229	58.8		40.6	336	59.5		30.4		
15	136	24.2	357	14.5		18.8	108	50.2		45.7	245	01.6		40.5	352	01.7		30.3		
16	151	26.6	12	15.0		17.9	123	51.0		46.3	260	04.4		40.5	7	04.0		30.2		
17	166	29.1	27	15.5	+17	17.1	138	51.7	+9	47.0	275	07.1	-21	40.5	22	06.2	+15	30.1		
18	181	31.5	42	16.0	+17	16.3	153	52.5	+9	47.6	290	09.9	-21	40.5	37	08.4	+15	30.0		
19	196	34.0	57	16.5		15.4	168	53.2		48.3	305	12.7		40.4	52	10.6		30.0		
20	211	36.5	72	17.0		14.6	183	54.0		48.9	320	15.4		40.4	67	12.9		29.9		
21	226	38.9	87	17.5		13.8	198	54.7		49.6	335	18.2		40.4	82	15.1		29.8		
22	241	41.4	102	18.0		12.9	213	55.5		50.2	350	21.0		40.3	97	17.3		29.7		
23	256	43.9	117	18.5		12.1	228	56.2		50.8	5	23.7		40.3	112	19.5		29.6		
24	271	46.3	132	19.0	+17	11.3	243	56.9	+9	51.5	20	26.5	-21	40.3	127	21.8	+15	29.6		
Dif	—		+5		-8		+7		+6		+28		0		+22		-1			

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: 8 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2 Rº: 43 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	26.2	+23	25.4	76	26.5	-9	56.7	60 N	** **	0 50	2 37	14 55	87	23 42	1		
1	194	26.1		25.4	91	02.1 ¹⁶⁶	-10	09.9 ¹³²	58	** **	1 41	2 57	47 83		51	5		
2	209	26.0		25.3	105	37.6 ¹⁶⁵		23.1 ¹³²	56	** **	2 11	3 14	40 79		23 59	9		
3	224	25.8		25.3	120	13.1 ¹⁶⁵		36.2 ¹³¹	54	0 46	34	28	34 75		** **	*		
4	239	25.7		25.2	134	48.6 ¹⁶⁵	-10	49.3 ¹³¹	52	1 33	2 52	40	28 73		0 02	11		
5	254	25.6	+23	25.2	149	24.0 ¹⁶⁴	-11	02.4 ¹³¹	50	2 01	3 07	3 51	14 23	70	0 05	14		
6	269	25.4	+23	25.1	163	59.4 ¹⁶⁴	-11	15.4 ¹³⁰	45	2 47	3 36	4 14	14 12	65	0 13	19		
7	284	25.3		25.1	178	34.7 ¹⁶³		28.4 ¹³⁰	40	3 17	3 59	32	14 02	62	20	22		
8	299	25.2		25.1	193	10.0 ¹⁶³		41.4 ¹³⁰	35	41	4 17	4 47	13 55	58	26	25		
9	314	25.0		25.0	207	45.3 ¹⁶³	-11	54.3 ¹²⁹	30	3 59	33	5 00	48 55		31	28		
10	329	24.9		25.0	222	20.5 ¹⁶²	-12	07.1 ¹²⁸	20	4 28	4 58	22	36 50		40	33		
11	344	24.8	+23	24.9	236	55.7 ¹⁶²	-12	19.9 ¹²⁸	10 N	4 51	5 18	5 41	13 26	46	0 48	37		
12	359	24.6	+23	24.9	251	30.8 ¹⁶¹	-12	32.7 ¹²⁸	0	5 10	5 36	5 59	13 16	43	0 55	41		
13	14	24.5		24.8	266	05.9 ¹⁶¹		45.4 ¹²⁷	10 S	27	5 53	6 16	13 07	38	1 03	45		
14	29	24.4		24.8	280	40.9 ¹⁶⁰	-12	58.1 ¹²⁷	20	5 43	6 11	35	12 57	34	11	49		
15	44	24.2		24.7	295	15.9 ¹⁶⁰	-13	10.7 ¹²⁶	30	6 00	30	6 56	46 29		20	54		
16	59	24.1		24.7	309	50.8 ¹⁵⁹		23.3 ¹²⁶	35	08	40	7 08	39 27		25	58		
17	74	24.0	+23	24.6	324	25.7 ¹⁵⁹	-13	35.8 ¹²⁵	40	6 18	6 52	7 22	12 32	23	1 31	61		
18	89	23.8	+23	24.6	339	00.6 ¹⁵⁹	-13	48.3 ¹²⁵	45	6 28	7 05	7 39	12 23	20	1 38	65		
19	104	23.7		24.5	353	35.4 ¹⁵⁸	-14	00.8 ¹²⁵	50	40	22	8 00	13 15		47	69		
20	119	23.6		24.5	8	10.1 ¹⁵⁷		13.1 ¹²³	52	45	29	10	08 13		51	72		
21	134	23.4		24.4	22	44.8 ¹⁵⁷		25.5 ¹²⁴	54	51	37	21	12 03	10	1 55	75		
22	149	23.3		24.4	37	19.4 ¹⁵⁶		37.7 ¹²²	56	6 57	46	34	11 58	7	2 00	77		
23	164	23.2		24.3	51	54.0 ¹⁵⁶	-14	50.0 ¹²³	58	7 04	7 57	8 49	51 4		05	81		
24	179	23.0	+23	24.3	66	28.5 ¹⁵⁵	-15	02.1 ¹²¹	60 S	7 11	8 08	9 06	11 44	0	2 11	85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 51 ^m 9		Mag: -4.6 PMG: 15 ^h 10 ^m		Mag: +0.7 PMG: 7 ^h 44 ^m		Mag: -2.6 PMG: 22 ^h 34 ^m		Mag: +0.6 PMG: 15 ^h 28 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	271	46.3	132	19.0	+17	11.3	243	56.9	+9	51.5
1	286	48.8	147	19.5		10.4	258	57.7		52.1
2	301	51.3	162	20.0		09.6	273	58.4		52.8
3	316	53.7	177	20.5		08.8	288	59.2		53.4
4	331	56.2	192	21.0		07.9	303	59.9		54.1
5	346	58.7	207	21.5	+17	07.1	319	00.7	+9	54.7
6	2	01.1	222	22.0	+17	06.3	334	01.4	+9	55.4
7	17	03.6	237	22.5		05.4	349	02.2		56.0
8	32	06.0	252	23.0		04.6	4	02.9		56.7
9	47	08.5	267	23.6		03.8	19	03.6		57.3
10	62	11.0	282	24.1		02.9	34	04.4		58.0
11	77	13.4	297	24.6	+17	02.1	49	05.1	+9	58.6
12	92	15.9	312	25.1	+17	01.3	64	05.9	+9	59.3
13	107	18.4	327	25.6	+17	00.4	79	06.6	+9	59.9
14	122	20.8	342	26.2	+16	59.6	94	07.4	+10	00.5
15	137	23.3	357	26.7		58.7	109	08.1		01.2
16	152	25.8	12	27.2		57.9	124	08.9		01.8
17	167	28.2	27	27.7	+16	57.1	139	09.6	+10	02.5
18	182	30.7	42	28.3	+16	56.2	154	10.3	+10	03.1
19	197	33.1	57	28.8		55.4	169	11.1		03.8
20	212	35.6	72	29.3		54.6	184	11.8		04.4
21	227	38.1	87	29.9		53.7	199	12.6		05.1
22	242	40.5	102	30.4		52.9	214	13.3		05.7
23	257	43.0	117	30.9		52.0	229	14.1		06.3
24	272	45.5	132	31.5	+16	51.2	244	14.8	+10	07.0
Dif	—		+5		-8		+7		+6	
							+28		0	
									+22	
									-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 9 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /3 R°: 46 ^m														
	PMG: 12 ^h 02 ^m 6				SD: 14 ^h 8 PMG: 20 ^h 09 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	179	23.0	+23	66	28.5	-15	02.1	60 N	21 28	23 13	** **	16 22 92	23 43 2					
1	194	22.9		81	02.9 ¹⁵⁴		14.2 ¹²¹	58	21 07	22 23	** **	16 10 86	23 56 9					
2	209	22.8		95	37.3 ¹⁵⁴		26.3 ¹²¹	56	20 51	21 53	** **	15 59 81	** ** *					
3	224	22.6		110	11.6 ¹⁵³		38.3 ¹²⁰	54	37	31	23 17	49 78	0 07 11					
4	239	22.5		124	45.9 ¹⁵³	-15	50.2 ¹¹⁹	52	24	21 13	22 31	41 75	13 14					
5	254	22.4	+23	139	20.1 ¹⁵²	-16	02.1 ¹¹⁹	50	20 13	20 58	22 03	15 33 72	0 19 17					
6	269	22.2	+23	153	54.3 ¹⁵²	-16	13.9 ¹¹⁸	45	19 51	20 28	21 18	15 17 67	0 32 21					
7	284	22.1		168	28.4 ¹⁵¹		25.7 ¹¹⁸	40	33	20 06	20 47	15 04 63	42 25					
8	299	22.0		183	02.4 ¹⁵⁰		37.4 ¹¹⁷	35	18	19 48	24	14 53 60	51 29					
9	314	21.8		197	36.4 ¹⁵⁰	-16	49.0 ¹¹⁶	30	19 05	32	20 06	43 57	0 59 31					
10	329	21.7		212	10.3 ¹⁴⁹	-17	00.6 ¹¹⁶	20	18 43	19 07	19 37	26 53	1 13 36					
11	344	21.6	+23	226	44.1 ¹⁴⁸	-17	12.1 ¹¹⁵	10 N	18 24	18 47	19 14	14 12 49	1 25 40					
12	359	21.4	+23	241	17.8 ¹⁴⁷	-17	23.6 ¹¹⁵	0	18 06	18 29	18 55	13 59 45	1 36 44					
13	14	21.3		255	51.5 ¹⁴⁷		35.0 ¹¹⁴	10 S	17 49	18 12	38	45 42	1 48 47					
14	29	21.2		270	25.1 ¹⁴⁶		46.3 ¹¹³	20	30	17 54	22	31 38	2 00 52					
15	44	21.0		284	58.7 ¹⁴⁶	-17	57.5 ¹¹²	30	17 09	35	18 05	15 33	14 56					
16	59	20.9		299	32.2 ¹⁴⁵	-18	08.7 ¹¹²	35	16 57	25	17 57	13 06 31	23 58					
17	74	20.8	+23	314	05.6 ¹⁴⁴	-18	19.8 ¹¹¹	40	16 43	17 13	17 47	12 55 28	2 32 62					
18	89	20.6	+23	328	38.9 ¹⁴³	-18	30.9 ¹¹¹	45	16 26	17 00	17 37	12 43 24	2 43 66					
19	104	20.5		343	12.2 ¹⁴³		41.8 ¹⁰⁹	50	16 05	16 44	25	28 19	2 56 72					
20	119	20.4		357	45.4 ¹⁴²	-18	52.7 ¹⁰⁹	52	15 55	36	20	21 17	3 03 73					
21	134	20.2		12	18.5 ¹⁴¹	-19	03.6 ¹⁰⁹	54	44	28	14	13 14	10 76					
22	149	20.1		26	51.5 ¹⁴⁰		14.3 ¹⁰⁷	56	31	19	08	12 05 10	17 81					
23	164	20.0		41	24.5 ¹⁴⁰		25.0 ¹⁰⁷	58	15 17	16 09	17 01	11 55 7	26 84					
24	179	19.8	+23	55	57.4 ¹³⁹	-19	35.6 ¹⁰⁶	60 S	14 59	15 57	16 54	11 44 2	3 36 90					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 48 ^m 0		Mag: -4.6 PMG: 15 ^h 09 ^m		Mag: +0.7 PMG: 7 ^h 43 ^m		Mag: -2.6 PMG: 22 ^h 30 ^m		Mag: +0.6 PMG: 15 ^h 25 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec	hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	272	45.5	132	31.5	+16	51.2	244	14.8	+10	07.0	21	32.9	-21	39.6	128	15.2	+15	27.6
1	287	47.9	147	32.0		50.4	259	15.6		07.6	36	35.7		39.5	143	17.4		27.6
2	302	50.4	162	32.6		49.5	274	16.3		08.3	51	38.4		39.5	158	19.6		27.5
3	317	52.9	177	33.1		48.7	289	17.0		08.9	66	41.2		39.5	173	21.8		27.4
4	332	55.3	192	33.7		47.8	304	17.8		09.6	81	44.0		39.5	188	24.1		27.3
5	347	57.8	207	34.2	+16	47.0	319	18.5	+10	10.2	96	46.7	-21	39.4	203	26.3	+15	27.2
6	3	00.3	222	34.8	+16	46.2	334	19.3	+10	10.8	111	49.5	-21	39.4	218	28.5	+15	27.2
7	18	02.7	237	35.3		45.3	349	20.0		11.5	126	52.3		39.4	233	30.7		27.1
8	33	05.2	252	35.9		44.5	4	20.8		12.1	141	55.0		39.3	248	32.9		27.0
9	48	07.6	267	36.4		43.6	19	21.5		12.8	156	57.8		39.3	263	35.2		26.9
10	63	10.1	282	37.0		42.8	34	22.3		13.4	172	00.5		39.3	278	37.4		26.8
11	78	12.6	297	37.6	+16	42.0	49	23.0	+10	14.0	187	03.3	-21	39.3	293	39.6	+15	26.8
12	93	15.0	312	38.1	+16	41.1	64	23.7	+10	14.7	202	06.1	-21	39.2	308	41.8	+15	26.7
13	108	17.5	327	38.7		40.3	79	24.5		15.3	217	08.8		39.2	323	44.1		26.6
14	123	20.0	342	39.2		39.4	94	25.2		16.0	232	11.6		39.2	338	46.3		26.5
15	138	22.4	357	39.8		38.6	109	26.0		16.6	247	14.4		39.1	353	48.5		26.4
16	153	24.9	12	40.4		37.7	124	26.7		17.2	262	17.1		39.1	8	50.7		26.3
17	168	27.4	27	41.0	+16	36.9	139	27.5	+10	17.9	277	19.9	-21	39.1	23	52.9	+15	26.3
18	183	29.8	42	41.5	+16	36.1	154	28.2	+10	18.5	292	22.6	-21	39.1	38	55.2	+15	26.2
19	198	32.3	57	42.1		35.2	169	29.0		19.2	307	25.4		39.0	53	57.4		26.1
20	213	34.8	72	42.7		34.4	184	29.7		19.8	322	28.2		39.0	68	59.6		26.0
21	228	37.2	87	43.3		33.5	199	30.4		20.4	337	30.9		39.0	84	01.8		25.9
22	243	39.7	102	43.8		32.7	214	31.2		21.1	352	33.7		38.9	99	04.1		25.9
23	258	42.1	117	44.4		31.8	229	31.9		21.7	7	36.4		38.9	114	06.3		25.8
24	273	44.6	132	45.0	+16	31.0	244	32.7	+10	22.4	22	39.2	-21	38.9	129	08.5	+15	25.7
Dif	—		+6		-8		+7		+6		+28		0		+22		-1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7			Edad: 10 ^d 9 PHE { 4 ^h : 54 ^m .4 12 ^h : 54 ^m .5 20 ^h : 54 ^m .6 R ^o : 50 ^m														
	PMG: 12 ^h 02 ^m 8			SD: 14 ^h 8 PMG: 20 ^h 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o		Hora	R ^o			
h	°	'	°	°	'	°	'	h	m	h	m	m	h	m	m	m		
0	179	19.8	+23	55	57.4	-19	35.6	60	N	0 53	2 38	17 54	95	23 45	8			
1	194	19.7		70	30.2 ¹³⁸		46.1 ¹⁰⁵	58		1 43	2 58	36 87		** ** *				
2	209	19.6		85	03.0 ¹³⁸	-19	56.6 ¹⁰⁵	56		2 12	3 15	20 82		0 08	13			
3	224	19.4		99	35.6 ¹³⁶	-20	07.0 ¹⁰⁴	54		0 48	34	29	17 07	78	18	16		
4	239	19.3		114	08.2 ¹³⁶		17.2 ¹⁰²	52		1 34	2 52	41	16 56	74	27	19		
5	254	19.2	+23	128	40.7 ¹³⁵	-20	27.5 ¹⁰³	50		2 02	3 07	3 52	16 45	72	0 36	21		
6	269	19.1	+23	143	13.1 ¹³⁴	-20	37.6 ¹⁰¹	45		2 47	3 37	4 15	16 24	67	0 53	26		
7	284	18.9		157	45.5 ¹³⁴		47.6 ¹⁰⁰	40		3 18	4 00	33	16 07	64	1 07	31		
8	299	18.8		172	17.7 ¹³²	-20	57.6 ¹⁰⁰	35		3 41	18	4 48	15 53	61	20	33		
9	314	18.7		186	49.9 ¹³²	-21	07.5 ⁹⁹	30		4 00	33	5 01	40 59		30	36		
10	329	18.5		201	22.0 ¹³¹		17.3 ⁹⁸	20		29	4 58	23	19 55		1 49	40		
11	344	18.4	+23	215	54.0 ¹³⁰	-21	27.0 ⁹⁷	10	N	4 51	5 18	5 42	15 01	51	2 05	43		
12	359	18.3	+23	230	25.9 ¹²⁹	-21	36.6 ⁹⁶	0		5 10	5 37	5 59	14 44	48	2 20	47		
13	14	18.1		244	57.8 ¹²⁹		46.1 ⁹⁵	10	S	27	5 54	6 17	27 46		35	50		
14	29	18.0		259	29.6 ¹²⁸	-21	55.6 ⁹⁵	20		5 44	6 11	35	14 09	42	2 52	53		
15	44	17.9		274	01.2 ¹²⁶	-22	04.9 ⁹³	30		6 00	30	6 56	13 48	39	3 10	58		
16	59	17.7		288	32.8 ¹²⁶		14.2 ⁹³	35		09	40	7 09	37 36		21	61		
17	74	17.6	+23	303	04.4 ¹²⁶	-22	23.3 ⁹¹	40		6 18	6 52	7 23	13 23	33	3 34	64		
18	89	17.5	+23	317	35.8 ¹²⁴	-22	32.4 ⁹¹	45		6 28	7 06	7 39	13 07	30	3 49	67		
19	104	17.4		332	07.1 ¹²³		41.4 ⁹⁰	50		40	22	8 00	12 47	25	4 08	72		
20	119	17.2		346	38.4 ¹²³		50.3 ⁸⁹	52		45	29	10	38 22		16	75		
21	134	17.1		1	09.6 ¹²²	-22	59.1 ⁸⁸	54		51	37	21	27 20		26	78		
22	149	17.0		15	40.7 ¹²¹	-23	07.8 ⁸⁷	56		6 57	46	34	15 17		38	81		
23	164	16.8		30	11.7 ¹²⁰		16.3 ⁸⁵	58		7 04	7 57	8 48	12 02	11	4 50	87		
24	179	16.7	+23	44	42.6 ¹¹⁹	-23	24.8 ⁸⁵	60	S	7 11	8 08	9 06	11 46	5	5 06	93		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 44 ^m 1			Mag: -4.6 PMG: 15 ^h 08 ^m			Mag: +0.7 PMG: 7 ^h 41 ^m			Mag: -2.6 PMG: 22 ^h 25 ^m			Mag: +0.6 PMG: 15 ^h 21 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	273	44.6		132	45.0	+16	31.0	244	32.7	+10	22.4	22	39.2	-21	38.9	
1	288	47.1		147	45.6		30.2	259	33.4		23.0	37	42.0		38.9	
2	303	49.5		162	46.2		29.3	274	34.2		23.6	52	44.7		38.8	
3	318	52.0		177	46.8		28.5	289	34.9		24.3	67	47.5		38.8	
4	333	54.5		192	47.3		27.6	304	35.7		24.9	82	50.2		38.8	
5	348	56.9		207	47.9	+16	26.8	319	36.4	+10	25.5	97	53.0	-21	38.7	
6	3	59.4		222	48.5	+16	25.9	334	37.1	+10	26.2	112	55.8	-21	38.7	
7	19	01.9		237	49.1		25.1	349	37.9		26.8	127	58.5		38.7	
8	34	04.3		252	49.7		24.2	4	38.6		27.5	143	01.3		38.7	
9	49	06.8		267	50.3		23.4	19	39.4		28.1	158	04.0		38.6	
10	64	09.2		282	50.9		22.5	34	40.1		28.7	173	06.8		38.6	
11	79	11.7		297	51.5	+16	21.7	49	40.9	+10	29.4	188	09.6	-21	38.6	
12	94	14.2		312	52.1	+16	20.9	64	41.6	+10	30.0	203	12.3	-21	38.5	
13	109	16.6		327	52.7		20.0	79	42.4		30.6	218	15.1		38.5	
14	124	19.1		342	53.3		19.2	94	43.1		31.3	233	17.8		38.5	
15	139	21.6		357	54.0		18.3	109	43.8		31.9	248	20.6		38.5	
16	154	24.0		12	54.6		17.5	124	44.6		32.5	263	23.3		38.4	
17	169	26.5		27	55.2	+16	16.6	139	45.3	+10	33.2	278	26.1	-21	38.4	
18	184	29.0		42	55.8	+16	15.8	154	46.1	+10	33.8	293	28.9	-21	38.4	
19	199	31.4		57	56.4		14.9	169	46.8		34.4	308	31.6		38.3	
20	214	33.9		72	57.0		14.1	184	47.6		35.1	323	34.4		38.3	
21	229	36.4		87	57.6		13.2	199	48.3		35.7	338	37.1		38.3	
22	244	38.8		102	58.3		12.4	214	49.1		36.4	353	39.9		38.3	
23	259	41.3		117	58.9		11.5	229	49.8		37.0	8	42.6		38.2	
24	274	43.7		132	59.5	+16	10.7	244	50.5	+10	37.6	23	45.4	-21	38.2	
Dif	—			+6		-8		+7		+6		+28		0		+22
																-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 15 ^h 7		Edad: 11 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 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	16.7	+23 20.7	44	42.6	-23 24.8	84	60 N	21 27	23 11	** **	19 29 91	23 53 19
1	194	16.6	20.7	59	13.4 ¹¹⁸	33.2	84	58	21 07	22 22	** **	19 03 81	0 05 15
2	209	16.4	20.6	73	44.2 ¹¹⁸	41.5	83	56	20 50	21 53	** **	18 42 76	21 20
3	224	16.3	20.5	88	14.8 ¹¹⁶	49.7	82	54	36	31	23 15	25 72	34 24
4	239	16.2	20.4	102	45.4 ¹¹⁶	-23 57.8	81	52	24	21 13	22 30	18 10 70	46 27
5	254	16.0	+23 20.3	117	15.9 ¹¹⁵	-24 05.7	79	50	20 13	20 58	22 03	17 57 69	0 57 29
6	269	15.9	+23 20.2	131	46.3 ¹¹⁴	-24 13.6	79	45	19 51	20 28	21 18	17 31 65	1 19 34
7	284	15.8	20.1	146	16.6 ¹¹³	21.4	78	40	33	20 06	20 47	17 11 62	38 37
8	299	15.7	20.0	160	46.8 ¹¹²	29.0	76	35	18	19 48	24	16 54 60	1 53 39
9	314	15.5	19.9	175	17.0 ¹¹²	36.6	76	30	19 05	32	20 06	39 59	2 06 42
10	329	15.4	19.8	189	47.0 ¹¹⁰	44.0	74	20	18 43	19 08	19 37	16 14 56	29 45
11	344	15.3	+23 19.7	204	17.0 ¹¹⁰	-24 51.3	73	10 N	18 24	18 47	19 14	15 52 55	2 48 48
12	359	15.1	+23 19.6	218	46.9 ¹⁰⁹	-24 58.5	72	0	18 07	18 29	18 55	15 32 53	3 07 50
13	14	15.0	19.5	233	16.7 ¹⁰⁸	-25 05.6	71	10 S	17 49	18 12	38	15 13 50	25 53
14	29	14.9	19.4	247	46.4 ¹⁰⁷	12.6	70	20	31	17 55	22	14 51 48	3 45 56
15	44	14.8	19.3	262	16.0 ¹⁰⁶	19.4	68	30	17 10	36	18 06	27 45	4 08 59
16	59	14.6	19.2	276	45.6 ¹⁰⁶	26.2	68	35	16 57	26	17 57	14 13 43	22 61
17	74	14.5	+23 19.1	291	15.1 ¹⁰⁵	-25 32.8	66	40	16 43	17 14	17 48	13 56 42	4 38 63
18	89	14.4	+23 19.0	305	44.4 ¹⁰³	-25 39.3	65	45	16 27	17 00	17 38	13 37 38	4 56 67
19	104	14.2	18.9	320	13.7 ¹⁰³	45.7	64	50	16 06	16 44	26	12 35	5 20 70
20	119	14.1	18.8	334	43.0 ¹⁰³	51.9	62	52	15 56	37	21	13 00 33	31 73
21	134	14.0	18.7	349	12.1 ¹⁰¹	-25 58.1	62	54	45	29	15	12 47 30	44 76
22	149	13.9	18.6	3	41.2 ¹⁰¹	-26 04.1	60	56	32	20	09	32 26	5 59 80
23	164	13.7	18.5	18	10.1 ⁹⁹	10.0	59	58	18	16 10	17 02	12 13 22	6 17 85
24	179	13.6	+23 18.4	32	39.0 ⁹⁹	-26 15.8	58	60 S	15 00	15 58	16 55	11 51 13	6 39 93
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 5 ^h 40 ^m 2		Mag: -4.6 PMG: 15 ^h 07 ^m		Mag: +0.7 PMG: 7 ^h 40 ^m		Mag: -2.6 PMG: 22 ^h 21 ^m		Mag: +0.6 PMG: 15 ^h 18 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	274	43.7	132 59.5	+16 10.7	244 50.5	+10 37.6	23 45.4	-21 38.2	130 01.8	+15 23.7			
1	289	46.2	148 00.1	09.8	259 51.3	38.3	38 48.2	38.2	145 04.0	23.7			
2	304	48.7	163 00.8	09.0	274 52.0	38.9	53 50.9	38.1	160 06.2	23.6			
3	319	51.1	178 01.4	08.1	289 52.8	39.5	68 53.7	38.1	175 08.4	23.5			
4	334	53.6	193 02.0	07.3	304 53.5	40.1	83 56.4	38.1	190 10.6	23.4			
5	349	56.1	208 02.7	+16 06.4	319 54.3	+10 40.8	98 59.2	-21 38.1	205 12.9	+15 23.3			
6	4	58.5	223 03.3	+16 05.6	334 55.0	+10 41.4	114 01.9	-21 38.0	220 15.1	+15 23.2			
7	20	01.0	238 04.0	04.7	349 55.8	42.0	129 04.7	38.0	235 17.3	23.2			
8	35	03.5	253 04.6	03.9	4	56.5	144 07.4	38.0	250 19.5	23.1			
9	50	05.9	268 05.2	03.0	19 57.2	43.3	159 10.2	38.0	265 21.7	23.0			
10	65	08.4	283 05.9	02.2	34 58.0	43.9	174 12.9	37.9	280 24.0	22.9			
11	80	10.9	298 06.5	+16 01.3	49 58.7	+10 44.6	189 15.7	-21 37.9	295 26.2	+15 22.8			
12	95	13.3	313 07.2	+16 00.5	64 59.5	+10 45.2	204 18.4	-21 37.9	310 28.4	+15 22.8			
13	110	15.8	328 07.8	+15 59.6	80 00.2	45.8	219 21.2	37.8	325 30.6	22.7			
14	125	18.2	343 08.5	58.8	95 01.0	46.5	234 24.0	37.8	340 32.8	22.6			
15	140	20.7	358 09.1	57.9	110 01.7	47.1	249 26.7	37.8	355 35.0	22.5			
16	155	23.2	13 09.8	57.1	125 02.5	47.7	264 29.5	37.8	10 37.3	22.4			
17	170	25.6	28 10.4	+15 56.2	140 03.2	+10 48.4	279 32.2	-21 37.7	25 39.5	+15 22.3			
18	185	28.1	43 11.1	+15 55.4	155 04.0	+10 49.0	294 35.0	-21 37.7	40 41.7	+15 22.3			
19	200	30.6	58 11.8	54.5	170 04.7	49.6	309 37.7	37.7	55 43.9	22.2			
20	215	33.0	73 12.4	53.7	185 05.4	50.2	324 40.5	37.6	70 46.1	22.1			
21	230	35.5	88 13.1	52.8	200 06.2	50.9	339 43.2	37.6	85 48.3	22.0			
22	245	38.0	103 13.8	52.0	215 06.9	51.5	354 46.0	37.6	100 50.6	21.9			
23	260	40.4	118 14.4	51.1	230 07.7	52.1	9 48.7	37.6	115 52.8	21.8			
24	275	42.9	133 15.1	+15 50.3	245 08.4	+10 52.8	24 51.5	-21 37.5	130 55.0	+15 21.8			
Dif	—		+6	-9	+7	+6	+28	0	+22	-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15°7 PMG: 12 ^h 03 ^m 2			Edad: 12 ^d 9 PHE { 4 ^h : 55'1 12 ^h : 55'2 20 ^h : 55'4 R°: 55 ^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	179	13.6	+23	18.4	32	39.0	98	-26	15.8	56	58	0 56	2 39	21 00	64	**	**	**	
1	194	13.5		18.3	47	07.8	98		21.4	56	58	1 44	2 59	20 24	62	0	20	28	
2	209	13.3		18.2	61	36.6	98		26.9	55	56	2 14	3 16	19 58	61		41	33	
3	224	13.2		18.1	76	05.2	96		32.3	54	54	0 51	36	30	37	61	0	58	37
4	239	13.1		17.9	90	33.8	96		37.5	52	52	1 36	2 54	42	20	60	1	13	39
5	254	13.0	+23	17.8	105	02.3	95	-26	42.7	52	50	2 03	3 08	3 53	19 06	59	1	26	41
6	269	12.8	+23	17.7	119	30.8	95	-26	47.7	50	45	2 48	3 38	4 15	18 36	58	1	53	44
7	284	12.7		17.6	133	59.1	93		52.5	48	40	3 19	4 00	33	18 13	58	2	15	45
8	299	12.6		17.5	148	27.4	93	-26	57.2	47	35	3 42	19	4 48	17 54	57		32	48
9	314	12.4		17.4	162	55.6	92	-27	01.8	46	30	4 00	34	5 01	38	56	2	48	48
10	329	12.3		17.3	177	23.7	91		06.3	45	20	29	4 59	23	17 10	56	3	14	50
11	344	12.2	+23	17.2	191	51.8	91	-27	10.6	43	10 N	4 52	5 19	5 42	16 47	55	3	36	52
12	359	12.1	+23	17.0	206	19.8	90	-27	14.8	42	0	5 11	5 37	6 00	16 25	54	3	57	54
13	14	11.9		16.9	220	47.7	89		18.8	40	10 S	28	5 54	17	16 03	54	4	18	55
14	29	11.8		16.8	235	15.6	89		22.7	39	20	5 44	6 11	35	15 39	54	4	41	56
15	44	11.7		16.7	249	43.4	88		26.5	38	30	6 00	30	6 56	15 12	53	5	07	58
16	59	11.6		16.6	264	11.1	87		30.1	36	35	09	41	7 09	14 56	52		23	59
17	74	11.4	+23	16.5	278	38.8	87	-27	33.6	35	40	6 18	6 52	7 23	14 38	51	5	41	60
18	89	11.3	+23	16.3	293	06.4	86	-27	36.9	33	45	6 29	7 06	7 40	14 15	50	6	03	62
19	104	11.2		16.2	307	33.9	85		40.1	32	50	40	22	8 00	13 47	48		30	65
20	119	11.0		16.1	322	01.4	85		43.2	31	52	45	29	10	33	47	6	44	65
21	134	10.9		16.0	336	28.8	84		46.1	29	54	51	37	21	13 17	45	7	00	67
22	149	10.8		15.9	350	56.1	83		48.9	28	56	6 57	46	33	12 58	44		19	69
23	164	10.7		15.7	5	23.4	83		51.5	26	58	7 04	7 56	8 48	35	40	7	42	72
24	179	10.5	+23	15.6	19	50.7	83	-27	53.9	24	60 S	7 11	8 08	9 05	12 04	34	8	12	79

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 36 ^m 2			Mag: -4.6 PMG: 15 ^h 06 ^m			Mag: +0.7 PMG: 7 ^h 39 ^m			Mag: -2.6 PMG: 22 ^h 16 ^m			Mag: +0.6 PMG: 15 ^h 14 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'		
0	275	42.9	133	15.1	+15	50.3	245	08.4	+10	52.8	24	51.5	-21	37.5	130	55.0	+15	21.8
1	290	45.4	148	15.8		49.4	260	09.2		53.4	39	54.2		37.5	145	57.2		21.7
2	305	47.8	163	16.4		48.6	275	09.9		54.0	54	57.0		37.5	160	59.4		21.6
3	320	50.3	178	17.1		47.7	290	10.7		54.6	69	59.7		37.4	176	01.6		21.5
4	335	52.7	193	17.8		46.9	305	11.4		55.3	85	02.5		37.4	191	03.9		21.4
5	350	55.2	208	18.5	+15	46.0	320	12.1	+10	55.9	100	05.2	-21	37.4	206	06.1	+15	21.3
6	5	57.7	223	19.1	+15	45.2	335	12.9	+10	56.5	115	08.0	-21	37.4	221	08.3	+15	21.3
7	21	00.1	238	19.8		44.3	350	13.6		57.2	130	10.7		37.3	236	10.5		21.2
8	36	02.6	253	20.5		43.5	5	14.4		57.8	145	13.5		37.3	251	12.7		21.1
9	51	05.1	268	21.2		42.6	20	15.1		58.4	160	16.2		37.3	266	14.9		21.0
10	66	07.5	283	21.9		41.8	35	15.9		59.0	175	19.0		37.3	281	17.2		20.9
11	81	10.0	298	22.6	+15	40.9	50	16.6	+10	59.7	190	21.7	-21	37.2	296	19.4	+15	20.8
12	96	12.5	313	23.3	+15	40.0	65	17.4	+11	00.3	205	24.5	-21	37.2	311	21.6	+15	20.8
13	111	14.9	328	24.0		39.2	80	18.1		00.9	220	27.2		37.2	326	23.8		20.7
14	126	17.4	343	24.7		38.3	95	18.8		01.5	235	30.0		37.1	341	26.0		20.6
15	141	19.9	358	25.4		37.5	110	19.6		02.2	250	32.7		37.1	356	28.2		20.5
16	156	22.3	13	26.1		36.6	125	20.3		02.8	265	35.5		37.1	11	30.4		20.4
17	171	24.8	28	26.8	+15	35.8	140	21.1	+11	03.4	280	38.2	-21	37.1	26	32.7	+15	20.3
18	186	27.2	43	27.5	+15	34.9	155	21.8	+11	04.0	295	41.0	-21	37.0	41	34.9	+15	20.3
19	201	29.7	58	28.2		34.1	170	22.6		04.7	310	43.7		37.0	56	37.1		20.2
20	216	32.2	73	28.9		33.2	185	23.3		05.3	325	46.5		37.0	71	39.3		20.1
21	231	34.6	88	29.6		32.4	200	24.1		05.9	340	49.2		37.0	86	41.5		20.0
22	246	37.1	103	30.3		31.5	215	24.8		06.5	355	51.9		36.9	101	43.7		19.9
23	261	39.6	118	31.0		30.7	230	25.5		07.2	10	54.7		36.9	116	46.0		19.8
24	276	42.0	133	31.7	+15	29.8	245	26.3	+11	07.8	25	57.4	-21	36.9	131	48.2	+15	19.8
Dif	—			+7	-9			+7	+6			+27	0			+22	-1	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 13 ^d 9 PHE { 4 ^h : 55/6 12 ^h : 55/7 20 ^h : 55/9 Rº: 56 ^m													
	PMG: 12 ^h 03 ^m 4				SD: 15/1 PMG: 23 ^h 33 ^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	179	10.5	+23	15.6	19	50.7	-27	53.9	60 N	21 27	23 07	** **	22 04 30		0 12 51			
1	194	10.4		15.5	34	17.9 82		56.3 24	58	21 06	22 21	** **	21 26 38		0 48 53			
2	209	10.3		15.4	48	45.0 81	-27	58.4 21	56	20 50	21 52	** **	20 59 41		1 14 54			
3	224	10.2		15.2	63	12.1 81	-28	00.5 21	54	36	30	23 12	38 44		35 54			
4	239	10.0		15.1	77	39.1 80		02.3 18	52	24	21 12	22 29	20 46		1 52 55			
5	254	09.9	+23	15.0	92	06.1 80	-28	04.1 18	50	20 13	20 57	22 02	20 05 47		2 07 55			
6	269	09.8	+23	14.8	106	33.1 80	-28	05.6 15	45	19 51	20 28	21 17	19 34 50		2 37 55			
7	284	09.7		14.7	121	00.0 79		07.0 14	40	33	20 06	20 47	19 11 51		3 00 56			
8	299	09.5		14.6	135	26.8 78		08.3 13	35	18	19 48	24	18 51 52		20 55			
9	314	09.4		14.5	149	53.6 78		09.4 11	30	19 05	33	20 06	34 53		3 36 56			
10	329	09.3		14.3	164	20.4 78		10.4 10	20	18 43	19 08	19 37	18 06 54		4 04 56			
11	344	09.2	+23	14.2	178	47.1 77	-28	11.2 8	10 N	18 24	18 48	19 15	17 42 55		4 28 56			
12	359	09.0	+23	14.1	193	13.8 77	-28	11.8 5	0	18 07	18 30	18 56	17 19 56		4 51 55			
13	14	08.9		13.9	207	40.5 77		12.3 4	10 S	17 50	18 13	39	16 57 57		5 13 56			
14	29	08.8		13.8	222	07.1 76		12.7 4	20	31	17 55	23	33 57		5 37 55			
15	44	08.7		13.7	236	33.7 76		12.9 2	30	17 10	37	18 07	16 05 58		6 05 55			
16	59	08.5		13.5	251	00.3 76		12.9 0	35	16 58	26	17 58	15 48 59		22 55			
17	74	08.4	+23	13.4	265	26.8 75	-28	12.8 1	40	16 44	17 15	17 49	15 29 59		6 41 55			
18	89	08.3	+23	13.3	279	53.3 75	-28	12.5 3	45	16 27	17 01	17 38	15 05 61		7 05 54			
19	104	08.2		13.1	294	19.8 75		12.0 5	50	16 07	16 45	27	14 35 62		35 53			
20	119	08.0		13.0	308	46.3 75		11.4 6	52	15 57	38	22	20 63		7 49 53			
21	134	07.9		12.8	323	12.7 74		10.7 7	54	46	30	16	14 02 64		8 07 52			
22	149	07.8		12.7	337	39.2 75		09.8 9	56	34	21	10	13 42 64		28 51			
23	164	07.7		12.6	352	05.6 74		08.7 11	58	19	16 11	17 03	13 15 67		8 54 50			
24	179	07.5	+23	12.4	6	31.9 73	-28	07.4 13	60 S	15 02	15 59	16 56	12 38 70		9 31 46			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 32 ^m 3		Mag: -4.6 PMG: 15 ^h 05 ^m				Mag: +0.7 PMG: 7 ^h 38 ^m				Mag: -2.6 PMG: 22 ^h 12 ^m				Mag: +0.6 PMG: 15 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	276	42.0	133	31.7	+15	29.8	245	26.3	+11	07.8	25	57.4	-21	36.9	131	48.2	+15	19.8
1	291	44.5	148	32.4		28.9	260	27.0		08.4	41	00.2		36.8	146	50.4		19.7
2	306	47.0	163	33.2		28.1	275	27.8		09.0	56	02.9		36.8	161	52.6		19.6
3	321	49.4	178	33.9		27.2	290	28.5		09.7	71	05.7		36.8	176	54.8		19.5
4	336	51.9	193	34.6		26.4	305	29.3		10.3	86	08.4		36.8	191	57.0		19.4
5	351	54.4	208	35.3	+15	25.5	320	30.0	+11	10.9	101	11.2	-21	36.7	206	59.2	+15	19.3
6	6	56.8	223	36.1	+15	24.7	335	30.8	+11	11.5	116	13.9	-21	36.7	222	01.4	+15	19.3
7	21	59.3	238	36.8		23.8	350	31.5		12.1	131	16.7		36.7	237	03.7		19.2
8	37	01.7	253	37.5		23.0	5	32.2		12.8	146	19.4		36.7	252	05.9		19.1
9	52	04.2	268	38.2		22.1	20	33.0		13.4	161	22.1		36.6	267	08.1		19.0
10	67	06.7	283	39.0		21.2	35	33.7		14.0	176	24.9		36.6	282	10.3		18.9
11	82	09.1	298	39.7	+15	20.4	50	34.5	+11	14.6	191	27.6	-21	36.6	297	12.5	+15	18.8
12	97	11.6	313	40.5	+15	19.5	65	35.2	+11	15.2	206	30.4	-21	36.5	312	14.7	+15	18.8
13	112	14.1	328	41.2		18.7	80	36.0		15.9	221	33.1		36.5	327	16.9		18.7
14	127	16.5	343	41.9		17.8	95	36.7		16.5	236	35.9		36.5	342	19.2		18.6
15	142	19.0	358	42.7		17.0	110	37.5		17.1	251	38.6		36.5	357	21.4		18.5
16	157	21.5	13	43.4		16.1	125	38.2		17.7	266	41.3		36.4	12	23.6		18.4
17	172	23.9	28	44.2	+15	15.3	140	38.9	+11	18.3	281	44.1	-21	36.4	27	25.8	+15	18.3
18	187	26.4	43	44.9	+15	14.4	155	39.7	+11	19.0	296	46.8	-21	36.4	42	28.0	+15	18.3
19	202	28.8	58	45.7		13.5	170	40.4		19.6	311	49.6		36.4	57	30.2		18.2
20	217	31.3	73	46.4		12.7	185	41.2		20.2	326	52.3		36.3	72	32.4		18.1
21	232	33.8	88	47.2		11.8	200	41.9		20.8	341	55.1		36.3	87	34.6		18.0
22	247	36.2	103	47.9		11.0	215	42.7		21.4	356	57.8		36.3	102	36.9		17.9
23	262	38.7	118	48.7		10.1	230	43.4		22.1	12	00.5		36.3	117	39.1		17.8
24	277	41.2	133	49.5	+15	09.3	245	44.2	+11	22.7	27	03.3	-21	36.2	132	41.3	+15	17.7
Dif	—		+7		-9		+7		+6		+27		0		+22		-1	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15°7 PMG: 12 ^h 03 ^m 6				Edad: 14 ^d 9 PHE { 4 ^h : 56°1 12 ^h : 56°3 20 ^h : 56°4 R°: **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	07.5	+23	12.4	6	31.9	-28	07.4	14	58	60 N	** **	1 00	2 41	22 34	11	1 03	87				
1	194	07.4		12.3	20	58.3	74	06.0	15	58	58	** **	1 47	3 01	22 04	20	1 41	79				
2	209	07.3		12.1	35	24.7	74	04.5	15	56	56	** **	2 15	17	21 40	26	2 08	75				
3	224	07.2		12.0	49	51.0	73	02.8	17	54	54	0 55	37	31	22 29		29	72				
4	239	07.0		11.9	64	17.4	74	-28 00.9	19	52	52	1 38	2 55	43	21 06	32	2 47	70				
5	254	06.9	+23	11.7	78	43.7	73	-27 58.9	20	50	50	2 05	3 10	3 54	20 52	35	3 02	68				
6	269	06.8	+23	11.6	93	10.0	73	-27 56.7	22	45	45	2 50	3 39	4 16	20 24	39	3 32	66				
7	284	06.7		11.4	107	36.3	73	54.3	24	40	40	3 20	4 01	34	20 02	42	3 56	64				
8	299	06.5		11.3	122	02.7	74	51.8	25	35	35	3 43	19	4 49	19 43	45	4 15	63				
9	314	06.4		11.1	136	29.0	73	49.2	26	30	30	4 01	35	5 02	27 47		4 32	61				
10	329	06.3		11.0	150	55.3	73	46.3	29	20	20	30	4 59	24	19 00	51	5 00	59				
11	344	06.2	+23	10.8	165	21.6	73	-27 43.4	29	10 N	10 N	4 52	5 19	5 43	18 37	53	5 24	57				
12	359	06.1	+23	10.7	179	48.0	74	-27 40.2	32	0	0	5 11	5 37	6 00	18 15	56	5 46	56				
13	14	05.9		10.5	194	14.3	73	36.9	33	10 S	10 S	28	5 54	17	17 54	57	6 09	54				
14	29	05.8		10.4	208	40.7	74	33.4	35	20	20	5 44	6 12	36	30 60		6 32	53				
15	44	05.7		10.2	223	07.0	73	29.8	36	30	30	6 00	30	6 57	17 03	63	7 00	50				
16	59	05.6		10.1	237	33.4	74	26.0	38	35	35	09	41	7 09	16 47	65	17	48				
17	74	05.4	+23	09.9	251	59.8	74	-27 22.1	39	40	40	6 18	6 52	7 23	16 28	67	7 36	46				
18	89	05.3	+23	09.8	266	26.2	74	-27 18.0	41	45	45	6 28	7 06	7 39	16 06	70	7 59	44				
19	104	05.2		09.6	280	52.6	74	13.7	43	50	50	40	22	8 00	15 37	74	8 28	41				
20	119	05.1		09.5	295	19.0	74	09.3	44	52	52	45	29	10	23 76		42	39				
21	134	05.0		09.3	309	45.5	75	-27 04.8	45	54	54	51	37	21	15 06	79	8 59	36				
22	149	04.8		09.1	324	11.9	74	-27 00.0	48	56	56	6 57	46	33	14 46	83	9 19	33				
23	164	04.7		09.0	338	38.4	75	-26 55.1	49	58	58	7 04	7 56	8 47	14 22	87	9 44	28				
24	179	04.6	+23	08.8	353	05.0	76	-26 50.1	50	60 S	60 S	7 11	8 07	9 05	13 48	97	10 17	19				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG 5 ^h 28 ^m 4				Mag: -4.6 PMG: 15 ^h 04 ^m				Mag: +0.7 PMG: 7 ^h 37 ^m				Mag: -2.6 PMG: 22 ^h 08 ^m				Mag: +0.6 PMG: 15 ^h 07 ^m					
	hG ♈				hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	277	41.2	133	49.5	+15	09.3	245	44.2	+11	22.7	27	03.3	-21	36.2	132	41.3	+15	17.7				
1	292	43.6	148	50.2		08.4	260	44.9		23.3	42	06.0		36.2	147	43.5		17.7				
2	307	46.1	163	51.0		07.5	275	45.7		23.9	57	08.8		36.2	162	45.7		17.6				
3	322	48.6	178	51.8		06.7	290	46.4		24.5	72	11.5		36.1	177	47.9		17.5				
4	337	51.0	193	52.5		05.8	305	47.1		25.2	87	14.2		36.1	192	50.1		17.4				
5	352	53.5	208	53.3	+15	05.0	320	47.9	+11	25.8	102	17.0	-21	36.1	207	52.3	+15	17.3				
6	7	56.0	223	54.1	+15	04.1	335	48.6	+11	26.4	117	19.7	-21	36.1	222	54.5	+15	17.2				
7	22	58.4	238	54.8		03.3	350	49.4		27.0	132	22.5		36.0	237	56.8		17.2				
8	38	00.9	253	55.6		02.4	5	50.1		27.6	147	25.2		36.0	252	59.0		17.1				
9	53	03.3	268	56.4		01.5	20	50.9		28.2	162	27.9		36.0	268	01.2		17.0				
10	68	05.8	283	57.2	+15	00.7	35	51.6		28.9	177	30.7		36.0	283	03.4		16.9				
11	83	08.3	298	58.0	+14	59.8	50	52.4	+11	29.5	192	33.4	-21	35.9	298	05.6	+15	16.8				
12	98	10.7	313	58.7	+14	59.0	65	53.1	+11	30.1	207	36.2	-21	35.9	313	07.8	+15	16.7				
13	113	13.2	328	59.5		58.1	80	53.8		30.7	222	38.9		35.9	328	10.0		16.6				
14	128	15.7	344	00.3		57.3	95	54.6		31.3	237	41.6		35.9	343	12.2		16.6				
15	143	18.1	359	01.1		56.4	110	55.3		31.9	252	44.4		35.8	358	14.4		16.5				
16	158	20.6	14	01.9		55.5	125	56.1		32.5	267	47.1		35.8	13	16.7		16.4				
17	173	23.1	29	02.7	+14	54.7	140	56.8	+11	33.2	282	49.8	-21	35.8	28	18.9	+15	16.3				
18	188	25.5	44	03.5	+14	53.8	155	57.6	+11	33.8	297	52.6	-21	35.7	43	21.1	+15	16.2				
19	203	28.0	59	04.3		53.0	170	58.3		34.4	312	55.3		35.7	58	23.3		16.1				
20	218	30.5	74	05.1		52.1	185	59.1		35.0	327	58.1		35.7	73	25.5		16.0				
21	233	32.9	89	05.9		51.3	200	59.8		35.6	343	00.8		35.7	88	27.7		16.0				
22	248	35.4	104	06.7		50.4	216	00.5		36.2	358	03.5		35.6	103	29.9		15.9				
23	263	37.8	119	07.5		49.5	231	01.3		36.8	13	06.3		35.6	118	32.1		15.8				
24	278	40.3	134	08.3	+14	48.7	246	02.0	+11	37.5	28	09.0	-21	35.6	133	34.3	+15	15.7				
Dif	—				+8 -9				+7 +6				+27 0				+22 -1					

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 9 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 8 20 ^h : 57 ^m 0											
	PMG: 12 ^h 03 ^m 8			SD: 15 ^h 4 PMG: 0 ^h 29 ^m R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	04.6	+23 08.8	353	05.0	-26 50.1	52	60 N	21 25	23 03	** **	22 45 4	2 30 103		
1	194	04.5	08.7	7	31.5 75	44.9	52	58	21 05	22 19	** **	24 10	3 00 94		
2	209	04.3	08.5	21	58.1 76	39.6	53	56	20 49	21 50	** **	22 06 16	23 88		
3	224	04.2	08.4	36	24.7 76	34.1	55	54	35	29	23 09	21 51 20	41 84		
4	239	04.1	08.2	50	51.3 76	28.4	57	52	23	21 11	22 27	38 24	3 57 80		
5	254	04.0	+23 08.0	65	18.0 77	-26 22.6	58	50	20 13	20 57	22 01	21 27 26	4 10 78		
6	269	03.9	+23 07.9	79	44.7 77	-26 16.6	60	45	19 51	20 28	21 17	21 03 32	4 38 73		
7	284	03.7	07.7	94	11.4 77	10.5	61	40	33	20 05	20 47	20 44 36	5 00 69		
8	299	03.6	07.5	108	38.2 78	-26 04.2	63	35	18	19 48	24	28 39	18 66		
9	314	03.5	07.4	123	05.0 78	-25 57.8	64	30	19 05	33	20 06	20 14 42	33 64		
10	329	03.4	07.2	137	31.9 79	51.2	66	20	18 43	19 08	19 37	19 51 45	5 59 60		
11	344	03.3	+23 07.1	151	58.7 78	-25 44.5	67	10 N	18 25	18 48	19 15	19 30 50	6 21 58		
12	359	03.1	+23 06.9	166	25.7 80	-25 37.6	69	0	18 07	18 30	18 56	19 11 53	6 42 54		
13	14	03.0	06.7	180	52.6 79	30.6	70	10 S	17 50	18 13	39	18 51 57	7 03 51		
14	29	02.9	06.6	195	19.7 81	23.5	71	20	32	17 56	23	30 61	25 48		
15	44	02.8	06.4	209	46.7 80	16.1	74	30	17 11	37	18 07	18 06 65	7 50 44		
16	59	02.7	06.2	224	13.8 81	08.7	76	35	16 59	27	17 59	17 52 68	8 05 42		
17	74	02.5	+23 06.0	238	41.0 82	-25 01.1	77	40	16 45	17 15	17 49	17 35 71	8 22 39		
18	89	02.4	+23 05.9	253	08.2 82	-24 53.3	78	45	16 28	17 02	17 39	17 16 74	8 43 35		
19	104	02.3	05.7	267	35.4 82	45.4	79	50	16 08	16 46	28	16 51 80	9 09 30		
20	119	02.2	05.5	282	02.7 83	37.4	80	52	15 58	39	23	39 83	21 28		
21	134	02.1	05.4	296	30.1 84	29.2	82	54	48	31	17	25 86	35 25		
22	149	01.9	05.2	310	57.5 84	20.9	83	56	35	22	11	16 09 90	9 52 20		
23	164	01.8	05.0	325	24.9 84	12.4	85	58	21	12	17 04	15 49 96	10 12 15		
24	179	01.7	+23 04.8	339	52.4 85	-24 03.8	86	60 S	15 04	16 01	16 57	15 25 104	10 36 8		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 24 ^m 4		Mag: -4.6 PMG: 15 ^h 03 ^m		Mag: +0.7 PMG: 7 ^h 35 ^m		Mag: -2.6 PMG: 22 ^h 03 ^m		Mag: +0.6 PMG: 15 ^h 03 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	278	40.3	134 08.3	+14 48.7	246 02.0	+11 37.5	28 09.0	-21 35.6	133 34.3	+15 15.7
1	293	42.8	149 09.1	47.8	261 02.8	38.1	43 11.7	35.6	148 36.6	15.6
2	308	45.2	164 09.9	47.0	276 03.5	38.7	58 14.5	35.5	163 38.8	15.5
3	323	47.7	179 10.7	46.1	291 04.3	39.3	73 17.2	35.5	178 41.0	15.5
4	338	50.2	194 11.6	45.3	306 05.0	39.9	88 19.9	35.5	193 43.2	15.4
5	353	52.6	209 12.4	+14 44.4	321 05.8	+11 40.5	103 22.7	-21 35.5	208 45.4	+15 15.3
6	8	55.1	224 13.2	+14 43.5	336 06.5	+11 41.1	118 25.4	-21 35.4	223 47.6	+15 15.2
7	23	57.6	239 14.0	42.7	351 07.2	41.7	133 28.1	35.4	238 49.8	15.1
8	39	00.0	254 14.8	41.8	6 08.0	42.4	148 30.9	35.4	253 52.0	15.0
9	54	02.5	269 15.7	41.0	21 08.7	43.0	163 33.6	35.4	268 54.2	14.9
10	69	05.0	284 16.5	40.1	36 09.5	43.6	178 36.3	35.3	283 56.4	14.9
11	84	07.4	299 17.3	+14 39.2	51 10.2	+11 44.2	193 39.1	-21 35.3	298 58.6	+15 14.8
12	99	09.9	314 18.2	+14 38.4	66 11.0	+11 44.8	208 41.8	-21 35.3	314 00.9	+15 14.7
13	114	12.3	329 19.0	37.5	81 11.7	45.4	223 44.5	35.3	329 03.1	14.6
14	129	14.8	344 19.8	36.7	96 12.5	46.0	238 47.3	35.2	344 05.3	14.5
15	144	17.3	359 20.7	35.8	111 13.2	46.6	253 50.0	35.2	359 07.5	14.4
16	159	19.7	14 21.5	35.0	126 13.9	47.2	268 52.7	35.2	14 09.7	14.3
17	174	22.2	29 22.4	+14 34.1	141 14.7	+11 47.9	283 55.5	-21 35.1	29 11.9	+15 14.3
18	189	24.7	44 23.2	+14 33.2	156 15.4	+11 48.5	298 58.2	-21 35.1	44 14.1	+15 14.2
19	204	27.1	59 24.0	32.4	171 16.2	49.1	314 00.9	35.1	59 16.3	14.1
20	219	29.6	74 24.9	31.5	186 16.9	49.7	329 03.7	35.1	74 18.5	14.0
21	234	32.1	89 25.7	30.7	201 17.7	50.3	344 06.4	35.0	89 20.7	13.9
22	249	34.5	104 26.6	29.8	216 18.4	50.9	359 09.1	35.0	104 22.9	13.8
23	264	37.0	119 27.4	28.9	231 19.2	51.5	14 11.9	35.0	119 25.1	13.7
24	279	39.5	134 28.3	+14 28.1	246 19.9	+11 52.1	29 14.6	-21 35.0	134 27.4	+15 13.7
Dif	—	+8	-9	+7	+6	+27	0	+22	-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15°7 PMG: 12 ^h 04 ^m 0				Edad: 16 ^d 9 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/5 R°: 52 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	01.7	+23	04.8	339	52.4	86	−24	03.8	58	1 05	2 43	22	49	1	4	13	105		
1	194	01.6		04.7	354	20.0	86	−23	55.1	58	1 49	3 02		34	7		34	97		
2	209	01.5		04.5	8	47.6	86		46.2	56	2 18	19		22	11		4	51		
3	224	01.3		04.3	23	15.3	87		37.2	54	0 59	39		11	14		5	05		
4	239	01.2		04.1	37	43.0	87		28.0	52	1 41	2 56		22	02		17	85		
5	254	01.1	+23	04.0	52	10.8	88	−23	18.7	50	2 07	3 11	3 55	21	53	20	5	28		
6	269	01.0	+23	03.8	66	38.6	88	−23	09.3	45	2 51	3 40	4 17	21	35	25	5	51		
7	284	00.9		03.6	81	06.5	89	−22	59.8	40	3 21	4 02	35		20	29		6		
8	299	00.8		03.4	95	34.5	90		50.1	35	3 44	20	4 50	21	07	33		24		
9	314	00.6		03.2	110	02.5	90		40.3	30	4 02	4 35	5 03	20	56	36		37		
10	329	00.5		03.1	124	30.6	91		30.3	20	31	5 00	24		36	42		6		
11	344	00.4	+23	02.9	138	58.7	91	−22	20.2	10 N	4 53	5 20	5 43	20	20	46		7		
12	359	00.3	+23	02.7	153	26.9	92	−22	10.0	0	5 12	5 38	6 00	20	04	50		7		
13	14	00.2		02.5	167	55.1	92	−21	59.7	10 S	28	5 55	17	19	48	55		7		
14	29	00.0		02.3	182	23.5	94		49.2	20	5 44	6 12	36		31	59		8		
15	43	59.9		02.1	196	51.8	93		38.7	30	6 00	30	6 57		11	65		34		
16	58	59.8		02.0	211	20.3	95		28.0	35	09	41	7 09	19	00	67		8		
17	73	59.7	+23	01.8	225	48.8	95	−21	17.1	40	6 18	6 52	7 23	18	46	72		9		
18	88	59.6	+23	01.6	240	17.3	95	−21	06.2	45	6 28	7 05	7 39	18	30	77		9		
19	103	59.5		01.4	254	46.0	97	−20	55.1	50	40	21	7 59		11	82		39		
20	118	59.3		01.2	269	14.6	96		44.0	52	45	28	8 09	18	02	85		9		
21	133	59.2		01.0	283	43.4	98		32.7	54	50	36	20	17	51	88		10		
22	148	59.1		00.8	298	12.2	98		21.2	56	6 56	45	32		39	92		12		
23	163	59.0		00.6	312	41.1	99	−20	09.7	58	7 03	7 55	8 47		25	97		27		
24	178	58.9	+23	00.4	327	10.0	99	−19	58.1	60 S	7 10	8 07	9 03	17	09	103		10		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 20 ^m 5				Mag: −4.6 PMG: 15 ^h 01 ^m				Mag: +0.7 PMG: 7 ^h 34 ^m				Mag: −2.6 PMG: 21 ^h 59 ^m				Mag: +0.6 PMG: 15 ^h 00 ^m			
	hG ♂		Dec		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	39.5	134	28.3	+14	28.1			246	19.9	+11	52.1	29	14.6	−21	35.0	134	27.4	+15	13.7
1	294	41.9	149	29.2		27.2			261	20.7		52.7	44	17.3		34.9	149	29.6		13.6
2	309	44.4	164	30.0		26.4			276	21.4		53.3	59	20.1		34.9	164	31.8		13.5
3	324	46.8	179	30.9		25.5			291	22.1		53.9	74	22.8		34.9	179	34.0		13.4
4	339	49.3	194	31.7		24.7			306	22.9		54.5	89	25.5		34.9	194	36.2		13.3
5	354	51.8	209	32.6	+14	23.8			321	23.6	+11	55.2	104	28.2	−21	34.8	209	38.4	+15	13.2
6	9	54.2	224	33.5	+14	22.9			336	24.4	+11	55.8	119	31.0	−21	34.8	224	40.6	+15	13.1
7	24	56.7	239	34.4		22.1			351	25.1		56.4	134	33.7		34.8	239	42.8		13.1
8	39	59.2	254	35.2		21.2			6	25.9		57.0	149	36.4		34.8	254	45.0		13.0
9	55	01.6	269	36.1		20.4			21	26.6		57.6	164	39.2		34.7	269	47.2		12.9
10	70	04.1	284	37.0		19.5			36	27.4		58.2	179	41.9		34.7	284	49.4		12.8
11	85	06.6	299	37.9	+14	18.6			51	28.1	+11	58.8	194	44.6	−21	34.7	299	51.6	+15	12.7
12	100	09.0	314	38.7	+14	17.8			66	28.8	+11	59.4	209	47.3	−21	34.7	314	53.8	+15	12.6
13	115	11.5	329	39.6		16.9			81	29.6	+12	00.0	224	50.1		34.6	329	56.0		12.5
14	130	14.0	344	40.5		16.1			96	30.3	+12	00.6	239	52.8		34.6	344	58.3		12.4
15	145	16.4	359	41.4		15.2			111	31.1		01.2	254	55.5		34.6	0	00.5		12.4
16	160	18.9	14	42.3		14.4			126	31.8		01.8	269	58.3		34.6	15	02.7		12.3
17	175	21.3	29	43.2	+14	13.5			141	32.6	+12	02.4	285	01.0	−21	34.5	30	04.9	+15	12.2
18	190	23.8	44	44.1	+14	12.6			156	33.3	+12	03.0	300	03.7	−21	34.5	45	07.1	+15	12.1
19	205	26.3	59	45.0		11.8			171	34.1		03.6	315	06.4		34.5	60	09.3		12.0
20	220	28.7	74	45.9		10.9			186	34.8		04.2	330	09.2		34.5	75	11.5		11.9
21	235	31.2	89	46.8		10.1			201	35.5		04.8	345	11.9		34.4	90	13.7		11.8
22	250	33.7	104	47.7		09.2			216	36.3		05.4	0	14.6		34.4	105	15.9		11.8
23	265	36.1	119	48.6		08.4			231	37.0		06.0	15	17.3		34.4	120	18.1		11.7
24	280	38.6	134	49.5	+14	07.5			246	37.8	+12	06.6	30	20.1	−21	34.4	135	20.3	+15	11.6
Dif	—		+9		−9		+7		+6		+27		0		+22		−1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 9	PHE {	4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 57 ^m 9									
	PMG: 12 ^h 04 ^m 2								SD: 15 ^h 7		PMG: 2 ^h 16 ^m		R°: 50 ^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	58.9	+23 00.4	327	10.0	-19 58.1	118	60 N	21 24	22 59	22 50	0	5 58	102	
1	193	58.8	00.3	341	39.0 ¹⁰⁰	46.3 ¹¹⁸	118	58	21 04	22 16	41	4	6 11	97	
2	208	58.6	+23 00.1	356	08.0 ¹⁰⁰	34.4 ¹¹⁹	119	56	20 48	21 49	33	7	23	92	
3	223	58.5	+22 59.9	10	37.1 ¹⁰¹	22.5 ¹¹⁹	121	54	34	28	23 05	11	33	88	
4	238	58.4	59.7	25	06.3 ¹⁰²	-19 10.4 ¹²¹	121	52	22	21 10	22 25	19	14	42	85
5	253	58.3	+22 59.5	39	35.6 ¹⁰³	-18 58.2 ¹²²	122	50	20 12	20 56	21 59	16	6 50	82	
6	268	58.2	+22 59.3	54	04.8 ¹⁰²	-18 45.9 ¹²³	123	45	19 50	20 27	21 16	22	7 07	76	
7	283	58.1	59.1	68	34.2 ¹⁰⁴	33.5 ¹²⁴	124	40	33	20 05	20 46	26	20	72	
8	298	58.0	58.9	83	03.6 ¹⁰⁴	21.0 ¹²⁵	125	35	18	19 47	24	30	32	68	
9	313	57.8	58.7	97	33.1 ¹⁰⁵	-18 08.3 ¹²⁷	127	30	19 05	32	20 06	33	42	65	
10	328	57.7	58.5	112	02.6 ¹⁰⁵	-17 55.6 ¹²⁷	127	20	18 44	19 08	19 37	39	7 59	59	
11	343	57.6	+22 58.3	126	32.2 ¹⁰⁶	-17 42.8 ¹²⁸	128	10 N	18 25	18 48	19 15	44	8 14	54	
12	358	57.5	+22 58.1	141	01.9 ¹⁰⁷	-17 29.9 ¹²⁹	129	0	18 08	18 30	18 56	49	8 28	50	
13	13	57.4	57.9	155	31.6 ¹⁰⁷	16.9 ¹³⁰	130	10 S	17 51	18 14	40	53	42	45	
14	28	57.3	57.7	170	01.4 ¹⁰⁸	-17 03.8 ¹³¹	131	20	33	17 57	24	58	8 56	41	
15	43	57.2	57.5	184	31.2 ¹⁰⁸	-16 50.6 ¹³²	132	30	12	38	18 08	64	9 13	35	
16	58	57.0	57.3	199	01.1 ¹⁰⁹	37.3 ¹³³	133	35	17 00	28	17 59	68	23	31	
17	73	56.9	+22 57.1	213	31.1 ¹¹⁰	-16 23.9 ¹³⁴	134	40	16 46	17 16	17 50	71	9 34	27	
18	88	56.8	+22 56.9	228	01.1 ¹¹⁰	-16 10.4 ¹³⁵	135	45	16 30	17 03	17 40	76	9 46	24	
19	103	56.7	56.7	242	31.1 ¹¹⁰	-15 56.9 ¹³⁵	135	50	09	16 48	29	82	10 02	17	
20	118	56.6	56.5	257	01.2 ¹¹¹	43.2 ¹³⁷	137	52	16 00	40	24	84	09	15	
21	133	56.5	56.3	271	31.4 ¹¹²	29.5 ¹³⁷	137	54	15 49	32	18	88	17	12	
22	148	56.4	56.1	286	01.6 ¹¹²	15.6 ¹³⁹	139	56	37	24	12	92	26	9	
23	163	56.2	55.9	300	31.9 ¹¹³	-15 01.7 ¹³⁹	139	58	23	14	17 06	96	35	6	
24	178	56.1	+22 55.7	315	02.2 ¹¹³	-14 47.7 ¹⁴⁰	140	60 S	15 06	16 02	16 59	100	10 47	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 16 ^m 6		Mag: -4.6 PMG: 15 ^h 00 ^m		Mag: +0.7 PMG: 7 ^h 33 ^m		Mag: -2.6 PMG: 21 ^h 55 ^m		Mag: +0.6 PMG: 14 ^h 56 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	280	38.6	134	49.5	+14 07.5	246	37.8	+12 06.6	30 20.1	-21 34.4	135	20.3	+15 11.6	
1	295	41.1	149	50.4	06.6	261	38.5	07.2	45 22.8	34.3	150	22.5	11.5	
2	310	43.5	164	51.3	05.8	276	39.3	07.8	60 25.5	34.3	165	24.7	11.4	
3	325	46.0	179	52.2	04.9	291	40.0	08.4	75 28.2	34.3	180	26.9	11.3	
4	340	48.4	194	53.1	04.1	306	40.8	09.0	90 31.0	34.3	195	29.1	11.2	
5	355	50.9	209	54.0	+14 03.2	321	41.5	+12 09.6	105 33.7	-21 34.2	210	31.3	+15 11.1	
6	10	53.4	224	55.0	+14 02.3	336	42.2	+12 10.3	120 36.4	-21 34.2	225	33.5	+15 11.1	
7	25	55.8	239	55.9	01.5	351	43.0	10.9	135 39.1	34.2	240	35.8	11.0	
8	40	58.3	254	56.8	+14 00.6	6	43.7	11.5	150 41.8	34.2	255	38.0	10.9	
9	56	00.8	269	57.7	+13 59.8	21	44.5	12.1	165 44.6	34.1	270	40.2	10.8	
10	71	03.2	284	58.6	58.9	36	45.2	12.7	180 47.3	34.1	285	42.4	10.7	
11	86	05.7	299	59.6	+13 58.1	51	46.0	+12 13.3	195 50.0	-21 34.1	300	44.6	+15 10.6	
12	101	08.2	315	00.5	+13 57.2	66	46.7	+12 13.9	210 52.7	-21 34.1	315	46.8	+15 10.5	
13	116	10.6	330	01.4	56.3	81	47.5	14.5	225 55.5	34.0	330	49.0	10.5	
14	131	13.1	345	02.4	55.5	96	48.2	15.1	240 58.2	34.0	345	51.2	10.4	
15	146	15.6	0	03.3	54.6	111	49.0	15.7	256 00.9	34.0	0	53.4	10.3	
16	161	18.0	15	04.3	53.8	126	49.7	16.3	271 03.6	34.0	15	55.6	10.2	
17	176	20.5	30	05.2	+13 52.9	141	50.4	+12 16.9	286 06.3	-21 33.9	30	57.8	+15 10.1	
18	191	22.9	45	06.1	+13 52.1	156	51.2	+12 17.4	301 09.1	-21 33.9	46	00.0	+15 10.0	
19	206	25.4	60	07.1	51.2	171	51.9	18.0	316 11.8	33.9	61	02.2	09.9	
20	221	27.9	75	08.0	50.3	186	52.7	18.6	331 14.5	33.9	76	04.4	09.8	
21	236	30.3	90	09.0	49.5	201	53.4	19.2	346 17.2	33.8	91	06.6	09.8	
22	251	32.8	105	09.9	48.6	216	54.2	19.8	1	19.9	33.8	106	08.8	09.7
23	266	35.3	120	10.9	47.8	231	54.9	20.4	16	22.7	33.8	121	11.0	09.6
24	281	37.7	135	11.8	+13 46.9	246	55.7	+12 21.0	31 25.4	-21 33.8	136	13.2	+15 09.5	
Dif	—		+9	-9		+7	+6		+27	0		+22	-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 04 ^m 3 ^s				Edad: 18 ^d 9 ^h PHE { SD: 15 ^h 8 ^m PMG: 3 ^h 06 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	56.1	+22	55.7	315	02.2	-14	47.7	60 N	** **	1 10	2 45	22 50	0	7 40	98	
1	193	56.0		55.4	329	32.6 ¹¹⁴		33.6 ¹⁴¹	58	** **	1 52	3 05	45	3	48	94	
2	208	55.9		55.2	344	03.0 ¹¹⁴		19.5 ¹⁴¹	56	** **	2 20	21	40	7	7 55	90	
3	223	55.8		55.0	358	33.5 ¹¹⁵	-14	05.2 ¹⁴³	54	1 04	41	34	36	10	8 01	87	
4	238	55.7		54.8	13	04.0 ¹¹⁵	-13	50.9 ¹⁴³	52	1 43	2 58	46	33	12	07	84	
5	253	55.6	+22	54.6	27	34.6 ¹¹⁶	-13	36.5 ¹⁴⁴	50	2 09	3 13	3 57	22 29	14	8 12	81	
6	268	55.5	+22	54.4	42	05.2 ¹¹⁶	-13	22.0 ¹⁴⁵	45	2 53	3 42	4 19	22 22	19	8 23	76	
7	283	55.3		54.2	56	35.9 ¹¹⁷	-13	07.5 ¹⁴⁵	40	3 22	4 04	36	15	24	32	71	
8	298	55.2		54.0	71	06.6 ¹¹⁷	-12	52.9 ¹⁴⁶	35	3 45	21	4 51	10	28	40	67	
9	313	55.1		53.8	85	37.4 ¹¹⁸		38.2 ¹⁴⁷	30	4 03	4 36	5 03	22 05	31	47	63	
10	328	55.0		53.5	100	08.2 ¹¹⁸		23.4 ¹⁴⁸	20	31	5 01	25	21 57	37	8 58	58	
11	343	54.9	+22	53.3	114	39.0 ¹¹⁸	-12	08.6 ¹⁴⁸	10 N	4 54	5 21	5 44	21 50	42	9 08	52	
12	358	54.8	+22	53.1	129	09.9 ¹¹⁹	-11	53.7 ¹⁴⁹	0	5 12	5 38	6 01	21 43	47	9 18	47	
13	13	54.7		52.9	143	40.9 ¹²⁰		38.7 ¹⁵⁰	10 S	29	5 55	18	36	52	27	43	
14	28	54.6		52.7	158	11.8 ¹¹⁹		23.7 ¹⁵⁰	20	5 44	6 12	36	28	57	37	37	
15	43	54.4		52.5	172	42.9 ¹²¹	-11	08.6 ¹⁵¹	30	6 00	30	6 56	20	63	48	32	
16	58	54.3		52.2	187	13.9 ¹²⁰	-10	53.5 ¹⁵¹	35	09	41	7 09	15	67	9 54	29	
17	73	54.2	+22	52.0	201	45.0 ¹²¹	-10	38.2 ¹⁵³	40	6 18	6 52	7 22	21 09	71	10 01	25	
18	88	54.1	+22	51.8	216	16.1 ¹²¹	-10	23.0 ¹⁵²	45	6 28	7 05	7 39	21 03	75	10 10	20	
19	103	54.0		51.6	230	47.3 ¹²²	-10	07.6 ¹⁵⁴	50	39	21	7 59	20 55	81	19	16	
20	118	53.9		51.4	245	18.5 ¹²²	-9	52.2 ¹⁵⁴	52	44	28	8 08	51	84	24	13	
21	133	53.8		51.1	259	49.7 ¹²²		36.8 ¹⁵⁴	54	50	36	19	47	87	29	10	
22	148	53.7		50.9	274	21.0 ¹²³		21.3 ¹⁵⁵	56	6 56	45	31	43	89	35	7	
23	163	53.6		50.7	288	52.3 ¹²³	-9	05.7 ¹⁵⁶	58	7 02	7 54	8 45	38	93	41	3	
24	178	53.5	+22	50.5	303	23.6 ¹²³	-8	50.1 ¹⁵⁶	60 S	7 09	8 06	9 02	20 32	97	10 48	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 12 ^m 6 ^s		Mag: -4.6 PMG: 14 ^h 58 ^m		Mag: +0.7 PMG: 7 ^h 32 ^m		Mag: -2.5 PMG: 21 ^h 50 ^m		Mag: +0.6 PMG: 14 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	281	37.7	135	11.8	+13	46.9	246	55.7	+12	21.0
1	296	40.2	150	12.8		46.1	261	56.4		21.6
2	311	42.7	165	13.8		45.2	276	57.1		22.2
3	326	45.1	180	14.7		44.4	291	57.9		22.8
4	341	47.6	195	15.7		43.5	306	58.6		23.4
5	356	50.1	210	16.7	+13	42.6	321	59.4	+12	24.0
6	11	52.5	225	17.6	+13	41.8	337	00.1	+12	24.6
7	26	55.0	240	18.6		40.9	352	00.9		25.2
8	41	57.4	255	19.6		40.1	7	01.6		25.8
9	56	59.9	270	20.6		39.2	22	02.4		26.4
10	72	02.4	285	21.5		38.4	37	03.1		27.0
11	87	04.8	300	22.5	+13	37.5	52	03.8	+12	27.6
12	102	07.3	315	23.5	+13	36.6	67	04.6	+12	28.2
13	117	09.8	330	24.5		35.8	82	05.3		28.8
14	132	12.2	345	25.5		34.9	97	06.1		29.4
15	147	14.7	0	26.5		34.1	112	06.8		30.0
16	162	17.2	15	27.4		33.2	127	07.6		30.6
17	177	19.6	30	28.4	+13	32.4	142	08.3	+12	31.2
18	192	22.1	45	29.4	+13	31.5	157	09.1	+12	31.7
19	207	24.6	60	30.4		30.7	172	09.8		32.3
20	222	27.0	75	31.4		29.8	187	10.6		32.9
21	237	29.5	90	32.4		28.9	202	11.3		33.5
22	252	31.9	105	33.4		28.1	217	12.0		34.1
23	267	34.4	120	34.4		27.2	232	12.8		34.7
24	282	36.9	135	35.5	+13	26.4	247	13.5	+12	35.3
Dif	—		+10		-9		+7		+6	
								+27	0	
									+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 19 ^d 9 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'7										
	PMG: 12 ^h 04 ^m 5			SD: 15'9 PMG: 3 ^h 54 ^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	178	53.5	+22 50.5	303	23.6	-8 50.1		60 N	21 22	22 54	** **		22 50 **	9 18 98
1	193	53.3	50.2	317	55.0 ¹²⁴	34.5 ¹⁵⁶		58	21 03	22 14	** **		48 3	22 93
2	208	53.2	50.0	332	26.4 ¹²⁴	18.8 ¹⁵⁷		56	20 47	21 47	** **		47 6	25 90
3	223	53.1	49.8	346	57.8 ¹²⁴	-8 03.0 ¹⁵⁸		54	33	26	23 00		46 9	28 87
4	238	53.0	49.6	1	29.2 ¹²⁴	-7 47.2 ¹⁵⁸		52	22	21 09	22 23		45 11	31 84
5	253	52.9	+22 49.3	16	00.7 ¹²⁵	-7 31.4 ¹⁵⁸		50	20 11	20 55	21 58		22 43 15	9 33 82
6	268	52.8	+22 49.1	30	32.2 ¹²⁵	-7 15.5 ¹⁵⁹		45	19 49	20 26	21 15		22 41 19	9 39 75
7	283	52.7	48.9	45	03.7 ¹²⁵	-6 59.6 ¹⁵⁹		40	32	20 05	20 46		39 24	43 71
8	298	52.6	48.6	59	35.2 ¹²⁵	43.6 ¹⁶⁰		35	18	19 47	23		38 27	47 66
9	313	52.5	48.4	74	06.7 ¹²⁵	27.6 ¹⁶⁰		30	19 05	32	20 05		36 31	50 63
10	328	52.4	48.2	88	38.3 ¹²⁶	-6 11.5 ¹⁶¹		20	18 44	19 08	19 37		34 37	9 56 57
11	343	52.2	+22 47.9	103	09.9 ¹²⁶	-5 55.4 ¹⁶¹		10 N	18 25	18 48	19 15		22 32 42	10 00 52
12	358	52.1	+22 47.7	117	41.5 ¹²⁶	-5 39.3 ¹⁶¹		0	18 08	18 31	18 57		22 30 47	10 05 47
13	13	52.0	47.5	132	13.1 ¹²⁶	23.2 ¹⁶¹		10 S	17 51	18 14	40		28 52	10 41
14	28	51.9	47.2	146	44.7 ¹²⁶	-5 07.0 ¹⁶²		20	33	17 57	25		25 58	14 37
15	43	51.8	47.0	161	16.4 ¹²⁷	-4 50.7 ¹⁶³		30	13	39	09		23 63	20 30
16	58	51.7	46.8	175	48.0 ¹²⁶	34.5 ¹⁶²		35	17 01	29	18 00		22 67	23 27
17	73	51.6	+22 46.5	190	19.7 ¹²⁷	-4 18.2 ¹⁶³		40	16 47	17 17	17 51		22 20 71	10 26 24
18	88	51.5	+22 46.3	204	51.4 ¹²⁷	-4 01.9 ¹⁶³		45	16 31	17 04	17 41		22 18 76	10 30 19
19	103	51.4	46.1	219	23.1 ¹²⁷	-3 45.6 ¹⁶³		50	11	16 49	30		16 81	35 14
20	118	51.3	45.8	233	54.7 ¹²⁶	29.2 ¹⁶⁴		52	16 01	42	25		15 84	37 11
21	133	51.2	45.6	248	26.4 ¹²⁷	-3 12.8 ¹⁶⁴		54	15 51	34	20		14 87	39 9
22	148	51.1	45.3	262	58.1 ¹²⁷	-2 56.4 ¹⁶⁴		56	39	25	14		12 91	42 6
23	163	51.0	45.1	277	29.8 ¹²⁷	40.0 ¹⁶⁴		58	25	16	08		11 94	44 3
24	178	50.8	+22 44.9	292	01.5 ¹²⁷	-2 23.5 ¹⁶⁵		60 S	15 08	16 04	17 00		22 09 98	10 48 **
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 08 ^m 7		Mag: -4.7 PMG: 14 ^h 57 ^m			Mag: +0.7 PMG: 7 ^h 31 ^m			Mag: -2.5 PMG: 21 ^h 46 ^m			Mag: +0.6 PMG: 14 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	282	36.9	135	35.5	+13 26.4	247	13.5	+12 35.3	32	30.6	-21 33.2	137	06.1	+15 07.4
1	297	39.3	150	36.5	25.5	262	14.3	35.9	47	33.3	33.2	152	08.3	07.3
2	312	41.8	165	37.5	24.7	277	15.0	36.5	62	36.0	33.1	167	10.5	07.2
3	327	44.3	180	38.5	23.8	292	15.8	37.1	77	38.7	33.1	182	12.7	07.1
4	342	46.7	195	39.5	23.0	307	16.5	37.7	92	41.4	33.1	197	14.9	07.0
5	357	49.2	210	40.5	+13 22.1	322	17.3	+12 38.3	107	44.1	-21 33.1	212	17.1	+15 06.9
6	12	51.7	225	41.6	+13 21.3	337	18.0	+12 38.8	122	46.9	-21 33.0	227	19.3	+15 06.9
7	27	54.1	240	42.6	20.4	352	18.7	39.4	137	49.6	33.0	242	21.5	06.8
8	42	56.6	255	43.6	19.6	7	19.5	40.0	152	52.3	33.0	257	23.7	06.7
9	57	59.0	270	44.6	18.7	22	20.2	40.6	167	55.0	33.0	272	25.9	06.6
10	73	01.5	285	45.7	17.8	37	21.0	41.2	182	57.7	33.0	287	28.1	06.5
11	88	04.0	300	46.7	+13 17.0	52	21.7	+12 41.8	198	00.4	-21 32.9	302	30.3	+15 06.4
12	103	06.4	315	47.7	+13 16.1	67	22.5	+12 42.4	213	03.1	-21 32.9	317	32.5	+15 06.3
13	118	08.9	330	48.8	15.3	82	23.2	43.0	228	05.8	32.9	332	34.7	06.2
14	133	11.4	345	49.8	14.4	97	24.0	43.6	243	08.5	32.9	347	36.9	06.1
15	148	13.8	0	50.9	13.6	112	24.7	44.1	258	11.2	32.8	2	39.1	06.1
16	163	16.3	15	51.9	12.7	127	25.4	44.7	273	14.0	32.8	17	41.3	06.0
17	178	18.8	30	52.9	+13 11.9	142	26.2	+12 45.3	288	16.7	-21 32.8	32	43.5	+15 05.9
18	193	21.2	45	54.0	+13 11.0	157	26.9	+12 45.9	303	19.4	-21 32.8	47	45.7	+15 05.8
19	208	23.7	60	55.0	10.2	172	27.7	46.5	318	22.1	32.7	62	47.9	05.7
20	223	26.2	75	56.1	09.3	187	28.4	47.1	333	24.8	32.7	77	50.1	05.6
21	238	28.6	90	57.2	08.5	202	29.2	47.7	348	27.5	32.7	92	52.3	05.5
22	253	31.1	105	58.2	07.6	217	29.9	48.3	3	30.2	32.7	107	54.5	05.4
23	268	33.5	120	59.3	06.8	232	30.7	48.8	18	32.9	32.6	122	56.7	05.3
24	283	36.0	136	00.3	+13 05.9	247	31.4	+12 49.4	33	35.6	-21 32.6	137	58.9	+15 05.3
Dif	—		+10	-9		+7	+6		+27	0		+22		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 20 ^d 9	PHE { 4 ^h : 58 ^h /8 12 ^h : 58 ^h /9 20 ^h : 59 ^h /0	R ^o : 47 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 12 ^h 04 ^m 7																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	178	50.8	+22 44.9	292	01.5	-2 23.5	164	60 N	** **	1 15	2 48	22 49 0	10 56 98				
1	193	50.7	44.6	306	33.2	-2 07.1	164	58	** **	1 56	3 07	51 4	55 95				
2	208	50.6	44.4	321	04.9	-1 50.6	165	56	** **	2 23	23	53 7	55 91				
3	223	50.5	44.1	335	36.6	34.1	165	54	1 09	2 43	36	55 10	55 88				
4	238	50.4	43.9	350	08.3	17.6	165	52	1 47	3 00	48	56 13	55 84				
5	253	50.3	+22 43.6	4	40.0	-1 01.0	166	50	2 12	3 15	3 58	22 58 15	10 55 82				
6	268	50.2	+22 43.4	19	11.7	-0 44.5	165	45	2 54	3 43	4 20	23 00 21	10 54 76				
7	283	50.1	43.2	33	43.3	27.9	166	40	3 24	4 05	37	03 25	54 71				
8	298	50.0	42.9	48	15.0	-0 11.4	165	35	3 46	22	4 52	05 29	53 68				
9	313	49.9	42.7	62	46.6	+0 05.2	166	30	4 04	4 37	5 04	07 32	53 64				
10	328	49.8	42.4	77	18.3	21.7	165	20	32	5 01	26	11 38	53 58				
11	343	49.7	+22 42.2	91	49.9	+0 38.3	166	10 N	4 54	5 21	5 44	23 14 43	10 52 53				
12	358	49.6	+22 41.9	106	21.5	+0 54.9	166	0	5 13	5 39	6 01	23 17 48	10 52 47				
13	13	49.5	41.7	120	53.1	+1 11.5	166	10 S	29	5 55	18	20 53	51 43				
14	28	49.4	41.4	135	24.7	28.1	166	20	5 45	6 12	36	23 58	51 37				
15	43	49.3	41.2	149	56.2	+1 44.6	165	30	6 00	30	6 56	26 65	50 32				
16	58	49.2	40.9	164	27.7	+2 01.2	166	35	09	40	7 08	29 68	50 28				
17	73	49.1	+22 40.7	178	59.3	+2 17.8	166	40	6 18	6 52	7 22	23 31 73	10 50 24				
18	88	49.0	+22 40.4	193	30.7	+2 34.4	166	45	6 28	7 05	7 38	23 34 77	10 49 20				
19	103	48.8	40.2	208	02.2	+2 50.9	165	50	39	20	7 58	37 84	49 14				
20	118	48.7	39.9	222	33.6	+3 07.5	166	52	44	27	8 07	39 86	48 12				
21	133	48.6	39.6	237	05.1	24.0	165	54	49	35	18	41 89	48 9				
22	148	48.5	39.4	251	36.4	40.6	166	56	6 55	44	30	43 92	48 6				
23	163	48.4	39.1	266	07.8	+3 57.1	165	58	7 01	7 53	8 44	45 96	47 4				
24	178	48.3	+22 38.9	280	39.1	+4 13.6	165	60 S	7 08	8 04	9 00	23 47 101	10 47 0				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 04 ^m 8		Mag: -4.7 PMG: 14 ^h 55 ^m		Mag: +0.7 PMG: 7 ^h 30 ^m		Mag: -2.5 PMG: 21 ^h 42 ^m		Mag: +0.6 PMG: 14 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	283	36.0	136 00.3	+13 05.9	247 31.4	+12 49.4	33 35.6	-21 32.6	137 58.9	+15 05.3
1	298	38.5	151 01.4	05.1	262 32.2	50.0	48 38.3	32.6	153 01.1	05.2
2	313	40.9	166 02.5	04.2	277 32.9	50.6	63 41.0	32.6	168 03.3	05.1
3	328	43.4	181 03.5	03.4	292 33.6	51.2	78 43.7	32.6	183 05.5	05.0
4	343	45.9	196 04.6	02.5	307 34.4	51.8	93 46.5	32.5	198 07.7	04.9
5	358	48.3	211 05.7	+13 01.7	322 35.1	+12 52.4	108 49.2	-21 32.5	213 09.9	+15 04.8
6	13	50.8	226 06.8	+13 00.8	337 35.9	+12 52.9	123 51.9	-21 32.5	228 12.1	+15 04.7
7	28	53.3	241 07.8	+12 59.9	352 36.6	53.5	138 54.6	32.5	243 14.3	04.6
8	43	55.7	256 08.9	59.1	7 37.4	54.1	153 57.3	32.4	258 16.5	04.5
9	58	58.2	271 10.0	58.2	22 38.1	54.7	169 00.0	32.4	273 18.7	04.5
10	74	00.7	286 11.1	57.4	37 38.9	55.3	184 02.7	32.4	288 20.9	04.4
11	89	03.1	301 12.2	+12 56.5	52 39.6	+12 55.9	199 05.4	-21 32.4	303 23.1	+15 04.3
12	104	05.6	316 13.3	+12 55.7	67 40.3	+12 56.4	214 08.1	-21 32.3	318 25.3	+15 04.2
13	119	08.0	331 14.3	54.8	82 41.1	57.0	229 10.8	32.3	333 27.5	04.1
14	134	10.5	346 15.4	54.0	97 41.8	57.6	244 13.5	32.3	348 29.7	04.0
15	149	13.0	1 16.5	53.1	112 42.6	58.2	259 16.2	32.3	3 31.9	03.9
16	164	15.4	16 17.6	52.3	127 43.3	58.8	274 18.9	32.3	18 34.1	03.8
17	179	17.9	31 18.7	+12 51.5	142 44.1	+12 59.4	289 21.6	-21 32.2	33 36.3	+15 03.7
18	194	20.4	46 19.8	+12 50.6	157 44.8	+12 59.9	304 24.3	-21 32.2	48 38.5	+15 03.6
19	209	22.8	61 20.9	49.8	172 45.6	+13 00.5	319 27.0	32.2	63 40.7	03.6
20	224	25.3	76 22.1	48.9	187 46.3	01.1	334 29.7	32.2	78 42.9	03.5
21	239	27.8	91 23.2	48.1	202 47.1	01.7	349 32.4	32.1	93 45.1	03.4
22	254	30.2	106 24.3	47.2	217 47.8	02.3	4 35.1	32.1	108 47.3	03.3
23	269	32.7	121 25.4	46.4	232 48.5	02.8	19 37.8	32.1	123 49.5	03.2
24	284	35.1	136 26.5	+12 45.5	247 49.3	+13 03.4	34 40.5	-21 32.1	138 51.7	+15 03.1
Dif	—		+11	-8	+7	+6	+27	0	+22	-1

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 9 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 2 20 ^h : 59 ^m 3											
	PMG: 12 ^h 04 ^m 9			SD: 16 ^h 1 PMG: 5 ^h 28 ^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	178	48.3	+22 38.9	280	39.1	+4 13.6	165	60 N	21 20	22 49	** **	22 49	1	12 34	103
1	193	48.2	38.6	295	10.4 ¹²³	30.1 ¹⁶⁵	165	58	21 01	22 11	** **	22 55	5	30	98
2	208	48.1	38.4	309	41.6 ¹²²	+4 46.6 ¹⁶⁵	165	56	20 45	21 44	** **	23 00	9	26	94
3	223	48.0	38.1	324	12.8 ¹²²	+5 03.0 ¹⁶⁴	164	54	32	24	22 55	05 12	23	90	
4	238	47.9	37.8	338	44.0 ¹²²	19.5 ¹⁶⁵	165	52	20	21 08	22 20	09 15	19	88	
5	253	47.8	+22 37.6	353	15.2 ¹²²	+5 35.9 ¹⁶⁴	164	50	20 10	20 54	21 56	23 13	17	12 17	84
6	268	47.7	+22 37.3	7	46.3 ¹²¹	+5 52.3 ¹⁶⁴	164	45	19 49	20 25	21 14	23 21	23	12 10	79
7	283	47.6	37.1	22	17.3 ¹²⁰	+6 08.7 ¹⁶⁴	164	40	32	20 04	20 45	28 28		05 74	
8	298	47.5	36.8	36	48.3 ¹²⁰	25.0 ¹⁶³	163	35	17	19 47	23	34 32	12	01 69	
9	313	47.4	36.5	51	19.3 ¹²⁰	41.4 ¹⁶⁴	164	30	19 05	32	20 05	39 36	11	57 66	
10	328	47.3	36.3	65	50.2 ¹¹⁹	+6 57.7 ¹⁶³	163	20	18 44	19 08	19 37	49 41	51	59	
11	343	47.2	+22 36.0	80	21.1 ¹¹⁹	+7 13.9 ¹⁶²	162	10 N	18 25	18 48	19 15	23 57	46	11 45	54
12	358	47.1	+22 35.7	94	51.9 ¹¹⁸	+7 30.2 ¹⁶³	163	0	18 09	18 31	18 57	** ** *		11 39	50
13	13	47.0	35.5	109	22.7 ¹¹⁸	+7 46.4 ¹⁶²	162	10 S	17 52	18 14	41	** ** *		34	44
14	28	46.9	35.2	123	53.5 ¹¹⁸	+8 02.5 ¹⁶¹	161	20	34	17 58	25	** ** *		28	39
15	43	46.8	34.9	138	24.1 ¹¹⁶	18.7 ¹⁶²	162	30	14	40	09	** ** *		22	33
16	58	46.7	34.7	152	54.8 ¹¹⁷	34.8 ¹⁶¹	161	35	17 02	30	18 01	** ** *		18	30
17	73	46.6	+22 34.4	167	25.3 ¹¹⁵	+8 50.8 ¹⁶⁰	160	40	16 48	17 19	17 52	** ** *		11 14	26
18	88	46.5	+22 34.1	181	55.9 ¹¹⁶	+9 06.8 ¹⁶⁰	160	45	16 32	17 06	17 43	** ** *		11 09	21
19	103	46.4	33.9	196	26.3 ¹¹⁴	22.8 ¹⁶⁰	160	50	12	16 50	32	** ** *		03	16
20	118	46.3	33.6	210	56.7 ¹¹⁴	38.7 ¹⁵⁹	159	52	16 03	43	27	** ** *		11 00	14
21	133	46.2	33.3	225	27.1 ¹¹⁴	+9 54.6 ¹⁵⁹	159	54	15 53	36	21	** ** *		10 57	11
22	148	46.1	33.0	239	57.3 ¹¹²	+10 10.5 ¹⁵⁹	159	56	41	27	16	** ** *		54	8
23	163	46.0	32.8	254	27.6 ¹¹³	26.3 ¹⁵⁸	158	58	27	17	09	** ** *		51	3
24	178	45.9	+22 32.5	268	57.7 ¹¹¹	+10 42.0 ¹⁵⁷	157	60 S	15 11	16 07	17 02	** ** *		10 47	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 5 ^h 00 ^m 8		Mag: -4.7 PMG: 14 ^h 53 ^m			Mag: +0.7 PMG: 7 ^h 28 ^m			Mag: -2.5 PMG: 21 ^h 37 ^m			Mag: +0.6 PMG: 14 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	284	35.1	136	26.5	+12 45.5	247	49.3	+13 03.4	34	40.5	-21 32.1	138	51.7	+15 03.1	
1	299	37.6	151	27.6	44.7	262	50.0	04.0	49	43.2	32.1	153	53.9	03.0	
2	314	40.1	166	28.7	43.8	277	50.8	04.6	64	45.9	32.0	168	56.1	02.9	
3	329	42.5	181	29.9	43.0	292	51.5	05.2	79	48.6	32.0	183	58.3	02.8	
4	344	45.0	196	31.0	42.1	307	52.3	05.7	94	51.3	32.0	199	00.5	02.8	
5	359	47.5	211	32.1	+12 41.3	322	53.0	+13 06.3	109	54.0	-21 32.0	214	02.7	+15 02.7	
6	14	49.9	226	33.3	+12 40.4	337	53.8	+13 06.9	124	56.7	-21 31.9	229	04.9	+15 02.6	
7	29	52.4	241	34.4	39.6	352	54.5	07.5	139	59.4	31.9	244	07.1	02.5	
8	44	54.9	256	35.5	38.7	7	55.3	08.1	155	02.1	31.9	259	09.3	02.4	
9	59	57.3	271	36.7	37.9	22	56.0	08.6	170	04.8	31.9	274	11.5	02.3	
10	74	59.8	286	37.8	37.0	37	56.7	09.2	185	07.5	31.9	289	13.7	02.2	
11	90	02.3	301	38.9	+12 36.2	52	57.5	+13 09.8	200	10.2	-21 31.8	304	15.9	+15 02.1	
12	105	04.7	316	40.1	+12 35.3	67	58.2	+13 10.4	215	12.9	-21 31.8	319	18.0	+15 02.0	
13	120	07.2	331	41.2	34.5	82	59.0	10.9	230	15.6	31.8	334	20.2	01.9	
14	135	09.6	346	42.4	33.7	97	59.7	11.5	245	18.3	31.8	349	22.4	01.9	
15	150	12.1	1	43.5	32.8	113	00.5	12.1	260	21.0	31.7	4	24.6	01.8	
16	165	14.6	16	44.7	32.0	128	01.2	12.7	275	23.7	31.7	19	26.8	01.7	
17	180	17.0	31	45.9	+12 31.1	143	02.0	+13 13.3	290	26.4	-21 31.7	34	29.0	+15 01.6	
18	195	19.5	46	47.0	+12 30.3	158	02.7	+13 13.8	305	29.1	-21 31.7	49	31.2	+15 01.5	
19	210	22.0	61	48.2	29.4	173	03.4	14.4	320	31.8	31.7	64	33.4	01.4	
20	225	24.4	76	49.3	28.6	188	04.2	15.0	335	34.5	31.6	79	35.6	01.3	
21	240	26.9	91	50.5	27.7	203	04.9	15.6	350	37.2	31.6	94	37.8	01.2	
22	255	29.4	106	51.7	26.9	218	05.7	16.1	5	39.9	31.6	109	40.0	01.1	
23	270	31.8	121	52.8	26.1	233	06.4	16.7	20	42.6	31.6	124	42.2	01.0	
24	285	34.3	136	54.0	+12 25.2	248	07.2	+13 17.3	35	45.3	-21 31.5	139	44.4	+15 00.9	
Dif	—		+11		-8	+7		+6	+27		0	+22		-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 05 ^m 0				Edad: 22 ^d 9 PHE { 4 ^h : 59/3 12 ^h : 59/4 20 ^h : 59/4 R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	45.9	+22	32.5	268	57.7	+10	42.0	60 N	** **	1 21	2 51	22 50	2	14 17	108	
1	193	45.8		32.2	283	27.8 ¹¹¹	+10	57.7 ¹⁵⁷	58	** **	2 00	3 09	23 00	8	08	102	
2	208	45.7		31.9	297	57.8 ¹¹⁰	+11	13.3 ¹⁵⁶	56	** **	26	25	09 13		14 00	97	
3	223	45.6		31.7	312	27.8 ¹¹⁰		28.9 ¹⁵⁶	54	1 15	2 46	38	17 17		13 53	93	
4	238	45.5		31.4	326	57.7 ¹⁰⁹		44.4 ¹⁵⁵	52	1 50	3 02	3 50	24 20		47	90	
5	253	45.4	+22	31.1	341	27.5 ¹⁰⁸	+11	59.9 ¹⁵⁵	50	2 14	3 17	4 00	23 30	23	13 41	87	
6	268	45.3	+22	30.8	355	57.2 ¹⁰⁷	+12	15.3 ¹⁵⁴	45	2 56	3 45	4 21	23 44	29	13 29	81	
7	283	45.2		30.6	10	26.9 ¹⁰⁷		30.7 ¹⁵⁴	40	3 25	4 06	38	23 56	33	19	76	
8	298	45.1		30.3	24	56.5 ¹⁰⁶	+12	46.0 ¹⁵³	35	3 47	23	4 53	** **	**	10	72	
9	313	45.0		30.0	39	26.0 ¹⁰⁵	+13	01.2 ¹⁵²	30	4 05	4 38	5 05	** **	**	13 03	68	
10	328	44.9		29.7	53	55.5 ¹⁰⁵		16.3 ¹⁵¹	20	33	5 02	26	** **	**	12 50	63	
11	343	44.8	+22	29.4	68	24.9 ¹⁰⁴	+13	31.4 ¹⁵¹	10 N	4 55	5 22	5 45	** **	**	12 39	58	
12	358	44.7	+22	29.2	82	54.1 ¹⁰²	+13	46.5 ¹⁵¹	0	5 13	5 39	6 01	0 05	51	12 29	53	
13	13	44.6		28.9	97	23.4 ¹⁰³	+14	01.4 ¹⁴⁹	10 S	29	5 55	18	13 56		18	49	
14	28	44.5		28.6	111	52.5 ¹⁰¹		16.3 ¹⁴⁹	20	5 45	6 12	36	21 62		12 07	44	
15	43	44.4		28.3	126	21.6 ¹⁰¹		31.1 ¹⁴⁸	30	6 00	30	6 56	31 67		11 55	38	
16	58	44.3		28.0	140	50.5 ⁹⁹	+14	45.8 ¹⁴⁷	35	09	40	7 08	37 71		48	34	
17	73	44.2	+22	27.7	155	19.4 ⁹⁹	+15	00.5 ¹⁴⁷	40	6 17	6 51	7 21	0 44	74	11 40	30	
18	88	44.1	+22	27.4	169	48.2 ⁹⁸	+15	15.0 ¹⁴⁵	45	6 27	7 04	7 37	0 51	80	11 30	26	
19	103	44.0		27.2	184	17.0 ⁹⁸		29.5 ¹⁴⁵	50	38	19	7 57	1 01	85	19	20	
20	118	43.9		26.9	198	45.6 ⁹⁶		43.9 ¹⁴⁴	52	43	26	8 06	05 89		14	17	
21	133	43.8		26.6	213	14.2 ⁹⁶	+15	58.3 ¹⁴⁴	54	48	34	17	10 92		08	14	
22	148	43.7		26.3	227	42.6 ⁹⁴	+16	12.5 ¹⁴²	56	6 54	42	28	15 96		11 02	10	
23	163	43.7		26.0	242	11.0 ⁹⁴		26.7 ¹⁴²	58	7 00	7 52	42	21 100		10 54	6	
24	178	43.6	+22	25.7	256	39.3 ⁹³	+16	40.7 ¹⁴⁰	60 S	7 07	8 03	8 58	1 28	105	10 46	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 56 ^m 9		Mag: -4.7 PMG: 14 ^h 51 ^m		Mag: +0.7 PMG: 7 ^h 27 ^m		Mag: -2.5 PMG: 21 ^h 33 ^m		Mag: +0.6 PMG: 14 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	285	34.3	136	54.0	+12	25.2	248	07.2	+13	17.3	35	45.3	-21	31.5	139	44.4	+15	00.9
1	300	36.7	151	55.2		24.4	263	07.9		17.9	50	48.0		31.5	154	46.6		00.9
2	315	39.2	166	56.4		23.5	278	08.7		18.4	65	50.7		31.5	169	48.8		00.8
3	330	41.7	181	57.5		22.7	293	09.4		19.0	80	53.4		31.5	184	51.0		00.7
4	345	44.1	196	58.7		21.8	308	10.2		19.6	95	56.1		31.5	199	53.2		00.6
5	0	46.6	211	59.9	+12	21.0	323	10.9	+13	20.2	110	58.8	-21	31.4	214	55.4	+15	00.5
6	15	49.1	227	01.1	+12	20.2	338	11.6	+13	20.7	126	01.4	-21	31.4	229	57.6	+15	00.4
7	30	51.5	242	02.3		19.3	353	12.4		21.3	141	04.1		31.4	244	59.8		00.3
8	45	54.0	257	03.5		18.5	8	13.1		21.9	156	06.8		31.4	260	02.0		00.2
9	60	56.5	272	04.7		17.6	23	13.9		22.4	171	09.5		31.4	275	04.2	+15	00.1
10	75	58.9	287	05.9		16.8	38	14.6		23.0	186	12.2		31.3	290	06.4	+15	00.0
11	91	01.4	302	07.1	+12	15.9	53	15.4	+13	23.6	201	14.9	-21	31.3	305	08.6	+15	00.0
12	106	03.9	317	08.3	+12	15.1	68	16.1	+13	24.2	216	17.6	-21	31.3	320	10.8	+14	59.9
13	121	06.3	332	09.5		14.3	83	16.9		24.7	231	20.3		31.3	335	12.9		59.8
14	136	08.8	347	10.7		13.4	98	17.6		25.3	246	23.0		31.2	350	15.1		59.7
15	151	11.2	2	11.9		12.6	113	18.4		25.9	261	25.7		31.2	5	17.3		59.6
16	166	13.7	17	13.1		11.7	128	19.1		26.4	276	28.4		31.2	20	19.5		59.5
17	181	16.2	32	14.3	+12	10.9	143	19.8	+13	27.0	291	31.1	-21	31.2	35	21.7	+14	59.4
18	196	18.6	47	15.5	+12	10.1	158	20.6	+13	27.6	306	33.8	-21	31.2	50	23.9	+14	59.3
19	211	21.1	62	16.8		09.2	173	21.3		28.2	321	36.4		31.1	65	26.1		59.2
20	226	23.6	77	18.0		08.4	188	22.1		28.7	336	39.1		31.1	80	28.3		59.1
21	241	26.0	92	19.2		07.5	203	22.8		29.3	351	41.8		31.1	95	30.5		59.0
22	256	28.5	107	20.4		06.7	218	23.6		29.9	6	44.5		31.1	110	32.7		59.0
23	271	31.0	122	21.7		05.9	233	24.3		30.4	21	47.2		31.1	125	34.9		58.9
24	286	33.4	137	22.9	+12	05.0	248	25.1	+13	31.0	36	49.9	-21	31.0	140	37.1	+14	58.8
Dif	—		+12		-8		+7		+6		+27		0		+22		-1	

UT	SOL			 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 23 ^d 9	PHE {	4 ^h : 59 ^s 5 12 ^h : 59 ^s 5 20 ^h : 59 ^s 5									
	PMG: 12 ^h 05 ^m 2						SD: 16 ^h 2			PMG: 7 ^h 09 ^m	R°: 56 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	43.6	+22 25.7	256	39.3	+16 40.7	92	60 N	21 17	22 43	** **	22 52	8	16 05	113
1	193	43.5	25.4	271	07.5	+16 54.7	140	58	20 59	22 07	** **	23 08	15	15 50	105
2	208	43.4	25.1	285	35.6	+17 08.6	139	56	43	21 42	** **	22 21		37 99	
3	223	43.3	24.8	300	03.6	22.3	137	54	30	22	22 50	34 25		26 95	
4	238	43.2	24.6	314	31.5	36.0	137	52	19	21 06	22 17	44 29		17 90	
5	253	43.1	+22 24.3	328	59.4	+17 49.6	136	50	20 09	20 52	21 53	23 53	32	15 08	87
6	268	43.0	+22 24.0	343	27.1	+18 03.1	135	45	19 48	20 24	21 12	** **	**	14 50	81
7	283	42.9	23.7	357	54.8	16.5	134	40	31	20 03	20 44	** **	**	35 77	
8	298	42.8	23.4	12	22.3	29.8	133	35	17	19 46	22	0 06	37	22 73	
9	313	42.7	23.1	26	49.8	42.9	131	30	19 04	31	20 04	15 40		14 11	71
10	328	42.6	22.8	41	17.1	+18 56.0	131	20	18 43	19 08	19 37	30 46		13 53	65
11	343	42.5	+22 22.5	55	44.4	+19 09.0	130	10 N	18 26	18 48	19 15	0 43	51	13 37	60
12	358	42.4	+22 22.2	70	11.5	+19 21.8	128	0	18 09	18 31	18 57	0 56	55	13 22	56
13	13	42.3	21.9	84	38.6	34.6	128	10 S	17 52	18 15	41	1 09	59	13 07	53
14	28	42.2	21.6	99	05.6	47.2	126	20	35	17 58	26	23 64		12 51	48
15	43	42.1	21.3	113	32.5	+19 59.7	125	30	15	41	10	38 70		33 43	
16	58	42.0	21.0	127	59.3	+20 12.1	124	35	17 03	31	18 02	48 73		22 40	
17	73	42.0	+22 20.7	142	25.9	+20 24.4	123	40	16 49	17 20	17 53	1 58	77	12 10	37
18	88	41.9	+22 20.4	156	52.5	+20 36.5	121	45	16 34	17 07	17 44	2 11	82	11 56	32
19	103	41.8	20.1	171	19.0	+20 48.5	120	50	14	16 52	33	26 88		39 26	
20	118	41.7	19.8	185	45.4	+21 00.4	119	52	16 05	45	28	34 91		31 23	
21	133	41.6	19.5	200	11.7	12.2	118	54	15 55	37	23	42 95		22 20	
22	148	41.5	19.2	214	37.9	23.9	117	56	43	29	17	2 51	99	12 16	
23	163	41.4	18.9	229	04.0	35.4	115	58	29	20	11	3 01	105	11 00	11
24	178	41.3	+22 18.6	243	30.0	+21 46.8	114	60 S	15 14	16 09	17 04	3 13	112	10 47	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 53 ^m 0		Mag: -4.7 PMG: 14 ^h 49 ^m		Mag: +0.7 PMG: 7 ^h 26 ^m		Mag: -2.5 PMG: 21 ^h 29 ^m		Mag: +0.6 PMG: 14 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	286	33.4	137	22.9	248	25.1	36	49.9	140	37.1
1	301	35.9	152	24.1	263	25.8	51	52.6	155	39.3
2	316	38.4	167	25.4	278	26.6	66	55.3	170	41.5
3	331	40.8	182	26.6	293	27.3	81	58.0	185	43.7
4	346	43.3	197	27.8	308	28.1	97	00.6	200	45.9
5	1	45.7	212	29.1	323	28.8	112	03.3	215	48.1
6	16	48.2	227	30.3	338	29.5	127	06.0	230	50.3
7	31	50.7	242	31.6	353	30.3	142	08.7	245	52.4
8	46	53.1	257	32.8	8	31.0	157	11.4	260	54.6
9	61	55.6	272	34.1	23	31.8	172	14.1	275	56.8
10	76	58.1	287	35.3	38	32.5	187	16.8	290	59.0
11	92	00.5	302	36.6	53	33.3	202	19.4	306	01.2
12	107	03.0	317	37.9	68	34.0	217	22.1	321	03.4
13	122	05.5	332	39.1	83	34.8	232	24.8	336	05.6
14	137	07.9	347	40.4	98	35.5	247	27.5	351	07.8
15	152	10.4	2	41.6	113	36.3	262	30.2	6	10.0
16	167	12.8	17	42.9	128	37.0	277	32.9	21	12.2
17	182	15.3	32	44.2	143	37.7	292	35.6	36	14.4
18	197	17.8	47	45.5	158	38.5	307	38.2	51	16.6
19	212	20.2	62	46.7	173	39.2	322	40.9	66	18.8
20	227	22.7	77	48.0	188	40.0	337	43.6	81	21.0
21	242	25.2	92	49.3	203	40.7	352	46.3	96	23.1
22	257	27.6	107	50.6	218	41.5	7	49.0	111	25.3
23	272	30.1	122	51.9	233	42.2	22	51.7	126	27.5
24	287	32.6	137	53.2	248	43.0	37	54.3	141	29.7
Dif	—		+13	-8	+7	+6	+27	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 05 ^m 5			Edad: 25 ^d 9 PHE { 4 ^h : 59'4 12 ^h : 59'3 20 ^h : 59'3 SD: 16'2 PMG: 9 ^h 04 ^m R°: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	h m	m
0	178	39.2	+22	11.0	229	25.7	+25	36.2	60 N	21 14	22 38	** **	23 20 54	19 46 78			
1	193	39.1		10.7	243	49.4	47	43.8	58	20 56	22 03	** **	23 53 58	19 13 74			
2	208	39.0		10.4	258	13.1	47	51.2	56	41	21 39	** **	** ** *	18 48 73			
3	223	38.9		10.0	272	36.7	46	+25 58.4	54	29	20	22 45	** ** *	29 71			
4	238	38.8		09.7	287	00.2	45	+26 05.5	52	17	21 04	22 14	0 13 42	18 12 70			
5	253	38.7	+22	09.4	301	23.6	44	+26 12.3	50	20 08	20 50	21 51	0 25 45	17 58 69			
6	268	38.6	+22	09.1	315	47.0	44	+26 19.0	45	19 47	20 23	21 11	0 50 49	17 29 68			
7	283	38.6		08.7	330	10.3	43	25.5	40	30	20 02	20 43	1 11 51	17 06 67			
8	298	38.5		08.4	344	33.5	42	31.9	35	16	19 45	21	28 53	16 47 67			
9	313	38.4		08.1	358	56.7	42	38.0	30	19 04	31	20 04	1 42 56	31 66			
10	328	38.3		07.7	13	19.8	41	44.0	20	18 43	19 08	19 36	2 08 57	16 04 65			
11	343	38.2	+22	07.4	27	42.9	41	+26 49.8	10 N	18 26	18 48	19 15	2 29 60	15 41 63			
12	358	38.1	+22	07.1	42	05.9	40	+26 55.4	0	18 09	18 31	18 57	2 50 62	15 19 63			
13	13	38.0		06.8	56	28.8	39	+27 00.8	10 S	17 53	18 15	41	3 10 64	14 57 62			
14	28	38.0		06.4	70	51.7	39	06.1	20	35	17 59	26	33 65	34 61			
15	43	37.9		06.1	85	14.6	39	11.1	30	16	42	11	3 58 69	14 07 59			
16	58	37.8		05.8	99	37.4	38	16.0	35	17 04	32	18 03	4 14 69	13 51 58			
17	73	37.7	+22	05.4	114	00.1	37	+27 20.6	40	16 51	17 21	17 55	4 32 71	13 33 57			
18	88	37.6	+22	05.1	128	22.8	37	+27 25.1	45	16 35	17 08	17 45	4 53 74	13 11 55			
19	103	37.5		04.8	142	45.5	37	29.4	50	16	16 54	35	5 21 76	12 43 52			
20	118	37.5		04.4	157	08.1	36	33.5	52	16 07	47	30	34 79	29 51			
21	133	37.4		04.1	171	30.7	36	37.4	54	15 57	39	25	5 49 81	12 13 49			
22	148	37.3		03.8	185	53.2	35	41.1	56	45	31	19	6 08 84	11 54 46			
23	163	37.2		03.4	200	15.8	36	44.7	58	32	22	13	6 30 89	31 42			
24	178	37.1	+22	03.1	214	38.2	34	+27 48.0	60 S	15 17	16 11	17 07	7 00 98	11 02 32			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 45 ^m 1		Mag: -4.7 PMG: 14 ^h 45 ^m		Mag: +0.6 PMG: 7 ^h 24 ^m		Mag: -2.5 PMG: 21 ^h 20 ^m		Mag: +0.6 PMG: 14 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	288	31.7	138	24.9	+11	25.1	249	00.9	+13	58.0
1	303	34.2	153	26.3		24.3	264	01.6		58.6
2	318	36.6	168	27.6		23.5	279	02.4		59.1
3	333	39.1	183	29.0		22.7	294	03.1	+13	59.7
4	348	41.6	198	30.3		21.8	309	03.9	+14	00.2
5	3	44.0	213	31.7	+11	21.0	324	04.6	+14	00.8
6	18	46.5	228	33.1	+11	20.2	339	05.4	+14	01.3
7	33	49.0	243	34.4		19.4	354	06.1		01.9
8	48	51.4	258	35.8		18.5	9	06.9		02.4
9	63	53.9	273	37.2		17.7	24	07.6		03.0
10	78	56.3	288	38.6		16.9	39	08.3		03.6
11	93	58.8	303	39.9	+11	16.1	54	09.1	+14	04.1
12	109	01.3	318	41.3	+11	15.3	69	09.8	+14	04.7
13	124	03.7	333	42.7		14.4	84	10.6		05.2
14	139	06.2	348	44.1		13.6	99	11.3		05.8
15	154	08.7	3	45.5		12.8	114	12.1		06.3
16	169	11.1	18	46.9		12.0	129	12.8		06.9
17	184	13.6	33	48.3	+11	11.2	144	13.6	+14	07.4
18	199	16.1	48	49.7	+11	10.4	159	14.3	+14	08.0
19	214	18.5	63	51.1		09.5	174	15.1		08.5
20	229	21.0	78	52.5		08.7	189	15.8		09.1
21	244	23.5	93	53.9		07.9	204	16.6		09.6
22	259	25.9	108	55.3		07.1	219	17.3		10.2
23	274	28.4	123	56.7		06.3	234	18.1		10.7
24	289	30.8	138	58.1	+11	05.4	249	18.8	+14	11.3
Dif	—		+14		-8		+7		+6	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 26 ^d 9	PHE {	4 ^h : 59 ^m 2 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9 R°: 62 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 05 ^m 6													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	37.1	+22 03.1	214	38.2	+27 48.0	32	60 N	** ** *	1 34	2 57	** ** *	21 04	34
1	193	37.0	02.7	229	00.7	51.2	32	58	** ** *	2 08	3 15	** ** *	20 27	42
2	208	37.0	02.4	243	23.2	54.1	29	56	** ** *	32	30	0 18	59	46
3	223	36.9	02.1	257	45.6	56.9	28	54	1 26	2 52	43	38	60	49
4	238	36.8	01.7	272	08.0	+27 59.4	25	52	1 58	3 07	3 54	0 55	60	51
5	253	36.7	+22 01.4	286	30.4	+28 01.8	24	50	2 21	3 21	4 04	1 10	60	52
6	268	36.6	+22 01.0	300	52.7	+28 04.0	22	45	3 01	3 48	4 25	1 39	61	55
7	283	36.5	00.7	315	15.1	05.9	19	40	29	4 09	41	2 02	62	57
8	298	36.5	+22 00.3	329	37.5	07.7	18	35	3 50	26	4 55	21	62	57
9	313	36.4	+22 00.0	343	59.8	09.3	16	30	4 08	4 40	5 07	2 38	62	57
10	328	36.3	+21 59.7	358	22.2	10.7	14	20	35	5 04	28	3 05	63	60
11	343	36.2	+21 59.3	12	44.5	+28 11.9	12	10 N	4 56	5 23	5 46	3 29	63	61
12	358	36.1	+21 59.0	27	06.9	+28 12.9	10	0	5 14	5 40	6 02	3 52	62	62
13	13	36.1	58.6	41	29.2	13.7	8	10 S	30	5 56	18	4 14	63	63
14	28	36.0	58.3	55	51.6	14.3	6	20	5 45	6 12	36	4 38	63	63
15	43	35.9	57.9	70	14.0	14.7	4	30	6 00	29	6 55	5 07	62	65
16	58	35.8	57.6	84	36.4	14.9	2	35	08	39	7 07	23	63	66
17	73	35.7	+21 57.2	98	58.8	+28 14.9	0	40	6 16	6 50	7 20	5 43	62	66
18	88	35.7	+21 56.9	113	21.2	+28 14.8	1	45	6 26	7 02	7 35	6 07	61	67
19	103	35.6	56.5	127	43.7	14.4	4	50	36	17	7 54	37	61	68
20	118	35.5	56.2	142	06.2	13.8	6	52	41	24	8 03	6 53	60	69
21	133	35.4	55.8	156	28.7	13.1	7	54	46	31	13	7 10	60	70
22	148	35.3	55.5	170	51.2	12.1	10	56	51	39	25	32	59	72
23	163	35.3	55.1	185	13.8	11.0	11	58	6 57	48	38	7 59	58	73
24	178	35.2	+21 54.8	199	36.4	+28 09.7	13	60 S	7 04	7 59	8 53	8 38	54	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 41 ^m 2		Mag: -4.7 PMG: 14 ^h 43 ^m		Mag: +0.6 PMG: 7 ^h 22 ^m		Mag: -2.5 PMG: 21 ^h 16 ^m		Mag: +0.6 PMG: 14 ^h 25 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	289	30.8	138	58.1	+11 05.4	249	18.8	+14 11.3	40	02.7	-21 29.6	143	14.9	+14 52.1
1	304	33.3	153	59.5	04.6	264	19.5	11.8	55	05.4	29.6	158	17.1	52.0
2	319	35.8	169	00.9	03.8	279	20.3	12.4	70	08.1	29.6	173	19.3	51.9
3	334	38.2	184	02.4	03.0	294	21.0	12.9	85	10.8	29.6	188	21.4	51.9
4	349	40.7	199	03.8	02.2	309	21.8	13.5	100	13.4	29.5	203	23.6	51.8
5	4	43.2	214	05.2	+11 01.4	324	22.5	+14 14.0	115	16.1	-21 29.5	218	25.8	+14 51.7
6	19	45.6	229	06.7	+11 00.6	339	23.3	+14 14.6	130	18.8	-21 29.5	233	28.0	+14 51.6
7	34	48.1	244	08.1	+10 59.7	354	24.0	15.1	145	21.4	29.5	248	30.2	51.5
8	49	50.6	259	09.5	58.9	9	24.8	15.7	160	24.1	29.5	263	32.4	51.4
9	64	53.0	274	11.0	58.1	24	25.5	16.2	175	26.8	29.4	278	34.6	51.3
10	79	55.5	289	12.4	57.3	39	26.3	16.8	190	29.4	29.4	293	36.8	51.2
11	94	58.0	304	13.8	+10 56.5	54	27.0	+14 17.3	205	32.1	-21 29.4	308	39.0	+14 51.1
12	110	00.4	319	15.3	+10 55.7	69	27.8	+14 17.9	220	34.8	-21 29.4	323	41.1	+14 51.0
13	125	02.9	334	16.7	54.9	84	28.5	18.4	235	37.4	29.4	338	43.3	50.9
14	140	05.3	349	18.2	54.1	99	29.3	19.0	250	40.1	29.4	353	45.5	50.8
15	155	07.8	4	19.6	53.3	114	30.0	19.5	265	42.7	29.3	8	47.7	50.7
16	170	10.3	19	21.1	52.4	129	30.8	20.1	280	45.4	29.3	23	49.9	50.6
17	185	12.7	34	22.6	+10 51.6	144	31.5	+14 20.6	295	48.1	-21 29.3	38	52.1	+14 50.5
18	200	15.2	49	24.0	+10 50.8	159	32.3	+14 21.2	310	50.7	-21 29.3	53	54.3	+14 50.5
19	215	17.7	64	25.5	50.0	174	33.0	21.7	325	53.4	29.3	68	56.5	50.4
20	230	20.1	79	27.0	49.2	189	33.7	22.2	340	56.1	29.2	83	58.6	50.3
21	245	22.6	94	28.4	48.4	204	34.5	22.8	355	58.7	29.2	99	00.8	50.2
22	260	25.1	109	29.9	47.6	219	35.2	23.3	11	01.4	29.2	114	03.0	50.1
23	275	27.5	124	31.4	46.8	234	36.0	23.9	26	04.1	29.2	129	05.2	50.0
24	290	30.0	139	32.9	+10 46.0	249	36.7	+14 24.4	41	06.7	-21 29.2	144	07.4	+14 49.9
Dif	—		+14	-8		+7	+5		+27		0	+22	-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 27 ^d 9 PHE { 4 ^h : 58 ^h /8 12 ^h : 58 ^h /6 20 ^h : 58 ^h /5 R°: 60 ^m											
	PMG: 12 ^h 05 ^m 7			SD: 16 ^h 0 PMG: 11 ^h 09 ^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	35.2	+21 54.8	199	36.4	+28 09.7	16	60 N	21 11	22 32	** **	0 14 94	21 38 12		
1	193	35.1	54.4	213	59.1	08.1	16	58	20 54	21 59	** **	0 51 85	21 09 21		
2	208	35.0	54.1	228	21.8	06.4	17	56	39	36	23 38	1 17 81	20 47 27		
3	223	35.0	53.7	242	44.5	04.5	19	54	27	17	22 40	38 78	29 31		
4	238	34.9	53.3	257	07.3	02.4	21	52	16	21 02	22 10	1 55 76	20 13 34		
5	253	34.8	+21 53.0	271	30.2	+28 00.1	23	50	20 06	20 48	21 48	2 10 75	19 59 37		
6	268	34.7	+21 52.6	285	53.1	+27 57.7	24	45	19 46	20 22	21 09	2 40 72	19 32 41		
7	283	34.6	52.3	300	16.0	55.0	27	40	29	20 01	20 41	3 04 69	19 10 44		
8	298	34.6	51.9	314	39.1	52.1	29	35	15	19 44	20	23 68	18 51 48		
9	313	34.5	51.6	329	02.1	49.1	30	30	19 03	30	20 03	3 40 66	35 50		
10	328	34.4	51.2	343	25.3	45.9	32	20	18 43	19 07	19 36	4 08 64	18 09 53		
11	343	34.3	+21 50.8	357	48.5	+27 42.5	34	10 N	18 26	18 48	19 15	4 32 62	17 45 56		
12	358	34.3	+21 50.5	12	11.7	+27 38.9	36	0	18 09	18 32	18 58	4 54 61	17 24 58		
13	13	34.2	50.1	26	35.1	35.2	37	10 S	17 53	16	42	5 17 58	17 02 61		
14	28	34.1	49.7	40	58.5	31.2	40	20	36	18 00	27	5 41 56	16 38 64		
15	43	34.0	49.4	55	22.0	27.1	41	30	17	17 43	12	6 09 54	16 11 67		
16	58	34.0	49.0	69	45.5	22.8	43	35	17 05	33	18 04	26 52	15 55 69		
17	73	33.9	+21 48.7	84	09.2	+27 18.3	45	40	16 52	17 22	17 56	6 45 50	15 36 71		
18	88	33.8	+21 48.3	98	32.9	+27 13.7	46	45	16 37	17 10	17 47	7 08 48	15 13 75		
19	103	33.7	47.9	112	56.7	08.8	49	50	18	16 55	36	38 44	14 43 80		
20	118	33.7	47.6	127	20.6	+27 03.9	49	52	16 09	49	32	7 53 41	29 81		
21	133	33.6	47.2	141	44.6	+26 58.7	52	54	15 59	42	27	8 10 39	14 12 85		
22	148	33.5	46.8	156	08.7	53.3	54	56	48	33	21	31 34	13 52 88		
23	163	33.4	46.4	170	32.8	47.8	55	58	35	24	15	8 57 28	13 26 95		
24	178	33.4	+21 46.1	184	57.1	+26 42.2	56	60 S	15 20	16 14	17 09	9 32 18	12 51 106		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 37 ^m 2			Mag: -4.7 PMG: 14 ^h 40 ^m			Mag: +0.6 PMG: 7 ^h 21 ^m			Mag: -2.5 PMG: 21 ^h 12 ^m			Mag: +0.6 PMG: 14 ^h 21 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	290	30.0	139 32.9	+10 46.0	249 36.7	+14 24.4	41 06.7	-21 29.2	144 07.4	+14 49.9					
1	305	32.5	154 34.3	45.2	264 37.5	25.0	56 09.4	29.2	159 09.6	49.8					
2	320	34.9	169 35.8	44.4	279 38.2	25.5	71 12.0	29.1	174 11.8	49.7					
3	335	37.4	184 37.3	43.6	294 39.0	26.1	86 14.7	29.1	189 14.0	49.6					
4	350	39.8	199 38.8	42.8	309 39.7	26.6	101 17.4	29.1	204 16.1	49.5					
5	5 42.3	214 40.3	+10 42.0	324 40.5	+14 27.1	116 20.0	-21 29.1	219 18.3	+14 49.4						
6	20 44.8	229 41.8	+10 41.2	339 41.2	+14 27.7	131 22.7	-21 29.1	234 20.5	+14 49.3						
7	35 47.2	244 43.3	40.4	354 42.0	28.2	146 25.3	29.1	249 22.7	49.2						
8	50 49.7	259 44.8	39.6	9 42.7	28.8	161 28.0	29.0	264 24.9	49.1						
9	65 52.2	274 46.3	38.7	24 43.5	29.3	176 30.7	29.0	279 27.1	49.0						
10	80 54.6	289 47.8	37.9	39 44.2	29.9	191 33.3	29.0	294 29.3	49.0						
11	95 57.1	304 49.3	+10 37.1	54 45.0	+14 30.4	206 36.0	-21 29.0	309 31.4	+14 48.9						
12	110 59.6	319 50.8	+10 36.3	69 45.7	+14 30.9	221 38.6	-21 29.0	324 33.6	+14 48.8						
13	126 02.0	334 52.3	35.5	84 46.5	31.5	236 41.3	28.9	339 35.8	48.7						
14	141 04.5	349 53.8	34.7	99 47.2	32.0	251 43.9	28.9	354 38.0	48.6						
15	156 07.0	4 55.4	33.9	114 48.0	32.6	266 46.6	28.9	9 40.2	48.5						
16	171 09.4	19 56.9	33.1	129 48.7	33.1	281 49.3	28.9	24 42.4	48.4						
17	186 11.9	34 58.4	+10 32.3	144 49.5	+14 33.6	296 51.9	-21 28.9	39 44.6	+14 48.3						
18	201 14.3	49 59.9	+10 31.5	159 50.2	+14 34.2	311 54.6	-21 28.9	54 46.7	+14 48.2						
19	216 16.8	65 01.5	30.7	174 50.9	34.7	326 57.2	28.8	69 48.9	48.1						
20	231 19.3	80 03.0	30.0	189 51.7	35.3	341 59.9	28.8	84 51.1	48.0						
21	246 21.7	95 04.5	29.2	204 52.4	35.8	357 02.5	28.8	99 53.3	47.9						
22	261 24.2	110 06.1	28.4	219 53.2	36.3	12 05.2	28.8	114 55.5	47.8						
23	276 26.7	125 07.6	27.6	234 53.9	36.9	27 07.9	28.8	129 57.7	47.7						
24	291 29.1	140 09.2	+10 26.8	249 54.7	+14 37.4	42 10.5	-21 28.8	144 59.9	+14 47.6						
Dif	—	+15	-8	+7	+5	+27	0	+22	-1						

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 29 ^d 9 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 2 R°: 50 ^m													
	PMG: 12 ^h 05 ^m 9				SD: 15 ^h 7 PMG: 13 ^h 03 ^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	31.7	+21	37.0	171	10.2	+23	39.7	60 N	21 08	22 26	** **	3 34 104		21 55 1			
1	193	31.6		36.6	185	37.2	80	30.3	58	20 51	21 55	** **	3 54 96		41 6			
2	208	31.5		36.3	200	04.2	80	20.9	56	37	33	23 23	4 10 91		30 10			
3	223	31.5		35.9	214	31.4	82	11.3	54	25	21 14	22 35	23 88		19 14			
4	238	31.4		35.5	228	58.7	83	+23 01.6	52	14	20 59	22 06	35 84		10 16			
5	253	31.3	+21	35.1	243	26.2	85	+22 51.7	50	20 04	20 46	21 45	4 46 81		21 02 19			
6	268	31.3	+21	34.7	257	53.7	85	+22 41.8	45	19 44	20 20	21 07	5 08 75		20 44 24			
7	283	31.2		34.3	272	21.4	87	31.7	40	28	20 00	20 40	25 71		30 28			
8	298	31.1		33.9	286	49.2	88	21.5	35	15	19 43	19	40 68		17 32			
9	313	31.1		33.5	301	17.1	89	11.2	30	19 03	30	20 02	5 53 64		20 06 35			
10	328	31.0		33.1	315	45.1	90	+22 00.8	20	18 43	19 07	19 36	6 15 59		19 48 40			
11	343	30.9	+21	32.7	330	13.2	91	+21 50.2	10 N	18 26	18 48	19 15	6 33 55		19 31 45			
12	358	30.9	+21	32.4	344	41.5	93	+21 39.6	0	18 10	18 32	18 58	6 51 51		19 16 49			
13	13	30.8		32.0	359	09.9	94	28.9	10 S	17 54	16	42	7 08 47		19 00 53			
14	28	30.7		31.6	13	38.4	95	18.0	20	37	18 01	28	27 43		18 44 57			
15	43	30.7		31.2	28	07.0	96	+21 07.1	30	18	17 44	13	7 48 38		24 63			
16	58	30.6		30.8	42	35.7	97	+20 56.0	35	17 06	34	18 05	8 00 35		13 66			
17	73	30.6	+21	30.4	57	04.6	99	+20 44.9	40	16 54	17 24	17 57	8 15 31		18 00 69			
18	88	30.5	+21	30.0	71	33.5	99	+20 33.7	45	16 39	17 12	17 48	8 31 27		17 44 74			
19	103	30.4		29.6	86	02.6	101	22.3	50	20	16 57	38	8 52 22		25 80			
20	118	30.4		29.2	100	31.8	102	+20 10.9	52	11	51	33	9 02 19		16 82			
21	133	30.3		28.8	115	01.1	103	+19 59.4	54	16 02	44	29	13 15		17 05 86			
22	148	30.2		28.4	129	30.6	105	47.8	56	15 51	36	23	25 12		16 53 90			
23	163	30.2		28.0	144	00.1	105	36.0	58	38	27	18	40 7		40 94			
24	178	30.1	+21	27.6	158	29.8	107	+19 24.3	60 S	15 23	16 17	17 11	9 56 2		16 24 100			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 29 ^m 4		Mag: -4.7 PMG: 14 ^h 35 ^m		Mag: +0.6 PMG: 7 ^h 19 ^m		Mag: -2.5 PMG: 21 ^h 03 ^m		Mag: +0.6 PMG: 14 ^h 14 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	292	28.3	140	47.1	+10	07.8	250	12.7	+14	50.3								
1	307	30.7	155	48.7		07.0	265	13.4		50.8								
2	322	33.2	170	50.4		06.2	280	14.2		51.3								
3	337	35.7	185	52.0		05.5	295	14.9		51.8								
4	352	38.1	200	53.6		04.7	310	15.7		52.4								
5	7	40.6	215	55.2	+10	03.9	325	16.4	+14	52.9								
6	22	43.1	230	56.9	+10	03.1	340	17.2	+14	53.4								
7	37	45.5	245	58.5		02.3	355	17.9		54.0								
8	52	48.0	261	00.1		01.6	10	18.7		54.5								
9	67	50.4	276	01.8	+10	00.8	25	19.4		55.0								
10	82	52.9	291	03.4	+10	00.0	40	20.1		55.6								
11	97	55.4	306	05.1	+9	59.2	55	20.9	+14	56.1								
12	112	57.8	321	06.7	+9	58.4	70	21.6	+14	56.6								
13	128	00.3	336	08.4		57.7	85	22.4		57.1								
14	143	02.8	351	10.0		56.9	100	23.1		57.7								
15	158	05.2	6	11.7		56.1	115	23.9		58.2								
16	173	07.7	21	13.3		55.3	130	24.6		58.7								
17	188	10.2	36	15.0	+9	54.6	145	25.4	+14	59.3								
18	203	12.6	51	16.7	+9	53.8	160	26.1	+14	59.8								
19	218	15.1	66	18.3		53.0	175	26.9	+15	00.3								
20	233	17.6	81	20.0		52.2	190	27.6		00.8								
21	248	20.0	96	21.7		51.5	205	28.4		01.4								
22	263	22.5	111	23.4		50.7	220	29.1		01.9								
23	278	24.9	126	25.0		49.9	235	29.9		02.4								
24	293	27.4	141	26.7	+9	49.2	250	30.6	+15	02.9								
Dif	—		+17		-8		+7		+5									
							+26		0									
									+22									
									-1									

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7			Edad: 1 ^d 5	PHE	$\left\{ \begin{array}{l} 4^h: 57^m/0 \\ 12^h: 56^m/8 \\ 20^h: 56^m/5 \end{array} \right.$		Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
	PMG: 12 ^h 06 ^m 0																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	30.1	+21	27.6	158	29.8	+19	24.3	60 N	1 47	3 05	5 18	96	21 56	0			
1	193	30.0		27.2	172	29.6 ¹⁰⁸		12.4 ¹¹⁹	58	2 17	21	30	91	47	4			
2	208	30.0		26.8	187	29.4 ¹⁰⁸	+19	00.4 ¹²⁰	56	0 49	40	41	87	40	7			
3	223	29.9		26.4	201	29.4 ¹¹⁰	+18	48.4 ¹²⁰	54	1 38	2 58	48	51	83	33	10		
4	238	29.9		26.0	216	29.6 ¹¹²		36.3 ¹²¹	52	2 06	3 13	3 59	5 59	81	26	13		
5	253	29.8	+21	25.6	230	29.8 ¹¹²	+18	24.1 ¹²²	50	2 27	3 26	4 08	6 07	78	21	15		
6	268	29.7	+21	25.2	245	30.1 ¹¹³	+18	11.8 ¹²³	45	3 06	3 52	4 28	6 23	72	21	08		
7	283	29.7		24.8	260	00.6 ¹¹⁵	+17	59.4 ¹²⁴	40	32	4 12	44	36	68	20	58		
8	298	29.6		24.4	274	31.1 ¹¹⁵		47.0 ¹²⁴	35	3 53	29	4 58	48	64	49	28		
9	313	29.5		24.0	289	01.8 ¹¹⁷		34.5 ¹²⁵	30	4 10	4 43	5 09	6 57	61	41	31		
10	328	29.5		23.6	303	32.5 ¹¹⁷		21.9 ¹²⁶	20	37	5 05	29	7 14	55	28	36		
11	343	29.4	+21	23.2	318	03.4 ¹¹⁹	+17	09.3 ¹²⁶	10 N	4 57	5 24	5 47	7 28	51	20	16		
12	358	29.4	+21	22.7	332	34.4 ¹²⁰	+16	56.6 ¹²⁷	0	5 14	5 40	6 02	7 42	46	20	05		
13	13	29.3		22.3	347	05.5 ¹²¹		43.8 ¹²⁸	10 S	30	5 56	18	7 55	42	19	53		
14	28	29.2		21.9	1	36.7 ¹²²		30.9 ¹²⁹	20	44	6 11	35	8 10	37	41	54		
15	43	29.2		21.5	16	08.0 ¹²³		18.0 ¹²⁹	30	5 59	28	6 54	26	32	27	59		
16	58	29.1		21.1	30	39.4 ¹²⁴	+16	05.0 ¹³⁰	35	6 06	38	7 05	35	30	19	62		
17	73	29.1	+21	20.7	45	10.8 ¹²⁴	+15	52.0 ¹³⁰	40	6 15	6 48	7 18	8 46	26	19	09		
18	88	29.0	+21	20.3	59	42.4 ¹²⁶	+15	38.9 ¹³¹	45	6 24	7 00	7 33	8 58	22	18	58		
19	103	29.0		19.9	74	14.1 ¹²⁷		25.8 ¹³¹	50	34	14	7 51	9 14	16	45	76		
20	118	28.9		19.5	88	45.9 ¹²⁸	+15	12.6 ¹³²	52	38	21	8 00	21	14	38	79		
21	133	28.8		19.0	103	17.8 ¹²⁹	+14	59.3 ¹³³	54	43	28	09	28	12	31	82		
22	148	28.8		18.6	117	49.8 ¹³⁰		46.0 ¹³³	56	48	35	20	37	8	23	85		
23	163	28.7		18.2	132	21.9 ¹³¹		32.6 ¹³⁴	58	6 54	44	33	47	4	14	89		
24	178	28.7	+21	17.8	146	54.1 ¹³²	+14	19.2 ¹³⁴	60 S	7 00	7 54	8 47	9 58	0	18	04		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG			Mag: -4.7			Mag: +0.6			Mag: -2.5			Mag: +0.6			
	4 ^h 25 ^m 4			PMG: 14 ^h 33 ^m			PMG: 7 ^h 18 ^m			PMG: 20 ^h 59 ^m			PMG: 14 ^h 11 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	293	27.4		141	26.7	+9	49.2	250	30.6	+15	02.9	44	17.6	-21	28.0	
1	308	29.9		156	28.4		48.4	265	31.4		03.5	59	20.2		28.0	
2	323	32.3		171	30.1		47.6	280	32.1		04.0	74	22.9		28.0	
3	338	34.8		186	31.8		46.9	295	32.9		04.5	89	25.5		28.0	
4	353	37.3		201	33.5		46.1	310	33.6		05.0	104	28.1		27.9	
5	8	39.7		216	35.2	+9	45.3	325	34.4	+15	05.6	119	30.8	-21	27.9	
6	23	42.2		231	36.9	+9	44.5	340	35.1	+15	06.1	134	33.4	-21	27.9	
7	38	44.7		246	38.6		43.8	355	35.9		06.6	149	36.1		27.9	
8	53	47.1		261	40.3		43.0	10	36.6		07.1	164	38.7		27.9	
9	68	49.6		276	42.0		42.2	25	37.4		07.7	179	41.3		27.9	
10	83	52.1		291	43.7		41.5	40	38.1		08.2	194	44.0		27.9	
11	98	54.5		306	45.5	+9	40.7	55	38.9	+15	08.7	209	46.6	-21	27.8	
12	113	57.0		321	47.2	+9	40.0	70	39.6	+15	09.2	224	49.2	-21	27.8	
13	128	59.4		336	48.9		39.2	85	40.4		09.7	239	51.9		27.8	
14	144	01.9		351	50.6		38.4	100	41.1		10.3	254	54.5		27.8	
15	159	04.4		6	52.4		37.7	115	41.9		10.8	269	57.1		27.8	
16	174	06.8		21	54.1		36.9	130	42.6		11.3	284	59.8		27.8	
17	189	09.3		36	55.8	+9	36.1	145	43.4	+15	11.8	300	02.4	-21	27.8	
18	204	11.8		51	57.6	+9	35.4	160	44.2	+15	12.4	315	05.1	-21	27.7	
19	219	14.2		66	59.3		34.6	175	44.9		12.9	330	07.7		27.7	
20	234	16.7		82	01.1		33.9	190	45.7		13.4	345	10.3		27.7	
21	249	19.2		97	02.8		33.1	205	46.4		13.9	0	13.0		27.7	
22	264	21.6		112	04.6		32.3	220	47.2		14.4	15	15.6		27.7	
23	279	24.1		127	06.3		31.6	235	47.9		15.0	30	18.2		27.7	
24	294	26.5		142	08.1	+9	30.8	250	48.7	+15	15.5	45	20.9	-21	27.7	
Dif	—			+17	-8			+8	+5			+26	0		+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 2 ^d 5 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 1 20 ^h : 55 ^m 9 R°: 42 ^m							Hora R°		Hora R°					
	PMG: 12 ^h 06 ^m 1			SD: 15 ^h 4 PMG: 14 ^h 39 ^m							Hora R°		Hora R°					
	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	28.7	+21 17.8	146	54.1	+14 19.2		60 N	21 04	22 20	6 54	89	21 56	0				
1	193	28.6	17.4	161	26.3 ¹³²	+14 05.7 ¹³⁵		58	20 48	21 51	7 01	86	51	3				
2	208	28.5	17.0	175	58.7 ¹³⁴	+13 52.2 ¹³⁵		56	34	29	08 82		47	5				
3	223	28.5	16.6	190	31.1 ¹³⁴	38.7 ¹³⁵		54	22	21 11	14 79		43	8				
4	238	28.4	16.1	205	03.7 ¹³⁶	25.1 ¹³⁶		52	12	20 57	20 76		39	10				
5	253	28.4	+21 15.7	219	36.3 ¹³⁶	+13 11.4 ¹³⁷		50	20 02	20 44	7 25	74	21 36	12				
6	268	28.3	+21 15.3	234	09.0 ¹³⁷	+12 57.7 ¹³⁷		45	19 43	20 18	7 35	69	21 28	17				
7	283	28.3	14.9	248	41.8 ¹³⁸	44.0 ¹³⁷		40	27	19 59	44 64		22	21				
8	298	28.2	14.5	263	14.7 ¹³⁹	30.2 ¹³⁸		35	14	42	52 60		17	24				
9	313	28.2	14.0	277	47.7 ¹⁴⁰	16.4 ¹³⁸		30	19 02	29	7 58	58	12	27				
10	328	28.1	13.6	292	20.7 ¹⁴⁰	+12 02.5 ¹³⁹		20	18 42	19 06	8 09	52	21 04	32				
11	343	28.0	+21 13.2	306	53.8 ¹⁴¹	+11 48.6 ¹³⁹		10 N	18 25	18 48	8 19	48	20 56	38				
12	358	28.0	+21 12.8	321	27.1 ¹⁴³	+11 34.7 ¹³⁹		0	18 10	18 32	8 28	43	20 49	42				
13	13	27.9	12.3	336	00.3 ¹⁴²	20.7 ¹⁴⁰		10 S	17 54	17	37 39		42	46				
14	28	27.9	11.9	350	33.7 ¹⁴⁴	+11 06.7 ¹⁴⁰		20	38	18 01	47 34		35	51				
15	43	27.8	11.5	5	07.2 ¹⁴⁵	+10 52.7 ¹⁴⁰		30	19	17 45	8 58	29	26	56				
16	58	27.8	11.1	19	40.7 ¹⁴⁵	38.6 ¹⁴¹		35	17 08	35	9 05	25	21	60				
17	73	27.7	+21 10.6	34	14.3 ¹⁴⁶	+10 24.6 ¹⁴⁰		40	16 55	17 25	9 12	22	20 15	63				
18	88	27.7	+21 10.2	48	48.0 ¹⁴⁷	+10 10.4 ¹⁴²		45	16 40	17 13	9 20	18	20 09	67				
19	103	27.6	09.8	63	21.7 ¹⁴⁷	+9 56.3 ¹⁴¹		50	22	16 59	30 13		20 01	72				
20	118	27.6	09.4	77	55.5 ¹⁴⁸	42.1 ¹⁴²		52	14	53	35 11		19 57	75				
21	133	27.5	08.9	92	29.4 ¹⁴⁹	27.9 ¹⁴²		54	16 04	46	40 8		53	77				
22	148	27.5	08.5	107	03.4 ¹⁵⁰	+9 13.7 ¹⁴²		56	15 54	38	45 6		48	80				
23	163	27.4	08.1	121	37.4 ¹⁵⁰	+8 59.5 ¹⁴²		58	41	30	51 3		43	83				
24	178	27.4	+21 07.6	136	11.5 ¹⁵¹	+8 45.2 ¹⁴³		60 S	15 27	16 20	9 58	0	19 37	87				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 21 ^m 5		Mag: -4.7 PMG: 14 ^h 30 ^m		Mag: +0.6 PMG: 7 ^h 16 ^m		Mag: -2.5 PMG: 20 ^h 55 ^m		Mag: +0.6 PMG: 14 ^h 07 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	°	'	°	'	°	'									
0	294	26.5	142 08.1	+9 30.8	250 48.7	+15 15.5	45 20.9	-21 27.7	147 37.1									
1	309	29.0	157 09.8	30.1	265 49.4	16.0	60 23.5	27.6	162 39.2									
2	324	31.5	172 11.6	29.3	280 50.2	16.5	75 26.1	27.6	177 41.4									
3	339	33.9	187 13.4	28.6	295 50.9	17.0	90 28.8	27.6	192 43.6									
4	354	36.4	202 15.1	27.8	310 51.7	17.5	105 31.4	27.6	207 45.8									
5	9	38.9	217 16.9	+9 27.1	325 52.4	+15 18.1	120 34.0	-21 27.6	222 48.0									
6	24	41.3	232 18.7	+9 26.3	340 53.2	+15 18.6	135 36.6	-21 27.6	237 50.1									
7	39	43.8	247 20.5	25.6	355 53.9	19.1	150 39.3	27.6	252 52.3									
8	54	46.3	262 22.2	24.8	10 54.7	19.6	165 41.9	27.5	267 54.5									
9	69	48.7	277 24.0	24.1	25 55.4	20.1	180 44.5	27.5	282 56.7									
10	84	51.2	292 25.8	23.3	40 56.2	20.6	195 47.2	27.5	297 58.9									
11	99	53.7	307 27.6	+9 22.6	55 56.9	+15 21.2	210 49.8	-21 27.5	313 01.1									
12	114	56.1	322 29.4	+9 21.8	70 57.7	+15 21.7	225 52.4	-21 27.5	328 03.2									
13	129	58.6	337 31.2	21.1	85 58.4	22.2	240 55.1	27.5	343 05.4									
14	145	01.0	352 33.0	20.3	100 59.2	22.7	255 57.7	27.5	358 07.6									
15	160	03.5	7 34.8	19.6	115 59.9	23.2	271 00.3	27.4	13 09.8									
16	175	06.0	22 36.6	18.8	131 00.7	23.7	286 02.9	27.4	28 12.0									
17	190	08.4	37 38.4	+9 18.1	146 01.4	+15 24.3	301 05.6	-21 27.4	43 14.1									
18	205	10.9	52 40.2	+9 17.3	161 02.2	+15 24.8	316 08.2	-21 27.4	58 16.3									
19	220	13.4	67 42.1	16.6	176 02.9	25.3	331 10.8	27.4	73 18.5									
20	235	15.8	82 43.9	15.8	191 03.7	25.8	346 13.4	27.4	88 20.7									
21	250	18.3	97 45.7	15.1	206 04.4	26.3	1 16.1	27.4	103 22.9									
22	265	20.8	112 47.5	14.3	221 05.2	26.8	16 18.7	27.4	118 25.0									
23	280	23.2	127 49.3	13.6	236 05.9	27.3	31 21.3	27.3	133 27.2									
24	295	25.7	142 51.2	+9 12.9	251 06.7	+15 27.8	46 24.0	-21 27.3	148 29.4									
Dif	—	+18	-7	+8	+5	+26	0	+22	-1									

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15/7 PMG: 12 ^h 06 ^m 2				Edad: 3 ^d 5 PHE { 4 ^h : 55/7 12 ^h : 55/5 20 ^h : 55/3 R°: 41 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	27.4	+21	07.6	136	11.5	+8	45.2	60 N	** **	1 53	3 09	8 23	85	21 56	**				
1	193	27.3		07.2	150	45.6 ¹⁵¹		30.9 ¹⁴³	58	** **	2 22	25	27	81	54	2				
2	208	27.3		06.8	165	19.8 ¹⁵²		16.6 ¹⁴³	56	1 01	2 44	39	30	79	52	5				
3	223	27.2		06.4	179	54.1 ¹⁵³	+8	02.3 ¹⁴³	54	1 44	3 01	3 51	33	76	51	7				
4	238	27.2		05.9	194	28.4 ¹⁵³	+7	47.9 ¹⁴⁴	52	2 11	16	4 01	36	73	49	10				
5	253	27.1	+21	05.5	209	02.8 ¹⁵⁴	+7	33.6 ¹⁴³	50	2 31	3 29	4 10	8 39	70	21 48	12				
6	268	27.0	+21	05.1	223	37.3 ¹⁵⁵	+7	19.2 ¹⁴⁴	45	3 08	3 54	4 30	8 44	66	21 45	17				
7	283	27.0		04.6	238	11.8 ¹⁵⁵	+7	04.8 ¹⁴⁴	40	34	4 14	46	48	62	43	20				
8	298	26.9		04.2	252	46.4 ¹⁵⁶	+6	50.4 ¹⁴⁴	35	3 55	30	4 59	52	58	41	23				
9	313	26.9		03.7	267	21.0 ¹⁵⁶		36.0 ¹⁴⁴	30	4 11	4 44	5 10	8 56	55	39	27				
10	328	26.9		03.3	281	55.7 ¹⁵⁷		21.6 ¹⁴⁴	20	37	5 06	30	9 01	50	36	32				
11	343	26.8	+21	02.9	296	30.4 ¹⁵⁷	+6	07.1 ¹⁴⁵	10 N	4 58	5 24	5 47	9 07	45	21 34	36				
12	358	26.8	+21	02.4	311	05.2 ¹⁵⁸	+5	52.7 ¹⁴⁴	0	5 15	5 40	6 03	9 11	41	21 31	40				
13	13	26.7		02.0	325	40.1 ¹⁵⁹		38.2 ¹⁴⁵	10 S	30	5 56	18	16	37	28	45				
14	28	26.7		01.6	340	14.9 ¹⁵⁸		23.7 ¹⁴⁵	20	44	6 11	35	21	32	26	49				
15	43	26.6		01.1	354	49.9 ¹⁶⁰	+5	09.3 ¹⁴⁴	30	5 58	28	6 53	27	27	22	55				
16	58	26.6		00.7	9	24.8 ¹⁵⁹	+4	54.8 ¹⁴⁵	35	6 06	37	7 04	30	24	21	57				
17	73	26.5	+21	00.2	23	59.9 ¹⁶¹	+4	40.3 ¹⁴⁵	40	6 14	6 47	7 17	9 34	20	21 18	61				
18	88	26.5	+20	59.8	38	34.9 ¹⁶⁰	+4	25.8 ¹⁴⁵	45	6 22	6 59	7 31	9 38	17	21 16	65				
19	103	26.4		59.4	53	10.0 ¹⁶¹	+4	11.3 ¹⁴⁵	50	32	7 12	49	43	12	13	70				
20	118	26.4		58.9	67	45.2 ¹⁶²	+3	56.8 ¹⁴⁵	52	36	19	7 58	46	9	12	72				
21	133	26.3		58.5	82	20.4 ¹⁶²		42.3 ¹⁴⁵	54	41	26	8 07	48	8	10	75				
22	148	26.3		58.0	96	55.6 ¹⁶²		27.8 ¹⁴⁵	56	46	33	18	51	5	08	78				
23	163	26.2		57.6	111	30.9 ¹⁶³	+3	13.3 ¹⁴⁵	58	51	42	30	54	2	06	81				
24	178	26.2	+20	57.1	126	06.2 ¹⁶³	+2	58.8 ¹⁴⁵	60 S	6 57	7 51	8 44	9 58	**	21 04	84				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 17 ^m 6				Mag: -4.7 PMG: 14 ^h 27 ^m				Mag: +0.6 PMG: 7 ^h 15 ^m				Mag: -2.5 PMG: 20 ^h 51 ^m				Mag: +0.6 PMG: 14 ^h 04 ^m			
h	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	295	25.7	142	51.2	+9	12.9	251	06.7	+15	27.8	46	24.0	-21	27.3	148	29.4	+14	38.4		
1	310	28.2	157	53.0		12.1	266	07.4		28.4	61	26.6		27.3	163	31.6		38.4		
2	325	30.6	172	54.9		11.4	281	08.2		28.9	76	29.2		27.3	178	33.8		38.3		
3	340	33.1	187	56.7		10.6	296	08.9		29.4	91	31.8		27.3	193	35.9		38.2		
4	355	35.5	202	58.5		09.9	311	09.7		29.9	106	34.4		27.3	208	38.1		38.1		
5	10	38.0	218	00.4	+9	09.2	326	10.4	+15	30.4	121	37.1	-21	27.3	223	40.3	+14	38.0		
6	25	40.5	233	02.2	+9	08.4	341	11.2	+15	30.9	136	39.7	-21	27.3	238	42.5	+14	37.9		
7	40	42.9	248	04.1		07.7	356	12.0		31.4	151	42.3		27.2	253	44.6		37.8		
8	55	45.4	263	06.0		07.0	11	12.7		31.9	166	44.9		27.2	268	46.8		37.7		
9	70	47.9	278	07.8		06.2	26	13.5		32.4	181	47.6		27.2	283	49.0		37.6		
10	85	50.3	293	09.7		05.5	41	14.2		33.0	196	50.2		27.2	298	51.2		37.5		
11	100	52.8	308	11.5	+9	04.8	56	15.0	+15	33.5	211	52.8	-21	27.2	313	53.4	+14	37.4		
12	115	55.3	323	13.4	+9	04.0	71	15.7	+15	34.0	226	55.4	-21	27.2	328	55.5	+14	37.3		
13	130	57.7	338	15.3		03.3	86	16.5		34.5	241	58.1		27.2	343	57.7		37.2		
14	146	00.2	353	17.2		02.6	101	17.2		35.0	257	00.7		27.1	358	59.9		37.1		
15	161	02.6	8	19.0		01.8	116	18.0		35.5	272	03.3		27.1	14	02.1		37.0		
16	176	05.1	23	20.9		01.1	131	18.7		36.0	287	05.9		27.1	29	04.3		36.9		
17	191	07.6	38	22.8	+9	00.4	146	19.5	+15	36.5	302	08.5	-21	27.1	44	06.4	+14	36.8		
18	206	10.0	53	24.7	+8	59.6	161	20.2	+15	37.0	317	11.2	-21	27.1	59	08.6	+14	36.7		
19	221	12.5	68	26.6		58.9	176	21.0		37.5	332	13.8		27.1	74	10.8		36.6		
20	236	15.0	83	28.5		58.2	191	21.7		38.0	347	16.4		27.1	89	13.0		36.5		
21	251	17.4	98	30.4		57.5	206	22.5		38.5	2	19.0		27.1	104	15.2		36.4		
22	266	19.9	113	32.3		56.7	221	23.2		39.1	17	21.6		27.1	119	17.3		36.3		
23	281	22.4	128	34.2		56.0	236	24.0		39.6	32	24.2		27.0	134	19.5		36.2		
24	296	24.8	143	36.1	+8	55.3	251	24.7	+15	40.1	47	26.9	-21	27.0	149	21.7	+14	36.1		
Dif	—		+19		-7		+8		+5		+26		0		+22		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7			Edad: 4 ^d 5 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8 R°: 39 ^m																		
	PMG: 12 ^h 06 ^m 3			SD: 15 ^h 0 PMG: 16 ^h 02 ^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	26.2	+20 57.1	126	06.2	+2 58.8		60 N	21 00	22 13	** **	9 48 83	21 55 **									
1	193	26.1	56.7	140	41.5 ¹⁶³	44.3 ¹⁴⁵		58	20 45	21 46	** **	48 80	56 2									
2	208	26.1	56.2	155	16.9 ¹⁶⁴	29.8 ¹⁴⁵		56	31	25	23 01	49 76	57 5									
3	223	26.0	55.8	169	52.3 ¹⁶⁴	15.3 ¹⁴⁵		54	20	21 08	22 23	49 74	58 7									
4	238	26.0	55.4	184	27.8 ¹⁶⁵	+2 00.8 ¹⁴⁵		52	09	20 54	21 58	49 72	21 59 10									
5	253	26.0	+20 54.9	199	03.2 ¹⁶⁴	+1 46.3 ¹⁴⁵		50	20 00	20 42	21 38	9 49 70	22 00 11									
6	268	25.9	+20 54.5	213	38.7 ¹⁶⁵	+1 31.8 ¹⁴⁵		45	19 41	20 16	21 02	9 50 64	22 02 16									
7	283	25.9	54.0	228	14.3 ¹⁶⁶	17.4 ¹⁴⁴		40	26	19 57	20 36	50 61	03 20									
8	298	25.8	53.6	242	49.8 ¹⁶⁵	+1 02.9 ¹⁴⁵		35	13	41	16	50 57	04 24									
9	313	25.8	53.1	257	25.4 ¹⁶⁶	+0 48.4 ¹⁴⁵		30	19 01	28	20 00	51 54	06 26									
10	328	25.7	52.7	272	01.0 ¹⁶⁶	34.0 ¹⁴⁴		20	18 42	19 06	19 34	51 49	08 31									
11	343	25.7	+20 52.2	286	36.6 ¹⁶⁶	+0 19.5 ¹⁴⁵		10 N	18 25	18 48	19 14	9 52 44	22 10 35									
12	358	25.7	+20 51.8	301	12.3 ¹⁶⁷	+0 05.1 ¹⁴⁴		0	18 10	18 32	18 58	9 52 40	22 11 40									
13	13	25.6	51.3	315	48.0 ¹⁶⁷	-0 09.3 ¹⁴⁴		10 S	17 55	17	43	53 35	13 44									
14	28	25.6	50.8	330	23.7 ¹⁶⁷	23.7 ¹⁴⁴		20	38	18 02	29	53 31	15 48									
15	43	25.5	50.4	344	59.4 ¹⁶⁷	38.1 ¹⁴⁴		30	20	17 46	15	54 26	17 54									
16	58	25.5	49.9	359	35.1 ¹⁶⁷	-0 52.5 ¹⁴⁴		35	17 09	36	08	54 23	18 57									
17	73	25.4	+20 49.5	14	10.8 ¹⁶⁷	-1 06.9 ¹⁴⁴		40	16 57	17 26	18 00	9 54 20	22 19 61									
18	88	25.4	+20 49.0	28	46.6 ¹⁶⁸	-1 21.2 ¹⁴³		45	16 42	17 15	17 51	9 55 16	22 21 64									
19	103	25.4	48.6	43	22.4 ¹⁶⁸	35.6 ¹⁴⁴		50	25	17 01	42	55 12	23 69									
20	118	25.3	48.1	57	58.2 ¹⁶⁸	-1 49.9 ¹⁴³		52	16	16 55	37	55 10	24 71									
21	133	25.3	47.7	72	34.0 ¹⁶⁸	-2 04.2 ¹⁴³		54	16 07	48	33	56 7	25 73									
22	148	25.2	47.2	87	09.8 ¹⁶⁸	18.5 ¹⁴³		56	15 57	41	28	56 5	26 76									
23	163	25.2	46.7	101	45.6 ¹⁶⁸	32.8 ¹⁴³		58	45	33	23	56 2	27 79									
24	178	25.2	+20 46.3	116	21.4 ¹⁶⁸	-2 47.1 ¹⁴³		60 S	15 31	16 23	17 17	9 57 **	22 28 83									
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 4 ^h 13 ^m 7		Mag: -4.7 PMG: 14 ^h 24 ^m		Mag: +0.6 PMG: 7 ^h 14 ^m		Mag: -2.5 PMG: 20 ^h 47 ^m		Mag: +0.6 PMG: 14 ^h 01 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec													
h	°	°	°	°	°	°	°	°	°													
0	296	24.8	143 36.1	+8 55.3	251 24.7	+15 40.1	47 26.9	-21 27.0	149 21.7													
1	311	27.3	158 38.0	54.6	266 25.5	40.6	62 29.5	27.0	164 23.9													
2	326	29.8	173 39.9	53.8	281 26.3	41.1	77 32.1	27.0	179 26.0													
3	341	32.2	188 41.9	53.1	296 27.0	41.6	92 34.7	27.0	194 28.2													
4	356	34.7	203 43.8	52.4	311 27.8	42.1	107 37.3	27.0	209 30.4													
5	11	37.1	218 45.7	+8 51.7	326 28.5	+15 42.6	122 40.0	-21 27.0	224 32.6													
6	26	39.6	233 47.6	+8 51.0	341 29.3	+15 43.1	137 42.6	-21 27.0	239 34.8													
7	41	42.1	248 49.6	50.2	356 30.0	43.6	152 45.2	26.9	254 36.9													
8	56	44.5	263 51.5	49.5	11 30.8	44.1	167 47.8	26.9	269 39.1													
9	71	47.0	278 53.4	48.8	26 31.5	44.6	182 50.4	26.9	284 41.3													
10	86	49.5	293 55.4	48.1	41 32.3	45.1	197 53.0	26.9	299 43.5													
11	101	51.9	308 57.3	+8 47.4	56 33.0	+15 45.6	212 55.6	-21 26.9	314 45.6													
12	116	54.4	323 59.3	+8 46.7	71 33.8	+15 46.1	227 58.3	-21 26.9	329 47.8													
13	131	56.9	339 01.2	45.9	86 34.5	46.6	243 00.9	26.9	344 50.0													
14	146	59.3	354 03.2	45.2	101 35.3	47.1	258 03.5	26.9	359 52.2													
15	162	01.8	9 05.1	44.5	116 36.0	47.6	273 06.1	26.8	14 54.4													
16	177	04.2	24 07.1	43.8	131 36.8	48.1	288 08.7	26.8	29 56.5													
17	192	06.7	39 09.1	+8 43.1	146 37.5	+15 48.6	303 11.3	-21 26.8	44 58.7													
18	207	09.2	54 11.0	+8 42.4	161 38.3	+15 49.1	318 13.9	-21 26.8	60 00.9													
19	222	11.6	69 13.0	41.7	176 39.1	49.6	333 16.5	26.8	75 03.1													
20	237	14.1	84 15.0	41.0	191 39.8	50.1	348 19.2	26.8	90 05.2													
21	252	16.6	99 17.0	40.2	206 40.6	50.6	3 21.8	26.8	105 07.4													
22	267	19.0	114 18.9	39.5	221 41.3	51.1	18 24.4	26.8	120 09.6													
23	282	21.5	129 20.9	38.8	236 42.1	51.6	33 27.0	26.8	135 11.8													
24	297	24.0	144 22.9	+8 38.1	251 42.8	+15 52.1	48 29.6	-21 26.7	150 14.0													
Dif	—	+20	-7	+8	+5	+26	0	+22	-1													

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 4				Edad: 5 ^d 5 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 R ^o : 41 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	25.2	+20	46.3	116	21.4	-2	47.1	60 N	** **	2 00	3 13	11 11	84	21 54	**				
1	193	25.1		45.8	130	57.3	169	-3 01.3	58	** **	27	29	08 80	21 58	3					
2	208	25.1		45.4	145	33.1	168	15.5	56	1 12	2 48	42	05 77	22 02	5					
3	223	25.0		44.9	160	08.9	168	29.7	54	1 50	3 05	3 54	03 74	05	9					
4	238	25.0		44.4	174	44.8	169	43.9	52	2 15	19	4 04	11 01	71	09	10				
5	253	25.0	+20	44.0	189	20.6	168	-3 58.1	50	2 35	3 32	4 13	10 59	69	22 11	13				
6	268	24.9	+20	43.5	203	56.5	169	-4 12.2	45	3 11	3 56	4 32	10 54	64	22 18	17				
7	283	24.9		43.0	218	32.3	168	26.3	40	37	4 16	4 47	51 60	23	21					
8	298	24.8		42.6	233	08.2	169	40.4	35	3 57	32	5 00	47 57	28	24					
9	313	24.8		42.1	247	44.0	168	-4 54.4	30	4 13	4 45	12	45 53	32	27					
10	328	24.8		41.6	262	19.9	169	-5 08.5	20	38	5 07	31	40 49	39	32					
11	343	24.7	+20	41.2	276	55.7	168	-5 22.5	10 N	4 58	5 25	5 47	10 36	44	22 45	37				
12	358	24.7	+20	40.7	291	31.5	168	-5 36.5	0	5 15	5 41	6 03	10 32	40	22 51	41				
13	13	24.7		40.2	306	07.3	168	-5 50.4	10 S	30	5 56	18	28 36	22 57	45					
14	28	24.6		39.8	320	43.2	169	-6 04.4	20	44	6 11	34	24 32	23 03	49					
15	43	24.6		39.3	335	19.0	168	18.3	30	5 58	27	6 53	20 26	11	54					
16	58	24.5		38.8	349	54.8	168	32.1	35	6 05	36	7 03	17 24	15	57					
17	73	24.5	+20	38.4	4	30.5	167	-6 46.0	40	6 13	6 46	7 15	10 14	20	23 20	60				
18	88	24.5	+20	37.9	19	06.3	168	-6 59.8	45	6 21	6 57	7 30	10 11	16	23 25	65				
19	103	24.4		37.4	33	42.1	168	-7 13.5	50	30	7 11	47	07 12	32	69					
20	118	24.4		37.0	48	17.8	167	27.3	52	35	17	7 56	05 10	35	72					
21	133	24.4		36.5	62	53.5	167	41.0	54	39	24	8 05	03 8	38	75					
22	148	24.3		36.0	77	29.3	168	-7 54.7	56	44	31	15	10 01	5	42	77				
23	163	24.3		35.5	92	04.9	166	-8 08.3	58	49	39	27	9 58	3	46	81				
24	178	24.3	+20	35.1	106	40.6	167	-8 21.9	60 S	6 55	7 49	8 41	9 56	**	23 51	84				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 09 ^m 7				Mag: -4.7 PMG: 14 ^h 21 ^m				Mag: +0.6 PMG: 7 ^h 13 ^m				Mag: -2.5 PMG: 20 ^h 42 ^m				Mag: +0.6 PMG: 13 ^h 57 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	297	24.0	144	22.9	+8	38.1	251	42.8	+15	52.1	48	29.6	-21	26.7	150	14.0	+14	33.8		
1	312	26.4	159	24.9		37.4	266	43.6		52.6	63	32.2		26.7	165	16.1		33.7		
2	327	28.9	174	26.9		36.7	281	44.3		53.1	78	34.8		26.7	180	18.3		33.6		
3	342	31.4	189	28.9		36.0	296	45.1		53.6	93	37.4		26.7	195	20.5		33.5		
4	357	33.8	204	30.9		35.3	311	45.8		54.1	108	40.0		26.7	210	22.7		33.4		
5	12	36.3	219	32.9	+8	34.6	326	46.6	+15	54.6	123	42.6	-21	26.7	225	24.8	+14	33.3		
6	27	38.7	234	34.9	+8	33.9	341	47.4	+15	55.1	138	45.3	-21	26.7	240	27.0	+14	33.2		
7	42	41.2	249	36.9		33.2	356	48.1		55.6	153	47.9		26.7	255	29.2		33.1		
8	57	43.7	264	38.9		32.5	11	48.9		56.1	168	50.5		26.7	270	31.4		33.0		
9	72	46.1	279	41.0		31.8	26	49.6		56.6	183	53.1		26.6	285	33.5		32.9		
10	87	48.6	294	43.0		31.1	41	50.4		57.1	198	55.7		26.6	300	35.7		32.8		
11	102	51.1	309	45.0	+8	30.4	56	51.1	+15	57.6	213	58.3	-21	26.6	315	37.9	+14	32.7		
12	117	53.5	324	47.0	+8	29.7	71	51.9	+15	58.1	229	00.9	-21	26.6	330	40.1	+14	32.6		
13	132	56.0	339	49.1		29.0	86	52.6		58.6	244	03.5		26.6	345	42.2		32.5		
14	147	58.5	354	51.1		28.3	101	53.4		59.1	259	06.1		26.6	0	44.4		32.4		
15	163	00.9	9	53.1		27.6	116	54.1	+15	59.6	274	08.7		26.6	15	46.6		32.3		
16	178	03.4	24	55.2		26.9	131	54.9	+16	00.1	289	11.3		26.6	30	48.8		32.2		
17	193	05.9	39	57.2	+8	26.2	146	55.6	+16	00.6	304	13.9	-21	26.6	45	51.0	+14	32.1		
18	208	08.3	54	59.3	+8	25.6	161	56.4	+16	01.1	319	16.5	-21	26.6	60	53.1	+14	32.0		
19	223	10.8	70	01.3		24.9	176	57.2		01.6	334	19.1		26.5	75	55.3		31.9		
20	238	13.2	85	03.4		24.2	191	57.9		02.1	349	21.7		26.5	90	57.5		31.8		
21	253	15.7	100	05.4		23.5	206	58.7		02.6	4	24.3		26.5	105	59.7		31.7		
22	268	18.2	115	07.5		22.8	221	59.4		03.0	19	26.9		26.5	121	01.8		31.6		
23	283	20.6	130	09.6		22.1	237	00.2		03.5	34	29.6		26.5	136	04.0		31.5		
24	298	23.1	145	11.6	+8	21.4	252	00.9	+16	04.0	49	32.2	-21	26.5	151	06.2	+14	31.4		
Dif	—		+20		-7		+8		+5		+26		0		+22		-1			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 15 ^h 7				Edad: 6 ^d 5	PHE	$\left\{ \begin{array}{l} 4^h: 54/4 \\ 12^h: 54/3 \\ 20^h: 54/3 \end{array} \right.$																			
	PMG: 12 ^h 06 ^m 4																									
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m								
0	178	24.3	+20	35.1	106	40.6	-8	21.9	60 N	20	56	22	07	** **	12	35	85	21 53 0								
1	193	24.2		34.6	121	16.3 ¹⁶⁷		35.5 ¹³⁶	58	41	21	41	21	41	** **	28	82	22 01 4								
2	208	24.2		34.1	135	51.9 ¹⁶⁶	-8	49.1 ¹³⁶	56	28		21	22	52		22	78	07 8								
3	223	24.2		33.6	150	27.5 ¹⁶⁶	-9	02.6 ¹³⁵	54	17	21	05	22	18		17	75	14 10								
4	238	24.1		33.2	165	03.1 ¹⁶⁶		16.0 ¹³⁴	52	20	07	20	51	21	54	12	72	19 13								
5	253	24.1	+20	32.7	179	38.6 ¹⁶⁵	-9	29.4 ¹³⁴	50	19	58	20	39	21	35	12	08	22 24 15								
6	268	24.1	+20	32.2	194	14.2 ¹⁶⁶	-9	42.8 ¹³⁴	45	19	39	20	14	21	00	11	58	22 35 20								
7	283	24.0		31.7	208	49.7 ¹⁶⁵	-9	56.2 ¹³⁴	40	24		19	55	20	34	51	61	44 24								
8	298	24.0		31.2	223	25.1 ¹⁶⁴	-10	09.5 ¹³³	35	11		40	20	15		44	58	52 27								
9	313	24.0		30.8	238	00.6 ¹⁶⁵		22.8 ¹³³	30	19	00	27	19	59		38	55	22 59 30								
10	328	23.9		30.3	252	36.0 ¹⁶⁴		36.0 ¹³²	20	18	41	19	05	34		29	49	23 11 35								
11	343	23.9	+20	29.8	267	11.4 ¹⁶⁴	-10	49.2 ¹³²	10 N	18	25	18	48	19	14	11	20	23 22 38								
12	358	23.9	+20	29.3	281	46.7 ¹⁶³	-11	02.3 ¹³¹	0	18	10	18	32	18	58	11	12	23 32 42								
13	13	23.8		28.8	296	22.1 ¹⁶⁴		15.4 ¹³¹	10 S	17	55		17	43		11	04	42 46								
14	28	23.8		28.4	310	57.4 ¹⁶³		28.5 ¹³¹	20	39		18	03	29		10	56	23 52 51								
15	43	23.8		27.9	325	32.6 ¹⁶²		41.5 ¹³⁰	30	21		17	47	16		46	28	** ** *								
16	58	23.7		27.4	340	07.8 ¹⁶²	-11	54.4 ¹²⁹	35	17	10		38	09		41	25	** ** *								
17	73	23.7	+20	26.9	354	43.0 ¹⁶²	-12	07.3 ¹²⁹	40	16	58	17	28	18	01	10	34	** ** *								
18	88	23.7	+20	26.4	9	18.1 ¹⁶¹	-12	20.2 ¹²⁹	45	16	44	17	17	17	53	10	27	** ** *								
19	103	23.7		25.9	23	53.2 ¹⁶¹		33.0 ¹²⁸	50	27		17	04	44		19	14	** ** *								
20	118	23.6		25.5	38	28.3 ¹⁶¹		45.8 ¹²⁸	52	19		16	58	40		15	12	** ** *								
21	133	23.6		25.0	53	03.3 ¹⁶⁰	-12	58.5 ¹²⁷	54	10		51		35		11	9	** ** *								
22	148	23.6		24.5	67	38.3 ¹⁶⁰	-13	11.2 ¹²⁷	56	16	00		44	31		06	6	** ** *								
23	163	23.5		24.0	82	13.2 ¹⁵⁹		23.8 ¹²⁶	58	15	48		36	25		10	01	** ** *								
24	178	23.5	+20	23.5	96	48.1 ¹⁵⁹	-13	36.4 ¹²⁶	60 S	15	35	16	26	17	20	9	55	** ** *								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 4 ^h 05 ^m 8				Mag: -4.7 PMG: 14 ^h 17 ^m				Mag: +0.6 PMG: 7 ^h 12 ^m				Mag: -2.5 PMG: 20 ^h 38 ^m				Mag: +0.6 PMG: 13 ^h 54 ^m									
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	298	23.1	145	11.6	+8	21.4	252	00.9	+16	04.0	49	32.2	-21	26.5	151	06.2	+14	31.4								
1	313	25.6	160	13.7		20.7	267	01.7		04.5	64	34.8		26.5	166	08.4		31.3								
2	328	28.0	175	15.8		20.0	282	02.4		05.0	79	37.4		26.5	181	10.5		31.2								
3	343	30.5	190	17.9		19.4	297	03.2		05.5	94	40.0		26.5	196	12.7		31.1								
4	358	33.0	205	20.0		18.7	312	04.0		06.0	109	42.6		26.5	211	14.9		31.0								
5	13	35.4	220	22.0	+8	18.0	327	04.7	+16	06.5	124	45.2	-21	26.4	226	17.1	+14	30.9								
6	28	37.9	235	24.1	+8	17.3	342	05.5	+16	07.0	139	47.8	-21	26.4	241	19.2	+14	30.8								
7	43	40.3	250	26.2		16.6	357	06.2		07.5	154	50.4		26.4	256	21.4		30.7								
8	58	42.8	265	28.3		16.0	12	07.0		08.0	169	53.0		26.4	271	23.6		30.6								
9	73	45.3	280	30.4		15.3	27	07.7		08.5	184	55.6		26.4	286	25.8		30.5								
10	88	47.7	295	32.5		14.6	42	08.5		08.9	199	58.2		26.4	301	27.9		30.4								
11	103	50.2	310	34.6	+8	13.9	57	09.2	+16	09.4	215	00.8	-21	26.4	316	30.1	+14	30.3								
12	118	52.7	325	36.7	+8	13.2	72	10.0	+16	09.9	230	03.4	-21	26.4	331	32.3	+14	30.2								
13	133	55.1	340	38.9		12.6	87	10.8		10.4	245	06.0		26.4	346	34.5		30.1								
14	148	57.6	355	41.0		11.9	102	11.5		10.9	260	08.6		26.4	1	36.6		30.0								
15	164	00.1	10	43.1		11.2	117	12.3		11.4	275	11.2		26.3	16	38.8		29.9								
16	179	02.5	25	45.2		10.5	132	13.0		11.9	290	13.8		26.3	31	41.0		29.8								
17	194	05.0	40	47.3	+8	09.9	147	13.8	+16	12.4	305	16.3	-21	26.3	46	43.2	+14	29.7								
18	209	07.5	55	49.5	+8	09.2	162	14.5	+16	12.9	320	18.9	-21	26.3	61	45.3	+14	29.6								
19	224	09.9	70	51.6		08.5	177	15.3		13.3	335	21.5		26.3	76	47.5		29.5								
20	239	12.4	85	53.8		07.9	192	16.0		13.8	350	24.1		26.3	91	49.7		29.4								
21	254	14.8	100	55.9		07.2	207	16.8		14.3	5	26.7		26.3	106	51.9		29.3								
22	269	17.3	115	58.0		06.5	222	17.6		14.8	20	29.3		26.3	121	54.0		29.2								
23	284	19.8	131	00.2		05.9	237	18.3		15.3	35	31.9		26.3	136	56.2		29.2								
24	299	22.2	146	02.3	+8	05.2	252	19.1	+16	15.8	50	34.5	-21	26.3	151	58.4	+14	29.1								
Dif	—		+21		-7		+8		+5		+26		0		+22		-1									

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: 7 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 R°: 44 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	23.5	+20	23.5	96	48.1	-13	36.4	60 N	** **	2 06	3 17	14 00	90	21 53	1				
1	193	23.5		23.0	111	22.9 ¹⁵⁸	-13	48.9 ¹²⁵	58	** **	32	32	13 50	84	22 05	6				
2	208	23.5		22.5	125	57.7 ¹⁵⁸	-14	01.4 ¹²⁵	56	1 21	2 52	45	40 81		15 10					
3	223	23.4		22.0	140	32.4 ¹⁵⁷		13.8 ¹²⁴	54	1 56	3 09	3 56	32 77		24 14					
4	238	23.4		21.5	155	07.1 ¹⁵⁷		26.2 ¹²⁴	52	2 20	22	4 06	24 74		32 17					
5	253	23.4	+20	21.1	169	41.8 ¹⁵⁷	-14	38.5 ¹²³	50	2 39	3 34	4 15	13 18	71	22 39	20				
6	268	23.4	+20	20.6	184	16.4 ¹⁵⁶	-14	50.7 ¹²²	45	3 14	3 59	4 34	13 03	67	22 55	24				
7	283	23.3		20.1	198	50.9 ¹⁵⁵	-15	02.9 ¹²²	40	39	4 18	4 49	12 52	62	23 08	28				
8	298	23.3		19.6	213	25.4 ¹⁵⁵		15.1 ¹²²	35	3 58	33	5 02	42 59		19 31					
9	313	23.3		19.1	227	59.8 ¹⁵⁴		27.1 ¹²⁰	30	4 14	4 46	13	33 56		29 33					
10	328	23.3		18.6	242	34.2 ¹⁵⁴		39.1 ¹²⁰	20	39	5 08	32	18 52		23 46	38				
11	343	23.2	+20	18.1	257	08.5 ¹⁵³	-15	51.1 ¹²⁰	10 N	4 59	5 25	5 48	12 05	48	** **	**				
12	358	23.2	+20	17.6	271	42.8 ¹⁵³	-16	03.0 ¹¹⁹	0	5 15	5 41	6 03	11 53	44	** **	**				
13	13	23.2		17.1	286	17.0 ¹⁵²		14.8 ¹¹⁸	10 S	30	5 55	18	41 41		** **	**				
14	28	23.2		16.6	300	51.1 ¹⁵¹		26.6 ¹¹⁸	20	43	6 10	34	29 36		** **	**				
15	43	23.1		16.1	315	25.2 ¹⁵¹		38.3 ¹¹⁷	30	5 57	26	6 52	14 32		0 05	55				
16	58	23.1		15.6	329	59.3 ¹⁵¹	-16	50.0 ¹¹⁷	35	6 04	35	7 02	11 06	29	12 58					
17	73	23.1	+20	15.1	344	33.2 ¹⁴⁹	-17	01.6 ¹¹⁶	40	6 11	6 45	7 14	10 57	25	0 20	62				
18	88	23.1	+20	14.6	359	07.2 ¹⁵⁰	-17	13.1 ¹¹⁵	45	6 20	6 56	7 28	10 46	22	0 30	65				
19	103	23.0		14.1	13	41.0 ¹⁴⁸		24.6 ¹¹⁵	50	29	7 09	45	33 17		41 71					
20	118	23.0		13.6	28	14.8 ¹⁴⁸		35.9 ¹¹³	52	33	15	7 53	27 14		47 73					
21	133	23.0		13.1	42	48.5 ¹⁴⁷		47.3 ¹¹⁴	54	37	21	8 02	20 12		53 75					
22	148	23.0		12.6	57	22.2 ¹⁴⁷	-17	58.5 ¹¹²	56	42	28	12	12 9		0 59	79				
23	163	22.9		12.1	71	55.7 ¹⁴⁵	-18	09.7 ¹¹²	58	47	36	24	10 04	5	1 07	83				
24	178	22.9	+20	11.6	86	29.3 ¹⁴⁶	-18	20.8 ¹¹¹	60 S	6 52	7 45	8 37	9 54	1	1 15	88				

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 4 ^h 01 ^m 9			Mag: -4.7 PMG: 14 ^h 14 ^m			Mag: +0.6 PMG: 7 ^h 10 ^m			Mag: -2.5 PMG: 20 ^h 34 ^m			Mag: +0.6 PMG: 13 ^h 50 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'		°	'		°	'		°	'		°	'	
0	299	22.2		146	02.3	+8 05.2	252	19.1	+16 15.8	50	34.5	-21 26.3	151	58.4	+14 29.1
1	314	24.7		161	04.5	04.5	267	19.8	16.3	65	37.1	26.3	167	00.6	29.0
2	329	27.2		176	06.7	03.9	282	20.6	16.7	80	39.7	26.2	182	02.7	28.9
3	344	29.6		191	08.8	03.2	297	21.3	17.2	95	42.3	26.2	197	04.9	28.8
4	359	32.1		206	11.0	02.5	312	22.1	17.7	110	44.9	26.2	212	07.1	28.7
5	14	34.6		221	13.2	+8 01.9	327	22.9	+16 18.2	125	47.5	-21 26.2	227	09.3	+14 28.6
6	29	37.0		236	15.3	+8 01.2	342	23.6	+16 18.7	140	50.1	-21 26.2	242	11.4	+14 28.5
7	44	39.5		251	17.5	+8 00.6	357	24.4	19.2	155	52.7	26.2	257	13.6	28.4
8	59	42.0		266	19.7	+7 59.9	12	25.1	19.7	170	55.3	26.2	272	15.8	28.3
9	74	44.4		281	21.9	59.2	27	25.9	20.1	185	57.9	26.2	287	18.0	28.2
10	89	46.9		296	24.1	58.6	42	26.6	20.6	201	00.4	26.2	302	20.1	28.1
11	104	49.3		311	26.2	+7 57.9	57	27.4	+16 21.1	216	03.0	-21 26.2	317	22.3	+14 28.0
12	119	51.8		326	28.4	+7 57.3	72	28.1	+16 21.6	231	05.6	-21 26.2	332	24.5	+14 27.9
13	134	54.3		341	30.6	56.6	87	28.9	22.1	246	08.2	26.1	347	26.7	27.8
14	149	56.7		356	32.8	56.0	102	29.7	22.5	261	10.8	26.1	2	28.8	27.7
15	164	59.2		11	35.0	55.3	117	30.4	23.0	276	13.4	26.1	17	31.0	27.6
16	180	01.7		26	37.3	54.7	132	31.2	23.5	291	16.0	26.1	32	33.2	27.5
17	195	04.1		41	39.5	+7 54.0	147	31.9	+16 24.0	306	18.6	-21 26.1	47	35.3	+14 27.4
18	210	06.6		56	41.7	+7 53.4	162	32.7	+16 24.5	321	21.2	-21 26.1	62	37.5	+14 27.3
19	225	09.1		71	43.9	52.7	177	33.4	25.0	336	23.8	26.1	77	39.7	27.2
20	240	11.5		86	46.1	52.1	192	34.2	25.4	351	26.3	26.1	92	41.9	27.1
21	255	14.0		101	48.4	51.4	207	35.0	25.9	6	28.9	26.1	107	44.0	27.0
22	270	16.4		116	50.6	50.8	222	35.7	26.4	21	31.5	26.1	122	46.2	26.9
23	285	18.9		131	52.8	50.1	237	36.5	26.9	36	34.1	26.1	137	48.4	26.8
24	300	21.4		146	55.1	+7 49.5	252	37.2	+16 27.4	51	36.7	-21 26.1	152	50.6	+14 26.7
Dif	—			+22 -7			+8 +5			+26 0			+22 -1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 8 ^d 5	PHE	$\left\{ \begin{array}{l} 4^h: 54'3 \\ 12^h: 54'4 \\ 20^h: 54'4 \end{array} \right.$				Civil	Náutico	Hora	R°	Hora	R°				
	PMG: 12 ^h 06 ^m 5																			
	hG ☉	Dec			hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	178	22.9	+20	11.6	86	29.3	-18	20.8	60 N	20	52	22	01	15	30	94				
1	193	22.9		11.1	101	02.7 ¹⁴⁴		31.9 ¹¹¹	58	38	21	36	** ** *	14	87	22 11 12				
2	208	22.9		10.6	115	36.1 ¹⁴⁴		42.8 ¹⁰⁹	56	25	17	22	44	15	01	81				
3	223	22.9		10.1	130	09.4 ¹⁴³	-18	53.7 ¹⁰⁹	54	14	21	01	22	12	14	49				
4	238	22.8		09.6	144	42.7 ¹⁴³	-19	04.5 ¹⁰⁸	52	20	04	20	48	21	49	38 75				
5	253	22.8	+20	09.1	159	15.8 ¹⁴¹	-19	15.3 ¹⁰⁸	50	19	56	20	36	21	31	14 29 72				
6	268	22.8	+20	08.6	173	49.0 ¹⁴²	-19	26.0 ¹⁰⁷	45	19	37	20	12	20	57	14 10 67				
7	283	22.8		08.1	188	22.0 ¹⁴⁰		36.6 ¹⁰⁶	40	23	19	54	32	13	54	63				
8	298	22.8		07.6	202	54.9 ¹³⁹		47.1 ¹⁰⁵	35	19	10	39	20	13	41	60				
9	313	22.7		07.1	217	27.8 ¹³⁹	-19	57.5 ¹⁰⁴	30	18	59	26	19	58	29	58				
10	328	22.7		06.5	232	00.6 ¹³⁸	-20	07.9 ¹⁰⁴	20	41	19	05	33	13	10	53				
11	343	22.7	+20	06.0	246	33.4 ¹³⁸	-20	18.2 ¹⁰³	10 N	18	25	18	47	19	14	12 53 50				
12	358	22.7	+20	05.5	261	06.1 ¹³⁷	-20	28.4 ¹⁰²	0	18	10	18	32	18	58	12 37 47				
13	13	22.7		05.0	275	38.6 ¹³⁵		38.5 ¹⁰¹	10 S	17	55	18	43	22	43	28 49				
14	28	22.6		04.5	290	11.1 ¹³⁵		48.6 ¹⁰¹	20	40	18	03	30	12	05	40				
15	43	22.6		04.0	304	43.6 ¹³⁵	-20	58.5 ⁹⁹	30	22	17	48	17	11	46	36				
16	58	22.6		03.5	319	15.9 ¹³³	-21	08.4 ⁹⁹	35	12	39	10	33	35	34	10 60				
17	73	22.6	+20	03.0	333	48.2 ¹³³	-21	18.2 ⁹⁸	40	17	00	17	29	18	03	11 22 31				
18	88	22.6	+20	02.5	348	20.4 ¹³²	-21	27.9 ⁹⁷	45	16	46	17	19	17	55	11 08 27				
19	103	22.6		01.9	2	52.5 ¹³¹		37.5 ⁹⁶	50	29	06	46	10	50	22	1 52 72				
20	118	22.5		01.4	17	24.6 ¹³¹		47.0 ⁹⁵	52	22	17	00	42	41	20	2 00 74				
21	133	22.5		00.9	31	56.5 ¹²⁹	-21	56.5 ⁹⁵	54	13	16	54	38	32	17	08 78				
22	148	22.5	+20	00.4	46	28.4 ¹²⁹	-22	05.8 ⁹³	56	16	03	46	33	21	14	18 81				
23	163	22.5	+19	59.9	61	00.2 ¹²⁸		15.1 ⁹³	58	15	52	39	28	10	09	9				
24	178	22.5	+19	59.4	75	31.9 ¹²⁷	-22	24.2 ⁹¹	60 S	15	39	16	30	9	55	3				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 57 ^m 9				Mag: -4.7 PMG: 14 ^h 10 ^m				Mag: +0.6 PMG: 7 ^h 09 ^m				Mag: -2.5 PMG: 20 ^h 30 ^m				Mag: +0.6 PMG: 13 ^h 47 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	300	21.4	146	55.1	+7	49.5	252	37.2	+16	27.4	51	36.7	-21	26.1	152	50.6	+14	26.7		
1	315	23.8	161	57.3		48.9	267	38.0		27.8	66	39.3		26.0	167	52.7		26.6		
2	330	26.3	176	59.5		48.2	282	38.8		28.3	81	41.9		26.0	182	54.9		26.5		
3	345	28.8	192	01.8		47.6	297	39.5		28.8	96	44.5		26.0	197	57.1		26.4		
4	0	31.2	207	04.0		46.9	312	40.3		29.3	111	47.0		26.0	212	59.3		26.3		
5	15	33.7	222	06.3	+7	46.3	327	41.0	+16	29.7	126	49.6	-21	26.0	228	01.4	+14	26.2		
6	30	36.2	237	08.6	+7	45.7	342	41.8	+16	30.2	141	52.2	-21	26.0	243	03.6	+14	26.1		
7	45	38.6	252	10.8		45.0	357	42.5		30.7	156	54.8		26.0	258	05.8		26.0		
8	60	41.1	267	13.1		44.4	12	43.3		31.2	171	57.4		26.0	273	07.9		25.9		
9	75	43.6	282	15.4		43.8	27	44.1		31.7	187	00.0		26.0	288	10.1		25.8		
10	90	46.0	297	17.6		43.1	42	44.8		32.1	202	02.5		26.0	303	12.3		25.7		
11	105	48.5	312	19.9	+7	42.5	57	45.6	+16	32.6	217	05.1	-21	26.0	318	14.5	+14	25.6		
12	120	50.9	327	22.2	+7	41.9	72	46.3	+16	33.1	232	07.7	-21	26.0	333	16.6	+14	25.5		
13	135	53.4	342	24.5		41.2	87	47.1		33.6	247	10.3		26.0	348	18.8		25.4		
14	150	55.9	357	26.8		40.6	102	47.8		34.0	262	12.9		25.9	3	21.0		25.3		
15	165	58.3	12	29.1		40.0	117	48.6		34.5	277	15.5		25.9	18	23.2		25.2		
16	181	00.8	27	31.3		39.3	132	49.4		35.0	292	18.0		25.9	33	25.3		25.1		
17	196	03.3	42	33.6	+7	38.7	147	50.1	+16	35.5	307	20.6	-21	25.9	48	27.5	+14	25.0		
18	211	05.7	57	35.9	+7	38.1	162	50.9	+16	35.9	322	23.2	-21	25.9	63	29.7	+14	24.9		
19	226	08.2	72	38.3		37.5	177	51.6		36.4	337	25.8		25.9	78	31.8		24.8		
20	241	10.7	87	40.6		36.8	192	52.4		36.9	352	28.4		25.9	93	34.0		24.7		
21	256	13.1	102	42.9		36.2	207	53.2		37.4	7	30.9		25.9	108	36.2		24.6		
22	271	15.6	117	45.2		35.6	222	53.9		37.8	22	33.5		25.9	123	38.4		24.5		
23	286	18.1	132	47.5		35.0	237	54.7		38.3	37	36.1		25.9	138	40.5		24.4		
24	301	20.5	147	49.8	+7	34.4	252	55.4	+16	38.8	52	38.7	-21	25.9	153	42.7	+14	24.3		
Dif	—		+23		-6		+8		+5		+26		0		+22		-1			

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: 9 ^d 5 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 8 R ^o : 51 ^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	22.5	+19 59.4	75	31.9	-22 24.2	91	60 N	2 13	3 21	17 04	94	21 59	12	
1	193	22.5	58.9	90	03.6 ¹²⁷	33.3	91	58	37	36	16 41	84	22 23	21	
2	208	22.4	58.3	104	35.1 ¹²⁵	42.3	90	56	1 30	2 56	22 79		42 27		
3	223	22.4	57.8	119	06.6 ¹²⁵	-22 51.2	89	54	2 02	3 12	16 07	75	22 58	31	
4	238	22.4	57.3	133	38.0 ¹²⁴	-23 00.0	88	52	24	26	15 53	72	23 12	33	
5	253	22.4	+19 56.8	148	09.3 ¹²³	-23 08.6	86	50	2 43	3 37	15 41	70	23 24	36	
6	268	22.4	+19 56.3	162	40.5 ¹²²	-23 17.2	86	45	3 16	4 01	15 17	65	23 50	39	
7	283	22.4	55.7	177	11.6 ¹²¹	25.7	85	40	3 41	20	14 57	63	** ** *	**	
8	298	22.4	55.2	191	42.7 ¹²¹	34.1	84	35	4 00	35	41 61		** ** *	**	
9	313	22.3	54.7	206	13.7 ¹²⁰	42.4	83	30	16	4 47	27 59		0 02	39	
10	328	22.3	54.2	220	44.5 ¹¹⁸	50.6	82	20	40	5 08	14 03	56	24 42		
11	343	22.3	+19 53.7	235	15.3 ¹¹⁸	-23 58.7	81	10 N	4 59	5 26	13 43	53	0 42	46	
12	358	22.3	+19 53.1	249	46.1 ¹¹⁸	-24 06.7	80	0	5 15	5 41	13 24	51	0 59	49	
13	13	22.3	52.6	264	16.7 ¹¹⁶	14.6	79	10 S	30	5 55	13 05	48	1 17	51	
14	28	22.3	52.1	278	47.2 ¹¹⁵	22.3	77	20	43	6 10	12 45	46	35 55		
15	43	22.3	51.6	293	17.7 ¹¹⁵	30.0	77	30	5 56	25	22 42		1 57	58	
16	58	22.3	51.0	307	48.1 ¹¹⁴	37.6	76	35	6 03	34	12 09	40	2 10	60	
17	73	22.2	+19 50.5	322	18.4 ¹¹³	-24 45.0	74	40	6 10	6 43	11 53	38	2 24	64	
18	88	22.2	+19 50.0	336	48.6 ¹¹²	-24 52.3	73	45	6 18	6 54	11 35	34	2 42	66	
19	103	22.2	49.4	351	18.7 ¹¹¹	-24 59.6	73	50	27	7 07	12 30		3 04	71	
20	118	22.2	48.9	5	48.7 ¹¹⁰	-25 06.7	71	52	31	12	11 01	28	14 74		
21	133	22.2	48.4	20	18.7 ¹¹⁰	13.7	70	54	35	19	10 49	25	26 77		
22	148	22.2	47.9	34	48.5 ¹⁰⁸	20.6	69	56	39	26	35 21		39 81		
23	163	22.2	47.3	49	18.3 ¹⁰⁸	27.4	68	58	44	33	10 18	17	3 55	86	
24	178	22.2	+19 46.8	63	48.0 ¹⁰⁷	-25 34.0	66	60 S	6 49	7 42	9 58	9	4 14	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 54 ^m 0		Mag: -4.6 PMG: 14 ^h 06 ^m		Mag: +0.6 PMG: 7 ^h 08 ^m		Mag: -2.5 PMG: 20 ^h 26 ^m		Mag: +0.6 PMG: 13 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	301	20.5	147	49.8	252	55.4	52	38.7	153	42.7
1	316	23.0	162	52.2	267	56.2	67	41.3	168	44.9
2	331	25.4	177	54.5	282	57.0	82	43.8	183	47.1
3	346	27.9	192	56.8	297	57.7	97	46.4	198	49.2
4	1	30.4	207	59.2	312	58.5	112	49.0	213	51.4
5	16	32.8	223	01.5	327	59.2	127	51.6	228	53.6
6	31	35.3	238	03.9	343	00.0	142	54.2	243	55.7
7	46	37.8	253	06.2	358	00.7	157	56.7	258	57.9
8	61	40.2	268	08.6	13	01.5	172	59.3	274	00.1
9	76	42.7	283	10.9	28	02.3	188	01.9	289	02.3
10	91	45.2	298	13.3	43	03.0	203	04.5	304	04.4
11	106	47.6	313	15.6	58	03.8	218	07.0	319	06.6
12	121	50.1	328	18.0	73	04.5	233	09.6	334	08.8
13	136	52.5	343	20.4	88	05.3	248	12.2	349	10.9
14	151	55.0	358	22.8	103	06.1	263	14.8	4	13.1
15	166	57.5	13	25.1	118	06.8	278	17.3	19	15.3
16	181	59.9	28	27.5	133	07.6	293	19.9	34	17.5
17	197	02.4	43	29.9	148	08.3	308	22.5	49	19.6
18	212	04.9	58	32.3	163	09.1	323	25.1	64	21.8
19	227	07.3	73	34.7	178	09.9	338	27.6	79	24.0
20	242	09.8	88	37.1	193	10.6	353	30.2	94	26.1
21	257	12.3	103	39.5	208	11.4	8	32.8	109	28.3
22	272	14.7	118	41.9	223	12.1	23	35.3	124	30.5
23	287	17.2	133	44.3	238	12.9	38	37.9	139	32.7
24	302	19.7	148	46.7	253	13.7	53	40.5	154	34.8
Dif	—		+24	-6	+8	+5	+26	0	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 10 ^d 5 PHE { 4 ^h : 54/9 12 ^h : 55/1 20 ^h : 55/2 R ^o : 55 ^m													
	PMG: 12 ^h 06 ^m 5			SD: 14 ^h 9 PMG: 20 ^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		h m m			
0	178	22.2	+19 46.8	63	48.0	-25 34.0	66	60 N	20 48	21 54	** **	18 38 78		22 11 36			
1	193	22.2	46.3	78	17.6 ¹⁰⁶	40.6	66	58	34	31	23 27	18 05 72		22 44 42			
2	208	22.2	45.7	92	47.2 ¹⁰⁶	47.0	64	56	21	21 13	22 35	17 41 68		23 09 45			
3	223	22.1	45.2	107	16.6 ¹⁰⁴	53.3	63	54	11	20 57	22 06	22 65		29 47			
4	238	22.1	44.7	121	46.0 ¹⁰⁴	-25 59.5	62	52	20 01	44	21 44	17 05 65		23 45 48			
5	253	22.1	+19 44.1	136	15.3 ¹⁰³	-26 05.5	60	50	19 53	20 33	21 27	16 51 63		** ** *			
6	268	22.1	+19 43.6	150	44.5 ¹⁰²	-26 11.5	60	45	19 35	20 10	20 54	16 22 62		** ** *			
7	283	22.1	43.1	165	13.6 ¹⁰¹	17.3	58	40	21	19 52	30	16 00 60		0 10 42			
8	298	22.1	42.5	179	42.6 ¹⁰⁰	23.0	57	35	19 09	37	20 12	15 42 58		27 44			
9	313	22.1	42.0	194	11.6 ¹⁰⁰	28.5	55	30	18 58	25	19 56	15 26 57		0 41 46			
10	328	22.1	41.5	208	40.4 ⁹⁸	34.0	55	20	40	19 04	32	14 59 56		1 06 48			
11	343	22.1	+19 40.9	223	09.2 ⁹⁸	-26 39.3	53	10 N	18 25	18 47	19 13	14 36 55		1 28 50			
12	358	22.1	+19 40.4	237	38.0 ⁹⁸	-26 44.5	52	0	18 10	18 32	18 58	14 15 53		1 48 52			
13	13	22.1	39.9	252	06.6 ⁹⁶	49.5	50	10 S	17 56	18	44	13 53 53		2 08 54			
14	28	22.1	39.3	266	35.2 ⁹⁶	54.4	49	20	40	18 04	31	31 51		30 56			
15	43	22.1	38.8	281	03.7 ⁹⁵	-26 59.2	48	30	23	17 49	18	13 04 50		2 55 59			
16	58	22.1	38.2	295	32.1 ⁹⁴	-27 03.9	47	35	13	40	11	12 49 48		3 10 60			
17	73	22.1	+19 37.7	310	00.4 ⁹³	-27 08.4	45	40	17 02	17 31	18 04	12 31 47		3 28 61			
18	88	22.0	+19 37.2	324	28.7 ⁹³	-27 12.8	44	45	16 48	17 20	17 56	12 09 45		3 48 64			
19	103	22.0	36.6	338	56.8 ⁹¹	17.0	42	50	32	08	48	11 42 42		4 15 67			
20	118	22.0	36.1	353	25.0 ⁹²	21.2	42	52	24	17 02	44	29 41		28 69			
21	133	22.0	35.5	7	53.0 ⁹⁰	25.2	40	54	16	16 56	40	11 14 38		4 43 71			
22	148	22.0	35.0	22	21.0 ⁹⁰	29.0	38	56	16 06	49	36	10 56 36		5 00 74			
23	163	22.0	34.5	36	48.9 ⁸⁹	32.7	37	58	15 55	42	31	05 31		21 79			
24	178	22.0	+19 33.9	51	16.7 ⁸⁸	-27 36.3	36	60 S	15 43	16 33	17 26	10 07 23		5 48 88			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 3 ^h 50 ^m 1			Mag: -4.6 PMG: 14 ^h 03 ^m			Mag: +0.6 PMG: 7 ^h 07 ^m			Mag: -2.5 PMG: 20 ^h 22 ^m			Mag: +0.6 PMG: 13 ^h 40 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	302	19.7	148 46.7	+7 19.8	253 13.7	+16 50.0	53 40.5	-21 25.7	154 34.8	+14 21.9							
1	317	22.1	163 49.1	19.2	268 14.4	50.5	68 43.1	25.7	169 37.0	21.8							
2	332	24.6	178 51.6	18.6	283 15.2	51.0	83 45.6	25.7	184 39.2	21.7							
3	347	27.0	193 54.0	18.0	298 15.9	51.4	98 48.2	25.7	199 41.3	21.6							
4	2	29.5	208 56.4	17.4	313 16.7	51.9	113 50.8	25.7	214 43.5	21.5							
5	17	32.0	223 58.8	+7 16.8	328 17.5	+16 52.4	128 53.3	-21 25.7	229 45.7	+14 21.4							
6	32	34.4	239 01.3	+7 16.3	343 18.2	+16 52.8	143 55.9	-21 25.7	244 47.9	+14 21.3							
7	47	36.9	254 03.7	15.7	358 19.0	53.3	158 58.5	25.7	259 50.0	21.2							
8	62	39.4	269 06.2	15.1	13 19.7	53.8	174 01.0	25.7	274 52.2	21.1							
9	77	41.8	284 08.6	14.5	28 20.5	54.2	189 03.6	25.7	289 54.4	21.0							
10	92	44.3	299 11.1	13.9	43 21.3	54.7	204 06.2	25.7	304 56.5	20.9							
11	107	46.8	314 13.5	+7 13.3	58 22.0	+16 55.1	219 08.8	-21 25.7	319 58.7	+14 20.8							
12	122	49.2	329 16.0	+7 12.8	73 22.8	+16 55.6	234 11.3	-21 25.6	335 00.9	+14 20.7							
13	137	51.7	344 18.4	12.2	88 23.6	56.1	249 13.9	25.6	350 03.0	20.6							
14	152	54.2	359 20.9	11.6	103 24.3	56.5	264 16.5	25.6	5 05.2	20.5							
15	167	56.6	14 23.4	11.0	118 25.1	57.0	279 19.0	25.6	20 07.4	20.4							
16	182	59.1	29 25.8	10.4	133 25.8	57.5	294 21.6	25.6	35 09.6	20.3							
17	198	01.5	44 28.3	+7 09.9	148 26.6	+16 57.9	309 24.2	-21 25.6	50 11.7	+14 20.2							
18	213	04.0	59 30.8	+7 09.3	163 27.4	+16 58.4	324 26.7	-21 25.6	65 13.9	+14 20.1							
19	228	06.5	74 33.3	08.7	178 28.1	58.8	339 29.3	25.6	80 16.1	20.0							
20	243	08.9	89 35.8	08.2	193 28.9	59.3	354 31.8	25.6	95 18.2	19.9							
21	258	11.4	104 38.3	07.6	208 29.6	+16 59.8	9 34.4	25.6	110 20.4	19.8							
22	273	13.9	119 40.7	07.0	223 30.4	+17 00.2	24 37.0	25.6	125 22.6	19.7							
23	288	16.3	134 43.2	06.4	238 31.2	00.7	39 39.5	25.6	140 24.7	19.6							
24	303	18.8	149 45.7	+7 05.9	253 31.9	+17 01.1	54 42.1	-21 25.6	155 26.9	+14 19.5							
Dif	—			+25	-6	+8	+5	+26	0	+22	-1						

UT	SOL				O 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: 11 ^d 5 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 6 20 ^h : 55 ^h 8 R°: 56 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora		R°	Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	22.0	+19	33.9	51	16.7			-27	36.3			60 N	** **	2 19	3 26	19 56	42	22 47	75	
1	193	22.0		33.4	65	44.5	88			39.7	34		58	0 46	2 42	40	19 17	47	23 26	70	
2	208	22.0		32.8	80	12.2	87			43.0	33		56	1 38	3 01	3 52	18 49	49	23 54	67	
3	223	22.0		32.3	94	39.8	86			46.1	31		54	2 07	16	4 03		27 51	** **	** *	
4	238	22.0		31.7	109	07.4	86			49.1	30		52	29	29	12	18 10	51	** **	** *	
5	253	22.0	+19	31.2	123	34.9	85			-27	52.0	29	50	2 46	3 40	4 20	17 54	53	0 00	49	
6	268	22.0	+19	30.6	138	02.3	84			-27	54.7	27	45	3 19	4 03	4 38	17 24	53	0 29	50	
7	283	22.0		30.1	152	29.7	84			57.3	26		40	3 43	22	4 52	17 00	54	0 52	51	
8	298	22.0		29.5	166	57.0	83			-27	59.7	24	35	4 02	36	5 05	16 40	55	1 11	52	
9	313	22.0		29.0	181	24.2	82			-28	01.9	22	30	17	4 49	15	16 23	55		27 53	
10	328	22.0		28.4	195	51.4	82			04.1	22		20	4 41	5 09	33	15 55	55	1 54	54	
11	343	22.0	+19	27.9	210	18.6	82			-28	06.0	19	10 N	5 00	5 26	5 49	15 31	55	2 18	54	
12	358	22.0	+19	27.3	224	45.7	81			-28	07.9	19	0	5 16	5 41	6 03	15 08	56	2 40	55	
13	13	22.0		26.8	239	12.7	80			09.5	16		10 S	29	5 55	17	14 46	56	3 02	56	
14	28	22.0		26.2	253	39.7	80			11.1	16		20	42	6 09	32	14 22	56		26 56	
15	43	22.0		25.7	268	06.6	79			12.4	13		30	5 55	24	6 50	13 54	56	3 54	56	
16	58	22.0		25.1	282	33.5	79			13.7	13		35	6 02	32	7 00		37 56	4 10	57	
17	73	22.0	+19	24.6	297	00.4	79			-28	14.7	10	40	6 09	6 42	7 11	13 18	56	4 29	57	
18	88	22.0	+19	24.0	311	27.1	77			-28	15.6	9	45	6 16	6 52	7 24	12 54	57	4 52	58	
19	103	22.0		23.5	325	53.9	78			16.4	8		50	25	7 04	40		24 57	5 22	58	
20	118	22.0		22.9	340	20.6	77			17.0	6		52	28	10	48	12 10	56		37 58	
21	133	22.0		22.4	354	47.2	76			17.5	5		54	32	16	7 56	11 52	57	5 54	58	
22	148	22.0		21.8	9	13.9	77			17.8	3		56	37	23	8 06		32 56	6 14	59	
23	163	22.0		21.2	23	40.4	75			17.9	1		58	41	30	17	11 06	56	6 40	59	
24	178	22.0	+19	20.7	38	07.0	76			-28	17.9	0	60 S	6 46	7 39	8 29	10 30	55	7 16	60	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 3 ^h 46 ^m 1			Mag: -4.6 PMG: 13 ^h 59 ^m			Mag: +0.6 PMG: 7 ^h 06 ^m			Mag: -2.4 PMG: 20 ^h 18 ^m			Mag: +0.6 PMG: 13 ^h 36 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'		°	'		°	'		°	'		°	'										
0	303	18.8		149	45.7	+7 05.9	253	31.9	+17 01.1	54	42.1	-21 25.6	155	26.9	+14 19.5									
1	318	21.3		164	48.3	05.3	268	32.7	01.6	69	44.7	25.6	170	29.1	19.4									
2	333	23.7		179	50.8	04.7	283	33.4	02.1	84	47.2	25.6	185	31.3	19.3									
3	348	26.2		194	53.3	04.2	298	34.2	02.5	99	49.8	25.6	200	33.4	19.2									
4	3	28.7		209	55.8	03.6	313	35.0	03.0	114	52.4	25.6	215	35.6	19.1									
5	18	31.1		224	58.3	+7 03.1	328	35.7	+17 03.4	129	54.9	-21 25.6	230	37.8	+14 19.0									
6	33	33.6		240	00.8	+7 02.5	343	36.5	+17 03.9	144	57.5	-21 25.6	245	39.9	+14 18.8									
7	48	36.0		255	03.4	01.9	358	37.3	04.3	160	00.0	25.6	260	42.1	18.7									
8	63	38.5		270	05.9	01.4	13	38.0	04.8	175	02.6	25.5	275	44.3	18.6									
9	78	41.0		285	08.4	00.8	28	38.8	05.3	190	05.2	25.5	290	46.4	18.5									
10	93	43.4		300	11.0	+7 00.3	43	39.5	05.7	205	07.7	25.5	305	48.6	18.4									
11	108	45.9		315	13.5	+6 59.7	58	40.3	+17 06.2	220	10.3	-21 25.5	320	50.8	+14 18.3									
12	123	48.4		330	16.1	+6 59.2	73	41.1	+17 06.6	235	12.8	-21 25.5	335	53.0	+14 18.2									
13	138	50.8		345	18.6	58.6	88	41.8	07.1	250	15.4	25.5	350	55.1	18.1									
14	153	53.3		0	21.2	58.1	103	42.6	07.5	265	18.0	25.5	5	57.3	18.0									
15	168	55.8		15	23.7	57.5	118	43.4	08.0	280	20.5	25.5	20	59.5	17.9									
16	183	58.2		30	26.3	57.0	133	44.1	08.4	295	23.1	25.5	36	01.6	17.8									
17	199	00.7		45	28.9	+6 56.4	148	44.9	+17 08.9	310	25.6	-21 25.5	51	03.8	+14 17.7									
18	214	03.2		60	31.4	+6 55.9	163	45.6	+17 09.4	325	28.2	-21 25.5	66	06.0	+14 17.6									
19	229	05.6		75	34.0	55.3	178	46.4	09.8	340	30.7	25.5	81	08.1	17.5									
20	244	08.1		90	36.6	54.8	193	47.2	10.3	355	33.3	25.5	96	10.3	17.4									
21	259	10.5		105	39.2	54.2	208	47.9	10.7	10	35.9	25.5	111	12.5	17.3									
22	274	13.0		120	41.8	53.7	223	48.7	11.2	25	38.4	25.5	126	14.6	17.2									
23	289	15.5		135	44.4	53.2	238	49.5	11.6	40	41.0	25.5	141	16.8	17.1									
24	304	17.9		150	47.0	+6 52.6	253	50.2	+17 12.1	55	43.5	-21 25.5	156	19.0	+14 17.0									
Dif	—			+26			-6			+8			+26			0			+22			-1		

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 5				Edad: 12 ^d 5 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/5 R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	22.0	+19	20.7	38	07.0	-28	17.9	60 N	20 43	21 48	** **	20 38 16		** ** *			
1	193	22.0		20.1	52	33.5	75	17.7	58	30	26	23 11	20 04 25		** ** *			
2	208	22.0		19.6	67	00.0	75	17.4	56	18	21 08	22 27	19 38 32		** ** *			
3	223	22.0		19.0	81	26.4	74	16.9	54	20 08	20 54	22 00	18 35		0 16 65			
4	238	22.0		18.5	95	52.8	74	16.2	52	19 59	41	21 40	19 01 38		33 65			
5	253	22.1	+19	17.9	110	19.2	74	-28 15.4	50	19 50	20 30	21 23	18 47 39		0 49 63			
6	268	22.1	+19	17.3	124	45.6	74	-28 14.5	45	19 33	20 08	20 51	18 17 44		1 19 62			
7	283	22.1		16.8	139	11.9	73	13.3	40	19	19 50	28	17 54 46		1 43 61			
8	298	22.1		16.2	153	38.2	73	12.1	35	19 07	35	20 10	35 48		2 03 60			
9	313	22.1		15.7	168	04.5	73	10.6	30	18 57	23	19 55	17 18 50		20 59			
10	328	22.1		15.1	182	30.8	73	09.0	20	39	19 03	31	16 50 53		2 48 58			
11	343	22.1	+19	14.5	196	57.0	72	-28 07.2	10 N	18 24	18 47	19 13	16 26 55		3 12 58			
12	358	22.1	+19	14.0	211	23.2	72	-28 05.3	0	18 10	18 32	18 57	16 04 56		3 35 56			
13	13	22.1		13.4	225	49.4	72	03.2	10 S	17 56	18	44	15 42 58		3 58 55			
14	28	22.1		12.8	240	15.6	72	-28 01.0	20	41	18 05	31	15 18 60		4 22 54			
15	43	22.1		12.3	254	41.8	72	-27 58.6	30	24	17 50	19	14 50 62		4 50 52			
16	58	22.1		11.7	269	08.0	72	56.0	35	15	42	12	33 64		5 07 51			
17	73	22.1	+19	11.1	283	34.2	72	-27 53.3	40	17 03	17 33	18 06	14 14 65		5 26 50			
18	88	22.1	+19	10.6	298	00.4	72	-27 50.4	45	16 50	17 22	17 58	13 51 67		5 50 48			
19	103	22.1		10.0	312	26.5	71	47.3	50	35	10	50	21 70		6 20 46			
20	118	22.2		09.4	326	52.7	72	44.1	52	27	17 05	46	13 06 72		35 44			
21	133	22.2		08.9	341	18.8	71	40.7	54	19	16 59	43	12 49 74		6 52 43			
22	148	22.2		08.3	355	45.0	72	37.2	56	16 10	52	38	28 77		7 13 40			
23	163	22.2		07.7	10	11.1	71	33.5	58	15 59	45	34	12 02 81		7 39 36			
24	178	22.2	+19	07.2	24	37.3	72	-27 29.6	60 S	15 47	16 37	17 29	11 25 90		8 16 27			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 42 ^m 2		Mag: -4.6 PMG: 13 ^h 54 ^m		Mag: +0.6 PMG: 7 ^h 04 ^m		Mag: -2.4 PMG: 20 ^h 14 ^m		Mag: +0.6 PMG: 13 ^h 33 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	304	17.9	150	47.0	+6	52.6	253	50.2	+17	12.1								
1	319	20.4	165	49.6		52.1	268	51.0		12.5								
2	334	22.9	180	52.2		51.5	283	51.8		13.0								
3	349	25.3	195	54.8		51.0	298	52.5		13.4								
4	4	27.8	210	57.4		50.5	313	53.3		13.9								
5	19	30.3	226	00.0	+6	49.9	328	54.0	+17	14.3								
6	34	32.7	241	02.6	+6	49.4	343	54.8	+17	14.8								
7	49	35.2	256	05.2		48.9	358	55.6		15.2								
8	64	37.7	271	07.8		48.3	13	56.3		15.7								
9	79	40.1	286	10.5		47.8	28	57.1		16.1								
10	94	42.6	301	13.1		47.3	43	57.9		16.6								
11	109	45.0	316	15.7	+6	46.8	58	58.6	+17	17.0								
12	124	47.5	331	18.4	+6	46.2	73	59.4	+17	17.5								
13	139	50.0	346	21.0		45.7	89	00.2		17.9								
14	154	52.4	1	23.7		45.2	104	00.9		18.4								
15	169	54.9	16	26.3		44.7	119	01.7		18.8								
16	184	57.4	31	29.0		44.2	134	02.4		19.3								
17	199	59.8	46	31.6	+6	43.6	149	03.2	+17	19.7								
18	215	02.3	61	34.3	+6	43.1	164	04.0	+17	20.2								
19	230	04.8	76	37.0		42.6	179	04.7		20.6								
20	245	07.2	91	39.6		42.1	194	05.5		21.1								
21	260	09.7	106	42.3		41.6	209	06.3		21.5								
22	275	12.1	121	45.0		41.1	224	07.0		22.0								
23	290	14.6	136	47.7		40.6	239	07.8		22.4								
24	305	17.1	151	50.4	+6	40.0	254	08.6	+17	22.8								
Dif	—		+26		-5		+8		+4									
							+26		0									
									+22									
									-1									

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7			Edad: 13 ^d 5 PHE { 4 ^h : 56 ^m /7 12 ^h : 56 ^m /9 20 ^h : 57 ^m /1 R ^o : 54 ^m																	
	PMG: 12 ^h 06 ^m 5			SD: 15 ^h 4 PMG: 23 ^h 14 ^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	178	22.2	+19 07.2	24	37.3	-27 29.6	40	58	60 N	** **	2 26	3 30	20 54	6	0 02	101					
1	193	22.2	06.6	39	03.5	72	25.6	40	58	1 03	2 48	44	29 14		0 36	91					
2	208	22.2	06.0	53	29.6	71	21.4	42	56	1 46	3 05	3 56	20 10	19	1 01	85					
3	223	22.2	05.4	67	55.8	72	17.0	44	54	2 13	20	4 06	19 53	23	21	81					
4	238	22.2	04.9	82	22.0	72	12.5	45	52	34	33	15	39 26		38	78					
5	253	22.2	+19 04.3	96	48.2	72	-27 07.9	46	50	2 50	3 43	4 23	19 26	30	1 52	76					
6	268	22.3	+19 03.7	111	14.4	72	-27 03.0	49	45	3 22	4 06	4 40	19 01	34	2 21	72					
7	283	22.3	03.1	125	40.7	73	-26 58.0	50	40	3 45	23	4 54	18 40	39	2 44	69					
8	298	22.3	02.6	140	06.9	72	52.9	51	35	4 04	38	5 06	23 41		3 03	66					
9	313	22.3	02.0	154	33.2	73	47.6	53	30	19	4 50	16	18 08	44	19	64					
10	328	22.3	01.4	168	59.5	73	42.1	55	20	4 42	5 10	34	17 43	48	3 46	61					
11	343	22.3	+19 00.8	183	25.8	73	-26 36.5	56	10 N	5 00	5 27	5 49	17 21	51	4 10	58					
12	358	22.3	+19 00.3	197	52.1	73	-26 30.7	58	0	5 16	5 41	6 03	17 00	55	4 31	56					
13	13	22.3	+18 59.7	212	18.5	74	24.8	59	10 S	29	5 55	17	16 40	58	4 53	53					
14	28	22.3	59.1	226	44.9	74	18.7	61	20	42	6 08	32	16 18	61	5 16	50					
15	43	22.4	58.5	241	11.3	74	12.4	63	30	5 54	23	48	15 52	65	42	47					
16	58	22.4	58.0	255	37.7	74	-26 06.0	64	35	6 00	31	6 58	37 68		5 58	45					
17	73	22.4	+18 57.4	270	04.2	75	-25 59.4	66	40	6 07	6 40	7 09	15 19	71	6 16	43					
18	88	22.4	+18 56.8	284	30.7	75	-25 52.7	67	45	6 14	6 50	7 22	14 58	75	6 38	39					
19	103	22.4	56.2	298	57.2	75	45.8	69	50	22	7 02	38	31 80		7 06	34					
20	118	22.4	55.6	313	23.8	76	38.8	70	52	26	07	45	18 82		19	32					
21	133	22.4	55.1	327	50.4	76	31.6	72	54	30	13	7 53	14 03	86	35	28					
22	148	22.5	54.5	342	17.0	76	24.2	74	56	34	20	8 02	13 45	90	7 53	24					
23	163	22.5	53.9	356	43.7	77	16.8	74	58	38	27	13	13 23	96	8 15	19					
24	178	22.5	+18 53.3	11	10.4	77	-25 09.1	77	60 S	6 43	7 35	8 25	12 55	105	8 43	11					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 3 ^h 38 ^m 3			Mag: -4.6 PMG: 13 ^h 50 ^m			Mag: +0.5 PMG: 7 ^h 03 ^m			Mag: -2.4 PMG: 20 ^h 10 ^m			Mag: +0.6 PMG: 13 ^h 29 ^m								
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°						
0	305	17.1	151	50.4	+6 40.0	254	08.6	+17 22.8	56	44.8	-21 25.4	157	11.0	+14 14.6							
1	320	19.5	166	53.0	39.5	269	09.3	23.3	71	47.3	25.4	172	13.2	14.5							
2	335	22.0	181	55.7	39.0	284	10.1	23.7	86	49.8	25.4	187	15.4	14.4							
3	350	24.5	196	58.4	38.5	299	10.9	24.2	101	52.4	25.4	202	17.5	14.3							
4	5	26.9	212	01.1	38.0	314	11.6	24.6	116	54.9	25.4	217	19.7	14.2							
5	20	29.4	227	03.8	+6 37.5	329	12.4	+17 25.1	131	57.5	-21 25.4	232	21.9	+14 14.1							
6	35	31.9	242	06.6	+6 37.0	344	13.1	+17 25.5	147	00.0	-21 25.4	247	24.0	+14 14.0							
7	50	34.3	257	09.3	36.5	359	13.9	26.0	162	02.6	25.4	262	26.2	13.9							
8	65	36.8	272	12.0	36.0	14	14.7	26.4	177	05.1	25.4	277	28.4	13.8							
9	80	39.3	287	14.7	35.5	29	15.4	26.8	192	07.7	25.4	292	30.5	13.7							
10	95	41.7	302	17.4	35.0	44	16.2	27.3	207	10.2	25.4	307	32.7	13.6							
11	110	44.2	317	20.2	+6 34.5	59	17.0	+17 27.7	222	12.8	-21 25.4	322	34.9	+14 13.5							
12	125	46.6	332	22.9	+6 34.0	74	17.7	+17 28.2	237	15.3	-21 25.4	337	37.0	+14 13.4							
13	140	49.1	347	25.6	33.5	89	18.5	28.6	252	17.8	25.4	352	39.2	13.3							
14	155	51.6	2	28.4	33.1	104	19.3	29.1	267	20.4	25.4	7	41.4	13.2							
15	170	54.0	17	31.1	32.6	119	20.0	29.5	282	22.9	25.4	22	43.5	13.1							
16	185	56.5	32	33.9	32.1	134	20.8	29.9	297	25.5	25.4	37	45.7	13.0							
17	200	59.0	47	36.6	+6 31.6	149	21.6	+17 30.4	312	28.0	-21 25.4	52	47.9	+14 12.9							
18	216	01.4	62	39.4	+6 31.1	164	22.3	+17 30.8	327	30.5	-21 25.4	67	50.0	+14 12.8							
19	231	03.9	77	42.1	30.6	179	23.1	31.3	342	33.1	25.4	82	52.2	12.7							
20	246	06.4	92	44.9	30.1	194	23.9	31.7	357	35.6	25.4	97	54.4	12.6							
21	261	08.8	107	47.7	29.7	209	24.6	32.1	12	38.2	25.4	112	56.5	12.4							
22	276	11.3	122	50.4	29.2	224	25.4	32.6	27	40.7	25.4	127	58.7	12.3							
23	291	13.8	137	53.2	28.7	239	26.2	33.0	42	43.3	25.4	143	00.9	12.2							
24	306	16.2	152	56.0	+6 28.2	254	26.9	+17 33.5	57	45.8	-21 25.4	158	03.0	+14 12.1							
Dif	—			+27 -5			+8 +4			+25 0			+22 -1								

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna														
	SD: 15'8 PMG: 12 ^h 06 ^m 5			Edad: 14 ^d 5 PHE { 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'8 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	178	22.5	+18	53.3	11	10.4	78	-25	09.1	78	60 N	20 39	21 41	** **	21 00	1	1 43	107									
1	193	22.5		52.7	25	37.2	78	-25	01.3	78	58	26	21	22 57	20 43	8	2 07	99									
2	208	22.5		52.1	40	04.0	78	-24	53.4	79	56	14	21 04	22 20	29	12	26	93									
3	223	22.5		51.6	54	30.8	78		45.3	81	54	20 04	20 50	21 54	16	16	42	89									
4	238	22.6		51.0	68	57.7	79		37.0	83	52	19 56	37	35	20 05	20	2 56	85									
5	253	22.6	+18	50.4	83	24.6	79	-24	28.6	84	50	19 48	20 27	21 19	19 56	22	3 08	82									
6	268	22.6	+18	49.8	97	51.6	80	-24	20.1	85	45	19 31	20 05	20 48	19 35	28	3 33	76									
7	283	22.6		49.2	112	18.6	80		11.4	87	40	17	19 48	26	19	32	3 53	72									
8	298	22.6		48.6	126	45.6	80	-24	02.6	88	35	19 06	34	20 08	19 04	36	4 09	69									
9	313	22.7		48.0	141	12.8	82	-23	53.6	90	30	18 56	22	19 53	18 52	39	23	66									
10	328	22.7		47.4	155	39.9	81		44.5	91	20	39	19 02	30	31	44	4 47	61									
11	343	22.7	+18	46.9	170	07.1	82	-23	35.2	93	10 N	18 24	18 46	19 12	18 12	49	5 08	57									
12	358	22.7	+18	46.3	184	34.4	83	-23	25.8	94	0	18 10	18 32	18 57	17 55	53	5 27	54									
13	13	22.7		45.7	199	01.7	83		16.3	95	10 S	17 56	18	44	38	56	5 46	50									
14	28	22.7		45.1	213	29.0	83	-23	06.6	97	20	42	18 05	32	17 19	61	6 06	46									
15	43	22.8		44.5	227	56.5	85	-22	56.8	98	30	25	17 51	20	16 57	67	29	42									
16	58	22.8		43.9	242	23.9	84		46.9	99	35	16	43	14	45	69	43	38									
17	73	22.8	+18	43.3	256	51.4	85	-22	36.8	101	40	17 05	17 34	18 07	16 30	73	6 59	35									
18	88	22.8	+18	42.7	271	19.0	86	-22	26.5	103	45	16 52	17 24	18 00	16 13	77	7 17	31									
19	103	22.8		42.1	285	46.6	86		16.2	103	50	37	13	17 52	15 51	83	40	25									
20	118	22.9		41.5	300	14.3	87	-22	05.7	105	52	30	08	49	40	87	7 51	23									
21	133	22.9		40.9	314	42.1	88	-21	55.0	107	54	22	17 02	45	29	90	8 03	20									
22	148	22.9		40.3	329	09.8	87		44.3	107	56	13	16 55	41	15 15	94	17	16									
23	163	22.9		39.7	343	37.7	89		33.4	109	58	16 03	48	37	14 59	99	34	10									
24	178	23.0	+18	39.1	358	05.6	89	-21	22.4	110	60 S	15 51	16 41	17 32	14 40	106	8 54	4									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 3 ^h 34 ^m 3			Mag: -4.6 PMG: 13 ^h 46 ^m			Mag: +0.5 PMG: 7 ^h 02 ^m			Mag: -2.4 PMG: 20 ^h 06 ^m			Mag: +0.6 PMG: 13 ^h 26 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	'	°	'	'	°	'	'	°	'	'	°	'	'												
0	306	16.2		152	56.0	+6	28.2	254	26.9	+17	33.5	57	45.8	-21	25.4	158	03.0	+14	12.1								
1	321	18.7		167	58.8		27.7	269	27.7		33.9	72	48.3		25.3	173	05.2		12.0								
2	336	21.1		183	01.6		27.3	284	28.5		34.3	87	50.9		25.3	188	07.4		11.9								
3	351	23.6		198	04.3		26.8	299	29.2		34.8	102	53.4		25.3	203	09.6		11.8								
4	6	26.1		213	07.1		26.3	314	30.0		35.2	117	55.9		25.3	218	11.7		11.7								
5	21	28.5		228	09.9	+6	25.9	329	30.8	+17	35.6	132	58.5	-21	25.3	233	13.9	+14	11.6								
6	36	31.0		243	12.7	+6	25.4	344	31.5	+17	36.1	148	01.0	-21	25.3	248	16.1	+14	11.5								
7	51	33.5		258	15.5		24.9	359	32.3		36.5	163	03.6		25.3	263	18.2		11.4								
8	66	35.9		273	18.4		24.4	14	33.1		36.9	178	06.1		25.3	278	20.4		11.3								
9	81	38.4		288	21.2		24.0	29	33.8		37.4	193	08.6		25.3	293	22.6		11.2								
10	96	40.9		303	24.0		23.5	44	34.6		37.8	208	11.2		25.3	308	24.7		11.1								
11	111	43.3		318	26.8	+6	23.1	59	35.4	+17	38.3	223	13.7	-21	25.3	323	26.9	+14	11.0								
12	126	45.8		333	29.6	+6	22.6	74	36.1	+17	38.7	238	16.2	-21	25.3	338	29.1	+14	10.9								
13	141	48.3		348	32.5		22.1	89	36.9		39.1	253	18.8		25.3	353	31.2		10.8								
14	156	50.7		3	35.3		21.7	104	37.7		39.6	268	21.3		25.3	8	33.4		10.7								
15	171	53.2		18	38.1		21.2	119	38.4		40.0	283	23.8		25.3	23	35.6		10.6								
16	186	55.6		33	41.0		20.8	134	39.2		40.4	298	26.4		25.3	38	37.7		10.5								
17	201	58.1		48	43.8	+6	20.3	149	40.0	+17	40.9	313	28.9	-21	25.3	53	39.9	+14	10.4								
18	217	00.6		63	46.7	+6	19.9	164	40.7	+17	41.3	328	31.4	-21	25.3	68	42.0	+14	10.3								
19	232	03.0		78	49.5		19.4	179	41.5		41.7	343	34.0		25.3	83	44.2		10.2								
20	247	05.5		93	52.4		18.9	194	42.3		42.2	358	36.5		25.3	98	46.4		10.1								
21	262	08.0		108	55.2		18.5	209	43.0		42.6	13	39.0		25.3	113	48.5		10.0								
22	277	10.4		123	58.1		18.1	224	43.8		43.0	28	41.6		25.3	128	50.7		09.9								
23	292	12.9		139	01.0		17.6	239	44.6		43.5	43	44.1		25.3	143	52.9		09.8								
24	307	15.4		154	03.8	+6	17.2	254	45.3	+17	43.9	58	46.6	-21	25.3	158	55.0	+14	09.7								
Dif	—			+28			-5			+8			+4			+25			0			+22			-1		

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: 15 ^d 5 PHE { 4 ^h : 58 ^m 0 12 ^h : 58 ^m 2 20 ^h : 58 ^m 3 R°: 52 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	23.0	+18	39.1	358	05.6	-21	22.4	60 N	**	**	2	32	3	35	21	01	1		
1	193	23.0		38.6	12	33.6	90	-21	11.2	58	1	16	2	53	48	20	51	4		
2	208	23.0		38.0	27	01.6	90	-21	00.0	56	1	54	3	10	3	59	41	9		
3	223	23.0		37.4	41	29.7	91	-20	48.6	54	2	19	24	4	09	32	12	4		
4	238	23.0		36.8	55	57.8	91		37.0	52	39	36		18	25	15	21	87		
5	253	23.1	+18	36.2	70	26.0	92	-20	25.4	50	2	55	3	47	4	26	20	18		
6	268	23.1	+18	35.6	84	54.2	92	-20	13.6	45	3	25	4	08	4	42	20	03		
7	283	23.1		35.0	99	22.6	94	-20	01.8	40	3	48	25	4	56	19	51	27		
8	298	23.1		34.4	113	50.9	93	-19	49.7	35	4	06	40	5	08	40	32	18		
9	313	23.2		33.8	128	19.4	95		37.6	30	20	4	51	17	31	35	29	66		
10	328	23.2		33.2	142	47.8	94		25.4	20	4	43	5	11	35	15	41	5		
11	343	23.2	+18	32.6	157	16.4	96	-19	13.0	10 N	5	01	5	27	5	49	19	01		
12	358	23.2	+18	32.0	171	45.0	96	-19	00.6	0	5	16	5	41	6	03	18	48		
13	13	23.3		31.4	186	13.6	96	-18	48.0	10 S	29	5	54	16	34	55	36	47		
14	28	23.3		30.7	200	42.4	98		35.3	20	41	6	08	31	20	60	6	52		
15	43	23.3		30.1	215	11.1	97		22.5	30	53	22	47	18	04	66	7	11		
16	58	23.4		29.5	229	40.0	99	-18	09.6	35	5	59	30	6	57	17	54	69		
17	73	23.4	+18	28.9	244	08.9	99	-17	56.6	40	6	06	6	38	7	07	17	43		
18	88	23.4	+18	28.3	258	37.8	99	-17	43.4	45	6	12	6	48	7	20	17	30		
19	103	23.4		27.7	273	06.8	100		30.2	50	20	6	59	35	14	84	8	05		
20	118	23.5		27.1	287	35.9	101		16.9	52	23	7	05	42	17	07	87	14		
21	133	23.5		26.5	302	05.0	101	-17	03.4	54	27	10	50	16	59	90	23	14		
22	148	23.5		25.9	316	34.2	102	-16	49.9	56	31	17	7	59	49	94	33	10		
23	163	23.5		25.3	331	03.4	102		36.3	58	35	23	8	09	38	99	44	7		
24	178	23.6	+18	24.7	345	32.7	103	-16	22.5	60 S	6	40	7	31	8	20	16	26		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 30 ^m 4			Mag: -4.5 PMG: 13 ^h 41 ^m			Mag: +0.5 PMG: 7 ^h 01 ^m			Mag: -2.4 PMG: 20 ^h 02 ^m			Mag: +0.6 PMG: 13 ^h 22 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°				
0	307	15.4		154	03.8	+6	17.2	254	45.3	+17	43.9	58	46.6	-21	25.3				
1	322	17.8		169	06.7		16.7	269	46.1		44.3	73	49.2		25.3				
2	337	20.3		184	09.6		16.3	284	46.9		44.8	88	51.7		25.3				
3	352	22.8		199	12.5		15.8	299	47.7		45.2	103	54.2		25.3				
4	7	25.2		214	15.4		15.4	314	48.4		45.6	118	56.8		25.3				
5	22	27.7		229	18.3	+6	15.0	329	49.2	+17	46.0	133	59.3	-21	25.3				
6	37	30.1		244	21.2	+6	14.5	344	50.0	+17	46.5	149	01.8	-21	25.3				
7	52	32.6		259	24.1		14.1	359	50.7		46.9	164	04.3		25.3				
8	67	35.1		274	27.0		13.7	14	51.5		47.3	179	06.9		25.3				
9	82	37.5		289	29.9		13.2	29	52.3		47.8	194	09.4		25.3				
10	97	40.0		304	32.8		12.8	44	53.0		48.2	209	11.9		25.3				
11	112	42.5		319	35.7	+6	12.4	59	53.8	+17	48.6	224	14.5	-21	25.3				
12	127	44.9		334	38.6	+6	11.9	74	54.6	+17	49.0	239	17.0	-21	25.3				
13	142	47.4		349	41.5		11.5	89	55.3		49.5	254	19.5		25.3				
14	157	49.9		4	44.5		11.1	104	56.1		49.9	269	22.0		25.3				
15	172	52.3		19	47.4		10.7	119	56.9		50.3	284	24.6		25.3				
16	187	54.8		34	50.3		10.2	134	57.6		50.8	299	27.1		25.3				
17	202	57.2		49	53.3	+6	09.8	149	58.4	+17	51.2	314	29.6	-21	25.3				
18	217	59.7		64	56.2	+6	09.4	164	59.2	+17	51.6	329	32.1	-21	25.3				
19	233	02.2		79	59.2		09.0	180	00.0		52.0	344	34.7		25.3				
20	248	04.6		95	02.1		08.6	195	00.7		52.5	359	37.2		25.3				
21	263	07.1		110	05.1		08.1	210	01.5		52.9	14	39.7		25.3				
22	278	09.6		125	08.0		07.7	225	02.3		53.3	29	42.2		25.3				
23	293	12.0		140	11.0		07.3	240	03.0		53.7	44	44.8		25.3				
24	308	14.5		155	14.0	+6	06.9	255	03.8	+17	54.2	59	47.3	-21	25.3				
Dif	—			+29			-4	+8			+4	+25			0	+22			-1

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 16 ^d 5 PHE { 4 ^h : 58 ^s 5 12 ^h : 58 ^s 7 20 ^h : 58 ^s 8 R°: 50 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	178	23.6	+18	24.7	345	32.7	-16	22.5	60 N	20 34	21 35	** **	21 02	**	5 15	102				
1	193	23.6		24.1	0	02.1 ¹⁰⁴	-16	08.7 ¹³⁸	58	21	21 15	22 46	20 55	4	25	98				
2	208	23.6		23.5	14	31.4 ¹⁰³	-15	54.8 ¹³⁹	56	10	20 59	22 12	50	6	34	93				
3	223	23.7		22.9	29	00.9 ¹⁰⁵		40.8 ¹⁴⁰	54	20 01	45	21 49	44	10	41	90				
4	238	23.7		22.2	43	30.4 ¹⁰⁵		26.7 ¹⁴¹	52	19 52	34	30	40	12	48	87				
5	253	23.7	+18	21.6	58	00.0 ¹⁰⁶	-15	12.5 ¹⁴²	50	19 45	20 23	21 15	20 35	16	5	84				
6	268	23.7	+18	21.0	72	29.6 ¹⁰⁶	-14	58.2 ¹⁴³	45	19 28	20 02	20 45	20 26	21	6	77				
7	283	23.8		20.4	86	59.2 ¹⁰⁶		43.8 ¹⁴⁴	40	15	19 46	23	18	25	18	73				
8	298	23.8		19.8	101	29.0 ¹⁰⁸		29.3 ¹⁴⁵	35	19 04	32	20 06	12	29	27	69				
9	313	23.8		19.2	115	58.7 ¹⁰⁷		14.8 ¹⁴⁵	30	18 54	20	19 51	20 06	32	35	66				
10	328	23.9		18.6	130	28.5 ¹⁰⁸	-14	00.2 ¹⁴⁶	20	38	19 01	29	19 56	38	6	59				
11	343	23.9	+18	18.0	144	58.4 ¹⁰⁹	-13	45.5 ¹⁴⁷	10 N	18 23	18 45	19 11	19 46	44	7	54				
12	358	23.9	+18	17.3	159	28.3 ¹⁰⁹	-13	30.7 ¹⁴⁸	0	18 10	18 32	18 57	19 38	48	7	49				
13	13	24.0		16.7	173	58.3 ¹¹⁰		15.8 ¹⁴⁹	10 S	17 57	19	44	29	54	23	44				
14	28	24.0		16.1	188	28.3 ¹¹⁰	-13	00.9 ¹⁴⁹	20	43	18 06	32	20	59	34	40				
15	43	24.0		15.5	202	58.3 ¹¹⁰	-12	45.8 ¹⁵¹	30	27	17 52	21	10	65	47	34				
16	58	24.1		14.9	217	28.4 ¹¹¹		30.7 ¹⁵¹	35	17	44	15	19 03	69	7	55				
17	73	24.1	+18	14.3	231	58.6 ¹¹²	-12	15.6 ¹⁵¹	40	17 07	17 36	18 09	18 56	73	8	03				
18	88	24.1	+18	13.6	246	28.8 ¹¹²	-12	00.3 ¹⁵³	45	16 55	17 26	18 02	18 48	78	8	13				
19	103	24.2		13.0	260	59.0 ¹¹²	-11	45.0 ¹⁵³	50	40	15	17 54	38	84	25	16				
20	118	24.2		12.4	275	29.3 ¹¹³		29.6 ¹⁵⁴	52	33	10	51	34	86	31	13				
21	133	24.2		11.8	289	59.6 ¹¹³	-11	14.2 ¹⁵⁴	54	25	17 05	48	29	89	37	10				
22	148	24.3		11.2	304	30.0 ¹¹⁴	-10	58.7 ¹⁵⁵	56	16	16 59	44	23	93	43	8				
23	163	24.3		10.5	319	00.4 ¹¹⁴		43.1 ¹⁵⁶	58	16 07	52	40	17	96	51	4				
24	178	24.3	+18	09.9	333	30.8 ¹¹⁴	-10	27.4 ¹⁵⁷	60 S	15 56	16 44	17 36	18 10	100	8	59				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 26 ^m 5				Mag: -4.5 PMG: 13 ^h 36 ^m				Mag: +0.5 PMG: 6 ^h 59 ^m				Mag: -2.4 PMG: 19 ^h 57 ^m				Mag: +0.6 PMG: 13 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	14.5	155	14.0	+6	06.9	255	03.8	+17	54.2	59	47.3	-21	25.3	159	47.0	+14	07.2		
1	323	17.0	170	16.9		06.5	270	04.6		54.6	74	49.8		25.3	174	49.2		07.1		
2	338	19.4	185	19.9		06.1	285	05.3		55.0	89	52.3		25.3	189	51.4		07.0		
3	353	21.9	200	22.9		05.7	300	06.1		55.4	104	54.9		25.3	204	53.5		06.9		
4	8	24.4	215	25.9		05.3	315	06.9		55.9	119	57.4		25.3	219	55.7		06.8		
5	23	26.8	230	28.8	+6	04.9	330	07.7	+17	56.3	134	59.9	-21	25.3	234	57.9	+14	06.7		
6	38	29.3	245	31.8	+6	04.5	345	08.4	+17	56.7	150	02.4	-21	25.3	250	00.0	+14	06.6		
7	53	31.7	260	34.8		04.1	0	09.2		57.1	165	04.9		25.3	265	02.2		06.5		
8	68	34.2	275	37.8		03.7	15	10.0		57.6	180	07.5		25.3	280	04.3		06.4		
9	83	36.7	290	40.8		03.3	30	10.7		58.0	195	10.0		25.3	295	06.5		06.3		
10	98	39.1	305	43.8		02.9	45	11.5		58.4	210	12.5		25.3	310	08.7		06.2		
11	113	41.6	320	46.8	+6	02.5	60	12.3	+17	58.8	225	15.0	-21	25.3	325	10.8	+14	06.1		
12	128	44.1	335	49.8	+6	02.1	75	13.1	+17	59.2	240	17.5	-21	25.3	340	13.0	+14	06.0		
13	143	46.5	350	52.9		01.7	90	13.8	+17	59.7	255	20.1		25.3	355	15.2		05.9		
14	158	49.0	5	55.9		01.3	105	14.6	+18	00.1	270	22.6		25.3	10	17.3		05.8		
15	173	51.5	20	58.9		00.9	120	15.4		00.5	285	25.1		25.3	25	19.5		05.7		
16	188	53.9	36	01.9		00.5	135	16.1		00.9	300	27.6		25.3	40	21.7		05.6		
17	203	56.4	51	05.0	+6	00.1	150	16.9	+18	01.3	315	30.1	-21	25.3	55	23.8	+14	05.5		
18	218	58.9	66	08.0	+5	59.8	165	17.7	+18	01.8	330	32.7	-21	25.3	70	26.0	+14	05.4		
19	234	01.3	81	11.0		59.4	180	18.5		02.2	345	35.2		25.3	85	28.2		05.3		
20	249	03.8	96	14.1		59.0	195	19.2		02.6	0	37.7		25.3	100	30.3		05.2		
21	264	06.2	111	17.1		58.6	210	20.0		03.0	15	40.2		25.3	115	32.5		05.1		
22	279	08.7	126	20.2		58.2	225	20.8		03.4	30	42.7		25.3	130	34.7		04.9		
23	294	11.2	141	23.2		57.9	240	21.5		03.9	45	45.2		25.3	145	36.8		04.8		
24	309	13.6	156	26.3	+5	57.5	255	22.3	+18	04.3	60	47.7	-21	25.4	160	39.0	+14	04.7		
Dif	—		+30		-4		+8		+4		+25		0		+22		-1			

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 3				Edad: 17 ^d 5 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 1 20 ^h : 59 ^m 2 R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	24.3	+18	09.9	333	30.8	-10	27.4	60 N	**	**	2	39	3	40	21	01	0		
1	193	24.4		09.3	348	01.3	-10	11.7	58	1	28	2	58	3	52	20	59	3		
2	208	24.4		08.7	2	31.8	-9	56.0	56	2	01	3	14	4	03	56	7	07		
3	223	24.4		08.1	17	02.4		40.2	54	25	28	13			54	9	11	89		
4	238	24.5		07.4	31	33.0		24.3	52	43	40	21			52	12	15	86		
5	253	24.5	+18	06.8	46	03.6	-9	08.3	50	2	59	3	50	4	29	20	51	14		
6	268	24.5	+18	06.2	60	34.2	-8	52.4	45	3	28	4	11	4	45	20	47	19		
7	283	24.6		05.6	75	04.9		36.3	40	3	50	27		4	58	43	24	31		
8	298	24.6		04.9	89	35.6		20.2	35	4	07	41	5	09	41	28	36	68		
9	313	24.7		04.3	104	06.4	-8	04.1	30	22	4	53	19		38	31	41	64		
10	328	24.7		03.7	118	37.2	-7	47.9	20	4	44	5	12	35	34	37	48	59		
11	343	24.7	+18	03.1	133	08.0	-7	31.7	10 N	5	01	5	27	5	50	20	30	43		
12	358	24.8	+18	02.4	147	38.8	-7	15.4	0	5	16	5	41	6	03	20	26	48		
13	13	24.8		01.8	162	09.7	-6	59.1	10 S	29	5	54	16		23	53	07	43		
14	28	24.9		01.2	176	40.6		42.7	20	40	6	07	30		19	58	14	37		
15	43	24.9	+18	00.5	191	11.5		26.3	30	52	21	46		15	64	21	31			
16	58	24.9	+17	59.9	205	42.4	-6	09.9	35	5	58	28	6	55	12	68	25	28		
17	73	25.0	+17	59.3	220	13.3	-5	53.4	40	6	04	6	36	7	05	20	09	72		
18	88	25.0	+17	58.6	234	44.3	-5	36.9	45	6	10	6	46	7	17	20	06	77		
19	103	25.0		58.0	249	15.3		20.4	50	18	6	57	32		02	83	41	15		
20	118	25.1		57.4	263	46.3	-5	03.8	52	21	7	02	39		20	00	85	44		
21	133	25.1		56.8	278	17.4	-4	47.2	54	24	07	47		19	58	88	47	10		
22	148	25.2		56.1	292	48.4		30.6	56	28	13	7	55		56	91	51	6		
23	163	25.2		55.5	307	19.5	-4	13.9	58	32	20	8	05		53	95	55	3		
24	178	25.2	+17	54.9	321	50.5	-3	57.2	60 S	6	36	7	27	8	16	19	50	100		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 3 ^h 22 ^m 5			Mag: -4.5 PMG: 13 ^h 31 ^m			Mag: +0.5 PMG: 6 ^h 58 ^m			Mag: -2.4 PMG: 19 ^h 53 ^m			Mag: +0.6 PMG: 13 ^h 15 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	309	13.6		156	26.3	+5	255	22.3	+18	60	47.7	-21	160	39.0	+14												
1	324	16.1		171	29.3		270	23.1		75	50.3		175	41.1													
2	339	18.6		186	32.4		285	23.9		90	52.8		190	43.3													
3	354	21.0		201	35.5		300	24.6		105	55.3		205	45.5													
4	9	23.5		216	38.6		315	25.4		120	57.8		220	47.6													
5	24	26.0		231	41.6	+5	330	26.2	+18	136	00.3	-21	235	49.8	+14												
6	39	28.4		246	44.7	+5	345	26.9	+18	151	02.8	-21	250	52.0	+14												
7	54	30.9		261	47.8		0	27.7		166	05.3		265	54.1													
8	69	33.3		276	50.9		15	28.5		181	07.9		280	56.3													
9	84	35.8		291	54.0		30	29.3		196	10.4		295	58.5													
10	99	38.3		306	57.1		45	30.0		211	12.9		311	00.6													
11	114	40.7		322	00.2	+5	60	30.8	+18	226	15.4	-21	326	02.8	+14												
12	129	43.2		337	03.3	+5	75	31.6	+18	241	17.9	-21	341	05.0	+14												
13	144	45.7		352	06.4		90	32.4		256	20.4		356	07.1													
14	159	48.1		7	09.5		105	33.1		271	22.9		11	09.3													
15	174	50.6		22	12.6		120	33.9		286	25.4		26	11.4													
16	189	53.1		37	15.7		135	34.7		301	27.9		41	13.6													
17	204	55.5		52	18.9	+5	150	35.4	+18	316	30.5	-21	56	15.8	+14												
18	219	58.0		67	22.0	+5	165	36.2	+18	331	33.0	-21	71	17.9	+14												
19	235	00.5		82	25.1		180	37.0		346	35.5		86	20.1													
20	250	02.9		97	28.2		195	37.8		1	38.0		101	22.3													
21	265	05.4		112	31.4		210	38.5		16	40.5		116	24.4													
22	280	07.8		127	34.5		225	39.3		31	43.0		131	26.6													
23	295	10.3		142	37.7		240	40.1		46	45.5		146	28.8													
24	310	12.8		157	40.8	+5	255	40.9	+18	61	48.0	-21	161	30.9	+14												
Dif	—			+31			-4			+8			+4			+25			0			+22			-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8			Edad: 18 ^d 5 PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /3 20 ^h : 59 ^m /4																		
	PMG: 12 ^h 06 ^m 3			SD: 16 ^h 1 PMG: 2 ^h 38 ^m R°: 47 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m								
0	178	25.2	+17 54.9	321	50.5	-3 57.2		60 N	20 29	21 28	23 31	21 01 **	8 37	100								
1	193	25.3	54.2	336	21.6 ¹²¹	40.5 ¹⁶⁷		58	17	21 10	22 35	02 3	38	96								
2	208	25.3	53.6	350	52.7 ¹²¹	23.8 ¹⁶⁷		56	20 06	20 54	22 05	03 6	39	92								
3	223	25.4	53.0	5	23.8 ¹²¹	-3 07.0 ¹⁶⁸		54	19 57	41	21 43	03 10	40	89								
4	238	25.4	52.3	19	54.9 ¹²¹	-2 50.2 ¹⁶⁸		52	49	30	25	04 12	41	85								
5	253	25.5	+17 51.7	34	26.0 ¹²¹	-2 33.4 ¹⁶⁸		50	19 42	20 20	21 10	21 05 15	8 41	83								
6	268	25.5	+17 51.0	48	57.2 ¹²²	-2 16.6 ¹⁶⁸		45	19 26	20 00	20 42	21 06 20	8 42	78								
7	283	25.5	50.4	63	28.3 ¹²¹	-1 59.8 ¹⁶⁸		40	13	19 43	20	07 25	44	72								
8	298	25.6	49.8	77	59.4 ¹²¹	43.0 ¹⁶⁸		35	19 02	30	20 04	09 28	44	69								
9	313	25.6	49.1	92	30.6 ¹²²	26.1 ¹⁶⁹		30	18 53	19	19 50	09 32	45	65								
10	328	25.7	48.5	107	01.7 ¹²¹	-1 09.2 ¹⁶⁹		20	37	19 00	28	11 38	47	58								
11	343	25.7	+17 47.9	121	32.9 ¹²²	-0 52.4 ¹⁶⁸		10 N	18 23	18 45	19 11	21 13 43	8 48	53								
12	358	25.8	+17 47.2	136	04.0 ¹²¹	-0 35.5 ¹⁶⁹		0	18 10	18 31	18 57	21 14 49	8 49	48								
13	13	25.8	46.6	150	35.1 ¹²¹	18.6 ¹⁶⁹		10 S	17 57	19	44	16 53	50	43								
14	28	25.9	45.9	165	06.3 ¹²²	-0 01.7 ¹⁶⁹		20	43	18 06	33	17 59	51	38								
15	43	25.9	45.3	179	37.4 ¹²¹	+0 15.2 ¹⁶⁹		30	28	17 53	22	19 65	52	32								
16	58	25.9	44.7	194	08.5 ¹²¹	32.1 ¹⁶⁹		35	19	46	16	20 69	53	28								
17	73	26.0	+17 44.0	208	39.6 ¹²¹	+0 49.0 ¹⁶⁹		40	17 09	17 38	18 10	21 21 73	8 54	24								
18	88	26.0	+17 43.4	223	10.7 ¹²¹	+1 05.9 ¹⁶⁹		45	16 57	17 28	18 04	21 23 78	8 55	19								
19	103	26.1	42.7	237	41.8 ¹²¹	22.8 ¹⁶⁹		50	42	18	17 57	25 83	56	14								
20	118	26.1	42.1	252	12.9 ¹²¹	39.7 ¹⁶⁹		52	36	13	54	25 87	56	12								
21	133	26.2	41.4	266	44.0 ¹²¹	+1 56.6 ¹⁶⁹		54	28	08	51	26 90	57	9								
22	148	26.2	40.8	281	15.0 ¹²⁰	+2 13.4 ¹⁶⁸		56	20	17 02	47	27 93	57	7								
23	163	26.3	40.1	295	46.1 ¹²¹	30.3 ¹⁶⁹		58	11	16 55	43	28 97	58	3								
24	178	26.3	+17 39.5	310	17.1 ¹²⁰	+2 47.1 ¹⁶⁸		60 S	16 00	16 48	17 39	21 30 101	8 59	**								
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 3 ^h 18 ^m 6		Mag: -4.5 PMG: 13 ^h 26 ^m		Mag: +0.5 PMG: 6 ^h 57 ^m		Mag: -2.4 PMG: 19 ^h 49 ^m		Mag: +0.6 PMG: 13 ^h 12 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec													
h	°	°	°	°	°	°	°	°	°													
0	310	12.8	157 40.8	+5 48.9	255 40.9	+18 14.2	61 48.0	-21 25.4	161 30.9	+14 02.3												
1	325	15.2	172 44.0	48.6	270 41.6	14.6	76 50.5	25.4	176 33.1	02.2												
2	340	17.7	187 47.1	48.3	285 42.4	15.0	91 53.0	25.4	191 35.2	02.0												
3	355	20.2	202 50.3	47.9	300 43.2	15.4	106 55.5	25.4	206 37.4	01.9												
4	10	22.6	217 53.5	47.6	315 44.0	15.9	121 58.0	25.4	221 39.6	01.8												
5	25	25.1	232 56.6	+5 47.3	330 44.7	+18 16.3	137 00.5	-21 25.4	236 41.7	+14 01.7												
6	40	27.6	247 59.8	+5 46.9	345 45.5	+18 16.7	152 03.0	-21 25.4	251 43.9	+14 01.6												
7	55	30.0	263 03.0	46.6	0 46.3	17.1	167 05.6	25.4	266 46.1	01.5												
8	70	32.5	278 06.2	46.3	15 47.1	17.5	182 08.1	25.4	281 48.2	01.4												
9	85	35.0	293 09.3	45.9	30 47.8	17.9	197 10.6	25.4	296 50.4	01.3												
10	100	37.4	308 12.5	45.6	45 48.6	18.3	212 13.1	25.4	311 52.6	01.2												
11	115	39.9	323 15.7	+5 45.3	60 49.4	+18 18.7	227 15.6	-21 25.4	326 54.7	+14 01.1												
12	130	42.3	338 18.9	+5 45.0	75 50.2	+18 19.1	242 18.1	-21 25.4	341 56.9	+14 01.0												
13	145	44.8	353 22.1	44.7	90 50.9	19.5	257 20.6	25.4	356 59.0	00.9												
14	160	47.3	8 25.3	44.3	105 51.7	19.9	272 23.1	25.4	12 01.2	00.8												
15	175	49.7	23 28.5	44.0	120 52.5	20.3	287 25.6	25.4	27 03.4	00.7												
16	190	52.2	38 31.7	43.7	135 53.3	20.7	302 28.1	25.5	42 05.5	00.6												
17	205	54.7	53 34.9	+5 43.4	150 54.0	+18 21.2	317 30.6	-21 25.5	57 07.7	+14 00.5												
18	220	57.1	68 38.2	+5 43.1	165 54.8	+18 21.6	332 33.1	-21 25.5	72 09.9	+14 00.4												
19	235	59.6	83 41.4	42.8	180 55.6	22.0	347 35.6	25.5	87 12.0	00.3												
20	251	02.1	98 44.6	42.5	195 56.4	22.4	2 38.1	25.5	102 14.2	00.2												
21	266	04.5	113 47.8	42.2	210 57.1	22.8	17 40.6	25.5	117 16.4	+14 00.1												
22	281	07.0	128 51.1	41.9	225 57.9	23.2	32 43.1	25.5	132 18.5	+14 00.0												
23	296	09.4	143 54.3	41.6	240 58.7	23.6	47 45.6	25.5	147 20.7	+13 59.9												
24	311	11.9	158 57.5	+5 41.3	255 59.5	+18 24.0	62 48.1	-21 25.5	162 22.8	+13 59.8												
Dif	—		+32 -3		+8 +4		+25 0		+22 -1													

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: 19 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/4 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	178	26.3	+17	39.5	310	17.1	+2	47.1	60 N	0 43	2 45	3 44	21 00	1	10 17	102		
1	193	26.4		38.9	324	48.1	+3	04.0	58	1 38	3 04	3 56	05	4	14	98		
2	208	26.4		38.2	339	19.1		20.8	56	2 08	19	4 07	09	8	11	94		
3	223	26.5		37.6	353	50.1		37.6	54	30	32	16	13	11	09	90		
4	238	26.5		36.9	8	21.0	+3	54.4	52	2 48	43	24	16	15	06	88		
5	253	26.6	+17	36.3	22	51.9	+4	11.2	50	3 03	3 53	4 31	21 20	16	10 04	85		
6	268	26.6	+17	35.6	37	22.8	+4	28.0	45	3 31	4 13	4 47	21 26	23	10 00	78		
7	283	26.6		35.0	51	53.7	+4	44.7	40	3 52	30	5 00	32	27	9 56	74		
8	298	26.7		34.3	66	24.5	+5	01.4	35	4 09	43	10	37	31	53	69		
9	313	26.7		33.7	80	55.3		18.1	30	23	4 54	20	41	35	50	66		
10	328	26.8		33.0	95	26.1		34.8	20	4 45	5 13	36	49	40	45	60		
11	343	26.8	+17	32.4	109	56.9	+5	51.4	10 N	5 02	5 28	5 50	21 56	45	9 41	54		
12	358	26.9	+17	31.7	124	27.6	+6	08.0	0	5 16	5 41	6 03	22 03	50	9 37	49		
13	13	26.9		31.1	138	58.3		24.6	10 S	28	5 54	15	09	55	33	44		
14	28	27.0		30.4	153	28.9		41.1	20	39	6 06	29	16	61	29	39		
15	43	27.1		29.8	167	59.6	+6	57.6	30	50	19	44	24	67	24	33		
16	58	27.1		29.1	182	30.1	+7	14.1	35	5 56	26	6 53	29	70	21	29		
17	73	27.2	+17	28.4	197	00.7	+7	30.6	40	6 02	6 34	7 03	22 34	75	9 18	25		
18	88	27.2	+17	27.8	211	31.2	+7	47.0	45	6 08	6 43	7 15	22 41	79	9 14	21		
19	103	27.3		27.1	226	01.6	+8	03.3	50	15	54	29	48	86	10	15		
20	118	27.3		26.5	240	32.1		19.6	52	18	6 59	36	52	88	08	13		
21	133	27.4		25.8	255	02.4		35.9	54	21	7 04	43	22 56	91	06	10		
22	148	27.4		25.2	269	32.8	+8	52.1	56	25	10	7 51	23 00	95	04	7		
23	163	27.5		24.5	284	03.1	+9	08.3	58	28	16	8 00	05	100	9 01	4		
24	178	27.5	+17	23.9	298	33.3	+9	24.4	60 S	6 32	7 23	8 11	23 11	104	8 58	0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 14 ^m 7		Mag: -4.4 PMG: 13 ^h 21 ^m		Mag: +0.5 PMG: 6 ^h 56 ^m		Mag: -2.4 PMG: 19 ^h 46 ^m		Mag: +0.6 PMG: 13 ^h 09 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	311	11.9	158	57.5	+5	41.3	255	59.5	+18	24.0
1	326	14.4	174	00.8		41.0	271	00.2		24.4
2	341	16.8	189	04.0		40.7	286	01.0		24.8
3	356	19.3	204	07.3		40.4	301	01.8		25.2
4	11	21.8	219	10.5		40.1	316	02.6		25.6
5	26	24.2	234	13.8	+5	39.8	331	03.3	+18	26.0
6	41	26.7	249	17.1	+5	39.5	346	04.1	+18	26.4
7	56	29.2	264	20.3		39.2	1	04.9		26.8
8	71	31.6	279	23.6		38.9	16	05.7		27.2
9	86	34.1	294	26.9		38.6	31	06.5		27.6
10	101	36.6	309	30.1		38.3	46	07.2		28.0
11	116	39.0	324	33.4	+5	38.1	61	08.0	+18	28.4
12	131	41.5	339	36.7	+5	37.8	76	08.8	+18	28.8
13	146	43.9	354	40.0		37.5	91	09.6		29.2
14	161	46.4	9	43.3		37.2	106	10.3		29.6
15	176	48.9	24	46.6		36.9	121	11.1		30.0
16	191	51.3	39	49.9		36.7	136	11.9		30.4
17	206	53.8	54	53.2	+5	36.4	151	12.7	+18	30.8
18	221	56.3	69	56.5	+5	36.1	166	13.4	+18	31.2
19	236	58.7	84	59.8		35.8	181	14.2		31.6
20	252	01.2	100	03.1		35.6	196	15.0		32.0
21	267	03.7	115	06.4		35.3	211	15.8		32.4
22	282	06.1	130	09.7		35.0	226	16.6		32.8
23	297	08.6	145	13.1		34.8	241	17.3		33.2
24	312	11.0	160	16.4	+5	34.5	256	18.1	+18	33.6
Dif	—		+33		-3		+8		+4	
							+25		0	
									+22	
									-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 20 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/4 R°: 51 ^m													
	PMG: 12 ^h 06 ^m 1				SD: 16 ^h 2 PMG: 4 ^h 14 ^m													
	hG ☉		Dec		hG ☾		Dif		Dec	Dif	Civil		Náutico		Hora R°			
h	°	'	°	'	°	'	°	'			h	m	h	m	h	m		
0	178	27.5	+17	23.9	298	33.3	+9	24.4	60 N	20 24	21 22	23 09	21 01	1	11 59	107		
1	193	27.6		23.2	313	03.5 ¹¹²		40.5 ¹⁶¹	58	12	21 04	22 25	09	7	52	101		
2	208	27.6		22.5	327	33.6 ¹¹¹	+9	56.6 ¹⁶¹	56	20 02	20 49	21 58	17	11	45	96		
3	223	27.7		21.9	342	03.7 ¹¹¹	+10	12.5 ¹⁵⁹	54	19 53	37	37	24	15	39	93		
4	238	27.7		21.2	356	33.8 ¹¹¹		28.5 ¹⁶⁰	52	46	26	20	31	18	34	89		
5	253	27.8	+17	20.6	11	03.7 ¹⁰⁹	+10	44.3 ¹⁵⁸	50	19 38	20 16	21 06	21 36	21	11 29	86		
6	268	27.8	+17	19.9	25	33.7 ¹¹⁰	+11	00.2 ¹⁵⁹	45	19 23	19 57	20 38	21 49	26	11 18	80		
7	283	27.9		19.2	40	03.6 ¹⁰⁹		15.9 ¹⁵⁷	40	11	41	18	21 59	31	10	75		
8	298	28.0		18.6	54	33.4 ¹⁰⁸		31.6 ¹⁵⁷	35	19 00	28	20 01	22 08	35	11 02	71		
9	313	28.0		17.9	69	03.1 ¹⁰⁷	+11	47.2 ¹⁵⁶	30	18 51	19 17	19 48	16	38	10 56	67		
10	328	28.1		17.3	83	32.8 ¹⁰⁷	+12	02.8 ¹⁵⁶	20	36	18 59	27	29	44	45	61		
11	343	28.1	+17	16.6	98	02.5 ¹⁰⁷	+12	18.3 ¹⁵⁵	10 N	18 22	18 44	19 10	22 41	49	10 35	57		
12	358	28.2	+17	15.9	112	32.1 ¹⁰⁶	+12	33.7 ¹⁵⁴	0	18 10	18 31	18 56	22 53	53	10 26	52		
13	13	28.2		15.3	127	01.6 ¹⁰⁵	+12	49.1 ¹⁵⁴	10 S	17 57	19	44	23 04	58	17	47		
14	28	28.3		14.6	141	31.1 ¹⁰⁵	+13	04.4 ¹⁵³	20	44	18 07	33	17	62	10 08	41		
15	43	28.4		13.9	156	00.4 ¹⁰³		19.6 ¹⁵²	30	29	17 54	23	31	68	9 57	36		
16	58	28.4		13.3	170	29.8 ¹⁰⁴		34.8 ¹⁵²	35	20	47	17	39	72	50	33		
17	73	28.5	+17	12.6	184	59.0 ¹⁰²	+13	49.8 ¹⁵⁰	40	17 11	17 39	18 12	23 49	76	9 43	29		
18	88	28.5	+17	11.9	199	28.2 ¹⁰²	+14	04.8 ¹⁵⁰	45	16 59	17 30	18 06	***	***	9 35	24		
19	103	28.6		11.3	213	57.4 ¹⁰²		19.8 ¹⁵⁰	50	45	20	17 59	***	***	25	19		
20	118	28.6		10.6	228	26.4 ¹⁰⁰		34.6 ¹⁴⁸	52	39	16	56	***	***	21	16		
21	133	28.7		09.9	242	55.4 ¹⁰⁰	+14	49.4 ¹⁴⁸	54	32	11	53	***	***	16	13		
22	148	28.8		09.3	257	24.3 ⁹⁹	+15	04.0 ¹⁴⁶	56	24	17 05	50	***	***	11	9		
23	163	28.8		08.6	271	53.2 ⁹⁹		18.6 ¹⁴⁶	58	15	16 59	47	***	***	9 05	5		
24	178	28.9	+17	07.9	286	22.0 ⁹⁸	+15	33.1 ¹⁴⁵	60 S	16 04	16 52	17 43	***	***	8 58	0		
UT	ARIES				VENUS				MARTE				JÚPITER					
	PMG: 3 ^h 10 ^m 7				Mag: -4.4 PMG: 13 ^h 16 ^m				Mag: +0.5 PMG: 6 ^h 54 ^m				Mag: -2.4 PMG: 19 ^h 42 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♃			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	312	11.0	160	16.4	+5	34.5	256	18.1	+18	33.6	63	48.0	-21	25.6	163	14.7		
1	327	13.5	175	19.7		34.3	271	18.9		34.0	78	50.4		25.6	178	16.9		
2	342	16.0	190	23.1		34.0	286	19.7		34.4	93	52.9		25.6	193	19.1		
3	357	18.4	205	26.4		33.7	301	20.5		34.8	108	55.4		25.6	208	21.2		
4	12	20.9	220	29.7		33.5	316	21.2		35.2	123	57.9		25.6	223	23.4		
5	27	23.4	235	33.1	+5	33.2	331	22.0	+18	35.6	139	00.4	-21	25.6	238	25.6		
6	42	25.8	250	36.4	+5	33.0	346	22.8	+18	36.0	154	02.9	-21	25.6	253	27.7		
7	57	28.3	265	39.8		32.7	1	23.6		36.4	169	05.4		25.6	268	29.9		
8	72	30.8	280	43.2		32.5	16	24.3		36.8	184	07.9		25.6	283	32.0		
9	87	33.2	295	46.5		32.2	31	25.1		37.1	199	10.4		25.6	298	34.2		
10	102	35.7	310	49.9		32.0	46	25.9		37.5	214	12.8		25.6	313	36.4		
11	117	38.2	325	53.2	+5	31.7	61	26.7	+18	37.9	229	15.3	-21	25.6	328	38.5		
12	132	40.6	340	56.6	+5	31.5	76	27.5	+18	38.3	244	17.8	-21	25.6	343	40.7		
13	147	43.1	356	00.0		31.3	91	28.2		38.7	259	20.3		25.7	358	42.8		
14	162	45.5	11	03.4		31.0	106	29.0		39.1	274	22.8		25.7	13	45.0		
15	177	48.0	26	06.7		30.8	121	29.8		39.5	289	25.3		25.7	28	47.2		
16	192	50.5	41	10.1		30.5	136	30.6		39.9	304	27.8		25.7	43	49.3		
17	207	52.9	56	13.5	+5	30.3	151	31.4	+18	40.3	319	30.3	-21	25.7	58	51.5		
18	222	55.4	71	16.9	+5	30.1	166	32.1	+18	40.7	334	32.7	-21	25.7	73	53.7		
19	237	57.9	86	20.3		29.8	181	32.9		41.1	349	35.2		25.7	88	55.8		
20	253	00.3	101	23.7		29.6	196	33.7		41.5	4	37.7		25.7	103	58.0		
21	268	02.8	116	27.1		29.4	211	34.5		41.9	19	40.2		25.7	119	00.1		
22	283	05.3	131	30.5		29.2	226	35.3		42.2	34	42.7		25.7	134	02.3		
23	298	07.7	146	33.9		28.9	241	36.1		42.6	49	45.2		25.7	149	04.5		
24	313	10.2	161	37.3	+5	28.7	256	36.8	+18	43.0	64	47.6	-21	25.7	164	06.6		
Dif	—		+34		-2		+8		+4		+25		0		+22			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 0			Edad: 21 ^d 5 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 3 20 ^h : 59 ^m 3 R ^o : 54 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R ^o	Hora	R ^o													
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m													
0	178	28.9	+17	07.9		286	22.0	+15	33.1	60 N	1 04	2 51	3 49	21 02 5	13 46 111												
1	193	28.9		07.3		300	50.7	97	+15	47.5	58	1 48	3 09	4 01	16 12 33 103												
2	208	29.0		06.6		315	19.3	96	+16	01.9	56	2 15	23	11	28 18 21 99												
3	223	29.1		05.9		329	47.9	96		16.1	54	36	36	19	39 22 12 93												
4	238	29.1		05.2		344	16.3	94		30.3	52	2 53	47	27	49 25 13 03 90												
5	253	29.2	+17	04.6		358	44.7	94	+16	44.3	50	3 07	3 56	4 34	21 57 28 12 55 87												
6	268	29.2	+17	03.9		13	13.1	94	+16	58.3	45	3 34	4 16	4 49	22 15 34 12 38 81												
7	283	29.3		03.2		27	41.3	92	+17	12.1	40	3 55	32	5 02	30 38 25 76												
8	298	29.4		02.6		42	09.5	92		25.9	35	4 11	44	12	43 41 13 73												
9	313	29.4		01.9		56	37.6	91		39.5	30	25	4 55	21	22 54 45 12 03 70												
10	328	29.5		01.2		71	05.6	90	+17	53.1	20	4 46	5 13	37	23 13 50 11 46 64												
11	343	29.5	+17	00.5		85	33.5	89	+18	06.5	10 N	5 02	5 28	5 50	23 30 53 11 32 59												
12	358	29.6	+16	59.9		100	01.4	89	+18	19.9	0	5 16	5 41	6 03	23 46 57 11 18 55												
13	13	29.7		59.2		114	29.1	87		33.1	10 S	28	5 53	15	** ** * 11 04 51												
14	28	29.7		58.5		128	56.8	87		46.2	20	39	6 05	28	** * 10 49 47												
15	43	29.8		57.8		143	24.4	86	+18	59.3	30	49	18	43	** * 33 41												
16	58	29.9		57.2		157	51.9	85	+19	12.2	35	5 54	25	6 51	** * 23 38												
17	73	29.9	+16	56.5		172	19.4	85	+19	24.9	40	6 00	6 32	7 01	** * 10 12 34												
18	88	30.0	+16	55.8		186	46.7	83	+19	37.6	45	6 06	6 41	7 12	0 00 81 9 59 30												
19	103	30.1		55.1		201	14.0	83	+19	50.2	50	12	51	26	14 87 44 24												
20	118	30.1		54.4		215	41.2	82	+20	02.6	52	15	6 56	32	20 91 37 20												
21	133	30.2		53.8		230	08.3	81		15.0	54	18	7 01	39	27 94 29 17												
22	148	30.2		53.1		244	35.3	80		27.2	56	21	06	47	36 98 20 13												
23	163	30.3		52.4		259	02.3	80		39.2	58	25	12	7 56	45 103 9 10 8												
24	178	30.4	+16	51.7		273	29.1	78	+20	51.2	60 S	6 28	7 19	8 06	0 55 110 8 58 2												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 3 ^h 06 ^m 8			Mag: -4.3 PMG: 13 ^h 10 ^m			Mag: +0.5 PMG: 6 ^h 53 ^m			Mag: -2.4 PMG: 19 ^h 38 ^m			Mag: +0.6 PMG: 13 ^h 02 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	313	10.2		161	37.3	+5	256	36.8	+18	43.0	64	47.6	-21	25.7	164	06.6	+13	54.7									
1	328	12.7		176	40.8		271	37.6		43.4	79	50.1		25.7	179	08.8		54.6									
2	343	15.1		191	44.2		286	38.4		43.8	94	52.6		25.7	194	10.9		54.5									
3	358	17.6		206	47.6		301	39.2		44.2	109	55.1		25.7	209	13.1		54.4									
4	13	20.0		221	51.0		316	40.0		44.6	124	57.6		25.7	224	15.3		54.3									
5	28	22.5		236	54.5	+5	331	40.7	+18	45.0	140	00.0	-21	25.7	239	17.4	+13	54.2									
6	43	25.0		251	57.9	+5	346	41.5	+18	45.4	155	02.5	-21	25.8	254	19.6	+13	54.1									
7	58	27.4		267	01.3		1	42.3		45.7	170	05.0		25.8	269	21.8		54.0									
8	73	29.9		282	04.8		16	43.1		46.1	185	07.5		25.8	284	23.9		53.9									
9	88	32.4		297	08.2		31	43.9		46.5	200	10.0		25.8	299	26.1		53.8									
10	103	34.8		312	11.7		46	44.6		46.9	215	12.4		25.8	314	28.2		53.7									
11	118	37.3		327	15.1	+5	61	45.4	+18	47.3	230	14.9	-21	25.8	329	30.4	+13	53.6									
12	133	39.8		342	18.6	+5	76	46.2	+18	47.7	245	17.4	-21	25.8	344	32.6	+13	53.5									
13	148	42.2		357	22.0		91	47.0		48.1	260	19.9		25.8	359	34.7		53.4									
14	163	44.7		12	25.5		106	47.8		48.4	275	22.4		25.8	14	36.9		53.3									
15	178	47.1		27	28.9		121	48.6		48.8	290	24.8		25.8	29	39.0		53.2									
16	193	49.6		42	32.4		136	49.3		49.2	305	27.3		25.8	44	41.2		53.1									
17	208	52.1		57	35.9	+5	151	50.1	+18	49.6	320	29.8	-21	25.8	59	43.4	+13	53.0									
18	223	54.5		72	39.4	+5	166	50.9	+18	50.0	335	32.3	-21	25.8	74	45.5	+13	52.9									
19	238	57.0		87	42.8		181	51.7		50.4	350	34.7		25.8	89	47.7		52.8									
20	253	59.5		102	46.3		196	52.5		50.8	5	37.2		25.8	104	49.9		52.6									
21	269	01.9		117	49.8		211	53.3		51.1	20	39.7		25.9	119	52.0		52.5									
22	284	04.4		132	53.3		226	54.0		51.5	35	42.2		25.9	134	54.2		52.4									
23	299	06.9		147	56.8		241	54.8		51.9	50	44.6		25.9	149	56.3		52.3									
24	314	09.3		163	00.3	+5	256	55.6	+18	52.3	65	47.1	-21	25.9	164	58.5	+13	52.2									
Dif	—			+35			-2			+8			+4			+25			0			+22			-1		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8				Edad: 22 ^d 5	PHE {	4 ^h : 59 ^m /2 12 ^h : 59 ^m /1 20 ^h : 59 ^m /1	R°: 58 ^m											
	PMG: 12 ^h 05 ^m 9																		
	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	30.4	+16	51.7	273	29.1	+20	51.2	60 N	20 19	21 15	22 53	21 07 14			15 37	110		
1	193	30.4		51.0	287	55.9	78	+21 03.0 ¹¹⁸	58	20 08	20 58	22 16	28 24			16 10	101		
2	208	30.5		50.4	302	22.6	77	14.7 ¹¹⁷	56	19 58	44	21 50	21 46 29			15 00	93		
3	223	30.6		49.7	316	49.2	76	26.3 ¹¹⁶	54	50	32	31	22 01 33			14 45	90		
4	238	30.6		49.0	331	15.7	75	37.7 ¹¹⁴	52	42	22	15	14 36			33 86			
5	253	30.7	+16	48.3	345	42.1	74	+21 49.0 ¹¹³	50	19 35	20 13	21 01	22 25 39			14 22	83		
6	268	30.8	+16	47.6	0	08.4	73	+22 00.2 ¹¹²	45	19 21	19 54	20 35	22 49 44			13 59	78		
7	283	30.8		46.9	14	34.7	73	11.2 ¹¹⁰	40	19 09	38	20 15	23 08 47			41 74			
8	298	30.9		46.3	29	00.9	72	22.1 ¹⁰⁹	35	18 59	26	19 59	24 50			26 71			
9	313	31.0		45.6	43	26.9	70	32.9 ¹⁰⁸	30	50	19 15	46	23 39 51			13 13	69		
10	328	31.0		44.9	57	53.0	71	43.5 ¹⁰⁶	20	35	18 58	25	** ** *			12 50	65		
11	343	31.1	+16	44.2	72	18.9	69	+22 54.0 ¹⁰⁵	10 N	18 22	18 44	19 09	** ** *			12 31	62		
12	358	31.2	+16	43.5	86	44.7	68	+23 04.4 ¹⁰⁴	0	18 09	18 31	18 56	** ** *			12 13	58		
13	13	31.3		42.8	101	10.5	68	14.6 ¹⁰²	10 S	17 57	19	44	0 02 61			11 55	55		
14	28	31.3		42.1	115	36.1	66	24.6 ¹⁰⁰	20	45	18 08	34	19 65			36 52			
15	43	31.4		41.5	130	01.7	66	34.5 ⁹⁹	30	30	17 55	24	39 70			14 48			
16	58	31.5		40.8	144	27.2	65	44.3 ⁹⁸	35	22	48	19	0 51 73			11 01	45		
17	73	31.5	+16	40.1	158	52.7	65	+23 53.9 ⁹⁶	40	17 12	17 41	18 13	1 05 76			10 46	43		
18	88	31.6	+16	39.4	173	18.0	63	+24 03.3 ⁹⁴	45	17 01	17 33	18 08	1 21 80			10 29	38		
19	103	31.7		38.7	187	43.3	63	12.6 ⁹³	50	16 48	23	18 02	41 86			10 08	32		
20	118	31.7		38.0	202	08.5	62	21.8 ⁹²	52	42	18	17 59	1 51 89			9 57	30		
21	133	31.8		37.3	216	33.6	61	30.8 ⁹⁰	54	35	14	56	2 01 93			46 26			
22	148	31.9		36.6	230	58.6	60	39.6 ⁸⁸	56	27	08	53	14 97			33 22			
23	163	32.0		35.9	245	23.6	60	48.3 ⁸⁷	58	19	17 02	50	28 104			18 16			
24	178	32.0	+16	35.2	259	48.5	59	+24 56.8 ⁸⁵	60 S	16 09	16 56	17 47	2 45 113			9 00	7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 02 ^m 9		Mag: -4.3 PMG: 13 ^h 05 ^m		Mag: +0.5 PMG: 6 ^h 52 ^m		Mag: -2.4 PMG: 19 ^h 34 ^m		Mag: +0.6 PMG: 12 ^h 58 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	314	09.3	163	00.3	+5 23.9	256	55.6	+18 52.3	65	47.1	-21 25.9	164	58.5	+13 52.2				
1	329	11.8	178	03.8	23.7	271	56.4	52.7	80	49.6	25.9	180	00.7	52.1				
2	344	14.3	193	07.3	23.5	286	57.2	53.0	95	52.1	25.9	195	02.8	52.0				
3	359	16.7	208	10.8	23.3	301	58.0	53.4	110	54.5	25.9	210	05.0	51.9				
4	14	19.2	223	14.3	23.1	316	58.7	53.8	125	57.0	25.9	225	07.1	51.8				
5	29	21.6	238	17.8	+5 23.0	331	59.5	+18 54.2	140	59.5	-21 25.9	240	09.3	+13 51.7				
6	44	24.1	253	21.3	+5 22.8	347	00.3	+18 54.6	156	02.0	-21 25.9	255	11.5	+13 51.6				
7	59	26.6	268	24.8	22.6	2	01.1	55.0	171	04.4	25.9	270	13.6	51.5				
8	74	29.0	283	28.4	22.5	17	01.9	55.3	186	06.9	25.9	285	15.8	51.4				
9	89	31.5	298	31.9	22.3	32	02.7	55.7	201	09.4	25.9	300	17.9	51.3				
10	104	34.0	313	35.4	22.1	47	03.4	56.1	216	11.8	25.9	315	20.1	51.2				
11	119	36.4	328	38.9	+5 22.0	62	04.2	+18 56.5	231	14.3	-21 26.0	330	22.3	+13 51.1				
12	134	38.9	343	42.5	+5 21.8	77	05.0	+18 56.8	246	16.8	-21 26.0	345	24.4	+13 51.0				
13	149	41.4	358	46.0	21.6	92	05.8	57.2	261	19.3	26.0	0	26.6	50.9				
14	164	43.8	13	49.5	21.5	107	06.6	57.6	276	21.7	26.0	15	28.7	50.8				
15	179	46.3	28	53.1	21.3	122	07.4	58.0	291	24.2	26.0	30	30.9	50.6				
16	194	48.8	43	56.6	21.2	137	08.2	58.4	306	26.7	26.0	45	33.1	50.5				
17	209	51.2	59	00.2	+5 21.0	152	08.9	+18 58.7	321	29.1	-21 26.0	60	35.2	+13 50.4				
18	224	53.7	74	03.7	+5 20.9	167	09.7	+18 59.1	336	31.6	-21 26.0	75	37.4	+13 50.3				
19	239	56.1	89	07.3	20.7	182	10.5	59.5	351	34.1	26.0	90	39.5	50.2				
20	254	58.6	104	10.9	20.6	197	11.3	+18 59.9	6	36.5	26.0	105	41.7	50.1				
21	270	01.1	119	14.4	20.4	212	12.1	+19 00.2	21	39.0	26.0	120	43.9	50.0				
22	285	03.5	134	18.0	20.3	227	12.9	00.6	36	41.5	26.0	135	46.0	49.9				
23	300	06.0	149	21.6	20.1	242	13.7	01.0	51	43.9	26.1	150	48.2	49.8				
24	315	08.5	164	25.1	+5 20.0	257	14.4	+19 01.4	66	46.4	-21 26.1	165	50.4	+13 49.7				
Dif	—		+35		-2		+8		+4		+25		0		+22		-1	

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: 24 ^d 5 PHE { 4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'4 SD: 16'0 PMG: 7 ^h 58 ^m R°: 61 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	178	33.8	+16	18.5	245	26.8	+27	30.7	60 N	20 13	21 09	22 40	21 59 81	18 57 46
1	193	33.9		17.8	259	50.3	45	34.9	58	20 03	20 53	22 07	22 37 75	18 19 51
2	208	34.0		17.1	274	13.7	44	38.9	56	19 54	39	21 43	23 04 73	17 52 54
3	223	34.1		16.4	288	37.1	44	42.8	54	46	28	25	25 71	31 55
4	238	34.1		15.7	303	00.5	44	46.4	52	38	18	21 10	43 70	17 13 56
5	253	34.2	+16	15.0	317	23.9	44	+27 49.9	50	19 32	20 09	20 57	23 58 69	16 58 57
6	268	34.3	+16	14.3	331	47.2	43	+27 53.2	45	19 18	19 51	20 31	** ** *	16 28 58
7	283	34.4		13.6	346	10.5	43	56.3	40	19 06	36	20 12	** ** *	16 04 59
8	298	34.4		12.8	0	33.8	43	+27 59.2	35	18 57	24	19 57	0 14 58	15 44 60
9	313	34.5		12.1	14	57.1	43	+28 01.9	30	48	19 14	44	30 59	15 28 59
10	328	34.6		11.4	29	20.4	43	04.4	20	33	18 57	24	0 57 60	14 59 61
11	343	34.7	+16	10.7	43	43.6	42	+28 06.8	10 N	18 21	18 43	19 08	1 21 61	14 35 61
12	358	34.8	+16	10.0	58	06.8	42	+28 09.0	0	18 09	18 31	18 56	1 43 61	14 12 61
13	13	34.8		09.3	72	30.1	43	10.9	10 S	17 58	19	45	2 05 62	13 50 61
14	28	34.9		08.6	86	53.3	42	12.7	20	45	18 08	34	29 62	13 25 62
15	43	35.0		07.9	101	16.5	42	14.3	30	31	17 56	25	2 57 63	12 57 62
16	58	35.1		07.2	115	39.7	42	15.7	35	23	50	20	3 13 64	40 62
17	73	35.2	+16	06.5	130	02.9	42	+28 17.0	40	17 14	17 43	18 15	3 33 64	12 21 61
18	88	35.3	+16	05.7	144	26.1	42	+28 18.0	45	17 04	17 35	18 10	3 56 64	11 57 62
19	103	35.3		05.0	158	49.4	43	18.9	50	16 51	25	04	4 26 65	27 61
20	118	35.4		04.3	173	12.6	42	19.5	52	45	21	18 02	41 65	11 11 62
21	133	35.5		03.6	187	35.8	42	20.0	54	38	17	17 59	4 58 66	10 54 61
22	148	35.6		02.9	201	59.1	43	20.3	56	31	12	56	5 19 67	33 61
23	163	35.7		02.2	216	22.4	43	20.4	58	23	06	53	5 46 67	10 06 61
24	178	35.7	+16	01.5	230	45.7	43	+28 20.3	60 S	16 13	17 00	17 50	6 23 70	9 28 60

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 2 ^h 55 ^m 0		Mag: -4.2 PMG: 12 ^h 53 ^m		Mag: +0.5 PMG: 6 ^h 49 ^m		Mag: -2.4 PMG: 19 ^h 26 ^m		Mag: +0.6 PMG: 12 ^h 51 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	316	07.6	165	51.8	+5	17.1	257	33.4	+19	10.3						
1	331	10.1	180	55.5		17.0	272	34.1		10.7						
2	346	12.5	195	59.1		16.9	287	34.9		11.0						
3	1	15.0	211	02.8		16.8	302	35.7		11.4						
4	16	17.5	226	06.4		16.7	317	36.5		11.8						
5	31	19.9	241	10.1	+5	16.6	332	37.3	+19	12.1						
6	46	22.4	256	13.7	+5	16.5	347	38.1	+19	12.5						
7	61	24.9	271	17.4		16.4	2	38.9		12.9						
8	76	27.3	286	21.1		16.4	17	39.7		13.2						
9	91	29.8	301	24.8		16.3	32	40.5		13.6						
10	106	32.2	316	28.4		16.2	47	41.3		14.0						
11	121	34.7	331	32.1	+5	16.1	62	42.0	+19	14.3						
12	136	37.2	346	35.8	+5	16.0	77	42.8	+19	14.7						
13	151	39.6	1	39.5		16.0	92	43.6		15.1						
14	166	42.1	16	43.2		15.9	107	44.4		15.4						
15	181	44.6	31	46.8		15.8	122	45.2		15.8						
16	196	47.0	46	50.5		15.7	137	46.0		16.1						
17	211	49.5	61	54.2	+5	15.7	152	46.8	+19	16.5						
18	226	52.0	76	57.9	+5	15.6	167	47.6	+19	16.9						
19	241	54.4	92	01.6		15.5	182	48.4		17.2						
20	256	56.9	107	05.3		15.5	197	49.2		17.6						
21	271	59.4	122	09.0		15.4	212	50.0		18.0						
22	287	01.8	137	12.8		15.3	227	50.7		18.3						
23	302	04.3	152	16.5		15.3	242	51.5		18.7						
24	317	06.7	167	20.2	+5	15.2	257	52.3	+19	19.0						
Dif	—		+37		-1		+8		+4		+25		0		+22	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 1				Edad: 4 ^d 0 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 R ^o : 41 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	56.3	+13	36.5	136	55.1	-6	36.9	60 N	2	13	3	27	4	18	10	13	85		
1	193	56.4		35.7	151	30.7	-6	50.8	58		35		40	26		08	81	11		
2	208	56.5		34.9	166	06.3	-7	04.7	56	2	53	3	51	34		10	03	78		
3	223	56.7		34.1	180	42.0		18.6	54	3	08	4	00	41		9	59	75		
4	238	56.8		33.3	195	17.6		32.5	52		20		09	46		55	72	26		
5	253	56.9	+13	32.5	209	53.1	-7	46.3	50	3	31	4	16	4	52	9	52	70		
6	268	57.1	+13	31.7	224	28.7	-8	00.0	45	3	53	4	32	5	03	9	45	64		
7	283	57.2		30.9	239	04.3	-8	13.8	40	4	09		44	13		38	61	47		
8	298	57.3		30.1	253	39.8		27.5	35		22	4	54	21		33	58	20		
9	313	57.4		29.3	268	15.4		41.1	30		33	5	03	28		29	54	21		
10	328	57.6		28.5	282	50.9	-8	54.7	20	4	51		18	40		21	49	10		
11	343	57.7	+13	27.8	297	26.3	-9	08.3	10 N	5	04	5	29	5	51	9	14	45		
12	358	57.8	+13	27.0	312	01.8	-9	21.9	0	5	15	5	40	6	01	9	08	40		
13	13	58.0		26.2	326	37.2		35.4	10 S		24		49	10		9	01	37		
14	28	58.1		25.4	341	12.7	-9	48.8	20		32	5	58	21		8	55	32		
15	43	58.2		24.6	355	48.1	-10	02.2	30		39	6	08	32		47	27	21		
16	58	58.4		23.8	10	23.4		15.6	35		43		13	39		43	24	22		
17	73	58.5	+13	23.0	24	58.8	-10	29.0	40	5	46	6	18	6	46	8	38	21		
18	88	58.6	+13	22.2	39	34.1	-10	42.2	45	5	50	6	24	6	55	8	32	18		
19	103	58.8		21.4	54	09.4	-10	55.5	50		54		32	7	05	25	13	25		
20	118	58.9		20.6	68	44.6	-11	08.7	52		55		35	10		22	11	30		
21	133	59.0		19.8	83	19.8		21.8	54		57		38	15		19	8	35		
22	148	59.2		19.0	97	55.0		35.0	56	5	58		42	21		15	6	40		
23	163	59.3		18.2	112	30.2	-11	48.0	58	6	00		46	28		11	3	47		
24	178	59.4	+13	17.4	127	05.3	-12	01.0	60 S	6	02	6	51	7	35	8	06	0		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 19 ^m 6			Mag: -4.1 PMG: 11 ^h 58 ^m			Mag: +0.4 PMG: 6 ^h 38 ^m			Mag: -2.3 PMG: 18 ^h 51 ^m			Mag: +0.6 PMG: 12 ^h 20 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	324	59.9		179	49.5	+5	260	27.4	+20	76	28.5	-21	174	28.3	+13
1	340	02.3		194	53.5		275	28.2		91	30.9		189	30.5	
2	355	04.8		209	57.5		290	29.0		106	33.2		204	32.6	
3	10	07.2		225	01.5		305	29.8		121	35.6		219	34.8	
4	25	09.7		240	05.5		320	30.7		136	38.0		234	36.9	
5	40	12.2		255	09.5	+5	335	31.5	+20	151	40.4	-21	249	39.1	+13
6	55	14.6		270	13.5	+5	350	32.3	+20	166	42.8	-21	264	41.3	+13
7	70	17.1		285	17.5		5	33.1		181	45.2		279	43.4	
8	85	19.6		300	21.5		20	34.0		196	47.5		294	45.6	
9	100	22.0		315	25.5		35	34.8		211	49.9		309	47.7	
10	115	24.5		330	29.5		50	35.6		226	52.3		324	49.9	
11	130	27.0		345	33.5	+5	65	36.4	+20	241	54.7	-21	339	52.0	+13
12	145	29.4		0	37.5	+5	80	37.3	+20	256	57.1	-21	354	54.2	+13
13	160	31.9		15	41.6		95	38.1		271	59.4		9	56.4	
14	175	34.4		30	45.6		110	38.9		287	01.8		24	58.5	
15	190	36.8		45	49.6		125	39.8		302	04.2		40	00.7	
16	205	39.3		60	53.6		140	40.6		317	06.6		55	02.8	
17	220	41.7		75	57.6	+5	155	41.4	+20	332	09.0	-21	70	05.0	+13
18	235	44.2		91	01.6	+5	170	42.2	+20	347	11.3	-21	85	07.1	+13
19	250	46.7		106	05.6		185	43.1		2	13.7		100	09.3	
20	265	49.1		121	09.6		200	43.9		17	16.1		115	11.5	
21	280	51.6		136	13.6		215	44.7		32	18.5		130	13.6	
22	295	54.1		151	17.6		230	45.5		47	20.9		145	15.8	
23	310	56.5		166	21.6		245	46.4		62	23.2		160	17.9	
24	325	59.0		181	25.6	+5	260	47.2	+20	77	25.6	-21	175	20.1	+13
Dif	—			+40			+8			+24			+22		
				+3			+3			0			-1		

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: 5 ^d 0 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	59.4	+13	17.4	127	05.3	-12 01.0	60 N	19 46	20 36	21 47	11 38 88	20 04 0	
1	193	59.6		16.6	141	40.4 ¹⁶¹	14.0 ¹³⁰	58	38	24	26	29 83	14 5	
2	208	59.7		15.8	156	15.5 ¹⁶¹	26.9 ¹²⁹	56	31	13	21 09	21 80	23 9	
3	223	59.9		14.9	170	50.5 ¹⁶⁰	39.8 ¹²⁹	54	24	20 04	20 56	14 76	31 12	
4	239	00.0		14.1	185	25.5 ¹⁶⁰	-12 52.6 ¹²⁸	52	19	19 56	44	07 74	38 15	
5	254	00.1	+13	13.3	200	00.4 ¹⁵⁹	-13 05.3 ¹²⁷	50	19 13	19 49	20 33	11 02 71	20 44 18	
6	269	00.3	+13	12.5	214	35.3 ¹⁵⁹	-13 18.0 ¹²⁷	45	19 02	19 34	20 13	10 49 66	20 58 22	
7	284	00.4		11.7	229	10.2 ¹⁵⁹	30.7 ¹²⁷	40	18 53	22	19 57	39 62	21 10 26	
8	299	00.5		10.9	243	45.0 ¹⁵⁸	43.3 ¹²⁶	35	45	12	44	31 58	20 29	
9	314	00.7		10.1	258	19.8 ¹⁵⁸	-13 55.9 ¹²⁶	30	39	19 04	33	23 56	28 32	
10	329	00.8		09.3	272	54.6 ¹⁵⁸	-14 08.3 ¹²⁴	20	27	18 50	16	10 10 51	43 36	
11	344	00.9	+13	08.5	287	29.3 ¹⁵⁷	-14 20.8 ¹²⁵	10 N	18 17	18 38	19 04	9 59 46	21 56 41	
12	359	01.1	+13	07.7	302	03.9 ¹⁵⁶	-14 33.2 ¹²⁴	0	18 07	18 29	18 53	9 48 43	22 09 44	
13	14	01.2		06.9	316	38.5 ¹⁵⁶	45.5 ¹²³	10 S	17 58	19	44	38 39	21 48	
14	29	01.4		06.1	331	13.1 ¹⁵⁶	-14 57.7 ¹²²	20	48	11	37	27 35	34 52	
15	44	01.5		05.3	345	47.6 ¹⁵⁵	-15 09.9 ¹²²	30	37	18 02	30	14 30	50 56	
16	59	01.6		04.5	0	22.1 ¹⁵⁵	22.1 ¹²²	35	31	17 57	26	9 07 28	22 59 59	
17	74	01.8	+13	03.7	14	56.5 ¹⁵⁴	-15 34.2 ¹²¹	40	17 24	17 51	18 23	8 59 24	23 09 62	
18	89	01.9	+13	02.9	29	30.8 ¹⁵³	-15 46.2 ¹²⁰	45	17 15	17 46	18 20	8 50 20	23 21 66	
19	104	02.1		02.1	44	05.2 ¹⁵⁴	-15 58.1 ¹¹⁹	50	05	39	17	38 16	36 71	
20	119	02.2		01.2	58	39.4 ¹⁵²	-16 10.0 ¹¹⁹	52	17 01	36	15	33 13	43 73	
21	134	02.3	+13	00.4	73	13.6 ¹⁵²	21.9 ¹¹⁹	54	16 56	32	14	27 11	50 77	
22	149	02.5	+12	59.6	87	47.8 ¹⁵²	33.6 ¹¹⁷	56	50	29	13	21 8	23 59 80	
23	164	02.6		58.8	102	21.9 ¹⁵¹	45.3 ¹¹⁷	58	44	25	11	14 4	*** **	
24	179	02.8	+12	58.0	116	55.9 ¹⁵⁰	-16 57.0 ¹¹⁷	60 S	16 36	17 21	18 10	8 06 0	*** **	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 15 ^m 7		Mag: -4.1 PMG: 11 ^h 51 ^m		Mag: +0.4 PMG: 6 ^h 36 ^m		Mag: -2.3 PMG: 18 ^h 47 ^m		Mag: +0.6 PMG: 12 ^h 17 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	325	59.0	181	25.6	260	47.2	77	25.6	175	20.1				
1	341	01.5	196	29.6	275	48.0	92	28.0	190	22.2				
2	356	03.9	211	33.6	290	48.9	107	30.4	205	24.4				
3	11	06.4	226	37.6	305	49.7	122	32.7	220	26.6				
4	26	08.9	241	41.6	320	50.5	137	35.1	235	28.7				
5	41	11.3	256	45.6	335	51.4	152	37.5	250	30.9				
6	56	13.8	271	49.6	350	52.2	167	39.9	265	33.0				
7	71	16.2	286	53.6	365	53.0	182	42.2	280	35.2				
8	86	18.7	301	57.6	380	53.8	197	44.6	295	37.3				
9	101	21.2	317	01.6	395	54.7	212	47.0	310	39.5				
10	116	23.6	332	05.6	410	55.5	227	49.4	325	41.6				
11	131	26.1	347	09.6	425	56.3	242	51.7	340	43.8				
12	146	28.6	2	13.6	440	57.2	257	54.1	355	46.0				
13	161	31.0	17	17.6	455	58.0	272	56.5	10	48.1				
14	176	33.5	32	21.6	470	58.8	287	58.8	25	50.3				
15	191	36.0	47	25.6	485	59.7	303	01.2	40	52.4				
16	206	38.4	62	29.5	500	00.5	318	03.6	55	54.6				
17	221	40.9	77	33.5	515	01.3	333	06.0	70	56.7				
18	236	43.3	92	37.5	530	02.2	348	08.3	85	58.9				
19	251	45.8	107	41.5	545	03.0	3	10.7	101	01.1				
20	266	48.3	122	45.5	560	03.8	18	13.1	116	03.2				
21	281	50.7	137	49.5	575	04.7	33	15.4	131	05.4				
22	296	53.2	152	53.5	590	05.5	48	17.8	146	07.5				
23	311	55.7	167	57.5	605	06.3	63	20.2	161	09.7				
24	326	58.1	183	01.5	620	07.2	78	22.5	176	11.8				
Dif	—		+40	+3	+8	+3	+24	0	+22	-1				

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 7			Edad: 6 ^d 0 SD: 14 ^h 8 PMG: 16 ^h 42 ^m	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2 R°: 46 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	02.8	+12 58.0	116	55.9	-16 57.0	60 N	2 22	3 33	4 23	13 06	93	20 04	3	
1	194	02.9		131	29.9 ¹⁵⁰	-17 08.6 ¹¹⁶	58	42	45	31	12 52	86	19	9	
2	209	03.0		146	03.9 ¹⁵⁰	20.1 ¹¹⁵	56	2 59	3 55	38	41 81		32	13	
3	224	03.2		160	37.8 ¹⁴⁹	31.5 ¹¹⁴	54	3 13	4 04	44	30 77		43	17	
4	239	03.3		175	11.6 ¹⁴⁸	42.9 ¹¹⁴	52	25	12	50	21 74		20 53	20	
5	254	03.5	+12 53.9	189	45.3 ¹⁴⁷	-17 54.2 ¹¹³	50	3 35	4 19	4 55	12 13	71	21 02	22	
6	269	03.6	+12 53.1	204	19.0 ¹⁴⁷	-18 05.4 ¹¹²	45	3 56	4 34	5 06	11 55	67	21 20	28	
7	284	03.7		218	52.7 ¹⁴⁷	16.5 ¹¹¹	40	4 11	46	15	41 63		36	30	
8	299	03.9		233	26.3 ¹⁴⁶	27.6 ¹¹¹	35	24	4 56	23	29 60		21 49	33	
9	314	04.0		247	59.8 ¹⁴⁵	38.6 ¹¹⁰	30	35	5 04	29	19 56		22 00	36	
10	329	04.2		262	33.2 ¹⁴⁴	-18 49.6 ¹¹⁰	20	4 51	18	41	11 01	52	19	41	
11	344	04.3	+12 49.1	277	06.6 ¹⁴⁴	-19 00.4 ¹⁰⁸	10 N	5 04	5 29	5 51	10 45	49	22 37	43	
12	359	04.5	+12 48.2	291	40.0 ¹⁴⁴	-19 11.2 ¹⁰⁸	0	5 15	5 39	6 00	10 31	45	22 53	46	
13	14	04.6		306	13.2 ¹⁴²	21.9 ¹⁰⁷	10 S	23	48	10	17 42		23 09	50	
14	29	04.7		320	46.4 ¹⁴²	32.5 ¹⁰⁶	20	31	5 57	19	10 02	38	26	53	
15	44	04.9		335	19.6 ¹⁴²	43.1 ¹⁰⁶	30	38	6 06	30	9 44	34	46	57	
16	59	05.0		349	52.6 ¹⁴⁰	-19 53.6 ¹⁰⁵	35	41	10	36	35 31		23 58	59	
17	74	05.2	+12 44.2	4	25.6 ¹⁴⁰	-20 04.0 ¹⁰⁴	40	5 44	6 16	6 43	9 23	28	*** ** *	***	
18	89	05.3	+12 43.4	18	58.6 ¹⁴⁰	-20 14.3 ¹⁰³	45	5 47	6 21	6 52	9 10	24	*** ** *	***	
19	104	05.5		33	31.4 ¹³⁸	24.5 ¹⁰²	50	50	28	7 01	8 54	19	*** ** *	***	
20	119	05.6		48	04.2 ¹³⁸	34.7 ¹⁰²	52	51	31	06	46 17		*** ** *	***	
21	134	05.8		62	36.9 ¹³⁷	44.7 ¹⁰⁰	54	53	34	11	38 14		*** ** *	***	
22	149	05.9		77	09.6 ¹³⁷	-20 54.7 ¹⁰⁰	56	54	38	16	29 11		*** ** *	***	
23	164	06.0		91	42.2 ¹³⁶	-21 04.6 ⁹⁹	58	55	41	23	18 7		0 09	84	
24	179	06.2	+12 38.4	106	14.7 ¹³⁵	-21 14.4 ⁹⁸	60 S	5 57	6 46	7 30	8 06	2	0 20	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 11 ^m 8		Mag: -4.1 PMG: 11 ^h 45 ^m		Mag: +0.4 PMG: 6 ^h 35 ^m		Mag: -2.3 PMG: 18 ^h 44 ^m		Mag: +0.6 PMG: 12 ^h 13 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	326	58.1	183	01.5	+5 48.5	261	07.2	+20 37.1	78	22.5	-21 30.4	176	11.8	+13 18.9
1	342	00.6	198	05.5	48.8	276	08.0	37.4	93	24.9	30.4	191	14.0	18.8
2	357	03.1	213	09.5	49.1	291	08.8	37.7	108	27.3	30.4	206	16.2	18.7
3	12	05.5	228	13.4	49.4	306	09.7	38.0	123	29.6	30.4	221	18.3	18.6
4	27	08.0	243	17.4	49.7	321	10.5	38.3	138	32.0	30.4	236	20.5	18.5
5	42	10.5	258	21.4	+5 50.0	336	11.3	+20 38.6	153	34.4	-21 30.5	251	22.6	+13 18.4
6	57	12.9	273	25.4	+5 50.4	351	12.2	+20 38.9	168	36.7	-21 30.5	266	24.8	+13 18.3
7	72	15.4	288	29.4	50.7	6	13.0	39.2	183	39.1	30.5	281	26.9	18.2
8	87	17.8	303	33.4	51.0	21	13.8	39.4	198	41.5	30.5	296	29.1	18.1
9	102	20.3	318	37.4	51.3	36	14.7	39.7	213	43.8	30.5	311	31.3	18.0
10	117	22.8	333	41.3	51.6	51	15.5	40.0	228	46.2	30.6	326	33.4	17.8
11	132	25.2	348	45.3	+5 52.0	66	16.3	+20 40.3	243	48.6	-21 30.6	341	35.6	+13 17.7
12	147	27.7	3	49.3	+5 52.3	81	17.2	+20 40.6	258	50.9	-21 30.6	356	37.7	+13 17.6
13	162	30.2	18	53.3	52.6	96	18.0	40.9	273	53.3	30.6	11	39.9	17.5
14	177	32.6	33	57.2	53.0	111	18.8	41.2	288	55.7	30.7	26	42.0	17.4
15	192	35.1	49	01.2	53.3	126	19.7	41.5	303	58.0	30.7	41	44.2	17.3
16	207	37.6	64	05.2	53.6	141	20.5	41.7	319	00.4	30.7	56	46.3	17.2
17	222	40.0	79	09.2	+5 53.9	156	21.4	+20 42.0	334	02.8	-21 30.7	71	48.5	+13 17.1
18	237	42.5	94	13.2	+5 54.3	171	22.2	+20 42.3	349	05.1	-21 30.7	86	50.7	+13 17.0
19	252	44.9	109	17.1	54.6	186	23.0	42.6	4	07.5	30.8	101	52.8	16.9
20	267	47.4	124	21.1	54.9	201	23.9	42.9	19	09.8	30.8	116	55.0	16.8
21	282	49.9	139	25.1	55.3	216	24.7	43.2	34	12.2	30.8	131	57.1	16.7
22	297	52.3	154	29.0	55.6	231	25.5	43.4	49	14.6	30.8	146	59.3	16.6
23	312	54.8	169	33.0	56.0	246	26.4	43.7	64	16.9	30.9	162	01.4	16.4
24	327	57.3	184	37.0	+5 56.3	261	27.2	+20 44.0	79	19.3	-21 30.9	177	03.6	+13 16.3
Dif	—		+40		+3	+8		+3	+24		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8			Edad: 7 ^d 0	PHE	$\left\{ \begin{array}{l} 4^h: 54/3 \\ 12^h: 54/3 \\ 20^h: 54/4 \\ R^{\circ}: 49^m \end{array} \right.$																
	PMG: 12 ^h 03 ^m 5																					
	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	06.2	+12 38.4	106	14.7	-21 14.4	98	60 N	19 40	20 29	21 38	14 39 94	20 07 8									
1	194	06.3		120	47.1 ¹³⁴	24.2	98	58	33	18	18	18 86	28 16									
2	209	06.5	36.8	135	19.5 ¹³⁴	33.8	96	56	26	20 08	21 03	14 02 80	20 45 22									
3	224	06.6	36.0	149	51.8 ¹³³	43.3	95	54	20	19 59	20 50	13 47 77	21 00 25									
4	239	06.8	35.2	164	24.0 ¹³²	-21 52.8	95	52	14	52	38	35 73	13 28									
5	254	06.9	+12 34.3	178	56.1 ¹³¹	-22 02.2	94	50	19 10	19 45	20 29	13 24 71	21 24 31									
6	269	07.1	+12 33.5	193	28.2 ¹³¹	-22 11.5	93	45	18 59	19 30	20 09	13 02 66	21 48 34									
7	284	07.2	32.7	208	00.2 ¹³⁰	20.7	92	40	50	19	19 53	12 44 62	22 06 38									
8	299	07.4	31.9	222	32.1 ¹²⁹	29.8	91	35	43	09	41	29 60	22 41									
9	314	07.5	31.1	237	04.0 ¹²⁹	38.8	90	30	37	19 01	31	12 15 58	22 36 42									
10	329	07.7	30.2	251	35.7 ¹²⁷	47.7	89	20	25	18 48	15	11 53 55	23 00 45									
11	344	07.8	+12 29.4	266	07.4 ¹²⁷	-22 56.5	88	10 N	18 16	18 37	19 02	11 34 51	23 20 48									
12	359	08.0	+12 28.6	280	39.1 ¹²⁷	-23 05.2	87	0	18 07	18 28	18 53	11 16 49	23 39 51									
13	14	08.1	27.8	295	10.6 ¹²⁵	13.8	86	10 S	17 58	19	44	10 59 46	23 59 52									
14	29	08.3	26.9	309	42.1 ¹²⁵	22.3	85	20	49	11	37	40 43	** ** *									
15	44	08.4	26.1	324	13.5 ¹²⁴	30.8	85	30	38	18 03	31	18 40	** ** *									
16	59	08.6	25.3	338	44.8 ¹²³	39.1	83	35	32	17 58	28	10 06 37	** ** *									
17	74	08.7	+12 24.5	353	16.0 ¹²²	-23 47.3	82	40	17 25	17 53	18 25	9 51 35	0 11 63									
18	89	08.9	+12 23.6	7	47.1 ¹²¹	-23 55.4	81	45	17 18	17 48	18 22	9 34 31	0 27 66									
19	104	09.0	22.8	22	18.2 ¹²¹	-24 03.4	80	50	08	41	19	13 27	47 71									
20	119	09.2	22.0	36	49.2 ¹²⁰	11.4	80	52	17 04	39	18	9 03 24	0 56 74									
21	134	09.3	21.2	51	20.1 ¹¹⁹	19.2	78	54	16 59	36	17	8 52 21	1 07 77									
22	149	09.5	20.3	65	51.0 ¹¹⁹	26.9	77	56	54	32	16	40 17	19 81									
23	164	09.6	19.5	80	21.7 ¹¹⁷	34.5	76	58	48	29	15	25 12	33 86									
24	179	09.8	+12 18.7	94	52.4 ¹¹⁷	-24 42.0	75	60 S	16 41	17 25	18 14	8 08 5	1 50 93									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 2 ^h 07 ^m 8			Mag: -4.1 PMG: 11 ^h 38 ^m			Mag: +0.4 PMG: 6 ^h 34 ^m			Mag: -2.3 PMG: 18 ^h 40 ^m			Mag: +0.6 PMG: 12 ^h 10 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	327	57.3	184 37.0	+5 56.3	261 27.2	+20 44.0	79 19.3	-21 30.9	177 03.6	+13 16.3												
1	342	59.7	199 40.9	56.6	276 28.1	44.3	94 21.6	30.9	192 05.8	16.2												
2	358	02.2	214 44.9	57.0	291 28.9	44.6	109 24.0	30.9	207 07.9	16.1												
3	13	04.7	229 48.9	57.3	306 29.7	44.9	124 26.4	30.9	222 10.1	16.0												
4	28	07.1	244 52.8	57.7	321 30.6	45.1	139 28.7	31.0	237 12.2	15.9												
5	43	09.6	259 56.8	+5 58.0	336 31.4	+20 45.4	154 31.1	-21 31.0	252 14.4	+13 15.8												
6	58	12.1	275 00.8	+5 58.4	351 32.3	+20 45.7	169 33.4	-21 31.0	267 16.5	+13 15.7												
7	73	14.5	290 04.7	58.7	6 33.1	46.0	184 35.8	31.0	282 18.7	15.6												
8	88	17.0	305 08.7	59.1	21 33.9	46.3	199 38.2	31.1	297 20.9	15.5												
9	103	19.4	320 12.6	59.4	36 34.8	46.5	214 40.5	31.1	312 23.0	15.4												
10	118	21.9	335 16.6	+5 59.8	51 35.6	46.8	229 42.9	31.1	327 25.2	15.3												
11	133	24.4	350 20.5	+6 00.1	66 36.5	+20 47.1	244 45.2	-21 31.1	342 27.3	+13 15.1												
12	148	26.8	5 24.5	+6 00.5	81 37.3	+20 47.4	259 47.6	-21 31.2	357 29.5	+13 15.0												
13	163	29.3	20 28.5	00.8	96 38.1	47.7	274 49.9	31.2	12 31.6	14.9												
14	178	31.8	35 32.4	01.2	111 39.0	47.9	289 52.3	31.2	27 33.8	14.8												
15	193	34.2	50 36.4	01.5	126 39.8	48.2	304 54.7	31.2	42 36.0	14.7												
16	208	36.7	65 40.3	01.9	141 40.7	48.5	319 57.0	31.2	57 38.1	14.6												
17	223	39.2	80 44.2	+6 02.2	156 41.5	+20 48.8	334 59.4	-21 31.3	72 40.3	+13 14.5												
18	238	41.6	95 48.2	+6 02.6	171 42.4	+20 49.1	350 01.7	-21 31.3	87 42.4	+13 14.4												
19	253	44.1	110 52.1	03.0	186 43.2	49.3	5 04.1	31.3	102 44.6	14.3												
20	268	46.6	125 56.1	03.3	201 44.0	49.6	20 06.4	31.3	117 46.7	14.2												
21	283	49.0	141 00.0	03.7	216 44.9	49.9	35 08.8	31.4	132 48.9	14.1												
22	298	51.5	156 04.0	04.0	231 45.7	50.2	50 11.1	31.4	147 51.0	14.0												
23	313	53.9	171 07.9	04.4	246 46.6	50.4	65 13.5	31.4	162 53.2	13.9												
24	328	56.4	186 11.8	+6 04.8	261 47.4	+20 50.7	80 15.8	-21 31.4	177 55.4	+13 13.7												
Dif	—	+40		+4	+8		+3	+24		0	+22		-1									

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 8 ^d 0	PHE	$\left\{ \begin{array}{l} 4^h: 54^m/5 \\ 12^h: 54^m/7 \\ 20^h: 54^m/8 \end{array} \right.$		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 03 ^m 2															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	09.8	+12 18.7	94	52.4	-24 42.0	74	60 N	2 30	3 39	4 28	16 13 87	20 15 22			
1	194	09.9	17.9	109	23.0 ¹¹⁶	49.4	74	58	2 49	3 50	35	15 44 77	20 44 32			
2	209	10.1	17.0	123	53.5 ¹¹⁵	-24 56.6	72	56	3 05	4 00	42	22 72	21 07 36			
3	224	10.2	16.2	138	24.0 ¹¹⁵	-25 03.8	72	54	18	08	48	15 04 69	25 39			
4	239	10.4	15.4	152	54.4 ¹¹⁴	10.8	70	52	29	16	53	14 48 68	41 41			
5	254	10.5	+12 14.5	167	24.6 ¹¹²	-25 17.8	70	50	3 39	4 23	4 58	14 35 66	21 55 42			
6	269	10.7	+12 13.7	181	54.9 ¹¹³	-25 24.6	68	45	3 58	4 37	5 08	14 08 62	22 22 45			
7	284	10.8	12.9	196	25.0 ¹¹¹	31.3	67	40	4 14	48	17	13 46 61	22 44 47			
8	299	11.0	12.1	210	55.0 ¹¹⁰	37.9	66	35	26	4 58	24	29 59	23 03 48			
9	314	11.1	11.2	225	25.0 ¹¹⁰	44.4	65	30	36	5 06	31	13 13 58	18 49			
10	329	11.3	10.4	239	54.9 ¹⁰⁹	50.8	64	20	4 52	19	42	12 48 55	23 45 51			
11	344	11.4	+12 09.6	254	24.7 ¹⁰⁸	-25 57.0	62	10 N	5 04	5 30	5 51	12 25 54	** ** *	**		
12	359	11.6	+12 08.7	268	54.5 ¹⁰⁸	-26 03.2	62	0	5 14	5 39	6 00	12 05 52	** ** *	**		
13	14	11.7	07.9	283	24.1 ¹⁰⁶	09.2	60	10 S	22	47	09	11 45 50	** ** *	**		
14	29	11.9	07.1	297	53.7 ¹⁰⁶	15.1	59	20	29	5 55	18	11 23 48	0 19 55			
15	44	12.0	06.2	312	23.2 ¹⁰⁵	20.8	57	30	36	6 04	28	10 58 45	43 58			
16	59	12.2	05.4	326	52.7 ¹⁰⁵	26.5	57	35	39	08	34	43 44	0 57 60			
17	74	12.4	+12 04.6	341	22.0 ¹⁰³	-26 32.0	55	40	5 41	6 13	6 41	10 26 42	1 14 62			
18	89	12.5	+12 03.7	355	51.3 ¹⁰³	-26 37.4	53	45	5 44	6 18	6 48	10 05 40	1 33 65			
19	104	12.7	02.9	10	20.5 ¹⁰²	42.7	54	50	47	24	6 58	9 40 36	1 58 69			
20	119	12.8	02.1	24	49.7 ¹⁰²	47.8	51	52	48	27	7 02	27 35	2 10 71			
21	134	13.0	01.2	39	18.7 ¹⁰⁰	52.9	51	54	49	30	07	9 13 32	24 73			
22	149	13.1	+12 00.4	53	47.7 ¹⁰⁰	-26 57.7	48	56	50	33	12	8 57 28	40 77			
23	164	13.3	+11 59.6	68	16.6 ⁹⁹	-27 02.5	48	58	51	37	18	37 24	2 59 82			
24	179	13.4	+11 58.7	82	45.5 ⁹⁹	-27 07.2	47	60 S	5 52	6 40	7 24	8 13 14	3 23 91			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.1		Mag: +0.4		Mag: -2.3		Mag: +0.6	
	2 ^h 03 ^m 9		PMG: 11 ^h 32 ^m		PMG: 6 ^h 32 ^m		PMG: 18 ^h 36 ^m		PMG: 12 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	328	56.4	186	11.8	261	47.4	80	15.8	177	55.4
1	343	58.9	201	15.8	276	48.3	95	18.2	192	57.5
2	359	01.3	216	19.7	291	49.1	110	20.5	207	59.7
3	14	03.8	231	23.6	306	49.9	125	22.9	223	01.8
4	29	06.3	246	27.6	321	50.8	140	25.2	238	04.0
5	44	08.7	261	31.5	336	51.6	155	27.6	253	06.1
6	59	11.2	276	35.4	351	52.5	170	30.0	268	08.3
7	74	13.7	291	39.4	6	53.3	185	32.3	283	10.5
8	89	16.1	306	43.3	21	54.2	200	34.7	298	12.6
9	104	18.6	321	47.2	36	55.0	215	37.0	313	14.8
10	119	21.1	336	51.1	51	55.9	230	39.4	328	16.9
11	134	23.5	351	55.0	66	56.7	245	41.7	343	19.1
12	149	26.0	6	59.0	81	57.6	260	44.0	358	21.2
13	164	28.4	22	02.9	96	58.4	275	46.4	13	23.4
14	179	30.9	37	06.8	111	59.2	290	48.7	28	25.6
15	194	33.4	52	10.7	127	00.1	305	51.1	43	27.7
16	209	35.8	67	14.6	142	00.9	320	53.4	58	29.9
17	224	38.3	82	18.5	157	01.8	335	55.8	73	32.0
18	239	40.8	97	22.4	172	02.6	350	58.1	88	34.2
19	254	43.2	112	26.3	187	03.5	6	00.5	103	36.3
20	269	45.7	127	30.3	202	04.3	21	02.8	118	38.5
21	284	48.2	142	34.2	217	05.2	36	05.2	133	40.7
22	299	50.6	157	38.1	232	06.0	51	07.5	148	42.8
23	314	53.1	172	42.0	247	06.9	66	09.9	163	45.0
24	329	55.5	187	45.9	262	07.7	81	12.2	178	47.1
Dif	—		+39	+4	+8	+3	+23	0	+22	-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 9 ^d 0	PHE { 4 ^h : 55 ^m /0 12 ^h : 55 ^m /1 20 ^h : 55 ^m /3	Latitud			Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 0									PMG: 19 ^h 10 ^m		R°: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	13.4	+11 58.7	82	45.5	-27 07.2		60 N	19 34	20 22	21 29	17 40 58		20 37 56	
1	194	13.6		97	14.3	98 11.7	45	58	27	12	21 11	17 01 58		21 16 56	
2	209	13.8		111	43.0	97 16.0	43	56	21	20 02	20 56	16 34 58		21 43 56	
3	224	13.9		126	11.6	96 20.3	43	54	15	19 54	44	16 13 57		22 04 57	
4	239	14.1		140	40.1	95 24.4	41	52	10	47	33	15 56 56		22 56	
5	254	14.2	+11 54.6	155	08.6	95 -27 28.4	40	50	19 06	19 40	20 24	15 41 56		22 37 56	
6	269	14.4	+11 53.7	169	37.1	95 -27 32.2	38	45	18 56	19 27	20 05	15 10 57		23 07 57	
7	284	14.5		184	05.4	93 35.9	37	40	48	16	19 50	14 47 56		31 56	
8	299	14.7		198	33.7	93 39.5	36	35	41	19 07	38	28 55		23 51 56	
9	314	14.9		213	01.9	92 42.9	34	30	34	18 59	28	14 11 55		** ** *	**
10	329	15.0		227	30.1	92 46.2	33	20	24	47	13	13 43 55		** ** *	**
11	344	15.2	+11 49.5	241	58.2	91 -27 49.4	32	10 N	18 15	18 36	19 01	13 19 55		0 08 52	
12	359	15.3	+11 48.7	256	26.2	90 -27 52.4	30	0	18 06	18 27	18 52	12 57 54		0 30 53	
13	14	15.5		270	54.2	90 55.3	29	10 S	17 58	19	44	35 53		0 51 54	
14	29	15.6		285	22.1	89 -27 58.0	27	20	49	12	38	12 11 53		1 14 56	
15	44	15.8		299	50.0	89 -28 00.6	26	30	39	18 04	32	11 43 53		41 57	
16	59	16.0		314	17.8	88 03.1	25	35	34	17 59	29	27 52		1 57 58	
17	74	16.1	+11 44.5	328	45.5	87 -28 05.4	23	40	17 27	17 55	18 27	11 08 51		2 16 58	
18	89	16.3	+11 43.7	343	13.2	87 -28 07.6	22	45	17 20	17 50	18 24	10 45 51		2 38 60	
19	104	16.4		357	40.8	86 09.6	20	50	11	44	22	16 49		3 07 61	
20	119	16.6		12	08.4	86 11.5	19	52	07	42	21	10 02 48		21 62	
21	134	16.8		26	35.9	85 13.2	17	54	17 02	39	20	9 45 47		37 64	
22	149	16.9		41	03.3	84 14.8	16	56	16 58	36	19	25 46		3 57 65	
23	164	17.1		55	30.7	84 16.2	14	58	52	33	19	9 01 43		4 21 68	
24	179	17.2	+11 38.6	69	58.1	84 -28 17.5	13	60 S	16 46	17 29	18 18	8 27 39		4 54 74	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 2 ^h 00 ^m 0		Mag: -4.1 PMG: 11 ^h 26 ^m		Mag: +0.4 PMG: 6 ^h 31 ^m		Mag: -2.3 PMG: 18 ^h 32 ^m		Mag: +0.6 PMG: 12 ^h 03 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	'	°	'	°	'	°	'						
0	329	55.5	187 45.9	+6 13.8	262 07.7	+20 57.3	81 12.2	-21 32.0	178 47.1						
1	344	58.0	202 49.8	14.2	277 08.6	57.5	96 14.6	32.0	193 49.3						
2	0	00.5	217 53.6	14.6	292 09.4	57.8	111 16.9	32.0	208 51.4						
3	15	02.9	232 57.5	15.0	307 10.3	58.1	126 19.2	32.1	223 53.6						
4	30	05.4	248 01.4	15.3	322 11.1	58.3	141 21.6	32.1	238 55.8						
5	45	07.9	263 05.3	+6 15.7	337 12.0	+20 58.6	156 23.9	-21 32.1	253 57.9						
6	60	10.3	278 09.2	+6 16.1	352 12.8	+20 58.9	171 26.3	-21 32.1	269 00.1						
7	75	12.8	293 13.1	16.5	7 13.7	59.1	186 28.6	32.2	284 02.2						
8	90	15.3	308 17.0	16.9	22 14.5	59.4	201 31.0	32.2	299 04.4						
9	105	17.7	323 20.9	17.3	37 15.4	59.7	216 33.3	32.2	314 06.5						
10	120	20.2	338 24.7	17.7	52 16.2	+20 59.9	231 35.6	32.2	329 08.7						
11	135	22.7	353 28.6	+6 18.1	67 17.1	+21 00.2	246 38.0	-21 32.3	344 10.9						
12	150	25.1	8 32.5	+6 18.5	82 17.9	+21 00.5	261 40.3	-21 32.3	359 13.0						
13	165	27.6	23 36.4	18.9	97 18.8	00.7	276 42.7	32.3	14 15.2						
14	180	30.0	38 40.2	19.3	112 19.6	01.0	291 45.0	32.3	29 17.3						
15	195	32.5	53 44.1	19.7	127 20.5	01.3	306 47.3	32.4	44 19.5						
16	210	35.0	68 48.0	20.1	142 21.3	01.5	321 49.7	32.4	59 21.6						
17	225	37.4	83 51.8	+6 20.5	157 22.2	+21 01.8	336 52.0	-21 32.4	74 23.8						
18	240	39.9	98 55.7	+6 20.9	172 23.0	+21 02.1	351 54.4	-21 32.4	89 26.0						
19	255	42.4	113 59.5	21.3	187 23.9	02.3	6 56.7	32.5	104 28.1						
20	270	44.8	129 03.4	21.7	202 24.8	02.6	21 59.0	32.5	119 30.3						
21	285	47.3	144 07.3	22.1	217 25.6	02.9	37 01.4	32.5	134 32.4						
22	300	49.8	159 11.1	22.5	232 26.5	03.1	52 03.7	32.5	149 34.6						
23	315	52.2	174 15.0	22.9	247 27.3	03.4	67 06.0	32.6	164 36.7						
24	330	54.7	189 18.8	+6 23.3	262 28.2	+21 03.7	82 08.4	-21 32.6	179 38.9						
Dif	—	+39	+4	+9	+3	+23	0	+22	-1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 7			Edad: 10 ^d 0 PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 R ^o : 56 ^m				Principio del crepúsculo			Salida de Luna			Puesta de Luna				
	hG ☉ Dec			hG ☾ Dif Dec Dif				Náutico	Civil		Hora R ^o	Hora R ^o	Hora R ^o	Hora R ^o	Hora R ^o	Hora R ^o		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m		
0	179	17.2	+11 38.6	69	58.1	-28 17.5	60 N	2 38	3 44	4 32	18 38	24	21 33	93				
1	194	17.4	37.8	84	25.4	18.7	58	2 56	3 55	39	17 59	33	22 12	83				
2	209	17.6	36.9	98	52.7	19.6	56	3 10	4 04	46	32 38		22 39	78				
3	224	17.7	36.1	113	19.9	20.5	54	23	12	51	17 10	41	23 01	74				
4	239	17.9	35.2	127	47.1	21.2	52	33	20	4 56	16 52	44	18	72				
5	254	18.0	+11 34.4	142	14.2	-28 21.7	50	3 43	4 26	5 01	16 37	45	23 33	71				
6	269	18.2	+11 33.5	156	41.3	-28 22.1	45	4 01	4 39	5 11	16 07	47	** ** *					
7	284	18.4	32.7	171	08.3	22.3	40	16	50	19	15 43	49	** ** *					
8	299	18.5	31.8	185	35.3	22.4	35	28	4 59	26	23 51		** ** *					
9	314	18.7	31.0	200	02.3	22.4	30	38	5 07	32	15 06	52	0 07	56				
10	329	18.9	30.2	214	29.2	22.1	20	4 53	19	42	14 38	53	0 36	55				
11	344	19.0	+11 29.3	228	56.1	-28 21.8	10 N	5 05	5 30	5 51	14 14	54	1 00	55				
12	359	19.2	+11 28.5	243	23.0	-28 21.2	0	5 14	5 38	5 59	13 51	56	1 23	55				
13	14	19.3	27.6	257	49.8	20.5	10 S	21	46	6 08	28 57		1 45	55				
14	29	19.5	26.8	272	16.6	19.7	20	28	5 54	16	13 04	58	2 10	54				
15	44	19.7	25.9	286	43.4	18.7	30	34	6 02	26	12 36	59	38	53				
16	59	19.8	25.1	301	10.1	17.6	35	36	06	32	12 19	60	2 55	53				
17	74	20.0	+11 24.2	315	36.9	-28 16.2	40	5 39	6 10	6 38	11 59	61	3 14	53				
18	89	20.2	+11 23.4	330	03.6	-28 14.8	45	5 41	6 15	6 45	11 36	62	3 38	52				
19	104	20.3	22.5	344	30.2	13.2	50	43	21	54	11 05	64	4 08	51				
20	119	20.5	21.7	358	56.9	11.4	52	44	23	6 58	10 50	65	23	50				
21	134	20.7	20.8	13	23.5	09.4	54	45	26	7 02	32 67		4 41	49				
22	149	20.8	20.0	27	50.1	07.3	56	45	29	07	10 11	68	5 02	48				
23	164	21.0	19.1	42	16.7	05.1	58	46	32	12	9 44	71	5 29	45				
24	179	21.2	+11 18.3	56	43.3	-28 02.7	60 S	5 47	6 35	7 18	9 06	76	6 08	39				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 1 ^h 56 ^m 0			Mag: -4.1 PMG: 11 ^h 20 ^m			Mag: +0.4 PMG: 6 ^h 30 ^m			Mag: -2.3 PMG: 18 ^h 29 ^m			Mag: +0.6 PMG: 12 ^h 00 ^m					
	hG ♈ Dec			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	330	54.7	189 18.8	+6 23.3	262 28.2	+21 03.7	82 08.4	-21 32.6	179 38.9	+13 08.6								
1	345	57.2	204 22.7	23.7	277 29.0	03.9	97 10.7	32.6	194 41.1	08.4								
2	0	59.6	219 26.5	24.1	292 29.9	04.2	112 13.1	32.6	209 43.2	08.3								
3	16	02.1	234 30.4	24.5	307 30.7	04.4	127 15.4	32.7	224 45.4	08.2								
4	31	04.5	249 34.2	24.9	322 31.6	04.7	142 17.7	32.7	239 47.5	08.1								
5	46	07.0	264 38.0	+6 25.3	337 32.4	+21 05.0	157 20.1	-21 32.7	254 49.7	+13 08.0								
6	61	09.5	279 41.9	+6 25.8	352 33.3	+21 05.2	172 22.4	-21 32.8	269 51.8	+13 07.9								
7	76	11.9	294 45.7	26.2	7 34.2	05.5	187 24.7	32.8	284 54.0	07.8								
8	91	14.4	309 49.5	26.6	22 35.0	05.7	202 27.1	32.8	299 56.2	07.7								
9	106	16.9	324 53.4	27.0	37 35.9	06.0	217 29.4	32.8	314 58.3	07.6								
10	121	19.3	339 57.2	27.4	52 36.7	06.3	232 31.7	32.9	330 00.5	07.5								
11	136	21.8	355 01.0	+6 27.8	67 37.6	+21 06.5	247 34.1	-21 32.9	345 02.6	+13 07.4								
12	151	24.3	10 04.8	+6 28.2	82 38.4	+21 06.8	262 36.4	-21 32.9	0 04.8	+13 07.3								
13	166	26.7	25 08.7	28.6	97 39.3	07.0	277 38.7	32.9	15 06.9	07.1								
14	181	29.2	40 12.5	29.1	112 40.2	07.3	292 41.1	33.0	30 09.1	07.0								
15	196	31.7	55 16.3	29.5	127 41.0	07.6	307 43.4	33.0	45 11.2	06.9								
16	211	34.1	70 20.1	29.9	142 41.9	07.8	322 45.7	33.0	60 13.4	06.8								
17	226	36.6	85 23.9	+6 30.3	157 42.7	+21 08.1	337 48.1	-21 33.0	75 15.6	+13 06.7								
18	241	39.0	100 27.7	+6 30.7	172 43.6	+21 08.3	352 50.4	-21 33.1	90 17.7	+13 06.6								
19	256	41.5	115 31.5	31.1	187 44.4	08.6	7 52.7	33.1	105 19.9	06.5								
20	271	44.0	130 35.3	31.6	202 45.3	08.8	22 55.1	33.1	120 22.0	06.4								
21	286	46.4	145 39.1	32.0	217 46.2	09.1	37 57.4	33.1	135 24.2	06.3								
22	301	48.9	160 42.9	32.4	232 47.0	09.4	52 59.7	33.2	150 26.3	06.2								
23	316	51.4	175 46.7	32.8	247 47.9	09.6	68 02.0	33.2	165 28.5	06.1								
24	331	53.8	190 50.5	+6 33.2	262 48.7	+21 09.9	83 04.4	-21 33.2	180 30.7	+13 06.0								
Dif	—			+38	+4	+9	+3	+23	0	+22	-1							

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 02 ^m 5				Edad: 11 ^d 0 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'8 R°: 55 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	21.2	+11	18.3	56	43.3	75	-28	02.7	26	19 29	20 16	21 20	19 02	8	23 06 106		
1	194	21.3		17.4	71	09.8	75	-28	00.1	26	22	20 06	21 04	18 32	18	35 96		
2	209	21.5		16.6	85	36.4	76	-27	57.4	27	16	19 57	20 50	18 10	23	23 57 90		
3	224	21.7		15.7	100	02.9	75		54.5	29	11	49	38	17 51	28	** ** *		
4	239	21.8		14.9	114	29.4	75		51.4	31	06	42	28	36	31	** ** *		
5	254	22.0	+11	14.0	128	55.9	75	-27	48.2	32	19 02	19 36	20 19	17 22	33	** ** *		
6	269	22.2	+11	13.2	143	22.4	75	-27	44.9	33	18 52	19 23	20 01	16 54	38	0 04 67		
7	284	22.3		12.3	157	48.9	75		41.3	36	45	13	19 47	32	42	27 65		
8	299	22.5		11.5	172	15.4	75		37.7	36	38	19 04	35	16 14	44	0 47 63		
9	314	22.7		10.6	186	41.9	75		33.8	39	32	18 57	26	15 58	46	1 03 62		
10	329	22.8		09.8	201	08.4	75		29.8	40	22	45	11	31	50	31 60		
11	344	23.0	+11	08.9	215	34.9	75	-27	25.7	41	18 14	18 35	19 00	15 08	53	1 55 58		
12	359	23.2	+11	08.1	230	01.4	75	-27	21.3	44	18 06	18 27	18 51	14 47	55	2 18 55		
13	14	23.3		07.2	244	27.9	75		16.8	45	17 58	19	44	25	58	2 40 54		
14	29	23.5		06.3	258	54.4	75		12.2	46	50	12	38	14 02	61	3 04 51		
15	44	23.7		05.5	273	20.9	75		07.4	48	40	05	33	13 35	64	31 49		
16	59	23.8		04.6	287	47.4	75	-27	02.5	49	35	18 01	30	19	66	3 48 47		
17	74	24.0	+11	03.8	302	14.0	76	-26	57.3	52	17 29	17 57	18 28	13 00	69	4 07 45		
18	89	24.2	+11	02.9	316	40.5	75	-26	52.1	52	17 22	17 52	18 26	12 38	71	4 30 42		
19	104	24.3		02.1	331	07.1	76		46.6	55	14	47	25	12 09	76	4 59 39		
20	119	24.5		01.2	345	33.6	75		41.0	56	10	45	24	11 55	78	5 13 37		
21	134	24.7	+11	00.4	0	00.2	76		35.3	57	06	42	23	39	81	30 34		
22	149	24.8	+10	59.5	14	26.8	76		29.4	59	17 01	40	23	11 19	85	5 50 30		
23	164	25.0		58.6	28	53.4	76		23.3	61	16 56	37	22	10 55	90	6 14 25		
24	179	25.2	+10	57.8	43	20.0	76	-26	17.1	62	16 50	17 34	18 22	10 22	100	6 47 16		
UT	ARIES				VENUS				MARTE				JÚPITER					
	PMG: 1 ^h 52 ^m 1				Mag: -4.1 PMG: 11 ^h 14 ^m				Mag: +0.3 PMG: 6 ^h 28 ^m				Mag: -2.3 PMG: 18 ^h 25 ^m					
	hG ♈		hG ♀		hG ♂		hG ♉		hG ♊		hG ♋		hG ♌		hG ♍			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	331	53.8	190	50.5	+6	33.2	262	48.7	+21	09.9	83	04.4	-21	33.2	180	30.7		
1	346	56.3	205	54.3		33.7	277	49.6		10.1	98	06.7		33.2	195	32.8		
2	1	58.8	220	58.1		34.1	292	50.5		10.4	113	09.0		33.3	210	35.0		
3	17	01.2	236	01.9		34.5	307	51.3		10.6	128	11.4		33.3	225	37.1		
4	32	03.7	251	05.7		34.9	322	52.2		10.9	143	13.7		33.3	240	39.3		
5	47	06.1	266	09.5	+6	35.4	337	53.0	+21	11.1	158	16.0	-21	33.4	255	41.4		
6	62	08.6	281	13.2	+6	35.8	352	53.9	+21	11.4	173	18.3	-21	33.4	270	43.6		
7	77	11.1	296	17.0		36.2	7	54.8		11.7	188	20.7		33.4	285	45.8		
8	92	13.5	311	20.8		36.6	22	55.6		11.9	203	23.0		33.4	300	47.9		
9	107	16.0	326	24.6		37.1	37	56.5		12.2	218	25.3		33.5	315	50.1		
10	122	18.5	341	28.3		37.5	52	57.4		12.4	233	27.6		33.5	330	52.2		
11	137	20.9	356	32.1	+6	37.9	67	58.2	+21	12.7	248	30.0	-21	33.5	345	54.4		
12	152	23.4	11	35.9	+6	38.3	82	59.1	+21	12.9	263	32.3	-21	33.5	0	56.5		
13	167	25.9	26	39.6		38.8	97	59.9		13.2	278	34.6		33.6	15	58.7		
14	182	28.3	41	43.4		39.2	113	00.8		13.4	293	36.9		33.6	31	00.9		
15	197	30.8	56	47.1		39.6	128	01.7		13.7	308	39.3		33.6	46	03.0		
16	212	33.3	71	50.9		40.1	143	02.5		13.9	323	41.6		33.6	61	05.2		
17	227	35.7	86	54.6	+6	40.5	158	03.4	+21	14.2	338	43.9	-21	33.7	76	07.3		
18	242	38.2	101	58.4	+6	40.9	173	04.3	+21	14.4	353	46.2	-21	33.7	91	09.5		
19	257	40.6	117	02.1		41.4	188	05.1		14.7	8	48.6		33.7	106	11.6		
20	272	43.1	132	05.9		41.8	203	06.0		14.9	23	50.9		33.8	121	13.8		
21	287	45.6	147	09.6		42.2	218	06.9		15.2	38	53.2		33.8	136	16.0		
22	302	48.0	162	13.3		42.6	233	07.7		15.4	53	55.5		33.8	151	18.1		
23	317	50.5	177	17.1		43.1	248	08.6		15.7	68	57.8		33.8	166	20.3		
24	332	53.0	192	20.8	+6	43.5	263	09.5	+21	15.9	84	00.2	-21	33.9	181	22.4		
Dif	—		+38		+4		+9		+3		+23		0		+22			
															-1			

UT	SOL			○ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 2			Edad: 12 ^d 0 PHE { 4 ^h : 57 ^h 0 12 ^h : 57 ^h 3 20 ^h : 57 ^h 6 R ^o : 53 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o		Hora	R ^o		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	25.2	+10	57.8	43	20.0	-26	17.1	60 N	2 45	3 50	4 37	19 10	3	***	***	
1	194	25.4		56.9	57	46.7	77	10.7	58	3 02	4 00	44	18 50	10	***	***	
2	209	25.5		56.1	72	13.3	76	-26	04.2	56	16	09	50	33	15	***	***
3	224	25.7		55.2	86	40.0	77	-25	57.5	54	27	16	4 55	19	19	0 15	86
4	239	25.9		54.4	101	06.7	77	50.7	52	37	23	5 00	18 07	22	30	83	
5	254	26.0	+10	53.5	115	33.5	78	-25	43.7	50	3 46	4 29	5 04	17 55	26	0 44	79
6	269	26.2	+10	52.6	130	00.2	77	-25	36.6	45	4 04	4 42	5 13	17 32	31	1 11	74
7	284	26.4		51.8	144	27.0	78	29.2	74	40	18	4 52	21	17 14	35	32	71
8	299	26.6		50.9	158	53.8	78	21.8	74	35	30	5 01	27	16 58	38	1 50	68
9	314	26.7		50.1	173	20.7	79	14.2	76	30	39	08	33	44	42	2 05	65
10	329	26.9		49.2	187	47.5	78	-25	06.4	20	4 54	20	43	21	46	31	61
11	344	27.1	+10	48.3	202	14.5	80	-24	58.5	10 N	5 05	5 30	5 51	16 01	50	2 53	58
12	359	27.2	+10	47.5	216	41.4	79	-24	50.5	0	5 13	5 38	5 59	15 42	54	3 13	55
13	14	27.4		46.6	231	08.4	80	42.2	83	10 S	21	45	6 07	23	57	34	51
14	29	27.6		45.7	245	35.4	80	33.9	83	20	27	5 52	15	15 03	61	3 55	48
15	44	27.8		44.9	260	02.4	80	25.4	85	30	32	6 00	24	14 39	66	4 20	44
16	59	27.9		44.0	274	29.5	81	16.7	87	35	34	03	29	25	69	35	41
17	74	28.1	+10	43.2	288	56.6	81	-24	07.9	40	5 36	6 07	6 35	14 09	72	4 52	38
18	89	28.3	+10	42.3	303	23.7	81	-23	58.9	45	5 38	6 12	6 42	13 49	77	5 12	35
19	104	28.5		41.4	317	50.9	82	49.8	91	50	39	17	50	25	82	38	29
20	119	28.6		40.6	332	18.1	82	40.6	92	52	40	19	53	13	86	5 50	26
21	134	28.8		39.7	346	45.4	83	31.2	94	54	40	21	6 58	13 00	89	6 04	23
22	149	29.0		38.8	1	12.7	83	21.7	95	56	41	24	7 02	12 44	93	20	19
23	164	29.1		38.0	15	40.0	83	12.0	97	58	41	27	07	25	99	6 39	14
24	179	29.3	+10	37.1	30	07.4	84	-23	02.2	60 S	5 41	6 30	7 13	12 02	107	7 03	6
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 48 ^m 2			Mag: -4.2 PMG: 11 ^h 08 ^m			Mag: +0.3 PMG: 6 ^h 27 ^m			Mag: -2.3 PMG: 18 ^h 21 ^m			Mag: +0.6 PMG: 11 ^h 53 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	332	53.0		192	20.8	+6	43.5	263	09.5	+21	15.9	84	00.2	-21	33.9	181	22.4
1	347	55.4		207	24.5		44.0	278	10.3		16.2	99	02.5		33.9	196	24.6
2	2	57.9		222	28.2		44.4	293	11.2		16.4	114	04.8		33.9	211	26.7
3	18	00.4		237	32.0		44.8	308	12.1		16.7	129	07.1		33.9	226	28.9
4	33	02.8		252	35.7		45.3	323	12.9		16.9	144	09.5		34.0	241	31.1
5	48	05.3		267	39.4	+6	45.7	338	13.8	+21	17.2	159	11.8	-21	34.0	256	33.2
6	63	07.8		282	43.1	+6	46.1	353	14.7	+21	17.4	174	14.1	-21	34.0	271	35.4
7	78	10.2		297	46.8		46.6	8	15.5		17.7	189	16.4		34.1	286	37.5
8	93	12.7		312	50.5		47.0	23	16.4		17.9	204	18.7		34.1	301	39.7
9	108	15.1		327	54.2		47.4	38	17.3		18.2	219	21.0		34.1	316	41.9
10	123	17.6		342	57.9		47.9	53	18.1		18.4	234	23.4		34.1	331	44.0
11	138	20.1		358	01.6	+6	48.3	68	19.0	+21	18.7	249	25.7	-21	34.2	346	46.2
12	153	22.5		13	05.3	+6	48.8	83	19.9	+21	18.9	264	28.0	-21	34.2	1	48.3
13	168	25.0		28	09.0		49.2	98	20.7		19.1	279	30.3		34.2	16	50.5
14	183	27.5		43	12.7		49.6	113	21.6		19.4	294	32.6		34.3	31	52.6
15	198	29.9		58	16.4		50.1	128	22.5		19.6	309	35.0		34.3	46	54.8
16	213	32.4		73	20.1		50.5	143	23.3		19.9	324	37.3		34.3	61	57.0
17	228	34.9		88	23.8	+6	51.0	158	24.2	+21	20.1	339	39.6	-21	34.3	76	59.1
18	243	37.3		103	27.4	+6	51.4	173	25.1	+21	20.4	354	41.9	-21	34.4	92	01.3
19	258	39.8		118	31.1		51.9	188	25.9		20.6	9	44.2		34.4	107	03.4
20	273	42.3		133	34.8		52.3	203	26.8		20.9	24	46.5		34.4	122	05.6
21	288	44.7		148	38.5		52.7	218	27.7		21.1	39	48.8		34.4	137	07.7
22	303	47.2		163	42.1		53.2	233	28.6		21.3	54	51.2		34.5	152	09.9
23	318	49.6		178	45.8		53.6	248	29.4		21.6	69	53.5		34.5	167	12.1
24	333	52.1		193	49.4	+6	54.1	263	30.3	+21	21.8	84	55.8	-21	34.5	182	14.2
Dif	—			+37		+4		+9		+2		+23		0		+22	-1

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 9			Edad: 13 ^d 0 PHE { 4 ^h : 57'9 12 ^h : 58'1 20 ^h : 58'4 R°: 52 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	29.3	+10 37.1	30	07.4	-23 02.2	85	60 N	19 23	20 09	21 12	19 13	1	0 52	107	
1	194	29.5		44	34.9	-22 52.2	100	58		16	20 00	20 56	19 00	6	1 11	101
2	209	29.7		59	02.3		84	56	11	19 51		43	18 48	10		27 95
3	224	29.8		73	29.8		85	54		06	44	32	38 14		41	91
4	239	30.0		87	57.4		86	52	19 02	38	23		29 17		1 53	87
5	254	30.2	+10 32.8	102	25.0	-22 11.0	105	50	18 57	19 32	20 14	18 21	19		2 03	85
6	269	30.4	+10 31.9	116	52.6	-22 00.3	107	45	18 49	19 20	19 57	18 03	25		2 25	79
7	284	30.5		131	20.3	-21 49.6	107	40		42	10	43	17 49	29		43 74
8	299	30.7		145	48.1		88	35		35	19 02	33	36 34		2 58	70
9	314	30.9		160	15.8		87	30		30	18 55	24	26 37		3 10	67
10	329	31.1		174	43.7		89	20		21	43	19 10	17 07	43		32 61
11	344	31.3	+10 27.6	189	11.5	-21 05.1	113	10 N	18 13	18 34	18 59	16 51	47		3 51	57
12	359	31.4	+10 26.7	203	39.5	-20 53.6	115	0	18 05	18 26	18 51	16 36	52		4 08	53
13	14	31.6		218	07.4		89	10 S	17 58		19	44	20 57		25	49
14	29	31.8		232	35.4		90	20		50	13	38	16 04	61	4 43	44
15	44	32.0		247	03.5		91	30		42	06	34	15 45	67	5 04	39
16	59	32.1		261	31.6	-20 06.5	120	35		37	18 02	32	34 70		16	36
17	74	32.3	+10 22.4	275	59.8	-19 54.5	120	40	17 31	17 58	18 30	15 21	75		5 30	32
18	89	32.5	+10 21.5	290	28.0	-19 42.3	122	45	17 25	17 54	18 29	15 06	79		5 47	27
19	104	32.7		304	56.2		92	50		17	50	27	14 47	86	6 07	22
20	119	32.8		319	24.5		93	52		13	48	27	39 88		16	19
21	134	33.0		333	52.9	-19 04.9	126	54		09	46	27	29 91		27	16
22	149	33.2		348	21.2	-18 52.2	127	56		05	43	26	17 96		39	12
23	164	33.4		2	49.7		95	58	17 00	41	26	14 04	101	6 53	7	
24	179	33.6	+10 16.3	17	18.2	-18 26.5	129	60 S	16 55	17 38	18 26	13 49	106	7 09	2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 44 ^m 2		Mag: -4.2 PMG: 11 ^h 02 ^m		Mag: +0.3 PMG: 6 ^h 26 ^m		Mag: -2.3 PMG: 18 ^h 17 ^m		Mag: +0.6 PMG: 11 ^h 49 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	333	52.1	193	49.4	+6 54.1	263	30.3	+21 21.8	84	55.8	-21 34.5	182	14.2	+13 00.8	
1	348	54.6	208	53.1	54.5	278	31.2	22.1	99	58.1		197	16.4	00.7	
2	3	57.0	223	56.8	55.0	293	32.0	22.3	115	00.4		212	18.5	00.5	
3	18	59.5	239	00.4	55.4	308	32.9	22.6	130	02.7		227	20.7	00.4	
4	34	02.0	254	04.1	55.9	323	33.8	22.8	145	05.0		242	22.8	00.3	
5	49	04.4	269	07.7	+6 56.3	338	34.7	+21 23.0	160	07.3	-21 34.7	257	25.0	+13 00.2	
6	64	06.9	284	11.3	+6 56.7	353	35.5	+21 23.3	175	09.7	-21 34.7	272	27.2	+13 00.1	
7	79	09.4	299	15.0	57.2	8	36.4	23.5	190	12.0		287	29.3	+13 00.0	
8	94	11.8	314	18.6	57.6	23	37.3	23.8	205	14.3		302	31.5	+12 59.9	
9	109	14.3	329	22.2	58.1	38	38.2	24.0	220	16.6		317	33.6	59.8	
10	124	16.8	344	25.9	58.5	53	39.0	24.2	235	18.9		332	35.8	59.7	
11	139	19.2	359	29.5	+6 59.0	68	39.9	+21 24.5	250	21.2	-21 34.8	347	37.9	+12 59.6	
12	154	21.7	14	33.1	+6 59.4	83	40.8	+21 24.7	265	23.5	-21 34.9	2	40.1	+12 59.5	
13	169	24.1	29	36.7	+6 59.9	98	41.7	25.0	280	25.8		17	42.3	59.4	
14	184	26.6	44	40.4	+7 00.3	113	42.5	25.2	295	28.1		32	44.4	59.2	
15	199	29.1	59	44.0	00.8	128	43.4	25.4	310	30.5		47	46.6	59.1	
16	214	31.5	74	47.6	01.2	143	44.3	25.7	325	32.8		62	48.7	59.0	
17	229	34.0	89	51.2	+7 01.7	158	45.2	+21 25.9	340	35.1	-21 35.0	77	50.9	+12 58.9	
18	244	36.5	104	54.8	+7 02.1	173	46.0	+21 26.1	355	37.4	-21 35.0	92	53.0	+12 58.8	
19	259	38.9	119	58.4	02.6	188	46.9	26.4	10	39.7		107	55.2	58.7	
20	274	41.4	135	02.0	03.0	203	47.8	26.6	25	42.0		122	57.4	58.6	
21	289	43.9	150	05.6	03.5	218	48.7	26.9	40	44.3		137	59.5	58.5	
22	304	46.3	165	09.2	03.9	233	49.5	27.1	55	46.6		153	01.7	58.4	
23	319	48.8	180	12.7	04.4	248	50.4	27.3	70	48.9		168	03.8	58.3	
24	334	51.2	195	16.3	+7 04.8	263	51.3	+21 27.6	85	51.2	-21 35.2	183	06.0	+12 58.2	
Dif	—		+36		+4	+9		+2	+23		0	+22		-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 6			Edad: 14 ^d 0 SD: 15 ^h 9 PMG: 23 ^h 40 ^m	PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 9 20 ^h : 59 ^m 1 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	33.6	+10	16.3	17	18.2	-18	26.5	60 N	2	52	3	55	4	42	19	14
1	194	33.7		15.4	31	46.7 95		13.4 131	58	3	08	4	05	48		19	06
2	209	33.9		14.5	46	15.3 96	-18	00.3 131	56	21		13		54		18	58
3	224	34.1		13.7	60	43.9 96	-17	47.0 133	54	32		20		4	58		52
4	239	34.3		12.8	75	12.6 97		33.6 134	52	42		27		5	03		46
5	254	34.5	+10	11.9	89	41.3 97	-17	20.1 135	50	3	50	4	32	5	07	18	40
6	269	34.6	+10	11.1	104	10.1 98	-17	06.5 136	45	4	07	4	45	5	15	18	28
7	284	34.8		10.2	118	38.9 98	-16	52.8 137	40	21		4	54	23		18	27
8	299	35.0		09.3	133	07.8 99		39.0 138	35	31		5	02	29		10	31
9	314	35.2		08.4	147	36.7 99		25.1 139	30	40		09		34		18	03
10	329	35.4		07.6	162	05.6 99	-16	11.1 140	20	4	54	21		43		17	50
11	344	35.5	+10	06.7	176	34.6 100	-15	57.0 141	10 N	5	05	5	30	5	51	17	38
12	359	35.7	+10	05.8	191	03.7 101	-15	42.7 143	0	5	13	5	37	5	58	17	28
13	14	35.9		04.9	205	32.8 101		28.4 143	10 S	20		44		6	06		17
14	29	36.1		04.1	220	01.9 101	-15	14.0 144	20	25		51		13		17	05
15	44	36.3		03.2	234	31.1 102	-14	59.5 145	30	29		5	57	22		16	52
16	59	36.4		02.3	249	00.3 102		44.9 146	35	31		6	01	26		44	71
17	74	36.6	+10	01.4	263	29.5 102	-14	30.2 147	40	5	33	6	04	6	32	16	36
18	89	36.8	+10	00.6	277	58.8 103	-14	15.4 148	45	5	34	6	08	6	38	16	25
19	104	37.0	+9	59.7	292	28.2 104	-14	00.5 149	50	35		13		46		13	85
20	119	37.2		58.8	306	57.5 103	-13	45.5 150	52	36		15		49		07	88
21	134	37.4		57.9	321	27.0 105		30.5 150	54	36		17		53		16	00
22	149	37.5		57.0	335	56.4 104		15.3 152	56	36		19		6	57	15	53
23	164	37.7		56.2	350	25.9 105	-13	00.1 152	58	36		22		7	02		45
24	179	37.9	+9	55.3	4	55.5 106	-12	44.8 153	60 S	5	36	6	24	7	07	15	35

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 40 ^m 3		Mag: -4.3 PMG: 10 ^h 56 ^m		Mag: +0.3 PMG: 6 ^h 24 ^m		Mag: -2.2 PMG: 18 ^h 14 ^m		Mag: +0.6 PMG: 11 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	334	51.2	195	16.3	263	51.3	85	51.2	183	06.0
1	349	53.7	210	19.9	278	52.2	100	53.5	198	08.2
2	4	56.2	225	23.5	293	53.1	115	55.8	213	10.3
3	19	58.6	240	27.1	308	53.9	130	58.1	228	12.5
4	35	01.1	255	30.6	323	54.8	146	00.4	243	14.6
5	50	03.6	270	34.2	338	55.7	161	02.7	258	16.8
6	65	06.0	285	37.8	353	56.6	176	05.0	273	18.9
7	80	08.5	300	41.3	8	57.5	191	07.3	288	21.1
8	95	11.0	315	44.9	23	58.3	206	09.7	303	23.3
9	110	13.4	330	48.4	38	59.2	221	12.0	318	25.4
10	125	15.9	345	52.0	54	00.1	236	14.3	333	27.6
11	140	18.4	0	55.5	69	01.0	251	16.6	348	29.7
12	155	20.8	15	59.1	84	01.9	266	18.9	3	31.9
13	170	23.3	31	02.6	99	02.7	281	21.2	18	34.0
14	185	25.7	46	06.1	114	03.6	296	23.5	33	36.2
15	200	28.2	61	09.7	129	04.5	311	25.8	48	38.4
16	215	30.7	76	13.2	144	05.4	326	28.1	63	40.5
17	230	33.1	91	16.7	159	06.3	341	30.4	78	42.7
18	245	35.6	106	20.2	174	07.1	356	32.7	93	44.8
19	260	38.1	121	23.8	189	08.0	11	35.0	108	47.0
20	275	40.5	136	27.3	204	08.9	26	37.3	123	49.2
21	290	43.0	151	30.8	219	09.8	41	39.6	138	51.3
22	305	45.5	166	34.3	234	10.7	56	41.9	153	53.5
23	320	47.9	181	37.8	249	11.6	71	44.2	168	55.6
24	335	50.4	196	41.3	264	12.4	86	46.5	183	57.8
Dif	—		+35		+9		+23		+22	
			+5		+2		0		-1	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 3		Edad: 15 ^d 0 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 5 20 ^h : 59 ^m 7 R°: ***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	m
0	179	37.9	+9 55.3	4	55.5	-12 44.8	60 N	19 17	20 03	21 04	19 14	**	4 25	103
1	194	38.1		19	25.0 ¹⁰⁵	29.4 ¹⁵⁴	58	11	19 54	20 49	09 4		32	98
2	209	38.3		33	54.6 ¹⁰⁶	-12 13.9 ¹⁵⁵	56	06		46 37	06 6		38	95
3	224	38.4		48	24.3 ¹⁰⁷	-11 58.3 ¹⁵⁶	54	19 01		39 26	19 02 10		44	91
4	239	38.6		62	54.0 ¹⁰⁷	42.7 ¹⁵⁶	52	18 57		33 17	18 59 13		49	88
5	254	38.8	+9 50.9	77	23.7 ¹⁰⁷	-11 27.0 ¹⁵⁷	50	18 53	19 27	20 09	18 56 15		4 53	85
6	269	39.0	+9 50.0	91	53.4 ¹⁰⁷	-11 11.2 ¹⁵⁸	45	18 45	19 16	19 53	18 50 20		5 03	79
7	284	39.2		106	23.2 ¹⁰⁸	-10 55.3 ¹⁵⁹	40	39	19 07	40	45 25		11	74
8	299	39.4		120	53.0 ¹⁰⁸	39.4 ¹⁵⁹	35	33	18 59	30	41 28		18	70
9	314	39.5		135	22.8 ¹⁰⁸	23.4 ¹⁶⁰	30	28		52 21	37 32		24	66
10	329	39.7		149	52.7 ¹⁰⁹	-10 07.3 ¹⁶¹	20	19		41 19 08	30 38		34	60
11	344	39.9	+9 45.6	164	22.6 ¹⁰⁹	-9 51.2 ¹⁶¹	10 N	18 12	18 33	18 58	18 23 45		5 43	55
12	359	40.1	+9 44.7	178	52.5 ¹⁰⁹	-9 35.0 ¹⁶²	0	18 05	18 26	18 50	18 18 49		5 52	49
13	14	40.3		193	22.5 ¹¹⁰	18.8 ¹⁶²	10 S	17 58	19	44	12 54		6 00	44
14	29	40.5		207	52.5 ¹¹⁰	-9 02.4 ¹⁶⁴	20	51	13	39	18 06 60		09	39
15	44	40.7		222	22.5 ¹¹⁰	-8 46.1 ¹⁶³	30	43		07 35	17 59 66		18	33
16	59	40.8		236	52.5 ¹¹⁰	29.6 ¹⁶⁵	35	38		04 33	55 70		24	29
17	74	41.0	+9 40.3	251	22.5 ¹¹⁰	-8 13.1 ¹⁶⁵	40	17 33	18 00	18 32	17 50 74		6 30	26
18	89	41.2	+9 39.4	265	52.6 ¹¹¹	-7 56.6 ¹⁶⁵	45	17 27	17 57	18 31	17 45 79		6 38	21
19	104	41.4		280	22.7 ¹¹¹	40.0 ¹⁶⁶	50	20		53 30	38 85		46	16
20	119	41.6		294	52.8 ¹¹¹	23.3 ¹⁶⁷	52	16		51 30	35 88		51	12
21	134	41.8		309	23.0 ¹¹²	-7 06.6 ¹⁶⁷	54	13		49 30	32 91		6 55	10
22	149	42.0		323	53.1 ¹¹¹	-6 49.9 ¹⁶⁷	56	09		47 30	28 94		7 00	7
23	164	42.1		338	23.3 ¹¹²	33.1 ¹⁶⁸	58	05		45 30	24 98		05	4
24	179	42.3	+9 34.1	352	53.5 ¹¹²	-6 16.3 ¹⁶⁸	60 S	17 00	17 42	18 30	17 19 103		7 11	0
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 36 ^m 4		Mag: -4.3 PMG: 10 ^h 51 ^m			Mag: +0.3 PMG: 6 ^h 23 ^m			Mag: -2.2 PMG: 18 ^h 10 ^m			Mag: +0.6 PMG: 11 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	335	50.4	196	41.3	+7 15.7	264	12.4	+21 33.1	86	46.5	-21 35.9	183	57.8	+12 55.6
1	350	52.9	211	44.8	16.2	279	13.3	33.4	101	48.8	36.0	198	59.9	55.5
2	5	55.3	226	48.3	16.7	294	14.2	33.6	116	51.1	36.0	214	02.1	55.4
3	20	57.8	241	51.8	17.1	309	15.1	33.8	131	53.4	36.0	229	04.3	55.2
4	36	00.2	256	55.3	17.6	324	16.0	34.1	146	55.7	36.1	244	06.4	55.1
5	51	02.7	271	58.7	+7 18.0	339	16.9	+21 34.3	161	58.0	-21 36.1	259	08.6	+12 55.0
6	66	05.2	287	02.2	+7 18.5	354	17.8	+21 34.5	177	00.2	-21 36.1	274	10.7	+12 54.9
7	81	07.6	302	05.7	18.9	9	18.6	34.7	192	02.5	36.1	289	12.9	54.8
8	96	10.1	317	09.2	19.4	24	19.5	35.0	207	04.8	36.2	304	15.0	54.7
9	111	12.6	332	12.6	19.9	39	20.4	35.2	222	07.1	36.2	319	17.2	54.6
10	126	15.0	347	16.1	20.3	54	21.3	35.4	237	09.4	36.2	334	19.4	54.5
11	141	17.5	2	19.6	+7 20.8	69	22.2	+21 35.6	252	11.7	-21 36.3	349	21.5	+12 54.4
12	156	20.0	17	23.0	+7 21.2	84	23.1	+21 35.9	267	14.0	-21 36.3	4	23.7	+12 54.3
13	171	22.4	32	26.5	21.7	99	24.0	36.1	282	16.3	36.3	19	25.8	54.2
14	186	24.9	47	29.9	22.1	114	24.8	36.3	297	18.6	36.4	34	28.0	54.1
15	201	27.3	62	33.4	22.6	129	25.7	36.5	312	20.9	36.4	49	30.2	53.9
16	216	29.8	77	36.8	23.1	144	26.6	36.8	327	23.2	36.4	64	32.3	53.8
17	231	32.3	92	40.2	+7 23.5	159	27.5	+21 37.0	342	25.5	-21 36.5	79	34.5	+12 53.7
18	246	34.7	107	43.7	+7 24.0	174	28.4	+21 37.2	357	27.8	-21 36.5	94	36.6	+12 53.6
19	261	37.2	122	47.1	24.4	189	29.3	37.4	12	30.1	36.5	109	38.8	53.5
20	276	39.7	137	50.5	24.9	204	30.2	37.7	27	32.4	36.5	124	40.9	53.4
21	291	42.1	152	54.0	25.3	219	31.1	37.9	42	34.7	36.6	139	43.1	53.3
22	306	44.6	167	57.4	25.8	234	32.0	38.1	57	37.0	36.6	154	45.3	53.2
23	321	47.1	183	00.8	26.3	249	32.8	38.3	72	39.2	36.6	169	47.4	53.1
24	336	49.5	198	04.2	+7 26.7	264	33.7	+21 38.6	87	41.5	-21 36.7	184	49.6	+12 53.0
Dif	—		+35		+5	+9		+2	+23		0	+22		-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 17 ^d 0	PHE {	4 ^h : 60 ^h 1 12 ^h : 60 ^h 2 20 ^h : 60 ^h 2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 7								SD: 16 ^h 4			PMG: 1 ^h 19 ^m			R°: 49 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	46.8	+9 12.8	341	00.1	+0 36.9	60 N	19 11	19 56	20 56	19 13 0	7 50 105			
1	194	47.0		355	30.4 ¹¹³	+0 54.3 ¹⁷⁴	58	05	48	42	16 4	49 100			
2	209	47.2		10	00.6 ¹¹²	+1 11.7 ¹⁷⁴	56	19 01	40	31	19 7	47 96			
3	224	47.4		24	30.8 ¹¹²	29.1 ¹⁷⁴	54	18 57	34	21	21 11	46 93			
4	239	47.6		39	01.0 ¹¹²	+1 46.4 ¹⁷³	52	53	28	12	24 13	45 89			
5	254	47.8	+9 08.4	53	31.2 ¹¹²	+2 03.8 ¹⁷⁴	50	18 49	19 23	20 04	19 26 16	7 44 87			
6	269	48.0	+9 07.5	68	01.4 ¹¹²	+2 21.2 ¹⁷⁴	45	18 42	19 12	19 49	19 31 22	7 42 80			
7	284	48.2		82	31.5 ¹¹¹	38.6 ¹⁷⁴	40	35	19 03	37	35 27	40 75			
8	299	48.4		97	01.6 ¹¹¹	+2 55.9 ¹⁷³	35	30	18 56	27	38 31	38 71			
9	314	48.6		111	31.7 ¹¹¹	+3 13.3 ¹⁷⁴	30	25	50	19	41 35	37 67			
10	329	48.8		126	01.8 ¹¹¹	30.6 ¹⁷³	20	17	40	19 06	47 40	34 61			
11	344	48.9	+9 03.0	140	31.9 ¹¹¹	+3 47.9 ¹⁷³	10 N	18 10	18 32	18 57	19 52 46	7 32 56			
12	359	49.1	+9 02.1	155	01.9 ¹¹⁰	+4 05.2 ¹⁷³	0	18 04	18 25	18 49	19 56 51	7 30 50			
13	14	49.3		169	31.9 ¹¹⁰	22.5 ¹⁷³	10 S	17 58	19	44	20 01 56	28 45			
14	29	49.5	+9 00.3	184	01.9 ¹¹⁰	39.8 ¹⁷³	20	51	13	39	06 62	26 39			
15	44	49.7	+8 59.4	198	31.8 ¹⁰⁹	+4 57.0 ¹⁷²	30	44	08	36	12 68	24 33			
16	59	49.9		213	01.7 ¹⁰⁹	+5 14.2 ¹⁷²	35	39	05	34	15 72	22 30			
17	74	50.1	+8 57.7	227	31.6 ¹⁰⁹	+5 31.4 ¹⁷²	40	17 35	18 02	18 33	20 19 76	7 21 25			
18	89	50.3	+8 56.8	242	01.5 ¹⁰⁹	+5 48.5 ¹⁷¹	45	17 29	17 59	18 33	20 24 81	7 19 21			
19	104	50.5		256	31.3 ¹⁰⁸	+6 05.6 ¹⁷¹	50	23	55	33	29 88	16 16			
20	119	50.7		271	01.1 ¹⁰⁸	22.7 ¹⁷¹	52	20	54	33	32 90	15 13			
21	134	50.9		285	30.8 ¹⁰⁷	39.8 ¹⁷¹	54	16	52	33	35 93	14 10			
22	149	51.1		300	00.5 ¹⁰⁷	+6 56.8 ¹⁷⁰	56	13	51	34	38 97	13 7			
23	164	51.3		314	30.2 ¹⁰⁷	+7 13.8 ¹⁷⁰	58	09	49	34	41 102	12 3			
24	179	51.5	+8 51.4	328	59.8 ¹⁰⁶	+7 30.7 ¹⁶⁹	60 S	17 04	17 47	18 35	20 45 106	7 10 0			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 28 ^m 5		Mag: -4.4 PMG: 10 ^h 40 ^m			Mag: +0.3 PMG: 6 ^h 20 ^m			Mag: -2.2 PMG: 18 ^h 03 ^m			Mag: +0.6 PMG: 11 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	337	48.7	199	25.0	+7 37.7	264	55.2	+21 43.8	88	36.4	-21 37.4	185	41.4	+12 50.4	
1	352	51.1	214	28.3		279	56.1	44.0	103	38.7	37.5	200	43.5	50.3	
2	7	53.6	229	31.6		294	57.0	44.3	118	41.0	37.5	215	45.7	50.2	
3	22	56.1	244	34.9		309	57.9	44.5	133	43.3	37.5	230	47.9	50.1	
4	37	58.5	259	38.2		324	58.8	44.7	148	45.5	37.5	245	50.0	50.0	
5	53	01.0	274	41.5	+7 40.0	339	59.7	+21 44.9	163	47.8	-21 37.6	260	52.2	+12 49.8	
6	68	03.4	289	44.8	+7 40.4	355	00.6	+21 45.1	178	50.1	-21 37.6	275	54.3	+12 49.7	
7	83	05.9	304	48.1	40.9	10	01.5	45.3	193	52.4	37.6	290	56.5	49.6	
8	98	08.4	319	51.4	41.4	25	02.4	45.5	208	54.7	37.7	305	58.7	49.5	
9	113	10.8	334	54.7	41.8	40	03.3	45.8	223	57.0	37.7	321	00.8	49.4	
10	128	13.3	349	58.0	42.3	55	04.2	46.0	238	59.2	37.7	336	03.0	49.3	
11	143	15.8	5	01.3	+7 42.7	70	05.1	+21 46.2	254	01.5	-21 37.8	351	05.1	+12 49.2	
12	158	18.2	20	04.5	+7 43.2	85	06.0	+21 46.4	269	03.8	-21 37.8	6	07.3	+12 49.1	
13	173	20.7	35	07.8	43.6	100	06.9	46.6	284	06.1	37.8	21	09.5	49.0	
14	188	23.2	50	11.1	44.1	115	07.8	46.8	299	08.4	37.9	36	11.6	48.9	
15	203	25.6	65	14.3	44.6	130	08.7	47.0	314	10.6	37.9	51	13.8	48.8	
16	218	28.1	80	17.6	45.0	145	09.6	47.3	329	12.9	37.9	66	15.9	48.7	
17	233	30.5	95	20.9	+7 45.5	160	10.5	+21 47.5	344	15.2	-21 38.0	81	18.1	+12 48.5	
18	248	33.0	110	24.1	+7 45.9	175	11.4	+21 47.7	359	17.5	-21 38.0	96	20.3	+12 48.4	
19	263	35.5	125	27.4	46.4	190	12.3	47.9	14	19.7	38.0	111	22.4	48.3	
20	278	37.9	140	30.6	46.8	205	13.2	48.1	29	22.0	38.1	126	24.6	48.2	
21	293	40.4	155	33.8	47.3	220	14.1	48.3	44	24.3	38.1	141	26.7	48.1	
22	308	42.9	170	37.1	47.7	235	15.0	48.5	59	26.6	38.1	156	28.9	48.0	
23	323	45.3	185	40.3	48.2	250	15.9	48.7	74	28.9	38.2	171	31.0	47.9	
24	338	47.8	200	43.5	+7 48.6	265	16.8	+21 48.9	89	31.1	-21 38.2	186	33.2	+12 47.8	
Dif	—		+33		+5	+9		+2	+23		0	+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 18 ^d 0 PHE { 4 ^h : 60 ^m /2 12 ^h : 60 ^m /2 20 ^h : 60 ^m /1													
	PMG: 12 ^h 00 ^m 4			SD: 16 ^d 4 PMG: 2 ^h 08 ^m R°: 52 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	51.5	+8 51.4	328	59.8	+7 30.7	169	58	60 N	3 06	4 06	4 51	19 13	1	9 35	108	
1	194	51.6	50.5	343	29.4	+7 47.6	106	58		20	14	4 57	20	6	29	102	
2	209	51.8	49.6	357	59.0	+8 04.4	106	56		31	22	5 01	26	11	23	99	
3	224	52.0	48.7	12	28.5	21.2	105	54		41	28	06	32	14	19	94	
4	239	52.2	47.8	26	58.0	38.0	105	52		50	34	09	37	17	14	92	
5	254	52.4	+8 46.9	41	27.4	+8 54.7	104	50		3 57	4 39	5 13	19 42	20	9 11	88	
6	269	52.6	+8 46.0	55	56.7	+9 11.4	103	45		4 13	4 50	5 20	19 53	25	9 02	82	
7	284	52.8	45.1	70	26.1	28.0	104	40		25	4 58	26	20 02	30	8 55	77	
8	299	53.0	44.2	84	55.3	+9 44.5	102	35		35	5 06	32	09	34	49	73	
9	314	53.2	43.3	99	24.6	+10 01.0	103	30		43	12	36	16	38	44	69	
10	329	53.4	42.4	113	53.8	17.5	105	20		4 55	22	44	27	44	35	63	
11	344	53.6	+8 41.5	128	22.9	+10 33.8	103	10 N		5 05	5 30	5 51	20 38	49	8 28	57	
12	359	53.8	+8 40.6	142	51.9	+10 50.1	100	0		5 12	5 36	5 57	20 47	54	8 20	53	
13	14	54.0	39.7	157	21.0	+11 06.4	101	10 S		18	42	6 03	20 57	59	13	47	
14	29	54.2	38.8	171	49.9	22.6	102	20		22	48	10	21 08	64	8 05	42	
15	44	54.4	37.9	186	18.8	38.7	101	30		25	53	17	20	70	7 57	35	
16	59	54.6	37.0	200	47.7	+11 54.8	101	35		26	56	21	27	74	52	32	
17	74	54.8	+8 36.1	215	16.5	+12 10.7	100	40		5 27	5 59	6 26	21 35	78	7 46	28	
18	89	55.0	+8 35.2	229	45.2	+12 26.6	100	45		5 28	6 02	6 31	21 45	83	7 40	23	
19	104	55.2	34.3	244	13.9	42.5	100	50		28	05	37	21 57	89	32	17	
20	119	55.3	33.4	258	42.5	+12 58.2	100	52		27	06	40	22 02	92	28	15	
21	134	55.5	32.5	273	11.1	+13 13.9	100	54		27	08	44	08	96	24	12	
22	149	55.7	31.6	287	39.6	29.5	100	56		27	10	47	15	100	20	8	
23	164	55.9	30.7	302	08.0	+13 45.0	100	58		26	11	51	23	104	15	5	
24	179	56.1	+8 29.8	316	36.4	+14 00.5	100	60 S		5 25	6 13	6 55	22 31	111	7 10	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 24 ^m 6		Mag: -4.4 PMG: 10 ^h 35 ^m		Mag: +0.3 PMG: 6 ^h 18 ^m		Mag: -2.2 PMG: 17 ^h 59 ^m		Mag: +0.6 PMG: 11 ^h 32 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	338	47.8	200	43.5	265	16.8	89	31.1	186	33.2
1	353	50.3	215	46.8	280	17.7	104	33.4	201	35.4
2	8	52.7	230	50.0	295	18.6	119	35.7	216	37.5
3	23	55.2	245	53.2	310	19.5	134	38.0	231	39.7
4	38	57.7	260	56.4	325	20.4	149	40.2	246	41.8
5	54	00.1	275	59.6	340	21.3	164	42.5	261	44.0
6	69	02.6	291	02.8	355	22.2	179	44.8	276	46.2
7	84	05.0	306	06.0	10	23.1	194	47.1	291	48.3
8	99	07.5	321	09.2	25	24.0	209	49.3	306	50.5
9	114	10.0	336	12.4	40	25.0	224	51.6	321	52.6
10	129	12.4	351	15.6	55	25.9	239	53.9	336	54.8
11	144	14.9	6	18.8	70	26.8	254	56.1	351	57.0
12	159	17.4	21	21.9	85	27.7	269	58.4	6	59.1
13	174	19.8	36	25.1	100	28.6	285	00.7	22	01.3
14	189	22.3	51	28.3	115	29.5	300	03.0	37	03.4
15	204	24.8	66	31.4	130	30.4	315	05.2	52	05.6
16	219	27.2	81	34.6	145	31.3	330	07.5	67	07.8
17	234	29.7	96	37.8	160	32.2	345	09.8	82	09.9
18	249	32.2	111	40.9	175	33.1	0	12.0	97	12.1
19	264	34.6	126	44.1	190	34.0	15	14.3	112	14.2
20	279	37.1	141	47.2	205	34.9	30	16.6	127	16.4
21	294	39.5	156	50.4	220	35.9	45	18.9	142	18.6
22	309	42.0	171	53.5	235	36.8	60	21.1	157	20.7
23	324	44.5	186	56.6	250	37.7	75	23.4	172	22.9
24	339	46.9	201	59.8	265	38.6	90	25.7	187	25.0
Dif	—		+32		+9		+23		+22	
			+5		+2		0		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8			Edad: 19 ^d 0 PHE { 4 ^h : 60 ^m 1 12 ^h : 60 ^m 0 20 ^h : 59 ^m 9					Civil			Náutico			Hora R°		
	PMG: 12 ^h 00 ^m 1			PMG: 3 ^h 00 ^m R°: 54 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m
0	179	56.1	+8 29.8	316	36.4	+14 00.5	93	60 N	19 05	19 50	20 48	19 14 3	11 23 112				
1	194	56.3	28.9	331	04.7	15.8	153	58	19 00	42	35	26 10	11 106				
2	209	56.5	28.0	345	32.9	31.1	153	56	18 56	35	24	37 15	11 02 100				
3	224	56.7	27.1	0	01.1	46.3	152	54	52	29	15	46 19	10 53 96				
4	239	56.9	26.2	14	29.2	01.4	151	52	48	23	07	19 54 23	46 92				
5	254	57.1	+8 25.3	28	57.2	16.3	149	50	18 45	19 19	20 00	20 02 26	10 39 89				
6	269	57.3	+8 24.4	43	25.2	31.2	149	45	18 38	19 08	19 45	20 18 32	10 24 83				
7	284	57.5	23.5	57	53.1	46.1	149	40	32	19 00	33	32 36	12 78				
8	299	57.7	22.6	72	20.9	00.8	147	35	27	18 53	24	43 40	10 02 74				
9	314	57.9	21.7	86	48.7	15.4	146	30	23	47	16	20 54 43	9 53 70				
10	329	58.1	20.7	101	16.4	29.9	145	20	16	38	19 04	21 11 48	38 65				
11	344	58.3	+8 19.8	115	44.0	44.3	144	10 N	18 09	18 31	18 55	21 27 52	9 25 60				
12	359	58.5	+8 18.9	130	11.6	58.6	143	0	18 03	18 24	18 49	21 41 57	9 13 55				
13	14	58.7	18.0	144	39.0	12.8	142	10 S	17 58	19	43	21 56 61	9 00 51				
14	29	58.9	17.1	159	06.4	26.9	141	20	52	14	39	22 12 65	8 47 46				
15	44	59.1	16.2	173	33.8	40.8	139	30	45	09	37	30 70	32 41				
16	59	59.3	15.3	188	01.0	54.7	139	35	41	06	36	41 73	24 37				
17	74	59.5	+8 14.4	202	28.2	08.5	138	40	17 37	18 04	18 35	22 53 77	8 14 33				
18	89	59.7	+8 13.5	216	55.3	22.1	136	45	17 32	18 01	18 35	23 08 82	8 03 28				
19	104	59.9	12.6	231	22.3	35.6	135	50	26	17 58	36	26 88	7 49 23				
20	120	00.1	11.7	245	49.3	49.0	134	52	23	57	36	34 92	43 19				
21	135	00.3	10.8	260	16.2	02.3	133	54	20	56	37	44 95	36 16				
22	150	00.5	09.9	274	43.0	15.5	132	56	17	54	37	23 55 100	28 12				
23	165	00.7	09.0	289	09.7	28.6	131	58	13	53	38	** ** *	20 7				
24	180	00.9	+8 08.1	303	36.3	41.5	129	60 S	17 09	17 51	18 39	** ** *	7 10 1				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 20 ^m 7		Mag: -4.5 PMG: 10 ^h 30 ^m		Mag: +0.3 PMG: 6 ^h 17 ^m		Mag: -2.2 PMG: 17 ^h 56 ^m		Mag: +0.6 PMG: 11 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	339	46.9	201	59.8	265	38.6	90	25.7	187	25.0
1	354	49.4	217	02.9	280	39.5	105	27.9	202	27.2
2	9	51.9	232	06.0	295	40.4	120	30.2	217	29.4
3	24	54.3	247	09.1	310	41.3	135	32.5	232	31.5
4	39	56.8	262	12.2	325	42.2	150	34.7	247	33.7
5	54	59.3	277	15.3	340	43.1	165	37.0	262	35.8
6	70	01.7	292	18.4	355	44.1	180	39.3	277	38.0
7	85	04.2	307	21.5	370	45.0	195	41.5	292	40.2
8	100	06.6	322	24.6	385	45.9	210	43.8	307	42.3
9	115	09.1	337	27.7	400	46.8	225	46.1	322	44.5
10	130	11.6	352	30.8	415	47.7	240	48.3	337	46.6
11	145	14.0	7	33.9	430	48.6	255	50.6	352	48.8
12	160	16.5	22	37.0	445	49.5	270	52.9	7	51.0
13	175	19.0	37	40.1	460	50.5	285	55.1	22	53.1
14	190	21.4	52	43.1	475	51.4	300	57.4	37	55.3
15	205	23.9	67	46.2	490	52.3	315	59.6	52	57.4
16	220	26.4	82	49.3	505	53.2	331	01.9	67	59.6
17	235	28.8	97	52.3	520	54.1	346	04.2	83	01.8
18	250	31.3	112	55.4	535	55.0	1	06.4	98	03.9
19	265	33.8	127	58.4	550	56.0	16	08.7	113	06.1
20	280	36.2	143	01.5	565	56.9	31	11.0	128	08.2
21	295	38.7	158	04.5	580	57.8	46	13.2	143	10.4
22	310	41.1	173	07.6	595	58.7	61	15.5	158	12.6
23	325	43.6	188	10.6	610	59.6	76	17.7	173	14.7
24	340	46.1	203	13.6	625	00.5	91	20.0	188	16.9
Dif	—		+31	+4	+9	+2	+23	0	+22	-1

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 5			Edad: 24 ^d 0 PHE { 4 ^h : 57'7 12 ^h : 57'5 20 ^h : 57'4 PMG: 7 ^h 52 ^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	180	20.5	+6 39.8	246	29.5	+27 48.1	60 N	3 26	4 22	5 06	22 41	104	18 09	8	
1	195	20.8		260	54.1	56	58	37	28	10	23 07	95	17 43	16	
2	210	21.0		275	18.7	56	56	46	34	13	27 00		22	22	
3	225	21.2		289	43.4	57	54	3 54	40	16	44 86		17 05	26	
4	240	21.4		304	08.2	58	52	4 02	44	19	23 59	82	16 50	29	
5	255	21.6	+6 35.2	318	33.1	59	50	4 08	4 48	5 22	** ** *		16 37	32	
6	270	21.8	+6 34.3	332	58.0	59	45	4 21	4 57	5 27	** ** *		16 10	37	
7	285	22.0		347	23.1	61	40	32	5 04	32	** ** *		15 49	40	
8	300	22.2		1	48.2	61	35	40	10	36	0 09	66	31	43	
9	315	22.4		16	13.3	61	30	47	15	39	25 64		15 16	45	
10	330	22.6		30	38.6	63	20	4 57	23	45	0 53	61	14 50	49	
11	345	22.9	+6 29.6	45	03.9	63	10 N	5 05	5 29	5 50	1 16	60	14 27	53	
12	0	23.1	+6 28.7	59	29.4	65	0	5 10	5 34	5 55	1 39	57	14 06	55	
13	15	23.3		73	54.9	65	10 S	14	39	6 00	2 01	54	13 45	58	
14	30	23.5		88	20.5	66	20	17	42	05	24 53		13 22	61	
15	45	23.7		102	46.2	67	30	18	46	10	2 52	49	12 56	64	
16	60	23.9		117	12.0	68	35	18	48	13	3 08	47	40	67	
17	75	24.1	+6 24.0	131	37.9	69	40	5 18	5 49	6 16	3 27	45	12 21	70	
18	90	24.3	+6 23.1	146	03.8	69	45	5 17	5 51	6 20	3 50	42	11 59	73	
19	105	24.5		160	29.9	71	50	15	53	25	4 19	37	31	78	
20	120	24.8		174	56.0	71	52	14	53	27	33 35		17	80	
21	135	25.0		189	22.3	73	54	13	54	29	4 50	32	11 00	84	
22	150	25.2		203	48.6	73	56	12	55	32	5 10	27	10 41	88	
23	165	25.4		218	15.1	75	58	10	55	35	5 34	22	10 17	94	
24	180	25.6	+6 17.5	232	41.6	75	60 S	5 08	5 56	6 38	6 07	11	9 45	105	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 01 ^m 0		Mag: -4.6 PMG: 10 ^h 07 ^m		Mag: +0.2 PMG: 6 ^h 10 ^m		Mag: -2.2 PMG: 17 ^h 38 ^m		Mag: +0.6 PMG: 11 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	344	42.6	207	44.9	+8 50.2	267	30.2	+22 16.4	191	44.4	+12 32.3				
1	359	45.1	222	47.5	50.6	282	31.2	16.6	206	46.5	32.2				
2	14	47.6	237	50.1	51.0	297	32.1	16.8	221	48.7	32.1				
3	29	50.0	252	52.7	51.3	312	33.1	16.9	236	50.8	32.0				
4	44	52.5	267	55.3	51.7	327	34.0	17.1	251	53.0	31.9				
5	59	55.0	282	57.9	+8 52.1	342	35.0	+22 17.3	266	55.2	+12 31.8				
6	74	57.4	298	00.5	+8 52.5	357	35.9	+22 17.5	281	57.3	+12 31.6				
7	89	59.9	313	03.1	52.9	12	36.9	17.6	296	59.5	31.5				
8	105	02.3	328	05.7	53.3	27	37.8	17.8	312	01.7	31.4				
9	120	04.8	343	08.3	53.7	42	38.8	18.0	327	03.8	31.3				
10	135	07.3	358	10.9	54.1	57	39.7	18.1	342	06.0	31.2				
11	150	09.7	13	13.5	+8 54.4	72	40.7	+22 18.3	357	08.1	+12 31.1				
12	165	12.2	28	16.0	+8 54.8	87	41.7	+22 18.5	12	10.3	+12 31.0				
13	180	14.7	43	18.6	55.2	102	42.6	18.7	27	12.5	30.9				
14	195	17.1	58	21.2	55.6	117	43.6	18.8	42	14.6	30.8				
15	210	19.6	73	23.7	56.0	132	44.5	19.0	57	16.8	30.7				
16	225	22.1	88	26.3	56.3	147	45.5	19.2	72	19.0	30.6				
17	240	24.5	103	28.8	+8 56.7	162	46.4	+22 19.3	87	21.1	+12 30.5				
18	255	27.0	118	31.4	+8 57.1	177	47.4	+22 19.5	102	23.3	+12 30.4				
19	270	29.5	133	33.9	57.5	192	48.3	19.7	117	25.5	30.3				
20	285	31.9	148	36.5	57.9	207	49.3	19.8	132	27.6	30.1				
21	300	34.4	163	39.0	58.2	222	50.3	20.0	147	29.8	30.0				
22	315	36.8	178	41.5	58.6	237	51.2	20.2	162	31.9	29.9				
23	330	39.3	193	44.1	59.0	252	52.2	20.3	177	34.1	29.8				
24	345	41.8	208	46.6	+8 59.4	267	53.1	+22 20.5	192	36.3	+12 29.7				
Dif	—		+26		+4	+10		+2	+22		0	+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 25 ^d 0 PHE { 4 ^h : 57'2 12 ^h : 57'0 20 ^h : 56'8 R°: 51 ^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	180	25.6	+6 17.5	232	41.6	+25 38.1	73	60 N	18 47	19 30	20 25	** ** *	18 17	3	
1	195	25.8	16.6	247	08.3	30.8	74	58	43	24	15	** ** *	17 59	9	
2	210	26.0	15.6	261	35.0	23.4	76	56	40	18	20 06	** ** *	44	13	
3	225	26.2	14.7	276	01.8	15.8	77	54	37	13	19 58	** ** *	31	16	
4	240	26.4	13.8	290	28.8	08.1	79	52	34	09	51	** ** *	19	20	
5	255	26.7	+6 12.8	304	55.8	+25 00.2	79	50	18 32	19 05	19 45	0 11 80	17 09	22	
6	270	26.9	+6 11.9	319	22.9	+24 52.3	81	45	18 27	18 57	19 32	0 37 74	16 47	28	
7	285	27.1	11.0	333	50.2	44.1	82	40	23	50	23	0 58 70	29	32	
8	300	27.3	10.0	348	17.5	35.9	83	35	19	45	15	1 15 66	14	36	
9	315	27.5	09.1	2	45.0	27.5	84	30	16	40	19 08	29 65	16 01	39	
10	330	27.7	08.1	17	12.5	19.0	85	20	10	33	18 58	1 54 60	15 39	43	
11	345	27.9	+6 07.2	31	40.1	+24 10.4	86	10 N	18 06	18 27	18 51	2 16 56	15 20	47	
12	0	28.1	+6 06.3	46	07.9	+24 01.6	88	0	18 01	18 22	18 46	2 36 52	15 01	51	
13	15	28.4	05.3	60	35.7	+23 52.7	89	10 S	17 57	18	43	2 55 50	14 43	55	
14	30	28.6	04.4	75	03.7	43.7	90	20	53	15	40	3 17 45	23	59	
15	45	28.8	03.5	89	31.8	34.6	91	30	48	12	40	41 42	14 00	64	
16	60	29.0	02.5	103	59.9	25.4	92	35	45	11	40	3 55 39	13 47	66	
17	75	29.2	+6 01.6	118	28.2	+23 16.0	94	40	17 42	18 09	18 41	4 12 36	13 31	70	
18	90	29.4	+6 00.7	132	56.6	+23 06.5	95	45	17 39	18 08	18 42	4 32 31	13 12	74	
19	105	29.6	+5 59.7	147	25.1	+22 56.9	96	50	34	07	44	4 56 27	12 49	79	
20	120	29.9	58.8	161	53.6	47.2	97	52	33	06	45	5 08 24	37	83	
21	135	30.1	57.9	176	22.3	37.4	98	54	30	06	47	22 20	24	86	
22	150	30.3	56.9	190	51.1	27.5	99	56	28	05	48	37 16	12 09	90	
23	165	30.5	56.0	205	20.0	17.4	101	58	26	05	50	5 56 11	11 51	96	
24	180	30.7	+5 55.0	219	49.0	+22 07.3	101	60 S	17 23	18 04	18 53	6 18 4	11 30	103	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 57 ^m 1		Mag: -4.6 PMG: 10 ^h 03 ^m		Mag: +0.2 PMG: 6 ^h 08 ^m		Mag: -2.2 PMG: 17 ^h 34 ^m		Mag: +0.6 PMG: 11 ^h 08 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	345	41.8	208	46.6	+8 59.4	+22 20.5	95	49.2	-21 44.2	192	36.3				
1	0	44.2	223	49.1	+8 59.7	20.7	110	51.4	44.2	207	38.4				
2	15	46.7	238	51.6	+9 00.1	20.8	125	53.6	44.2	222	40.6				
3	30	49.2	253	54.1	00.5	21.0	140	55.8	44.3	237	42.8				
4	45	51.6	268	56.7	00.9	21.2	155	58.0	44.3	252	44.9				
5	60	54.1	283	59.2	+9 01.2	21.3	171	00.3	-21 44.4	267	47.1				
6	75	56.6	299	01.7	+9 01.6	21.5	186	02.5	-21 44.4	282	49.3				
7	90	59.0	314	04.1	02.0	21.7	201	04.7	44.4	297	51.4				
8	106	01.5	329	06.6	02.3	21.8	216	06.9	44.5	312	53.6				
9	121	04.0	344	09.1	02.7	22.0	231	09.2	44.5	327	55.7				
10	136	06.4	359	11.6	03.1	22.2	246	11.4	44.5	342	57.9				
11	151	08.9	14	14.1	+9 03.4	22.3	261	13.6	-21 44.6	358	00.1				
12	166	11.3	29	16.6	+9 03.8	22.5	276	15.8	-21 44.6	13	02.2				
13	181	13.8	44	19.0	04.2	22.6	291	18.0	44.7	28	04.4				
14	196	16.3	59	21.5	04.5	22.8	306	20.3	44.7	43	06.6				
15	211	18.7	74	24.0	04.9	23.0	321	22.5	44.7	58	08.7				
16	226	21.2	89	26.4	05.3	23.1	336	24.7	44.8	73	10.9				
17	241	23.7	104	28.9	+9 05.6	23.3	351	26.9	-21 44.8	88	13.1				
18	256	26.1	119	31.3	+9 06.0	23.5	6	29.1	-21 44.9	103	15.2				
19	271	28.6	134	33.8	06.3	23.6	21	31.4	44.9	118	17.4				
20	286	31.1	149	36.2	06.7	23.8	36	33.6	44.9	133	19.5				
21	301	33.5	164	38.7	07.1	23.9	51	35.8	45.0	148	21.7				
22	316	36.0	179	41.1	07.4	24.1	66	38.0	45.0	163	23.9				
23	331	38.4	194	43.5	07.8	24.3	81	40.2	45.1	178	26.0				
24	346	40.9	209	45.9	+9 08.1	24.4	96	42.5	-21 45.1	193	28.2				
Dif	—		+25	+4	+10	+2	+22	0		+22	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 8			Edad: 26 ^d 0 PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'3 SD: 15'5 PMG: 9 ^h 40 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	30.7	+5	55.0	219	49.0	+22	07.3	60 N	3 32	4 27	5 10	0 25	99	18 20
1	195	30.9		54.1	234	18.1 ¹⁰¹	+21	57.0 ¹⁰³	58	42	33	14	42	94	18 08
2	210	31.1		53.2	248	47.3 ¹⁰²		46.7 ¹⁰³	56	51	38	17	0 57	88	17 57
3	225	31.3		52.2	263	16.6 ¹⁰³		36.2 ¹⁰⁵	54	3 59	43	20	1 10	84	47
4	240	31.6		51.3	277	46.0 ¹⁰⁴		25.6 ¹⁰⁶	52	4 06	48	22	21	81	39
5	255	31.8	+5	50.4	292	15.5 ¹⁰⁵	+21	15.0 ¹⁰⁶	50	4 12	4 52	5 25	1 31	78	17 31
6	270	32.0	+5	49.4	306	45.2 ¹⁰⁷	+21	04.2 ¹⁰⁸	45	4 24	5 00	5 30	1 51	73	17 15
7	285	32.2		48.5	321	14.9 ¹⁰⁷	+20	53.4 ¹⁰⁸	40	34	06	34	2 08	68	17 01
8	300	32.4		47.5	335	44.7 ¹⁰⁸		42.4 ¹¹⁰	35	42	12	37	21	65	16 50
9	315	32.6		46.6	350	14.6 ¹⁰⁹		31.4 ¹¹⁰	30	48	16	40	34	61	40
10	330	32.8		45.7	4	44.6 ¹¹⁰		20.2 ¹¹²	20	4 58	24	46	2 54	57	22
11	345	33.1	+5	44.7	19	14.8 ¹¹²	+20	09.0 ¹¹²	10 N	5 05	5 29	5 50	3 12	52	16 07
12	0	33.3	+5	43.8	33	45.0 ¹¹²	+19	57.6 ¹¹⁴	0	5 10	5 34	5 55	3 28	49	15 52
13	15	33.5		42.8	48	15.3 ¹¹³		46.2 ¹¹⁴	10 S	13	38	5 59	3 45	44	38
14	30	33.7		41.9	62	45.7 ¹¹⁴		34.7 ¹¹⁵	20	15	41	6 03	4 02	41	22
15	45	33.9		41.0	77	16.2 ¹¹⁵		23.1 ¹¹⁶	30	16	44	07	23	35	15 04
16	60	34.1		40.0	91	46.8 ¹¹⁶	+19	11.5 ¹¹⁶	35	16	45	10	34	33	14 53
17	75	34.3	+5	39.1	106	17.6 ¹¹⁸	+18	59.7 ¹¹⁸	40	5 15	5 46	6 13	4 48	28	14 41
18	90	34.6	+5	38.1	120	48.4 ¹¹⁸	+18	47.9 ¹¹⁸	45	5 13	5 47	6 17	5 03	25	14 26
19	105	34.8		37.2	135	19.3 ¹¹⁹		35.9 ¹²⁰	50	11	48	21	23	19	08
20	120	35.0		36.3	149	50.3 ¹²⁰		23.9 ¹²⁰	52	10	49	22	32	16	14 00
21	135	35.2		35.3	164	21.3 ¹²⁰	+18	11.9 ¹²⁰	54	08	49	24	42	14	13 50
22	150	35.4		34.4	178	52.5 ¹²²	+17	59.7 ¹²²	56	07	49	27	5 53	11	39
23	165	35.6		33.4	193	23.8 ¹²³		47.5 ¹²²	58	05	50	29	6 07	6	27
24	180	35.8	+5	32.5	207	55.2 ¹²⁴	+17	35.2 ¹²³	60 S	5 02	5 50	6 32	6 22	1	13 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 53 ^m 1		Mag: -4.7 PMG: 9 ^h 59 ^m		Mag: +0.2 PMG: 6 ^h 07 ^m		Mag: -2.2 PMG: 17 ^h 31 ^m		Mag: +0.7 PMG: 11 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	346	40.9	209	45.9	+9	08.1	268	16.3	+22	24.4
1	1	43.4	224	48.4		08.5	283	17.2		24.6
2	16	45.8	239	50.8		08.9	298	18.2		24.8
3	31	48.3	254	53.2		09.2	313	19.2		24.9
4	46	50.8	269	55.6		09.6	328	20.2		25.1
5	61	53.2	284	58.0	+9	09.9	343	21.1	+22	25.2
6	76	55.7	300	00.4	+9	10.3	358	22.1	+22	25.4
7	91	58.2	315	02.8		10.6	13	23.1		25.6
8	107	00.6	330	05.2		11.0	28	24.0		25.7
9	122	03.1	345	07.6		11.3	43	25.0		25.9
10	137	05.6	0	10.0		11.7	58	26.0		26.0
11	152	08.0	15	12.3	+9	12.0	73	27.0	+22	26.2
12	167	10.5	30	14.7	+9	12.4	88	27.9	+22	26.3
13	182	12.9	45	17.1		12.7	103	28.9		26.5
14	197	15.4	60	19.5		13.1	118	29.9		26.7
15	212	17.9	75	21.8		13.4	133	30.8		26.8
16	227	20.3	90	24.2		13.8	148	31.8		27.0
17	242	22.8	105	26.5	+9	14.1	163	32.8	+22	27.1
18	257	25.3	120	28.9	+9	14.5	178	33.8	+22	27.3
19	272	27.7	135	31.2		14.8	193	34.7		27.4
20	287	30.2	150	33.6		15.1	208	35.7		27.6
21	302	32.7	165	35.9		15.5	223	36.7		27.8
22	317	35.1	180	38.3		15.8	238	37.7		27.9
23	332	37.6	195	40.6		16.2	253	38.7		28.1
24	347	40.1	210	42.9	+9	16.5	268	39.6	+22	28.2
Dif	—		+24		+3		+10		+2	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 7			Edad: 2 ^d 5 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 1 R ^o : 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m		
0	181	02.1	+3 38.4	157	04.2	-10 22.8	60 N	3 49	4 42	5 24	9 18	86	18 16	1		
1	196	02.3		171	39.5 ¹⁶³	36.1 ¹³³	58	3 58	47	27	10 82		25	4		
2	211	02.5		186	14.7 ¹⁶²	-10 49.4 ¹³³	56	4 05	51	29	9 03	79	33	7		
3	226	02.7		200	49.9 ¹⁶²	-11 02.7 ¹³³	54	11	55	30	8 57	76	39	11		
4	241	03.0		215	25.1 ¹⁶²	15.8 ¹³¹	52	17	4 58	32	52	73	46	13		
5	256	03.2	+3 33.7	230	00.3 ¹⁶²	-11 29.0 ¹³²	50	4 22	5 01	5 34	8 47	71	18 51	16		
6	271	03.4	+3 32.7	244	35.4 ¹⁶¹	-11 42.1 ¹³¹	45	4 32	5 07	5 37	8 37	65	19 03	21		
7	286	03.6		259	10.5 ¹⁶¹	-11 55.1 ¹³⁰	40	40	12	39	28 62		13	25		
8	301	03.8		273	45.6 ¹⁶¹	-12 08.1 ¹³⁰	35	46	16	42	21 58		22	27		
9	316	04.1		288	20.6 ¹⁶⁰	21.1 ¹³⁰	30	52	20	44	14 56		29	31		
10	331	04.3		302	55.6 ¹⁶⁰	34.0 ¹²⁹	20	4 59	25	47	8 03	51	42	36		
11	346	04.5	+3 27.9	317	30.5 ¹⁵⁹	-12 46.8 ¹²⁸	10 N	5 04	5 29	5 50	7 54	46	19 54	39		
12	1	04.7	+3 26.9	332	05.4 ¹⁵⁹	-12 59.6 ¹²⁸	0	5 08	5 32	5 52	7 45	42	20 05	43		
13	16	05.0		346	40.3 ¹⁵⁹	-13 12.4 ¹²⁸	10 S	10	34	55	36 38		16	47		
14	31	05.2		1	15.2 ¹⁵⁹	25.0 ¹²⁶	20	10	35	5 57	27 33		28	50		
15	46	05.4		15	50.0 ¹⁵⁸	37.7 ¹²⁷	30	09	36	6 00	16 29		41	56		
16	61	05.6		30	24.7 ¹⁵⁷	-13 50.3 ¹²⁶	35	07	36	02	10 26		49	58		
17	76	05.8	+3 22.1	44	59.4 ¹⁵⁷	-14 02.8 ¹²⁵	40	5 05	5 36	6 03	7 03	23	20 58	61		
18	91	06.1	+3 21.2	59	34.1 ¹⁵⁷	-14 15.2 ¹²⁴	45	5 02	5 36	6 05	6 55	19	21 08	66		
19	106	06.3		74	08.8 ¹⁵⁷	27.6 ¹²⁴	50	4 58	35	07	45 15		21	71		
20	121	06.5		88	43.4 ¹⁵⁶	40.0 ¹²⁴	52	56	35	09	41 12		27	73		
21	136	06.7		103	17.9 ¹⁵⁵	-14 52.3 ¹²³	54	53	34	10	36 10		34	76		
22	151	07.0		117	52.4 ¹⁵⁵	-15 04.5 ¹²²	56	51	34	11	31 7		41	79		
23	166	07.2		132	26.9 ¹⁵⁵	16.7 ¹²²	58	48	33	12	25 4		49	84		
24	181	07.4	+3 15.4	147	01.3 ¹⁵⁴	-15 28.8 ¹²¹	60 S	4 44	5 32	6 14	6 18	0	21 59	88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 29 ^m 5		Mag: -4.7 PMG: 9 ^h 39 ^m		Mag: +0.1 PMG: 5 ^h 57 ^m		Mag: -2.1 PMG: 17 ^h 10 ^m		Mag: +0.7 PMG: 10 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	352	35.7	214	54.0	+9 51.2	270	39.9	+22 45.2	101	58.8	-21 51.0	198	40.2	+12 11.9
1	7	38.2	229	55.8	51.4	285	41.0	45.3	117	01.0	51.0	213	42.4	11.8
2	22	40.7	244	57.7	51.7	300	42.0	45.4	132	03.2	51.1	228	44.5	11.7
3	37	43.1	259	59.6	51.9	315	43.0	45.6	147	05.4	51.1	243	46.7	11.6
4	52	45.6	275	01.4	52.1	330	44.0	45.7	162	07.5	51.2	258	48.9	11.5
5	67	48.1	290	03.3	+9 52.4	345	45.1	+22 45.8	177	09.7	-21 51.2	273	51.0	+12 11.4
6	82	50.5	305	05.1	+9 52.6	0	46.1	+22 46.0	192	11.9	-21 51.2	288	53.2	+12 11.3
7	97	53.0	320	07.0	52.8	15	47.1	46.1	207	14.1	51.3	303	55.4	11.1
8	112	55.4	335	08.8	53.0	30	48.2	46.2	222	16.2	51.3	318	57.6	11.0
9	127	57.9	350	10.6	53.3	45	49.2	46.3	237	18.4	51.4	333	59.7	10.9
10	143	00.4	5	12.5	53.5	60	50.2	46.5	252	20.6	51.4	349	01.9	10.8
11	158	02.8	20	14.3	+9 53.7	75	51.3	+22 46.6	267	22.8	-21 51.5	4	04.1	+12 10.7
12	173	05.3	35	16.1	+9 54.0	90	52.3	+22 46.7	282	24.9	-21 51.5	19	06.2	+12 10.6
13	188	07.8	50	18.0	54.2	105	53.3	46.8	297	27.1	51.5	34	08.4	10.5
14	203	10.2	65	19.8	54.4	120	54.4	47.0	312	29.3	51.6	49	10.6	10.4
15	218	12.7	80	21.6	54.6	135	55.4	47.1	327	31.4	51.6	64	12.7	10.3
16	233	15.2	95	23.4	54.8	150	56.4	47.2	342	33.6	51.7	79	14.9	10.2
17	248	17.6	110	25.2	+9 55.1	165	57.5	+22 47.3	357	35.8	-21 51.7	94	17.1	+12 10.1
18	263	20.1	125	27.0	+9 55.3	180	58.5	+22 47.5	12	38.0	-21 51.8	109	19.3	+12 10.0
19	278	22.6	140	28.8	55.5	195	59.5	47.6	27	40.1	51.8	124	21.4	09.9
20	293	25.0	155	30.6	55.7	211	00.6	47.7	42	42.3	51.8	139	23.6	09.8
21	308	27.5	170	32.4	55.9	226	01.6	47.8	57	44.5	51.9	154	25.8	09.7
22	323	29.9	185	34.2	56.2	241	02.7	48.0	72	46.6	51.9	169	27.9	09.6
23	338	32.4	200	36.0	56.4	256	03.7	48.1	87	48.8	52.0	184	30.1	09.5
24	353	34.9	215	37.8	+9 56.6	271	04.7	+22 48.2	102	51.0	-21 52.0	199	32.3	+12 09.4
Dif	—		+18	+2		+10	+1		+22	0		+22	-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15°9			Edad: 3 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1																		
	PMG: 11 ^h 55 ^m 3			SD: 14'7 PMG: 14 ^h 37 ^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	181	07.4	+3 15.4	147	01.3	-15 28.8		60 N	18 23	19 05	19 57	10 44 91	18 17 1									
1	196	07.6		161	35.6 ¹⁵³	40.8 ¹²⁰		58	21	19 00	49	32 85	29 8									
2	211	07.8		176	09.9 ¹⁵³	-15 52.8 ¹²⁰		56	19	18 56	42	22 80	40 12									
3	226	08.1		190	44.2 ¹⁵³	-16 04.7 ¹¹⁹		54	17	53	36	13 77	50 15									
4	241	08.3		205	18.4 ¹⁵²	16.6 ¹¹⁹		52	16	50	31	10 05 74	18 59 18									
5	256	08.5	+3 10.6	219	52.6 ¹⁵²	-16 28.4 ¹¹⁸		50	18 15	18 47	19 26	9 58 71	19 07 20									
6	271	08.7	+3 09.7	234	26.7 ¹⁵¹	-16 40.1 ¹¹⁷		45	18 12	18 41	19 16	9 42 66	19 24 25									
7	286	09.0		249	00.8 ¹⁵¹	-16 51.8 ¹¹⁷		40	10	37	09	30 62	38 28									
8	301	09.2		263	34.8 ¹⁵⁰	-17 03.3 ¹¹⁵		35	08	33	19 03	19 59	19 49 32									
9	316	09.4		278	08.7 ¹⁴⁹	14.9 ¹¹⁶		30	06	30	18 58	9 10 56	20 00 34									
10	331	09.6		292	42.6 ¹⁴⁹	26.3 ¹¹⁴		20	03	25	51	8 54 51	18 38									
11	346	09.8	+3 04.9	307	16.5 ¹⁴⁹	-17 37.7 ¹¹⁴		10 N	18 01	18 22	18 46	8 40 47	20 33 42									
12	1	10.1	+3 03.9	321	50.3 ¹⁴⁸	-17 49.0 ¹¹³		0	17 59	18 19	18 43	8 27 44	20 48 45									
13	16	10.3		336	24.0 ¹⁴⁷	-18 00.2 ¹¹²		10 S	57	18	42	14 41	21 03 48									
14	31	10.5		350	57.7 ¹⁴⁷	11.4 ¹¹²		20	54	16	42	8 00 37	18 53									
15	46	10.7	+3 01.0	5	31.3 ¹⁴⁶	22.5 ¹¹¹		30	52	16	44	7 45 32	37 56									
16	61	11.0	+3 00.0	20	04.9 ¹⁴⁶	33.5 ¹¹⁰		35	51	16	46	36 30	47 59									
17	76	11.2	+2 59.1	34	38.4 ¹⁴⁵	-18 44.5 ¹¹⁰		40	17 50	18 17	18 48	7 26 26	21 59 63									
18	91	11.4	+2 58.1	49	11.9 ¹⁴⁵	-18 55.3 ¹⁰⁸		45	17 48	18 17	18 51	7 14 23	22 14 66									
19	106	11.6		63	45.3 ¹⁴⁴	-19 06.1 ¹⁰⁸		50	46	18	56	7 00 18	32 71									
20	121	11.8		78	18.6 ¹⁴³	16.8 ¹⁰⁷		52	45	19	58	6 53 16	40 74									
21	136	12.1		92	51.9 ¹⁴³	27.5 ¹⁰⁷		54	45	20	19 01	46 13	22 50 76									
22	151	12.3		107	25.1 ¹⁴²	38.0 ¹⁰⁵		56	44	21	04	38 9	23 00 81									
23	166	12.5		121	58.2 ¹⁴¹	48.5 ¹⁰⁵		58	42	22	08	29 5	13 85									
24	181	12.7	+2 52.3	136	31.3 ¹⁴¹	-19 58.9 ¹⁰⁴		60 S	17 41	18 23	19 12	6 18 1	23 27 92									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 0 ^h 25 ^m 6			Mag: -4.7 PMG: 9 ^h 36 ^m			Mag: +0.1 PMG: 5 ^h 55 ^m			Mag: -2.1 PMG: 17 ^h 06 ^m			Mag: +0.7 PMG: 10 ^h 40 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	353	34.9		215	37.8	+9 56.6	271	04.7	+22 48.2	102	51.0	-21 52.0	199	32.3	+12 09.4							
1	8	37.3		230	39.6	56.8	286	05.8	48.3	117	53.2	52.1	214	34.5	09.3							
2	23	39.8		245	41.3	57.0	301	06.8	48.4	132	55.3	52.1	229	36.6	09.2							
3	38	42.3		260	43.1	57.2	316	07.9	48.6	147	57.5	52.2	244	38.8	09.1							
4	53	44.7		275	44.9	57.4	331	08.9	48.7	162	59.7	52.2	259	41.0	08.9							
5	68	47.2		290	46.7	+9 57.6	346	09.9	+22 48.8	178	01.8	-21 52.2	274	43.1	+12 08.8							
6	83	49.7		305	48.4	+9 57.8	1	11.0	+22 48.9	193	04.0	-21 52.3	289	45.3	+12 08.7							
7	98	52.1		320	50.2	58.1	16	12.0	49.1	208	06.2	52.3	304	47.5	08.6							
8	113	54.6		335	51.9	58.3	31	13.1	49.2	223	08.3	52.4	319	49.6	08.5							
9	128	57.0		350	53.7	58.5	46	14.1	49.3	238	10.5	52.4	334	51.8	08.4							
10	143	59.5		5	55.4	58.7	61	15.2	49.4	253	12.7	52.5	349	54.0	08.3							
11	159	02.0		20	57.2	+9 58.9	76	16.2	+22 49.5	268	14.8	-21 52.5	4	56.2	+12 08.2							
12	174	04.4		35	58.9	+9 59.1	91	17.2	+22 49.7	283	17.0	-21 52.5	19	58.3	+12 08.1							
13	189	06.9		51	00.7	59.3	106	18.3	49.8	298	19.2	52.6	35	00.5	08.0							
14	204	09.4		66	02.4	59.5	121	19.3	49.9	313	21.3	52.6	50	02.7	07.9							
15	219	11.8		81	04.1	59.7	136	20.4	50.0	328	23.5	52.7	65	04.8	07.8							
16	234	14.3		96	05.9	+9 59.9	151	21.4	50.1	343	25.7	52.7	80	07.0	07.7							
17	249	16.8		111	07.6	+10 00.1	166	22.5	+22 50.3	358	27.8	-21 52.8	95	09.2	+12 07.6							
18	264	19.2		126	09.3	+10 00.3	181	23.5	+22 50.4	13	30.0	-21 52.8	110	11.4	+12 07.5							
19	279	21.7		141	11.0	00.5	196	24.6	50.5	28	32.2	52.8	125	13.5	07.4							
20	294	24.2		156	12.8	00.7	211	25.6	50.6	43	34.3	52.9	140	15.7	07.3							
21	309	26.6		171	14.5	00.9	226	26.7	50.7	58	36.5	52.9	155	17.9	07.2							
22	324	29.1		186	16.2	01.1	241	27.7	50.9	73	38.7	53.0	170	20.0	07.1							
23	339	31.5		201	17.9	01.2	256	28.8	51.0	88	40.8	53.0	185	22.2	07.0							
24	354	34.0		216	19.6	+10 01.4	271	29.8	+22 51.1	103	43.0	-21 53.1	200	24.4	+12 06.9							
Dif	—			+17 +2			+10 +1			+22 0			+22 -1									

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 0			Edad: 4 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m		h	m	m	
0	181	12.7	+2 52.3	136	31.3	-19 58.9	60 N	3 55	4 47	5 29	12 15	93	18 18	6		
1	196	13.0		151	04.3 ¹⁴⁰	-20 09.2 ¹⁰³	58	4 03	51	31	11 57	86	37	12		
2	211	13.2		165	37.3 ¹⁴⁰	19.4 ¹⁰²	56	09	55	33	42	81	18 52	18		
3	226	13.4		180	10.2 ¹³⁹	29.6 ¹⁰²	54	15	4 58	34	30	76	19 05	22		
4	241	13.6		194	43.0 ¹³⁸	39.6 ¹⁰⁰	52	21	5 01	35	19	73	17	24		
5	256	13.8	+2 47.5	209	15.8 ¹³⁸	-20 49.6 ¹⁰⁰	50	4 25	5 04	5 37	11 09	71	19 27	27		
6	271	14.1	+2 46.6	223	48.5 ¹³⁷	-20 59.5 ⁹⁹	45	4 35	5 10	5 39	10 48	66	19 49	31		
7	286	14.3		238	21.1 ¹³⁶	-21 09.3 ⁹⁸	40	42	14	41	32	62	20 06	35		
8	301	14.5		252	53.7 ¹³⁶	19.0 ⁹⁷	35	48	18	43	18	59	21	37		
9	316	14.7		267	26.2 ¹³⁵	28.7 ⁹⁵	30	4 53	21	45	10 06	57	34	39		
10	331	15.0		281	58.6 ¹³⁴	38.2 ⁹⁵	20	5 00	25	47	9 45	53	20 56	43		
11	346	15.2	+2 41.7	296	31.0 ¹³⁴	-21 47.7 ⁹⁵	10 N	5 04	5 29	5 50	9 27	50	21 15	46		
12	1	15.4	+2 40.8	311	03.3 ¹³³	-21 57.0 ⁹³	0	5 07	5 31	5 52	9 11	47	21 33	49		
13	16	15.6		325	35.5 ¹³²	-22 06.3 ⁹²	10 S	08	33	54	8 55	43	21 51	51		
14	31	15.8		340	07.7 ¹³²	15.5 ⁹⁰	20	08	34	56	37	41	22 11	54		
15	46	16.1		354	39.8 ¹³¹	24.5 ⁹⁰	30	06	34	58	17	37	33	57		
16	61	16.3		9	11.9 ¹³¹	33.5 ⁹⁰	35	04	34	5 59	8 06	34	22 46	60		
17	76	16.5	+2 36.0	23	43.8 ¹²⁹	-22 42.4 ⁸⁹	40	5 02	5 33	6 00	7 52	32	23 02	62		
18	91	16.7	+2 35.0	38	15.7 ¹²⁹	-22 51.2 ⁸⁸	45	4 58	5 32	6 01	7 37	28	23 20	65		
19	106	17.0		52	47.5 ¹²⁸	-22 59.9 ⁸⁷	50	53	31	03	18	23	43	69		
20	121	17.2		67	19.3 ¹²⁸	-23 08.5 ⁸⁶	52	51	30	04	7 09	20	23 54	72		
21	136	17.4		81	51.0 ¹²⁷	17.0 ⁸⁵	54	48	30	05	6 59	18	** ** *	**		
22	151	17.6		96	22.6 ¹²⁶	25.5 ⁸⁵	56	45	29	06	47	15	** ** *	**		
23	166	17.9		110	54.1 ¹²⁵	33.8 ⁸³	58	42	28	07	34	10	** ** *	**		
24	181	18.1	+2 29.2	125	25.6 ¹²⁵	-23 42.0 ⁸²	60 S	4 38	5 26	6 08	6 19	4	** ** *	**		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 21 ^m 7			Mag: -4.8 PMG: 9 ^h 34 ^m			Mag: +0.1 PMG: 5 ^h 54 ^m			Mag: -2.1 PMG: 17 ^h 03 ^m			Mag: +0.7 PMG: 10 ^h 37 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	354	34.0		216	19.6	+10 01.4	271	29.8	+22 51.1	103	43.0	-21 53.1	200	24.4	+12 06.9	
1	9	36.5		231	21.3	01.6	286	30.9	51.2	118	45.1	53.1	215	26.6	06.8	
2	24	38.9		246	23.0	01.8	301	31.9	51.3	133	47.3	53.2	230	28.7	06.6	
3	39	41.4		261	24.7	02.0	316	33.0	51.4	148	49.5	53.2	245	30.9	06.5	
4	54	43.9		276	26.4	02.2	331	34.0	51.6	163	51.6	53.2	260	33.1	06.4	
5	69	46.3		291	28.1	+10 02.4	346	35.1	+22 51.7	178	53.8	-21 53.3	275	35.3	+12 06.3	
6	84	48.8		306	29.7	+10 02.6	1	36.1	+22 51.8	193	56.0	-21 53.3	290	37.4	+12 06.2	
7	99	51.3		321	31.4	02.8	16	37.2	51.9	208	58.1	53.4	305	39.6	06.1	
8	114	53.7		336	33.1	02.9	31	38.2	52.0	224	00.3	53.4	320	41.8	06.0	
9	129	56.2		351	34.8	03.1	46	39.3	52.1	239	02.4	53.5	335	43.9	05.9	
10	144	58.7		6	36.4	03.3	61	40.3	52.3	254	04.6	53.5	350	46.1	05.8	
11	160	01.1		21	38.1	+10 03.5	76	41.4	+22 52.4	269	06.8	-21 53.5	5	48.3	+12 05.7	
12	175	03.6		36	39.8	+10 03.7	91	42.5	+22 52.5	284	08.9	-21 53.6	20	50.5	+12 05.6	
13	190	06.0		51	41.4	03.8	106	43.5	52.6	299	11.1	53.6	35	52.6	05.5	
14	205	08.5		66	43.1	04.0	121	44.6	52.7	314	13.2	53.7	50	54.8	05.4	
15	220	11.0		81	44.7	04.2	136	45.6	52.8	329	15.4	53.7	65	57.0	05.3	
16	235	13.4		96	46.4	04.4	151	46.7	53.0	344	17.6	53.8	80	59.1	05.2	
17	250	15.9		111	48.0	+10 04.5	166	47.7	+22 53.1	359	19.7	-21 53.8	96	01.3	+12 05.1	
18	265	18.4		126	49.7	+10 04.7	181	48.8	+22 53.2	14	21.9	-21 53.9	111	03.5	+12 05.0	
19	280	20.8		141	51.3	04.9	196	49.9	53.3	29	24.0	53.9	126	05.7	04.9	
20	295	23.3		156	52.9	05.1	211	50.9	53.4	44	26.2	53.9	141	07.8	04.8	
21	310	25.8		171	54.6	05.2	226	52.0	53.5	59	28.3	54.0	156	10.0	04.7	
22	325	28.2		186	56.2	05.4	241	53.0	53.6	74	30.5	54.0	171	12.2	04.6	
23	340	30.7		201	57.8	05.6	256	54.1	53.8	89	32.7	54.1	186	14.4	04.5	
24	355	33.1		216	59.5	+10 05.7	271	55.2	+22 53.9	104	34.8	-21 54.1	201	16.5	+12 04.4	
Dif	—			+17	+2		+11	+1		+22	0		+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15'9			Edad: 5 ^d 5	PHE	$\left\{ \begin{array}{l} 4^h: 54/2 \\ 12^h: 54/2 \\ 20^h: 54/3 \end{array} \right.$																
	PMG: 11 ^h 54 ^m 6																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m								
0	181	18.1	+2 29.2	125	25.6	-23 42.0	81	60 N	18 16	18 58	19 50	13 48 90	18 24 14									
1	196	18.3		139	57.0 ¹²⁴	50.1	81	58	15	54	42	23 80	18 49 24									
2	211	18.5		154	28.4 ¹²⁴	-23 58.1	80	56	14	51	36	13 03 75	19 10 28									
3	226	18.7		168	59.6 ¹²²	-24 06.0	79	54	12	48	30	12 46 72	27 32									
4	241	19.0		183	30.8 ¹²²	13.8	78	52	11	45	25	32 69	41 35									
5	256	19.2	+2 24.4	198	01.9 ¹²¹	-24 21.5	77	50	18 10	18 43	19 21	12 20 67	19 54 36									
6	271	19.4	+2 23.4	212	33.0 ¹²¹	-24 29.1	76	45	18 08	18 37	19 12	11 54 64	20 20 40									
7	286	19.6		227	04.0 ¹²⁰	36.5	74	40	06	33	05	34 61	41 42									
8	301	19.9		241	34.9 ¹¹⁹	43.9	74	35	05	30	19 00	17 59	20 58 44									
9	316	20.1		256	05.7 ¹¹⁸	51.2	73	30	03	27	18 55	11 03 57	21 13 46									
10	331	20.3		270	36.5 ¹¹⁸	-24 58.3	71	20	18 01	23	49	10 38 55	21 39 48									
11	346	20.5	+2 18.6	285	07.2 ¹¹⁷	-25 05.4	71	10 N	17 59	18 20	18 45	10 17 52	22 01 49									
12	1	20.8	+2 17.6	299	37.9 ¹¹⁷	-25 12.3	69	0	17 58	18 19	18 43	9 58 50	22 22 51									
13	16	21.0		314	08.4 ¹¹⁵	19.1	68	10 S	56	17	42	38 48	22 42 53									
14	31	21.2		328	38.9 ¹¹⁵	25.8	67	20	55	17	42	9 18 45	23 05 54									
15	46	21.4		343	09.3 ¹¹⁴	32.4	66	30	53	17	45	8 54 42	30 57									
16	61	21.6		357	39.7 ¹¹⁴	38.9	65	35	52	18	47	40 41	23 46 57									
17	76	21.9	+2 12.8	12	10.0 ¹¹³	-25 45.3	64	40	17 51	18 19	18 50	8 24 38	** ** *									
18	91	22.1	+2 11.8	26	40.2 ¹¹²	-25 51.5	62	45	17 50	18 20	18 54	8 05 35	** ** *									
19	106	22.3		41	10.3 ¹¹¹	-25 57.6	61	50	49	21	18 59	7 41 31	** ** *									
20	121	22.5		55	40.4 ¹¹¹	-26 03.7	61	52	49	22	19 02	29 30	** ** *									
21	136	22.8		70	10.4 ¹¹⁰	09.6	59	54	48	23	05	17 26	0 06 75									
22	151	23.0		84	40.4 ¹¹⁰	15.3	57	56	47	24	08	7 02 23	21 78									
23	166	23.2		99	10.2 ¹⁰⁸	21.0	57	58	47	26	12	6 44 18	38 83									
24	181	23.4	+2 06.0	113	40.1 ¹⁰⁹	-26 26.5	55	60 S	17 46	18 27	19 17	6 23 10	0 59 91									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG			Mag: -4.8			Mag: +0.1			Mag: -2.1			Mag: +0.7									
	0 ^h 17 ^m 7			PMG: 9 ^h 31 ^m			PMG: 5 ^h 52 ^m			PMG: 16 ^h 59 ^m			PMG: 10 ^h 33 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	355	33.1		216	59.5	+10 05.7	271	55.2	+22 53.9	104	34.8	-21 54.1	201	16.5	+12 04.4							
1	10	35.6		232	01.1	05.9	286	56.2	54.0	119	37.0	54.2	216	18.7	04.2							
2	25	38.1		247	02.7	06.1	301	57.3	54.1	134	39.1	54.2	231	20.9	04.1							
3	40	40.5		262	04.3	06.2	316	58.3	54.2	149	41.3	54.3	246	23.0	04.0							
4	55	43.0		277	05.9	06.4	331	59.4	54.3	164	43.4	54.3	261	25.2	03.9							
5	70	45.5		292	07.5	+10 06.6	347	00.5	+22 54.4	179	45.6	-21 54.3	276	27.4	+12 03.8							
6	85	47.9		307	09.1	+10 06.7	2	01.5	+22 54.5	194	47.8	-21 54.4	291	29.6	+12 03.7							
7	100	50.4		322	10.7	06.9	17	02.6	54.7	209	49.9	54.4	306	31.7	03.6							
8	115	52.9		337	12.3	07.1	32	03.7	54.8	224	52.1	54.5	321	33.9	03.5							
9	130	55.3		352	13.9	07.2	47	04.7	54.9	239	54.2	54.5	336	36.1	03.4							
10	145	57.8		7	15.5	07.4	62	05.8	55.0	254	56.4	54.6	351	38.3	03.3							
11	161	00.3		22	17.1	+10 07.5	77	06.9	+22 55.1	269	58.5	-21 54.6	6	40.4	+12 03.2							
12	176	02.7		37	18.7	+10 07.7	92	07.9	+22 55.2	285	00.7	-21 54.7	21	42.6	+12 03.1							
13	191	05.2		52	20.3	07.8	107	09.0	55.3	300	02.8	54.7	36	44.8	03.0							
14	206	07.6		67	21.8	08.0	122	10.1	55.4	315	05.0	54.7	51	47.0	02.9							
15	221	10.1		82	23.4	08.1	137	11.1	55.5	330	07.1	54.8	66	49.1	02.8							
16	236	12.6		97	25.0	08.3	152	12.2	55.7	345	09.3	54.8	81	51.3	02.7							
17	251	15.0		112	26.6	+10 08.5	167	13.3	+22 55.8	0	11.4	-21 54.9	96	53.5	+12 02.6							
18	266	17.5		127	28.1	+10 08.6	182	14.4	+22 55.9	15	13.6	-21 54.9	111	55.7	+12 02.5							
19	281	20.0		142	29.7	08.8	197	15.4	56.0	30	15.8	55.0	126	57.8	02.4							
20	296	22.4		157	31.3	08.9	212	16.5	56.1	45	17.9	55.0	142	00.0	02.3							
21	311	24.9		172	32.8	09.0	227	17.6	56.2	60	20.1	55.1	157	02.2	02.2							
22	326	27.4		187	34.4	09.2	242	18.6	56.3	75	22.2	55.1	172	04.3	02.1							
23	341	29.8		202	35.9	09.3	257	19.7	56.4	90	24.4	55.1	187	06.5	02.0							
24	356	32.3		217	37.5	+10 09.5	272	20.8	+22 56.5	105	26.5	-21 55.2	202	08.7	+12 01.9							
Dif	—			+16			+11			+22			+22									
				+2			+1			0			-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 3			Edad: 6 ^d 5 SD: 14'8 PMG: 17 ^h 00 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'6 20 ^h : 54'7 R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	181	23.4	+2	06.0	113	40.1	-26	26.5	54	60 N	4 00	4 52	5 34	15 18 71	
1	196	23.6		05.1	128	09.8	107	31.9	54	58	08	56	35	14 43 66	
2	211	23.9		04.1	142	39.5	107	37.2	53	56	14	4 59	36	14 18 63	
3	226	24.1		03.1	157	09.1	106	42.4	52	54	19	5 02	38	13 58 62	
4	241	24.3		02.1	171	38.6	105	47.5	51	52	24	05	39	41 61	
5	256	24.5	+2	01.2	186	08.1	105	-26	52.4	49	50	4 29	5 07	5 40	
6	271	24.8	+2	00.2	200	37.5	104	-26	57.2	48	45	4 37	5 12	5 42	
7	286	25.0	+1	59.2	215	06.9	104	-27	01.8	46	40	44	16	43	
8	301	25.2		58.3	229	36.2	103	06.4	46	35	50	19	45	16 56	
9	316	25.4		57.3	244	05.4	102	10.8	44	30	4 54	22	46	12 00 55	
10	331	25.7		56.3	258	34.6	102	15.1	43	20	5 00	26	48	11 33 54	
11	346	25.9	+1	55.4	273	03.7	101	-27	19.2	41	10 N	5 04	5 29	5 50	
12	1	26.1	+1	54.4	287	32.7	100	-27	23.3	41	0	5 06	5 30	5 51	
13	16	26.3		53.4	302	01.7	100	27.2	39	10 S	07	31	52	26 52	
14	31	26.5		52.5	316	30.7	100	30.9	37	20	06	32	54	10 03 50	
15	46	26.8		51.5	330	59.5	98	34.6	37	30	04	31	55	9 36 49	
16	61	27.0		50.5	345	28.3	98	38.1	35	35	5 01	31	56	21 47	
17	76	27.2	+1	49.6	359	57.1	98	-27	41.4	33	40	4 58	5 30	5 57	
18	91	27.4	+1	48.6	14	25.8	97	-27	44.7	33	45	4 54	5 28	5 58	
19	106	27.7		47.6	28	54.4	96	47.8	31	50	49	27	59	8 12 43	
20	121	27.9		46.7	43	23.0	96	50.7	29	52	46	26	5 59	7 59 41	
21	136	28.1		45.7	57	51.6	96	53.6	29	54	43	25	6 00	43 40	
22	151	28.3		44.7	72	20.1	95	56.3	27	56	40	23	00	25 37	
23	166	28.6		43.8	86	48.5	94	-27	58.8	25	58	36	22	01	
24	181	28.8	+1	42.8	101	16.9	94	-28	01.2	24	60 S	4 31	5 20	6 02	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 13 ^m 8			Mag: -4.8 PMG: 9 ^h 29 ^m			Mag: +0.1 PMG: 5 ^h 50 ^m			Mag: -2.1 PMG: 16 ^h 56 ^m			Mag: +0.7 PMG: 10 ^h 30 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	356	32.3		217	37.5	+10	272	20.8	+22	105	26.5	-21	202	08.7	+12
1	11	34.8		232	39.0		287	21.9		120	28.7		217	10.9	
2	26	37.2		247	40.5		302	22.9		135	30.8		232	13.0	
3	41	39.7		262	42.1		317	24.0		150	33.0		247	15.2	
4	56	42.1		277	43.6		332	25.1		165	35.1		262	17.4	
5	71	44.6		292	45.1	+10	347	26.2	+22	180	37.3	-21	277	19.6	+12
6	86	47.1		307	46.7	+10	2	27.2	+22	195	39.4	-21	292	21.7	+12
7	101	49.5		322	48.2		17	28.3		210	41.6		307	23.9	
8	116	52.0		337	49.7		32	29.4		225	43.7		322	26.1	
9	131	54.5		352	51.2		47	30.5		240	45.8		337	28.3	
10	146	56.9		7	52.7		62	31.5		255	48.0		352	30.4	
11	161	59.4		22	54.3	+10	77	32.6	+22	270	50.1	-21	7	32.6	+12
12	177	01.9		37	55.8	+10	92	33.7	+22	285	52.3	-21	22	34.8	+12
13	192	04.3		52	57.3		107	34.8		300	54.4		37	37.0	
14	207	06.8		67	58.8		122	35.9		315	56.6		52	39.1	
15	222	09.3		83	00.3		137	36.9		330	58.7		67	41.3	
16	237	11.7		98	01.8		152	38.0		346	00.9		82	43.5	
17	252	14.2		113	03.3	+10	167	39.1	+22	1	03.0	-21	97	45.7	+12
18	267	16.6		128	04.8	+10	182	40.2	+22	16	05.2	-21	112	47.8	+12
19	282	19.1		143	06.2		197	41.3		31	07.3		127	50.0	+11
20	297	21.6		158	07.7		212	42.4		46	09.5		142	52.2	
21	312	24.0		173	09.2		227	43.4		61	11.6		157	54.4	
22	327	26.5		188	10.7		242	44.5		76	13.7		172	56.5	
23	342	29.0		203	12.2		257	45.6		91	15.9		187	58.7	
24	357	31.4		218	13.6	+10	272	46.7	+22	106	18.0	-21	203	00.9	+11
Dif	—			+15	+1		+11	+1		+21	0		+22	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53 ^m 9			Edad: 7 ^d 5 PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3 R°: 54 ^m SD: 14'9 PMG: 17 ^h 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	181	28.8	+1 42.8	101	16.9	-28 01.2	23	60 N	18 10	18 52	19 43	16 29 36		19 17 77		
1	196	29.0		115	45.2	93	03.5	58	09	49	36	15 49 42		19 57 71		
2	211	29.2		130	13.5	93	05.6	56	08	45	30	21 46		20 25 67		
3	226	29.4		144	41.7	92	07.6	54	07	43	25	15 00 47		20 47 65		
4	241	29.7		159	09.9	92	09.5	52	07	40	20	14 42 48		21 04 65		
5	256	29.9	+1 37.9	173	38.1	92	-28 11.2	50	18 06	18 38	19 16	14 27 48		21 20 63		
6	271	30.1	+1 37.0	188	06.2	91	-28 12.8	45	18 04	18 34	19 08	13 56 50		21 50 62		
7	286	30.3		202	34.2	90	14.2	40	03	30	19 02	32 51		22 14 60		
8	301	30.6		217	02.3	91	15.5	35	02	27	18 57	13 12 52		34 59		
9	316	30.8		231	30.2	89	16.7	30	18 01	25	53	12 55 53		22 51 58		
10	331	31.0		245	58.2	90	17.7	20	17 59	21	47	27 53		23 19 57		
11	346	31.2	+1 32.1	260	26.1	89	-28 18.5	10 N	17 58	18 19	18 44	12 03 53		23 43 56		
12	1	31.5	+1 31.2	274	53.9	88	-28 19.2	0	17 57	18 18	18 42	11 40 54	***	***	***	
13	16	31.7		289	21.7	88	19.8	10 S	56	17	42	11 18 54	***	***	***	
14	31	31.9		303	49.5	88	20.2	20	55	17	43	10 53 55		***	***	
15	46	32.1		318	17.3	88	20.5	30	54	18	46	25 55		0 27 54		
16	61	32.3		332	45.0	87	20.6	35	54	19	49	10 08 56		0 43 55		
17	76	32.6	+1 26.3	347	12.7	87	-28 20.6	40	17 53	18 20	18 52	9 49 56		1 03 54		
18	91	32.8	+1 25.3	1	40.3	86	-28 20.4	45	17 53	18 22	18 56	9 25 56		1 26 54		
19	106	33.0		16	08.0	87	20.1	50	52	24	19 02	8 55 57		1 56 54		
20	121	33.2		30	35.6	86	19.7	52	52	26	05	40 57		2 11 54		
21	136	33.5		45	03.1	85	19.1	54	52	27	08	23 57		28 55		
22	151	33.7		59	30.7	86	18.3	56	51	28	12	8 02 57		2 49 54		
23	166	33.9		73	58.2	85	17.4	58	51	30	17	7 35 58		3 16 54		
24	181	34.1	+1 19.5	88	25.7	85	-28 16.4	60 S	17 51	18 32	19 22	6 58 59		3 53 53		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 09 ^m 9			Mag: -4.8 PMG: 9 ^h 26 ^m			Mag: +0.1 PMG: 5 ^h 48 ^m			Mag: -2.1 PMG: 16 ^h 52 ^m			Mag: +0.7 PMG: 10 ^h 26 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	357	31.4		218	13.6	+10 12.7	272	46.7	+22 59.1	106	18.0	-21 56.3	203	00.9	+11 59.4	
1	12	33.9		233	15.1	12.8	287	47.8	59.2	121	20.2	56.3	218	03.1	59.3	
2	27	36.4		248	16.6	12.9	302	48.9	59.3	136	22.3	56.4	233	05.2	59.2	
3	42	38.8		263	18.0	13.0	317	49.9	59.4	151	24.5	56.4	248	07.4	59.1	
4	57	41.3		278	19.5	13.1	332	51.0	59.5	166	26.6	56.5	263	09.6	59.0	
5	72	43.7		293	21.0	+10 13.2	347	52.1	+22 59.6	181	28.8	-21 56.5	278	11.8	+11 58.9	
6	87	46.2		308	22.4	+10 13.4	2	53.2	+22 59.7	196	30.9	-21 56.5	293	13.9	+11 58.8	
7	102	48.7		323	23.9	13.5	17	54.3	59.8	211	33.0	56.6	308	16.1	58.7	
8	117	51.1		338	25.3	13.6	32	55.4	+22 59.9	226	35.2	56.6	323	18.3	58.6	
9	132	53.6		353	26.7	13.7	47	56.5	+23 00.0	241	37.3	56.7	338	20.5	58.4	
10	147	56.1		8	28.2	13.8	62	57.6	+23 00.1	256	39.5	56.7	353	22.6	58.3	
11	162	58.5		23	29.6	+10 13.9	77	58.7	+23 00.2	271	41.6	-21 56.8	8	24.8	+11 58.2	
12	178	01.0		38	31.1	+10 14.0	92	59.8	+23 00.3	286	43.7	-21 56.8	23	27.0	+11 58.1	
13	193	03.5		53	32.5	14.1	108	00.8	00.4	301	45.9	56.9	38	29.2	58.0	
14	208	05.9		68	33.9	14.2	123	01.9	00.5	316	48.0	56.9	53	31.4	57.9	
15	223	08.4		83	35.4	14.4	138	03.0	00.6	331	50.2	57.0	68	33.5	57.8	
16	238	10.9		98	36.8	14.5	153	04.1	00.7	346	52.3	57.0	83	35.7	57.7	
17	253	13.3		113	38.2	+10 14.6	168	05.2	+23 00.8	1	54.4	-21 57.0	98	37.9	+11 57.6	
18	268	15.8		128	39.6	+10 14.7	183	06.3	+23 00.9	16	56.6	-21 57.1	113	40.1	+11 57.5	
19	283	18.2		143	41.0	14.8	198	07.4	01.0	31	58.7	57.1	128	42.2	57.4	
20	298	20.7		158	42.4	14.9	213	08.5	01.1	47	00.9	57.2	143	44.4	57.3	
21	313	23.2		173	43.9	15.0	228	09.6	01.2	62	03.0	57.2	158	46.6	57.2	
22	328	25.6		188	45.3	15.1	243	10.7	01.3	77	05.1	57.3	173	48.8	57.1	
23	343	28.1		203	46.7	15.2	258	11.8	01.4	92	07.3	57.3	188	50.9	57.0	
24	358	30.6		218	48.1	+10 15.3	273	12.9	+23 01.5	107	09.4	-21 57.4	203	53.1	+11 56.9	
Dif	—			+14 +1			+11 +1			+21 0			+22 -1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 53 ^m 5			Edad: 8 ^d 5 PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 56 ^s 0 R°: 54 ^m																
	hG ☉ Dec			hG ☾ Dif Dec Dif						Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m	m		
0	181	34.1	+1 19.5	88	25.7	85	−28 16.4	12	60 N	4	06	4	57	5	38	17	05	14		
1	196	34.3		102	53.2	85		15.2	58		12	5	00	39		16	31	24		
2	211	34.6		117	20.6	84		13.8	56		18		03	40		16	07	28		
3	226	34.8		131	48.0	84		12.3	54		23		06	41		15	47	32		
4	241	35.0		146	15.5	85		10.6	52		28		08	42		30	35	22		
5	256	35.2	+1 14.7	160	42.8	83	−28 08.8	18	50	4	32	5	10	5	43	15	15	38		
6	271	35.5	+1 13.7	175	10.2	84	−28 06.9	19	45	4	40	5	15	5	44	14	46	41		
7	286	35.7		189	37.6	84		04.8	40		46		18	45		23	44	23		
8	301	35.9		204	04.9	83		02.5	35		51		21	46		14	04	46		
9	316	36.1		218	32.3	84	−28 00.1	23	30	4	55	23		47		13	48	47		
10	331	36.4		232	59.6	83	−27 57.6	25	20	5	01	26		48		13	20	50		
11	346	36.6	+1 08.9	247	26.9	83	−27 54.8	28	10 N	5	04	5	28	5	49	12	56	53		
12	1	36.8	+1 07.9	261	54.2	83	−27 52.0	28	0	5	06	5	30	5	50	12	34	54		
13	16	37.0		276	21.5	83		49.0	10 S		06		30	51		12	12	56		
14	31	37.2		290	48.8	83		45.8	20		04		30	52		11	48	58		
15	46	37.5		305	16.1	83		42.5	30	5	01	29		53		20	61	1		
16	61	37.7		319	43.4	83		39.0	35	4	58	28		53		11	04	62		
17	76	37.9	+1 03.0	334	10.7	83	−27 35.4	36	40	4	55	5	26	5	53	10	45	63		
18	91	38.1	+1 02.1	348	38.0	83	−27 31.6	38	45	4	50	5	25	5	54	10	21	66		
19	106	38.4		3	05.3	83		27.7	50		44		22	54		9	52	69		
20	121	38.6	+1 00.1	17	32.5	82		23.6	52		41		21	55		37	71	3		
21	136	38.8	+0 59.1	31	59.8	83		19.4	54		38		20	55		9	20	73		
22	151	39.0		46	27.1	83		15.0	56		34		18	55		8	59	76		
23	166	39.2		60	54.4	83		10.5	58		30		16	55		8	33	81		
24	181	39.5	+0 56.2	75	21.7	83	−27 05.8	47	60 S	4	25	5	14	5	55	7	57	90		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 05 ^m 9			Mag: −4.8 PMG: 9 ^h 24 ^m			Mag: +0.1 PMG: 5 ^h 47 ^m			Mag: −2.1 PMG: 16 ^h 49 ^m			Mag: +0.7 PMG: 10 ^h 23 ^m		
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	358	30.6	218	48.1	+10 15.3	273	12.9	+23 01.5	107	09.4	−21 57.4	203	53.1	+11 56.9	
1	13	33.0	233	49.5		288	14.0		122	11.6		218	55.3		
2	28	35.5	248	50.9		303	15.1		137	13.7		233	57.5		
3	43	38.0	263	52.2		318	16.2		152	15.8		248	59.6		
4	58	40.4	278	53.6		333	17.3		167	18.0		264	01.8		
5	73	42.9	293	55.0	+10 15.7	348	18.4	+23 02.0	182	20.1	−21 57.6	279	04.0	+11 56.4	
6	88	45.4	308	56.4	+10 15.8	3	19.5	+23 02.1	197	22.2	−21 57.6	294	06.2	+11 56.3	
7	103	47.8	323	57.8		18	20.6		212	24.4		309	08.4		
8	118	50.3	338	59.2		33	21.7		227	26.5		324	10.5		
9	133	52.7	354	00.5		48	22.8		242	28.6		339	12.7		
10	148	55.2	9	01.9		63	23.9		257	30.8		354	14.9		
11	163	57.7	24	03.3	+10 16.3	78	25.0	+23 02.6	272	32.9	−21 57.9	9	17.1	+11 55.8	
12	179	00.1	39	04.6	+10 16.3	93	26.1	+23 02.7	287	35.0	−21 57.9	24	19.2	+11 55.7	
13	194	02.6	54	06.0		108	27.2		302	37.2		39	21.4		
14	209	05.1	69	07.4		123	28.3		317	39.3		54	23.6		
15	224	07.5	84	08.7		138	29.4		332	41.4		69	25.8		
16	239	10.0	99	10.1		153	30.5		347	43.6		84	28.0		
17	254	12.5	114	11.4	+10 16.7	168	31.6	+23 03.2	2	45.7	−21 58.1	99	30.1	+11 55.2	
18	269	14.9	129	12.8	+10 16.8	183	32.7	+23 03.3	17	47.8	−21 58.2	114	32.3	+11 55.1	
19	284	17.4	144	14.1		198	33.8		32	50.0		129	34.5		
20	299	19.9	159	15.5		213	34.9		47	52.1		144	36.7		
21	314	22.3	174	16.8		228	36.0		62	54.2		159	38.8		
22	329	24.8	189	18.1		243	37.2		77	56.4		174	41.0		
23	344	27.2	204	19.5		258	38.3		92	58.5		189	43.2		
24	359	29.7	219	20.8	+10 17.3	273	39.4	+23 03.9	108	00.6	−21 58.5	204	45.4	+11 54.4	
Dif	—			+14	+1	+11	+1		+21	0		+22	−1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 53 ^m 2			Edad: 9 ^d 5 PHE { 4 ^h : 56'2 12 ^h : 56'5 20 ^h : 56'8 R°: 53 ^m SD: 15'3 PMG: 19 ^h 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m			
0	181	39.5	+0 56.2	75	21.7	-27 05.8	60 N	18 04	18 46	19 36	17 19 5		22 13 106			
1	196	39.7		89	49.0	-27 00.9	58	04	43	30	16 55 12		37 97			
2	211	39.9		104	16.3	-26 55.9	56	03	40	24	35 18		22 56 91			
3	226	40.1		118	43.7	50.8	54	02	38	20	19 22		23 12 87			
4	241	40.4		133	11.0	45.5	52	02	36	15	16 05 25		25 84			
5	256	40.6	+0 51.4	147	38.3	-26 40.1	50	18 01	18 34	19 12	15 53 28		23 37 81			
6	271	40.8	+0 50.4	162	05.7	-26 34.5	45	18 00	18 30	19 04	15 27 34		** ** *			
7	286	41.0		176	33.1	28.7	40	18 00	27	18 58	15 07 37		** ** *			
8	301	41.2		191	00.5	22.8	35	17 59	24	54	14 50 40		** ** *			
9	316	41.5		205	27.9	16.8	30	58	22	50	35 43		** ** *			
10	331	41.7		219	55.3	10.6	20	58	20	45	14 10 47		0 16 59			
11	346	41.9	+0 45.6	234	22.7	-26 04.2	10 N	17 57	18 18	18 42	13 49 50		0 39 56			
12	1	42.1	+0 44.6	248	50.2	-25 57.8	0	17 56	18 17	18 41	13 28 54		1 00 54			
13	16	42.4		263	17.6	51.1	10 S	56	17	41	13 08 57		22 51			
14	31	42.6		277	45.1	44.3	20	56	18	43	12 46 60		1 44 49			
15	46	42.8		292	12.6	37.4	30	55	19	47	21 64		2 11 45			
16	61	43.0		306	40.2	30.3	35	55	21	50	12 06 66		26 43			
17	76	43.2	+0 39.7	321	07.7	-25 23.1	40	17 55	18 22	18 54	11 48 70		2 44 41			
18	91	43.5	+0 38.8	335	35.3	-25 15.7	45	17 55	18 25	18 59	11 27 74		3 06 37			
19	106	43.7		350	02.9	08.2	50	55	27	19 05	11 01 78		33 33			
20	121	43.9		4	30.6	-25 00.5	52	55	29	09	10 48 81		3 47 30			
21	136	44.1		18	58.2	-24 52.7	54	55	31	12	33 84		4 02 27			
22	151	44.3		33	25.9	44.7	56	55	32	16	10 15 89		20 23			
23	166	44.6		47	53.6	36.6	58	55	34	21	9 54 94		4 41 18			
24	181	44.8	+0 32.9	62	21.4	-24 28.3	60 S	17 55	18 37	19 27	9 27 102		5 09 9			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 0 ^h 02 ^m 0		Mag: -4.8 PMG: 9 ^h 22 ^m		Mag: 0.0 PMG: 5 ^h 45 ^m		Mag: -2.1 PMG: 16 ^h 46 ^m		Mag: +0.7 PMG: 10 ^h 19 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	359	29.7	219	20.8	273	39.4	108	00.6	204	45.4						
1	14	32.2	234	22.1	288	40.5	123	02.8	219	47.6						
2	29	34.6	249	23.5	303	41.6	138	04.9	234	49.7						
3	44	37.1	264	24.8	318	42.7	153	07.0	249	51.9						
4	59	39.6	279	26.1	333	43.8	168	09.2	264	54.1						
5	74	42.0	294	27.4	348	44.9	183	11.3	279	56.3						
6	89	44.5	309	28.7	3	46.0	198	13.4	294	58.4						
7	104	47.0	324	30.0	18	47.2	213	15.6	310	00.6						
8	119	49.4	339	31.3	33	48.3	228	17.7	325	02.8						
9	134	51.9	354	32.7	48	49.4	243	19.8	340	05.0						
10	149	54.3	9	34.0	63	50.5	258	21.9	355	07.2						
11	164	56.8	24	35.3	78	51.6	273	24.1	10	09.3						
12	179	59.3	39	36.6	93	52.7	288	26.2	25	11.5						
13	195	01.7	54	37.8	108	53.9	303	28.3	40	13.7						
14	210	04.2	69	39.1	123	55.0	318	30.5	55	15.9						
15	225	06.7	84	40.4	138	56.1	333	32.6	70	18.1						
16	240	09.1	99	41.7	153	57.2	348	34.7	85	20.2						
17	255	11.6	114	43.0	168	58.3	3	36.8	100	22.4						
18	270	14.1	129	44.3	183	59.4	18	39.0	115	24.6						
19	285	16.5	144	45.6	199	00.6	33	41.1	130	26.8						
20	300	19.0	159	46.8	214	01.7	48	43.2	145	28.9						
21	315	21.5	174	48.1	229	02.8	63	45.3	160	31.1						
22	330	23.9	189	49.4	244	03.9	78	47.5	175	33.3						
23	345	26.4	204	50.6	259	05.0	93	49.6	190	35.5						
24	0	28.8	219	51.9	274	06.2	108	51.7	205	37.7						
Dif	—		+13	+1	+11	+1	+21	0	+22	-1						

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52 ^m 5		Edad: 11 ^d 5 PHE { SD: 15'8 PMG: 21 ^h 26 ^m 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'7 R°: 50 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	181	50.1	+0	09.6	49	36.9	-20 28.7	60 N	17 58	18 40	19 29	17 25	1	** ** *	**
1	196	50.3		08.6	64	05.5	96 17.1	58	58	37	24	15	4	0 14	99
2	211	50.5		07.6	78	34.1	96 -20 05.3	56	58	35	19	17 05	9	28	94
3	226	50.8		06.7	93	02.8	97 -19 53.4	54	57	33	14	16 57	12	39	90
4	241	51.0		05.7	107	31.5	97 41.4	52	57	31	11	49	15	49	87
5	256	51.2	+0	04.7	122	00.2	97 -19 29.3	50	17 57	18 29	19 07	16 43	17	0 58	84
6	271	51.4	+0	03.7	136	29.0	98 -19 17.0	45	17 57	18 26	19 00	16 28	23	1 17	78
7	286	51.6		02.8	150	57.8	98 -19 04.7	40	56	23	18 55	16	28	32	73
8	301	51.9		01.8	165	26.6	98 -18 52.2	35	56	21	51	16 05	32	45	69
9	316	52.1	+0	00.8	179	55.5	99 39.6	30	56	20	48	15 56	35	1 56	66
10	331	52.3	-0	00.1	194	24.4	99 26.8	20	56	18	43	41	40	2 15	61
11	346	52.5	-0	01.1	208	53.4	100 -18 14.0	10 N	17 56	18 17	18 41	15 27	46	2 32	55
12	1	52.7	-0	02.1	223	22.4	100 -18 01.0	0	17 56	18 16	18 40	15 14	50	2 47	51
13	16	53.0		03.1	237	51.4	100 -17 48.0	10 S	56	17	41	15 01	55	3 02	47
14	31	53.2		04.0	252	20.5	101 34.8	20	56	18	44	14 47	60	18	42
15	46	53.4		05.0	266	49.6	101 21.5	30	57	20	48	31	66	36	37
16	61	53.6		06.0	281	18.7	101 -17 08.1	35	57	22	52	21	70	47	33
17	76	53.8	-0	07.0	295	47.8	101 -16 54.5	40	17 57	18 24	18 56	14 10	74	3 59	29
18	91	54.1	-0	07.9	310	17.0	102 -16 40.9	45	17 58	18 27	19 01	13 58	78	4 13	25
19	106	54.3		08.9	324	46.3	103 27.2	50	58	31	09	42	85	30	20
20	121	54.5		09.9	339	15.5	102 -16 13.3	52	58	32	12	35	87	38	17
21	136	54.7		10.8	353	44.8	103 -15 59.4	54	59	34	16	26	91	47	14
22	151	54.9		11.8	8	14.1	103 45.3	56	17 59	36	21	17	95	4 57	10
23	166	55.2		12.8	22	43.5	104 31.2	58	18 00	39	26	13 07	99	5 09	6
24	181	55.4	-0	13.8	37	12.9	104 -15 16.9	60 S	18 00	18 42	19 32	12 54	105	5 22	1

UT	ARIES	VENUS		MARTE		JÚPITER		SATURNO		
	PMG 23 ^h 50 ^m 2	Mag: -4.8 PMG: 9 ^h 18 ^m		Mag: 0.0 PMG: 5 ^h 41 ^m		Mag: -2.1 PMG: 16 ^h 39 ^m		Mag: +0.7 PMG: 10 ^h 13 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	'	°	'	°	'	°	'	
0	1	28.0	220 21.4	+10 19.6	274 33.3	+23 08.2	109 42.7	-22 00.7	206 30.0	+11 49.6
1	16	30.5	235 22.6	19.6	289 34.4	08.3	124 44.8	00.8	221 32.2	49.5
2	31	32.9	250 23.8	19.6	304 35.5	08.4	139 46.9	00.8	236 34.3	49.4
3	46	35.4	265 25.0	19.6	319 36.7	08.5	154 49.0	00.8	251 36.5	49.3
4	61	37.8	280 26.2	19.6	334 37.8	08.6	169 51.1	00.9	266 38.7	49.2
5	76	40.3	295 27.4	+10 19.7	349 39.0	+23 08.7	184 53.2	-22 00.9	281 40.9	+11 49.1
6	91	42.8	310 28.6	+10 19.7	4 40.1	+23 08.8	199 55.4	-22 01.0	296 43.1	+11 48.9
7	106	45.2	325 29.8	19.7	19 41.2	08.8	214 57.5	01.0	311 45.3	48.8
8	121	47.7	340 30.9	19.7	34 42.4	08.9	229 59.6	01.1	326 47.4	48.7
9	136	50.2	355 32.1	19.7	49 43.5	09.0	245 01.7	01.1	341 49.6	48.6
10	151	52.6	10 33.3	19.7	64 44.7	09.1	260 03.8	01.2	356 51.8	48.5
11	166	55.1	25 34.5	+10 19.7	79 45.8	+23 09.2	275 06.0	-22 01.2	11 54.0	+11 48.4
12	181	57.6	40 35.6	+10 19.8	94 46.9	+23 09.3	290 08.1	-22 01.3	26 56.2	+11 48.3
13	197	00.0	55 36.8	19.8	109 48.1	09.4	305 10.2	01.3	41 58.3	48.2
14	212	02.5	70 38.0	19.8	124 49.2	09.4	320 12.3	01.4	57 00.5	48.1
15	227	04.9	85 39.1	19.8	139 50.4	09.5	335 14.4	01.4	72 02.7	48.0
16	242	07.4	100 40.3	19.8	154 51.5	09.6	350 16.5	01.5	87 04.9	47.9
17	257	09.9	115 41.4	+10 19.8	169 52.7	+23 09.7	5 18.6	-22 01.5	102 07.1	+11 47.8
18	272	12.3	130 42.6	+10 19.8	184 53.8	+23 09.8	20 20.8	-22 01.6	117 09.3	+11 47.7
19	287	14.8	145 43.7	19.8	199 54.9	09.9	35 22.9	01.6	132 11.4	47.6
20	302	17.3	160 44.9	19.8	214 56.1	09.9	50 25.0	01.6	147 13.6	47.5
21	317	19.7	175 46.0	19.8	229 57.2	10.0	65 27.1	01.7	162 15.8	47.4
22	332	22.2	190 47.2	19.8	244 58.4	10.1	80 29.2	01.7	177 18.0	47.3
23	347	24.7	205 48.3	19.8	259 59.5	10.2	95 31.3	01.8	192 20.2	47.2
24	2	27.1	220 49.5	+10 19.8	275 00.7	+23 10.3	110 33.4	-22 01.8	207 22.3	+11 47.1
Dif	—	+12	0	+11	+1	+21	0	+22	-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 51 ^m 8			Edad: 13 ^d 5 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'3 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m			
0	182	00.6	-0 37.1	25	05.5	-9 07.7	60 N	17 52	18 33	19 23	17 25 0		3 28 103			
1	197	00.8		39	35.4 ¹⁰⁹	-8 51.4 ¹⁶³	58	52	31	18	23 3		32 100			
2	212	01.1		54	05.4 ¹¹⁰	35.0 ¹⁶⁴	56	52	29	13	21 7		37 95			
3	227	01.3		68	35.3 ¹⁰⁹	18.5 ¹⁶⁵	54	52	28	09	19 10		41 92			
4	242	01.5		83	05.3 ¹¹⁰	-8 01.9 ¹⁶⁶	52	52	26	06	17 13		44 89			
5	257	01.7	-0 42.0	97	35.2 ¹⁰⁹	-7 45.3 ¹⁶⁶	50	17 53	18 25	19 03	17 16 15		3 47 86			
6	272	01.9	-0 43.0	112	05.2 ¹¹⁰	-7 28.6 ¹⁶⁷	45	17 53	18 22	18 56	17 12 21		3 54 80			
7	287	02.2		126	35.2 ¹¹⁰	-7 11.9 ¹⁶⁷	40	53	20	51	09 26		4 00 75			
8	302	02.4		141	05.1 ¹⁰⁹	-6 55.1 ¹⁶⁸	35	53	18	48	07 29		04 71			
9	317	02.6		155	35.1 ¹¹⁰	38.3 ¹⁶⁸	30	53	17	45	05 33		09 67			
10	332	02.8		170	05.1 ¹¹⁰	21.4 ¹⁶⁹	20	54	16	41	17 01 39		16 60			
11	347	03.0	-0 47.8	184	35.1 ¹¹⁰	-6 04.4 ¹⁷⁰	10 N	17 54	18 15	18 40	16 57 45		4 22 55			
12	2	03.2	-0 48.8	199	05.1 ¹¹⁰	-5 47.4 ¹⁷⁰	0	17 55	18 16	18 40	16 54 50		4 28 50			
13	17	03.5		213	35.1 ¹¹⁰	30.4 ¹⁷⁰	10 S	56	17	41	51 55		34 44			
14	32	03.7		228	05.0 ¹⁰⁹	-5 13.3 ¹⁷¹	20	57	19	44	47 62		40 39			
15	47	03.9		242	35.0 ¹¹⁰	-4 56.2 ¹⁷¹	30	58	22	49	44 67		47 32			
16	62	04.1		257	05.0 ¹¹⁰	39.0 ¹⁷²	35	58	24	53	41 72		51 29			
17	77	04.3	-0 53.7	271	35.0 ¹¹⁰	-4 21.8 ¹⁷²	40	17 59	18 26	18 58	16 39 76		4 55 25			
18	92	04.5	-0 54.6	286	04.9 ¹⁰⁹	-4 04.5 ¹⁷³	45	18 00	18 29	19 04	16 36 81		5 00 21			
19	107	04.8		300	34.9 ¹¹⁰	-3 47.2 ¹⁷³	50	01	34	12	32 87		06 15			
20	122	05.0		315	04.8 ¹⁰⁹	29.9 ¹⁷³	52	02	36	16	31 89		09 12			
21	137	05.2		329	34.8 ¹¹⁰	-3 12.5 ¹⁷⁴	54	02	38	20	29 93		12 10			
22	152	05.4		344	04.7 ¹⁰⁹	-2 55.1 ¹⁷⁴	56	03	40	25	27 96		15 7			
23	167	05.6	-0 59.5	358	34.6 ¹⁰⁹	37.7 ¹⁷⁴	58	04	43	31	25 100		19 3			
24	182	05.8	-1 00.5	13	04.5 ¹⁰⁹	-2 20.2 ¹⁷⁵	60 S	18 05	18 47	19 37	16 22 104		5 23 **			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 42 ^m 4		Mag: -4.8 PMG: 9 ^h 14 ^m		Mag: 0.0 PMG: 5 ^h 38 ^m		Mag: -2.1 PMG: 16 ^h 32 ^m		Mag: +0.7 PMG: 10 ^h 06 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	3	26.3	221	16.0	+10	19.5	111	24.1	-22	03.0						
1	18	28.7	236	17.1		19.4	126	26.2		03.0						
2	33	31.2	251	18.2		19.4	141	28.3		03.1						
3	48	33.7	266	19.2		19.4	156	30.4		03.1						
4	63	36.1	281	20.3		19.4	171	32.5		03.2						
5	78	38.6	296	21.4	+10	19.3	186	34.6	-22	03.2						
6	93	41.0	311	22.4	+10	19.3	201	36.7	-22	03.3						
7	108	43.5	326	23.5		19.3	216	38.8		03.3						
8	123	46.0	341	24.6		19.2	231	40.9		03.4						
9	138	48.4	356	25.6		19.2	246	43.0		03.4						
10	153	50.9	11	26.7		19.1	261	45.2		03.5						
11	168	53.4	26	27.7	+10	19.1	276	47.3	-22	03.5						
12	183	55.8	41	28.8	+10	19.1	291	49.4	-22	03.5						
13	198	58.3	56	29.8		19.0	306	51.5		03.6						
14	214	00.8	71	30.9		19.0	321	53.6		03.6						
15	229	03.2	86	31.9		19.0	336	55.7		03.7						
16	244	05.7	101	32.9		18.9	351	57.8		03.7						
17	259	08.2	116	34.0	+10	18.9	6	59.9	-22	03.8						
18	274	10.6	131	35.0	+10	18.8	22	02.0	-22	03.8						
19	289	13.1	146	36.0		18.8	37	04.1		03.9						
20	304	15.5	161	37.1		18.7	52	06.2		03.9						
21	319	18.0	176	38.1		18.7	67	08.3		04.0						
22	334	20.5	191	39.1		18.6	82	10.4		04.0						
23	349	22.9	206	40.2		18.6	97	12.5		04.1						
24	4	25.4	221	41.2	+10	18.5	112	14.6	-22	04.1						
Dif	—		+10	0	+12	+1	+21	0	+22	-1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 51 ^m 4			Edad: 14 ^d 5 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'8 R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m		h	m	m	
0	182	05.8	-1	00.5	13	04.5	-2	20.2	58	4	21	5	17	25	0	
1	197	06.1		01.5	27	34.4	-2	02.7	58		27	13	52	26	4	
2	212	06.3		02.4	42	04.3	-1	45.2	56		31	15	52	28	7	
3	227	06.5		03.4	56	34.2		27.7	54		35	17	52	29	10	
4	242	06.7		04.4	71	04.0	-1	10.1	52		38	18	52	30	13	
5	257	06.9	-1	05.3	85	33.8	-0	52.5	50	4	41	5	17	31	16	
6	272	07.1	-1	06.3	100	03.6	-0	35.0	45	4	48	5	17	33	21	
7	287	07.4		07.3	114	33.4	-0	17.3	40		52	24	51	35	26	
8	302	07.6		08.3	129	03.2	+0	00.3	35		56	25	51	36	31	
9	317	07.8		09.2	143	32.9		17.9	30	4	59	26	50	38	34	
10	332	08.0		10.2	158	02.6		35.6	20	5	02	28	50	40	41	
11	347	08.2	-1	11.2	172	32.3	+0	53.2	10 N	5	04	5	17	42	46	
12	2	08.4	-1	12.2	187	01.9	+1	10.9	0	5	04	5	17	44	52	
13	17	08.7		13.1	201	31.6		28.6	10 S	5	02	26	47	46	57	
14	32	08.9		14.1	216	01.2	+1	46.2	20	4	59	24	46	49	62	
15	47	09.1		15.1	230	30.7	+2	03.9	30		53	21	45	51	70	
16	62	09.3		16.1	245	00.3		21.6	35		50	19	44	53	73	
17	77	09.5	-1	17.0	259	29.8	+2	39.2	40	4	45	5	17	55	77	
18	92	09.7	-1	18.0	273	59.3	+2	56.9	45	4	39	5	17	57	82	
19	107	09.9		19.0	288	28.7	+3	14.6	50		31	09	41	17	59	
20	122	10.2		19.9	302	58.1		32.2	52		27	07	40	18	00	
21	137	10.4		20.9	317	27.4	+3	49.8	54		22	04	40	02	05	
22	152	10.6		21.9	331	56.8	+4	07.5	56		17	5	39	03	09	
23	167	10.8		22.9	346	26.0		25.1	58		12	4	38	05	102	
24	182	11.0	-1	23.8	0	55.3	+4	42.7	60 S	4	05	4	18	06	108	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 38 ^m 4			Mag: -4.8 PMG: 9 ^h 13 ^m			Mag: 0.0 PMG: 5 ^h 36 ^m			Mag: -2.1 PMG: 16 ^h 29 ^m			Mag: +0.7 PMG: 10 ^h 02 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	4	25.4	221	41.2	+10	18.5	275	56.5	+23	14.1	112	14.6	-22	04.1	209	07.2
1	19	27.9	236	42.2		18.5	290	57.7		14.2	127	16.7		04.2	224	09.4
2	34	30.3	251	43.2		18.4	305	58.8		14.3	142	18.8		04.2	239	11.5
3	49	32.8	266	44.2		18.4	321	00.0		14.3	157	20.9		04.3	254	13.7
4	64	35.3	281	45.2		18.3	336	01.2		14.4	172	23.0		04.3	269	15.9
5	79	37.7	296	46.2	+10	18.3	351	02.4	+23	14.5	187	25.1	-22	04.4	284	18.1
6	94	40.2	311	47.3	+10	18.2	6	03.5	+23	14.6	202	27.2	-22	04.4	299	20.3
7	109	42.6	326	48.3		18.1	21	04.7		14.6	217	29.3		04.5	314	22.5
8	124	45.1	341	49.3		18.1	36	05.9		14.7	232	31.4		04.5	329	24.7
9	139	47.6	356	50.3		18.0	51	07.1		14.8	247	33.5		04.6	344	26.8
10	154	50.0	11	51.3		18.0	66	08.3		14.9	262	35.6		04.6	359	29.0
11	169	52.5	26	52.3	+10	17.9	81	09.4	+23	14.9	277	37.7	-22	04.6	14	31.2
12	184	55.0	41	53.2	+10	17.8	96	10.6	+23	15.0	292	39.8	-22	04.7	29	33.4
13	199	57.4	56	54.2		17.8	111	11.8		15.1	307	41.9		04.7	44	35.6
14	214	59.9	71	55.2		17.7	126	13.0		15.1	322	44.0		04.8	59	37.8
15	230	02.4	86	56.2		17.6	141	14.2		15.2	337	46.1		04.8	74	40.0
16	245	04.8	101	57.2		17.6	156	15.4		15.3	352	48.2		04.9	89	42.1
17	260	07.3	116	58.2	+10	17.5	171	16.6	+23	15.4	7	50.3	-22	04.9	104	44.3
18	275	09.8	131	59.2	+10	17.4	186	17.7	+23	15.4	22	52.4	-22	05.0	119	46.5
19	290	12.2	147	00.1		17.4	201	18.9		15.5	37	54.5		05.0	134	48.7
20	305	14.7	162	01.1		17.3	216	20.1		15.6	52	56.6		05.1	149	50.9
21	320	17.1	177	02.1		17.2	231	21.3		15.7	67	58.7		05.1	164	53.1
22	335	19.6	192	03.1		17.1	246	22.5		15.7	83	00.8		05.2	179	55.3
23	350	22.1	207	04.0		17.1	261	23.7		15.8	98	02.9		05.2	194	57.4
24	5	24.5	222	05.0	+10	17.0	276	24.9	+23	15.9	113	05.0	-22	05.3	209	59.6
Dif	—		+10	-1			+12	+1			+21	0			+22	-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51 ^m 1			Edad: 15 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'0 R°: ***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	182	11.0	-1 23.8	0	55.3	+4	42.7	60 N	17 46	18 27	19 16	17 25	1	6 56 110	
1	197	11.2	24.8	15	24.5 ¹⁰²	+5	00.2 ¹⁷⁵	58	47	26	12	30	6	53 104	
2	212	11.4	25.8	29	53.6 ¹⁰¹		17.8 ¹⁷⁶	56	47	24	08	35	9	49 100	
3	227	11.7	26.8	44	22.7 ¹⁰¹		35.3 ¹⁷⁵	54	47	23	04	39	13	46 97	
4	242	11.9	27.7	58	51.8 ¹⁰¹	+5	52.8 ¹⁷⁵	52	48	21	19 01	43	16	43 94	
5	257	12.1	-1 28.7	73	20.8 ¹⁰⁰	+6	10.3 ¹⁷⁵	50	17 48	18 20	18 58	17 47	18	6 41 90	
6	272	12.3	-1 29.7	87	49.8 ¹⁰⁰	+6	27.8 ¹⁷⁵	45	17 49	18 18	18 52	17 54	25	6 36 83	
7	287	12.5	30.6	102	18.7 ⁹⁹	+6	45.2 ¹⁷⁴	40	50	17	48	18 01	30	31 79	
8	302	12.7	31.6	116	47.5 ⁹⁸	+7	02.6 ¹⁷⁴	35	50	16	45	07	33	27 74	
9	317	12.9	32.6	131	16.4 ⁹⁹		19.9 ¹⁷³	30	51	15	43	12	37	24 70	
10	332	13.2	33.6	145	45.1 ⁹⁷		37.2 ¹⁷³	20	52	14	40	21	43	18 64	
11	347	13.4	-1 34.5	160	13.8 ⁹⁷	+7	54.5 ¹⁷³	10 N	17 53	18 14	18 39	18 28	49	6 13 58	
12	2	13.6	-1 35.5	174	42.5 ⁹⁷	+8	11.7 ¹⁷²	0	17 54	18 15	18 39	18 36	54	6 08 53	
13	17	13.8	36.5	189	11.1 ⁹⁶		28.9 ¹⁷²	10 S	56	17	41	43	60	6 04 47	
14	32	14.0	37.5	203	39.6 ⁹⁵	+8	46.1 ¹⁷²	20	57	19	45	18 51	65	5 58 42	
15	47	14.2	38.4	218	08.1 ⁹⁵	+9	03.2 ¹⁷¹	30	17 59	23	51	19 01	71	53 35	
16	62	14.4	39.4	232	36.5 ⁹⁴		20.2 ¹⁷⁰	35	18 00	25	18 55	06	75	49 32	
17	77	14.7	-1 40.4	247	04.9 ⁹⁴	+9	37.2 ¹⁷⁰	40	18 01	18 28	19 00	19 12	80	5 46 27	
18	92	14.9	-1 41.4	261	33.2 ⁹³	+9	54.1 ¹⁶⁹	45	18 02	18 32	19 07	19 19	85	5 41 23	
19	107	15.1	42.3	276	01.4 ⁹²	+10	11.0 ¹⁶⁹	50	04	37	15	28	92	36 17	
20	122	15.3	43.3	290	29.6 ⁹²		27.9 ¹⁶⁹	52	05	39	19	32	95	34 14	
21	137	15.5	44.3	304	57.7 ⁹¹	+10	44.6 ¹⁶⁷	54	06	42	24	37	98	31 12	
22	152	15.7	45.2	319	25.7 ⁹⁰	+11	01.3 ¹⁶⁷	56	07	44	29	42	102	29 8	
23	167	15.9	46.2	333	53.7 ⁹⁰		18.0 ¹⁶⁷	58	08	48	36	47	107	25 5	
24	182	16.1	-1 47.2	348	21.6 ⁸⁹	+11	34.5 ¹⁶⁵	60 S	18 09	18 51	19 43	19 54	112	5 22 0	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 34 ^m 5		Mag: -4.8 PMG: 9 ^h 11 ^m		Mag: 0.0 PMG: 5 ^h 34 ^m		Mag: -2.1 PMG: 16 ^h 25 ^m		Mag: +0.7 PMG: 9 ^h 59 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	5	24.5	222	05.0	+10	17.0	113	05.0	-22	05.3					
1	20	27.0	237	06.0		16.9	128	07.1		05.3					
2	35	29.5	252	06.9		16.8	143	09.2		05.4					
3	50	31.9	267	07.9		16.8	158	11.2		05.4					
4	65	34.4	282	08.8		16.7	173	13.3		05.5					
5	80	36.9	297	09.8	+10	16.6	188	15.4	-22	05.5					
6	95	39.3	312	10.7	+10	16.5	203	17.5	-22	05.6					
7	110	41.8	327	11.7		16.4	218	19.6		05.6					
8	125	44.2	342	12.6		16.3	233	21.7		05.7					
9	140	46.7	357	13.6		16.3	248	23.8		05.7					
10	155	49.2	12	14.5		16.2	263	25.9		05.8					
11	170	51.6	27	15.5	+10	16.1	278	28.0	-22	05.8					
12	185	54.1	42	16.4	+10	16.0	293	30.1	-22	05.9					
13	200	56.6	57	17.3		15.9	308	32.2		05.9					
14	215	59.0	72	18.3		15.8	323	34.3		05.9					
15	231	01.5	87	19.2		15.7	338	36.4		06.0					
16	246	04.0	102	20.1		15.6	353	38.5		06.0					
17	261	06.4	117	21.1	+10	15.5	8	40.6	-22	06.1					
18	276	08.9	132	22.0	+10	15.4	23	42.6	-22	06.1					
19	291	11.4	147	22.9		15.4	38	44.7		06.2					
20	306	13.8	162	23.8		15.3	53	46.8		06.2					
21	321	16.3	177	24.8		15.2	68	48.9		06.3					
22	336	18.7	192	25.7		15.1	83	51.0		06.3					
23	351	21.2	207	26.6		15.0	98	53.1		06.4					
24	6	23.7	222	27.5	+10	14.9	113	55.2	-22	06.4					
Dif	—		+9	-1		+12	+1	+21	0		+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 1			Edad: 18 ^d 5 PHE { 4 ^h : 60 ^m 4 12 ^h : 60 ^m 2 20 ^h : 60 ^m 0 SD: 16 ^h 5 PMG: 2 ^h 42 ^m R°: 61 ^m																
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m		
0	182	26.2	-2 33.8	321	10.9		+22 51.2		60 N	4 32	5 21	6 02	17 36	21		12 38	109			
1	197	26.4	34.8	335	35.0	51	+23 02.0	108	58		36	22	01			18 00	31	12 14 100		
2	212	26.6	35.8	349	59.0	50		12.7	56	39	23	6 00	19 37			11 56	93			
3	227	26.8	36.8	4	22.9	49		23.2	54	43	24	5 59	36 40			40	89			
4	242	27.0	37.7	18	46.8	49		33.5	52	45	25	58	18 50	43		26	86			
5	257	27.3	-2 38.7	33	10.6	48	+23 43.7	102	50	4 48	5 25	5 58	19 02	46		11 14	84			
6	272	27.5	-2 39.7	47	34.4	48	+23 53.7	100	45	4 53	5 27	5 56	19 28	49		10 50	78			
7	287	27.7	40.6	61	58.0	46	+24 03.5	98	40		56	55	19 48	53		30	76			
8	302	27.9	41.6	76	21.7	47		13.2	35	4 59	28	54	20 06	54		14	73			
9	317	28.1	42.6	90	45.2	45		22.6	30	5 01	29	52	20 56	56		10 00	71			
10	332	28.3	43.6	105	08.7	45		31.9	20		03	28	20 46	58		9 36	67			
11	347	28.5	-2 44.5	119	32.1	44	+24 41.1	92	10 N	5 03	5 28	5 49	21 08	60		9 15	65			
12	2	28.7	-2 45.5	133	55.5	44	+24 50.0	89	0	5 02	5 26	5 47	21 28	63		8 56	62			
13	17	28.9	46.5	148	18.8	43	+24 58.8	88	10 S	4 59	24	45	21 49	64		37	59			
14	32	29.1	47.4	162	42.0	42	+25 07.4	86	20		55	21	22 11	67		8 17	56			
15	47	29.3	48.4	177	05.2	42		15.8	30	48	16	40	37	69		7 53	53			
16	62	29.5	49.4	191	28.3	41		24.1	35	44	13	39	22 53	70		40	50			
17	77	29.7	-2 50.4	205	51.4	41	+25 32.1	80	40	4 38	5 10	5 37	23 11	71		7 24	47			
18	92	29.9	-2 51.3	220	14.4	40	+25 40.0	79	45	4 31	5 05	5 35	23 33	73		7 05	44			
19	107	30.1	52.3	234	37.4	40		47.7	50		21	32	** ** *	**		6 42	38			
20	122	30.3	53.3	249	00.4	40	+25 55.2	75	52	17	4 57	31	** ** *	**		31	35			
21	137	30.5	54.2	263	23.3	39	+26 02.5	73	54	12	54	30	** ** *	**		18	32			
22	152	30.7	55.2	277	46.1	38		09.6	56	4 06	51	28	** ** *	**		6 04	27			
23	167	31.0	56.2	292	08.9	38		16.6	58	3 59	47	27	** ** *	**		5 47	21			
24	182	31.2	-2 57.1	306	31.7	38	+26 23.3	67	60 S	3 51	4 43	5 25	** ** *	**		5 27	11			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 22 ^m 7			Mag: -4.7 PMG: 9 ^h 07 ^m			Mag: -0.1 PMG: 5 ^h 28 ^m			Mag: -2.0 PMG: 16 ^h 15 ^m			Mag: +0.7 PMG: 9 ^h 48 ^m							
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°					
0	8	21.9	223 08.9	+10 08.8		277 52.1	+23 20.7		115 35.2	-22 08.8		212 37.3	+11 32.9							
1	23	24.4	238 09.7	08.6		292 53.4	20.8		130 37.3	08.8		227 39.5	32.8							
2	38	26.9	253 10.5	08.5		307 54.6	20.9		145 39.4	08.9		242 41.7	32.7							
3	53	29.3	268 11.3	08.3		322 55.9	20.9		160 41.5	08.9		257 43.8	32.6							
4	68	31.8	283 12.1	08.2		337 57.1	21.0		175 43.5	09.0		272 46.0	32.5							
5	83	34.3	298 12.9	+10 08.0		352 58.3	+23 21.1		190 45.6	-22 09.0		287 48.2	+11 32.4							
6	98	36.7	313 13.7	+10 07.9		7 59.6	+23 21.1		205 47.7	-22 09.1		302 50.4	+11 32.3							
7	113	39.2	328 14.5	07.7		23 00.8	21.2		220 49.8	09.1		317 52.6	32.2							
8	128	41.7	343 15.3	07.5		38 02.0	21.2		235 51.8	09.2		332 54.8	32.1							
9	143	44.1	358 16.1	07.4		53 03.3	21.3		250 53.9	09.2		347 57.0	32.0							
10	158	46.6	13 16.9	07.2		68 04.5	21.4		265 56.0	09.2		2 59.2	31.9							
11	173	49.1	28 17.7	+10 07.1		83 05.8	+23 21.4		280 58.1	-22 09.3		18 01.4	+11 31.8							
12	188	51.5	43 18.5	+10 06.9		98 07.0	+23 21.5		296 00.2	-22 09.3		33 03.6	+11 31.7							
13	203	54.0	58 19.3	06.7		113 08.2	21.5		311 02.2	09.4		48 05.8	31.6							
14	218	56.4	73 20.1	06.6		128 09.5	21.6		326 04.3	09.4		63 08.0	31.5							
15	233	58.9	88 20.8	06.4		143 10.7	21.7		341 06.4	09.5		78 10.2	31.4							
16	249	01.4	103 21.6	06.2		158 12.0	21.7		356 08.5	09.5		93 12.4	31.3							
17	264	03.8	118 22.4	+10 06.1		173 13.2	+23 21.8		11 10.5	-22 09.6		108 14.5	+11 31.2							
18	279	06.3	133 23.2	+10 05.9		188 14.5	+23 21.9		26 12.6	-22 09.6		123 16.7	+11 31.1							
19	294	08.8	148 24.0	05.7		203 15.7	21.9		41 14.7	09.7		138 18.9	31.0							
20	309	11.2	163 24.7	05.6		218 17.0	22.0		56 16.8	09.7		153 21.1	30.9							
21	324	13.7	178 25.5	05.4		233 18.2	22.0		71 18.8	09.8		168 23.3	30.8							
22	339	16.2	193 26.3	05.2		248 19.5	22.1		86 20.9	09.8		183 25.5	30.7							
23	354	18.6	208 27.1	05.0		263 20.7	22.2		101 23.0	09.9		198 27.7	30.6							
24	9	21.1	223 27.8	+10 04.9		278 22.0	+23 22.2		116 25.0	-22 09.9		213 29.9	+11 30.5							
Dif	—		+8	-2		+12	+1		+21	0		+22	-1							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 16°0			Edad: 19 ^d 5 PHE { 4 ^h : 59/8 12 ^h : 59/6 20 ^h : 59/3																		
	PMG: 11 ^h 49 ^m 8			SD: 16°3 PMG: 3 ^h 43 ^m R°: 63 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m								
0	182	31.2	-2 57.1	306	31.7	+26 23.3		60 N	17 34	18 15	19 04	17 57 55	14 27 76									
1	197	31.4		320	54.4	29.9	66	58	35	14	19 00	18 31 58	13 54 72									
2	212	31.6	-2 59.1	335	17.1	36.2	63	56	36	13	18 57	18 56 59	29 71									
3	227	31.8	-3 00.1	349	39.8	42.4	62	54	38	13	54	19 16 60	13 09 70									
4	242	32.0	01.0	4	02.4	48.4	60	52	39	12	51	33 60	12 52 69									
5	257	32.2	-3 02.0	18	25.0	54.2	58	50	17 39	18 12	18 49	19 48 60	12 38 68									
6	272	32.4	-3 03.0	32	47.6	59.8	56	45	17 41	18 11	18 45	20 17 61	12 08 68									
7	287	32.6	03.9	47	10.2	05.2	54	40	43	10	41	20 41 61	11 46 66									
8	302	32.8	04.9	61	32.7	10.4	52	35	45	10	39	21 00 61	27 66									
9	317	33.0	05.9	75	55.2	15.5	51	30	46	10	38	16 62	11 11 65									
10	332	33.2	06.8	90	17.7	20.3	48	20	49	11	36	21 44 62	10 43 65									
11	347	33.4	-3 07.8	104	40.2	24.9	46	10 N	17 51	18 12	18 36	22 08 62	10 20 63									
12	2	33.6	-3 08.8	119	02.7	29.4	45	0	17 53	18 14	18 38	22 31 62	9 58 63									
13	17	33.8	09.8	133	25.2	33.6	42	10 S	55	16	41	22 53 62	36 62									
14	32	34.0	10.7	147	47.6	37.7	41	20	17 58	20	46	23 18 61	9 13 60									
15	47	34.2	11.7	162	10.1	41.5	38	30	18 01	25	53	23 46 61	8 46 59									
16	62	34.4	12.7	176	32.5	45.2	37	35	03	28	18 58	*** ** *	30 58									
17	77	34.6	-3 13.6	190	55.0	48.6	34	40	18 05	18 32	19 04	*** ** *	8 11 57									
18	92	34.8	-3 14.6	205	17.4	51.9	33	45	18 07	18 37	19 12	*** ** *	7 49 55									
19	107	35.0	15.6	219	39.9	55.0	31	50	10	43	22	0 00 77	20 53									
20	122	35.2	16.5	234	02.3	57.8	28	52	12	46	27	14 78	7 06 52									
21	137	35.4	17.5	248	24.8	00.5	27	54	13	49	32	30 80	6 50 50									
22	152	35.6	18.5	262	47.3	03.0	25	56	15	53	38	0 48 84	31 47									
23	167	35.8	19.4	277	09.8	05.3	23	58	17	18 57	46	1 11 88	6 08 43									
24	182	36.0	-3 20.4	291	32.3	07.4	21	60 S	18 19	19 01	19 54	1 41 98	5 38 33									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 23 ^h 18 ^m 8			Mag: -4.7 PMG: 9 ^h 06 ^m			Mag: -0.1 PMG: 5 ^h 26 ^m			Mag: -2.0 PMG: 16 ^h 12 ^m			Mag: +0.7 PMG: 9 ^h 45 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°							
0	9	21.1	223 27.8	+10 04.9	278 22.0	+23 22.2	116 25.0	-22 09.9	213 29.9	+11 30.5												
1	24	23.6	238 28.6	04.7	293 23.2	22.3	131 27.1	10.0	228 32.1	30.4												
2	39	26.0	253 29.4	04.5	308 24.5	22.3	146 29.2	10.0	243 34.3	30.3												
3	54	28.5	268 30.1	04.3	323 25.7	22.4	161 31.3	10.1	258 36.5	30.2												
4	69	30.9	283 30.9	04.2	338 27.0	22.5	176 33.3	10.1	273 38.7	30.1												
5	84	33.4	298 31.6	+10 04.0	353 28.2	+23 22.5	191 35.4	-22 10.2	288 40.9	+11 30.0												
6	99	35.9	313 32.4	+10 03.8	8 29.5	+23 22.6	206 37.5	-22 10.2	303 43.1	+11 29.9												
7	114	38.3	328 33.1	03.6	23 30.7	22.6	221 39.6	10.3	318 45.3	29.8												
8	129	40.8	343 33.9	03.4	38 32.0	22.7	236 41.6	10.3	333 47.4	29.7												
9	144	43.3	358 34.6	03.2	53 33.2	22.8	251 43.7	10.4	348 49.6	29.7												
10	159	45.7	13 35.4	03.1	68 34.5	22.8	266 45.8	10.4	3 51.8	29.6												
11	174	48.2	28 36.1	+10 02.9	83 35.8	+23 22.9	281 47.8	-22 10.5	18 54.0	+11 29.5												
12	189	50.7	43 36.9	+10 02.7	98 37.0	+23 22.9	296 49.9	-22 10.5	33 56.2	+11 29.4												
13	204	53.1	58 37.6	02.5	113 38.3	23.0	311 52.0	10.6	48 58.4	29.3												
14	219	55.6	73 38.4	02.3	128 39.5	23.0	326 54.0	10.6	64 00.6	29.2												
15	234	58.1	88 39.1	02.1	143 40.8	23.1	341 56.1	10.7	79 02.8	29.1												
16	250	00.5	103 39.8	01.9	158 42.0	23.2	356 58.2	10.7	94 05.0	29.0												
17	265	03.0	118 40.6	+10 01.7	173 43.3	+23 23.2	12 00.3	-22 10.8	109 07.2	+11 28.9												
18	280	05.4	133 41.3	+10 01.5	188 44.6	+23 23.3	27 02.3	-22 10.8	124 09.4	+11 28.8												
19	295	07.9	148 42.0	01.3	203 45.8	23.3	42 04.4	10.9	139 11.6	28.7												
20	310	10.4	163 42.8	01.1	218 47.1	23.4	57 06.5	10.9	154 13.8	28.6												
21	325	12.8	178 43.5	00.9	233 48.4	23.5	72 08.5	11.0	169 16.0	28.5												
22	340	15.3	193 44.2	00.7	248 49.6	23.5	87 10.6	11.0	184 18.2	28.4												
23	355	17.8	208 45.0	00.5	263 50.9	23.6	102 12.7	11.1	199 20.4	28.3												
24	10	20.2	223 45.7	+10 00.3	278 52.2	+23 23.6	117 14.7	-22 11.1	214 22.6	+11 28.2												
Dif	—		+7 -2		+13 +1		+21 0		+22 -1													

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 16°0			Edad: 25 ^d 5 PHE { 4 ^h : 55°6 12 ^h : 55°4 20 ^h : 55°3																		
	PMG: 11 ^h 47 ^m 9			SD: 15°2 PMG: 9 ^h 11 ^m R°: 42 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m								
0	182	59.1	-5 16.1	226	21.7	+13 37.2	60 N	17 16	17 57	18 45	1 21 88	16 33 **										
1	197	59.3	17.1	240	55.0 ¹⁴³	23.9 ¹³³	58	18	58	43	29 84	27 3										
2	212	59.5	18.1	255	28.3 ¹⁴³	+13 10.5 ¹³⁴	56	21	58	41	36 81	22 6										
3	227	59.6	19.0	270	01.8 ¹⁴⁵	+12 57.2 ¹³³	54	23	58	39	43 78	18 8										
4	242	59.8	20.0	284	35.3 ¹⁴⁵	43.7 ¹³⁵	52	25	58	37	49 75	14 10										
5	258	00.0	-5 20.9	299	08.8 ¹⁴⁵	+12 30.3 ¹³⁴	50	17 27	17 59	18 36	1 54 72	16 10 13										
6	273	00.2	-5 21.9	313	42.4 ¹⁴⁶	+12 16.8 ¹³⁵	45	17 30	18 00	18 34	2 05 67	16 03 17										
7	288	00.4	22.8	328	16.1 ¹⁴⁷	+12 03.2 ¹³⁶	40	34	01	32	14 63	15 56 21										
8	303	00.5	23.8	342	49.9 ¹⁴⁸	+11 49.6 ¹³⁶	35	36	02	31	22 60	50 25										
9	318	00.7	24.8	357	23.7 ¹⁴⁸	36.0 ¹³⁶	30	39	03	30	29 56	45 27										
10	333	00.9	25.7	11	57.6 ¹⁴⁹	22.3 ¹³⁷	20	43	05	31	40 52	36 33										
11	348	01.1	-5 26.7	26	31.6 ¹⁵⁰	+11 08.6 ¹³⁷	10 N	17 47	18 08	18 33	2 51 46	15 28 37										
12	3	01.3	-5 27.6	41	05.6 ¹⁵⁰	+10 54.9 ¹³⁷	0	17 51	18 12	18 36	3 00 43	15 21 41										
13	18	01.4	28.6	55	39.7 ¹⁵¹	41.1 ¹³⁸	10 S	17 55	16	41	10 38	13 46										
14	33	01.6	29.5	70	13.9 ¹⁵²	27.3 ¹³⁸	20	18 00	22	48	20 34	15 05 51										
15	48	01.8	30.5	84	48.1 ¹⁵²	+10 13.5 ¹³⁸	30	05	29	18 57	32 28	14 56 56										
16	63	02.0	31.5	99	22.3 ¹⁵²	+9 59.6 ¹³⁹	35	08	33	19 03	38 26	51 59										
17	78	02.2	-5 32.4	113	56.7 ¹⁵⁴	+9 45.7 ¹³⁹	40	18 11	18 38	19 11	3 46 22	14 45 62										
18	93	02.3	-5 33.4	128	31.1 ¹⁵⁴	+9 31.8 ¹³⁹	45	18 15	18 45	19 20	3 54 19	14 38 66										
19	108	02.5	34.3	143	05.5 ¹⁵⁴	17.8 ¹⁴⁰	50	20	53	33	4 05 13	29 71										
20	123	02.7	35.3	157	40.0 ¹⁵⁵	+9 03.8 ¹⁴⁰	52	22	18 57	39	10 11	25 74										
21	138	02.9	36.2	172	14.5 ¹⁵⁵	+8 49.8 ¹⁴⁰	54	24	19 01	45	15 9	21 76										
22	153	03.1	37.2	186	49.1 ¹⁵⁶	35.8 ¹⁴⁰	56	27	06	19 53	21 6	16 79										
23	168	03.2	38.2	201	23.8 ¹⁵⁷	21.7 ¹⁴¹	58	30	11	20 02	27 3	10 83										
24	183	03.4	-5 39.1	215	58.5 ¹⁵⁷	+8 07.6 ¹⁴¹	60 S	18 34	19 17	20 12	4 35 **	14 04 86										
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 22 ^h 55 ^m 2		Mag: -4.7 PMG: 9 ^h 00 ^m		Mag: -0.2 PMG: 5 ^h 14 ^m		Mag: -2.0 PMG: 15 ^h 52 ^m		Mag: +0.8 PMG: 9 ^h 24 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec													
h	°	'	°	°	'	°	'	°	'													
0	15	15.9	225 00.3	+9 29.0	281 29.2	+23 29.8	121 21.2	-22 17.0	218 46.6	+11 16.9												
1	30	18.4	240 00.8	28.7	296 30.5	29.9	136 23.3	17.1	233 48.8	16.8												
2	45	20.9	255 01.3	28.4	311 31.9	29.9	151 25.3	17.1	248 51.0	16.7												
3	60	23.3	270 01.9	28.1	326 33.2	30.0	166 27.3	17.2	263 53.2	16.6												
4	75	25.8	285 02.4	27.7	341 34.6	30.0	181 29.4	17.2	278 55.4	16.5												
5	90	28.2	300 02.9	+9 27.4	356 35.9	+23 30.0	196 31.4	-22 17.3	293 57.6	+11 16.4												
6	105	30.7	315 03.4	+9 27.1	11 37.3	+23 30.1	211 33.5	-22 17.3	308 59.8	+11 16.3												
7	120	33.2	330 04.0	26.8	26 38.7	30.1	226 35.5	17.4	324 02.0	16.2												
8	135	35.6	345 04.5	26.4	41 40.0	30.2	241 37.5	17.4	339 04.2	16.1												
9	150	38.1	0 05.0	26.1	56 41.4	30.2	256 39.6	17.5	354 06.4	16.0												
10	165	40.6	15 05.5	25.8	71 42.7	30.3	271 41.6	17.5	9 08.6	16.0												
11	180	43.0	30 06.0	+9 25.4	86 44.1	+23 30.3	286 43.7	-22 17.6	24 10.8	+11 15.9												
12	195	45.5	45 06.5	+9 25.1	101 45.5	+23 30.4	301 45.7	-22 17.6	39 13.0	+11 15.8												
13	210	48.0	60 07.0	24.8	116 46.8	30.4	316 47.7	17.7	54 15.2	15.7												
14	225	50.4	75 07.6	24.4	131 48.2	30.5	331 49.8	17.7	69 17.5	15.6												
15	240	52.9	90 08.1	24.1	146 49.5	30.5	346 51.8	17.8	84 19.7	15.5												
16	255	55.4	105 08.6	23.8	161 50.9	30.6	1 53.8	17.8	99 21.9	15.4												
17	270	57.8	120 09.1	+9 23.4	176 52.3	+23 30.6	16 55.9	-22 17.9	114 24.1	+11 15.3												
18	286	00.3	135 09.6	+9 23.1	191 53.6	+23 30.6	31 57.9	-22 17.9	129 26.3	+11 15.2												
19	301	02.7	150 10.1	22.8	206 55.0	30.7	47 00.0	18.0	144 28.5	15.1												
20	316	05.2	165 10.6	22.4	221 56.4	30.7	62 02.0	18.0	159 30.7	15.0												
21	331	07.7	180 11.1	22.1	236 57.7	30.8	77 04.0	18.1	174 32.9	14.9												
22	346	10.1	195 11.6	21.7	251 59.1	30.8	92 06.1	18.1	189 35.1	14.8												
23	1	12.6	210 12.1	21.4	267 00.5	30.9	107 08.1	18.2	204 37.3	14.8												
24	16	15.1	225 12.6	+9 21.0	282 01.9	+23 30.9	122 10.1	-22 18.2	219 39.5	+11 14.7												
Dif	—	+5	-3	+14	0	+20	0	+22	-1													

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 6			Edad: 26 ^d 5 PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'9 R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m		h	m	m	
0	183	03.4	-5 39.1	215	58.5	+8 07.6	60 N	4 51	5 39	6 21	2 49	85	16 32	**		
1	198	03.6	40.1	230	33.2 ¹⁵⁷	+7 53.5 ¹⁴¹	58	54	39	18	53	81	30	2		
2	213	03.8	41.0	245	08.0 ¹⁵⁸	39.4 ¹⁴¹	56	56	39	16	2 57	78	28	5		
3	228	03.9	42.0	259	42.9 ¹⁵⁹	25.2 ¹⁴²	54	57	38	14	3 01	75	26	7		
4	243	04.1	42.9	274	17.7 ¹⁵⁸	+7 11.1 ¹⁴¹	52	4 59	38	12	04	72	24	10		
5	258	04.3	-5 43.9	288	52.7 ¹⁶⁰	+6 56.9 ¹⁴²	50	5 00	5 38	6 10	3 06	71	16 23	12		
6	273	04.5	-5 44.8	303	27.7 ¹⁶⁰	+6 42.7 ¹⁴²	45	5 03	5 37	6 06	3 12	66	16 20	16		
7	288	04.7	45.8	318	02.7 ¹⁶⁰	28.4 ¹⁴³	40	04	36	03	17	62	17	20		
8	303	04.8	46.8	332	37.7 ¹⁶⁰	+6 14.2 ¹⁴²	35	05	34	6 00	22	57	15	23		
9	318	05.0	47.7	347	12.8 ¹⁶¹	+5 59.9 ¹⁴³	30	05	33	5 57	25	55	12	27		
10	333	05.2	48.7	1 48.0 ¹⁶²	45.7 ¹⁴²		20	05	30	53	32	49	09	31		
11	348	05.4	-5 49.6	16 23.1 ¹⁶¹	+5 31.4 ¹⁴³		10 N	5 03	5 27	5 48	3 37	45	16 05	36		
12	3 05.5	-5 50.6	30 58.4 ¹⁶³	+5 17.1 ¹⁴³			0	4 59	5 24	5 44	3 43	40	16 02	40		
13	18 05.7	51.5	45 33.6 ¹⁶²	+5 02.8 ¹⁴³			10 S	55	19	40	48	36	15 59	45		
14	33 05.9	52.5	60 08.9 ¹⁶³	+4 48.4 ¹⁴⁴			20	48	14	36	3 54	31	56	49		
15	48 06.1	53.4	74 44.2 ¹⁶³	34.1 ¹⁴³			30	38	06	31	4 00	27	52	54		
16	63 06.2	54.4	89 19.5 ¹⁶³	19.8 ¹⁴³			35	32	5 02	27	04	23	50	57		
17	78 06.4	-5 55.3	103 54.9 ¹⁶⁴	+4 05.4 ¹⁴⁴			40	4 24	4 57	5 24	4 08	20	15 47	61		
18	93 06.6	-5 56.3	118 30.3 ¹⁶⁴	+3 51.1 ¹⁴³			45	4 14	4 50	5 20	4 13	16	15 44	65		
19	108 06.8	57.2	133 05.8 ¹⁶⁵	36.7 ¹⁴⁴			50	4 02	42	15	18	12	40	70		
20	123 06.9	58.2	147 41.2 ¹⁶⁴	22.3 ¹⁴⁴			52	3 56	38	13	21	10	39	72		
21	138 07.1	-5 59.2	162 16.7 ¹⁶⁵	+3 08.0 ¹⁴³			54	50	34	10	24	7	37	74		
22	153 07.3	-6 00.1	176 52.3 ¹⁶⁶	+2 53.6 ¹⁴⁴			56	42	29	07	27	5	35	77		
23	168 07.5	01.1	191 27.8 ¹⁶⁵	39.2 ¹⁴⁴			58	33	24	04	30	2	33	80		
24	183 07.6	-6 02.0	206 03.4 ¹⁶⁶	+2 24.8 ¹⁴⁴			60 S	3 23	4 17	5 01	4 34	**	15 30	84		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 51 ^m 2			Mag: -4.7 PMG: 8 ^h 59 ^m			Mag: -0.2 PMG: 5 ^h 11 ^m			Mag: -2.0 PMG: 15 ^h 49 ^m			Mag: +0.8 PMG: 9 ^h 20 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	16	15.1	225 12.6	+9 21.0	282 01.9	+23 30.9	122 10.1	-22 18.2	219 39.5	+11 14.7						
1	31 17.5	240 13.1	20.7	297 03.2	31.0	137 12.2	18.3	234 41.7	14.6							
2	46 20.0	255 13.6	20.4	312 04.6	31.0	152 14.2	18.3	249 43.9	14.5							
3	61 22.5	270 14.1	20.0	327 06.0	31.0	167 16.2	18.4	264 46.1	14.4							
4	76 24.9	285 14.5	19.7	342 07.3	31.1	182 18.3	18.4	279 48.3	14.3							
5	91 27.4	300 15.0	+9 19.3	357 08.7	+23 31.1	197 20.3	-22 18.5	294 50.6	+11 14.2							
6	106 29.8	315 15.5	+9 19.0	12 10.1	+23 31.2	212 22.3	-22 18.5	309 52.8	+11 14.1							
7	121 32.3	330 16.0	18.6	27 11.5	31.2	227 24.4	18.6	324 55.0	14.0							
8	136 34.8	345 16.5	18.3	42 12.9	31.3	242 26.4	18.6	339 57.2	13.9							
9	151 37.2	0 17.0	17.9	57 14.2	31.3	257 28.4	18.7	354 59.4	13.8							
10	166 39.7	15 17.5	17.6	72 15.6	31.4	272 30.5	18.7	10 01.6	13.7							
11	181 42.2	30 17.9	+9 17.2	87 17.0	+23 31.4	287 32.5	-22 18.8	25 03.8	+11 13.7							
12	196 44.6	45 18.4	+9 16.9	102 18.4	+23 31.4	302 34.5	-22 18.8	40 06.0	+11 13.6							
13	211 47.1	60 18.9	16.5	117 19.8	31.5	317 36.6	18.9	55 08.2	13.5							
14	226 49.6	75 19.4	16.1	132 21.1	31.5	332 38.6	18.9	70 10.4	13.4							
15	241 52.0	90 19.9	15.8	147 22.5	31.6	347 40.6	19.0	85 12.6	13.3							
16	256 54.5	105 20.3	15.4	162 23.9	31.6	2 42.7	19.0	100 14.8	13.2							
17	271 57.0	120 20.8	+9 15.1	177 25.3	+23 31.7	17 44.7	-22 19.1	115 17.1	+11 13.1							
18	286 59.4	135 21.3	+9 14.7	192 26.7	+23 31.7	32 46.7	-22 19.1	130 19.3	+11 13.0							
19	302 01.9	150 21.7	14.3	207 28.1	31.8	47 48.8	19.2	145 21.5	12.9							
20	317 04.3	165 22.2	14.0	222 29.4	31.8	62 50.8	19.2	160 23.7	12.8							
21	332 06.8	180 22.7	13.6	237 30.8	31.8	77 52.8	19.3	175 25.9	12.7							
22	347 09.3	195 23.2	13.3	252 32.2	31.9	92 54.9	19.3	190 28.1	12.7							
23	2 11.7	210 23.6	12.9	267 33.6	31.9	107 56.9	19.4	205 30.3	12.6							
24	17 14.2	225 24.1	+9 12.5	282 35.0	+23 32.0	122 58.9	-22 19.4	220 32.5	+11 12.5							
Dif	—	+5	-4	+14	0	+20	0	+22	-1							

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°0 PMG: 11 ^h 47 ^m 4			Edad: 27 ^d 5 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 R°: 40 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	07.6	-6 02.0	206	03.4	+2 24.8		60 N	17 10	17 52	18 40	4 14 83	16 31 **		
1	198	07.8	03.0	220	39.0 ¹⁶⁶	+2 10.4 ¹⁴⁴		58	13	52	37	14 80	32 2		
2	213	08.0	03.9	235	14.6 ¹⁶⁶	+1 56.1 ¹⁴³		56	16	53	36	15 77	33 5		
3	228	08.2	04.9	249	50.2 ¹⁶⁶	41.7 ¹⁴⁴		54	18	53	34	16 74	33 8		
4	243	08.3	05.8	264	25.8 ¹⁶⁶	27.3 ¹⁴⁴		52	20	54	33	16 72	34 10		
5	258	08.5	-6 06.8	279	01.5 ¹⁶⁷	+1 12.9 ¹⁴⁴		50	17 22	17 55	18 32	4 17 69	16 35 11		
6	273	08.7	-6 07.7	293	37.2 ¹⁶⁷	+0 58.5 ¹⁴⁴		45	17 27	17 56	18 30	4 18 64	16 36 16		
7	288	08.8	08.7	308	12.9 ¹⁶⁷	44.2 ¹⁴³		40	30	57	29	19 60	37 20		
8	303	09.0	09.6	322	48.6 ¹⁶⁷	29.8 ¹⁴⁴		35	34	17 59	28	19 57	38 23		
9	318	09.2	10.6	337	24.4 ¹⁶⁸	15.4 ¹⁴⁴		30	37	18 00	28	20 54	39 26		
10	333	09.4	11.5	352	00.1 ¹⁶⁷	+0 01.1 ¹⁴³		20	42	04	29	21 49	40 31		
11	348	09.5	-6 12.5	6	35.9 ¹⁶⁸	-0 13.3 ¹⁴⁴		10 N	17 46	18 07	18 32	4 22 44	16 41 36		
12	3	09.7	-6 13.4	21	11.6 ¹⁶⁷	-0 27.6 ¹⁴³		0	17 51	18 11	18 36	4 23 40	16 42 40		
13	18	09.9	14.4	35	47.4 ¹⁶⁸	42.0 ¹⁴⁴		10 S	17 55	16	41	24 36	44 44		
14	33	10.0	15.3	50	23.2 ¹⁶⁸	-0 56.3 ¹⁴³		20	18 00	22	48	25 31	45 48		
15	48	10.2	16.3	64	59.0 ¹⁶⁸	-1 10.6 ¹⁴³		30	06	30	18 58	27 26	46 54		
16	63	10.4	17.2	79	34.8 ¹⁶⁸	24.9 ¹⁴³		35	09	35	19 05	27 23	47 57		
17	78	10.6	-6 18.2	94	10.6 ¹⁶⁸	-1 39.2 ¹⁴³		40	18 13	18 41	19 13	4 28 20	16 48 60		
18	93	10.7	-6 19.1	108	46.4 ¹⁶⁸	-1 53.5 ¹⁴³		45	18 18	18 47	19 23	4 29 16	16 49 64		
19	108	10.9	20.1	123	22.3 ¹⁶⁹	-2 07.8 ¹⁴³		50	23	18 56	36	30 12	50 69		
20	123	11.1	21.0	137	58.1 ¹⁶⁸	22.0 ¹⁴²		52	25	19 00	43	31 9	51 71		
21	138	11.2	22.0	152	33.9 ¹⁶⁸	36.3 ¹⁴³		54	28	05	50	31 7	51 74		
22	153	11.4	22.9	167	09.7 ¹⁶⁸	-2 50.5 ¹⁴²		56	31	10	19 58	32 4	52 77		
23	168	11.6	23.9	181	45.5 ¹⁶⁸	-3 04.7 ¹⁴²		58	35	16	20 07	32 2	53 79		
24	183	11.7	-6 24.8	196	21.4 ¹⁶⁹	-3 18.9 ¹⁴²		60 S	18 38	19 22	20 18	4 33 **	16 54 83		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 47 ^m 3			Mag: -4.7 PMG: 8 ^h 58 ^m			Mag: -0.2 PMG: 5 ^h 09 ^m			Mag: -2.0 PMG: 15 ^h 46 ^m			Mag: +0.8 PMG: 9 ^h 16 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'		°	'		°	'		°	'		°	'	
0	17	14.2		225	24.1	+9 12.5	282	35.0	+23 32.0	122	58.9	-22 19.4	220	32.5	+11 12.5
1	32	16.7		240	24.5	12.2	297	36.4	32.0	138	01.0	19.5	235	34.7	12.4
2	47	19.1		255	25.0	11.8	312	37.8	32.1	153	03.0	19.5	250	36.9	12.3
3	62	21.6		270	25.5	11.4	327	39.2	32.1	168	05.0	19.6	265	39.1	12.2
4	77	24.1		285	25.9	11.0	342	40.6	32.1	183	07.0	19.6	280	41.3	12.1
5	92	26.5		300	26.4	+9 10.7	357	42.0	+23 32.2	198	09.1	-22 19.7	295	43.6	+11 12.0
6	107	29.0		315	26.8	+9 10.3	12	43.4	+23 32.2	213	11.1	-22 19.7	310	45.8	+11 11.9
7	122	31.4		330	27.3	09.9	27	44.7	32.3	228	13.1	19.8	325	48.0	11.8
8	137	33.9		345	27.8	09.6	42	46.1	32.3	243	15.2	19.8	340	50.2	11.7
9	152	36.4		0	28.2	09.2	57	47.5	32.4	258	17.2	19.9	355	52.4	11.7
10	167	38.8		15	28.7	08.8	72	48.9	32.4	273	19.2	19.9	10	54.6	11.6
11	182	41.3		30	29.1	+9 08.4	87	50.3	+23 32.5	288	21.3	-22 20.0	25	56.8	+11 11.5
12	197	43.8		45	29.6	+9 08.1	102	51.7	+23 32.5	303	23.3	-22 20.0	40	59.0	+11 11.4
13	212	46.2		60	30.0	07.7	117	53.1	32.5	318	25.3	20.1	56	01.2	11.3
14	227	48.7		75	30.5	07.3	132	54.5	32.6	333	27.3	20.1	71	03.4	11.2
15	242	51.2		90	30.9	06.9	147	55.9	32.6	348	29.4	20.2	86	05.7	11.1
16	257	53.6		105	31.3	06.5	162	57.3	32.7	3	31.4	20.2	101	07.9	11.0
17	272	56.1		120	31.8	+9 06.2	177	58.7	+23 32.7	18	33.4	-22 20.3	116	10.1	+11 10.9
18	287	58.6		135	32.2	+9 05.8	193	00.2	+23 32.8	33	35.4	-22 20.3	131	12.3	+11 10.8
19	303	01.0		150	32.7	05.4	208	01.6	32.8	48	37.5	20.4	146	14.5	10.7
20	318	03.5		165	33.1	05.0	223	03.0	32.8	63	39.5	20.4	161	16.7	10.7
21	333	05.9		180	33.5	04.6	238	04.4	32.9	78	41.5	20.5	176	18.9	10.6
22	348	08.4		195	34.0	04.2	253	05.8	32.9	93	43.6	20.5	191	21.1	10.5
23	3	10.9		210	34.4	03.8	268	07.2	33.0	108	45.6	20.6	206	23.3	10.4
24	18	13.3		225	34.8	+9 03.5	283	08.6	+23 33.0	123	47.6	-22 20.6	221	25.6	+11 10.3
Dif	—			+4	-4		+14	0		+20	0		+22	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 1			Edad: 28 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m		h	m	m	
0	183	11.7	-6 24.8	196	21.4	-3 18.9	60 N	4 56	5 44	6 26	5 37	83	16 30	0		
1	198	11.9	25.8	210	57.2 ¹⁶⁸	33.1 ¹⁴²	58	4 58	43	23	34	80	34	3		
2	213	12.1	26.7	225	33.0 ¹⁶⁸	-3 47.2 ¹⁴¹	56	5 00	43	20	32	76	38	5		
3	228	12.2	27.7	240	08.8 ¹⁶⁸	-4 01.4 ¹⁴²	54	01	42	18	30	73	41	8		
4	243	12.4	28.6	254	44.6 ¹⁶⁸	15.5 ¹⁴¹	52	02	41	15	28	71	44	10		
5	258	12.6	-6 29.6	269	20.4 ¹⁶⁸	-4 29.6 ¹⁴¹	50	5 03	5 41	6 13	5 26	69	16 46	13		
6	273	12.7	-6 30.5	283	56.2 ¹⁶⁸	-4 43.7 ¹⁴¹	45	5 05	5 39	6 09	5 22	64	16 52	17		
7	288	12.9	31.5	298	32.0 ¹⁶⁸	-4 57.7 ¹⁴⁰	40	06	38	05	19	60	16 57	21		
8	303	13.1	32.4	313	07.8 ¹⁶⁸	-5 11.7 ¹⁴⁰	35	07	36	6 01	16	57	17 01	24		
9	318	13.2	33.4	327	43.6 ¹⁶⁸	25.7 ¹⁴⁰	30	07	34	5 58	14	54	05	27		
10	333	13.4	34.3	342	19.3 ¹⁶⁷	39.7 ¹⁴⁰	20	05	31	53	10	49	11	32		
11	348	13.6	-6 35.3	356	55.1 ¹⁶⁸	-5 53.7 ¹⁴⁰	10 N	5 03	5 27	5 48	5 06	45	17 17	36		
12	3	13.7	-6 36.2	11	30.8 ¹⁶⁷	-6 07.6 ¹³⁹	0	4 59	5 23	5 44	5 03	40	17 22	41		
13	18	13.9	37.2	26	06.5 ¹⁶⁷	21.5 ¹³⁹	10 S	53	18	39	5 00	36	28	44		
14	33	14.1	38.1	40	42.2 ¹⁶⁷	35.4 ¹³⁹	20	46	12	34	4 56	32	33	50		
15	48	14.2	39.1	55	17.9 ¹⁶⁷	-6 49.2 ¹³⁸	30	36	5 04	28	53	26	40	54		
16	63	14.4	40.0	69	53.6 ¹⁶⁷	-7 03.0 ¹³⁸	35	29	4 59	25	50	24	44	57		
17	78	14.6	-6 41.0	84	29.3 ¹⁶⁷	-7 16.8 ¹³⁸	40	4 21	4 53	5 21	4 48	20	17 48	61		
18	93	14.7	-6 41.9	99	04.9 ¹⁶⁶	-7 30.6 ¹³⁸	45	4 10	4 46	5 16	4 45	17	17 53	65		
19	108	14.9	42.8	113	40.5 ¹⁶⁶	44.3 ¹³⁷	50	3 57	38	11	42	12	17 59	70		
20	123	15.1	43.8	128	16.1 ¹⁶⁶	-7 58.0 ¹³⁷	52	51	33	08	40	10	18 02	72		
21	138	15.2	44.7	142	51.7 ¹⁶⁶	-8 11.6 ¹³⁶	54	44	29	05	38	8	05	74		
22	153	15.4	45.7	157	27.3 ¹⁶⁶	25.2 ¹³⁶	56	36	24	5 02	36	6	09	77		
23	168	15.6	46.6	172	02.8 ¹⁶⁵	38.8 ¹³⁶	58	26	18	4 59	34	3	12	81		
24	183	15.7	-6 47.6	186	38.3 ¹⁶⁵	-8 52.3 ¹³⁵	60 S	3 15	4 11	4 55	4 32	**	18 17	84		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 43 ^m 4			Mag: -4.7 PMG: 8 ^h 57 ^m			Mag: -0.2 PMG: 5 ^h 07 ^m			Mag: -2.0 PMG: 15 ^h 43 ^m			Mag: +0.8 PMG: 9 ^h 13 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	18	13.3	225	34.8	+9 03.5	283	08.6	+23 33.0	123	47.6	-22 20.6	221	25.6	+11 10.3		
1	33	15.8	240	35.3	03.1	298	10.0	33.0	138	49.6	20.7	236	27.8	10.2		
2	48	18.3	255	35.7	02.7	313	11.4	33.1	153	51.7	20.7	251	30.0	10.1		
3	63	20.7	270	36.1	02.3	328	12.8	33.1	168	53.7	20.8	266	32.2	10.0		
4	78	23.2	285	36.6	01.9	343	14.2	33.2	183	55.7	20.8	281	34.4	09.9		
5	93	25.7	300	37.0	+9 01.5	358	15.7	+23 33.2	198	57.7	-22 20.9	296	36.6	+11 09.8		
6	108	28.1	315	37.4	+9 01.1	13	17.1	+23 33.3	213	59.8	-22 20.9	311	38.8	+11 09.8		
7	123	30.6	330	37.9	00.7	28	18.5	33.3	229	01.8	21.0	326	41.0	09.7		
8	138	33.0	345	38.3	+9 00.3	43	19.9	33.3	244	03.8	21.0	341	43.3	09.6		
9	153	35.5	0	38.7	+8 59.9	58	21.3	33.4	259	05.8	21.1	356	45.5	09.5		
10	168	38.0	15	39.1	59.5	73	22.7	33.4	274	07.8	21.1	11	47.7	09.4		
11	183	40.4	30	39.5	+8 59.1	88	24.2	+23 33.5	289	09.9	-22 21.2	26	49.9	+11 09.3		
12	198	42.9	45	40.0	+8 58.7	103	25.6	+23 33.5	304	11.9	-22 21.2	41	52.1	+11 09.2		
13	213	45.4	60	40.4	58.3	118	27.0	33.6	319	13.9	21.3	56	54.3	09.1		
14	228	47.8	75	40.8	57.9	133	28.4	33.6	334	15.9	21.3	71	56.5	09.0		
15	243	50.3	90	41.2	57.5	148	29.8	33.6	349	18.0	21.4	86	58.7	08.9		
16	258	52.8	105	41.6	57.1	163	31.3	33.7	4	20.0	21.4	102	01.0	08.9		
17	273	55.2	120	42.0	+8 56.7	178	32.7	+23 33.7	19	22.0	-22 21.5	117	03.2	+11 08.8		
18	288	57.7	135	42.5	+8 56.3	193	34.1	+23 33.8	34	24.0	-22 21.5	132	05.4	+11 08.7		
19	304	00.2	150	42.9	55.9	208	35.5	33.8	49	26.1	21.6	147	07.6	08.6		
20	319	02.6	165	43.3	55.5	223	37.0	33.8	64	28.1	21.6	162	09.8	08.5		
21	334	05.1	180	43.7	55.1	238	38.4	33.9	79	30.1	21.7	177	12.0	08.4		
22	349	07.5	195	44.1	54.7	253	39.8	33.9	94	32.1	21.7	192	14.2	08.3		
23	4	10.0	210	44.5	54.2	268	41.2	34.0	109	34.1	21.8	207	16.4	08.2		
24	19	12.5	225	44.9	+8 53.8	283	42.7	+23 34.0	124	36.2	-22 21.8	222	18.7	+11 08.1		
Dif	—		+4	-4		+14	0		+20		0	+22	-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 16 ^h 0			Edad: 1 ^d 8	PHE	$\left\{ \begin{array}{l} 4^h: 53^m/9 \\ 12^h: 53^m/9 \\ 20^h: 54^m/0 \end{array} \right.$																
	PMG: 11 ^h 46 ^m 3																					
	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	23.4	-7 32.8	166	19.1	-18 44.3		60 N	16 58	17 40	18 28	9 54 92	16 31 4									
1	198	23.5		180	52.5 ¹⁴⁴	-18 55.0 ¹⁰⁷		58	17 02	42	27	39 85	16 47 11									
2	213	23.7	34.6	195	25.9 ¹⁴⁴	-19 05.7 ¹⁰⁷		56	05	43	26	26 80	17 01 15									
3	228	23.8	35.6	209	59.1 ¹⁴²	16.4 ¹⁰⁷		54	09	44	25	15 76	13 19									
4	243	24.0	36.5	224	32.3 ¹⁴²	26.9 ¹⁰⁵		52	11	45	24	9 05 73	23 22									
5	258	24.1	-7 37.5	239	05.5 ¹⁴²	-19 37.4 ¹⁰⁵		50	17 14	17 46	18 24	8 56 71	17 33 24									
6	273	24.3	-7 38.4	253	38.6 ¹⁴¹	-19 47.8 ¹⁰⁴		45	17 20	17 49	18 23	8 37 66	17 52 29									
7	288	24.4	39.3	268	11.6 ¹⁴⁰	-19 58.1 ¹⁰³		40	24	51	23	22 62	18 09 32									
8	303	24.6	40.3	282	44.6 ¹⁴⁰	-20 08.3 ¹⁰²		35	28	54	23	8 09 60	22 36									
9	318	24.7	41.2	297	17.5 ¹³⁹	18.5 ¹⁰²		30	32	17 56	24	7 58 57	34 38									
10	333	24.9	42.1	311	50.4 ¹³⁹	28.5 ¹⁰⁰		20	38	18 01	26	39 53	18 55 41									
11	348	25.0	-7 43.1	326	23.2 ¹³⁸	-20 38.5 ¹⁰⁰		10 N	17 44	18 05	18 30	7 23 49	19 13 44									
12	3	25.2	-7 44.0	340	55.9 ¹³⁷	-20 48.4 ⁹⁹		0	17 50	18 10	18 35	7 08 46	19 30 47									
13	18	25.3	44.9	355	28.5 ¹³⁶	-20 58.2 ⁹⁸		10 S	17 55	16	41	6 53 42	19 47 50									
14	33	25.5	45.9	10	01.1 ¹³⁶	-21 07.9 ⁹⁷		20	18 01	24	18 50	37 39	20 05 53									
15	48	25.6	46.8	24	33.7 ¹³⁶	17.5 ⁹⁶		30	08	33	19 01	18 35	26 57									
16	63	25.8	47.7	39	06.1 ¹³⁴	27.1 ⁹⁶		35	12	38	09	6 08 32	38 59									
17	78	25.9	-7 48.7	53	38.5 ¹³⁴	-21 36.5 ⁹⁴		40	18 17	18 45	19 18	5 56 29	20 52 62									
18	93	26.1	-7 49.6	68	10.9 ¹³⁴	-21 45.9 ⁹⁴		45	18 23	18 53	19 29	5 41 26	21 09 65									
19	108	26.2	50.6	82	43.2 ¹³³	-21 55.2 ⁹³		50	29	19 03	44	24 21	30 70									
20	123	26.4	51.5	97	15.4 ¹³²	-22 04.3 ⁹¹		52	32	08	51	16 19	40 73									
21	138	26.5	52.4	111	47.5 ¹³¹	13.4 ⁹¹		54	36	13	19 59	5 07 16	21 52 75									
22	153	26.7	53.4	126	19.6 ¹³¹	22.4 ⁹⁰		56	40	19	20 08	4 57 12	22 04 80									
23	168	26.8	54.3	140	51.6 ¹³⁰	31.3 ⁸⁹		58	44	26	19	45 9	20 84									
24	183	27.0	-7 55.2	155	23.6 ¹³⁰	-22 40.1 ⁸⁸		60 S	18 48	19 33	20 31	4 32 3	22 38 91									
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 22 ^h 31 ^m 6		Mag: -4.6 PMG: 8 ^h 56 ^m		Mag: -0.3 PMG: 5 ^h 00 ^m		Mag: -2.0 PMG: 15 ^h 33 ^m		Mag: +0.8 PMG: 9 ^h 02 ^m													
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec													
h	°	°	°	°	°	°	°	°	°													
0	21	10.7	226 03.0	+8 33.0	284 52.3	+23 35.9	126 12.9	-22 24.2	224 05.0	+11 03.9												
1	36	13.2	241 03.4	32.6	299 53.7	36.0	141 14.9	24.2	239 07.2	03.8												
2	51	15.7	256 03.7	32.1	314 55.2	36.0	156 16.9	24.3	254 09.4	03.7												
3	66	18.1	271 04.1	31.6	329 56.7	36.1	171 18.9	24.3	269 11.7	03.6												
4	81	20.6	286 04.4	31.2	344 58.2	36.1	186 21.0	24.4	284 13.9	03.5												
5	96	23.1	301 04.8	+8 30.7	359 59.6	+23 36.1	201 23.0	-22 24.4	299 16.1	+11 03.5												
6	111	25.5	316 05.1	+8 30.3	15 01.1	+23 36.2	216 25.0	-22 24.5	314 18.3	+11 03.4												
7	126	28.0	331 05.5	29.8	30 02.6	36.2	231 27.0	24.5	329 20.5	03.3												
8	141	30.5	346 05.8	29.3	45 04.1	36.3	246 29.0	24.6	344 22.8	03.2												
9	156	32.9	1 06.1	28.9	60 05.5	36.3	261 31.0	24.6	359 25.0	03.1												
10	171	35.4	16 06.5	28.4	75 07.0	36.3	276 33.0	24.7	14 27.2	03.0												
11	186	37.9	31 06.8	+8 28.0	90 08.5	+23 36.4	291 35.0	-22 24.7	29 29.4	+11 02.9												
12	201	40.3	46 07.2	+8 27.5	105 10.0	+23 36.4	306 37.0	-22 24.8	44 31.6	+11 02.8												
13	216	42.8	61 07.5	27.0	120 11.5	36.5	321 39.0	24.8	59 33.9	02.8												
14	231	45.2	76 07.8	26.6	135 12.9	36.5	336 41.0	24.9	74 36.1	02.7												
15	246	47.7	91 08.2	26.1	150 14.4	36.5	351 43.1	24.9	89 38.3	02.6												
16	261	50.2	106 08.5	25.6	165 15.9	36.6	6 45.1	25.0	104 40.5	02.5												
17	276	52.6	121 08.8	+8 25.1	180 17.4	+23 36.6	21 47.1	-22 25.0	119 42.7	+11 02.4												
18	291	55.1	136 09.2	+8 24.7	195 18.9	+23 36.7	36 49.1	-22 25.1	134 45.0	+11 02.3												
19	306	57.6	151 09.5	24.2	210 20.4	36.7	51 51.1	25.1	149 47.2	02.2												
20	322	00.0	166 09.8	23.7	225 21.9	36.7	66 53.1	25.2	164 49.4	02.2												
21	337	02.5	181 10.2	23.3	240 23.3	36.8	81 55.1	25.2	179 51.6	02.1												
22	352	05.0	196 10.5	22.8	255 24.8	36.8	96 57.1	25.3	194 53.8	02.0												
23	7	07.4	211 10.8	22.3	270 26.3	36.9	111 59.1	25.3	209 56.1	01.9												
24	22	09.9	226 11.1	+8 21.8	285 27.8	+23 36.9	127 01.1	-22 25.4	224 58.3	+11 01.8												
Dif	—		+3	-5	+15	0	+20	0	+22	-1												

ALMANAQUE NÁUTICO PERSEIS

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: 4 ^d 8 SD: 14'8 PMG: 15 ^h 46 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	33.8	-8	131	42.9	-27	33.8	5	10	5	58	6	41	14	16	48	
1	198	34.0		146	11.9 ¹⁰⁰		37.0	11	56		36		36	13	38	50	
2	213	34.1		160	40.9 ¹⁰⁰		40.0	12	55		32		32	13	11	51	
3	228	34.2		175	09.8 ⁹⁹		42.8	12	53		29		29	12	50	51	
4	243	34.4		189	38.7 ⁹⁹		45.6	12	51		26		26	32	52		
5	258	34.5	-8	204	07.6 ⁹⁹	-27	48.2	5	50	5	50	6	23	12	17	52	
6	273	34.6	-8	218	36.4 ⁹⁸	-27	50.6	5	47	5	47	6	16	11	47	52	
7	288	34.8		233	05.2 ⁹⁸		53.0	12	44		11		11	24	52		
8	303	34.9		247	33.9 ⁹⁷		55.2	11	41		06		06	11	04	53	
9	318	35.0		262	02.6 ⁹⁷		57.2	10	38		6	02	6	10	48	52	
10	333	35.2		276	31.2 ⁹⁶	-27	59.2	07	33	5	55	5	55	10	20	52	
11	348	35.3	-8	290	59.9 ⁹⁷	-28	00.9	5	03	5	27	5	48	9	56	52	
12	3	35.5	-8	305	28.4 ⁹⁵	-28	02.6	4	57	5	21	5	42	9	33	53	
13	18	35.6		319	57.0 ⁹⁶		04.1	50	15		36		36	9	11	53	
14	33	35.7		334	25.5 ⁹⁵		05.5	41	5	07	29		29	8	47	53	
15	48	35.9		348	54.0 ⁹⁵		06.7	28	4	57	21		21	20	52		
16	63	36.0		3	22.4 ⁹⁴		07.8	20	51		17		17	8	03	52	
17	78	36.1	-8	17	50.9 ⁹⁵	-28	08.7	4	44	4	44	5	12	7	44	52	
18	93	36.3	-8	32	19.3 ⁹⁴	-28	09.6	3	58	4	35	5	05	7	21	51	
19	108	36.4		46	47.6 ⁹³		10.2	43	24	4	58	6	52	6	52	51	
20	123	36.5		61	16.0 ⁹⁴		10.8	36	19		55		55	37	51		
21	138	36.7	-8	75	44.3 ⁹³		11.2	27	14		51		51	21	49		
22	153	36.8	-9	90	12.6 ⁹³		11.4	17	07		47		47	6	01	49	
23	168	36.9	-9	104	40.9 ⁹³		11.5	3	06	4	00	42	5	5	36	47	
24	183	37.0	-9	119	09.1 ⁹²	-28	11.5	2	52	3	52	4	37	5	02	44	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 19 ^m 8			Mag: -4.6 PMG: 8 ^h 54 ^m			Mag: -0.3 PMG: 4 ^h 53 ^m			Mag: -2.0 PMG: 15 ^h 23 ^m			Mag: +0.8 PMG: 8 ^h 52 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	24	08.2	226	25.7	+7	57.9	286	40.5	+23	38.8	128	37.2	-22	27.7	226	45.0	
1	39	10.6	241	25.9		57.4	301	42.0		38.8	143	39.2		27.8	241	47.2	
2	54	13.1	256	26.2		56.9	316	43.5		38.8	158	41.2		27.8	256	49.4	
3	69	15.6	271	26.5		56.4	331	45.1		38.9	173	43.2		27.9	271	51.6	
4	84	18.0	286	26.8		55.8	346	46.6		38.9	188	45.2		27.9	286	53.9	
5	99	20.5	301	27.1	+7	55.3	1	48.2	+23	39.0	203	47.2	-22	28.0	301	56.1	
6	114	23.0	316	27.3	+7	54.8	16	49.7	+23	39.0	218	49.2	-22	28.0	316	58.3	
7	129	25.4	331	27.6		54.3	31	51.2		39.0	233	51.2		28.1	332	00.5	
8	144	27.9	346	27.9		53.7	46	52.8		39.1	248	53.2		28.1	347	02.8	
9	159	30.3	1	28.1		53.2	61	54.3		39.1	263	55.2		28.2	2	05.0	
10	174	32.8	16	28.4		52.7	76	55.9		39.2	278	57.2		28.2	17	07.2	
11	189	35.3	31	28.7	+7	52.2	91	57.4	+23	39.2	293	59.2	-22	28.3	32	09.4	
12	204	37.7	46	29.0	+7	51.6	106	59.0	+23	39.2	309	01.1	-22	28.3	47	11.7	
13	219	40.2	61	29.2		51.1	122	00.5		39.3	324	03.1		28.4	62	13.9	
14	234	42.7	76	29.5		50.6	137	02.1		39.3	339	05.1		28.4	77	16.1	
15	249	45.1	91	29.8		50.0	152	03.6		39.4	354	07.1		28.5	92	18.4	
16	264	47.6	106	30.0		49.5	167	05.2		39.4	9	09.1		28.5	107	20.6	
17	279	50.1	121	30.3	+7	49.0	182	06.7	+23	39.4	24	11.1	-22	28.5	122	22.8	
18	294	52.5	136	30.6	+7	48.4	197	08.3	+23	39.5	39	13.1	-22	28.6	137	25.0	
19	309	55.0	151	30.8		47.9	212	09.8		39.5	54	15.1		28.6	152	27.3	
20	324	57.4	166	31.1		47.4	227	11.4		39.6	69	17.1		28.7	167	29.5	
21	339	59.9	181	31.3		46.8	242	12.9		39.6	84	19.1		28.7	182	31.7	
22	355	02.4	196	31.6		46.3	257	14.5		39.6	99	21.1		28.8	197	33.9	
23	10	04.8	211	31.9		45.8	272	16.0		39.7	114	23.1		28.8	212	36.2	
24	25	07.3	226	32.1	+7	45.2	287	17.6	+23	39.7	129	25.1	-22	28.9	227	38.4	
Dif	—		+3	-5			+15	0			+20			0	+22	-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 45 ^m 4			Edad: 5 ^d 8 PHE { 4 ^h : 54 ^m 8 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2 R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m			
0	183	37.0	-9 01.9	119	09.1	-28 11.5	60 N	16 47	17 29	18 17	15 04 20		18 17 90			
1	198	37.2	02.8	133	37.3	92 11.3	58	51	31	16	14 28 29		18 53 80			
2	213	37.3	03.7	148	05.5	92 11.0	56	55	33	16	14 02 34		19 19 75			
3	228	37.4	04.6	162	33.7	92 10.5	54	16 59	35	16	13 41 37		39 72			
4	243	37.6	05.5	177	01.9	92 09.9	52	17 03	37	16	24 39		19 56 70			
5	258	37.7	-9 06.5	191	30.1	92 -28 09.2	50	17 06	17 38	18 16	13 09 41		20 11 68			
6	273	37.8	-9 07.4	205	58.2	91 -28 08.3	45	17 13	17 42	18 16	12 39 44		20 40 65			
7	288	38.0	08.3	220	26.3	91 07.3	40	18	46	17	12 16 46		21 03 63			
8	303	38.1	09.2	234	54.4	91 06.1	35	23	49	18	11 57 47		22 61			
9	318	38.2	10.1	249	22.6	92 04.8	30	28	52	20	40 49		21 39 59			
10	333	38.3	11.0	263	50.6	90 03.3	20	35	17 58	23	11 12 50		22 06 57			
11	348	38.5	-9 11.9	278	18.7	91 -28 01.7	10 N	17 42	18 03	18 28	10 48 52		22 30 54			
12	3	38.6	-9 12.9	292	46.8	91 -28 00.0	0	17 49	18 10	18 34	10 26 53		22 52 52			
13	18	38.7	13.8	307	14.9	91 -27 58.1	10 S	17 55	17	42	10 04 54		23 13 51			
14	33	38.9	14.7	321	42.9	90 56.0	20	18 03	25	18 51	9 40 55		23 37 48			
15	48	39.0	15.6	336	11.0	91 53.8	30	11	36	19 04	9 12 57		** ** *			
16	63	39.1	16.5	350	39.1	91 51.5	35	16	42	13	8 55 58		** ** *			
17	78	39.2	-9 17.4	5	07.1	90 -27 49.0	40	18 21	18 49	19 23	8 36 59		** ** *			
18	93	39.4	-9 18.3	19	35.2	91 -27 46.4	45	18 28	18 59	19 35	8 12 61		0 13 48			
19	108	39.5	19.3	34	03.2	90 43.7	50	36	19 10	19 52	7 43 63		43 46			
20	123	39.6	20.2	48	31.3	91 40.8	52	39	15	20 00	28 64		0 58 45			
21	138	39.7	21.1	62	59.4	91 37.7	54	43	21	09	7 10 66		1 15 44			
22	153	39.9	22.0	77	27.4	90 34.5	56	48	28	19	6 50 67		1 36 42			
23	168	40.0	22.9	91	55.5	91 31.2	58	53	36	31	6 23 71		2 02 39			
24	183	40.1	-9 23.8	106	23.6	91 -27 27.7	60 S	18 59	19 44	20 45	5 46 78		2 39 33			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 15 ^m 9			Mag: -4.6 PMG: 8 ^h 54 ^m			Mag: -0.3 PMG: 4 ^h 50 ^m			Mag: -2.0 PMG: 15 ^h 20 ^m			Mag: +0.8 PMG: 8 ^h 48 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	°	'	°	'		°	'		°	'		°	'		
0	25	07.3	226 32.1	287 17.6	+7 45.2		129 25.1	-22 28.9		227 38.4	+10 55.7		242 40.6	55.6		
1	40	09.8	241 32.4	302 19.1	39.7		144 27.1	28.9		242 40.6	55.6		242 40.6	55.6		
2	55	12.2	256 32.6	317 20.7	39.8		159 29.1	29.0		257 42.9	55.5		257 42.9	55.5		
3	70	14.7	271 32.9	332 22.3	39.8		174 31.0	29.0		272 45.1	55.4		272 45.1	55.4		
4	85	17.2	286 33.1	347 23.8	39.9		189 33.0	29.1		287 47.3	55.3		287 47.3	55.3		
5	100	19.6	301 33.4	2	25.4	+23 39.9	204 35.0	-22 29.1		302 49.5	+10 55.2		302 49.5	+10 55.2		
6	115	22.1	316 33.6	17 27.0	+23 39.9		219 37.0	-22 29.2		317 51.8	+10 55.2		317 51.8	+10 55.2		
7	130	24.6	331 33.9	32 28.5	40.0		234 39.0	29.2		332 54.0	55.1		332 54.0	55.1		
8	145	27.0	346 34.2	47 30.1	40.0		249 41.0	29.3		347 56.2	55.0		347 56.2	55.0		
9	160	29.5	1 34.4	62 31.7	40.1		264 43.0	29.3		2 58.5	54.9		2 58.5	54.9		
10	175	31.9	16 34.7	77 33.2	40.1		279 45.0	29.4		18 00.7	54.8		18 00.7	54.8		
11	190	34.4	31 34.9	92 34.8	+23 40.1		294 47.0	-22 29.4		33 02.9	+10 54.7		33 02.9	+10 54.7		
12	205	36.9	46 35.2	107 36.4	+23 40.2		309 49.0	-22 29.5		48 05.1	+10 54.7		48 05.1	+10 54.7		
13	220	39.3	61 35.4	122 37.9	40.2		324 51.0	29.5		63 07.4	54.6		63 07.4	54.6		
14	235	41.8	76 35.6	137 39.5	40.3		339 52.9	29.6		78 09.6	54.5		78 09.6	54.5		
15	250	44.3	91 35.9	152 41.1	40.3		354 54.9	29.6		93 11.8	54.4		93 11.8	54.4		
16	265	46.7	106 36.1	167 42.6	40.3		9 56.9	29.7		108 14.1	54.3		108 14.1	54.3		
17	280	49.2	121 36.4	182 44.2	+23 40.4		24 58.9	-22 29.7		123 16.3	+10 54.2		123 16.3	+10 54.2		
18	295	51.7	136 36.6	197 45.8	+23 40.4		40 00.9	-22 29.8		138 18.5	+10 54.2		138 18.5	+10 54.2		
19	310	54.1	151 36.9	212 47.4	40.5		55 02.9	29.8		153 20.7	54.1		153 20.7	54.1		
20	325	56.6	166 37.1	227 48.9	40.5		70 04.9	29.9		168 23.0	54.0		168 23.0	54.0		
21	340	59.1	181 37.3	242 50.5	40.5		85 06.9	29.9		183 25.2	53.9		183 25.2	53.9		
22	356	01.5	196 37.6	257 52.1	40.6		100 08.9	30.0		198 27.4	53.8		198 27.4	53.8		
23	11	04.0	211 37.8	272 53.7	40.6		115 10.8	30.0		213 29.7	53.7		213 29.7	53.7		
24	26	06.4	226 38.1	287 55.3	+23 40.6		130 12.8	-22 30.1		228 31.9	+10 53.7		228 31.9	+10 53.7		
Dif	—		+2		-5		+16	0		+20	0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 2			Edad: 6 ^d 8 SD: 15'0 PMG: 17 ^h 32 ^m	PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8 R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	40.1	-9	23.8	106	23.6	-27	27.7	5 15	6 03	6 46	15 24	8	19 47	100		
1	198	40.2		24.7	120	51.6	90	24.1	15	6 01	41	14 57	16	20 13	92		
2	213	40.4		25.7	135	19.7	91	20.3	16	5 59	36	36	21	34	86		
3	228	40.5		26.6	149	47.8	91	16.4	16	57	33	18	25	20 51	82		
4	243	40.6		27.5	164	15.9	91	12.3	16	55	29	14 03	28	21 06	79		
5	258	40.7	-9	28.4	178	44.1	92	-27	5 16	5 53	6 26	13 50	31	21 19	76		
6	273	40.9	-9	29.3	193	12.2	91	-27	5 15	5 49	6 19	13 23	35	21 45	71		
7	288	41.0		30.2	207	40.3	91	-26	14	46	13	13 02	38	22 06	67		
8	303	41.1		31.1	222	08.5	92	54.7	13	42	08	12 44	41	23	64		
9	318	41.2		32.0	236	36.7	92	49.9	11	39	6 04	29	43	22 38	62		
10	333	41.4		32.9	251	04.8	91	45.0	08	33	5 56	12 02	47	23 03	58		
11	348	41.5	-9	33.8	265	33.0	92	-26	5 03	5 27	5 49	11 40	50	23 24	55		
12	3	41.6	-9	34.8	280	01.3	93	-26	4 57	5 21	5 42	11 19	52	23 44	52		
13	18	41.7		35.7	294	29.5	92	29.4	49	14	35	10 58	55	***	***	***	
14	33	41.8		36.6	308	57.8	93	23.9	39	5 05	28	35	58	***	***	***	
15	48	42.0		37.5	323	26.0	92	18.3	26	4 55	19	10 09	61	0 04	46		
16	63	42.1		38.4	337	54.3	93	12.5	17	48	14	9 53	63	20	44		
17	78	42.2	-9	39.3	352	22.7	94	-26	4 07	4 41	5 09	9 35	66	0 38	42		
18	93	42.3	-9	40.2	6	51.0	93	-26	3 55	4 31	5 02	9 13	69	1 01	39		
19	108	42.5		41.1	21	19.4	94	-25	38	20	4 54	8 46	72	29	35		
20	123	42.6		42.0	35	47.8	94	48.1	30	15	50	32	75	43	33		
21	138	42.7		42.9	50	16.2	94	41.6	21	09	46	8 16	78	1 59	31		
22	153	42.8		43.8	64	44.6	94	35.0	3 11	4 02	42	7 57	82	2 18	27		
23	168	42.9		44.7	79	13.1	95	28.3	2 59	3 54	37	34	87	2 41	22		
24	183	43.1	-9	45.7	93	41.6	95	-25	2 45	3 45	4 31	7 04	96	3 12	13		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 11 ^m 9			Mag: -4.6 PMG: 8 ^h 53 ^m			Mag: -0.4 PMG: 4 ^h 48 ^m			Mag: -2.0 PMG: 15 ^h 17 ^m			Mag: +0.8 PMG: 8 ^h 45 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	26	06.4	226	38.1	+7	32.0	287	55.3	+23	40.6	130	12.8	-22	30.1	228	31.9	+10	53.7
1	41	08.9	241	38.3		31.5	302	56.8		40.7	145	14.8		30.1	243	34.1		53.6
2	56	11.4	256	38.5		30.9	317	58.4		40.7	160	16.8		30.2	258	36.4		53.5
3	71	13.8	271	38.8		30.4	333	00.0		40.8	175	18.8		30.2	273	38.6		53.4
4	86	16.3	286	39.0		29.8	348	01.6		40.8	190	20.8		30.3	288	40.8		53.3
5	101	18.8	301	39.2	+7	29.2	3	03.2	+23	40.8	205	22.8	-22	30.3	303	43.0	+10	53.2
6	116	21.2	316	39.5	+7	28.7	18	04.8	+23	40.9	220	24.8	-22	30.3	318	45.3	+10	53.2
7	131	23.7	331	39.7		28.1	33	06.3		40.9	235	26.7		30.4	333	47.5		53.1
8	146	26.2	346	39.9		27.5	48	07.9		41.0	250	28.7		30.4	348	49.7		53.0
9	161	28.6	1	40.2		27.0	63	09.5		41.0	265	30.7		30.5	3	52.0		52.9
10	176	31.1	16	40.4		26.4	78	11.1		41.0	280	32.7		30.5	18	54.2		52.8
11	191	33.6	31	40.6	+7	25.8	93	12.7	+23	41.1	295	34.7	-22	30.6	33	56.4	+10	52.7
12	206	36.0	46	40.8	+7	25.3	108	14.3	+23	41.1	310	36.7	-22	30.6	48	58.7	+10	52.7
13	221	38.5	61	41.1		24.7	123	15.9		41.2	325	38.7		30.7	64	00.9		52.6
14	236	40.9	76	41.3		24.1	138	17.5		41.2	340	40.6		30.7	79	03.1		52.5
15	251	43.4	91	41.5		23.6	153	19.1		41.2	355	42.6		30.8	94	05.4		52.4
16	266	45.9	106	41.7		23.0	168	20.7		41.3	10	44.6		30.8	109	07.6		52.3
17	281	48.3	121	42.0	+7	22.4	183	22.3	+23	41.3	25	46.6	-22	30.9	124	09.8	+10	52.3
18	296	50.8	136	42.2	+7	21.8	198	23.9	+23	41.4	40	48.6	-22	30.9	139	12.1	+10	52.2
19	311	53.3	151	42.4		21.3	213	25.5		41.4	55	50.6		31.0	154	14.3		52.1
20	326	55.7	166	42.6		20.7	228	27.1		41.4	70	52.6		31.0	169	16.5		52.0
21	341	58.2	181	42.9		20.1	243	28.7		41.5	85	54.5		31.1	184	18.8		51.9
22	357	00.7	196	43.1		19.5	258	30.3		41.5	100	56.5		31.1	199	21.0		51.8
23	12	03.1	211	43.3		19.0	273	31.9		41.6	115	58.5		31.2	214	23.2		51.8
24	27	05.6	226	43.5	+7	18.4	288	33.5	+23	41.6	131	00.5	-22	31.2	229	25.4	+10	51.7
Dif	—		+2	-6			+16	0			+20	0			+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 16 ^h 1			Edad: 7 ^d 8	PHE	$\left\{ \begin{array}{l} 4^h: 56'1 \\ 12^h: 56'3 \\ 20^h: 56'6 \\ R^{\circ}: 50^m \end{array} \right.$																
	PMG: 11 ^h 45 ^m 0																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	'	'	'	'	°	h m	h m	h m	m	h m	m								
0	183	43.1	-9	45.7	93	41.6	-25	21.4	60 N	16 41	17 23	18 12	15 32	3								
1	198	43.2		46.6	108	10.1	95	14.4	58	46	26	11	15 13	9								
2	213	43.3		47.5	122	38.6	95	07.2	56	51	28	11	14 57	14								
3	228	43.4		48.4	137	07.2	96	59.9	54	55	31	12	43 18	13								
4	243	43.5		49.3	151	35.8	96	52.5	52	16 58	33	12	31 21	25								
5	258	43.6	-9	50.2	166	04.5	97	44.9	50	17 02	17 35	18 12	14 21	23								
6	273	43.8	-9	51.1	180	33.1	96	37.2	45	17 09	17 39	18 13	13 58	29								
7	288	43.9		52.0	195	01.8	97	29.4	40	15	43	14	40 33	23								
8	303	44.0		52.9	209	30.5	97	21.4	35	21	46	16	25 36	27								
9	318	44.1		53.8	223	59.3	98	13.3	30	25	50	18	13 12	39								
10	333	44.2		54.7	238	28.1	98	05.1	20	34	17 56	22	12 49	44								
11	348	44.3	-9	55.6	252	56.9	98	56.7	10 N	17 41	18 03	18 27	12 30	47								
12	3	44.5	-9	56.5	267	25.8	99	48.2	0	17 48	18 09	18 34	12 11	51								
13	18	44.6		57.4	281	54.6	98	39.6	10 S	17 56	17	42	11 53	54								
14	33	44.7		58.3	296	23.6	100	30.8	20	18 03	26	18 52	33 58	25								
15	48	44.8	-9	59.2	310	52.5	99	22.0	30	12	37	19 06	11 10	63								
16	63	44.9	-10	00.1	325	21.5	100	12.9	35	18	44	15	10 56	66								
17	78	45.0	-10	01.0	339	50.5	100	03.8	40	18 24	18 52	19 25	10 41	68								
18	93	45.2	-10	01.9	354	19.6	101	54.5	45	18 31	19 01	19 39	10 22	73								
19	108	45.3		02.8	8	48.7	101	45.1	50	39	13	19 56	9 58	79								
20	123	45.4		03.7	23	17.8	101	35.6	52	43	19	20 04	47 81	16								
21	138	45.5		04.6	37	47.0	102	25.9	54	47	25	13	34 84	30								
22	153	45.6		05.5	52	16.2	102	16.1	56	52	33	24	19 89	2								
23	168	45.7		06.4	66	45.4	102	06.2	58	18 58	41	37	9 01	94								
24	183	45.8	-10	07.3	81	14.6	102	56.2	60 S	19 04	19 50	20 53	8 40	100								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 22 ^h 08 ^m 0			Mag: -4.6 PMG: 8 ^h 53 ^m			Mag: -0.4 PMG: 4 ^h 45 ^m			Mag: -2.0 PMG: 15 ^h 14 ^m			Mag: +0.8 PMG: 8 ^h 41 ^m									
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	'	°	'	'	°	'	'	°	'	'	°	'	'							
0	27	05.6	226	43.5	+7	18.4	288	33.5	+23	41.6	131	00.5	-22	31.2	229	25.4						
1	42	08.0	241	43.7		17.8	303	35.1		41.6	146	02.5		31.3	244	27.7						
2	57	10.5	256	43.9		17.2	318	36.7		41.7	161	04.5		31.3	259	29.9						
3	72	13.0	271	44.2		16.6	333	38.3		41.7	176	06.4		31.4	274	32.1						
4	87	15.4	286	44.4		16.1	348	39.9		41.8	191	08.4		31.4	289	34.4						
5	102	17.9	301	44.6	+7	15.5	3	41.5	+23	41.8	206	10.4	-22	31.5	304	36.6						
6	117	20.4	316	44.8	+7	14.9	18	43.1	+23	41.8	221	12.4	-22	31.5	319	38.8						
7	132	22.8	331	45.0		14.3	33	44.7		41.9	236	14.4		31.6	334	41.1						
8	147	25.3	346	45.2		13.7	48	46.3		41.9	251	16.4		31.6	349	43.3						
9	162	27.8	1	45.4		13.1	63	48.0		42.0	266	18.3		31.7	4	45.5						
10	177	30.2	16	45.6		12.6	78	49.6		42.0	281	20.3		31.7	19	47.8						
11	192	32.7	31	45.9	+7	12.0	93	51.2	+23	42.0	296	22.3	-22	31.7	34	50.0						
12	207	35.2	46	46.1	+7	11.4	108	52.8	+23	42.1	311	24.3	-22	31.8	49	52.2						
13	222	37.6	61	46.3		10.8	123	54.4		42.1	326	26.3		31.8	64	54.5						
14	237	40.1	76	46.5		10.2	138	56.0		42.2	341	28.3		31.9	79	56.7						
15	252	42.5	91	46.7		09.6	153	57.6		42.2	356	30.2		31.9	94	59.0						
16	267	45.0	106	46.9		09.0	168	59.3		42.2	11	32.2		32.0	110	01.2						
17	282	47.5	121	47.1	+7	08.4	184	00.9	+23	42.3	26	34.2	-22	32.0	125	03.4						
18	297	49.9	136	47.3	+7	07.8	199	02.5	+23	42.3	41	36.2	-22	32.1	140	05.7						
19	312	52.4	151	47.5		07.2	214	04.1		42.4	56	38.2		32.1	155	07.9						
20	327	54.9	166	47.7		06.6	229	05.8		42.4	71	40.1		32.2	170	10.1						
21	342	57.3	181	47.9		06.0	244	07.4		42.4	86	42.1		32.2	185	12.4						
22	357	59.8	196	48.1		05.4	259	09.0		42.5	101	44.1		32.3	200	14.6						
23	13	02.3	211	48.3		04.8	274	10.6		42.5	116	46.1		32.3	215	16.8						
24	28	04.7	226	48.5	+7	04.3	289	12.3	+23	42.6	131	48.1	-22	32.4	230	19.1						
Dif	—		+2		-6		+16		0		+20		0		+22	-1						

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 7				Edad: 9 ^d 8 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 2 20 ^h : 58 ^m 5 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	48.5	-10	28.9	69	07.2	-17	19.7	60 N	16 35	17 18	18 06	15 36 0		** ** *	**		
1	198	48.6		29.8	83	37.3 ¹¹¹	-17	06.7 ¹³⁰	58	41	21	07	28 4		** ** *	**		
2	213	48.7		30.7	98	07.4 ¹¹¹	-16	53.7 ¹³⁰	56	46	24	07	21 7		** ** *	**		
3	228	48.8		31.5	112	37.5 ¹¹¹		40.6 ¹³¹	54	50	26	07	14 11		** ** *	**		
4	243	48.9		32.4	127	07.7 ¹¹²		27.4 ¹³²	52	54	29	08	08 14		** ** *	**		
5	258	49.0	-10	33.3	141	37.9 ¹¹²	-16	14.1 ¹³³	50	16 58	17 31	18 08	15 03 16		** ** *	**		
6	273	49.1	-10	34.2	156	08.1 ¹¹²	-16	00.6 ¹³⁵	45	17 06	17 36	18 10	14 51 22		0 10 77			
7	288	49.2		35.1	170	38.4 ¹¹³	-15	47.1 ¹³⁵	40	13	40	12	42 26		23 72			
8	303	49.3		36.0	185	08.7 ¹¹³		33.5 ¹³⁶	35	18	44	13	33 30		34 67			
9	318	49.4		36.9	199	39.0 ¹¹³		19.7 ¹³⁸	30	23	48	16	26 33		43 64			
10	333	49.5		37.8	214	09.3 ¹¹³	-15	05.9 ¹³⁸	20	32	17 55	21	13 39		0 59 59			
11	348	49.6	-10	38.7	228	39.6 ¹¹³	-14	52.0 ¹³⁹	10 N	17 40	18 02	18 26	14 02 44		1 13 53			
12	3	49.7	-10	39.6	243	10.0 ¹¹⁴	-14	38.0 ¹⁴⁰	0	17 48	18 09	18 34	13 52 48		1 26 49			
13	18	49.8		40.5	257	40.4 ¹¹⁴		23.9 ¹⁴¹	10 S	17 56	17	42	41 53		39 44			
14	33	49.9		41.4	272	10.8 ¹¹⁴	-14	09.7 ¹⁴²	20	18 04	27	18 53	30 58		1 52 40			
15	48	50.0		42.2	286	41.2 ¹¹⁴	-13	55.4 ¹⁴³	30	14	38	19 08	17 64		2 07 34			
16	63	50.1		43.1	301	11.7 ¹¹⁵		41.0 ¹⁴⁴	35	19	46	17	09 68		16 31			
17	78	50.2	-10	44.0	315	42.2 ¹¹⁵	-13	26.6 ¹⁴⁴	40	18 26	18 54	19 28	13 00 72		2 26 27			
18	93	50.3	-10	44.9	330	12.6 ¹¹⁴	-13	12.0 ¹⁴⁶	45	18 33	19 04	19 42	12 50 77		2 38 23			
19	108	50.4		45.8	344	43.1 ¹¹⁵	-12	57.4 ¹⁴⁶	50	42	17	20 00	38 82		52 17			
20	123	50.5		46.7	359	13.7 ¹¹⁶		42.6 ¹⁴⁸	52	47	23	09	32 85		2 59 14			
21	138	50.6		47.6	13	44.2 ¹¹⁵		27.8 ¹⁴⁸	54	51	30	19	26 88		3 06 12			
22	153	50.7		48.5	28	14.7 ¹¹⁵	-12	12.9 ¹⁴⁹	56	18 56	37	30	18 92		14 9			
23	168	50.8		49.4	42	45.3 ¹¹⁶	-11	57.9 ¹⁵⁰	58	19 02	46	20 44	10 96		23 5			
24	183	50.9	-10	50.2	57	15.9 ¹¹⁶	-11	42.9 ¹⁵⁰	60 S	19 09	19 56	21 00	12 01 101		3 33 1			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 00 ^m 1		Mag: -4.6 PMG: 8 ^h 52 ^m		Mag: -0.4 PMG: 4 ^h 40 ^m		Mag: -1.9 PMG: 15 ^h 08 ^m		Mag: +0.8 PMG: 8 ^h 34 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	29	03.9	226	53.1	+6	49.7	132	35.5	-22	33.5								
1	44	06.3	241	53.2		49.0	147	37.5		33.6								
2	59	08.8	256	53.4		48.4	162	39.5		33.6								
3	74	11.3	271	53.6		47.8	177	41.4		33.7								
4	89	13.7	286	53.8		47.2	192	43.4		33.7								
5	104	16.2	301	53.9	+6	46.6	207	45.4	-22	33.8								
6	119	18.6	316	54.1	+6	45.9	222	47.4	-22	33.8								
7	134	21.1	331	54.3		45.3	237	49.3		33.9								
8	149	23.6	346	54.5		44.7	252	51.3		33.9								
9	164	26.0	1	54.6		44.1	267	53.3		34.0								
10	179	28.5	16	54.8		43.4	282	55.3		34.0								
11	194	31.0	31	55.0	+6	42.8	297	57.2	-22	34.0								
12	209	33.4	46	55.2	+6	42.2	312	59.2	-22	34.1								
13	224	35.9	61	55.3		41.6	328	01.2		34.1								
14	239	38.4	76	55.5		40.9	343	03.1		34.2								
15	254	40.8	91	55.7		40.3	358	05.1		34.2								
16	269	43.3	106	55.8		39.7	13	07.1		34.3								
17	284	45.8	121	56.0	+6	39.1	28	09.1	-22	34.3								
18	299	48.2	136	56.2	+6	38.4	43	11.0	-22	34.4								
19	314	50.7	151	56.3		37.8	58	13.0		34.4								
20	329	53.1	166	56.5		37.2	73	15.0		34.5								
21	344	55.6	181	56.7		36.5	88	17.0		34.5								
22	359	58.1	196	56.8		35.9	103	18.9		34.6								
23	15	00.5	211	57.0		35.3	118	20.9		34.6								
24	30	03.0	226	57.2	+6	34.6	133	22.9	-22	34.7								
Dif	—		+2		-6		+17		0									
							+20		0									
									+22									
									-1									

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 44 ^m 5				Edad: 10 ^d 8 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'5 R°: 49 ^m																			
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora		R°	Hora		R°				
h	°	'	°	'	°	'	°	'	°	'	°	°	h	m	h	m	h	m	h	m	m			
0	183	50.9	-10	50.2	57	15.9	-11	42.9	58	15.9	-11	42.9	5	24	6	12	6	56	15	36	0			
1	198	51.0		51.1	71	46.5		116	58	15.9		152	24	09		50		32	4	0	56	96		
2	213	51.1		52.0	86	17.1		116	56	15.9		152	23	07		45		28	7	1	02	92		
3	228	51.2		52.9	100	47.7		116	54	15.9		153	23	04		40		25	10		07	90		
4	243	51.3		53.8	115	18.3		116	52	15.9		154	22	02		36		22	12		12	86		
5	258	51.4	-10	54.7	129	48.9	-10	54.7	50	15.9	-10	54.7	5	22	5	59	6	32	15	19	15	1	17	83
6	273	51.5	-10	55.6	144	19.5	-10	55.6	45	15.9	-10	55.6	5	20	5	54	6	24	15	13	20	1	27	77
7	288	51.6		56.4	158	50.2		117	40	15.9		156	18	50		17		08	25		35	72		
8	303	51.7		57.3	173	20.8		116	35	15.9		157	16	46		11		15	03	29	41	69		
9	318	51.8		58.2	187	51.4		116	30	15.9		157	14	42		6	06	14	59	32	47	65		
10	333	51.9	-10	59.1	202	22.1	-10	59.1	20	15.9	-10	59.1	09	35	5	57	5	57	52	39		1	58	58
11	348	52.0	-11	00.0	216	52.7	-11	00.0	10	15.9	-11	00.0	5	03	5	28	5	49	14	46	44	2	06	54
12	3	52.1	-11	00.9	231	23.4	-11	00.9	0	15.9	-11	00.9	4	56	5	20	5	41	14	40	49	2	15	48
13	18	52.2		01.8	245	54.0		116	10	15.9		160	47	12		33		34	54		23	44		
14	33	52.3		02.6	260	24.7		117	20	15.9		161	36	05	5	02	25	28	60		32	38		
15	48	52.4		03.5	274	55.3		116	30	15.9		161	21	4	50	15		21	66		41	33		
16	63	52.5		04.4	289	26.0		117	35	15.9		162	12	43		09		17	70		47	29		
17	78	52.6	-11	05.3	303	56.6	-11	05.3	40	15.9	-11	05.3	4	01	4	35	5	03	14	12	74	2	53	25
18	93	52.7	-11	06.2	318	27.2	-11	06.2	45	15.9	-11	06.2	3	47	4	24	4	55	14	07	78	3	01	20
19	108	52.8		07.0	332	57.8		116	50	15.9		163	29	11		46		14	00	85		09	16	
20	123	52.9		07.9	347	28.4		116	52	15.9		165	20	4	05	42		13	57	87		13	13	
21	138	53.0		08.8	1	59.0		116	54	15.9		165	3	10	3	59	37		54	90		18	10	
22	153	53.1		09.7	16	29.6		116	56	15.9		165	2	58		51	32		50	94		23	7	
23	168	53.1		10.6	31	00.2		116	58	15.9		166	45	42		26			46	97		28	4	
24	183	53.2	-11	11.5	45	30.8	-11	11.5	60	15.9	-11	11.5	2	28	3	32	4	19	13	42	101	3	34	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 56 ^m 2		Mag: -4.6 PMG: 8 ^h 52 ^m		Mag: -0.4 PMG: 4 ^h 37 ^m		Mag: -1.9 PMG: 15 ^h 04 ^m		Mag: +0.8 PMG: 8 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	30	03.0	226	57.2	290	31.6	133	22.9	232	06.5
1	45	05.5	241	57.3	305	33.2	148	24.8	247	08.7
2	60	07.9	256	57.5	320	34.9	163	26.8	262	11.0
3	75	10.4	271	57.7	335	36.6	178	28.8	277	13.2
4	90	12.9	286	57.8	350	38.3	193	30.7	292	15.5
5	105	15.3	301	58.0	5	40.0	208	32.7	307	17.7
6	120	17.8	316	58.1	20	41.6	223	34.7	322	19.9
7	135	20.3	331	58.3	35	43.3	238	36.7	337	22.2
8	150	22.7	346	58.5	50	45.0	253	38.6	352	24.4
9	165	25.2	1	58.6	65	46.7	268	40.6	7	26.7
10	180	27.6	16	58.8	80	48.4	283	42.6	22	28.9
11	195	30.1	31	58.9	95	50.1	298	44.5	37	31.1
12	210	32.6	46	59.1	110	51.8	313	46.5	52	33.4
13	225	35.0	61	59.2	125	53.4	328	48.5	67	35.6
14	240	37.5	76	59.4	140	55.1	343	50.4	82	37.9
15	255	40.0	91	59.5	155	56.8	358	52.4	97	40.1
16	270	42.4	106	59.7	170	58.5	13	54.4	112	42.4
17	285	44.9	121	59.8	186	00.2	28	56.3	127	44.6
18	300	47.4	137	00.0	201	01.9	43	58.3	142	46.8
19	315	49.8	152	00.1	216	03.6	59	00.3	157	49.1
20	330	52.3	167	00.3	231	05.3	74	02.3	172	51.3
21	345	54.7	182	00.4	246	07.0	89	04.2	187	53.6
22	0	57.2	197	00.6	261	08.7	104	06.2	202	55.8
23	15	59.7	212	00.7	276	10.4	119	08.2	217	58.1
24	31	02.1	227	00.9	291	12.1	134	10.1	233	00.3
Dif	—		+2	-6	+17	0	+20	0	+22	-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 4				Edad: 11 ^d 8 PHE { 4 ^h : 59'8 12 ^h : 60'1 20 ^h : 60'3 R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	53.2	-11	11.5	45	30.8	-5	19.9	60 N	16 30	17 13	18 01	15 36 0		2 29 103			
1	198	53.3		12.3	60	01.3 ¹¹⁵	-5	03.2 ¹⁶⁷	58	36	16	02	36 4		32 98			
2	213	53.4		13.2	74	31.9 ¹¹⁶	-4	46.4 ¹⁶⁸	56	41	19	02	35 7		34 95			
3	228	53.5		14.1	89	02.4 ¹¹⁵		29.6 ¹⁶⁸	54	46	22	03	35 10		37 91			
4	243	53.6		15.0	103	32.9 ¹¹⁵	-4	12.8 ¹⁶⁸	52	50	25	04	34 13		38 89			
5	258	53.7	-11	15.9	118	03.4 ¹¹⁵	-3	55.9 ¹⁶⁹	50	16 54	17 27	18 05	15 34 15		2 40 86			
6	273	53.8	-11	16.7	132	33.8 ¹¹⁴	-3	39.0 ¹⁶⁹	45	17 03	17 33	18 07	15 33 21		2 44 80			
7	288	53.9		17.6	147	04.3 ¹¹⁵		22.0 ¹⁷⁰	40	10	37	09	33 25		47 75			
8	303	54.0		18.5	161	34.7 ¹¹⁴	-3	05.0 ¹⁷⁰	35	16	42	11	32 30		50 70			
9	318	54.1		19.4	176	05.1 ¹¹⁴	-2	47.9 ¹⁷¹	30	21	46	14	31 34		52 67			
10	333	54.1		20.2	190	35.4 ¹¹³		30.8 ¹⁷¹	20	31	17 53	19	31 39		2 56 61			
11	348	54.2	-11	21.1	205	05.8 ¹¹⁴	-2	13.7 ¹⁷¹	10 N	17 40	18 01	18 26	15 30 45		3 00 55			
12	3	54.3	-11	22.0	219	36.1 ¹¹³	-1	56.5 ¹⁷²	0	17 48	18 09	18 33	15 29 50		3 03 50			
13	18	54.4		22.9	234	06.4 ¹¹³		39.4 ¹⁷¹	10 S	17 56	17	43	28 56		07 44			
14	33	54.5		23.7	248	36.6 ¹¹²		22.1 ¹⁷³	20	18 05	28	18 54	28 61		10 39			
15	48	54.6		24.6	263	06.8 ¹¹²	-1	04.9 ¹⁷²	30	15	40	19 09	27 68		14 32			
16	63	54.7		25.5	277	37.0 ¹¹²	-0	47.6 ¹⁷³	35	21	48	19	27 71		16 29			
17	78	54.8	-11	26.4	292	07.2 ¹¹²	-0	30.3 ¹⁷³	40	18 28	18 56	19 31	15 26 76		3 18 25			
18	93	54.9	-11	27.3	306	37.3 ¹¹¹	-0	13.0 ¹⁷³	45	18 36	19 07	19 45	15 25 81		3 21 21			
19	108	54.9		28.1	321	07.4 ¹¹¹	+0	04.3 ¹⁷³	50	46	21	20 04	25 87		25 15			
20	123	55.0		29.0	335	37.4 ¹¹⁰		21.7 ¹⁷⁴	52	50	27	13	24 90		26 13			
21	138	55.1		29.9	350	07.4 ¹¹⁰		39.1 ¹⁷⁴	54	18 55	34	24	24 93		28 9			
22	153	55.2		30.7	4	37.4 ¹¹⁰	+0	56.5 ¹⁷⁴	56	19 01	42	36	24 96		30 6			
23	168	55.3		31.6	19	07.3 ¹⁰⁹	+1	13.9 ¹⁷⁴	58	07	19 51	20 50	23 101		32 3			
24	183	55.4	-11	32.5	33	37.2 ¹⁰⁹	+1	31.3 ¹⁷⁴	60 S	19 14	20 02	21 08	15 23 104		3 34 0			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 52 ^m 3		Mag: -4.6 PMG: 8 ^h 52 ^m		Mag: -0.5 PMG: 4 ^h 35 ^m		Mag: -1.9 PMG: 15 ^h 01 ^m		Mag: +0.8 PMG: 8 ^h 27 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	31	02.1	227	00.9	+6	19.1	291	12.1	+23	45.6								
1	46	04.6	242	01.0		18.5	306	13.8		45.6								
2	61	07.1	257	01.2		17.8	321	15.5		45.7								
3	76	09.5	272	01.3		17.2	336	17.2		45.7								
4	91	12.0	287	01.5		16.5	351	18.9		45.8								
5	106	14.5	302	01.6	+6	15.9	6	20.6	+23	45.8								
6	121	16.9	317	01.7	+6	15.2	21	22.3	+23	45.9								
7	136	19.4	332	01.9		14.5	36	24.0		45.9								
8	151	21.9	347	02.0		13.9	51	25.8		46.0								
9	166	24.3	2	02.2		13.2	66	27.5		46.0								
10	181	26.8	17	02.3		12.6	81	29.2		46.0								
11	196	29.2	32	02.5	+6	11.9	96	30.9	+23	46.1								
12	211	31.7	47	02.6	+6	11.2	111	32.6	+23	46.1								
13	226	34.2	62	02.7		10.6	126	34.3		46.2								
14	241	36.6	77	02.9		09.9	141	36.0		46.2								
15	256	39.1	92	03.0		09.2	156	37.8		46.3								
16	271	41.6	107	03.1		08.6	171	39.5		46.3								
17	286	44.0	122	03.3	+6	07.9	186	41.2	+23	46.4								
18	301	46.5	137	03.4	+6	07.2	201	42.9	+23	46.4								
19	316	49.0	152	03.5		06.6	216	44.6		46.4								
20	331	51.4	167	03.7		05.9	231	46.4		46.5								
21	346	53.9	182	03.8		05.2	246	48.1		46.5								
22	1	56.3	197	03.9		04.6	261	49.8		46.6								
23	16	58.8	212	04.1		03.9	276	51.5		46.6								
24	32	01.3	227	04.2	+6	03.2	291	53.3	+23	46.7								
Dif	—		+1		-7		+17		0									
							+20		0									
									+22									
									-1									

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44 ^m 1			Edad: 13 ^d 8 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4 R°: 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	57.3	-11 53.4	21	17.8	+8 28.2	94	60 N	16 24	17 08	17 56	15 37 2	5 58 113		
1	198	57.4	54.2	35	46.2	+8 45.3	171	58	30	11	57	44 8	52 108		
2	213	57.5	55.1	50	14.5	+9 02.3	170	56	36	15	58	51 12	47 103		
3	228	57.6	56.0	64	42.7	19.4	171	54	41	18	17 59	15 57 15	42 99		
4	243	57.7	56.8	79	10.9	36.3	169	52	46	21	18 00	16 02 19	38 95		
5	258	57.7	-11 57.7	93	38.9	+9 53.3	170	50	16 50	17 23	18 01	16 07 22	5 34 93		
6	273	57.8	-11 58.6	108	06.9	+10 10.2	169	45	16 59	17 29	18 04	16 17 28	5 26 86		
7	288	57.9	-11 59.4	122	34.8	27.0	168	40	17 07	35	06	26 33	19 81		
8	303	58.0	-12 00.3	137	02.6	+10 43.8	168	35	14	39	09	34 37	13 76		
9	318	58.0	01.1	151	30.4	+11 00.5	167	30	20	44	12	41 40	5 08 72		
10	333	58.1	02.0	165	58.0	17.2	167	20	30	17 52	18	16 52 47	4 59 66		
11	348	58.2	-12 02.9	180	25.6	+11 33.8	166	10 N	17 39	18 00	18 25	17 03 52	4 51 60		
12	3	58.3	-12 03.7	194	53.1	+11 50.3	165	0	17 47	18 09	18 33	17 13 57	4 44 55		
13	18	58.3	04.6	209	20.4	+12 06.8	165	10 S	17 56	18	43	23 62	37 50		
14	33	58.4	05.5	223	47.7	23.2	164	20	18 06	28	18 55	33 68	29 44		
15	48	58.5	06.3	238	15.0	39.6	164	30	17	41	19 11	46 73	21 37		
16	63	58.6	07.2	252	42.1	+12 55.8	162	35	23	49	21	17 53 77	16 34		
17	78	58.6	-12 08.0	267	09.1	+13 12.1	163	40	18 30	18 59	19 33	18 01 82	4 10 30		
18	93	58.7	-12 08.9	281	36.0	+13 28.2	161	45	18 39	19 10	19 48	18 11 87	4 03 25		
19	108	58.8	09.8	296	02.9	+13 44.2	160	50	49	24	20 08	22 94	3 56 19		
20	123	58.9	10.6	310	29.6	+14 00.2	160	52	54	31	18	28 97	52 16		
21	138	58.9	11.5	324	56.3	16.1	159	54	18 59	39	29	34 101	48 13		
22	153	59.0	12.3	339	22.9	31.9	158	56	19 05	47	42	41 105	44 9		
23	168	59.1	13.2	353	49.3	+14 47.6	157	58	12	19 57	20 57	49 110	39 5		
24	183	59.1	-12 14.1	8	15.7	+15 03.2	156	60 S	19 19	20 08	21 17	18 57 118	3 34 0		
UT	ARIES			VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 21 ^h 44 ^m 4			Mag: -4.5 PMG: 8 ^h 51 ^m			Mag: -0.5 PMG: 4 ^h 29 ^m			Mag: -1.9 PMG: 14 ^h 55 ^m		Mag: +0.8 PMG: 8 ^h 20 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	33	00.4	227 07.1	+5 46.9	292 35.0	+23 47.8	135 44.3	-22 38.0	234 48.1	+10 40.3					
1	48	02.9	242 07.3	46.2	307 36.8	47.8	150 46.3	38.1	249 50.4	40.3					
2	63	05.3	257 07.4	45.5	322 38.5	47.9	165 48.3	38.1	264 52.6	40.2					
3	78	07.8	272 07.5	44.8	337 40.3	47.9	180 50.2	38.2	279 54.9	40.1					
4	93	10.3	287 07.6	44.1	352 42.1	48.0	195 52.2	38.2	294 57.1	40.0					
5	108	12.7	302 07.7	+5 43.4	7 43.8	+23 48.0	210 54.1	-22 38.3	309 59.4	+10 40.0					
6	123	15.2	317 07.8	+5 42.7	22 45.6	+23 48.1	225 56.1	-22 38.3	325 01.6	+10 39.9					
7	138	17.7	332 07.9	42.0	37 47.3	48.1	240 58.1	38.4	340 03.9	39.8					
8	153	20.1	347 08.0	41.3	52 49.1	48.2	256 00.0	38.4	355 06.1	39.7					
9	168	22.6	2 08.2	40.6	67 50.9	48.2	271 02.0	38.5	10 08.4	39.7					
10	183	25.1	17 08.3	39.9	82 52.6	48.3	286 03.9	38.5	25 10.6	39.6					
11	198	27.5	32 08.4	+5 39.2	97 54.4	+23 48.3	301 05.9	-22 38.6	40 12.9	+10 39.5					
12	213	30.0	47 08.5	+5 38.5	112 56.1	+23 48.3	316 07.8	-22 38.6	55 15.1	+10 39.4					
13	228	32.4	62 08.6	37.8	127 57.9	48.4	331 09.8	38.6	70 17.4	39.4					
14	243	34.9	77 08.7	37.1	142 59.7	48.4	346 11.8	38.7	85 19.6	39.3					
15	258	37.4	92 08.8	36.4	158 01.5	48.5	1 13.7	38.7	100 21.9	39.2					
16	273	39.8	107 08.9	35.7	173 03.2	48.5	16 15.7	38.8	115 24.1	39.1					
17	288	42.3	122 09.0	+5 35.0	188 05.0	+23 48.6	31 17.6	-22 38.8	130 26.4	+10 39.1					
18	303	44.8	137 09.1	+5 34.3	203 06.8	+23 48.6	46 19.6	-22 38.9	145 28.6	+10 39.0					
19	318	47.2	152 09.2	33.6	218 08.5	48.7	61 21.5	38.9	160 30.9	38.9					
20	333	49.7	167 09.3	32.9	233 10.3	48.7	76 23.5	39.0	175 33.1	38.8					
21	348	52.2	182 09.4	32.2	248 12.1	48.8	91 25.5	39.0	190 35.4	38.8					
22	3	54.6	197 09.5	31.5	263 13.9	48.8	106 27.4	39.1	205 37.6	38.7					
23	18	57.1	212 09.6	30.8	278 15.7	48.9	121 29.4	39.1	220 39.9	38.6					
24	33	59.6	227 09.7	+5 30.1	293 17.4	+23 48.9	136 31.3	-22 39.2	235 42.1	+10 38.5					
Dif	—		+1 -7		+18 0		+20 0		+23 -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: 23 ^d 8 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'0 R°: 41 ^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	184	06.7	-15	11.1	245	17.1	+9	18.0	60 N	15 57	16 43	17 33	0 36 85		14 44 **			
1	199	06.7		11.8	259	51.5 ¹⁵⁴	+9	04.1 ¹³⁹	58	16 06		49 36	41 82		41 2			
2	214	06.7		12.6	274	26.0 ¹⁵⁵	+8	50.1 ¹⁴⁰	56	14	54	38	46 78		38 5			
3	229	06.7		13.4	289	00.6 ¹⁵⁶		36.2 ¹³⁹	54	21	16 59	41	50 75		35 8			
4	244	06.7		14.2	303	35.2 ¹⁵⁶		22.2 ¹⁴⁰	52	27	17 03	43	54 73		33 10			
5	259	06.7	-15	14.9	318	09.8 ¹⁵⁶	+8	08.2 ¹⁴⁰	50	16 33	17 07	17 45	0 57 71		14 31 12			
6	274	06.7	-15	15.7	332	44.6 ¹⁵⁸	+7	54.2 ¹⁴⁰	45	16 45	17 15	17 50	1 05 65		14 26 17			
7	289	06.7		16.5	347	19.3 ¹⁵⁷		40.1 ¹⁴¹	40	16 55	23	17 55	11 61		22 21			
8	304	06.7		17.3	1	54.1 ¹⁵⁸		26.1 ¹⁴⁰	35	17 03	30	18 00	16 58		19 24			
9	319	06.6		18.0	16	29.0 ¹⁵⁹	+7	12.0 ¹⁴¹	30	11	36	04	21 55		16 27			
10	334	06.6		18.8	31	03.9 ¹⁵⁹	+6	57.9 ¹⁴¹	20	24	47	13	29 49		11 32			
11	349	06.6	-15	19.6	45	38.9 ¹⁶⁰	+6	43.8 ¹⁴¹	10 N	17 36	17 58	18 23	1 36 45		14 06 36			
12	4	06.6	-15	20.3	60	13.9 ¹⁶⁰	+6	29.7 ¹⁴¹	0	17 47	18 08	18 33	1 42 41		14 02 40			
13	19	06.6		21.1	74	49.0 ¹⁶¹		15.6 ¹⁴¹	10 S	17 58	20	18 46	49 36		13 58 44			
14	34	06.6		21.9	89	24.1 ¹⁶¹	+6	01.4 ¹⁴²	20	18 10	33	19 01	1 56 32		53 49			
15	49	06.6		22.7	103	59.3 ¹⁶²	+5	47.3 ¹⁴¹	30	24	18 50	20	2 03 27		47 55			
16	64	06.6		23.4	118	34.5 ¹⁶²		33.1 ¹⁴²	35	32	19 00	32	08 24		44 58			
17	79	06.6	-15	24.2	133	09.7 ¹⁶²	+5	18.9 ¹⁴²	40	18 42	19 11	19 47	2 13 21		13 41 61			
18	94	06.6	-15	25.0	147	45.0 ¹⁶³	+5	04.7 ¹⁴²	45	18 53	19 25	20 06	2 19 17		13 37 64			
19	109	06.6		25.7	162	20.3 ¹⁶³	+4	50.5 ¹⁴²	50	19 06	43	30	26 12		32 69			
20	124	06.6		26.5	176	55.6 ¹⁶³		36.3 ¹⁴²	52	12	19 51	43	29 10		29 72			
21	139	06.5		27.3	191	31.0 ¹⁶⁴		22.1 ¹⁴²	54	19	20 01	20 57	33 8		27 74			
22	154	06.5		28.0	206	06.4 ¹⁶⁴	+4	07.9 ¹⁴²	56	27	12	21 14	36 6		24 77			
23	169	06.5		28.8	220	41.9 ¹⁶⁵	+3	53.6 ¹⁴³	58	36	25	21 36	41 2		21 80			
24	184	06.5	-15	29.6	235	17.4 ¹⁶⁵	+3	39.4 ¹⁴²	60 S	19 46	20 40	22 06	2 46 **		13 17 84			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 05 ^m 1		Mag: -4.5 PMG: 8 ^h 51 ^m		Mag: -0.7 PMG: 3 ^h 59 ^m		Mag: -1.9 PMG: 14 ^h 24 ^m		Mag: +0.8 PMG: 7 ^h 43 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	42	51.8	227	18.5	+2	42.2	143	30.1	-22	48.7								
1	57	54.3	242	18.5		41.4	158	32.0		48.7								
2	72	56.7	257	18.5		40.5	173	33.9		48.7								
3	87	59.2	272	18.5		39.7	188	35.8		48.8								
4	103	01.7	287	18.5		38.8	203	37.8		48.8								
5	118	04.1	302	18.5	+2	38.0	218	39.7	-22	48.9								
6	133	06.6	317	18.4	+2	37.1	233	41.6	-22	48.9								
7	148	09.1	332	18.4		36.3	248	43.5		49.0								
8	163	11.5	347	18.4		35.5	263	45.5		49.0								
9	178	14.0	2	18.4		34.6	278	47.4		49.0								
10	193	16.4	17	18.4		33.8	293	49.3		49.1								
11	208	18.9	32	18.4	+2	32.9	308	51.2	-22	49.1								
12	223	21.4	47	18.3	+2	32.1	323	53.1	-22	49.2								
13	238	23.8	62	18.3		31.2	338	55.1		49.2								
14	253	26.3	77	18.3		30.4	353	57.0		49.2								
15	268	28.8	92	18.3		29.5	8	58.9		49.3								
16	283	31.2	107	18.3		28.7	24	00.8		49.3								
17	298	33.7	122	18.2	+2	27.8	39	02.7	-22	49.4								
18	313	36.2	137	18.2	+2	27.0	54	04.7	-22	49.4								
19	328	38.6	152	18.2		26.1	69	06.6		49.5								
20	343	41.1	167	18.2		25.3	84	08.5		49.5								
21	358	43.6	182	18.2		24.4	99	10.4		49.5								
22	13	46.0	197	18.1		23.6	114	12.3		49.6								
23	28	48.5	212	18.1		22.7	129	14.3		49.6								
24	43	50.9	227	18.1	+2	21.9	144	16.2	-22	49.7								
Dif	—		0		-8		+21		+1									
							+19		0									
									+23									
									-1									

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 44 ^m 4			Edad: 4 ^d 0 PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/2 PMG: 15 ^h 27 ^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	183	55.4	-18	04.0	136	27.6	-27 33.8	60 N	15 34	16 22	17 14	13 27 12	17 32 95	
1	198	55.3		04.7	150	56.0	94 31.0	58	45	30	18	12 58 20	18 01 87	
2	213	55.2		05.3	165	24.3	93 28.0	56	15 55	37	22	36 25	23 81	
3	228	55.1		06.0	179	52.7	94 24.9	54	16 03	43	26	18 28	41 78	
4	243	55.1		06.7	194	21.0	93 21.7	52	11	48	29	12 02 31	18 56 75	
5	258	55.0	-18	07.3	208	49.4	94 -27 18.3	50	16 18	16 53	17 32	11 48 34	19 09 73	
6	273	54.9	-18	08.0	223	17.8	94 -27 14.8	45	16 33	17 04	17 40	11 21 37	19 37 68	
7	288	54.8		08.6	237	46.2	94 11.2	40	45	14	46	10 59 40	19 58 65	
8	303	54.7		09.3	252	14.7	95 07.4	35	16 55	22	53	41 42	20 16 62	
9	318	54.6		09.9	266	43.1	94 -27 03.5	30	17 05	30	17 59	10 25 44	31 60	
10	333	54.5		10.6	281	11.6	95 -26 59.4	20	21	44	18 10	9 58 48	20 57 56	
11	348	54.4	-18	11.2	295	40.1	95 -26 55.2	10 N	17 35	17 57	18 22	9 35 50	21 19 53	
12	3	54.3	-18	11.9	310	08.6	95 -26 50.9	0	17 48	18 10	18 35	9 14 52	21 39 51	
13	18	54.2		12.5	324	37.1	95 46.4	10 S	18 01	24	18 50	8 53 54	22 00 48	
14	33	54.1		13.2	339	05.7	96 41.8	20	16	39	19 07	30 56	21 46	
15	48	54.0		13.9	353	34.3	96 37.0	30	33	18 59	30	8 03 59	22 47 41	
16	63	53.9		14.5	8	02.9	96 32.1	35	42	19 10	19 44	7 47 61	23 01 40	
17	78	53.8	-18	15.2	22	31.5	96 -26 27.1	40	18 54	19 24	20 02	7 29 62	23 18 37	
18	93	53.7	-18	15.8	37	00.2	97 -26 21.9	45	19 07	19 41	20 24	7 06 66	23 39 33	
19	108	53.6		16.5	51	28.9	97 16.6	50	23	20 02	20 54	6 38 69	** * *	
20	123	53.5		17.1	65	57.6	97 11.2	52	31	12	21 09	24 71	** * *	
21	138	53.4		17.7	80	26.4	98 -26 05.6	54	39	24	28	6 08 73	** * *	
22	153	53.3		18.4	94	55.1	97 -25 59.9	56	19 49	38	21 52	5 48 77	0 16 31	
23	168	53.2		19.0	109	23.9	98 54.0	58	20 00	20 54	22 27	5 25 81	0 40 27	
24	183	53.1	-18	19.7	123	52.8	99 -25 48.1	60 S	20 13	21 14	** **	4 53 89	1 12 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 25 ^m 8		Mag: -4.4 PMG: 8 ^h 52 ^m			Mag: -0.9 PMG: 3 ^h 23 ^m			Mag: -1.9 PMG: 13 ^h 54 ^m			Mag: +0.8 PMG: 7 ^h 07 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	
h	°	'	°	'	°	'	°	°	'	°	'	°	'	
0	52	43.2	227	03.7	-0	52.9	309 02.7	+24 24.0	151 07.9	-22 58.0	253 02.4	+10 10.0		
1	67	45.7	242	03.6		53.8	324 05.1	24.1	166 09.8		58.0	268 04.7	10.0	
2	82	48.1	257	03.5		54.8	339 07.5	24.2	181 11.7		58.0	283 07.0	09.9	
3	97	50.6	272	03.4		55.7	354 09.9	24.3	196 13.5		58.1	298 09.4	09.9	
4	112	53.1	287	03.3		56.7	9 12.3	24.4	211 15.4		58.1	313 11.7	09.8	
5	127	55.5	302	03.2	-0	57.6	24 14.7	+24 24.5	226 17.3	-22 58.1	328 14.0	+10 09.8		
6	142	58.0	317	03.1	-0	58.6	39 17.1	+24 24.6	241 19.2	-22 58.2	343 16.3	+10 09.7		
7	158	00.4	332	03.0	-0	59.5	54 19.5	24.7	256 21.1		58.2	358 18.6	09.7	
8	173	02.9	347	02.9	-1	00.4	69 21.9	24.9	271 23.0		58.2	13 20.9	09.6	
9	188	05.4	2	02.7		01.4	84 24.3	25.0	286 24.9		58.3	28 23.2	09.6	
10	203	07.8	17	02.6		02.3	99 26.8	25.1	301 26.8		58.3	43 25.6	09.5	
11	218	10.3	32	02.5	-1	03.3	114 29.2	+24 25.2	316 28.7	-22 58.3	58 27.9	+10 09.5		
12	233	12.8	47	02.4	-1	04.2	129 31.6	+24 25.3	331 30.6	-22 58.4	73 30.2	+10 09.4		
13	248	15.2	62	02.3		05.2	144 34.0	25.4	346 32.5		58.4	88 32.5	09.4	
14	263	17.7	77	02.2		06.1	159 36.4	25.6	1 34.4		58.4	103 34.8	09.3	
15	278	20.2	92	02.1		07.1	174 38.9	25.7	16 36.2		58.5	118 37.1	09.3	
16	293	22.6	107	02.0		08.0	189 41.3	25.8	31 38.1		58.5	133 39.5	09.2	
17	308	25.1	122	01.8	-1	09.0	204 43.7	+24 25.9	46 40.0	-22 58.5	148 41.8	+10 09.2		
18	323	27.6	137	01.7	-1	09.9	219 46.1	+24 26.0	61 41.9	-22 58.6	163 44.1	+10 09.1		
19	338	30.0	152	01.6		10.9	234 48.6	26.1	76 43.8		58.6	178 46.4	09.1	
20	353	32.5	167	01.5		11.8	249 51.0	26.2	91 45.7		58.7	193 48.7	09.0	
21	8	34.9	182	01.4		12.8	264 53.4	26.4	106 47.6		58.7	208 51.0	09.0	
22	23	37.4	197	01.3		13.7	279 55.9	26.5	121 49.5		58.7	223 53.4	08.9	
23	38	39.9	212	01.2		14.7	294 58.3	26.6	136 51.4		58.8	238 55.7	08.9	
24	53	42.3	227	01.0	-1	15.6	310 00.7	+24 26.7	151 53.3	-22 58.8	253 58.0	+10 08.8		
Dif	—		-1 -9		+24 +1		+19		0		+23		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna							
	SD: 16 ^h 2 PMG: 11 ^h 44 ^m 5				Edad: 5 ^d 0 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 6 20 ^h : 55 ^h 8 R ^o : 50 ^m																				
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil	Hora		R ^o	Hora		R ^o					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	h	m	m	
0	183	53.1	-18	19.7	123	52.8	-25	48.1	61	58	60 N	6	16	7	08	7	57	13	39	5	19	07	98		
1	198	53.0		20.3	138	21.7	99	42.0	61	58		12	7	00	46			18	11			28	91		
2	213	52.9		21.0	152	50.6	99	35.7	63	56		08	6	53	36			13	01	15		44	87		
3	228	52.8		21.6	167	19.5	99	29.3	64	54		04		47	27			12	46	19		19	59	82	
4	243	52.7		22.3	181	48.5	100	22.8	65	52		6	00	42	19			33	23			20	11	79	
5	258	52.6	-18	22.9	196	17.5	100	-25	16.2	66	50	5	57	6	37	7	12	12	22	25			20	22	76
6	273	52.5	-18	23.6	210	46.6	101	-25	09.4	68	45	5	50	6	25	6	57	11	58	30			20	45	71
7	288	52.4		24.2	225	15.6	100	-25	02.5	69	40	43		16	45			39	34			21	03	67	
8	303	52.3		24.8	239	44.8	102	-24	55.5	70	35	37	6	07	34			23	37			18	64		
9	318	52.2		25.5	254	13.9	101		48.3	72	30	30	5	59	25			11	09	40			31	61	
10	333	52.1		26.1	268	43.1	102		41.0	73	20	19		45	6	09		10	46	43			21	53	57
11	348	52.0	-18	26.8	283	12.4	103	-24	33.6	74	10 N	5	07	5	32	5	54	10	25	47			22	12	53
12	3	51.9	-18	27.4	297	41.6	102	-24	26.1	75	0	4	54	5	19	5	41	10	06	50			22	30	49
13	18	51.8		28.0	312	11.0	104		18.4	77	10 S	39	5	05	27			9	47	53			22	48	45
14	33	51.7		28.7	326	40.3	103		10.6	78	20	4	22	4	49	5	13		26	57			23	07	41
15	48	51.6		29.3	341	09.7	104	-24	02.7	79	30	3	59	30	4	56		9	02	61			28	37	
16	63	51.5		30.0	355	39.2	105	-23	54.7	80	35	44		18	46			8	48	63			41	34	
17	78	51.4	-18	30.6	10	08.6	104	-23	46.5	82	40	3	27	4	05	4	35	8	31	66			23	55	31
18	93	51.3	-18	31.2	24	38.2	106	-23	38.2	83	45	3	05	3	48	4	22	8	12	69	**	**	**		
19	108	51.2		31.9	39	07.7	105		29.8	84	50	2	35	26	4	05		7	47	75			0	04	29
20	123	51.1		32.5	53	37.3	106		21.2	86	52	19		16	3	58		35	77			17	26		
21	138	51.0		33.1	68	07.0	107		12.6	86	54	2	00	3	04	49		21	81			31	23		
22	153	50.9		33.8	82	36.7	107	-23	03.8	88	56	1	36	2	50	39		7	05	85			0	47	20
23	168	50.7		34.4	97	06.4	107	-22	54.9	89	58	1	02	34	28			6	46	90			1	07	15
24	183	50.6	-18	35.0	111	36.2	108	-22	45.8	91	60 S	**	**	2	14	3	15	6	22	97			1	31	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 21 ^m 8		Mag: -4.4 PMG: 8 ^h 52 ^m		Mag: -0.9 PMG: 3 ^h 19 ^m		Mag: -1.9 PMG: 13 ^h 51 ^m		Mag: +0.8 PMG: 7 ^h 03 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	53	42.3	227	01.0	-1	15.6	310	00.7	+24	26.7
1	68	44.8	242	00.9		16.6	325	03.2		26.8
2	83	47.3	257	00.8		17.5	340	05.6		26.9
3	98	49.7	272	00.7		18.5	355	08.1		27.1
4	113	52.2	287	00.6		19.4	10	10.5		27.2
5	128	54.7	302	00.4	-1	20.4	25	12.9	+24	27.3
6	143	57.1	317	00.3	-1	21.3	40	15.4	+24	27.4
7	158	59.6	332	00.2		22.3	55	17.8		27.5
8	174	02.0	347	00.1		23.2	70	20.3		27.7
9	189	04.5	2	00.0		24.2	85	22.7		27.8
10	204	07.0	16	59.8		25.1	100	25.2		27.9
11	219	09.4	31	59.7	-1	26.1	115	27.7	+24	28.0
12	234	11.9	46	59.6	-1	27.0	130	30.1	+24	28.1
13	249	14.4	61	59.5		28.0	145	32.6		28.3
14	264	16.8	76	59.4		28.9	160	35.0		28.4
15	279	19.3	91	59.2		29.9	175	37.5		28.5
16	294	21.8	106	59.1		30.8	190	40.0		28.6
17	309	24.2	121	59.0	-1	31.8	205	42.4	+24	28.7
18	324	26.7	136	58.9	-1	32.8	220	44.9	+24	28.9
19	339	29.2	151	58.7		33.7	235	47.4		29.0
20	354	31.6	166	58.6		34.7	250	49.8		29.1
21	9	34.1	181	58.5		35.6	265	52.3		29.2
22	24	36.5	196	58.4		36.6	280	54.8		29.3
23	39	39.0	211	58.2		37.5	295	57.2		29.5
24	54	41.5	226	58.1	-1	38.5	310	59.7	+24	29.6
Dif	—		-1		-10		+25		+1	
							+19		0	
									+23	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 45 ^m 5			Edad: 10 ^d 0 PHE { SD: 16:1 PMG: 20 ^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	
0	183	38.6	-19 33.1	65	30.7	-1 04.6	60 N	15 21	16 12	17 04	13 47 0	1 35 101		
1	198	38.5	33.6	80	02.0 ¹²³	-0 48.0 ¹⁶⁶	58	34	20	10	48 4	36 96		
2	213	38.3	34.2	94	33.2 ¹²²	31.4 ¹⁶⁶	56	45	28	14	49 8	36 93		
3	228	38.2	34.8	109	04.4 ¹²²	-0 14.8 ¹⁶⁶	54	15 54	35	19	50 11	37 89		
4	243	38.0	35.4	123	35.5 ¹²¹	+0 01.8 ¹⁶⁶	52	16 03	41	23	52 13	37 86		
5	258	37.9	-19 35.9	138	06.7 ¹²²	+0 18.5 ¹⁶⁷	50	16 11	16 47	17 26	13 52 16	1 37 84		
6	273	37.7	-19 36.5	152	37.7 ¹²⁰	+0 35.2 ¹⁶⁷	45	16 27	16 59	17 35	13 55 21	1 38 78		
7	288	37.6	37.1	167	08.8 ¹²¹	+0 51.9 ¹⁶⁷	40	40	17 10	43	56 26	38 73		
8	303	37.5	37.7	181	39.8 ¹²⁰	+1 08.7 ¹⁶⁸	35	16 52	19	50	58 30	39 69		
9	318	37.3	38.2	196	10.7 ¹¹⁹	25.4 ¹⁶⁷	30	17 02	28	17 57	13 59 34	39 65		
10	333	37.2	38.8	210	41.6 ¹¹⁹	42.2 ¹⁶⁸	20	19	43	18 10	14 02 39	40 59		
11	348	37.0	-19 39.4	225	12.4 ¹¹⁸	+1 58.9 ¹⁶⁷	10 N	17 35	17 57	18 23	14 04 45	1 40 54		
12	3	36.9	-19 39.9	239	43.2 ¹¹⁸	+2 15.7 ¹⁶⁸	0	17 49	18 11	18 37	14 06 50	1 41 48		
13	18	36.7	40.5	254	14.0 ¹¹⁸	32.5 ¹⁶⁸	10 S	18 04	26	18 52	08 55	41 43		
14	33	36.6	41.1	268	44.7 ¹¹⁷	+2 49.3 ¹⁶⁸	20	19	18 43	19 11	10 61	41 39		
15	48	36.4	41.6	283	15.3 ¹¹⁶	+3 06.1 ¹⁶⁸	30	38	19 04	36	13 67	42 32		
16	63	36.3	42.2	297	45.9 ¹¹⁶	22.9 ¹⁶⁸	35	18 48	17	19 51	14 71	42 29		
17	78	36.1	-19 42.8	312	16.4 ¹¹⁵	+3 39.7 ¹⁶⁸	40	19 01	19 32	20 10	14 16 75	1 42 25		
18	93	36.0	-19 43.3	326	46.8 ¹¹⁴	+3 56.5 ¹⁶⁸	45	19 15	19 50	20 34	14 18 80	1 43 20		
19	108	35.8	43.9	341	17.2 ¹¹⁴	+4 13.3 ¹⁶⁸	50	33	20 13	21 08	21 86	43 15		
20	123	35.7	44.5	355	47.6 ¹¹⁴	30.2 ¹⁶⁹	52	41	25	25	22 88	43 13		
21	138	35.5	45.0	10	17.8 ¹¹²	+4 47.0 ¹⁶⁸	54	19 51	38	21 48	23 92	44 9		
22	153	35.4	45.6	24	48.0 ¹¹²	+5 03.8 ¹⁶⁸	56	20 02	20 53	22 18	24 96	44 7		
23	168	35.2	46.1	39	18.2 ¹¹²	20.6 ¹⁶⁸	58	14	21 12	23 17	26 99	44 4		
24	183	35.1	-19 46.7	53	48.2 ¹¹⁰	+5 37.4 ¹⁶⁸	60 S	20 29	21 36	** **	14 28 103	1 44 0		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 02 ^m 2		Mag: -4.3 PMG: 8 ^h 53 ^m		Mag: -1.1 PMG: 2 ^h 59 ^m		Mag: -1.9 PMG: 13 ^h 36 ^m		Mag: +0.8 PMG: 6 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	58	38.0	226	44.3	315	04.9	155	39.4	258	37.2				
1	73	40.5	241	44.2	330	07.5	170	41.3	273	39.5				
2	88	43.0	256	44.0	345	10.2	185	43.2	288	41.9				
3	103	45.4	271	43.9	0	12.8	200	45.0	303	44.2				
4	118	47.9	286	43.7	15	15.4	215	46.9	318	46.5				
5	133	50.4	301	43.5	30	18.1	230	48.8	333	48.9				
6	148	52.8	316	43.4	45	20.7	245	50.7	348	51.2				
7	163	55.3	331	43.2	60	23.4	260	52.6	3	53.5				
8	178	57.7	346	43.0	75	26.0	275	54.4	18	55.9				
9	194	00.2	1	42.9	90	28.7	290	56.3	33	58.2				
10	209	02.7	16	42.7	105	31.3	305	58.2	49	00.5				
11	224	05.1	31	42.5	120	34.0	321	00.1	64	02.9				
12	239	07.6	46	42.4	135	36.6	336	01.9	79	05.2				
13	254	10.1	61	42.2	150	39.3	351	03.8	94	07.6				
14	269	12.5	76	42.0	165	41.9	6	05.7	109	09.9				
15	284	15.0	91	41.9	180	44.6	21	07.6	124	12.2				
16	299	17.5	106	41.7	195	47.2	36	09.5	139	14.6				
17	314	19.9	121	41.5	210	49.9	51	11.3	154	16.9				
18	329	22.4	136	41.4	225	52.5	66	13.2	169	19.3				
19	344	24.8	151	41.2	240	55.2	81	15.1	184	21.6				
20	359	27.3	166	41.0	255	57.9	96	17.0	199	23.9				
21	14	29.8	181	40.9	271	00.5	111	18.8	214	26.3				
22	29	32.2	196	40.7	286	03.2	126	20.7	229	28.6				
23	44	34.7	211	40.5	301	05.9	141	22.6	244	30.9				
24	59	37.2	226	40.4	316	08.5	156	24.5	259	33.3				
Dif	—		-2	-10	+27	+1	+19	0	+23	0				

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 45 ^m 8			Edad: 11 ^d 0 PHE { SD: 16/4 PMG: 21 ^h 08 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	183	35.1	-19 46.7	53	48.2	+5 37.4	60 N	6 28	7 21	8 12	13 47	2	3 16	106	
1	198	34.9	47.3	68	18.2 ¹¹⁰	+5 54.1 ¹⁶⁷	58	23	12	7 59	52	6	12	102	
2	213	34.8	47.8	82	48.2 ¹¹⁰	+6 10.9 ¹⁶⁸	56	18	7 04	48	13 57	10	09	97	
3	228	34.6	48.4	97	18.0 ¹⁰⁸	27.6 ¹⁶⁷	54	13	6 57	38	14 01	13	06	94	
4	243	34.5	48.9	111	47.8 ¹⁰⁸	+6 44.4 ¹⁶⁸	52	09	51	29	05	16	03	91	
5	258	34.3	-19 49.5	126	17.5 ¹⁰⁷	+7 01.1 ¹⁶⁷	50	6 05	6 45	7 22	14 08	19	3 01	88	
6	273	34.2	-19 50.1	140	47.2 ¹⁰⁷	+7 17.8 ¹⁶⁷	45	5 57	6 33	7 05	14 16	25	2 56	81	
7	288	34.0	50.6	155	16.7 ¹⁰⁵	34.5 ¹⁶⁷	40	49	22	6 51	22	30	51	77	
8	303	33.9	51.2	169	46.2 ¹⁰⁵	+7 51.1 ¹⁶⁶	35	42	13	40	28	33	48	72	
9	318	33.7	51.7	184	15.6 ¹⁰⁴	+8 07.7 ¹⁶⁶	30	35	6 04	30	33	37	44	69	
10	333	33.6	52.3	198	44.9 ¹⁰³	24.4 ¹⁶⁷	20	22	5 49	6 12	41	44	39	62	
11	348	33.4	-19 52.8	213	14.2 ¹⁰³	+8 40.9 ¹⁶⁵	10 N	5 09	5 34	5 57	14 49	48	2 34	57	
12	3	33.3	-19 53.4	227	43.3 ¹⁰¹	+8 57.5 ¹⁶⁶	0	4 55	5 20	5 42	14 56	54	2 29	52	
13	18	33.1	53.9	242	12.4 ¹⁰¹	+9 14.0 ¹⁶⁵	10 S	39	5 05	28	15 03	59	24	47	
14	33	33.0	54.5	256	41.3 ⁹⁹	30.4 ¹⁶⁴	20	4 20	4 48	5 12	11 64		20	41	
15	48	32.8	55.0	271	10.2 ⁹⁹	+9 46.9 ¹⁶⁵	30	3 55	27	4 53	20	71	14	35	
16	63	32.6	55.6	285	39.0 ⁹⁸	+10 03.3 ¹⁶⁴	35	40	4 14	43	25	75	11	31	
17	78	32.5	-19 56.1	300	07.7 ⁹⁷	+10 19.6 ¹⁶³	40	3 21	3 59	4 30	15 31	79	2 07	28	
18	93	32.3	-19 56.7	314	36.3 ⁹⁶	+10 36.0 ¹⁶⁴	45	2 57	3 41	4 16	15 38	84	2 03	23	
19	108	32.2	57.2	329	04.9 ⁹⁶	+10 52.2 ¹⁶²	50	23	18	3 58	47	90	1 58	17	
20	123	32.0	57.8	343	33.3 ⁹⁴	+11 08.4 ¹⁶²	52	2 05	3 06	49	50	94	56	14	
21	138	31.9	58.3	358	01.6 ⁹³	24.6 ¹⁶²	54	1 43	2 53	40	15 55	97	53	12	
22	153	31.7	58.9	12	29.9 ⁹³	40.7 ¹⁶¹	56	1 13	37	29	16 00	100	51	8	
23	168	31.5	-19 59.4	26	58.0 ⁹¹	+11 56.8 ¹⁶¹	58	0 14	2 19	17	05	105	48	4	
24	183	31.4	-20 00.0	41	26.0 ⁹⁰	+12 12.8 ¹⁶⁰	60 S	** **	1 55	3 02	16 11	111	1 44	1	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 58 ^m 2			Mag: -4.3 PMG: 8 ^h 53 ^m			Mag: -1.1 PMG: 2 ^h 55 ^m			Mag: -1.9 PMG: 13 ^h 33 ^m			Mag: +0.8 PMG: 6 ^h 41 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	59	37.2	226 40.4	-3 35.0	316 08.5	+24 45.4	156 24.5	-23 03.4	259 33.3	+10 02.6					
1	74	39.6	241 40.2	36.0	331 11.2	45.5	171 26.3	03.5	274 35.6	02.5					
2	89	42.1	256 40.0	37.0	346 13.9	45.7	186 28.2	03.5	289 38.0	02.5					
3	104	44.6	271 39.8	37.9	1 16.6	45.8	201 30.1	03.5	304 40.3	02.5					
4	119	47.0	286 39.7	38.9	16 19.2	46.0	216 32.0	03.6	319 42.6	02.4					
5	134	49.5	301 39.5	-3 39.9	31 21.9	+24 46.1	231 33.9	-23 03.6	334 45.0	+10 02.4					
6	149	52.0	316 39.3	-3 40.9	46 24.6	+24 46.2	246 35.7	-23 03.6	349 47.3	+10 02.3					
7	164	54.4	331 39.2	41.9	61 27.3	46.4	261 37.6	03.7	4 49.7	02.3					
8	179	56.9	346 39.0	42.9	76 30.0	46.5	276 39.5	03.7	19 52.0	02.3					
9	194	59.3	1 38.8	43.8	91 32.7	46.7	291 41.4	03.7	34 54.4	02.2					
10	210	01.8	16 38.6	44.8	106 35.3	46.8	306 43.2	03.7	49 56.7	02.2					
11	225	04.3	31 38.5	-3 45.8	121 38.0	+24 47.0	321 45.1	-23 03.8	64 59.0	+10 02.1					
12	240	06.7	46 38.3	-3 46.8	136 40.7	+24 47.1	336 47.0	-23 03.8	80 01.4	+10 02.1					
13	255	09.2	61 38.1	47.8	151 43.4	47.2	351 48.9	03.8	95 03.7	02.1					
14	270	11.7	76 37.9	48.8	166 46.1	47.4	6 50.7	03.9	110 06.1	02.0					
15	285	14.1	91 37.8	49.7	181 48.8	47.5	21 52.6	03.9	125 08.4	02.0					
16	300	16.6	106 37.6	50.7	196 51.5	47.7	36 54.5	03.9	140 10.7	02.0					
17	315	19.1	121 37.4	-3 51.7	211 54.2	+24 47.8	51 56.4	-23 04.0	155 13.1	+10 01.9					
18	330	21.5	136 37.2	-3 52.7	226 56.9	+24 48.0	66 58.2	-23 04.0	170 15.4	+10 01.9					
19	345	24.0	151 37.0	53.7	241 59.6	48.1	82 00.1	04.0	185 17.8	01.8					
20	0	26.4	166 36.9	54.7	257 02.3	48.3	97 02.0	04.0	200 20.1	01.8					
21	15	28.9	181 36.7	55.7	272 05.0	48.4	112 03.9	04.1	215 22.5	01.8					
22	30	31.4	196 36.5	56.6	287 07.7	48.5	127 05.7	04.1	230 24.8	01.7					
23	45	33.8	211 36.3	57.6	302 10.4	48.7	142 07.6	04.1	245 27.1	01.7					
24	60	36.3	226 36.2	-3 58.6	317 13.1	+24 48.8	157 09.5	-23 04.2	260 29.5	+10 01.7					
Dif	—		-2	-10	+27	+1	+19	0	+23	0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 12 ^d 0	PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'2 R°: 60 ^m										
	PMG: 11 ^h 46 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	31.4	-20 00.0	41	26.0	+12 12.8		60 N	15 17	16 09	17 02	13 49 4	5 02 114		
1	198	31.2	-20 00.5	55	54.0	90 28.8	160	58	31	17	07	13 58 10	4 54 108		
2	213	31.1	01.1	70	21.8	88 +12 44.7	159	56	42	25	12	14 07 14	46 104		
3	228	30.9	01.6	84	49.5	87 +13 00.5	158	54	15 52	33	17	14 19	40 99		
4	243	30.7	02.2	99	17.1	86 16.3	158	52	16 01	39	21	21 22	34 95		
5	258	30.6	-20 02.7	113	44.7	86 +13 32.0	157	50	16 08	16 45	17 25	14 27 25	4 29 92		
6	273	30.4	-20 03.2	128	12.1	84 +13 47.6	156	45	16 25	16 58	17 34	14 41 31	4 17 86		
7	288	30.3	03.8	142	39.4	83 +14 03.2	156	40	39	17 09	42	14 52 36	08 80		
8	303	30.1	04.3	157	06.6	82 18.7	155	35	16 51	18	49	15 01 40	4 00 76		
9	318	29.9	04.9	171	33.7	81 34.1	154	30	17 01	27	17 56	10 43	3 53 72		
10	333	29.8	05.4	186	00.7	80 +14 49.5	154	20	19	43	18 10	25 49	41 66		
11	348	29.6	-20 05.9	200	27.5	78 +15 04.7	152	10 N	17 35	17 57	18 23	15 37 54	3 31 60		
12	3	29.5	-20 06.5	214	54.3	78 +15 19.9	152	0	17 50	18 12	18 37	15 50 58	3 21 56		
13	18	29.3	07.0	229	21.0	77 35.0	151	10 S	18 05	27	18 53	16 02 63	11 51		
14	33	29.1	07.6	243	47.5	75 +15 50.0	150	20	21	18 45	19 13	15 69	3 01 46		
15	48	29.0	08.1	258	13.9	74 +16 04.9	149	30	39	19 06	38	31 74	2 49 40		
16	63	28.8	08.6	272	40.2	73 19.7	148	35	18 50	19	19 54	40 77	42 36		
17	78	28.6	-20 09.2	287	06.4	72 +16 34.5	148	40	19 03	19 34	20 13	16 50 82	2 35 32		
18	93	28.5	-20 09.7	301	32.5	71 +16 49.1	146	45	19 18	19 53	20 38	17 02 87	2 26 27		
19	108	28.3	10.2	315	58.5	70 +17 03.6	145	50	36	20 17	21 12	17 94	15 21		
20	123	28.1	10.8	330	24.3	68 18.1	145	52	45	29	31	24 97	10 19		
21	138	28.0	11.3	344	50.1	68 32.4	143	54	19 55	42	21 54	32 101	2 05 15		
22	153	27.8	11.8	359	15.7	66 +17 46.6	142	56	20 06	20 59	22 28	40 106	1 59 11		
23	168	27.6	12.4	13	41.2	65 +18 00.8	142	58	19	21 18	** **	17 50 112	52 7		
24	183	27.5	-20 12.9	28	06.5	63 +18 14.8	140	60 S	20 34	21 43	** **	18 02 119	1 45 2		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 54 ^m 3			Mag: -4.3 PMG: 8 ^h 54 ^m			Mag: -1.1 PMG: 2 ^h 51 ^m			Mag: -1.8 PMG: 13 ^h 30 ^m			Mag: +0.8 PMG: 6 ^h 37 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	60	36.3	226 36.2	-3 58.6	317 13.1	+24 48.8	157 09.5	-23 04.2	260 29.5	+10 01.7					
1	75	38.8	241 36.0	-3 59.6	332 15.8	49.0	172 11.4	04.2	275 31.8	01.6					
2	90	41.2	256 35.8	-4 00.6	347 18.6	49.1	187 13.2	04.2	290 34.2	01.6					
3	105	43.7	271 35.6	01.6	2 21.3	49.3	202 15.1	04.2	305 36.5	01.5					
4	120	46.2	286 35.4	02.6	17 24.0	49.4	217 17.0	04.3	320 38.9	01.5					
5	135	48.6	301 35.2	-4 03.6	32 26.7	+24 49.6	232 18.9	-23 04.3	335 41.2	+10 01.5					
6	150	51.1	316 35.1	-4 04.5	47 29.4	+24 49.7	247 20.7	-23 04.3	350 43.6	+10 01.4					
7	165	53.6	331 34.9	05.5	62 32.1	49.9	262 22.6	04.4	5 45.9	01.4					
8	180	56.0	346 34.7	06.5	77 34.9	50.0	277 24.5	04.4	20 48.2	01.4					
9	195	58.5	1 34.5	07.5	92 37.6	50.1	292 26.4	04.4	35 50.6	01.3					
10	211	00.9	16 34.3	08.5	107 40.3	50.3	307 28.2	04.4	50 52.9	01.3					
11	226	03.4	31 34.1	-4 09.5	122 43.1	+24 50.4	322 30.1	-23 04.5	65 55.3	+10 01.3					
12	241	05.9	46 34.0	-4 10.5	137 45.8	+24 50.6	337 32.0	-23 04.5	80 57.6	+10 01.2					
13	256	08.3	61 33.8	11.5	152 48.5	50.7	352 33.8	04.5	96 00.0	01.2					
14	271	10.8	76 33.6	12.4	167 51.2	50.9	7 35.7	04.6	111 02.3	01.1					
15	286	13.3	91 33.4	13.4	182 54.0	51.0	22 37.6	04.6	126 04.7	01.1					
16	301	15.7	106 33.2	14.4	197 56.7	51.2	37 39.5	04.6	141 07.0	01.1					
17	316	18.2	121 33.0	-4 15.4	212 59.5	+24 51.3	52 41.3	-23 04.6	156 09.4	+10 01.0					
18	331	20.7	136 32.8	-4 16.4	228 02.2	+24 51.5	67 43.2	-23 04.7	171 11.7	+10 01.0					
19	346	23.1	151 32.7	17.4	243 04.9	51.6	82 45.1	04.7	186 14.1	01.0					
20	1	25.6	166 32.5	18.4	258 07.7	51.8	97 47.0	04.7	201 16.4	00.9					
21	16	28.1	181 32.3	19.4	273 10.4	51.9	112 48.8	04.8	216 18.7	00.9					
22	31	30.5	196 32.1	20.4	288 13.2	52.1	127 50.7	04.8	231 21.1	00.9					
23	46	33.0	211 31.9	21.3	303 15.9	52.2	142 52.6	04.8	246 23.4	00.8					
24	61	35.4	226 31.7	-4 22.3	318 18.7	+24 52.4	157 54.4	-23 04.8	261 25.8	+10 00.8					
Dif	—		-2	-10	+27	+1	+19	0	+23	0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 47 ^m 2			Edad: 16 ^d 0 PHE { SD: 16:5 PMG: 1 ^h 14 ^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	14.6	-20 49.4	342	20.1	+27 55.6	60 N	15 10	16 03	16 57	15 33 101		12 04 31	
1	198	14.4	49.9	356	40.3	12 56.4	58	25	13	17 03	16 07 92		11 29 41	
2	213	14.2	50.3	11	00.6	13 56.9	56	37	21	08	32 87		11 04 45	
3	228	14.0	50.8	25	20.8	12 57.2	54	47	29	13	16 52 84		10 44 48	
4	243	13.8	51.3	39	41.2	14 57.3	52	15 56	35	18	17 09 81		27 50	
5	258	13.6	-20 51.8	54	01.5	13 +27 57.2	50	16 05	16 42	17 22	17 23 80		10 13 51	
6	273	13.5	-20 52.3	68	21.9	14 +27 56.9	45	16 23	16 55	17 32	17 53 75		9 43 55	
7	288	13.3	52.7	82	42.4	15 56.4	40	37	17 07	40	18 16 73		20 57	
8	303	13.1	53.2	97	02.9	15 55.6	35	16 50	17	48	35 71		9 01 58	
9	318	12.9	53.7	111	23.4	15 54.7	30	17 00	26	17 55	18 51 69		8 44 60	
10	333	12.7	54.2	125	44.1	17 53.5	20	19	43	18 10	19 18 67		8 16 62	
11	348	12.5	-20 54.6	140	04.7	16 +27 52.1	10 N	17 35	17 58	18 24	19 42 64		7 52 63	
12	3	12.3	-20 55.1	154	25.5	18 +27 50.5	0	17 51	18 13	18 39	20 04 62		7 30 64	
13	18	12.1	55.6	168	46.3	18 48.7	10 S	18 06	29	18 56	26 60		7 07 66	
14	33	11.9	56.1	183	07.1	18 46.7	20	23	18 47	19 16	20 50 57		6 43 67	
15	48	11.7	56.5	197	28.1	20 44.5	30	43	19 09	42	21 17 54		6 15 69	
16	63	11.5	57.0	211	49.1	20 42.1	35	18 54	23	19 58	33 53		5 58 70	
17	78	11.3	-20 57.5	226	10.2	21 +27 39.5	40	19 07	19 39	20 18	21 52 50		5 39 71	
18	93	11.1	-20 58.0	240	31.4	22 +27 36.7	45	19 23	19 59	20 45	22 15 47		5 15 72	
19	108	10.9	58.4	254	52.7	23 33.7	50	42	20 24	21 21	44 42		4 45 74	
20	123	10.7	58.9	269	14.0	23 30.5	52	19 52	36	21 41	22 58 40		30 75	
21	138	10.5	59.4	283	35.5	25 27.1	54	20 02	20 51	22 08	23 14 37		4 12 77	
22	153	10.3	-20 59.8	297	57.0	25 23.4	56	14	21 08	22 49	34 33		3 51 79	
23	168	10.1	-21 00.3	312	18.7	27 19.6	58	27	30	** ** *	23 58 27		3 24 82	
24	183	09.9	-21 00.8	326	40.4	27 +27 15.6	60 S	20 44	21 58	** ** *	** ** **		2 47 87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 38 ^m 6		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: -1.2 PMG: 2 ^h 33 ^m			Mag: -1.8 PMG: 13 ^h 18 ^m			Mag: +0.8 PMG: 6 ^h 22 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	64	32.9	226	17.0	-5 33.9	321	41.0	+25 03.4	160	09.0	-23 06.8	264	15.2	+9 58.4
1	79	35.3	241	16.8	34.9	336	43.8	03.6	175	10.9	06.8	279	17.6	58.3
2	94	37.8	256	16.6	35.9	351	46.7	03.7	190	12.8	06.8	294	20.0	58.3
3	109	40.3	271	16.4	36.8	6	49.6	03.9	205	14.6	06.9	309	22.3	58.3
4	124	42.7	286	16.2	37.8	21	52.5	04.1	220	16.5	06.9	324	24.7	58.3
5	139	45.2	301	16.0	-5 38.8	36	55.3	+25 04.2	235	18.4	-23 06.9	339	27.0	+9 58.2
6	154	47.7	316	15.7	-5 39.8	51	58.2	+25 04.4	250	20.2	-23 06.9	354	29.4	+9 58.2
7	169	50.1	331	15.5	40.8	67	01.1	04.5	265	22.1	07.0	9	31.8	58.2
8	184	52.6	346	15.3	41.8	82	04.0	04.7	280	24.0	07.0	24	34.1	58.1
9	199	55.0	1	15.1	42.8	97	06.9	04.9	295	25.8	07.0	39	36.5	58.1
10	214	57.5	16	14.8	43.8	112	09.8	05.0	310	27.7	07.0	54	38.9	58.1
11	230	00.0	31	14.6	-5 44.8	127	12.6	+25 05.2	325	29.6	-23 07.1	69	41.2	+9 58.0
12	245	02.4	46	14.4	-5 45.8	142	15.5	+25 05.3	340	31.4	-23 07.1	84	43.6	+9 58.0
13	260	04.9	61	14.2	46.8	157	18.4	05.5	355	33.3	07.1	99	45.9	58.0
14	275	07.4	76	14.0	47.8	172	21.3	05.7	10	35.2	07.1	114	48.3	58.0
15	290	09.8	91	13.7	48.8	187	24.2	05.8	25	37.0	07.2	129	50.7	57.9
16	305	12.3	106	13.5	49.8	202	27.1	06.0	40	38.9	07.2	144	53.0	57.9
17	320	14.8	121	13.3	-5 50.8	217	30.0	+25 06.1	55	40.8	-23 07.2	159	55.4	+9 57.9
18	335	17.2	136	13.1	-5 51.8	232	32.9	+25 06.3	70	42.6	-23 07.2	174	57.7	+9 57.8
19	350	19.7	151	12.8	52.8	247	35.8	06.5	85	44.5	07.3	190	00.1	57.8
20	5	22.2	166	12.6	53.8	262	38.7	06.6	100	46.4	07.3	205	02.5	57.8
21	20	24.6	181	12.4	54.8	277	41.6	06.8	115	48.2	07.3	220	04.8	57.7
22	35	27.1	196	12.1	55.8	292	44.5	06.9	130	50.1	07.3	235	07.2	57.7
23	50	29.5	211	11.9	56.8	307	47.4	07.1	145	52.0	07.4	250	09.6	57.7
24	65	32.0	226	11.7	-5 57.8	322	50.3	+25 07.3	160	53.8	-23 07.4	265	11.9	+9 57.7
Dif	—		-2	-10		+29	+2		+19	0		+24		0

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 47 ^m 5			Edad: 17 ^d 0 PHE { SD: 16'3 PMG: 2 ^h 19 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	09.9	-21	00.8		326	40.4	+27	15.6	41	60 N	6 39	7 33	8 26	17 14	108
1	198	09.7		01.2		341	02.2	28	11.5	41	58	33	23	8 11	39	100
2	213	09.5		01.7		355	24.2	30	07.1	44	56	27	15	7 59	17 59	94
3	228	09.3		02.2		9	46.2	30	+27	02.5	46	54	22	07	48	18 16
4	243	09.1		02.6		24	08.4	32	+26	57.8	47	52	18	7 00	39	30 87
5	258	08.9	-21	03.1		38	30.6	32	+26	52.8	50	50	6 13	6 54	7 31	18 43
6	273	08.7	-21	03.6		52	53.0	34	+26	47.7	51	45	6 03	6 40	7 13	19 08
7	288	08.5		04.0		67	15.5	35	42.4	53	40	5 55	28	6 58	29	74
8	303	08.3		04.5		81	38.1	36	36.9	55	35	47	18	45	19	46
9	318	08.1		04.9		96	00.8	37	31.3	56	30	39	6 09	35	20	00
10	333	07.9		05.4		110	23.6	38	25.5	58	20	25	5 52	6 16	25	64
11	348	07.7	-21	05.9		124	46.6	40	+26	19.5	60	10 N	5 11	5 37	5 59	20 46
12	3	07.5	-21	06.3		139	09.7	41	+26	13.3	62	0	4 56	5 22	5 44	21 06
13	18	07.3		06.8		153	32.9	42	06.9	64	10 S	39	5 06	5 28	26	53
14	33	07.1		07.2		167	56.2	43	+26	00.4	65	20	4 19	4 47	5 11	21 47
15	48	06.9		07.7		182	19.7	45	+25	53.7	67	30	3 53	25	4 52	22 11
16	63	06.7		08.1		196	43.2	45	46.9	68	35	36	4 12	40	26	41
17	78	06.5	-21	08.6		211	07.0	48	+25	39.9	70	40	3 16	3 56	4 27	22 42
18	93	06.3	-21	09.1		225	30.8	48	+25	32.7	72	45	2 50	3 36	4 11	23 02
19	108	06.1		09.5		239	54.8	50	25.4	73	50	2 13	3 10	3 52	26	29
20	123	05.9		10.0		254	18.9	51	17.9	75	52	1 53	2 58	43	38	26
21	138	05.7		10.4		268	43.1	52	10.3	76	54	1 26	43	32	23	51
22	153	05.5		10.9		283	07.5	54	+25	02.5	78	56	0 46	26	20	** ** *
23	168	05.3		11.3		297	32.0	55	+24	54.5	80	58	** ** *	2 04	3 07	** ** *
24	183	05.1	-21	11.8		311	56.6	56	+24	46.4	81	60 S	** ** *	1 36	2 51	0 30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 34 ^m 6		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: -1.2 PMG: 2 ^h 28 ^m		Mag: -1.8 PMG: 13 ^h 15 ^m		Mag: +0.8 PMG: 6 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	32.0	226	11.7	-5	57.8	322	50.3	+25	07.3
1	80	34.5	241	11.5		58.8	337	53.2		07.4
2	95	36.9	256	11.2	-5	59.8	352	56.1		07.6
3	110	39.4	271	11.0	-6	00.8	7	59.1		07.7
4	125	41.9	286	10.8		01.8	23	02.0		07.9
5	140	44.3	301	10.5	-6	02.8	38	04.9	+25	08.1
6	155	46.8	316	10.3	-6	03.8	53	07.8	+25	08.2
7	170	49.3	331	10.1		04.8	68	10.7		08.4
8	185	51.7	346	09.8		05.8	83	13.6		08.5
9	200	54.2	1	09.6		06.8	98	16.6		08.7
10	215	56.7	16	09.4		07.8	113	19.5		08.9
11	230	59.1	31	09.2	-6	08.8	128	22.4	+25	09.0
12	246	01.6	46	08.9	-6	09.7	143	25.3	+25	09.2
13	261	04.0	61	08.7		10.7	158	28.3		09.4
14	276	06.5	76	08.4		11.7	173	31.2		09.5
15	291	09.0	91	08.2		12.7	188	34.1		09.7
16	306	11.4	106	08.0		13.7	203	37.1		09.8
17	321	13.9	121	07.7	-6	14.7	218	40.0	+25	10.0
18	336	16.4	136	07.5	-6	15.7	233	43.0	+25	10.2
19	351	18.8	151	07.3		16.7	248	45.9		10.3
20	6	21.3	166	07.0		17.7	263	48.8		10.5
21	21	23.8	181	06.8		18.7	278	51.8		10.7
22	36	26.2	196	06.6		19.7	293	54.7		10.8
23	51	28.7	211	06.3		20.7	308	57.7		11.0
24	66	31.2	226	06.1	-6	21.7	324	00.6	+25	11.2
Dif	—		-2		-10		+29		+2	

0	h	m	h	m	h	m	h	m	h	m	h	m
1	198	09.7		01.2	341	02.2	28	11.5	41	58	33	23
2	213	09.5		01.7	355	24.2	30	07.1	44	56	27	15
3	228	09.3		02.2	9	46.2	30	+27	02.5	46	54	22
4	243	09.1		02.6	24	08.4	32	+26	57.8	47	52	18
5	258	08.9	-21	03.1	38	30.6	32	+26	52.8	50	50	6 13
6	273	08.7	-21	03.6	52	53.0	34	+26	47.7	51	45	6 03
7	288	08.5		04.0	67	15.5	35	42.4	53	40	5 55	28
8	303	08.3		04.5	81	38.1	36	36.9	55	35	47	18
9	318	08.1		04.9	96	00.8	37	31.3	56	30	39	6 09
10	333	07.9		05.4	110	23.6	38	25.5	58	20	25	5 52
11	348	07.7	-21	05.9	124	46.6	40	+26	19.5	60	10 N	5 11
12	3	07.5	-21	06.3	139	09.7	41	+26	13.3	62	0	4 56
13	18	07.3		06.8	153	32.9	42	06.9	64	20 S	39	5 06
14	33	07.1		07.2	167	56.2	43	+26	00.4	65	10	4 19
15	48	06.9		07.7	182	19.7	45	+25	53.7	67	30	3 53
16	63	06.7		08.1	196	43.2	45	46.9	68	35	36	4 12
17	78	06.5	-21	08.6	211	07.0	48	+25	39.9	70	40	3 16
18	93	06.3	-21	09.1	225	30.8	48	+25	32.7	72	45	2 50
19	108	06.1		09.5	239	54.8	50	25.4	73	50	2 13	3 10
20	123	05.9		10.0	254	18.9	51	17.9	75	52	1 53	2 58
21	138	05.7		10.4	268	43.1	52	10.3	76	54	1 26	43
22	153	05.5		10.9	283	07.5	54	+25	02.5	78	56	0 46
23	168	05.3		11.3	297	32.0	55	+24	54.5	80	58	** ** *
24	183	05.1	-21	11.8	311	56.6	56	+24	46.4	81	60 S	** ** *

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 21 ^d 0	PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'6											
	PMG: 11 ^h 48 ^m 9					PMG: 5 ^h 49 ^m		R°: 42 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	49.4	-21	275	15.0	+10	38.1	60 N	6	45	7	40	8	34	23	46
1	197	49.2		289	48.4 ¹⁴⁴		24.1 ¹⁴⁰	58	39	30		19		49	80	50
2	212	48.9		304	21.9 ¹⁴⁵	+10	10.1 ¹⁴⁰	56	33	21		8	06	51	77	46
3	227	48.7		318	55.5 ¹⁴⁶	+9	56.0 ¹⁴¹	54	28	13		7	55	53	75	43
4	242	48.5		333	29.2 ¹⁴⁷		42.0 ¹⁴⁰	52	23	7	05	45		55	72	40
5	257	48.3	-21	348	02.9 ¹⁴⁷	+9	27.9 ¹⁴¹	50	6	18	6	59	7	36	23	57
6	272	48.0	-21	2	36.7 ¹⁴⁸	+9	13.8 ¹⁴¹	45	6	08	6	44	7	17	**	**
7	287	47.8		17	10.5 ¹⁴⁸	+8	59.7 ¹⁴¹	40	5	59	32	7	02	**	**	26
8	302	47.6		31	44.5 ¹⁵⁰		45.6 ¹⁴¹	35	50	21		6	49	**	**	22
9	317	47.3		46	18.5 ¹⁵⁰		31.4 ¹⁴²	30	42	6	12	38		**	**	18
10	332	47.1		60	52.6 ¹⁵¹		17.2 ¹⁴²	20	27	5	55	18		**	**	11
11	347	46.9	-21	75	26.7 ¹⁵¹	+8	03.0 ¹⁴²	10 N	5	13	5	39	6	01	**	**
12	2	46.6	-21	90	00.9 ¹⁵²	+7	48.8 ¹⁴²	0	4	57	5	23	5	45	**	**
13	17	46.4		104	35.2 ¹⁵³		34.6 ¹⁴²	10 S	40	5	06	29		**	**	54
14	32	46.2		119	09.5 ¹⁵³		20.4 ¹⁴²	20	4	19	4	47	5	12	**	**
15	47	45.9		133	43.9 ¹⁵⁴	+7	06.1 ¹⁴³	30	3	52	24	4	51	0	05	28
16	62	45.7		148	18.4 ¹⁵⁵	+6	51.9 ¹⁴²	35	35	4	10	39		10	25	36
17	77	45.5	-21	162	52.9 ¹⁵⁵	+6	37.6 ¹⁴³	40	3	14	3	54	4	26	0	16
18	92	45.2	-21	177	27.5 ¹⁵⁶	+6	23.3 ¹⁴³	45	2	46	3	33	4	09	0	23
19	107	45.0		192	02.1 ¹⁵⁶	+6	09.0 ¹⁴³	50	2	07	3	07	3	49	32	13
20	122	44.8		206	36.8 ¹⁵⁷	+5	54.7 ¹⁴³	52	1	45	2	53	39		36	11
21	137	44.5		221	11.5 ¹⁵⁷		40.4 ¹⁴³	54	1	16	38	28		40	9	13
22	152	44.3		235	46.3 ¹⁵⁸		26.1 ¹⁴³	56	0	20	2	19	16		45	6
23	167	44.1		250	21.2 ¹⁵⁹	+5	11.8 ¹⁴³	58	**	**	1	56	3	01	50	3
24	182	43.8	-21	264	56.0 ¹⁵⁸	+4	57.4 ¹⁴⁴	60 S	**	**	1	24	2	44	0	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 18 ^m 9		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: -1.3 PMG: 2 ^h 09 ^m		Mag: -1.8 PMG: 13 ^h 03 ^m		Mag: +0.8 PMG: 6 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	69	28.6	225	47.8	-7	33.5	327	37.1	+25	23.1
1	84	31.0	240	47.5		34.5	342	40.2		23.3
2	99	33.5	255	47.3		35.5	357	43.3		23.5
3	114	36.0	270	47.0		36.5	12	46.3		23.6
4	129	38.4	285	46.7		37.5	27	49.4		23.8
5	144	40.9	300	46.5	-7	38.5	42	52.5	+25	24.0
6	159	43.4	315	46.2	-7	39.5	57	55.6	+25	24.1
7	174	45.8	330	45.9		40.5	72	58.6		24.3
8	189	48.3	345	45.6		41.5	88	01.7		24.5
9	204	50.7	0	45.4		42.5	103	04.8		24.7
10	219	53.2	15	45.1		43.5	118	07.9		24.8
11	234	55.7	30	44.8	-7	44.5	133	11.0	+25	25.0
12	249	58.1	45	44.5	-7	45.5	148	14.0	+25	25.2
13	265	00.6	60	44.3		46.5	163	17.1		25.3
14	280	03.1	75	44.0		47.4	178	20.2		25.5
15	295	05.5	90	43.7		48.4	193	23.3		25.7
16	310	08.0	105	43.4		49.4	208	26.4		25.8
17	325	10.5	120	43.2	-7	50.4	223	29.5	+25	26.0
18	340	12.9	135	42.9	-7	51.4	238	32.6	+25	26.2
19	355	15.4	150	42.6		52.4	253	35.7		26.4
20	10	17.9	165	42.3		53.4	268	38.8		26.5
21	25	20.3	180	42.1		54.4	283	41.9		26.7
22	40	22.8	195	41.8		55.4	298	45.0		26.9
23	55	25.2	210	41.5		56.4	313	48.1		27.0
24	70	27.7	225	41.2	-7	57.4	328	51.2	+25	27.2
Dif	—		-3	-10			+31	+2		
									+19	0
										+24

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16°2			Edad: 22 ^d 0	PHE { 4 ^h : 55°/4 12 ^h : 55°/2 20 ^h : 55°/0	Latitud			Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 49 ^m 3									PMG: 6 ^h 31 ^m	R°: 40 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil			Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	43.8	-21	51.8	264	56.0	+4	57.4	60 N	15 02	15 56	16 51	** ** *	12 54 **				
1	197	43.6		52.1	279	31.0 ¹⁶⁰		43.1 ¹⁴³	58	17	16 07	16 58	** ** *	53 2				
2	212	43.4		52.5	294	06.0 ¹⁶⁰		28.8 ¹⁴³	56	30	16	17 04	** ** *	52 5				
3	227	43.1		52.9	308	41.0 ¹⁶⁰		14.4 ¹⁴⁴	54	42	24	09	** ** *	51 8				
4	242	42.9		53.3	323	16.1 ¹⁶¹	+4	00.1 ¹⁴³	52	15 52	31	14	** ** *	51 9				
5	257	42.7	-21	53.7	337	51.2 ¹⁶¹	+3	45.7 ¹⁴⁴	50	16 01	16 38	17 19	** ** *	12 50 12				
6	272	42.4	-21	54.0	352	26.3 ¹⁶¹	+3	31.4 ¹⁴³	45	16 20	16 53	17 30	0 01 65	12 48 17				
7	287	42.2		54.4	7	01.5 ¹⁶²		17.0 ¹⁴⁴	40	35	17 05	39	04 61	47 20				
8	302	41.9		54.8	21	36.8 ¹⁶³	+3	02.7 ¹⁴³	35	16 48	16	47	07 58	46 24				
9	317	41.7		55.2	36	12.0 ¹⁶²	+2	48.4 ¹⁴³	30	17 00	26	17 55	10 54	45 27				
10	332	41.5		55.5	50	47.3 ¹⁶³		34.0 ¹⁴⁴	20	19	43	18 10	14 49	44 31				
11	347	41.2	-21	55.9	65	22.7 ¹⁶⁴	+2	19.7 ¹⁴³	10 N	17 37	17 59	18 25	0 18 44	12 42 36				
12	2	41.0	-21	56.3	79	58.0 ¹⁶³	+2	05.4 ¹⁴³	0	17 53	18 15	18 41	0 21 41	12 41 40				
13	17	40.8		56.7	94	33.4 ¹⁶⁴	+1	51.0 ¹⁴⁴	10 S	18 09	32	18 59	25 36	39 45				
14	32	40.5		57.0	109	08.9 ¹⁶⁵		36.7 ¹⁴³	20	27	18 51	19 20	29 31	38 49				
15	47	40.3		57.4	123	44.3 ¹⁶⁴		22.4 ¹⁴³	30	18 48	19 15	19 47	33 26	36 54				
16	62	40.0		57.8	138	19.8 ¹⁶⁵	+1	08.1 ¹⁴³	35	19 00	29	20 05	35 24	35 57				
17	77	39.8	-21	58.1	152	55.4 ¹⁶⁶	+0	53.8 ¹⁴³	40	19 14	19 46	20 26	0 38 20	12 34 60				
18	92	39.6	-21	58.5	167	30.9 ¹⁶⁵	+0	39.5 ¹⁴³	45	19 30	20 07	20 54	0 41 17	12 33 64				
19	107	39.3		58.9	182	06.5 ¹⁶⁶		25.2 ¹⁴³	50	19 51	34	21 34	45 12	31 69				
20	122	39.1		59.2	196	42.1 ¹⁶⁶	+0	11.0 ¹⁴²	52	20 01	20 47	21 57	47 10	30 72				
21	137	38.8	-21	59.6	211	17.7 ¹⁶⁶	-0	03.3 ¹⁴³	54	12	21 03	22 28	49 7	29 74				
22	152	38.6	-22	00.0	225	53.3 ¹⁶⁶		17.6 ¹⁴³	56	25	22	** ** *	51 5	28 77				
23	167	38.3	-22	00.3	240	29.0 ¹⁶⁷		31.8 ¹⁴²	58	40	21 46	** ** *	53 3	27 80				
24	182	38.1	-22	00.7	255	04.7 ¹⁶⁷	-0	46.0 ¹⁴²	60 S	20 57	22 20	** ** *	0 56 **	12 26 83				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 15 ^m 0		Mag: -4.2 PMG: 8 ^h 57 ^m			Mag: -1.3 PMG: 2 ^h 04 ^m			Mag: -1.8 PMG: 13 ^h 00 ^m			Mag: +0.7 PMG: 5 ^h 59 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	70	27.7	225	41.2	-7	57.4	328	51.2	+25	27.2	164	37.1	-23	10.1	269	56.8	+9	54.6
1	85	30.2	240	40.9		58.4	343	54.3		27.4	179	38.9		10.1	284	59.2		54.6
2	100	32.6	255	40.7	-7	59.4	358	57.4		27.5	194	40.8		10.2	300	01.5		54.6
3	115	35.1	270	40.4	-8	00.4	14	00.5		27.7	209	42.7		10.2	315	03.9		54.6
4	130	37.6	285	40.1		01.4	29	03.6		27.9	224	44.5		10.2	330	06.3		54.6
5	145	40.0	300	39.8	-8	02.4	44	06.7	+25	28.1	239	46.4	-23	10.2	345	08.7	+9	54.5
6	160	42.5	315	39.5	-8	03.3	59	09.8	+25	28.2	254	48.2	-23	10.2	0	11.1	+9	54.5
7	175	45.0	330	39.2		04.3	74	12.9		28.4	269	50.1		10.3	15	13.5		54.5
8	190	47.4	345	39.0		05.3	89	16.0		28.6	284	51.9		10.3	30	15.9		54.5
9	205	49.9	0	38.7		06.3	104	19.2		28.7	299	53.8		10.3	45	18.2		54.5
10	220	52.3	15	38.4		07.3	119	22.3		28.9	314	55.7		10.3	60	20.6		54.4
11	235	54.8	30	38.1	-8	08.3	134	25.4	+25	29.1	329	57.5	-23	10.3	75	23.0	+9	54.4
12	250	57.3	45	37.8	-8	09.3	149	28.5	+25	29.2	344	59.4	-23	10.4	90	25.4	+9	54.4
13	265	59.7	60	37.5		10.3	164	31.6		29.4	0	01.2		10.4	105	27.8		54.4
14	281	02.2	75	37.3		11.3	179	34.8		29.6	15	03.1		10.4	120	30.2		54.4
15	296	04.7	90	37.0		12.3	194	37.9		29.8	30	04.9		10.4	135	32.6		54.3
16	311	07.1	105	36.7		13.3	209	41.0		29.9	45	06.8		10.4	150	34.9		54.3
17	326	09.6	120	36.4	-8	14.3	224	44.2	+25	30.1	60	08.6	-23	10.5	165	37.3	+9	54.3
18	341	12.1	135	36.1	-8	15.3	239	47.3	+25	30.3	75	10.5	-23	10.5	180	39.7	+9	54.3
19	356	14.5	150	35.8		16.3	254	50.4		30.4	90	12.4		10.5	195	42.1		54.3
20	11	17.0	165	35.5		17.2	269	53.5		30.6	105	14.2		10.5	210	44.5		54.2
21	26	19.5	180	35.2		18.2	284	56.7		30.8	120	16.1		10.5	225	46.9		54.2
22	41	21.9	195	34.9		19.2	299	59.8		30.9	135	17.9		10.6	240	49.3		54.2
23	56	24.4	210	34.7		20.2	315	03.0		31.1	150	19.8		10.6	255	51.7		54.2
24	71	26.8	225	34.4	-8	21.2	330	06.1	+25	31.3	165	21.6	-23	10.6	270	54.0	+9	54.2
Dif	—		-3		-10		+31		+2		+19		0		+24		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 11 ^h 49 ^m 7				Edad: 23 ^d 0 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 5 R°: 40 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	38.1	-22	00.7	255	04.7	-0	46.0	60 N	6 48	7 43	8 38	1 10	82	12 53	0		
1	197	37.9		01.1	269	40.4 ¹⁶⁷	-1	00.2 ¹⁴²	58	42	33	23	09	79	55	3		
2	212	37.6		01.4	284	16.1 ¹⁶⁷		14.4 ¹⁴²	56	36	24	8 09	08	76	57	6		
3	227	37.4		01.8	298	51.8 ¹⁶⁷		28.6 ¹⁴²	54	30	15	7 58	08	73	12 59	8		
4	242	37.1		02.2	313	27.5 ¹⁶⁷		42.8 ¹⁴²	52	25	08	48	07	71	13 00	11		
5	257	36.9	-22	02.5	328	03.3 ¹⁶⁸	-1	56.9 ¹⁴¹	50	6 20	7 01	7 39	1 07	69	13 02	12		
6	272	36.6	-22	02.9	342	39.0 ¹⁶⁷	-2	11.0 ¹⁴¹	45	6 10	6 46	7 20	1 06	64	13 05	17		
7	287	36.4		03.2	357	14.8 ¹⁶⁸		25.2 ¹⁴²	40	6 00	34	7 04	05	60	07	21		
8	302	36.2		03.6	11	50.6 ¹⁶⁸		39.3 ¹⁴¹	35	5 52	23	6 51	05	56	10	23		
9	317	35.9		04.0	26	26.4 ¹⁶⁸	-2	53.3 ¹⁴⁰	30	44	6 13	39	04	54	12	26		
10	332	35.7		04.3	41	02.2 ¹⁶⁸	-3	07.4 ¹⁴¹	20	29	5 56	20	03	49	15	32		
11	347	35.4	-22	04.7	55	37.9 ¹⁶⁷	-3	21.4 ¹⁴⁰	10 N	5 14	5 40	6 02	1 02	44	13 18	36		
12	2	35.2	-22	05.0	70	13.7 ¹⁶⁸	-3	35.4 ¹⁴⁰	0	4 58	5 24	5 46	1 02	40	13 21	40		
13	17	34.9		05.4	84	49.6 ¹⁶⁹	-3	49.4 ¹⁴⁰	10 S	40	5 07	30	01	36	24	44		
14	32	34.7		05.7	99	25.4 ¹⁶⁸	-4	03.4 ¹⁴⁰	20	4 19	4 48	5 12	1 00	32	27	48		
15	47	34.4		06.1	114	01.2 ¹⁶⁸		17.3 ¹³⁹	30	3 51	24	4 51	0 59	27	30	54		
16	62	34.2		06.5	128	37.0 ¹⁶⁸		31.3 ¹⁴⁰	35	34	4 10	39	59	23	32	57		
17	77	34.0	-22	06.8	143	12.8 ¹⁶⁸	-4	45.2 ¹³⁹	40	3 13	3 53	4 25	0 58	21	13 34	60		
18	92	33.7	-22	07.2	157	48.6 ¹⁶⁸	-4	59.0 ¹³⁸	45	2 45	3 32	4 08	0 58	16	13 37	64		
19	107	33.5		07.5	172	24.4 ¹⁶⁸	-5	12.9 ¹³⁹	50	2 05	3 05	3 48	57	12	40	69		
20	122	33.2		07.9	187	00.2 ¹⁶⁸		26.7 ¹³⁸	52	1 42	2 51	38	57	10	42	71		
21	137	33.0		08.2	201	35.9 ¹⁶⁷		40.5 ¹³⁸	54	1 10	36	27	56	8	43	74		
22	152	32.7		08.6	216	11.7 ¹⁶⁸	-5	54.3 ¹³⁸	56	** **	2 16	3 14	56	5	45	76		
23	167	32.5		08.9	230	47.5 ¹⁶⁸	-6	08.0 ¹³⁷	58	** **	1 52	2 59	56	2	47	79		
24	182	32.2	-22	09.3	245	23.2 ¹⁶⁷	-6	21.7 ¹³⁷	60 S	** **	1 18	2 41	0 55	0	13 49	83		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 11 ^m 1		Mag: -4.2 PMG: 8 ^h 58 ^m				Mag: -1.3 PMG: 1 ^h 59 ^m				Mag: -1.8 PMG: 12 ^h 57 ^m				Mag: +0.7 PMG: 5 ^h 55 ^m			
h	hG ♈		hG ♎		Dec		hG ♊		Dec		hG ♋		Dec		hG ♏		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	71	26.8	225	34.4	-8	21.2	330	06.1	+25	31.3	165	21.6	-23	10.6	270	54.0	+9	54.2
1	86	29.3	240	34.1		22.2	345	09.2		31.5	180	23.5		10.6	285	56.4		54.1
2	101	31.8	255	33.8		23.2	0	12.4		31.6	195	25.3		10.6	300	58.8		54.1
3	116	34.2	270	33.5		24.2	15	15.5		31.8	210	27.2		10.7	316	01.2		54.1
4	131	36.7	285	33.2		25.2	30	18.7		32.0	225	29.0		10.7	331	03.6		54.1
5	146	39.2	300	32.9	-8	26.2	45	21.8	+25	32.1	240	30.9	-23	10.7	346	06.0	+9	54.1
6	161	41.6	315	32.6	-8	27.2	60	25.0	+25	32.3	255	32.8	-23	10.7	1	08.4	+9	54.0
7	176	44.1	330	32.3		28.1	75	28.1		32.5	270	34.6		10.7	16	10.8		54.0
8	191	46.6	345	32.0		29.1	90	31.3		32.7	285	36.5		10.7	31	13.2		54.0
9	206	49.0	0	31.7		30.1	105	34.4		32.8	300	38.3		10.8	46	15.5		54.0
10	221	51.5	15	31.4		31.1	120	37.6		33.0	315	40.2		10.8	61	17.9		54.0
11	236	54.0	30	31.1	-8	32.1	135	40.7	+25	33.2	330	42.0	-23	10.8	76	20.3	+9	53.9
12	251	56.4	45	30.8	-8	33.1	150	43.9	+25	33.3	345	43.9	-23	10.8	91	22.7	+9	53.9
13	266	58.9	60	30.5		34.1	165	47.1		33.5	0	45.7		10.8	106	25.1		53.9
14	282	01.3	75	30.3		35.1	180	50.2		33.7	15	47.6		10.9	121	27.5		53.9
15	297	03.8	90	30.0		36.1	195	53.4		33.9	30	49.4		10.9	136	29.9		53.9
16	312	06.3	105	29.7		37.1	210	56.5		34.0	45	51.3		10.9	151	32.3		53.9
17	327	08.7	120	29.4	-8	38.0	225	59.7	+25	34.2	60	53.2	-23	10.9	166	34.7	+9	53.8
18	342	11.2	135	29.1	-8	39.0	241	02.9	+25	34.4	75	55.0	-23	10.9	181	37.1	+9	53.8
19	357	13.7	150	28.8		40.0	256	06.0		34.5	90	56.9		11.0	196	39.4		53.8
20	12	16.1	165	28.5		41.0	271	09.2		34.7	105	58.7		11.0	211	41.8		53.8
21	27	18.6	180	28.2		42.0	286	12.4		34.9	121	00.6		11.0	226	44.2		53.8
22	42	21.1	195	27.9		43.0	301	15.6		35.1	136	02.4		11.0	241	46.6		53.7
23	57	23.5	210	27.6		44.0	316	18.7		35.2	151	04.3		11.0	256	49.0		53.7
24	72	26.0	225	27.3	-8	45.0	331	21.9	+25	35.4	166	06.1	-23	11.0	271	51.4	+9	53.7
Dif	—		-3		-10		+32		+2		+19		0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 24 ^d 0	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2									
	PMG: 11 ^h 50 ^m 0					SD: 14'8			PMG: 7 ^h 51 ^m		R°: 41 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	32.2	-22 09.3	245	23.2	-6 21.7		60 N	15 00	15 55	16 50	2 32 83	12 53 0	
1	197	32.0	09.6	259	59.0 ¹⁶⁸	35.4 ¹³⁷		58	15	16 05	16 57	28 80	12 58 4	
2	212	31.7	09.9	274	34.7 ¹⁶⁷	-6 49.1 ¹³⁷		56	29	15	17 03	24 77	13 03 6	
3	227	31.5	10.3	289	10.5 ¹⁶⁸	-7 02.7 ¹³⁶		54	40	23	08	21 74	07 9	
4	242	31.2	10.6	303	46.2 ¹⁶⁷	16.3 ¹³⁶		52	15 51	31	14	18 71	11 11	
5	257	31.0	-22 11.0	318	21.9 ¹⁶⁷	-7 29.8 ¹³⁵		50	16 00	16 37	17 18	2 16 69	13 14 14	
6	272	30.7	-22 11.3	332	57.5 ¹⁶⁶	-7 43.3 ¹³⁵		45	16 19	16 52	17 29	2 10 64	13 22 18	
7	287	30.5	11.7	347	33.2 ¹⁶⁷	-7 56.8 ¹³⁵		40	35	17 05	39	05 60	28 22	
8	302	30.2	12.0	2	08.8 ¹⁶⁶	-8 10.3 ¹³⁵		35	16 48	16	47	2 01 57	33 26	
9	317	30.0	12.3	16	44.5 ¹⁶⁷	23.7 ¹³⁴		30	17 00	26	17 55	1 58 54	38 28	
10	332	29.7	12.7	31	20.1 ¹⁶⁶	37.1 ¹³⁴		20	20	17 44	18 11	52 49	47 32	
11	347	29.5	-22 13.0	45	55.6 ¹⁶⁵	-8 50.4 ¹³³		10 N	17 37	18 00	18 26	1 46 45	13 54 37	
12	2	29.2	-22 13.4	60	31.2 ¹⁶⁶	-9 03.7 ¹³³		0	17 54	18 16	18 42	1 42 40	14 01 41	
13	17	29.0	13.7	75	06.7 ¹⁶⁵	17.0 ¹³³		10 S	18 10	33	19 00	37 36	08 45	
14	32	28.7	14.0	89	42.3 ¹⁶⁶	30.2 ¹³²		20	28	18 53	22	32 31	15 50	
15	47	28.5	14.4	104	17.7 ¹⁶⁴	43.4 ¹³²		30	18 49	19 16	19 49	26 27	24 54	
16	62	28.2	14.7	118	53.2 ¹⁶⁵	-9 56.6 ¹³²		35	19 01	31	20 07	22 25	29 57	
17	77	28.0	-22 15.0	133	28.6 ¹⁶⁴	-10 09.7 ¹³¹		40	19 16	19 48	20 28	1 19 21	14 34 61	
18	92	27.7	-22 15.4	148	04.0 ¹⁶⁴	-10 22.8 ¹³¹		45	19 32	20 09	20 57	1 14 18	14 41 64	
19	107	27.4	15.7	162	39.4 ¹⁶⁴	35.8 ¹³⁰		50	19 53	37	21 38	09 13	49 69	
20	122	27.2	16.0	177	14.7 ¹⁶³	-10 48.8 ¹³⁰		52	20 04	20 50	22 01	07 11	53 71	
21	137	26.9	16.4	191	50.1 ¹⁶⁴	-11 01.7 ¹²⁹		54	15	21 07	22 35	04 9	14 57 74	
22	152	26.7	16.7	206	25.3 ¹⁶²	14.6 ¹²⁹		56	28	26	** **	1 01 6	15 01 77	
23	167	26.4	17.0	221	00.6 ¹⁶³	27.5 ¹²⁹		58	20 43	21 51	** **	0 58 3	06 80	
24	182	26.2	-22 17.4	235	35.8 ¹⁶²	-11 40.3 ¹²⁸		60 S	21 01	22 28	** **	0 55 0	15 12 84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 07 ^m 1		Mag: -4.2 PMG: 8 ^h 58 ^m			Mag: -1.4 PMG: 1 ^h 54 ^m			Mag: -1.8 PMG: 12 ^h 54 ^m			Mag: +0.7 PMG: 5 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	72	26.0	225	27.3	-8 45.0	331	21.9	+25 35.4	166	06.1	-23 11.0	271	51.4	+9 53.7
1	87	28.4	240	27.0	46.0	346	25.1	35.6	181	08.0	11.1	286	53.8	53.7
2	102	30.9	255	26.7	46.9	1	28.3	35.7	196	09.8	11.1	301	56.2	53.7
3	117	33.4	270	26.4	47.9	16	31.5	35.9	211	11.7	11.1	316	58.6	53.7
4	132	35.8	285	26.0	48.9	31	34.6	36.1	226	13.5	11.1	332	01.0	53.6
5	147	38.3	300	25.7	-8 49.9	46	37.8	+25 36.2	241	15.4	-23 11.1	347	03.4	+9 53.6
6	162	40.8	315	25.4	-8 50.9	61	41.0	+25 36.4	256	17.3	-23 11.2	2	05.8	+9 53.6
7	177	43.2	330	25.1	51.9	76	44.2	36.6	271	19.1	11.2	17	08.2	53.6
8	192	45.7	345	24.8	52.9	91	47.4	36.8	286	21.0	11.2	32	10.6	53.6
9	207	48.2	0 24.5	53.9	53.9	106	50.6	36.9	301	22.8	11.2	47	12.9	53.6
10	222	50.6	15 24.2	54.8	54.8	121	53.8	37.1	316	24.7	11.2	62	15.3	53.5
11	237	53.1	30 23.9	-8 55.8	55.8	136	57.0	+25 37.3	331	26.5	-23 11.2	77	17.7	+9 53.5
12	252	55.6	45 23.6	-8 56.8	56.8	152	00.1	+25 37.4	346	28.4	-23 11.3	92	20.1	+9 53.5
13	267	58.0	60 23.3	57.8	57.8	167	03.3	37.6	1	30.2	11.3	107	22.5	53.5
14	283	00.5	75 23.0	58.8	58.8	182	06.5	37.8	16	32.1	11.3	122	24.9	53.5
15	298	02.9	90 22.7	-8 59.8	59.8	197	09.7	38.0	31	33.9	11.3	137	27.3	53.5
16	313	05.4	105 22.4	-9 00.8	00.8	212	12.9	38.1	46	35.8	11.3	152	29.7	53.4
17	328	07.9	120 22.1	-9 01.8	01.8	227	16.1	+25 38.3	61	37.6	-23 11.4	167	32.1	+9 53.4
18	343	10.3	135 21.8	-9 02.7	02.7	242	19.3	+25 38.5	76	39.5	-23 11.4	182	34.5	+9 53.4
19	358	12.8	150 21.4	03.7	03.7	257	22.5	38.6	91	41.3	11.4	197	36.9	53.4
20	13	15.3	165 21.1	04.7	04.7	272	25.8	38.8	106	43.2	11.4	212	39.3	53.4
21	28	17.7	180 20.8	05.7	05.7	287	29.0	39.0	121	45.0	11.4	227	41.7	53.4
22	43	20.2	195 20.5	06.7	06.7	302	32.2	39.2	136	46.9	11.4	242	44.1	53.3
23	58	22.7	210 20.2	07.7	07.7	317	35.4	39.3	151	48.8	11.5	257	46.5	53.3
24	73	25.1	225 19.9	-9 08.6	08.6	332	38.6	+25 39.5	166	50.6	-23 11.5	272	48.9	+9 53.3
Dif	—		-3		-10	+32		+2	+19		0	+24		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 50 ^m 5			Edad: 25 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0 SD: 14'7 PMG: 8 ^h 32 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	26.2	-22	17.4	235	35.8	-11	40.3	60 N	6 51	7 47	8 42	3 55	86	12 53	1
1	197	25.9		17.7	250	11.0 ¹⁶²	-11	53.0 ¹²⁷	58	44	36	26	48	81	13 02	5
2	212	25.7		18.0	264	46.1 ¹⁶¹	-12	05.8 ¹²⁸	56	38	26	12	41	78	09	9
3	227	25.4		18.3	279	21.2 ¹⁶¹		18.4 ¹²⁶	54	33	18	8 01	35	75	16	12
4	242	25.2		18.7	293	56.3 ¹⁶¹		31.0 ¹²⁶	52	27	10	7 50	29	73	22	15
5	257	24.9	-22	19.0	308	31.3 ¹⁶⁰	-12	43.6 ¹²⁶	50	6 22	7 03	7 41	3 25	69	13 28	16
6	272	24.6	-22	19.3	323	06.3 ¹⁶⁰	-12	56.1 ¹²⁵	45	6 12	6 48	7 22	3 14	65	13 40	21
7	287	24.4		19.6	337	41.2 ¹⁵⁹	-13	08.6 ¹²⁵	40	6 02	36	7 06	3 05	61	50	25
8	302	24.1		20.0	352	16.1 ¹⁵⁹		21.0 ¹²⁴	35	5 53	25	6 53	2 58	58	13 59	28
9	317	23.9		20.3	6	51.0 ¹⁵⁹	6	51.0 ¹²⁴	30	45	6 15	41	52	54	14 06	31
10	332	23.6		20.6	21	25.8 ¹⁵⁸		45.7 ¹²³	20	30	5 57	21	41	49	19	36
11	347	23.4	-22	20.9	36	00.6 ¹⁵⁸	-13	58.0 ¹²³	10 N	5 14	5 41	6 03	2 31	46	14 31	39
12	2	23.1	-22	21.3	50	35.3 ¹⁵⁷	-14	10.2 ¹²²	0	4 58	5 24	5 47	2 22	42	14 42	43
13	17	22.8		21.6	65	10.0 ¹⁵⁷		22.3 ¹²¹	10 S	40	5 07	30	13	38	14 53	46
14	32	22.6		21.9	79	44.6 ¹⁵⁶		34.4 ¹²¹	20	4 19	4 48	5 12	2 03	34	15 05	50
15	47	22.3		22.2	94	19.2 ¹⁵⁶		46.4 ¹²⁰	30	3 51	24	4 51	1 53	29	18	55
16	62	22.1		22.5	108	53.8 ¹⁵⁶	-14	58.4 ¹²⁰	35	34	4 10	39	47	26	26	58
17	77	21.8	-22	22.8	123	28.3 ¹⁵⁵	-15	10.3 ¹¹⁹	40	3 12	3 52	4 25	1 40	23	15 35	61
18	92	21.5	-22	23.2	138	02.7 ¹⁵⁴	-15	22.2 ¹¹⁹	45	2 43	3 31	4 08	1 32	19	15 45	66
19	107	21.3		23.5	152	37.1 ¹⁵⁴		34.0 ¹¹⁸	50	2 02	3 04	3 47	22	15	15 58	70
20	122	21.0		23.8	167	11.4 ¹⁵³		45.7 ¹¹⁷	52	1 39	2 50	37	18	12	16 04	73
21	137	20.8		24.1	181	45.7 ¹⁵³	-15	57.4 ¹¹⁷	54	1 05	34	25	13	10	11	75
22	152	20.5		24.4	196	19.9 ¹⁵²	-16	09.0 ¹¹⁶	56	** **	2 14	3 12	07	8	18	79
23	167	20.2		24.7	210	54.1 ¹⁵²		20.6 ¹¹⁶	58	** **	1 49	2 57	1 01	5	26	83
24	182	20.0	-22	25.0	225	28.2 ¹⁵¹	-16	32.1 ¹¹⁵	60 S	** **	1 13	2 39	0 55	0	16 36	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 03 ^m 2		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: -1.4 PMG: 1 ^h 49 ^m		Mag: -1.8 PMG: 12 ^h 51 ^m		Mag: +0.7 PMG: 5 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	73	25.1	225	19.9	332	38.6	166	50.6	272	48.9
1	88	27.6	240	19.6	347	41.8	181	52.5	287	51.3
2	103	30.1	255	19.3	2	45.0	196	54.3	302	53.7
3	118	32.5	270	19.0	17	48.2	211	56.2	317	56.1
4	133	35.0	285	18.6	32	51.5	226	58.0	332	58.5
5	148	37.4	300	18.3	47	54.7	241	59.9	348	00.9
6	163	39.9	315	18.0	62	57.9	257	01.7	3	03.3
7	178	42.4	330	17.7	78	01.1	272	03.6	18	05.7
8	193	44.8	345	17.4	93	04.3	287	05.4	33	08.1
9	208	47.3	0	17.1	108	07.6	302	07.3	48	10.5
10	223	49.8	15	16.7	123	10.8	317	09.1	63	12.9
11	238	52.2	30	16.4	138	14.0	332	11.0	78	15.3
12	253	54.7	45	16.1	153	17.3	347	12.8	93	17.7
13	268	57.2	60	15.8	168	20.5	2	14.7	108	20.1
14	283	59.6	75	15.5	183	23.7	17	16.5	123	22.5
15	299	02.1	90	15.2	198	26.9	32	18.4	138	24.9
16	314	04.5	105	14.8	213	30.2	47	20.2	153	27.3
17	329	07.0	120	14.5	228	33.4	62	22.1	168	29.7
18	344	09.5	135	14.2	243	36.7	77	23.9	183	32.1
19	359	11.9	150	13.9	258	39.9	92	25.8	198	34.5
20	14	14.4	165	13.5	273	43.1	107	27.6	213	36.9
21	29	16.9	180	13.2	288	46.4	122	29.5	228	39.3
22	44	19.3	195	12.9	303	49.6	137	31.3	243	41.7
23	59	21.8	210	12.6	318	52.9	152	33.2	258	44.1
24	74	24.3	225	12.3	333	56.1	167	35.0	273	46.5
Dif	—		-3	-10	+32	+2	+19	0	+24	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 51 ^m 3			Edad: 27 ^d 0 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 9 ^h 59 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	13.7	-22	32.3	214	49.2	-20	46.5	60 N	6 54	7 50	8 45	6 50	91	12 57	8
1	197	13.4		32.6	229	21.8 ¹³⁶	-20	56.2 ⁹⁷	58	47	39	29	33	84	13 15	15
2	212	13.1		32.9	243	54.3 ¹³⁵	-21	05.7 ⁹⁵	56	41	29	15	18	80	31	19
3	227	12.9		33.2	258	26.8 ¹³⁵		15.2 ⁹⁵	54	35	20	8 03	6 06	75	44	22
4	242	12.6		33.4	272	59.1 ¹³³		24.5 ⁹³	52	29	13	7 53	5 55	72	13 55	26
5	257	12.3	-22	33.7	287	31.4 ¹³³	-21	33.8 ⁹³	50	6 25	7 06	7 44	5 45	70	14 05	28
6	272	12.1	-22	34.0	302	03.6 ¹³²	-21	43.0 ⁹²	45	6 14	6 50	7 24	5 25	65	14 27	32
7	287	11.8		34.3	316	35.8 ¹³²	-21	52.1 ⁹¹	40	6 04	38	7 08	5 08	62	44	36
8	302	11.5		34.6	331	07.9 ¹³¹	-22	01.1 ⁹⁰	35	5 55	26	6 54	4 54	60	14 59	38
9	317	11.2		34.9	345	39.9 ¹³⁰		10.0 ⁸⁹	30	47	6 16	42	42	57	15 12	40
10	332	11.0		35.2	0	11.8 ¹²⁹		18.8 ⁸⁸	20	31	5 58	22	22	53	34	43
11	347	10.7	-22	35.5	14	43.7 ¹²⁹	-22	27.5 ⁸⁷	10 N	5 15	5 42	6 04	4 04	51	15 53	46
12	2	10.4	-22	35.7	29	15.5 ¹²⁸	-22	36.1 ⁸⁶	0	4 59	5 25	5 48	3 48	47	16 10	49
13	17	10.2		36.0	43	47.3 ¹²⁸		44.7 ⁸⁶	10 S	41	5 08	31	32	44	28	51
14	32	09.9		36.3	58	18.9 ¹²⁶	-22	53.1 ⁸⁴	20	4 19	4 48	5 12	3 14	41	16 48	53
15	47	09.6		36.6	72	50.5 ¹²⁶	-23	01.4 ⁸³	30	3 51	24	4 51	2 55	37	17 10	57
16	62	09.4		36.9	87	22.1 ¹²⁶		09.7 ⁸³	35	33	4 10	39	43	35	23	59
17	77	09.1	-22	37.1	101	53.5 ¹²⁴	-23	17.8 ⁸¹	40	3 11	3 52	4 25	2 30	32	17 38	62
18	92	08.8	-22	37.4	116	24.9 ¹²⁴	-23	25.8 ⁸⁰	45	2 42	3 31	4 07	2 14	29	17 56	65
19	107	08.6		37.7	130	56.2 ¹²³		33.8 ⁸⁰	50	2 00	3 03	3 46	1 55	25	18 19	68
20	122	08.3		38.0	145	27.5 ¹²³		41.6 ⁷⁸	52	1 36	2 48	36	47	21	30	71
21	137	08.0		38.3	159	58.6 ¹²¹		49.4 ⁷⁸	54	1 01	32	24	37	19	42	74
22	152	07.7		38.5	174	29.8 ¹²²	-23	57.0 ⁷⁶	56	** **	2 12	3 11	25	16	18 56	77
23	167	07.5		38.8	189	00.8 ¹²⁰	-24	04.5 ⁷⁵	58	** **	1 46	2 55	1 12	12	19 13	82
24	182	07.2	-22	39.1	203	31.8 ¹²⁰	-24	11.9 ⁷⁴	60 S	** **	1 07	2 37	0 58	5	19 33	90
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 55 ^m 3			Mag: -4.2 PMG: 9 ^h 00 ^m			Mag: -1.4 PMG: 1 ^h 39 ^m			Mag: -1.8 PMG: 12 ^h 45 ^m			Mag: +0.7 PMG: 5 ^h 40 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	75	23.4	225	04.4	-9	55.7	335	14.5	+25	47.7	168	19.5	-23	12.3	274	44.1
1	90	25.9	240	04.0		56.7	350	17.7		47.9	183	21.3		12.3	289	46.5
2	105	28.3	255	03.7		57.7	5	21.0		48.0	198	23.2		12.3	304	48.9
3	120	30.8	270	03.4		58.6	20	24.3		48.2	213	25.0		12.3	319	51.3
4	135	33.3	285	03.0	-9	59.6	35	27.6		48.4	228	26.9		12.3	334	53.8
5	150	35.7	300	02.7	-10	00.6	50	30.9	+25	48.5	243	28.7	-23	12.4	349	56.2
6	165	38.2	315	02.3	-10	01.6	65	34.2	+25	48.7	258	30.6	-23	12.4	4	58.6
7	180	40.6	330	02.0		02.5	80	37.5		48.9	273	32.4		12.4	20	01.0
8	195	43.1	345	01.7		03.5	95	40.7		49.0	288	34.3		12.4	35	03.4
9	210	45.6	0	01.3		04.5	110	44.0		49.2	303	36.1		12.4	50	05.8
10	225	48.0	15	01.0		05.5	125	47.3		49.4	318	38.0		12.4	65	08.2
11	240	50.5	30	00.6	-10	06.4	140	50.6	+25	49.5	333	39.8	-23	12.4	80	10.6
12	255	53.0	45	00.3	-10	07.4	155	53.9	+25	49.7	348	41.7	-23	12.5	95	13.0
13	270	55.4	60	00.0		08.4	170	57.2		49.9	3	43.5		12.5	110	15.4
14	285	57.9	74	59.6		09.4	186	00.5		50.1	18	45.4		12.5	125	17.8
15	301	00.4	89	59.3		10.3	201	03.8		50.2	33	47.2		12.5	140	20.2
16	316	02.8	104	58.9		11.3	216	07.1		50.4	48	49.1		12.5	155	22.6
17	331	05.3	119	58.6	-10	12.3	231	10.4	+25	50.6	63	50.9	-23	12.5	170	25.0
18	346	07.8	134	58.3	-10	13.3	246	13.7	+25	50.7	78	52.7	-23	12.5	185	27.5
19	1	10.2	149	57.9		14.2	261	17.0		50.9	93	54.6		12.6	200	29.9
20	16	12.7	164	57.6		15.2	276	20.3		51.1	108	56.4		12.6	215	32.3
21	31	15.1	179	57.2		16.2	291	23.6		51.2	123	58.3		12.6	230	34.7
22	46	17.6	194	56.9		17.1	306	27.0		51.4	139	00.1		12.6	245	37.1
23	61	20.1	209	56.5		18.1	321	30.3		51.6	154	02.0		12.6	260	39.5
24	76	22.5	224	56.2	-10	19.1	336	33.6	+25	51.7	169	03.8	-23	12.6	275	41.9
Dif	—		-3		-10		+33		+2		+18		0		+24	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 51 ^m 7			Edad: 28 ^d 0 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:2 PMG: 10 ^h 47 ^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	h m m
0	182	07.2	-22 39.1	203	31.8	-24 11.9	73	60 N	14 56	15 52	16 48	8 21 87	13 05 18		
1	197	06.9		218	02.7 ¹¹⁹	19.2	73	58	15 13	16 03	16 55	7 57 79	30 26		
2	212	06.7		232	33.5 ¹¹⁸	26.4	72	56	26	13	17 01	38 73	13 50 30		
3	227	06.4		247	04.2 ¹¹⁷	33.5	71	54	38	22	07	21 71	14 06 34		
4	242	06.1		261	34.9 ¹¹⁷	40.5	70	52	49	29	13	7 07 69	21 36		
5	257	05.8	-22 40.4	276	05.6 ¹¹⁷	-24 47.4	69	50	15 58	16 36	17 18	6 55 67	14 33 38		
6	272	05.6	-22 40.7	290	36.1 ¹¹⁵	-24 54.1	67	45	16 18	16 52	17 29	6 30 63	14 59 41		
7	287	05.3		305	06.6 ¹¹⁵	-25 00.8	67	40	35	17 05	39	6 10 61	15 20 42		
8	302	05.0		319	37.0 ¹¹⁴	07.3	65	35	16 48	16	48	5 54 58	37 44		
9	317	04.7		334	07.4 ¹¹⁴	13.8	65	30	17 00	26	17 56	39 57	15 52 45		
10	332	04.5		348	37.7 ¹¹³	20.1	63	20	21	17 45	18 12	5 15 55	16 17 48		
11	347	04.2	-22 42.0	3	07.9 ¹¹²	-25 26.3	62	10 N	17 39	18 01	18 28	4 55 52	16 39 49		
12	2	03.9	-22 42.3	17	38.1 ¹¹²	-25 32.4	61	0	17 55	18 18	18 44	4 35 50	16 59 51		
13	17	03.6		32	08.2 ¹¹¹	38.3	59	10 S	18 12	35	19 02	4 16 48	17 19 53		
14	32	03.4		46	38.2 ¹¹⁰	44.2	59	20	31	18 55	24	3 55 46	17 41 55		
15	47	03.1		61	08.2 ¹¹⁰	49.9	57	30	18 52	19 19	19 52	32 43	18 07 56		
16	62	02.8		75	38.1 ¹⁰⁹	-25 55.5	56	35	19 05	34	20 11	18 41	22 57		
17	77	02.5	-22 43.6	90	07.9 ¹⁰⁸	-26 01.0	55	40	19 19	19 52	20 33	3 02 39	18 40 58		
18	92	02.3	-22 43.9	104	37.7 ¹⁰⁸	-26 06.4	54	45	19 37	20 14	21 02	2 43 37	19 01 60		
19	107	02.0		119	07.4 ¹⁰⁷	11.6	52	50	19 58	42	21 45	20 32	27 63		
20	122	01.7		133	37.1 ¹⁰⁷	16.7	51	52	20 09	20 56	22 10	2 08 31	41 64		
21	137	01.4		148	06.7 ¹⁰⁶	21.7	50	54	20	21 13	22 48	1 56 28	19 56 65		
22	152	01.2		162	36.2 ¹⁰⁵	26.6	49	56	34	21 34	** **	41 25	20 13 69		
23	167	00.9		177	05.7 ¹⁰⁵	31.3	47	58	20 50	22 01	** **	24 20	20 35 72		
24	182	00.6	-22 45.4	191	35.2 ¹⁰⁵	-26 36.0	47	60 S	21 09	22 41	** **	1 03 13	21 03 78		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 51 ^m 4		Mag: -4.2 PMG: 9 ^h 00 ^m			Mag: -1.4 PMG: 1 ^h 33 ^m			Mag: -1.8 PMG: 12 ^h 42 ^m			Mag: +0.7 PMG: 5 ^h 36 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	76	22.5	224	56.2	-10 19.1	336	33.6	+25 51.7	169	03.8	-23 12.6	275	41.9	+9 52.4	
1	91	25.0	239	55.8	20.0	351	36.9	51.9	184	05.7	12.7	290	44.3	52.3	
2	106	27.5	254	55.5	21.0	6	40.2	52.1	199	07.5	12.7	305	46.7	52.3	
3	121	29.9	269	55.1	22.0	21	43.5	52.2	214	09.4	12.7	320	49.1	52.3	
4	136	32.4	284	54.8	23.0	36	46.8	52.4	229	11.2	12.7	335	51.5	52.3	
5	151	34.9	299	54.5	-10 23.9	51	50.2	+25 52.6	244	13.1	-23 12.7	350	54.0	+9 52.3	
6	166	37.3	314	54.1	-10 24.9	66	53.5	+25 52.7	259	14.9	-23 12.7	5	56.4	+9 52.3	
7	181	39.8	329	53.8	25.9	81	56.8	52.9	274	16.8	12.7	20	58.8	52.3	
8	196	42.3	344	53.4	26.8	97	00.1	53.1	289	18.6	12.8	36	01.2	52.3	
9	211	44.7	359	53.1	27.8	112	03.4	53.2	304	20.5	12.8	51	03.6	52.3	
10	226	47.2	14	52.7	28.8	127	06.8	53.4	319	22.3	12.8	66	06.0	52.3	
11	241	49.6	29	52.4	-10 29.7	142	10.1	+25 53.6	334	24.2	-23 12.8	81	08.4	+9 52.2	
12	256	52.1	44	52.0	-10 30.7	157	13.4	+25 53.7	349	26.0	-23 12.8	96	10.8	+9 52.2	
13	271	54.6	59	51.7	31.7	172	16.7	53.9	4	27.9	12.8	111	13.2	52.2	
14	286	57.0	74	51.3	32.6	187	20.1	54.1	19	29.7	12.8	126	15.7	52.2	
15	301	59.5	89	50.9	33.6	202	23.4	54.3	34	31.6	12.9	141	18.1	52.2	
16	317	02.0	104	50.6	34.6	217	26.7	54.4	49	33.4	12.9	156	20.5	52.2	
17	332	04.4	119	50.2	-10 35.5	232	30.1	+25 54.6	64	35.3	-23 12.9	171	22.9	+9 52.2	
18	347	06.9	134	49.9	-10 36.5	247	33.4	+25 54.8	79	37.1	-23 12.9	186	25.3	+9 52.2	
19	2	09.4	149	49.5	37.5	262	36.7	54.9	94	39.0	12.9	201	27.7	52.2	
20	17	11.8	164	49.2	38.4	277	40.1	55.1	109	40.8	12.9	216	30.1	52.2	
21	32	14.3	179	48.8	39.4	292	43.4	55.3	124	42.7	12.9	231	32.5	52.2	
22	47	16.8	194	48.5	40.4	307	46.8	55.4	139	44.5	13.0	246	35.0	52.1	
23	62	19.2	209	48.1	41.3	322	50.1	55.6	154	46.4	13.0	261	37.4	52.1	
24	77	21.7	224	47.7	-10 42.3	337	53.4	+25 55.8	169	48.2	-23 13.0	276	39.8	+9 52.1	
Dif	—		-4		-10	+33		+2	+18		0	+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 52 ^m 2			Edad: 29 ^d 0 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/4 Rº: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	182	00.6	-22 45.4	191	35.2	-26 36.0	60 N	6 56	7 52	8 49	9 48	67	13 23	43	
1	197	00.3	45.7	206	04.5 ¹⁰³	40.5 ⁴⁵	58	49	41	32	9 16	63	13 56	46	
2	212	00.1	45.9	220	33.9 ¹⁰⁴	44.8 ⁴³	56	43	31	18	8 51	62	14 20	48	
3	226	59.8	46.2	235	03.1 ¹⁰²	49.1 ⁴³	54	37	23	8 06	32	60	40	48	
4	241	59.5	46.5	249	32.3 ¹⁰²	53.2 ⁴¹	52	32	15	7 55	16	59	14 57	49	
5	256	59.2	-22 46.7	264	01.5 ¹⁰²	-26 57.2 ⁴⁰	50	6 27	7 08	7 46	8 02	58	15 11	49	
6	271	58.9	-22 47.0	278	30.6 ¹⁰¹	-27 01.1 ³⁹	45	6 15	6 52	7 26	7 33	57	15 40	50	
7	286	58.7	47.2	292	59.7 ¹⁰¹	04.8 ³⁷	40	6 05	39	7 10	7 11	56	16 02	51	
8	301	58.4	47.5	307	28.7 ¹⁰⁰	08.4 ³⁶	35	5 56	28	6 56	6 52	56	21	52	
9	316	58.1	47.7	321	57.6 ⁹⁹	11.8 ³⁴	30	48	6 18	44	36	55	16 37	52	
10	331	57.8	48.0	336	26.6 ¹⁰⁰	15.2 ³⁴	20	32	5 59	23	6 10	53	17 05	52	
11	346	57.6	-22 48.2	350	55.4 ⁹⁸	-27 18.4 ³²	10 N	5 16	5 43	6 05	5 47	52	17 28	53	
12	1	57.3	-22 48.4	5	24.2 ⁹⁸	-27 21.4 ³⁰	0	5 00	5 26	5 48	5 25	52	17 50	53	
13	16	57.0	48.7	19	53.0 ⁹⁸	24.4 ³⁰	10 S	4 41	5 08	31	5 04	51	18 12	53	
14	31	56.7	48.9	34	21.8 ⁹⁸	27.2 ²⁸	20	4 20	4 49	5 13	4 41	50	18 36	53	
15	46	56.4	49.2	48	50.5 ⁹⁷	29.8 ²⁶	30	3 51	24	4 52	4 15	49	19 03	53	
16	61	56.2	49.4	63	19.1 ⁹⁶	32.4 ²⁶	35	33	4 10	39	3 59	48	19	53	
17	76	55.9	-22 49.7	77	47.7 ⁹⁶	-27 34.8 ²⁴	40	3 11	3 52	4 24	3 41	47	19 38	53	
18	91	55.6	-22 49.9	92	16.3 ⁹⁶	-27 37.0 ²²	45	2 42	3 30	4 07	3 20	45	20 01	53	
19	106	55.3	50.1	106	44.8 ⁹⁵	39.2 ²²	50	1 59	3 02	3 45	2 52	44	30	53	
20	121	55.0	50.4	121	13.3 ⁹⁵	41.1 ¹⁹	52	1 34	2 47	35	39	42	20 45	53	
21	136	54.8	50.6	135	41.8 ⁹⁵	43.0 ¹⁹	54	0 56	30	23	24	40	21 01	53	
22	151	54.5	50.9	150	10.3 ⁹⁵	44.7 ¹⁷	56	** **	2 10	3 10	2 06	38	22	52	
23	166	54.2	51.1	164	38.7 ⁹⁴	46.3 ¹⁶	58	** **	1 43	2 54	1 44	35	21 47	52	
24	181	53.9	-22 51.3	179	07.0 ⁹³	-27 47.7 ¹⁴	60 S	** **	1 02	2 35	1 16	29	22 21	51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 18 ^h 47 ^m 5		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: -1.5 PMG: 1 ^h 28 ^m		Mag: -1.8 PMG: 12 ^h 39 ^m		Mag: +0.7 PMG: 5 ^h 32 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	°	'	°	°	°	'		
0	77	21.7	224	47.7	-10 42.3	337 53.4	+25 55.8	169 48.2	-23 13.0	276 39.8	+9 52.1	
1	92	24.1	239	47.4	43.3	352 56.8	55.9	184 50.0	13.0	291 42.2	52.1	
2	107	26.6	254	47.0	44.2	8 00.1	56.1	199 51.9	13.0	306 44.6	52.1	
3	122	29.1	269	46.7	45.2	23 03.5	56.2	214 53.7	13.0	321 47.0	52.1	
4	137	31.5	284	46.3	46.2	38 06.8	56.4	229 55.6	13.0	336 49.4	52.1	
5	152	34.0	299	46.0	-10 47.1	53 10.2	+25 56.6	244 57.4	-23 13.0	351 51.9	+9 52.1	
6	167	36.5	314	45.6	-10 48.1	68 13.5	+25 56.7	259 59.3	-23 13.1	6 54.3	+9 52.1	
7	182	38.9	329	45.2	49.1	83 16.9	56.9	275 01.1	13.1	21 56.7	52.1	
8	197	41.4	344	44.9	50.0	98 20.2	57.1	290 03.0	13.1	36 59.1	52.1	
9	212	43.9	359	44.5	51.0	113 23.6	57.2	305 04.8	13.1	52 01.5	52.0	
10	227	46.3	14 44.1	51.9	51.9	128 26.9	57.4	320 06.7	13.1	67 03.9	52.0	
11	242	48.8	29 43.8	-10 52.9	52.9	143 30.3	+25 57.6	335 08.5	-23 13.1	82 06.4	+9 52.0	
12	257	51.3	44 43.4	-10 53.9	53.9	158 33.7	+25 57.7	350 10.4	-23 13.1	97 08.8	+9 52.0	
13	272	53.7	59 43.1	54.8	54.8	173 37.0	57.9	5 12.2	13.2	112 11.2	52.0	
14	287	56.2	74 42.7	55.8	55.8	188 40.4	58.1	20 14.1	13.2	127 13.6	52.0	
15	302	58.6	89 42.3	56.7	56.7	203 43.7	58.2	35 15.9	13.2	142 16.0	52.0	
16	318	01.1	104 42.0	57.7	57.7	218 47.1	58.4	50 17.8	13.2	157 18.4	52.0	
17	333	03.6	119 41.6	-10 58.7	58.7	233 50.5	+25 58.6	65 19.6	-23 13.2	172 20.9	+9 52.0	
18	348	06.0	134 41.2	-10 59.6	59.6	248 53.8	+25 58.7	80 21.5	-23 13.2	187 23.3	+9 52.0	
19	3	08.5	149 40.9	-11 00.6	00.6	263 57.2	58.9	95 23.3	13.2	202 25.7	52.0	
20	18	11.0	164 40.5	01.5	01.5	279 00.6	59.1	110 25.1	13.2	217 28.1	52.0	
21	33	13.4	179 40.1	02.5	02.5	294 03.9	59.2	125 27.0	13.3	232 30.5	52.0	
22	48	15.9	194 39.8	03.5	03.5	309 07.3	59.4	140 28.8	13.3	247 32.9	51.9	
23	63	18.4	209 39.4	04.4	04.4	324 10.7	59.6	155 30.7	13.3	262 35.4	51.9	
24	78	20.8	224 39.0	-11 05.4	05.4	339 14.0	+25 59.7	170 32.5	-23 13.3	277 37.8	+9 51.9	
Dif	—		-4	-10		+34	+2	+18	0		+24	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 52 ^m 6				Edad: 30 ^d 0 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 R°: 53 ^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	181	53.9	-22	51.3	179	07.0	-27	47.7	60 N	14 55	15 51	16 47	10 55 36	14 06 74				
1	196	53.6		51.6	193	35.4	94	49.0	58	15 12	16 03	16 55	10 19 41	14 42 69				
2	211	53.3		51.8	208	03.7	93	50.1	56	26	12	17 01	9 53 43	15 08 66				
3	226	53.1		52.1	222	32.0	93	51.1	54	38	21	07	32 45	28 65				
4	241	52.8		52.3	237	00.3	93	52.0	52	49	29	13	15 46	15 46 63				
5	256	52.5	-22	52.5	251	28.5	92	-27 52.7	50	15 58	16 36	17 18	9 00 47	16 00 62				
6	271	52.2	-22	52.8	265	56.7	92	-27 53.3	45	16 18	16 52	17 29	8 30 49	16 30 60				
7	286	51.9		53.0	280	24.9	92	53.8	40	35	17 05	39	8 07 50	16 53 59				
8	301	51.7		53.2	294	53.1	92	54.1	35	16 48	16	48	7 48 50	17 13 57				
9	316	51.4		53.4	309	21.3	92	54.2	30	17 01	27	17 57	31 51	29 57				
10	331	51.1		53.7	323	49.4	91	54.3	20	21	17 45	18 13	7 03 52	17 57 55				
11	346	50.8	-22	53.9	338	17.5	91	-27 54.1	10 N	17 39	18 02	18 28	6 39 53	18 21 54				
12	1	50.5	-22	54.1	352	45.7	92	-27 53.9	0	17 56	18 19	18 45	6 17 53	18 43 53				
13	16	50.2		54.4	7	13.8	91	53.5	10 S	18 14	37	19 04	5 55 53	19 05 51				
14	31	49.9		54.6	21	41.9	91	52.9	20	32	18 57	26	31 54	29 50				
15	46	49.7		54.8	36	09.9	90	52.2	30	18 54	19 21	19 54	5 04 54	19 56 49				
16	61	49.4		55.0	50	38.0	91	51.4	35	19 06	36	20 12	4 47 55	20 12 48				
17	76	49.1	-22	55.3	65	06.1	91	-27 50.4	40	19 21	19 54	20 35	4 28 55	20 31 46				
18	91	48.8	-22	55.5	79	34.2	91	-27 49.3	45	19 39	20 16	21 05	4 05 56	20 54 44				
19	106	48.5		55.7	94	02.2	90	48.0	50	20 00	44	21 48	3 36 56	21 23 42				
20	121	48.2		55.9	108	30.3	91	46.6	52	11	20 59	22 14	21 57	38 40				
21	136	48.0		56.1	122	58.3	90	45.1	54	23	21 16	22 54	3 04 57	21 54 39				
22	151	47.7		56.4	137	26.4	91	43.4	56	37	21 37	** **	2 44 57	22 14 36				
23	166	47.4		56.6	151	54.4	90	41.5	58	20 53	22 05	** **	2 19 58	22 39 31				
24	181	47.1	-22	56.8	166	22.5	91	-27 39.6	60 S	21 12	22 48	** **	1 45 59	23 12 25				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 43 ^m 5		Mag: -4.2 PMG: 9 ^h 02 ^m				Mag: -1.5 PMG: 1 ^h 23 ^m				Mag: -1.8 PMG: 12 ^h 36 ^m				Mag: +0.7 PMG: 5 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	78	20.8	224	39.0	-11	05.4	339	14.0	+25	59.7	170	32.5	-23	13.3	277	37.8	+9	51.9
1	93	23.3	239	38.7		06.3	354	17.4	+25	59.9	185	34.4		13.3	292	40.2		51.9
2	108	25.7	254	38.3		07.3	9	20.8	+26	00.0	200	36.2		13.3	307	42.6		51.9
3	123	28.2	269	37.9		08.3	24	24.2	+26	00.2	215	38.1		13.3	322	45.0		51.9
4	138	30.7	284	37.5		09.2	39	27.5		00.4	230	39.9		13.3	337	47.4		51.9
5	153	33.1	299	37.2	-11	10.2	54	30.9	+26	00.5	245	41.8	-23	13.4	352	49.9	+9	51.9
6	168	35.6	314	36.8	-11	11.1	69	34.3	+26	00.7	260	43.6	-23	13.4	7	52.3	+9	51.9
7	183	38.1	329	36.4		12.1	84	37.7		00.9	275	45.5		13.4	22	54.7		51.9
8	198	40.5	344	36.1		13.0	99	41.0		01.0	290	47.3		13.4	37	57.1		51.9
9	213	43.0	359	35.7		14.0	114	44.4		01.2	305	49.1		13.4	52	59.5		51.9
10	228	45.5	14	35.3		15.0	129	47.8		01.4	320	51.0		13.4	68	02.0		51.9
11	243	47.9	29	34.9	-11	15.9	144	51.2	+26	01.5	335	52.8	-23	13.4	83	04.4	+9	51.9
12	258	50.4	44	34.6	-11	16.9	159	54.6	+26	01.7	350	54.7	-23	13.4	98	06.8	+9	51.9
13	273	52.9	59	34.2		17.8	174	58.0		01.8	5	56.5		13.5	113	09.2		51.8
14	288	55.3	74	33.8		18.8	190	01.4		02.0	20	58.4		13.5	128	11.6		51.8
15	303	57.8	89	33.4		19.7	205	04.7		02.2	36	00.2		13.5	143	14.1		51.8
16	319	00.2	104	33.1		20.7	220	08.1		02.3	51	02.1		13.5	158	16.5		51.8
17	334	02.7	119	32.7	-11	21.6	235	11.5	+26	02.5	66	03.9	-23	13.5	173	18.9	+9	51.8
18	349	05.2	134	32.3	-11	22.6	250	14.9	+26	02.7	81	05.8	-23	13.5	188	21.3	+9	51.8
19	4	07.6	149	31.9		23.5	265	18.3		02.8	96	07.6		13.5	203	23.8		51.8
20	19	10.1	164	31.6		24.5	280	21.7		03.0	111	09.5		13.5	218	26.2		51.8
21	34	12.6	179	31.2		25.4	295	25.1		03.1	126	11.3		13.6	233	28.6		51.8
22	49	15.0	194	30.8		26.4	310	28.5		03.3	141	13.1		13.6	248	31.0		51.8
23	64	17.5	209	30.4		27.3	325	31.9		03.5	156	15.0		13.6	263	33.4		51.8
24	79	20.0	224	30.0	-11	28.3	340	35.3	+26	03.6	171	16.8	-23	13.6	278	35.9	+9	51.8
Dif	—		-4		-10		+34		+2		+18		0		+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 53 ^m 1			Edad: 1 ^d 3 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1 Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	47.1	-22	56.8	166	22.5	-27	39.6	60 N	6 59	7 55	8 52	11 31	15	15 20	93		
1	196	46.8		57.0	180	50.6		37.4	58	51	44	35	11 00	23	15 51	84		
2	211	46.5		57.2	195	18.6		35.2	56	45	34	21	10 36	29	16 14	79		
3	226	46.2		57.5	209	46.7		32.8	54	39	25	8 08	17 32		33 75			
4	241	46.0		57.7	224	14.8		30.2	52	33	17	7 58	10 01	35	16 49	73		
5	256	45.7	-22	57.9	238	42.9	-27	27.5	50	6 28	7 10	7 48	9 47	37	17 02	71		
6	271	45.4	-22	58.1	253	11.0	-27	24.7	45	6 17	6 54	7 28	9 19	40	17 30	67		
7	286	45.1		58.3	267	39.1		21.7	40	6 07	41	7 11	8 57	42	17 52	64		
8	301	44.8		58.5	282	07.3		18.6	35	5 58	29	6 57	38 44		18 10	62		
9	316	44.5		58.7	296	35.4		15.3	30	49	19	45	8 22	46	26 59			
10	331	44.2		58.9	311	03.6		11.9	20	33	6 01	25	7 55	49	18 52	57		
11	346	43.9	-22	59.2	325	31.8	-27	08.4	10 N	5 17	5 44	6 06	7 32	50	19 15	54		
12	1	43.7	-22	59.4	340	00.0	-27	04.7	0	5 01	5 27	5 49	7 10	53	19 36	51		
13	16	43.4		59.6	354	28.2	-27	00.9	10 S	4 42	5 09	32	6 48	55	19 56	50		
14	31	43.1	-22	59.8	8	56.5	-26	56.9	20	4 20	4 49	5 14	6 25	56	20 19	46		
15	46	42.8	-23	00.0	23	24.7		52.8	30	3 52	25	4 52	5 58	58	20 45	43		
16	61	42.5	-23	00.2	37	53.0		48.5	35	33	4 10	39	42	60	21 00	41		
17	76	42.2	-23	00.4	52	21.3	-26	44.2	40	3 11	3 52	4 25	5 23	62	21 17	39		
18	91	41.9	-23	00.6	66	49.7	-26	39.6	45	2 41	3 30	4 07	5 01	63	21 38	36		
19	106	41.6		00.8	81	18.1		35.0	50	1 57	3 01	3 45	4 32	67	22 05	31		
20	121	41.3		01.0	95	46.5		30.2	52	1 32	2 47	35	18	68	18 29			
21	136	41.1		01.2	110	14.9		25.2	54	0 52	29	23	4 01	71	33 26			
22	151	40.8		01.4	124	43.3		20.2	56	** **	2 08	3 09	3 41	74	22 50	22		
23	166	40.5		01.6	139	11.8		14.9	58	** **	1 40	2 53	3 17	77	23 10	18		
24	181	40.2	-23	01.8	153	40.4	-26	09.6	60 S	** **	0 58	2 33	2 44	85	23 37	10		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 39 ^m 6			Mag: -4.2 PMG: 9 ^h 02 ^m			Mag: -1.5 PMG: 1 ^h 17 ^m			Mag: -1.8 PMG: 12 ^h 33 ^m			Mag: +0.7 PMG: 5 ^h 25 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	79	20.0	224	30.0	-11	28.3	340	35.3	+26	03.6	171	16.8	-23	13.6	278	35.9	+9	51.8
1	94	22.4	239	29.7		29.3	355	38.7		03.8	186	18.7		13.6	293	38.3		51.8
2	109	24.9	254	29.3		30.2	10	42.1		03.9	201	20.5		13.6	308	40.7		51.8
3	124	27.4	269	28.9		31.2	25	45.5		04.1	216	22.4		13.6	323	43.1		51.8
4	139	29.8	284	28.5		32.1	40	48.9		04.3	231	24.2		13.6	338	45.6		51.8
5	154	32.3	299	28.1	-11	33.1	55	52.3	+26	04.4	246	26.1	-23	13.6	353	48.0	+9	51.8
6	169	34.7	314	27.7	-11	34.0	70	55.7	+26	04.6	261	27.9	-23	13.7	8	50.4	+9	51.8
7	184	37.2	329	27.4		35.0	85	59.1		04.7	276	29.8		13.7	23	52.8		51.7
8	199	39.7	344	27.0		35.9	101	02.5		04.9	291	31.6		13.7	38	55.3		51.7
9	214	42.1	359	26.6		36.8	116	05.9		05.1	306	33.5		13.7	53	57.7		51.7
10	229	44.6	14	26.2		37.8	131	09.3		05.2	321	35.3		13.7	69	00.1		51.7
11	244	47.1	29	25.8	-11	38.7	146	12.8	+26	05.4	336	37.1	-23	13.7	84	02.5	+9	51.7
12	259	49.5	44	25.4	-11	39.7	161	16.2	+26	05.5	351	39.0	-23	13.7	99	04.9	+9	51.7
13	274	52.0	59	25.0		40.6	176	19.6		05.7	6	40.8		13.7	114	07.4		51.7
14	289	54.5	74	24.7		41.6	191	23.0		05.9	21	42.7		13.7	129	09.8		51.7
15	304	56.9	89	24.3		42.5	206	26.4		06.0	36	44.5		13.8	144	12.2		51.7
16	319	59.4	104	23.9		43.5	221	29.8		06.2	51	46.4		13.8	159	14.6		51.7
17	335	01.9	119	23.5	-11	44.4	236	33.2	+26	06.3	66	48.2	-23	13.8	174	17.1	+9	51.7
18	350	04.3	134	23.1	-11	45.4	251	36.7	+26	06.5	81	50.1	-23	13.8	189	19.5	+9	51.7
19	5	06.8	149	22.7		46.3	266	40.1		06.7	96	51.9		13.8	204	21.9		51.7
20	20	09.2	164	22.3		47.3	281	43.5		06.8	111	53.7		13.8	219	24.4		51.7
21	35	11.7	179	21.9		48.2	296	46.9		07.0	126	55.6		13.8	234	26.8		51.7
22	50	14.2	194	21.5		49.2	311	50.3		07.1	141	57.4		13.8	249	29.2		51.7
23	65	16.6	209	21.1		50.1	326	53.8		07.3	156	59.3		13.8	264	31.6		51.7
24	80	19.1	224	20.8	-11	51.0	341	57.2	+26	07.5	172	01.1	-23	13.9	279	34.1	+9	51.7
Dif	—		-4		-9		+34		+2		+18		0		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 53 ^m 6			Edad: 2 ^d 3 PHE { 4 ^h : 55/3 12 ^h : 55/4 20 ^h : 55/6 PMG: 14 ^h 15 ^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	181	40.2	-23 01.8	153	40.4	-26 09.6	55	60 N	14 54	15 51	16 47	11 46 7	16 53 97	
1	196	39.9	02.0	168	08.9	-26 04.1	55	58	15 11	16 02	16 54	23 13	17 15 90	
2	211	39.6	02.2	182	37.5	-25 58.5	56	56	25	12	17 01	11 05 18	33 85	
3	226	39.3	02.4	197	06.1	52.7	58	54	38	21	07	10 49 22	17 48 82	
4	241	39.0	02.6	211	34.8	46.8	59	52	48	29	13	36 24	18 02 78	
5	256	38.7	-23 02.8	226	03.5	-25 40.8	60	50	15 58	16 36	17 18	10 24 27	18 13 76	
6	271	38.4	-23 03.0	240	32.3	-25 34.7	61	45	16 18	16 52	17 29	9 59 32	18 37 70	
7	286	38.2	03.2	255	01.0	28.4	63	40	35	17 05	39	39 36	18 56 67	
8	301	37.9	03.4	269	29.9	21.9	65	35	16 49	17	48	22 39	19 12 63	
9	316	37.6	03.6	283	58.7	15.4	65	30	17 01	27	17 57	9 08 41	25 61	
10	331	37.3	03.8	298	27.6	08.7	67	20	22	17 46	18 13	8 44 44	19 49 56	
11	346	37.0	-23 03.9	312	56.6	-25 01.9	68	10 N	17 40	18 03	18 29	8 22 48	20 09 53	
12	1	36.7	-23 04.1	327	25.5	-24 54.9	70	0	17 57	18 20	18 46	8 03 50	20 27 50	
13	16	36.4	04.3	341	54.6	47.9	70	10 S	18 15	38	19 05	7 43 53	20 46 46	
14	31	36.1	04.5	356	23.7	40.7	72	20	33	18 58	27	7 21 57	21 05 43	
15	46	35.8	04.7	10	52.8	33.3	74	30	18 55	19 22	19 56	6 56 61	28 38	
16	61	35.5	04.9	25	21.9	25.9	74	35	19 08	37	20 14	42 63	41 36	
17	76	35.2	-23 05.1	39	51.2	-24 18.3	76	40	19 23	19 55	20 37	6 25 65	21 56 33	
18	91	34.9	-23 05.3	54	20.4	-24 10.6	77	45	19 40	20 18	21 07	6 04 69	22 14 29	
19	106	34.7	05.4	68	49.7	-24 02.8	78	50	20 02	20 47	21 51	5 39 73	36 24	
20	121	34.4	05.6	83	19.1	-23 54.8	80	52	13	21 01	22 18	26 76	47 21	
21	136	34.1	05.8	97	48.5	46.7	81	54	25	19	22 59	5 12 79	22 59 18	
22	151	33.8	06.0	112	17.9	38.5	82	56	39	21 40	** **	4 55 83	23 12 15	
23	166	33.5	06.2	126	47.4	30.2	83	58	20 55	22 09	** **	34 88	28 11	
24	181	33.2	-23 06.4	141	17.0	-23 21.8	84	60 S	21 15	22 54	** **	4 09 95	23 47 5	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 35 ^m 7		Mag: -4.2 PMG: 9 ^h 03 ^m		Mag: -1.5 PMG: 1 ^h 12 ^m		Mag: -1.8 PMG: 12 ^h 30 ^m		Mag: +0.7 PMG: 5 ^h 21 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	80	19.1	224	20.8	341	57.2	172	01.1	279	34.1				
1	95	21.6	239	20.4	357	00.6	187	03.0	294	36.5				
2	110	24.0	254	20.0	12	04.0	202	04.8	309	38.9				
3	125	26.5	269	19.6	27	07.5	217	06.7	324	41.3				
4	140	29.0	284	19.2	42	10.9	232	08.5	339	43.8				
5	155	31.4	299	18.8	57	14.3	247	10.4	354	46.2				
6	170	33.9	314	18.4	72	17.8	262	12.2	9	48.6				
7	185	36.4	329	18.0	87	21.2	277	14.0	24	51.1				
8	200	38.8	344	17.6	102	24.6	292	15.9	39	53.5				
9	215	41.3	359	17.2	117	28.1	307	17.7	54	55.9				
10	230	43.7	14	16.8	132	31.5	322	19.6	69	58.3				
11	245	46.2	29	16.4	147	34.9	337	21.4	85	00.8				
12	260	48.7	44	16.0	162	38.4	352	23.3	100	03.2				
13	275	51.1	59	15.6	177	41.8	7	25.1	115	05.6				
14	290	53.6	74	15.2	192	45.2	22	27.0	130	08.1				
15	305	56.1	89	14.8	207	48.7	37	28.8	145	10.5				
16	320	58.5	104	14.4	222	52.1	52	30.6	160	12.9				
17	336	01.0	119	14.0	237	55.6	67	32.5	175	15.3				
18	351	03.5	134	13.6	252	59.0	82	34.3	190	17.8				
19	6	05.9	149	13.2	268	02.5	97	36.2	205	20.2				
20	21	08.4	164	12.8	283	05.9	112	38.0	220	22.6				
21	36	10.9	179	12.4	298	09.3	127	39.9	235	25.1				
22	51	13.3	194	12.0	313	12.8	142	41.7	250	27.5				
23	66	15.8	209	11.6	328	16.2	157	43.6	265	29.9				
24	81	18.2	224	11.2	343	19.7	172	45.4	280	32.4				
Dif	—		-4	-9	+34	+2	+18	0	+24	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 54 ^m 0			Edad: 3 ^d 3 PHE { 4 ^h : 55/7 12 ^h : 55/9 20 ^h : 56/1 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	33.2	-23	06.4	141	17.0	-23	21.8	60 N	7 01	7 57	8 54	11 53	2	18 30	96		
1	196	32.9		06.5	155	46.6 ¹⁰⁶		13.2	86	6 53	46	37	36	8	45	91		
2	211	32.6		06.7	170	16.2 ¹⁰⁶	-23	04.5	87	56	47	36	23	12	18 58	87		
3	226	32.3		06.9	184	45.9 ¹⁰⁷	-22	55.7	88	54	41	27	10	15	19 10	83		
4	241	32.0		07.1	199	15.7 ¹⁰⁸		46.8	89	52	35	19	8 00	11 00	19	20	80	
5	256	31.7	-23	07.2	213	45.5 ¹⁰⁸	-22	37.7	91	50	6 30	7 12	7 50	10 51	21	19 29	77	
6	271	31.4	-23	07.4	228	15.3 ¹⁰⁸	-22	28.6	91	45	6 19	6 56	7 29	10 31	26	19 47	72	
7	286	31.1		07.6	242	45.2 ¹⁰⁹		19.3	93	40	6 08	42	7 13	15	30	20 03	67	
8	301	30.8		07.8	257	15.2 ¹¹⁰		09.9	94	35	5 59	31	6 59	10 01	33	15	64	
9	316	30.5		07.9	271	45.2 ¹¹⁰	-22	00.4	95	30	51	20	47	9 49	36	26	61	
10	331	30.2		08.1	286	15.2 ¹¹⁰	-21	50.8	96	20	34	6 02	26	28	41	20 45	56	
11	346	30.0	-23	08.3	300	45.3 ¹¹¹	-21	41.1	97	10 N	5 18	5 45	6 07	9 10	45	21 02	51	
12	1	29.7	-23	08.5	315	15.5 ¹¹²	-21	31.3	98	0	5 02	5 28	5 50	8 53	49	21 17	47	
13	16	29.4		08.6	329	45.7 ¹¹²		21.3	100	10 S	4 43	5 10	33	36	53	32	43	
14	31	29.1		08.8	344	16.0 ¹¹³		11.3	100	20	4 21	4 50	5 14	8 18	56	21 48	39	
15	46	28.8		09.0	358	46.3 ¹¹³	-21	01.1	102	30	3 52	25	4 52	7 57	61	22 06	34	
16	61	28.5		09.1	13	16.6 ¹¹³	-20	50.8	103	35	33	4 10	40	45	64	17	31	
17	76	28.2	-23	09.3	27	47.1 ¹¹⁵	-20	40.4	104	40	3 11	3 52	4 25	7 30	68	22 29	28	
18	91	27.9	-23	09.5	42	17.5 ¹¹⁴	-20	30.0	104	45	2 41	3 30	4 07	7 13	72	22 43	24	
19	106	27.6		09.6	56	48.1 ¹¹⁶		19.4	106	50	1 56	3 01	3 45	6 52	77	23 00	19	
20	121	27.3		09.8	71	18.6 ¹¹⁵	-20	08.7	107	52	1 30	2 46	34	42	79	08	17	
21	136	27.0		10.0	85	49.2 ¹¹⁶	-19	57.9	108	54	0 48	28	22	31	82	17	14	
22	151	26.7		10.1	100	19.9 ¹¹⁷		47.0	109	56	** ** *	2 07	3 08	18	86	27	11	
23	166	26.4		10.3	114	50.6 ¹¹⁷		36.0	110	58	** ** *	1 39	2 52	6 02	91	39	6	
24	181	26.1	-23	10.4	129	21.4 ¹¹⁸	-19	24.9	111	60 S	** ** *	0 53	2 32	5 44	97	23 52	2	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 31 ^m 7			Mag: -4.2 PMG: 9 ^h 03 ^m			Mag: -1.5 PMG: 1 ^h 06 ^m			Mag: -1.8 PMG: 12 ^h 27 ^m			Mag: +0.7 PMG: 5 ^h 17 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	81	18.2	224	11.2	-12	13.6	343	19.7	+26	11.2	172	45.4	-23	14.1	280	32.4	+9	51.6
1	96	20.7	239	10.8		14.5	358	23.1		11.4	187	47.2		14.1	295	34.8		51.6
2	111	23.2	254	10.4		15.5	13	26.6		11.5	202	49.1		14.1	310	37.2		51.6
3	126	25.6	269	10.0		16.4	28	30.0		11.7	217	50.9		14.1	325	39.7		51.6
4	141	28.1	284	09.6		17.3	43	33.5		11.8	232	52.8		14.1	340	42.1		51.6
5	156	30.6	299	09.2	-12	18.3	58	36.9	+26	12.0	247	54.6	-23	14.2	355	44.5	+9	51.6
6	171	33.0	314	08.8	-12	19.2	73	40.4	+26	12.1	262	56.5	-23	14.2	10	46.9	+9	51.6
7	186	35.5	329	08.3		20.1	88	43.8		12.3	277	58.3		14.2	25	49.4		51.6
8	201	38.0	344	07.9		21.1	103	47.3		12.4	293	00.1		14.2	40	51.8		51.6
9	216	40.4	359	07.5		22.0	118	50.8		12.6	308	02.0		14.2	55	54.2		51.6
10	231	42.9	14	07.1		22.9	133	54.2		12.7	323	03.8		14.2	70	56.7		51.6
11	246	45.4	29	06.7	-12	23.9	148	57.7	+26	12.9	338	05.7	-23	14.2	85	59.1	+9	51.6
12	261	47.8	44	06.3	-12	24.8	164	01.1	+26	13.0	353	07.5	-23	14.2	101	01.5	+9	51.6
13	276	50.3	59	05.9		25.7	179	04.6		13.2	8	09.4		14.2	116	04.0		51.6
14	291	52.7	74	05.5		26.7	194	08.1		13.4	23	11.2		14.2	131	06.4		51.6
15	306	55.2	89	05.1		27.6	209	11.5		13.5	38	13.1		14.2	146	08.8		51.6
16	321	57.7	104	04.7		28.5	224	15.0		13.7	53	14.9		14.3	161	11.3		51.6
17	337	00.1	119	04.2	-12	29.4	239	18.4	+26	13.8	68	16.7	-23	14.3	176	13.7	+9	51.6
18	352	02.6	134	03.8	-12	30.4	254	21.9	+26	14.0	83	18.6	-23	14.3	191	16.2	+9	51.6
19	7	05.1	149	03.4		31.3	269	25.4		14.1	98	20.4		14.3	206	18.6		51.6
20	22	07.5	164	03.0		32.2	284	28.8		14.3	113	22.3		14.3	221	21.0		51.6
21	37	10.0	179	02.6		33.2	299	32.3		14.4	128	24.1		14.3	236	23.5		51.6
22	52	12.5	194	02.2		34.1	314	35.8		14.6	143	26.0		14.3	251	25.9		51.6
23	67	14.9	209	01.8		35.0	329	39.2		14.7	158	27.8		14.3	266	28.3		51.6
24	82	17.4	224	01.3	-12	35.9	344	42.7	+26	14.9	173	29.6	-23	14.3	281	30.8	+9	51.6
Dif	—			-4 -9			+35 +2			+18 0			+24 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 54 ^m 5			Edad: 4 ^d 3 PHE { 4 ^h : 56'3 12 ^h : 56'4 20 ^h : 56'6 R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	26.1	-23	10.4	129	21.4	-19	24.9	60 N	14 53	15 50	16 47	11 55	1	20 06	95		
1	196	25.8		10.6	143	52.2 ¹¹⁸		13.7 ¹¹²	58	15 10	16 02	16 54	44	6	16	90		
2	211	25.5		10.8	158	23.1 ¹¹⁹	-19	02.4 ¹¹³	56	25	12	17 01	35	9	25	86		
3	226	25.2		10.9	172	54.0 ¹¹⁹	-18	51.0 ¹¹⁴	54	37	21	07	26	12	33	83		
4	241	24.9		11.1	187	25.0 ¹²⁰		39.5 ¹¹⁵	52	48	29	13	19	14	40	80		
5	256	24.6	-23	11.2	201	56.0 ¹²⁰	-18	27.9 ¹¹⁶	50	15 58	16 36	17 18	11 12	17	20 46	77		
6	271	24.3	-23	11.4	216	27.1 ¹²¹	-18	16.2 ¹¹⁷	45	16 19	16 52	17 30	10 57	22	20 59	72		
7	286	24.0		11.5	230	58.2 ¹²¹	-18	04.4 ¹¹⁸	40	35	17 06	40	45	26	21 10	68		
8	301	23.7		11.7	245	29.3 ¹²¹	-17	52.6 ¹¹⁸	35	16 49	17	49	34	30	19	64		
9	316	23.4		11.9	260	00.6 ¹²³		40.6 ¹²⁰	30	17 02	28	17 58	25	33	27	61		
10	331	23.1		12.0	274	31.8 ¹²²		28.5 ¹²¹	20	23	17 47	18 14	10 09	38	41	55		
11	346	22.8	-23	12.2	289	03.1 ¹²³	-17	16.4 ¹²¹	10 N	17 41	18 04	18 30	9 55	42	21 53	50		
12	1	22.5	-23	12.3	303	34.5 ¹²⁴	-17	04.1 ¹²³	0	17 58	18 21	18 47	9 42	46	22 04	46		
13	16	22.2		12.5	318	05.8 ¹²³	-16	51.8 ¹²³	10 S	18 16	39	19 06	29	50	15	42		
14	31	21.9		12.6	332	37.3 ¹²⁵		39.4 ¹²⁴	20	34	18 59	28	9 14	56	27	37		
15	46	21.6		12.8	347	08.7 ¹²⁴		26.9 ¹²⁵	30	18 56	19 24	19 57	8 58	61	40	32		
16	61	21.3		12.9	1	40.3 ¹²⁶		14.3 ¹²⁶	35	19 09	39	20 16	49	63	48	29		
17	76	21.0	-23	13.1	16	11.8 ¹²⁵	-16	01.6 ¹²⁷	40	19 24	19 57	20 38	8 38	67	22 57	25		
18	91	20.7	-23	13.2	30	43.4 ¹²⁶	-15	48.9 ¹²⁷	45	19 42	20 19	21 09	8 25	72	23 07	21		
19	106	20.4		13.4	45	15.1 ¹²⁷		36.0 ¹²⁹	50	20 04	20 49	21 54	09	77	19	16		
20	121	20.1		13.5	59	46.8 ¹²⁷		23.1 ¹²⁹	52	15	21 04	22 21	8 01	80	25	13		
21	136	19.8		13.6	74	18.5 ¹²⁷	-15	10.1 ¹³⁰	54	27	21	23 04	7 53	83	31	10		
22	151	19.5		13.8	88	50.2 ¹²⁷	-14	57.0 ¹³¹	56	41	21 43	** **	44	86	38	7		
23	166	19.2		13.9	103	22.0 ¹²⁸		43.9 ¹³¹	58	20 58	22 12	** **	33	91	45	5		
24	181	18.9	-23	14.1	117	53.9 ¹²⁹	-14	30.6 ¹³³	60 S	21 18	22 59	** **	7 21	95	23 54	1		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 18 ^h 27 ^m 8		Mag: -4.2 PMG: 9 ^h 04 ^m			Mag: -1.5 PMG: 1 ^h 01 ^m			Mag: -1.8 PMG: 12 ^h 24 ^m				Mag: +0.7 PMG: 5 ^h 13 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	17.4	224	01.3	-12	35.9	344	42.7	+26	14.9	173	29.6	-23	14.3	281	30.8	+9	51.6
1	97	19.8	239	00.9		36.9	359	46.2		15.0	188	31.5		14.3	296	33.2		51.6
2	112	22.3	254	00.5		37.8	14	49.7		15.2	203	33.3		14.3	311	35.6		51.6
3	127	24.8	269	00.1		38.7	29	53.1		15.3	218	35.2		14.4	326	38.1		51.6
4	142	27.2	283	59.7		39.6	44	56.6		15.5	233	37.0		14.4	341	40.5		51.6
5	157	29.7	298	59.3	-12	40.6	60	00.1	+26	15.6	248	38.9	-23	14.4	356	42.9	+9	51.6
6	172	32.2	313	58.8	-12	41.5	75	03.6	+26	15.8	263	40.7	-23	14.4	11	45.4	+9	51.6
7	187	34.6	328	58.4		42.4	90	07.0		15.9	278	42.6		14.4	26	47.8		51.6
8	202	37.1	343	58.0		43.3	105	10.5		16.1	293	44.4		14.4	41	50.3		51.6
9	217	39.6	358	57.6		44.3	120	14.0		16.2	308	46.2		14.4	56	52.7		51.6
10	232	42.0	13	57.2		45.2	135	17.5		16.4	323	48.1		14.4	71	55.1		51.6
11	247	44.5	28	56.7	-12	46.1	150	20.9	+26	16.5	338	49.9	-23	14.4	86	57.6	+9	51.6
12	262	47.0	43	56.3	-12	47.0	165	24.4	+26	16.7	353	51.8	-23	14.4	102	00.0	+9	51.6
13	277	49.4	58	55.9		48.0	180	27.9		16.8	8	53.6		14.4	117	02.4		51.6
14	292	51.9	73	55.5		48.9	195	31.4		16.9	23	55.5		14.4	132	04.9		51.6
15	307	54.3	88	55.0		49.8	210	34.9		17.1	38	57.3		14.5	147	07.3		51.6
16	322	56.8	103	54.6		50.7	225	38.4		17.2	53	59.1		14.5	162	09.8		51.6
17	337	59.3	118	54.2	-12	51.6	240	41.8	+26	17.4	69	01.0	-23	14.5	177	12.2	+9	51.6
18	353	01.7	133	53.8	-12	52.6	255	45.3	+26	17.5	84	02.8	-23	14.5	192	14.6	+9	51.6
19	8	04.2	148	53.3		53.5	270	48.8		17.7	99	04.7		14.5	207	17.1		51.6
20	23	06.7	163	52.9		54.4	285	52.3		17.8	114	06.5		14.5	222	19.5		51.6
21	38	09.1	178	52.5		55.3	300	55.8		18.0	129	08.4		14.5	237	22.0		51.6
22	53	11.6	193	52.1		56.2	315	59.3		18.1	144	10.2		14.5	252	24.4		51.6
23	68	14.1	208	51.6		57.2	331	02.8		18.3	159	12.0		14.5	267	26.8		51.6
24	83	16.5	223	51.2	-12	58.1	346	06.2	+26	18.4	174	13.9	-23	14.5	282	29.3	+9	51.6
Dif	—		-4		-9		+35		+1		+18		0		+24		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 55 ^m 0			Edad: 5 ^d 3 SD: 15'5 PMG: 16 ^h 39 ^m	PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'3 R°: 46 ^m	Náutico		Civil	Hora		R°	Hora	R°					
	hG ☉	Dec	hG ☾											Dif	Dec	Dif		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	181	18.9	-23	14.1	117	53.9	-14 30.6	60 N	7 03	7 59	8 57	11 56	1	21 41	93			
1	196	18.6		14.2	132	25.7 ¹²⁸	17.3 ¹³³	58	6 55	48	39	50	4	46	90			
2	211	18.3		14.3	146	57.6 ¹²⁹	-14 03.9 ¹³⁴	56	49	38	25	44	7	51	86			
3	226	18.1		14.5	161	29.6 ¹³⁰	-13 50.5 ¹³⁴	54	43	29	12	38	10	21 56	83			
4	241	17.8		14.6	176	01.6 ¹³⁰	36.9 ¹³⁶	52	37	21	8 01	33	13	22 00	80			
5	256	17.4	-23	14.8	190	33.6 ¹³⁰	-13 23.3 ¹³⁶	50	6 32	7 13	7 52	11 29	15	22 03	78			
6	271	17.1	-23	14.9	205	05.6 ¹³⁰	-13 09.6 ¹³⁷	45	6 20	6 57	7 31	11 19	20	22 11	72			
7	286	16.8		15.0	219	37.7 ¹³¹	-12 55.9 ¹³⁷	40	10	44	14	11 24		18	67			
8	301	16.5		15.2	234	09.8 ¹³¹	42.0 ¹³⁹	35	6 00	32	7 00	11 04	27	23	64			
9	316	16.2		15.3	248	41.9 ¹³¹	28.1 ¹³⁹	30	5 52	22	6 48	10 58	30	28	61			
10	331	15.9		15.4	263	14.1 ¹³²	14.2 ¹³⁹	20	35	6 03	27	47	36	36	55			
11	346	15.6	-23	15.6	277	46.3 ¹³²	-12 00.1 ¹⁴¹	10 N	5 19	5 46	6 09	10 37	41	22 43	51			
12	1	15.3	-23	15.7	292	18.5 ¹³²	-11 46.0 ¹⁴¹	0	5 03	5 29	5 51	10 28	46	22 50	46			
13	16	15.0		15.8	306	50.7 ¹³²	31.9 ¹⁴¹	10 S	4 44	5 11	34	19	51	22 57	41			
14	31	14.7		16.0	321	23.0 ¹³³	17.6 ¹⁴³	20	4 21	4 50	5 15	10 10	55	23 04	36			
15	46	14.4		16.1	335	55.3 ¹³³	-11 03.4 ¹⁴²	30	3 52	26	4 53	9 59	61	12	30			
16	61	14.1		16.2	350	27.6 ¹³³	-10 49.0 ¹⁴⁴	35	34	4 10	40	52	64	17	26			
17	76	13.8	-23	16.4	4	59.9 ¹³³	-10 34.6 ¹⁴⁴	40	3 11	3 52	4 25	9 45	68	23 22	23			
18	91	13.5	-23	16.5	19	32.3 ¹³⁴	-10 20.1 ¹⁴⁵	45	2 41	3 30	4 07	9 37	72	23 28	19			
19	106	13.2		16.6	34	04.6 ¹³³	-10 05.6 ¹⁴⁵	50	1 56	3 01	3 45	26	78	35	14			
20	121	12.9		16.7	48	37.0 ¹³⁴	-9 51.0 ¹⁴⁶	52	1 29	2 46	34	21	81	38	12			
21	136	12.6		16.9	63	09.4 ¹³⁴	36.3 ¹⁴⁷	54	0 45	28	22	16	83	41	10			
22	151	12.3		17.0	77	41.9 ¹³⁵	21.6 ¹⁴⁷	56	** ** *	2 06	3 08	10	86	45	7			
23	166	12.0		17.1	92	14.3 ¹³⁴	-9 06.8 ¹⁴⁸	58	** ** *	1 37	2 52	9 04	89	50	3			
24	181	11.7	-23	17.2	106	46.8 ¹³⁵	-8 52.0 ¹⁴⁸	60 S	** ** *	0 50	2 31	8 56	94	23 55	0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 18 ^h 23 ^m 9			Mag: -4.2 PMG: 9 ^h 05 ^m			Mag: -1.6 PMG: 0 ^h 55 ^m			Mag: -1.8 PMG: 12 ^h 22 ^m			Mag: +0.7 PMG: 5 ^h 09 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	83	16.5	223	51.2	-12	58.1	346	06.2	+26	18.4	174	13.9	-23	14.5	282	29.3	+9	51.6
1	98	19.0	238	50.8		59.0	1	09.7		18.6	189	15.7		14.5	297	31.7		51.6
2	113	21.5	253	50.3	-12	59.9	16	13.2		18.7	204	17.6		14.5	312	34.2		51.6
3	128	23.9	268	49.9	-13	00.8	31	16.7		18.9	219	19.4		14.5	327	36.6		51.6
4	143	26.4	283	49.5		01.7	46	20.2		19.0	234	21.3		14.6	342	39.0		51.6
5	158	28.8	298	49.1	-13	02.7	61	23.7	+26	19.1	249	23.1	-23	14.6	357	41.5	+9	51.6
6	173	31.3	313	48.6	-13	03.6	76	27.2	+26	19.3	264	24.9	-23	14.6	12	43.9	+9	51.6
7	188	33.8	328	48.2		04.5	91	30.7		19.4	279	26.8		14.6	27	46.4		51.6
8	203	36.2	343	47.8		05.4	106	34.2		19.6	294	28.6		14.6	42	48.8		51.6
9	218	38.7	358	47.3		06.3	121	37.7		19.7	309	30.5		14.6	57	51.2		51.6
10	233	41.2	13	46.9		07.2	136	41.2		19.9	324	32.3		14.6	72	53.7		51.6
11	248	43.6	28	46.5	-13	08.1	151	44.7	+26	20.0	339	34.2	-23	14.6	87	56.1	+9	51.6
12	263	46.1	43	46.0	-13	09.0	166	48.2	+26	20.2	354	36.0	-23	14.6	102	58.6	+9	51.6
13	278	48.6	58	45.6		10.0	181	51.7		20.3	9	37.8		14.6	118	01.0		51.6
14	293	51.0	73	45.1		10.9	196	55.2		20.4	24	39.7		14.6	133	03.4		51.6
15	308	53.5	88	44.7		11.8	211	58.7		20.6	39	41.5		14.6	148	05.9		51.6
16	323	56.0	103	44.3		12.7	227	02.2		20.7	54	43.4		14.6	163	08.3		51.6
17	338	58.4	118	43.8	-13	13.6	242	05.7	+26	20.9	69	45.2	-23	14.7	178	10.8	+9	51.6
18	354	00.9	133	43.4	-13	14.5	257	09.2	+26	21.0	84	47.1	-23	14.7	193	13.2	+9	51.6
19	9	03.3	148	43.0		15.4	272	12.7		21.1	99	48.9		14.7	208	15.7		51.6
20	24	05.8	163	42.5		16.3	287	16.2		21.3	114	50.7		14.7	223	18.1		51.6
21	39	08.3	178	42.1		17.2	302	19.7		21.4	129	52.6		14.7	238	20.6		51.7
22	54	10.7	193	41.6		18.2	317	23.2		21.6	144	54.4		14.7	253	23.0		51.7
23	69	13.2	208	41.2		19.1	332	26.7		21.7	159	56.3		14.7	268	25.4		51.7
24	84	15.7	223	40.8	-13	20.0	347	30.2	+26	21.9	174	58.1	-23	14.7	283	27.9	+9	51.7
Dif	—			-4	-9	+35			+1	+18			0	+24				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/3 PMG: 11 ^h 55 ^m 5			Edad: 6 ^d 3 SD: 15/6 PMG: 17 ^h 25 ^m	PHE { 4 ^h : 57/5 12 ^h : 57/7 20 ^h : 57/9 R°: 46 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	181	11.7	-23	17.2	106	46.8	-8	52.0	60 N	14	53	15	50	16	47	11	57
1	196	11.4		17.4	121	19.2 ¹³⁴		37.1 ¹⁴⁹	58	15	10	16	02	16	55	54	3
2	211	11.1		17.5	135	51.7 ¹³⁵		22.2 ¹⁴⁹	56	25		12	17	01	51	6	
3	226	10.8		17.6	150	24.2 ¹³⁵	-8	07.2 ¹⁵⁰	54	38		21	08	48	9	19	88
4	241	10.5		17.7	164	56.7 ¹³⁵	-7	52.2 ¹⁵⁰	52	49		29	13	46	11	20	82
5	256	10.2	-23	17.8	179	29.2 ¹³⁵	-7	37.1 ¹⁵¹	50	15	58	16	37	17	18	11	44
6	271	09.9	-23	17.9	194	01.7 ¹³⁵	-7	22.0 ¹⁵¹	45	16	19	16	53	17	30	11	39
7	286	09.6		18.1	208	34.3 ¹³⁶	-7	06.8 ¹⁵²	40	36		17	06	40	35	23	
8	301	09.3		18.2	223	06.8 ¹³⁵	-6	51.6 ¹⁵²	35	16	50	18	50	31	27	27	70
9	316	09.0		18.3	237	39.3 ¹³⁵		36.3 ¹⁵³	30	17	02	29	17	58	28	31	
10	331	08.7		18.4	252	11.9 ¹³⁶		21.0 ¹⁵³	20	23		17	47	18	15	23	36
11	346	08.4	-23	18.5	266	44.4 ¹³⁵	-6	05.7 ¹⁵³	10 N	17	42	18	05	18	31	11	18
12	1	08.1	-23	18.6	281	16.9 ¹³⁵	-5	50.3 ¹⁵⁴	0	17	59	18	22	18	48	11	14
13	16	07.8		18.7	295	49.5 ¹³⁶		34.8 ¹⁵⁵	10 S	18	17	18	40	19	07	10	50
14	31	07.5		18.9	310	22.0 ¹³⁵		19.4 ¹⁵⁴	20	36		19	00	29	05	55	
15	46	07.2		19.0	324	54.5 ¹³⁵	-5	03.8 ¹⁵⁶	30	18	58	25	19	58	11	00	
16	61	06.9		19.1	339	27.0 ¹³⁵	-4	48.3 ¹⁵⁵	35	19	11	40	20	17	10	56	
17	76	06.6	-23	19.2	353	59.6 ¹³⁶	-4	32.7 ¹⁵⁶	40	19	26	19	58	20	40	10	53
18	91	06.3	-23	19.3	8	32.1 ¹³⁵	-4	17.1 ¹⁵⁶	45	19	44	20	21	21	11	10	49
19	106	06.0		19.4	23	04.6 ¹³⁵	-4	01.4 ¹⁵⁷	50	20	06	20	50	21	56	44	78
20	121	05.7		19.5	37	37.1 ¹³⁵	-3	45.7 ¹⁵⁷	52	17		21	05	22	23	42	81
21	136	05.4		19.6	52	09.5 ¹³⁴		30.0 ¹⁵⁷	54	29		23	08	23	08	39	84
22	151	05.1		19.7	66	42.0 ¹³⁵	-3	14.2 ¹⁵⁸	56	20	43	21	45	** **		36	87
23	166	04.8		19.8	81	14.5 ¹³⁵	-2	58.4 ¹⁵⁸	58	21	00	22	15	** **		33	90
24	181	04.4	-23	19.9	95	46.9 ¹³⁴	-2	42.6 ¹⁵⁸	60 S	21	20	23	04	** **		10	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 18 ^h 19 ^m 9		Mag: -4.1 PMG: 9 ^h 06 ^m		Mag: -1.6 PMG: 0 ^h 50 ^m		Mag: -1.8 PMG: 12 ^h 19 ^m		Mag: +0.7 PMG: 5 ^h 05 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	84	15.7	223	40.8	-13	20.0	347	30.2	+26	21.9							
1	99	18.1	238	40.3		20.9	2	33.7		22.0							
2	114	20.6	253	39.9		21.8	17	37.2		22.1							
3	129	23.1	268	39.4		22.7	32	40.7		22.3							
4	144	25.5	283	39.0		23.6	47	44.3		22.4							
5	159	28.0	298	38.6	-13	24.5	62	47.8	+26	22.6							
6	174	30.4	313	38.1	-13	25.4	77	51.3	+26	22.7							
7	189	32.9	328	37.7		26.3	92	54.8		22.8							
8	204	35.4	343	37.2		27.2	107	58.3		23.0							
9	219	37.8	358	36.8		28.1	123	01.8		23.1							
10	234	40.3	373	36.3		29.0	138	05.3		23.3							
11	249	42.8	388	35.9	-13	29.9	153	08.8	+26	23.4							
12	264	45.2	403	35.4	-13	30.8	168	12.4	+26	23.5							
13	279	47.7	418	35.0		31.7	183	15.9		23.7							
14	294	50.2	433	34.5		32.6	198	19.4		23.8							
15	309	52.6	448	34.1		33.5	213	22.9		23.9							
16	324	55.1	463	33.6		34.4	228	26.4		24.1							
17	339	57.6	478	33.2	-13	35.3	243	29.9	+26	24.2							
18	355	00.0	493	32.7	-13	36.2	258	33.5	+26	24.4							
19	10	02.5	508	32.3		37.1	273	37.0		24.5							
20	25	04.9	523	31.8		38.0	288	40.5		24.6							
21	40	07.4	538	31.4		38.9	303	44.0		24.8							
22	55	09.9	553	30.9		39.8	318	47.5		24.9							
23	70	12.3	568	30.5		40.7	333	51.1		25.0							
24	85	14.8	583	30.0	-13	41.6	348	54.6	+26	25.2							
Dif	—		-4		-9		+35		+1		+18		0		+24		0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'3 PMG: 11 ^h 55 ^m 9				Edad: 7 ^d 3 PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'6 R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora		R°	Hora		R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	181	04.4	-23	19.9	95	46.9	-2	42.6	60 N	7	04	8	01	8	59	11	57	0		
1	196	04.1		20.0	110	19.3	134	26.8	58	6	57	7	50	41						
2	211	03.8		20.1	124	51.7	134	-2	10.9	56	50	39		27						
3	226	03.5		20.2	139	24.1	134	-1	55.0	54	44	30		14						
4	241	03.2		20.3	153	56.5	134	39.1	52	38	22	8	03							
5	256	02.9	-23	20.4	168	28.8	133	-1	23.1	50	6	33	7	15	7	53	11	58	14	
6	271	02.6	-23	20.5	183	01.1	133	-1	07.1	45	6	21	6	59	7	32	11	58	20	
7	286	02.3		20.6	197	33.4	133	-0	51.1	40	11	45		16						
8	301	02.0		20.7	212	05.7	133		35.1	35	6	02	33	7	02					
9	316	01.7		20.8	226	37.9	132		19.1	30	5	53	23	6	49					
10	331	01.4		20.9	241	10.1	132	-0	03.1	20	37	6	04	28						
11	346	01.1	-23	21.0	255	42.3	132	+0	13.0	10 N	5	20	5	47	6	10	11	59	42	
12	1	00.8	-23	21.1	270	14.5	132	+0	29.1	0	5	03	5	30	5	52	12	00	47	
13	16	00.5		21.2	284	46.6	131	+0	45.2	10 S	4	45	5	12	35					
14	31	00.2		21.3	299	18.7	131	+1	01.3	20	4	22	4	51	5	16	00	58		
15	45	59.9		21.4	313	50.7	130		17.4	30	3	53	26	4	54					
16	60	59.6		21.5	328	22.7	130		33.5	35	34	4	11	41						
17	75	59.3	-23	21.6	342	54.7	130	+1	49.7	40	3	11	3	53	4	26	12	01	71	
18	90	59.0	-23	21.6	357	26.6	129	+2	05.8	45	2	41	3	30	4	08	12	02	75	
19	105	58.7		21.7	11	58.5	129		22.0	50	1	56	3	01	3	45				
20	120	58.3		21.8	26	30.3	128		38.1	52	1	28	2	46	35					
21	135	58.0		21.9	41	02.1	128	+2	54.3	54	0	43		28	22					
22	150	57.7		22.0	55	33.9	128	+3	10.5	56	**	**	2	06	3	08	03	90	23 58 8	
23	165	57.4		22.1	70	05.6	127		26.6	58	**	**	1	36	2	51	03	94	57 3	
24	180	57.1	-23	22.2	84	37.3	127	+3	42.8	60 S	**	**	0	47	2	31	12	04	97	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 16 ^m 0				Mag: -4.1 PMG: 9 ^h 06 ^m				Mag: -1.6 PMG: 0 ^h 44 ^m				Mag: -1.8 PMG: 12 ^h 16 ^m				Mag: +0.7 PMG: 5 ^h 01 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	14.8	223	30.0	-13	41.6			348	54.6	+26	25.2	175	42.3	-23	14.8	284	26.6	+9	51.8
1	100	17.3	238	29.6		42.5			3	58.1		25.3	190	44.2		14.9	299	29.1		51.8
2	115	19.7	253	29.1		43.4			19	01.6		25.4	205	46.0		14.9	314	31.5		51.8
3	130	22.2	268	28.7		44.3			34	05.2		25.6	220	47.8		14.9	329	34.0		51.8
4	145	24.7	283	28.2		45.2			49	08.7		25.7	235	49.7		14.9	344	36.4		51.8
5	160	27.1	298	27.8	-13	46.1			64	12.2	+26	25.8	250	51.5	-23	14.9	359	38.8	+9	51.8
6	175	29.6	313	27.3	-13	47.0			79	15.7	+26	26.0	265	53.4	-23	14.9	14	41.3	+9	51.8
7	190	32.0	328	26.9		47.9			94	19.3		26.1	280	55.2		14.9	29	43.7		51.8
8	205	34.5	343	26.4		48.8			109	22.8		26.3	295	57.0		14.9	44	46.2		51.8
9	220	37.0	358	25.9		49.7			124	26.3		26.4	310	58.9		14.9	59	48.7		51.8
10	235	39.4	13	25.5		50.6			139	29.8		26.5	326	00.7		14.9	74	51.1		51.8
11	250	41.9	28	25.0	-13	51.5			154	33.4	+26	26.7	341	02.6	-23	14.9	89	53.6	+9	51.8
12	265	44.4	43	24.6	-13	52.4			169	36.9	+26	26.8	356	04.4	-23	14.9	104	56.0	+9	51.8
13	280	46.8	58	24.1		53.2			184	40.4		26.9	11	06.3		14.9	119	58.5		51.8
14	295	49.3	73	23.6		54.1			199	44.0		27.0	26	08.1		14.9	135	00.9		51.8
15	310	51.8	88	23.2		55.0			214	47.5		27.2	41	09.9		14.9	150	03.4		51.9
16	325	54.2	103	22.7		55.9			229	51.0		27.3	56	11.8		14.9	165	05.8		51.9
17	340	56.7	118	22.3	-13	56.8			244	54.6	+26	27.4	71	13.6	-23	14.9	180	08.3	+9	51.9
18	355	59.2	133	21.8	-13	57.7			259	58.1	+26	27.6	86	15.5	-23	14.9	195	10.7	+9	51.9
19	11	01.6	148	21.3		58.6			275	01.6		27.7	101	17.3		15.0	210	13.2		51.9
20	26	04.1	163	20.9	-13	59.5			290	05.2		27.8	116	19.1		15.0	225	15.6		51.9
21	41	06.5	178	20.4	-14	00.4			305	08.7		28.0	131	21.0		15.0	240	18.1		51.9
22	56	09.0	193	19.9		01.2			320	12.2		28.1	146	22.8		15.0	255	20.5		51.9
23	71	11.5	208	19.5		02.1			335	15.8		28.2	161	24.7		15.0	270	23.0		51.9
24	86	13.9	223	19.0	-14	03.0			350	19.3	+26	28.4	176	26.5	-23	15.0	285	25.4	+9	51.9
Dif	—		-5		-9		+35		+1		+18		0		+25		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 11 ^h 56 ^m 4			Edad: 8 ^d 3 PHE SD: 16/0 PMG: 18 ^h 58 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	57.1	-23	22.2	84	37.3	+3 42.8	60 N	14 53	15 51	16 48	11 57 1	0 49 100	
1	195	56.8		22.2	99	08.9 ¹²⁶	+3 59.0 ¹⁶²	58	15 11	16 02	16 55	12 01 5	47 95	
2	210	56.5		22.3	113	40.4 ¹²⁵	+4 15.1 ¹⁶¹	56	25	13	17 02	04 8	45 92	
3	225	56.2		22.4	128	11.9 ¹²⁵		54	38	22	08	07 11	43 89	
4	240	55.9		22.5	142	43.4 ¹²⁵	+4 47.4 ¹⁶¹	52	49	30	14	10 14	42 85	
5	255	55.6	-23	22.6	157	14.8 ¹²⁴	+5 03.6 ¹⁶²	50	15 59	16 37	17 19	12 12 17	0 40 83	
6	270	55.3	-23	22.6	171	46.1 ¹²³	+5 19.7 ¹⁶¹	45	16 20	16 54	17 31	12 18 22	0 37 77	
7	285	55.0		22.7	186	17.4 ¹²³		40	36	17 07	41	22 27	35 72	
8	300	54.7		22.8	200	48.6 ¹²²	+5 51.9 ¹⁶¹	35	16 51	19	51	26 31	33 68	
9	315	54.4		22.9	215	19.7 ¹²¹	+6 08.0 ¹⁶¹	30	17 03	29	17 59	30 34	31 64	
10	330	54.1		22.9	229	50.8 ¹²¹		20	24	17 48	18 16	36 40	27 59	
11	345	53.8	-23	23.0	244	21.9 ¹²¹	+6 40.2 ¹⁶¹	10 N	17 43	18 06	18 32	12 41 45	0 24 53	
12	0	53.4	-23	23.1	258	52.8 ¹¹⁹	+6 56.3 ¹⁶¹	0	18 00	18 23	18 49	12 47 50	0 22 48	
13	15	53.1		23.2	273	23.7 ¹¹⁹	+7 12.3 ¹⁶⁰	10 S	18	18 41	19 08	52 55	19 43	
14	30	52.8		23.2	287	54.5 ¹¹⁸		20	37	19 01	19 31	12 58 60	16 38	
15	45	52.5		23.3	302	25.3 ¹¹⁸	+7 44.3 ¹⁶⁰	30	18 59	26	20 00	13 04 66	13 32	
16	60	52.2		23.4	316	56.0 ¹¹⁷	+8 00.3 ¹⁶⁰	35	19 12	19 42	18	08 70	11 28	
17	75	51.9	-23	23.5	331	26.6 ¹¹⁶	+8 16.2 ¹⁵⁹	40	19 27	20 00	20 41	13 12 74	0 08 25	
18	90	51.6	-23	23.5	345	57.1 ¹¹⁵	+8 32.1 ¹⁵⁹	45	19 45	20 22	21 12	13 17 79	0 06 20	
19	105	51.3		23.6	0	27.6 ¹¹⁵	+8 48.0 ¹⁵⁹	50	20 07	20 52	21 58	23 85	03 15	
20	120	51.0		23.7	14	57.9 ¹¹³	+9 03.9 ¹⁵⁹	52	18	21 07	22 25	26 88	02 12	
21	135	50.7		23.7	29	28.2 ¹¹³		54	31	25	23 12	29 91	0 00 10	
22	150	50.4		23.8	43	58.5 ¹¹³		56	20 45	21 47	** ** *	33 94	** ** **	
23	165	50.1		23.9	58	28.6 ¹¹¹	+9 51.3 ¹⁵⁸	58	21 02	22 17	** ** *	37 98	** ** **	
24	180	49.8	-23	23.9	72	58.7 ¹¹¹	+10 07.0 ¹⁵⁷	60 S	21 22	23 08	** ** *	13 41 103	23 55 1	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 12 ^m 1		Mag: -4.1 PMG: 9 ^h 07 ^m		Mag: -1.6 PMG: 0 ^h 39 ^m		Mag: -1.8 PMG: 12 ^h 13 ^m		Mag: +0.7 PMG: 4 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	86	13.9	223	19.0	-14	03.0	350	19.3	-23	15.0				
1	101	16.4	238	18.5		03.9	5	22.8		15.0				
2	116	18.9	253	18.1		04.8	20	26.4		15.0				
3	131	21.3	268	17.6		05.7	35	29.9		15.0				
4	146	23.8	283	17.1		06.6	50	33.4		15.0				
5	161	26.3	298	16.7	-14	07.4	65	37.0	+26	15.0				
6	176	28.7	313	16.2	-14	08.3	80	40.5	+26	15.0				
7	191	31.2	328	15.7		09.2	95	44.1		15.0				
8	206	33.7	343	15.3		10.1	110	47.6		15.0				
9	221	36.1	358	14.8		11.0	125	51.1		15.0				
10	236	38.6	13	14.3		11.9	140	54.7		15.0				
11	251	41.0	28	13.9	-14	12.7	155	58.2	+26	15.0				
12	266	43.5	43	13.4	-14	13.6	171	01.8	+26	15.0				
13	281	46.0	58	12.9		14.5	186	05.3		15.0				
14	296	48.4	73	12.4		15.4	201	08.8		15.0				
15	311	50.9	88	12.0		16.3	216	12.4		15.0				
16	326	53.4	103	11.5		17.1	231	15.9		15.0				
17	341	55.8	118	11.0	-14	18.0	246	19.5	+26	15.1				
18	356	58.3	133	10.5	-14	18.9	261	23.0	+26	15.1				
19	12	00.8	148	10.1		19.8	276	26.6		15.1				
20	27	03.2	163	09.6		20.6	291	30.1		15.1				
21	42	05.7	178	09.1		21.5	306	33.6		15.1				
22	57	08.1	193	08.6		22.4	321	37.2		15.1				
23	72	10.6	208	08.2		23.3	336	40.7		15.1				
24	87	13.1	223	07.7	-14	24.1	351	44.3	+26	15.1				
Dif	—		-5		-9		+35		+1					
							+18		0					
									+25					
									0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 11 ^h 56 ^m 9			Edad: 9 ^d 3	PHE { 4 ^h : 59/6 12 ^h : 59/8 20 ^h : 60/0 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	180	49.8	-23	23.9	72	58.7	+10	07.0	60 N	7	06	8	03	9	00	11	58
1	195	49.4		24.0	87	28.6		22.7	58	6	58	7	51	8	43	12	06
2	210	49.1		24.0	101	58.5		38.4	56	52	41		28		12	12	
3	225	48.8		24.1	116	28.3	+10	54.0	54	45	32		16		18	16	
4	240	48.5		24.2	130	58.0	+11	09.5	52	40	23	8	04		24	18	
5	255	48.2	-23	24.2	145	27.6	+11	25.0	50	6	34	7	16	7	55	12	29
6	270	47.9	-23	24.3	159	57.2	+11	40.5	45	6	23	7	00	7	34	12	40
7	285	47.6		24.3	174	26.6	+11	55.9	40	12	6	46		17	49	31	
8	300	47.3		24.4	188	55.9	+12	11.3	35	6	03	35	7	03	12	57	
9	315	47.0		24.5	203	25.2		26.6	30	5	54	24	6	50	13	04	
10	330	46.7		24.5	217	54.3		41.9	20	38	6	05		29	16	44	
11	345	46.4	-23	24.6	232	23.4	+12	57.1	10 N	5	21	5	48	6	11	13	26
12	0	46.1	-23	24.6	246	52.3	+13	12.3	0	5	04	5	31	5	53	13	37
13	15	45.8		24.7	261	21.2		27.4	10 S	4	45	5	13		36	47	59
14	30	45.4		24.7	275	50.0		42.4	20	4	23	4	52	5	17	13	58
15	45	45.1		24.8	290	18.6	+13	57.4	30	3	54	27	4	55	14	10	
16	60	44.8		24.8	304	47.2	+14	12.3	35	35	4	12		42	18	73	
17	75	44.5	-23	24.9	319	15.6	+14	27.2	40	3	12	3	54	4	26	14	26
18	90	44.2	-23	24.9	333	43.9	+14	41.9	45	2	41	3	31	4	08	14	36
19	105	43.9		25.0	348	12.2	+14	56.6	50	1	56	3	01	3	46		48
20	120	43.6		25.0	2	40.3	+15	11.3	52	1	28	2	46		35	14	54
21	135	43.3		25.1	17	08.3		25.8	54	0	41		28		23	15	00
22	150	43.0		25.1	31	36.2		40.3	56	** ** *	2	06		3	08	07	100
23	165	42.7		25.2	46	04.0	+15	54.7	58	** ** *	1	36		2	52	15	105
24	180	42.4	-23	25.2	60	31.7	+16	09.0	60 S	** ** *	0	46		2	31	15	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 08 ^m 1		Mag: -4.1 PMG: 9 ^h 08 ^m		Mag: -1.6 PMG: 0 ^h 33 ^m		Mag: -1.8 PMG: 12 ^h 10 ^m		Mag: +0.7 PMG: 4 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	87	13.1	223	07.7	-14	24.1	351	44.3	+26	31.4
1	102	15.5	238	07.2		25.0	6	47.8		31.5
2	117	18.0	253	06.7		25.9	21	51.4		31.7
3	132	20.5	268	06.2		26.8	36	54.9		31.8
4	147	22.9	283	05.8		27.6	51	58.5		31.9
5	162	25.4	298	05.3	-14	28.5	67	02.0	+26	32.0
6	177	27.9	313	04.8	-14	29.4	82	05.6	+26	32.1
7	192	30.3	328	04.3		30.3	97	09.1		32.3
8	207	32.8	343	03.8		31.1	112	12.7		32.4
9	222	35.3	358	03.3		32.0	127	16.2		32.5
10	237	37.7	13	02.9		32.9	142	19.8		32.6
11	252	40.2	28	02.4	-14	33.7	157	23.3	+26	32.8
12	267	42.6	43	01.9	-14	34.6	172	26.9	+26	32.9
13	282	45.1	58	01.4		35.5	187	30.4		33.0
14	297	47.6	73	00.9		36.3	202	34.0		33.1
15	312	50.0	88	00.4		37.2	217	37.5		33.2
16	327	52.5	103	00.0		38.1	232	41.1		33.4
17	342	55.0	117	59.5	-14	38.9	247	44.6	+26	33.5
18	357	57.4	132	59.0	-14	39.8	262	48.2	+26	33.6
19	12	59.9	147	58.5		40.7	277	51.7		33.7
20	28	02.4	162	58.0		41.5	292	55.3		33.8
21	43	04.8	177	57.5		42.4	307	58.8		34.0
22	58	07.3	192	57.0		43.3	323	02.4		34.1
23	73	09.8	207	56.5		44.1	338	05.9		34.2
24	88	12.2	222	56.0	-14	45.0	353	09.5	+26	34.3
Dif	—		-5 -9		+36 -9		+36 +1		+18 0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 57 ^m 4			Edad: 10 ^d 3 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'4 R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	42.4	-23	25.2	60	31.7	+16	09.0	60 N	14 54	15 51	16 48	12 01 6	4 15 113		
1	195	42.1		25.3	74	59.3	86	23.2	58	15 11	16 03	16 56	13 13	4 03 107		
2	210	41.7		25.3	89	26.7	84	37.4	56	26	13	17 03	24 18	3 53 101		
3	225	41.4		25.3	103	54.0	83	+16 51.5	54	39	23	09	34 22	44 97		
4	240	41.1		25.4	118	21.3	83	+17 05.4	52	15 50	31	15	42 26	37 93		
5	255	40.8	-23	25.4	132	48.4	81	+17 19.3	50	16 00	16 38	17 20	12 50 29	3 30 90		
6	270	40.5	-23	25.5	147	15.4	80	+17 33.1	45	16 20	16 54	17 32	13 07 34	3 15 83		
7	285	40.2		25.5	161	42.3	79	+17 46.8	40	37	17 08	42	20 39	3 03 78		
8	300	39.9		25.5	176	09.0	77	+18 00.4	35	16 52	20	17 51	32 43	2 52 75		
9	315	39.6		25.6	190	35.7	77	13.9	30	17 04	30	18 00	13 42 46	43 72		
10	330	39.3		25.6	205	02.2	75	27.3	20	25	17 49	17	14 00 51	28 66		
11	345	39.0	-23	25.7	219	28.6	74	+18 40.6	10 N	17 44	18 07	18 33	14 16 55	2 14 61		
12	0	38.7	-23	25.7	233	54.9	73	+18 53.8	0	18 01	18 24	18 50	14 31 59	2 02 56		
13	15	38.3		25.7	248	21.0	71	+19 06.9	10 S	19	18 42	19 09	14 46 63	1 49 52		
14	30	38.0		25.8	262	47.1	71	19.8	20	18 38	19 02	19 32	15 02 67	36 47		
15	45	37.7		25.8	277	13.0	69	32.7	30	19 00	27	20 01	20 73	21 42		
16	60	37.4		25.8	291	38.8	68	45.4	35	13	19 43	19	31 76	12 39		
17	75	37.1	-23	25.8	306	04.4	66	+19 58.1	40	19 28	20 01	20 43	15 44 80	1 02 35		
18	90	36.8	-23	25.9	320	30.0	66	+20 10.6	45	19 46	20 24	21 13	15 59 84	0 50 30		
19	105	36.5		25.9	334	55.4	64	22.9	50	20 09	20 53	21 59	16 17 91	37 24		
20	120	36.2		25.9	349	20.7	63	35.2	52	20	21 08	22 27	26 94	30 21		
21	135	35.9		26.0	3	45.9	62	47.3	54	32	26	23 14	36 97	23 18		
22	150	35.6		26.0	18	11.0	61	+20 59.4	56	20 46	21 49	** **	16 47 102	15 14		
23	165	35.2		26.0	32	35.9	59	+21 11.2	58	21 03	22 19	** **	17 00 108	0 06 9		
24	180	34.9	-23	26.0	47	00.7	58	+21 23.0	60 S	21 24	23 10	** **	17 15 117	23 59 9		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 04 ^m 2		Mag: -4.1 PMG: 9 ^h 09 ^m		Mag: -1.6 PMG: 0 ^h 27 ^m		Mag: -1.8 PMG: 12 ^h 07 ^m		Mag: +0.7 PMG: 4 ^h 50 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	88	12.2	222	56.0	-14	45.0	353	09.5	177	54.9	-23	15.2	287	23.4	+9	52.3
1	103	14.7	237	55.6		45.9	8	13.1	192	56.7		15.2	302	25.9		52.3
2	118	17.1	252	55.1		46.7	23	16.6	207	58.6		15.2	317	28.3		52.3
3	133	19.6	267	54.6		47.6	38	20.2	223	00.4		15.2	332	30.8		52.4
4	148	22.1	282	54.1		48.4	53	23.7	238	02.2		15.2	347	33.2		52.4
5	163	24.5	297	53.6	-14	49.3	68	27.3	253	04.1	-23	15.2	2	35.7	+9	52.4
6	178	27.0	312	53.1	-14	50.2	83	30.8	268	05.9	-23	15.2	17	38.2	+9	52.4
7	193	29.5	327	52.6		51.0	98	34.4	283	07.8		15.2	32	40.6		52.4
8	208	31.9	342	52.1		51.9	113	37.9	298	09.6		15.2	47	43.1		52.4
9	223	34.4	357	51.6		52.7	128	41.5	313	11.4		15.2	62	45.6		52.4
10	238	36.9	12	51.1		53.6	143	45.1	328	13.3		15.2	77	48.0		52.4
11	253	39.3	27	50.6	-14	54.4	158	48.6	343	15.1	-23	15.2	92	50.5	+9	52.4
12	268	41.8	42	50.1	-14	55.3	173	52.2	358	17.0	-23	15.2	107	52.9	+9	52.5
13	283	44.3	57	49.6		56.2	188	55.7	13	18.8		15.2	122	55.4		52.5
14	298	46.7	72	49.1		57.0	203	59.3	28	20.7		15.2	137	57.9		52.5
15	313	49.2	87	48.6		57.9	219	02.8	43	22.5		15.2	153	00.3		52.5
16	328	51.6	102	48.1		58.7	234	06.4	58	24.3		15.2	168	02.8		52.5
17	343	54.1	117	47.6	-14	59.6	249	10.0	73	26.2	-23	15.2	183	05.3	+9	52.5
18	358	56.6	132	47.1	-15	00.4	264	13.5	88	28.0	-23	15.2	198	07.7	+9	52.5
19	13	59.0	147	46.6		01.3	279	17.1	103	29.9		15.2	213	10.2		52.5
20	29	01.5	162	46.1		02.1	294	20.6	118	31.7		15.2	228	12.7		52.5
21	44	04.0	177	45.6		03.0	309	24.2	133	33.5		15.2	243	15.1		52.6
22	59	06.4	192	45.1		03.8	324	27.8	148	35.4		15.2	258	17.6		52.6
23	74	08.9	207	44.6		04.7	339	31.3	163	37.2		15.2	273	20.1		52.6
24	89	11.4	222	44.1	-15	05.5	354	34.9	178	39.1	-23	15.2	288	22.5	+9	52.6
Dif	—		-5		-9		+36		+1		+18		0		+25	

UT	SOL				O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 9				Edad: 11 ^d 3 PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'7 R°: 65 ^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	34.9	-23	26.0	47	00.7	+21	23.0	116	58	60 N	7 07	8 04	9 02	12 07	16		6 08	115		
1	195	34.6		26.1	61	25.4	57		34.6	116	58	7 00	7 52	8 44		26	25	5 50	106		
2	210	34.3		26.1	75	50.0	56		46.1	115	56	6 53		42	29	42	31	34	100		
3	225	34.0		26.1	90	14.5	55	+21	57.4	113	54		47	33	17	12	56	35	21	96	
4	240	33.7		26.1	104	38.8	53	+22	08.6	112	52		41	25	8 06	13	08	38	10	92	
5	255	33.4	-23	26.2	119	03.0	52	+22	19.7	111	50	6 36	7 17	7 56		13	19	41	5 00	89	
6	270	33.1	-23	26.2	133	27.1	51	+22	30.6	109	45	6 24	7 01	7 35	13	41	46	4 38	84		
7	285	32.8		26.2	147	51.1	50		41.4	108	40		13	6 47	18	13	59	50	21	80	
8	300	32.5		26.2	162	14.9	48	+22	52.0	106	35	6 04		36	7 04	14	15	52	4 07	76	
9	315	32.2		26.2	176	38.7	48	+23	02.4	104	30	5 55		25	6 51	28	55		3 55	73	
10	330	31.8		26.2	191	02.3	46		12.7	103	20		39	6 06	30	14	51	58	34	68	
11	345	31.5	-23	26.3	205	25.8	45	+23	22.9	102	10 N	5 22	5 49	6 12	15	11	61	3 15	65		
12	0	31.2	-23	26.3	219	49.2	44	+23	32.9	100	0	5 05	5 32	5 54	15	30	64	2 58	62		
13	15	30.9		26.3	234	12.4	42		42.7	98	10 S	4 46	5 13	37	15	49	67	41	59		
14	30	30.6		26.3	248	35.6	42	+23	52.4	97	20	4 24	4 53	5 18	16	09	70	23	55		
15	45	30.3		26.3	262	58.7	41	+24	01.9	95	30	3 55		28	4 55	33	73	2 03	49		
16	60	30.0		26.3	277	21.6	39		11.3	94	35		36	4 13	42	16	47	75	1 51	47	
17	75	29.7	-23	26.3	291	44.4	38	+24	20.5	92	40	3 13	3 54	4 27	17	04	77	1 37	43		
18	90	29.4	-23	26.3	306	07.1	37	+24	29.5	90	45	2 42	3 32	4 09	17	23	81	1 20	40		
19	105	29.1		26.4	320	29.7	36		38.3	88	50	1 56	3 02	3 47	17	48	85	1 01	33		
20	120	28.7		26.4	334	52.3	36		47.0	87	52	1 28	2 47	36	18	00	88	0 51	31		
21	135	28.4		26.4	349	14.7	34	+24	55.5	85	54	0 41		29	23	13	91	41	27		
22	150	28.1		26.4	3	37.0	33	+25	03.8	83	56	** ** *	2 06	3 09		29	95	29	22		
23	165	27.8		26.4	17	59.2	32		11.9	81	58	** ** *	1 36	2 52	18	48	102	0 15	17		
24	180	27.5	-23	26.4	32	21.3	31	+25	19.9	80	60 S	** ** *	0 45	2 32	19	12	112	** ** *	**		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 18 ^h 00 ^m 3				Mag: -4.1 PMG: 9 ^h 09 ^m				Mag: -1.6 PMG: 0 ^h 22 ^m				Mag: -1.8 PMG: 12 ^h 04 ^m				Mag: +0.7 PMG: 4 ^h 46 ^m				
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	89	11.4	222	44.1	-15	05.5			354	34.9	+26	37.1	178	39.1	-23	15.2	288	22.5	+9	52.6	
1	104	13.8	237	43.6		06.4			9	38.4		37.2	193	40.9		15.2	303	25.0		52.6	
2	119	16.3	252	43.1		07.2			24	42.0		37.3	208	42.7		15.2	318	27.5		52.6	
3	134	18.7	267	42.6		08.1			39	45.6		37.4	223	44.6		15.2	333	29.9		52.6	
4	149	21.2	282	42.1		08.9			54	49.1		37.5	238	46.4		15.2	348	32.4		52.6	
5	164	23.7	297	41.6	-15	09.8			69	52.7	+26	37.6	253	48.3	-23	15.2	3	34.9	+9	52.7	
6	179	26.1	312	41.1	-15	10.6			84	56.3	+26	37.7	268	50.1	-23	15.2	18	37.3	+9	52.7	
7	194	28.6	327	40.6		11.5			99	59.8		37.8	283	51.9		15.2	33	39.8		52.7	
8	209	31.1	342	40.1		12.3			115	03.4		37.9	298	53.8		15.2	48	42.3		52.7	
9	224	33.5	357	39.5		13.2			130	06.9		38.0	313	55.6		15.2	63	44.7		52.7	
10	239	36.0	12	39.0		14.0			145	10.5		38.2	328	57.5		15.2	78	47.2		52.7	
11	254	38.5	27	38.5	-15	14.9			160	14.1	+26	38.3	343	59.3	-23	15.2	93	49.7	+9	52.7	
12	269	40.9	42	38.0	-15	15.7			175	17.6	+26	38.4	359	01.1	-23	15.2	108	52.1	+9	52.7	
13	284	43.4	57	37.5		16.5			190	21.2		38.5	14	03.0		15.2	123	54.6		52.8	
14	299	45.9	72	37.0		17.4			205	24.8		38.6	29	04.8		15.2	138	57.1		52.8	
15	314	48.3	87	36.5		18.2			220	28.3		38.7	44	06.7		15.2	153	59.5		52.8	
16	329	50.8	102	36.0		19.1			235	31.9		38.8	59	08.5		15.2	169	02.0		52.8	
17	344	53.2	117	35.5	-15	19.9			250	35.4	+26	38.9	74	10.3	-23	15.2	184	04.5	+9	52.8	
18	359	55.7	132	34.9	-15	20.7			265	39.0	+26	39.0	89	12.2	-23	15.2	199	07.0	+9	52.8	
19	14	58.2	147	34.4		21.6			280	42.6		39.1	104	14.0		15.2	214	09.4		52.8	
20	30	00.6	162	33.9		22.4			295	46.1		39.2	119	15.9		15.2	229	11.9		52.8	
21	45	03.1	177	33.4		23.3			310	49.7		39.3	134	17.7		15.2	244	14.4		52.9	
22	60	05.6	192	32.9		24.1			325	53.3		39.4	149	19.5		15.2	259	16.8		52.9	
23	75	08.0	207	32.4		24.9			340	56.8		39.5	164	21.4		15.2	274	19.3		52.9	
24	90	10.5	222	31.8	-15	25.8			356	00.4	+26	39.6	179	23.2	-23	15.2	289	21.8	+9	52.9	
Dif	—				-5				+36				+18				+25				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 58 ^m 4			Edad: 12 ^d 3 PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 R°: 66 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	27.5	-23	26.4	32	21.3	+25	19.9	60 N	14 55	15 52	16 49	12 23	42	8 03	97		
1	195	27.2		26.4	46	43.3	30	27.7	58	15 12	16 04	16 57	12 51	49	7 36	89		
2	210	26.9		26.4	61	05.2	29	35.2	56	27	14	17 04	13 13	52	7 14	86		
3	225	26.6		26.4	75	27.0	28	42.6	54	40	23	10	31	55	6 57	87		
4	240	26.3		26.4	89	48.7	27	49.9	52	15 51	32	15	13 46	57	42	81		
5	255	26.0	-23	26.4	104	10.4	27	+25 56.9	50	16 01	16 39	17 21	14 00	57	6 29	79		
6	270	25.6	-23	26.4	118	31.9	25	+26 03.7	45	16 21	16 55	17 33	14 27	60	6 02	76		
7	285	25.3		26.4	132	53.4	25	10.4	40	38	17 09	43	14 49	61	5 41	74		
8	300	25.0		26.4	147	14.8	24	16.8	35	16 52	21	17 52	15 07	62	23	73		
9	315	24.7		26.4	161	36.1	23	23.1	30	17 05	31	18 01	23	63	5 08	71		
10	330	24.4		26.4	175	57.3	22	29.1	20	26	17 50	18	15 49	65	4 42	70		
11	345	24.1	-23	26.4	190	18.5	22	+26 35.0	10 N	17 45	18 08	18 34	16 12	66	4 20	68		
12	0	23.8	-23	26.4	204	39.6	21	+26 40.7	0	18 02	18 25	18 51	16 34	66	4 00	65		
13	15	23.5		26.4	219	00.6	20	46.1	10 S	20	18 43	19 10	16 56	67	3 40	63		
14	30	23.2		26.4	233	21.5	19	51.4	20	18 39	19 03	19 33	17 19	68	3 18	61		
15	45	22.9		26.4	247	42.4	19	+26 56.4	30	19 01	28	20 02	17 46	69	2 52	59		
16	60	22.5		26.4	262	03.3	19	+27 01.3	35	14	19 44	20	18 02	69	38	57		
17	75	22.2	-23	26.4	276	24.0	17	+27 05.9	40	19 29	20 02	20 44	18 21	70	2 20	56		
18	90	21.9	-23	26.3	290	44.7	17	+27 10.4	45	19 47	20 25	21 14	18 44	70	2 00	53		
19	105	21.6		26.3	305	05.4	17	14.6	50	20 10	20 54	22 00	19 13	71	1 34	49		
20	120	21.3		26.3	319	26.0	16	18.7	52	21	21 10	22 28	28	71	22	46		
21	135	21.0		26.3	333	46.6	16	22.5	54	33	28	23 15	19 44	73	1 08	43		
22	150	20.7		26.3	348	07.2	16	26.1	56	20 47	21 50	** **	20 04	73	0 51	40		
23	165	20.4		26.3	2	27.7	15	29.5	58	21 04	22 20	** **	20 30	73	32	34		
24	180	20.1	-23	26.3	16	48.1	14	+27 32.7	60 S	21 25	23 11	** **	21 04	75	0 08	24		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 17 ^h 56 ^m 4		Mag: -4.1 PMG: 9 ^h 10 ^m			Mag: -1.6 PMG: 0 ^h 16 ^m			Mag: -1.8 PMG: 12 ^h 01 ^m				Mag: +0.7 PMG: 4 ^h 42 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec				hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	90	10.5	222	31.8	-15	25.8	356	00.4	+26	39.6	179	23.2	-23	15.2	289	21.8	+9	52.9
1	105	13.0	237	31.3		26.6	11	04.0		39.8	194	25.1		15.2	304	24.2		52.9
2	120	15.4	252	30.8		27.4	26	07.5		39.9	209	26.9		15.2	319	26.7		52.9
3	135	17.9	267	30.3		28.3	41	11.1		40.0	224	28.7		15.2	334	29.2		52.9
4	150	20.4	282	29.8		29.1	56	14.7		40.1	239	30.6		15.2	349	31.7		53.0
5	165	22.8	297	29.3	-15	29.9	71	18.2	+26	40.2	254	32.4	-23	15.2	4	34.1	+9	53.0
6	180	25.3	312	28.7	-15	30.8	86	21.8	+26	40.3	269	34.3	-23	15.2	19	36.6	+9	53.0
7	195	27.7	327	28.2		31.6	101	25.3		40.4	284	36.1		15.2	34	39.1		53.0
8	210	30.2	342	27.7		32.4	116	28.9		40.5	299	37.9		15.2	49	41.5		53.0
9	225	32.7	357	27.2		33.3	131	32.5		40.6	314	39.8		15.2	64	44.0		53.0
10	240	35.1	12	26.7		34.1	146	36.0		40.7	329	41.6		15.2	79	46.5		53.0
11	255	37.6	27	26.1	-15	34.9	161	39.6	+26	40.8	344	43.5	-23	15.2	94	49.0	+9	53.1
12	270	40.1	42	25.6	-15	35.8	176	43.2	+26	40.9	359	45.3	-23	15.2	109	51.4	+9	53.1
13	285	42.5	57	25.1		36.6	191	46.7		41.0	14	47.1		15.2	124	53.9		53.1
14	300	45.0	72	24.6		37.4	206	50.3		41.1	29	49.0		15.2	139	56.4		53.1
15	315	47.5	87	24.0		38.3	221	53.9		41.2	44	50.8		15.2	154	58.9		53.1
16	330	49.9	102	23.5		39.1	236	57.4		41.3	59	52.7		15.2	170	01.3		53.1
17	345	52.4	117	23.0	-15	39.9	252	01.0	+26	41.4	74	54.5	-23	15.2	185	03.8	+9	53.1
18	0	54.9	132	22.5	-15	40.7	267	04.6	+26	41.5	89	56.3	-23	15.2	200	06.3	+9	53.2
19	15	57.3	147	21.9		41.6	282	08.1		41.6	104	58.2		15.2	215	08.7		53.2
20	30	59.8	162	21.4		42.4	297	11.7		41.7	120	00.0		15.2	230	11.2		53.2
21	46	02.2	177	20.9		43.2	312	15.3		41.8	135	01.9		15.2	245	13.7		53.2
22	61	04.7	192	20.3		44.0	327	18.8		41.9	150	03.7		15.2	260	16.2		53.2
23	76	07.2	207	19.8		44.9	342	22.4		42.0	165	05.5		15.2	275	18.6		53.2
24	91	09.6	222	19.3	-15	45.7	357	26.0	+26	42.1	180	07.4	-23	15.2	290	21.1	+9	53.3
Dif	—		-5 -8			+36 +1			+18 0				+25 0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 11 ^h 58 ^m 9			Edad: 13 ^d 3 PHE { 4 ^h : 60/7 12 ^h : 60/6 20 ^h : 60/5 PMG: 23 ^h 56 ^m R°: 64 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	20.1	-23	26.3	16	48.1	+27	32.7	60 N	7	08	8	05	9	03	13	05
1	195	19.7		26.3	31	08.6		35.6	58	7	01	7	53	8	45	13	40
2	210	19.4		26.2	45	29.0		38.4	56	6	54		43	30		14	05
3	225	19.1		26.2	59	49.3		41.0	54		48		34	18			26
4	240	18.8		26.2	74	09.7		43.3	52		42		26	8	07		43
5	255	18.5	-23	26.2	88	30.0	+27	45.4	50	6	37	7	18	7	57	14	57
6	270	18.2	-23	26.2	102	50.4	+27	47.3	45	6	25	7	02	7	36	15	27
7	285	17.9		26.2	117	10.7		49.0	40		14		6	48	19	15	50
8	300	17.6		26.1	131	31.0		50.5	35	6	05		37	7	05	16	09
9	315	17.3		26.1	145	51.3		51.8	30	5	56		26	6	52		26
10	330	17.0		26.1	160	11.6		52.9	20		40		6	07	31	16	54
11	345	16.6	-23	26.1	174	31.9	+27	53.7	10 N	5	23	5	50	6	13	17	18
12	0	16.3	-23	26.0	188	52.2	+27	54.3	0	5	06	5	33	5	55	17	40
13	15	16.0		26.0	203	12.5		54.7	10 S	4	47	5	14	38		18	03
14	30	15.7		26.0	217	32.9		54.9	20	4	25	4	54	5	19		27
15	45	15.4		26.0	231	53.2		54.9	30	3	56		29	4	56	18	55
16	60	15.1		25.9	246	13.6		54.7	35		37		4	43		19	11
17	75	14.8	-23	25.9	260	34.0	+27	54.2	40	3	14	3	55	4	28	19	31
18	90	14.5	-23	25.9	274	54.4	+27	53.6	45	2	43	3	33	4	10	19	54
19	105	14.2		25.9	289	14.8		52.7	50	1	57	3	03	3	48	20	24
20	120	13.9		25.8	303	35.3		51.6	52	1	29		2	48	37		39
21	135	13.5		25.8	317	55.9		50.3	54	0	42		30	24		20	57
22	150	13.2		25.8	332	16.4		48.8	56	** ** *	2	07	3	10		21	17
23	165	12.9		25.7	346	37.0		47.1	58	** ** *	1	37	2	53		21	43
24	180	12.6	-23	25.7	0	57.7	+27	45.2	60 S	** ** *	0	46	2	33		22	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 52 ^m 4		Mag: -4.1 PMG: 9 ^h 11 ^m		Mag: -1.6 PMG: 0 ^h 10 ^m		Mag: -1.8 PMG: 11 ^h 58 ^m		Mag: +0.6 PMG: 4 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	91	09.6	222	19.3	-15	45.7	357	26.0	+26	42.1
1	106	12.1	237	18.8		46.5	12	29.5		42.2
2	121	14.6	252	18.2		47.3	27	33.1		42.3
3	136	17.0	267	17.7		48.2	42	36.7		42.4
4	151	19.5	282	17.2		49.0	57	40.2		42.5
5	166	22.0	297	16.6	-15	49.8	72	43.8	+26	42.6
6	181	24.4	312	16.1	-15	50.6	87	47.4	+26	42.7
7	196	26.9	327	15.6		51.4	102	50.9		42.8
8	211	29.4	342	15.0		52.3	117	54.5		42.9
9	226	31.8	357	14.5		53.1	132	58.1		43.0
10	241	34.3	12	14.0		53.9	148	01.6		43.0
11	256	36.7	27	13.4	-15	54.7	163	05.2	+26	43.1
12	271	39.2	42	12.9	-15	55.5	178	08.8	+26	43.2
13	286	41.7	57	12.4		56.3	193	12.3		43.3
14	301	44.1	72	11.8		57.1	208	15.9		43.4
15	316	46.6	87	11.3		58.0	223	19.5		43.5
16	331	49.1	102	10.7		58.8	238	23.0		43.6
17	346	51.5	117	10.2	-15	59.6	253	26.6	+26	43.7
18	1	54.0	132	09.7	-16	00.4	268	30.1	+26	43.8
19	16	56.5	147	09.1		01.2	283	33.7		43.9
20	31	58.9	162	08.6		02.0	298	37.3		44.0
21	47	01.4	177	08.0		02.8	313	40.8		44.1
22	62	03.9	192	07.5		03.6	328	44.4		44.2
23	77	06.3	207	07.0		04.5	343	48.0		44.3
24	92	08.8	222	06.4	-16	05.3	358	51.5	+26	44.3
Dif	—		-5 -8		+36 -8		+1		+18 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 59 ^m 4			Edad: 14 ^d 3 PHE { 4 ^h : 60/3 12 ^h : 60/2 20 ^h : 60/0 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	12.6	-23	25.7	0	57.7	+27	45.2	60 N	14 56	15 54	16 50	14 31 109	10 32 20			
1	195	12.3		25.7	15	18.4		43.1	58	15 13	16 05	16 58	15 01 100	10 02 29			
2	210	12.0		25.6	29	39.2		40.7	56		28	15	17 05	24 94	9 39 34		
3	225	11.7		25.6	44	00.0		38.2	54		41	25	11	42 90	20 38		
4	240	11.4		25.5	58	20.9		35.4	52	15 52	33	17	15 58 87	9 04 41			
5	255	11.1	-23	25.5	72	41.8	+27	32.5	50	16 02	16 40	17 22	16 12 84	8 50 43			
6	270	10.8	-23	25.5	87	02.8	+27	29.3	45	16 23	16 56	17 34	16 39 80	8 21 48			
7	285	10.4		25.4	101	23.9		26.0	40		39	17 10	44	17 01 76	7 59 51		
8	300	10.1		25.4	115	45.1		22.4	35	16 54		22	17 53	19 73	40 54		
9	315	09.8		25.4	130	06.3		18.7	30	17 06		32	18 02	17 35 71	7 24 56		
10	330	09.5		25.3	144	27.6		14.7	20	27	17 51	19	18 01 67	6 57 58			
11	345	09.2	-23	25.3	158	49.0	+27	10.5	10 N	17 46	18 09	18 35	18 24 64	6 34 60			
12	0	08.9	-23	25.2	173	10.5	+27	06.2	0	18 03	18 26	18 52	18 45 61	6 12 63			
13	15	08.6		25.2	187	32.0	+27	01.6	10 S		21	18 44	19 11	19 06 58	5 50 65		
14	30	08.3		25.1	201	53.7	+26	56.9	20	18 40	19 04	19 34		29 54	5 26 68		
15	45	08.0		25.1	216	15.4		52.0	30	19 02		29	20 03	19 55 50	4 58 71		
16	60	07.7		25.0	230	37.3		46.8	35		15	19 45	21	20 10 48	42 72		
17	75	07.3	-23	25.0	244	59.2	+26	41.5	40	19 30	20 03	20 45	20 28 45	4 23 74			
18	90	07.0	-23	24.9	259	21.2	+26	36.0	45	19 48	20 25	21 15	20 49 42	3 59 77			
19	105	06.7		24.9	273	43.4		30.3	50	20 11	20 55	22 01	21 16 36	30 80			
20	120	06.4		24.8	288	05.6		24.5	52		21	21 10	22 29	29 33	3 15 83		
21	135	06.1		24.8	302	28.0		18.4	54		34	28	23 15	21 44 30	2 58 85		
22	150	05.8		24.7	316	50.4		12.2	56	20 48	21 51	** ** *	22 02 25	37 89			
23	165	05.5		24.7	331	13.0	+26	05.8	58	21 05	22 20	** ** *	23 19	2 11 94			
24	180	05.2	-23	24.6	345	35.7	+25	59.2	60 S	21 25	23 11	** ** *	22 50 11	1 35 104			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 17 ^h 48 ^m 5		Mag: -4.1 PMG: 9 ^h 12 ^m		Mag: -1.6 PMG: 0 ^h 05 ^m		Mag: -1.8 PMG: 11 ^h 55 ^m		Mag: +0.6 PMG: 4 ^h 34 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	92	08.8	222	06.4	-16	05.3	358	51.5	180	51.6							
1	107	11.2	237	05.9		06.1	13	55.1	195	53.4							
2	122	13.7	252	05.3		06.9	28	58.7	210	55.3							
3	137	16.2	267	04.8		07.7	44	02.2	225	57.1							
4	152	18.6	282	04.2		08.5	59	05.8	240	58.9							
5	167	21.1	297	03.7	-16	09.3	74	09.4	256	00.8							
6	182	23.6	312	03.1	-16	10.1	89	12.9	271	02.6							
7	197	26.0	327	02.6		10.9	104	16.5	286	04.5							
8	212	28.5	342	02.0		11.7	119	20.1	301	06.3							
9	227	31.0	357	01.5		12.5	134	23.6	316	08.1							
10	242	33.4	12	01.0		13.3	149	27.2	331	10.0							
11	257	35.9	27	00.4	-16	14.1	164	30.8	346	11.8							
12	272	38.4	41	59.9	-16	14.9	179	34.3	1	13.7							
13	287	40.8	56	59.3		15.7	194	37.9	16	15.5							
14	302	43.3	71	58.8		16.5	209	41.4	31	17.3							
15	317	45.7	86	58.2		17.3	224	45.0	46	19.2							
16	332	48.2	101	57.7		18.1	239	48.6	61	21.0							
17	347	50.7	116	57.1	-16	18.9	254	52.1	76	22.9							
18	2	53.1	131	56.5	-16	19.7	269	55.7	91	24.7							
19	17	55.6	146	56.0		20.5	284	59.3	106	26.5							
20	32	58.1	161	55.4		21.3	300	02.8	121	28.4							
21	48	00.5	176	54.9		22.1	315	06.4	136	30.2							
22	63	03.0	191	54.3		22.9	330	09.9	151	32.1							
23	78	05.5	206	53.8		23.7	345	13.5	166	33.9							
24	93	07.9	221	53.2	-16	24.5	0	17.1	181	35.7							
Dif	—		-5		-8		-8964		+1								
							+18		0								
									+25								
									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 9			Edad: 15 ^d 3 PHE { 4 ^h : 59'8 12 ^h : 59'5 20 ^h : 59'2 SD: 16'3 PMG: 1 ^h 00 ^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	180	05.2	-23	24.6	345	35.7	+25	59.2	60 N	7 09	8 06	9 03	16 20	109	10 52	8		
1	195	04.9		24.6	359	58.4	37	52.4	58	7 01	7 54	8 46	41 101		31	14		
2	210	04.6		24.5	14	21.3	39	45.5	56	6 55	44	31	16 58	96	10 13	20		
3	225	04.2		24.5	28	44.4	41	38.4	54	48	35	18	17 12	92	9 58	24		
4	240	03.9		24.4	43	07.5	41	31.1	52	43	26	8 07	25	88	45	27		
5	255	03.6	-23	24.4	57	30.8	43	+25	50	6 37	7 19	7 57	17 36	85	9 33	30		
6	270	03.3	-23	24.3	71	54.2	44	+25	45	6 26	7 03	7 37	17 59	79	9 09	36		
7	285	03.0		24.2	86	17.7	45	08.3	40	15	6 49	20	18 17	75	8 50	40		
8	300	02.7		24.2	100	41.3	46	+25	35	6 06	38	7 06	32	72	34	43		
9	315	02.4		24.1	115	05.0	47	+24	30	5 57	27	6 53	18 46	68	8 20	45		
10	330	02.1		24.1	129	28.9	49	44.0	20	41	6 08	32	19 08	63	7 55	51		
11	345	01.8	-23	24.0	143	52.9	50	+24	10 N	5 24	5 51	6 14	19 28	59	7 34	55		
12	0	01.5	-23	23.9	158	17.1	52	+24	0	5 07	5 34	5 56	19 46	55	7 15	58		
13	15	01.2		23.9	172	41.3	52	18.4	10 S	4 48	5 15	39	20 04	51	6 55	61		
14	30	00.8		23.8	187	05.7	54	09.5	20	4 26	4 55	5 20	23	47	34	65		
15	45	00.5		23.7	201	30.3	56	+24	30	3 57	30	4 58	45	42	6 09	70		
16	60	00.2		23.7	215	54.9	56	+23	35	38	4 15	45	20 58	39	5 54	73		
17	74	59.9	-23	23.6	230	19.7	58	+23	40	3 15	3 57	4 29	21 13	35	5 37	76		
18	89	59.6	-23	23.5	244	44.7	60	+23	45	2 44	3 34	4 11	21 31	30	5 16	81		
19	104	59.3		23.5	259	09.7	60	23.1	50	1 59	3 04	3 49	21 52	25	4 50	86		
20	119	59.0		23.4	273	34.9	62	13.4	52	1 31	2 49	38	22 02	23	38	89		
21	134	58.7		23.3	288	00.3	64	+23	54	0 44	31	26	14	19	23	93		
22	149	58.4		23.3	302	25.7	64	+22	56	** **	2 09	3 11	27	15	4 06	97		
23	164	58.1		23.2	316	51.4	67	43.4	58	** **	1 39	2 55	22 42	10	3 45	104		
24	179	57.8	-23	23.1	331	17.1	67	+22	60 S	** **	0 48	2 34	23 01	3	3 19	112		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 17 ^h 44 ^m 6		Mag: -4.1 PMG: 9 ^h 13 ^m			Mag: -1.6 PMG: 23 ^h 53 ^m			Mag: -1.8 PMG: 11 ^h 52 ^m				Mag: +0.6 PMG: 4 ^h 30 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	07.9	221	53.2	-16	24.5			0	17.1	+26	46.4	181	35.7	-23	15.2	292	20.1
1	108	10.4	236	52.7		25.3			15	20.6		46.5	196	37.6		15.2	307	22.6
2	123	12.9	251	52.1		26.1			30	24.2		46.6	211	39.4		15.2	322	25.1
3	138	15.3	266	51.5		26.9			45	27.8		46.7	226	41.3		15.2	337	27.6
4	153	17.8	281	51.0		27.7			60	31.3		46.8	241	43.1		15.2	352	30.1
5	168	20.2	296	50.4	-16	28.5			75	34.9	+26	46.9	256	44.9	-23	15.2	7	32.5
6	183	22.7	311	49.9	-16	29.2			90	38.4	+26	46.9	271	46.8	-23	15.2	22	35.0
7	198	25.2	326	49.3		30.0			105	42.0		47.0	286	48.6		15.2	37	37.5
8	213	27.6	341	48.8		30.8			120	45.6		47.1	301	50.5		15.2	52	40.0
9	228	30.1	356	48.2		31.6			135	49.1		47.2	316	52.3		15.2	67	42.5
10	243	32.6	11	47.6		32.4			150	52.7		47.3	331	54.1		15.2	82	45.0
11	258	35.0	26	47.1	-16	33.2			165	56.2	+26	47.4	346	56.0	-23	15.2	97	47.5
12	273	37.5	41	46.5	-16	34.0			180	59.8	+26	47.4	1	57.8	-23	15.1	112	49.9
13	288	40.0	56	45.9		34.8			196	03.4		47.5	16	59.7		15.1	127	52.4
14	303	42.4	71	45.4		35.5			211	06.9		47.6	32	01.5		15.1	142	54.9
15	318	44.9	86	44.8		36.3			226	10.5		47.7	47	03.3		15.1	157	57.4
16	333	47.4	101	44.3		37.1			241	14.0		47.8	62	05.2		15.1	172	59.9
17	348	49.8	116	43.7	-16	37.9			256	17.6	+26	47.8	77	07.0	-23	15.1	188	02.4
18	3	52.3	131	43.1	-16	38.7			271	21.2	+26	47.9	92	08.9	-23	15.1	203	04.9
19	18	54.7	146	42.6		39.5			286	24.7		48.0	107	10.7		15.1	218	07.3
20	33	57.2	161	42.0		40.2			301	28.3		48.1	122	12.5		15.1	233	09.8
21	48	59.7	176	41.4		41.0			316	31.8		48.2	137	14.4		15.1	248	12.3
22	64	02.1	191	40.9		41.8			331	35.4		48.2	152	16.2		15.1	263	14.8
23	79	04.6	206	40.3		42.6			346	39.0		48.3	167	18.1		15.1	278	17.3
24	94	07.1	221	39.7	-16	43.4			1	42.5	+26	48.4	182	19.9	-23	15.1	293	19.8
Dif	—		-6		-8		+36		+1		+18		0		+25		0	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 00 ^m 4			Edad: 16 ^d 3 PHE { 4 ^h : 59/0 12 ^h : 58/7 20 ^h : 58/4 R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	57.8	-23	23.1	331	17.1	+22	33.2	60 N	14 57	15 55	16 52	18 09	100	11 00	3
1	194	57.4		23.0	345	43.0		22.8	58	15 15	16 07	16 59	22 96		10 45	8
2	209	57.1		23.0	0	09.0		70	56	29	17	17 06	34 91		33	12
3	224	56.8		22.9	14	35.2		72	54	42	26	12	44 87		22	16
4	239	56.5		22.8	29	01.4		72	52	15 53	34	18	18 53	84	12	19
5	254	56.2	-23	22.7	43	27.9		75	50	16 03	16 42	17 23	19 01	82	10 03	22
6	269	55.9	-23	22.7	57	54.4		75	45	16 24	16 58	17 35	19 18	76	9 45	27
7	284	55.6		22.6	72	21.1		77	40	41	17 11	45	32 71		30	31
8	299	55.3		22.5	86	48.0		79	35	16 55	23	17 55	44 67		17	35
9	314	55.0		22.4	101	15.0		80	30	17 07	33	18 03	19 54	64	9 05	39
10	329	54.7		22.3	115	42.1		81	20	28	17 52	20	20 11	59	8 46	43
11	344	54.4	-23	22.3	130	09.3		82	10 N	17 47	18 10	18 36	20 27	53	8 29	48
12	359	54.0	-23	22.2	144	36.7		84	0	18 04	18 27	18 53	20 41	49	8 13	52
13	14	53.7		22.1	159	04.2		85	10 S	22	18 45	19 12	20 55	45	7 56	57
14	29	53.4		22.0	173	31.9		87	20	18 41	19 05	19 34	21 10	40	39	61
15	44	53.1		21.9	187	59.6		87	30	19 03	30	20 03	27 35		19	66
16	59	52.8		21.8	202	27.6		90	35	16	19 45	22	37 31		7 07	69
17	74	52.5	-23	21.7	216	55.6		90	40	19 31	20 03	20 45	21 48	28	6 53	73
18	89	52.2	-23	21.7	231	23.8		92	45	19 49	20 26	21 16	22 01	24	6 37	78
19	104	51.9		21.6	245	52.1		93	50	20 11	20 56	22 01	17 19		16	84
20	119	51.6		21.5	260	20.5		94	52	22	21 11	22 29	25 15		6 07	87
21	134	51.3		21.4	274	49.1		96	54	34	29	23 14	33 13		5 56	90
22	149	51.0		21.3	289	17.8		97	56	20 48	21 51	** **	42 10		43	95
23	164	50.7		21.2	303	46.6		98	58	21 05	22 20	** **	22 52	6	29	99
24	179	50.3	-23	21.1	318	15.6		100	60 S	21 25	23 10	** **	23 04	2	5 11	106

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 17 ^h 40 ^m 6		Mag: -4.1 PMG: 9 ^h 14 ^m		Mag: -1.6 PMG: 23 ^h 48 ^m		Mag: -1.8 PMG: 11 ^h 49 ^m			Mag: +0.6 PMG: 4 ^h 26 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	94	07.1	221	39.7	-16	43.4	1	42.5	+26	48.4	182	19.9	-23	15.1	293	19.8	+9	54.6
1	109	09.5	236	39.1		44.1	16	46.1		48.5	197	21.7		15.1	308	22.3		54.6
2	124	12.0	251	38.6		44.9	31	49.6		48.5	212	23.6		15.1	323	24.8		54.6
3	139	14.5	266	38.0		45.7	46	53.2		48.6	227	25.4		15.1	338	27.3		54.6
4	154	16.9	281	37.4		46.5	61	56.7		48.7	242	27.3		15.1	353	29.7		54.6
5	169	19.4	296	36.9	-16	47.2	77	00.3	+26	48.8	257	29.1	-23	15.1	8	32.2	+9	54.7
6	184	21.8	311	36.3	-16	48.0	92	03.8	+26	48.8	272	30.9	-23	15.1	23	34.7	+9	54.7
7	199	24.3	326	35.7		48.8	107	07.4		48.9	287	32.8		15.1	38	37.2		54.7
8	214	26.8	341	35.1		49.6	122	11.0		49.0	302	34.6		15.1	53	39.7		54.7
9	229	29.2	356	34.6		50.3	137	14.5		49.1	317	36.5		15.1	68	42.2		54.7
10	244	31.7	11	34.0		51.1	152	18.1		49.1	332	38.3		15.1	83	44.7		54.8
11	259	34.2	26	33.4	-16	51.9	167	21.6	+26	49.2	347	40.1	-23	15.1	98	47.2	+9	54.8
12	274	36.6	41	32.8	-16	52.7	182	25.2	+26	49.3	2	42.0	-23	15.1	113	49.7	+9	54.8
13	289	39.1	56	32.3		53.4	197	28.7		49.4	17	43.8		15.1	128	52.1		54.8
14	304	41.6	71	31.7		54.2	212	32.3		49.4	32	45.7		15.1	143	54.6		54.8
15	319	44.0	86	31.1		55.0	227	35.8		49.5	47	47.5		15.1	158	57.1		54.9
16	334	46.5	101	30.5		55.7	242	39.4		49.6	62	49.3		15.1	173	59.6		54.9
17	349	49.0	116	30.0	-16	56.5	257	42.9	+26	49.6	77	51.2	-23	15.1	189	02.1	+9	54.9
18	4	51.4	131	29.4	-16	57.3	272	46.5	+26	49.7	92	53.0	-23	15.0	204	04.6	+9	54.9
19	19	53.9	146	28.8		58.0	287	50.0		49.8	107	54.9		15.0	219	07.1		55.0
20	34	56.3	161	28.2		58.8	302	53.6		49.9	122	56.7		15.0	234	09.6		55.0
21	49	58.8	176	27.6	-16	59.6	317	57.1		49.9	137	58.5		15.0	249	12.1		55.0
22	65	01.3	191	27.1	-17	00.3	333	00.7		50.0	153	00.4		15.0	264	14.6		55.0
23	80	03.7	206	26.5		01.1	348	04.2		50.1	168	02.2		15.0	279	17.1		55.0
24	95	06.2	221	25.9	-17	01.8	3	07.8	+26	50.1	183	04.1	-23	15.0	294	19.6	+9	55.1
Dif	—		-6		-8		+36		+1		+18		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 17 ^d 3 PHE { 4 ^h : 58 ^m 1 12 ^h : 57 ^m 8 20 ^h : 57 ^m 5													
	PMG: 12 ^h 00 ^m 9			SD: 15:9 PMG: 2 ^h 53 ^m R°: 48 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	50.3	-23	21.1	318	15.6	+17	54.6	60 N	7	09	8	06	9	04	19	49
1	194	50.0		21.0	332	44.7 ¹⁰¹		41.8 ¹²⁸	58	7	02	7	54	8	46	19	58
2	209	49.7		20.9	347	13.9 ¹⁰²		28.9 ¹²⁹	56	6	55	44	32	20	05	85	45
3	224	49.4		20.8	1	43.2 ¹⁰³		16.0 ¹²⁹	54	49	35	19		11	83	38	1
4	239	49.1		20.7	16	12.7 ¹⁰⁵	+17	03.0 ¹³⁰	52	43	27	8	08	17	80	31	14
5	254	48.8	-23	20.6	30	42.3 ¹⁰⁶	+16	50.0 ¹³⁰	50	6	38	7	20	7	58	20	23
6	269	48.5	-23	20.5	45	12.0 ¹⁰⁷	+16	36.8 ¹³²	45	6	26	7	04	7	37	20	34
7	284	48.2		20.5	59	41.8 ¹⁰⁸		23.6 ¹³²	40	16	6	50	21	43	67	10	01
8	299	47.9		20.4	74	11.7 ¹⁰⁹	+16	10.4 ¹³²	35	6	07	38	7	07	51	63	9
9	314	47.6		20.3	88	41.8 ¹¹¹	+15	57.1 ¹³³	30	5	58	28	6	54	20	58	60
10	329	47.3		20.2	103	12.0 ¹¹²		43.7 ¹³⁴	20	42	6	09	33	21	10	54	29
11	344	47.0	-23	20.0	117	42.2 ¹¹²	+15	30.2 ¹³⁵	10 N	5	25	5	52	6	15	21	20
12	359	46.7	-23	19.9	132	12.7 ¹¹⁵	+15	16.7 ¹³⁵	0	5	08	5	35	5	57	21	30
13	14	46.3		19.8	146	43.2 ¹¹⁵	+15	03.1 ¹³⁶	10 S	4	49	5	17	40	40	40	8
14	29	46.0		19.7	161	13.8 ¹¹⁶	+14	49.5 ¹³⁶	20	4	27	4	56	5	21	21	50
15	44	45.7		19.6	175	44.6 ¹¹⁸		35.8 ¹³⁷	30	3	58	31	4	59	22	02	30
16	59	45.4		19.5	190	15.4 ¹¹⁸		22.1 ¹³⁷	35	39	4	16	46	08	28	16	66
17	74	45.1	-23	19.4	204	46.4 ¹²⁰	+14	08.3 ¹³⁸	40	3	16	3	58	4	31	22	16
18	89	44.8	-23	19.3	219	17.5 ¹²¹	+13	54.5 ¹³⁸	45	2	46	3	35	4	13	22	25
19	104	44.5		19.2	233	48.6 ¹²¹		40.6 ¹³⁹	50	2	00	3	06	3	50	36	14
20	119	44.2		19.1	248	19.9 ¹²³		26.7 ¹³⁹	52	1	33	2	51	39	40	13	34
21	134	43.9		19.0	262	51.3 ¹²⁴	+13	12.8 ¹³⁹	54	0	47	33	27	46	10	26	85
22	149	43.6		18.9	277	22.8 ¹²⁵	+12	58.8 ¹⁴⁰	56	** ** *	2	11	3	13	52	7	18
23	164	43.3		18.8	291	54.4 ¹²⁶		44.7 ¹⁴¹	58	** ** *	1	41	2	56	22	58	4
24	179	43.0	-23	18.7	306	26.1 ¹²⁷	+12	30.6 ¹⁴¹	60 S	** ** *	0	52	2	36	23	06	0

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 36 ^m 7		Mag: -4.1 PMG: 9 ^h 15 ^m			Mag: -1.6 PMG: 23 ^h 42 ^m			Mag: -1.8 PMG: 11 ^h 46 ^m			Mag: +0.6 PMG: 4 ^h 22 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	95	06.2	221	25.9	-17	01.8	3	07.8	+26	50.1	183	04.1	-23	15.0		
1	110	08.7	236	25.3		02.6	18	11.3		50.2	198	05.9		15.0		
2	125	11.1	251	24.7		03.4	33	14.9		50.3	213	07.7		15.0		
3	140	13.6	266	24.1		04.1	48	18.4		50.4	228	09.6		15.0		
4	155	16.1	281	23.6		04.9	63	22.0		50.4	243	11.4		15.0		
5	170	18.5	296	23.0	-17	05.7	78	25.5	+26	50.5	258	13.3	-23	15.0		
6	185	21.0	311	22.4	-17	06.4	93	29.1	+26	50.6	273	15.1	-23	15.0		
7	200	23.5	326	21.8		07.2	108	32.6		50.6	288	16.9		15.0		
8	215	25.9	341	21.2		07.9	123	36.2		50.7	303	18.8		15.0		
9	230	28.4	356	20.6		08.7	138	39.7		50.8	318	20.6		15.0		
10	245	30.8	11	20.0		09.4	153	43.3		50.8	333	22.5		15.0		
11	260	33.3	26	19.5	-17	10.2	168	46.8	+26	50.9	348	24.3	-23	15.0		
12	275	35.8	41	18.9	-17	10.9	183	50.4	+26	51.0	3	26.1	-23	15.0		
13	290	38.2	56	18.3		11.7	198	53.9		51.0	18	28.0		15.0		
14	305	40.7	71	17.7		12.5	213	57.4		51.1	33	29.8		15.0		
15	320	43.2	86	17.1		13.2	229	01.0		51.2	48	31.7		15.0		
16	335	45.6	101	16.5		14.0	244	04.5		51.2	63	33.5		14.9		
17	350	48.1	116	15.9	-17	14.7	259	08.1	+26	51.3	78	35.3	-23	14.9		
18	5	50.6	131	15.3	-17	15.5	274	11.6	+26	51.4	93	37.2	-23	14.9		
19	20	53.0	146	14.7		16.2	289	15.2		51.4	108	39.0		14.9		
20	35	55.5	161	14.1		17.0	304	18.7		51.5	123	40.9		14.9		
21	50	58.0	176	13.5		17.7	319	22.2		51.6	138	42.7		14.9		
22	66	00.4	191	12.9		18.5	334	25.8		51.6	153	44.5		14.9		
23	81	02.9	206	12.4		19.2	349	29.3		51.7	168	46.4		14.9		
24	96	05.3	221	11.8	-17	19.9	4	32.9	+26	51.7	183	48.2	-23	14.9		
Dif	—		-6		-8		+35		+1		+18		0		+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 01 ^m 4				Edad: 18 ^d 3 PHE { 4 ^h : 57 ^m 2 12 ^h : 56 ^m 9 20 ^h : 56 ^m 6 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	179	43.0	-23	18.7	306	26.1	+12	30.6	60 N	14 59	15 57	16 53	21 22 88		11 04 0					
1	194	42.7		18.5	320	57.9 ¹²⁸		16.5 ¹⁴¹	58	15 17	16 08	17 01	26 84		10 58 4					
2	209	42.4		18.4	335	29.8 ¹²⁹	+12	02.3 ¹⁴²	56		31	18	08	30 81	54 6					
3	224	42.1		18.3	350	01.8 ¹³⁰	+11	48.1 ¹⁴²	54		44	28	14	34 77	49 9					
4	239	41.7		18.2	4	33.9 ¹³¹		33.9 ¹⁴²	52	15 55		36	19	37 75	45 12					
5	254	41.4	-23	18.1	19	06.0 ¹³¹	+11	19.6 ¹⁴³	50	16 05	16 43	17 25	21 39 73	10 42 13						
6	269	41.1	-23	18.0	33	38.3 ¹³³	+11	05.3 ¹⁴³	45	16 25	16 59	17 36	21 45 68	10 34 18						
7	284	40.8		17.9	48	10.7 ¹³⁴	+10	51.0 ¹⁴³	40		42	17 12	46	50 64	27 23					
8	299	40.5		17.7	62	43.1 ¹³⁴		36.6 ¹⁴⁴	35	16 56		24	17 56	54 60	21 26					
9	314	40.2		17.6	77	15.7 ¹³⁶		22.3 ¹⁴³	30	17 08		35	18 04	21 58 57	16 29					
10	329	39.9		17.5	91	48.3 ¹³⁶	+10	07.9 ¹⁴⁴	20		29	17 53	21	22 04 52	10 07 35					
11	344	39.6	-23	17.4	106	21.0 ¹³⁷	+9	53.4 ¹⁴⁵	10 N	17 48	18 11	18 37	22 10 47	9 59 40						
12	359	39.3	-23	17.3	120	53.8 ¹³⁸	+9	39.0 ¹⁴⁴	0	18 05	18 28	18 54	22 15 42	9 52 44						
13	14	39.0		17.1	135	26.7 ¹³⁹		24.5 ¹⁴⁵	10 S		23	18 46	19 13	20 38	45 48					
14	29	38.7		17.0	149	59.6 ¹³⁹	+9	10.0 ¹⁴⁵	20	18 41	19 06	19 35	26 33	36 53						
15	44	38.4		16.9	164	32.7 ¹⁴¹	+8	55.4 ¹⁴⁶	30	19 03		31	20 04	32 28	27 59					
16	59	38.1		16.8	179	05.8 ¹⁴¹		40.9 ¹⁴⁵	35		16	19 46	23	36 25	22 61					
17	74	37.8	-23	16.6	193	39.0 ¹⁴²	+8	26.3 ¹⁴⁶	40	19 31	20 04	20 46	22 40 21	9 16 65						
18	89	37.5	-23	16.5	208	12.3 ¹⁴³	+8	11.8 ¹⁴⁵	45	19 49	20 26	21 16	22 45 17	9 08 70						
19	104	37.2		16.4	222	45.6 ¹⁴³	+7	57.2 ¹⁴⁶	50	20 12	20 56	22 01	50 13	9 00 75						
20	119	36.8		16.2	237	19.0 ¹⁴⁴		42.6 ¹⁴⁶	52		22	21 11	22 28	53 10	8 56 77					
21	134	36.5		16.1	251	52.5 ¹⁴⁵		27.9 ¹⁴⁷	54		34	29	23 12	56 8	51 80					
22	149	36.2		16.0	266	26.1 ¹⁴⁶	+7	13.3 ¹⁴⁶	56	20 49	21 51	** **	22 59 5	46 83						
23	164	35.9		15.9	280	59.7 ¹⁴⁶	+6	58.7 ¹⁴⁶	58	21 05	22 20	** **	23 02 3	41 86						
24	179	35.6	-23	15.7	295	33.4 ¹⁴⁷	+6	44.0 ¹⁴⁷	60 S	21 25	23 07	** **	23 06 0	8 34 91						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 32 ^m 8				Mag: -4.1 PMG: 9 ^h 16 ^m				Mag: -1.6 PMG: 23 ^h 36 ^m				Mag: -1.8 PMG: 11 ^h 43 ^m				Mag: +0.6 PMG: 4 ^h 18 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	05.3	221	11.8	-17	19.9	4	32.9	+26	51.7	183	48.2	-23	14.9	295	19.4	+9	55.6		
1	111	07.8	236	11.2		20.7	19	36.4		51.8	198	50.1		14.9	310	21.9		55.6		
2	126	10.3	251	10.6		21.4	34	39.9		51.9	213	51.9		14.9	325	24.4		55.7		
3	141	12.7	266	10.0		22.2	49	43.5		51.9	228	53.8		14.9	340	26.9		55.7		
4	156	15.2	281	09.4		22.9	64	47.0		52.0	243	55.6		14.9	355	29.4		55.7		
5	171	17.7	296	08.8	-17	23.7	79	50.6	+26	52.1	258	57.4	-23	14.9	10	31.9	+9	55.7		
6	186	20.1	311	08.2	-17	24.4	94	54.1	+26	52.1	273	59.3	-23	14.9	25	34.4	+9	55.8		
7	201	22.6	326	07.6		25.2	109	57.6		52.2	289	01.1		14.9	40	36.9		55.8		
8	216	25.1	341	07.0		25.9	125	01.2		52.2	304	03.0		14.9	55	39.4		55.8		
9	231	27.5	356	06.4		26.6	140	04.7		52.3	319	04.8		14.9	70	41.9		55.8		
10	246	30.0	11	05.8		27.4	155	08.2		52.4	334	06.6		14.9	85	44.4		55.9		
11	261	32.4	26	05.2	-17	28.1	170	11.8	+26	52.4	349	08.5	-23	14.8	100	46.9	+9	55.9		
12	276	34.9	41	04.6	-17	28.8	185	15.3	+26	52.5	4	10.3	-23	14.8	115	49.4	+9	55.9		
13	291	37.4	56	04.0		29.6	200	18.8		52.5	19	12.2		14.8	130	51.9		55.9		
14	306	39.8	71	03.4		30.3	215	22.4		52.6	34	14.0		14.8	145	54.4		56.0		
15	321	42.3	86	02.8		31.1	230	25.9		52.7	49	15.8		14.8	160	56.9		56.0		
16	336	44.8	101	02.2		31.8	245	29.4		52.7	64	17.7		14.8	175	59.4		56.0		
17	351	47.2	116	01.6	-17	32.5	260	33.0	+26	52.8	79	19.5	-23	14.8	191	01.9	+9	56.0		
18	6	49.7	131	00.9	-17	33.3	275	36.5	+26	52.8	94	21.4	-23	14.8	206	04.4	+9	56.1		
19	21	52.2	146	00.3		34.0	290	40.0		52.9	109	23.2		14.8	221	06.9		56.1		
20	36	54.6	160	59.7		34.7	305	43.6		52.9	124	25.0		14.8	236	09.4		56.1		
21	51	57.1	175	59.1		35.5	320	47.1		53.0	139	26.9		14.8	251	11.9		56.1		
22	66	59.6	190	58.5		36.2	335	50.6		53.1	154	28.7		14.8	266	14.4		56.2		
23	82	02.0	205	57.9		36.9	350	54.1		53.1	169	30.6		14.8	281	16.9		56.2		
24	97	04.5	220	57.3	-17	37.6	5	57.7	+26	53.2	184	32.4	-23	14.8	296	19.4	+9	56.2		
Dif	—		-6		-7		+35		+1		+18		0		+25		0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 01 ^m 9			Edad: 19 ^d 3 PHE { 4 ^h : 56/3 12 ^h : 56/0 20 ^h : 55/8 SD: 15/4 PMG: 4 ^h 25 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	35.6	-23	15.7	295	33.4	+6	44.0	60 N	7 10	8 06	9 03	22 50	84	11 04	0
1	194	35.3		15.6	310	07.2 ¹⁴⁸		29.3 ¹⁴⁷	58	7 02	7 55	8 46	50 81		02	3
2	209	35.0		15.5	324	41.0 ¹⁴⁸	+6	14.7 ¹⁴⁶	56	6 55	45	32	51 78	11 00	6	6
3	224	34.7		15.3	339	14.9 ¹⁴⁹	+6	00.0 ¹⁴⁷	54	49	36	19	51 75	10 58	8	6
4	239	34.4		15.2	353	48.9 ¹⁵⁰	+5	45.3 ¹⁴⁷	52	44	27	8 08	52 72	57	10	10
5	254	34.1	-23	15.1	8	22.9 ¹⁵⁰	+5	30.6 ¹⁴⁷	50	6 39	7 20	7 58	22 52	71	10 55	13
6	269	33.8	-23	14.9	22	57.0 ¹⁵¹	+5	15.9 ¹⁴⁷	45	6 27	7 04	7 38	22 53	65	10 52	17
7	284	33.5		14.8	37	31.1 ¹⁵¹	+5	01.2 ¹⁴⁷	40	17	6 51	21	54 61		50	21
8	299	33.2		14.6	52	05.3 ¹⁵²	+4	46.5 ¹⁴⁷	35	6 07	39	7 07	54 58		47	25
9	314	32.9		14.5	66	39.6 ¹⁵³		31.8 ¹⁴⁷	30	5 59	29	6 55	55 55		45	28
10	329	32.6		14.4	81	13.9 ¹⁵³		17.1 ¹⁴⁷	20	42	6 10	34	56 49		42	32
11	344	32.3	-23	14.2	95	48.2 ¹⁵³	+4	02.4 ¹⁴⁷	10 N	5 26	5 53	6 15	22 57	45	10 39	37
12	359	32.0	-23	14.1	110	22.6 ¹⁵⁴	+3	47.7 ¹⁴⁷	0	5 09	5 36	5 58	22 57	41	10 36	41
13	14	31.7		13.9	124	57.1 ¹⁵⁵		33.1 ¹⁴⁶	10 S	4 51	5 18	41	58 37		33	45
14	29	31.4		13.8	139	31.6 ¹⁵⁵		18.4 ¹⁴⁷	20	4 28	4 57	22	22 59	32	29	51
15	44	31.1		13.7	154	06.2 ¹⁵⁶	+3	03.7 ¹⁴⁷	30	3 59	33	5 00	23 00	27	26	55
16	59	30.8		13.5	168	40.8 ¹⁵⁶	+2	49.0 ¹⁴⁷	35	41	4 17	4 47	01 24		23	59
17	74	30.5	-23	13.4	183	15.4 ¹⁵⁶	+2	34.3 ¹⁴⁷	40	3 18	3 59	4 32	23 01	21	10 21	62
18	89	30.2	-23	13.2	197	50.1 ¹⁵⁷	+2	19.7 ¹⁴⁶	45	2 47	3 37	4 14	23 02	17	10 18	67
19	104	29.8		13.1	212	24.8 ¹⁵⁷	+2	05.0 ¹⁴⁷	50	2 02	3 07	3 52	03 12		15	71
20	119	29.5		12.9	226	59.6 ¹⁵⁸	+1	50.3 ¹⁴⁷	52	1 35	2 53	41	03 11		13	74
21	134	29.2		12.8	241	34.4 ¹⁵⁸		35.7 ¹⁴⁶	54	0 51	35	29	04 8		11	77
22	149	28.9		12.6	256	09.3 ¹⁵⁹		21.1 ¹⁴⁶	56	** **	2 13	3 15	04 6		09	79
23	164	28.6		12.5	270	44.1 ¹⁵⁸	+1	06.5 ¹⁴⁶	58	** **	1 44	2 58	05 3		07	82
24	179	28.3	-23	12.3	285	19.1 ¹⁶⁰	+0	51.8 ¹⁴⁷	60 S	** **	0 56	2 38	23 06	**	10 05	85
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 28 ^m 8		Mag: -4.1 PMG: 9 ^h 17 ^m			Mag: -1.6 PMG: 23 ^h 31 ^m			Mag: -1.8 PMG: 11 ^h 40 ^m			Mag: +0.6 PMG: 4 ^h 14 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	97	04.5	220	57.3	-17	37.6	5	57.7	+26	53.2	184	32.4	-23	14.8	296	19.4
1	112	06.9	235	56.7		38.4	21	01.2		53.2	199	34.2		14.8	311	21.9
2	127	09.4	250	56.1		39.1	36	04.7		53.3	214	36.1		14.8	326	24.4
3	142	11.9	265	55.5		39.8	51	08.3		53.3	229	37.9		14.8	341	26.9
4	157	14.3	280	54.9		40.6	66	11.8		53.4	244	39.8		14.7	356	29.4
5	172	16.8	295	54.3	-17	41.3	81	15.3	+26	53.4	259	41.6	-23	14.7	11	31.9
6	187	19.3	310	53.6	-17	42.0	96	18.8	+26	53.5	274	43.4	-23	14.7	26	34.4
7	202	21.7	325	53.0		42.7	111	22.4		53.6	289	45.3		14.7	41	36.9
8	217	24.2	340	52.4		43.4	126	25.9		53.6	304	47.1		14.7	56	39.4
9	232	26.7	355	51.8		44.2	141	29.4		53.7	319	49.0		14.7	71	41.9
10	247	29.1	10	51.2		44.9	156	32.9		53.7	334	50.8		14.7	86	44.4
11	262	31.6	25	50.6	-17	45.6	171	36.4	+26	53.8	349	52.7	-23	14.7	101	46.9
12	277	34.1	40	50.0	-17	46.3	186	40.0	+26	53.8	4	54.5	-23	14.7	116	49.4
13	292	36.5	55	49.4		47.1	201	43.5		53.9	19	56.3		14.7	131	51.9
14	307	39.0	70	48.7		47.8	216	47.0		53.9	34	58.2		14.7	146	54.4
15	322	41.4	85	48.1		48.5	231	50.5		54.0	50	00.0		14.7	161	56.9
16	337	43.9	100	47.5		49.2	246	54.1		54.0	65	01.9		14.7	176	59.4
17	352	46.4	115	46.9	-17	49.9	261	57.6	+26	54.1	80	03.7	-23	14.7	192	01.9
18	7	48.8	130	46.3	-17	50.6	277	01.1	+26	54.1	95	05.5	-23	14.7	207	04.4
19	22	51.3	145	45.6		51.4	292	04.6		54.2	110	07.4		14.6	222	06.9
20	37	53.8	160	45.0		52.1	307	08.1		54.2	125	09.2		14.6	237	09.4
21	52	56.2	175	44.4		52.8	322	11.6		54.3	140	11.1		14.6	252	11.9
22	67	58.7	190	43.8		53.5	337	15.2		54.3	155	12.9		14.6	267	14.5
23	83	01.2	205	43.2		54.2	352	18.7		54.4	170	14.7		14.6	282	17.0
24	98	03.6	220	42.5	-17	54.9	7	22.2	+26	54.4	185	16.6	-23	14.6	297	19.5
Dif	—		-6		-7		+35		+1		+18		0		+25	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 02 ^m 4				Edad: 20 ^d 3 PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 3 20 ^h : 55 ^s 1 R°: 41 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	179	28.3	-23	12.3	285	19.1	+0	51.8	60 N	15 02	15 59	16 55	** ** *		11 04	**				
1	194	28.0		12.2	299	54.0 ¹⁵⁹		37.3 ¹⁴⁵	58	19	16 10	17 03	** ** *		05	2				
2	209	27.7		12.0	314	29.0 ¹⁶⁰		22.7 ¹⁴⁶	56	33	20	09	** ** *		06	5				
3	224	27.4		11.9	329	04.0 ¹⁶⁰	+0	08.1 ¹⁴⁶	54	46	29	15	** ** *		06	8				
4	239	27.1		11.7	343	39.1 ¹⁶¹	-0	06.4 ¹⁴⁵	52	15 57	37	21	** ** *		07	10				
5	254	26.8	-23	11.6	358	14.2 ¹⁶¹	-0	21.0 ¹⁴⁶	50	16 06	16 45	17 26	** ** *		11 08	12				
6	269	26.5	-23	11.4	12	49.3 ¹⁶¹	-0	35.5 ¹⁴⁵	45	16 27	17 01	17 38	23 58	65	11 09	17				
7	284	26.2		11.3	27	24.4 ¹⁶¹	-0	50.0 ¹⁴⁵	40	43	14	48	55	61	11	20				
8	299	25.9		11.1	41	59.6 ¹⁶²	-1	04.5 ¹⁴⁵	35	16 57	25	17 57	52	58	12	24				
9	314	25.6		10.9	56	34.7 ¹⁶¹		18.9 ¹⁴⁴	30	17 10	36	18 06	50	54	13	26				
10	329	25.3		10.8	71	09.9 ¹⁶²		33.4 ¹⁴⁵	20	31	17 55	22	45	50	14	32				
11	344	25.0	-23	10.6	85	45.2 ¹⁶³	-1	47.8 ¹⁴⁴	10 N	17 49	18 12	18 38	23 42	44	11 16	36				
12	359	24.7	-23	10.5	100	20.4 ¹⁶²	-2	02.2 ¹⁴⁴	0	18 06	18 29	18 55	23 38	41	11 17	41				
13	14	24.4		10.3	114	55.7 ¹⁶³		16.6 ¹⁴⁴	10 S	23	18 46	19 14	35	36	18	45				
14	29	24.1		10.1	129	31.0 ¹⁶³		31.0 ¹⁴⁴	20	18 42	19 07	19 36	31	32	20	49				
15	44	23.8		10.0	144	06.3 ¹⁶³		45.3 ¹⁴³	30	19 04	31	20 05	27	27	21	55				
16	59	23.5		09.8	158	41.6 ¹⁶³	-2	59.6 ¹⁴³	35	17	19 46	23	25	24	22	58				
17	74	23.2	-23	09.6	173	16.9 ¹⁶³	-3	13.9 ¹⁴³	40	19 32	20 04	20 46	23 22	21	11 23	61				
18	89	22.9	-23	09.5	187	52.3 ¹⁶⁴	-3	28.1 ¹⁴²	45	19 49	20 27	21 16	23 19	17	11 25	65				
19	104	22.6		09.3	202	27.6 ¹⁶³		42.4 ¹⁴³	50	20 12	20 56	22 00	15	13	26	70				
20	119	22.3		09.1	217	03.0 ¹⁶⁴	-3	56.6 ¹⁴²	52	22	21 11	22 27	14	10	27	72				
21	134	22.0		09.0	231	38.3 ¹⁶³	-4	10.8 ¹⁴²	54	34	28	23 09	12	8	28	74				
22	149	21.7		08.8	246	13.7 ¹⁶⁴		24.9 ¹⁴¹	56	20 48	21 50	** ** *	10	6	28	78				
23	164	21.4		08.6	260	49.1 ¹⁶⁴		39.0 ¹⁴¹	58	21 05	22 18	** ** *	08	3	29	81				
24	179	21.1	-23	08.5	275	24.5 ¹⁶⁴	-4	53.1 ¹⁴¹	60 S	21 25	23 04	** ** *	23 05	0	11 30	84				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 24 ^m 9				Mag: -4.1 PMG: 9 ^h 18 ^m				Mag: -1.5 PMG: 23 ^h 25 ^m				Mag: -1.8 PMG: 11 ^h 37 ^m				Mag: +0.6 PMG: 4 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	98	03.6	220	42.5	-17	54.9	7	22.2	+26	54.4	185	16.6	-23	14.6	297	19.5	+9	56.9		
1	113	06.1	235	41.9		55.6	22	25.7		54.5	200	18.4		14.6	312	22.0		56.9		
2	128	08.5	250	41.3		56.3	37	29.2		54.5	215	20.3		14.6	327	24.5		56.9		
3	143	11.0	265	40.7		57.1	52	32.7		54.6	230	22.1		14.6	342	27.0		56.9		
4	158	13.5	280	40.1		57.8	67	36.2		54.6	245	23.9		14.6	357	29.5		57.0		
5	173	15.9	295	39.4	-17	58.5	82	39.7	+26	54.7	260	25.8	-23	14.6	12	32.0	+9	57.0		
6	188	18.4	310	38.8	-17	59.2	97	43.3	+26	54.7	275	27.6	-23	14.6	27	34.5	+9	57.0		
7	203	20.9	325	38.2	-17	59.9	112	46.8		54.8	290	29.5		14.6	42	37.0		57.1		
8	218	23.3	340	37.6	-18	00.6	127	50.3		54.8	305	31.3		14.5	57	39.5		57.1		
9	233	25.8	355	36.9		01.3	142	53.8		54.9	320	33.2		14.5	72	42.0		57.1		
10	248	28.3	10	36.3		02.0	157	57.3		54.9	335	35.0		14.5	87	44.5		57.1		
11	263	30.7	25	35.7	-18	02.7	173	00.8	+26	55.0	350	36.8	-23	14.5	102	47.0	+9	57.2		
12	278	33.2	40	35.1	-18	03.4	188	04.3	+26	55.0	5	38.7	-23	14.5	117	49.5	+9	57.2		
13	293	35.7	55	34.4		04.1	203	07.8		55.0	20	40.5		14.5	132	52.0		57.2		
14	308	38.1	70	33.8		04.8	218	11.3		55.1	35	42.4		14.5	147	54.6		57.2		
15	323	40.6	85	33.2		05.5	233	14.8		55.1	50	44.2		14.5	162	57.1		57.3		
16	338	43.0	100	32.5		06.2	248	18.3		55.2	65	46.0		14.5	177	59.6		57.3		
17	353	45.5	115	31.9	-18	06.9	263	21.8	+26	55.2	80	47.9	-23	14.5	193	02.1	+9	57.3		
18	8	48.0	130	31.3	-18	07.6	278	25.3	+26	55.3	95	49.7	-23	14.5	208	04.6	+9	57.4		
19	23	50.4	145	30.6		08.3	293	28.8		55.3	110	51.6		14.5	223	07.1		57.4		
20	38	52.9	160	30.0		09.0	308	32.3		55.4	125	53.4		14.5	238	09.6		57.4		
21	53	55.4	175	29.4		09.7	323	35.8		55.4	140	55.2		14.4	253	12.1		57.4		
22	68	57.8	190	28.7		10.4	338	39.3		55.4	155	57.1		14.4	268	14.6		57.5		
23	84	00.3	205	28.1		11.1	353	42.8		55.5	170	58.9		14.4	283	17.1		57.5		
24	99	02.8	220	27.5	-18	11.8	8	46.3	+26	55.5	186	00.8	-23	14.4	298	19.6	+9	57.5		
Dif	—		-6		-7		+35		0		+18		0		+25		0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 02 ^m 8			Edad: 21 ^d 3 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6 SD: 15'0 PMG: 5 ^h 48 ^m R°: 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	21.1	-23	08.5	275	24.5	-4	53.1	60 N	7 10	8 06	9 03	0 14	84	11 03	0
1	194	20.8		08.3	289	59.9 ¹⁶⁴	-5	07.2 ¹⁴¹	58	7 02	7 55	8 46	11 80		07 4	
2	209	20.5		08.1	304	35.3 ¹⁶⁴		21.2 ¹⁴⁰	56	6 56	45	32	09 77		11 6	
3	224	20.2		08.0	319	10.7 ¹⁶⁴		35.2 ¹⁴⁰	54	50	36	19	06 75		14 9	
4	239	19.9		07.8	333	46.1 ¹⁶⁴	-5	49.2 ¹⁴⁰	52	44	28	8 08	04 72		17 12	
5	254	19.6	-23	07.6	348	21.5 ¹⁶⁴	-6	03.1 ¹³⁹	50	6 39	7 20	7 59	0 03	69	11 20	13
6	269	19.3	-23	07.4	2	56.9 ¹⁶⁴	-6	17.0 ¹³⁹	45	6 27	7 04	7 38	** ** *		11 26	18
7	284	19.0		07.3	17	32.3 ¹⁶⁴		30.9 ¹³⁹	40	17	6 51	22	** ** *		31 22	
8	299	18.7		07.1	32	07.7 ¹⁶⁴		44.7 ¹³⁸	35	6 08	40	7 08	** ** *		36 24	
9	314	18.4		06.9	46	43.1 ¹⁶⁴	-6	58.5 ¹³⁸	30	5 59	29	6 56	** ** *		39 28	
10	329	18.1		06.7	61	18.5 ¹⁶⁴	-7	12.3 ¹³⁸	20	43	6 11	35	** ** *		46 33	
11	344	17.8	-23	06.5	75	53.9 ¹⁶⁴	-7	26.0 ¹³⁷	10 N	5 27	5 54	6 16	** ** *		11 52	37
12	359	17.5	-23	06.4	90	29.2 ¹⁶³	-7	39.7 ¹³⁷	0	5 10	5 37	5 59	** ** *		11 58	41
13	14	17.2		06.2	105	04.6 ¹⁶⁴	-7	53.4 ¹³⁷	10 S	4 52	5 19	42	** ** *		12 03	45
14	29	16.9		06.0	119	39.9 ¹⁶³	-8	07.0 ¹³⁶	20	29	4 59	23	** ** *		09 50	
15	44	16.6		05.8	134	15.3 ¹⁶⁴		20.6 ¹³⁶	30	4 01	34	5 01	23 54	29	16 54	
16	59	16.3		05.6	148	50.6 ¹⁶³		34.1 ¹³⁵	35	3 42	19	4 48	49 25		20 57	
17	74	16.0	-23	05.5	163	25.9 ¹⁶³	-8	47.6 ¹³⁵	40	3 19	4 01	4 34	23 43	22	12 24	61
18	89	15.7	-23	05.3	178	01.2 ¹⁶³	-9	01.0 ¹³⁴	45	2 49	3 39	4 16	23 36	19	12 30	64
19	104	15.4		05.1	192	36.5 ¹⁶³		14.4 ¹³⁴	50	2 05	3 09	3 54	28 14		36 70	
20	119	15.1		04.9	207	11.8 ¹⁶³		27.8 ¹³⁴	52	1 38	2 55	43	24 12		39 72	
21	134	14.8		04.7	221	47.0 ¹⁶²		41.1 ¹³³	54	0 56	37	31	20 10		42 75	
22	149	14.5		04.5	236	22.2 ¹⁶²	-9	54.4 ¹³³	56	** ** *	2 15	17	16 6		46 77	
23	164	14.2		04.3	250	57.4 ¹⁶²	-10	07.6 ¹³²	58	** ** *	1 47	3 01	11 3		50 80	
24	179	13.9	-23	04.1	265	32.6 ¹⁶²	-10	20.8 ¹³²	60 S	** ** *	1 01	2 41	23 05	0	12 54	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 21 ^m 0		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: -1.5 PMG: 23 ^h 19 ^m		Mag: -1.8 PMG: 11 ^h 35 ^m		Mag: +0.6 PMG: 4 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	99	02.8	220	27.5	8	46.3	+26	55.5	186	00.8
1	114	05.2	235	26.8	23	49.8		55.6	201	02.6
2	129	07.7	250	26.2	38	53.3		55.6	216	04.5
3	144	10.2	265	25.6	53	56.8		55.6	231	06.3
4	159	12.6	280	24.9	69	00.3		55.7	246	08.1
5	174	15.1	295	24.3	84	03.8	+26	55.7	261	10.0
6	189	17.5	310	23.7	99	07.3	+26	55.8	276	11.8
7	204	20.0	325	23.0	114	10.8		55.8	291	13.7
8	219	22.5	340	22.4	129	14.3		55.9	306	15.5
9	234	24.9	355	21.7	144	17.8		55.9	321	17.3
10	249	27.4	10	21.1	159	21.3		55.9	336	19.2
11	264	29.9	25	20.5	174	24.7	+26	56.0	351	21.0
12	279	32.3	40	19.8	189	28.2	+26	56.0	6	22.9
13	294	34.8	55	19.2	204	31.7		56.1	21	24.7
14	309	37.3	70	18.5	219	35.2		56.1	36	26.6
15	324	39.7	85	17.9	234	38.7		56.1	51	28.4
16	339	42.2	100	17.3	249	42.2		56.2	66	30.2
17	354	44.6	115	16.6	264	45.7	+26	56.2	81	32.1
18	9	47.1	130	16.0	279	49.2	+26	56.2	96	33.9
19	24	49.6	145	15.3	294	52.6		56.3	111	35.8
20	39	52.0	160	14.7	309	56.1		56.3	126	37.6
21	54	54.5	175	14.0	324	59.6		56.4	141	39.4
22	69	57.0	190	13.4	340	03.1		56.4	156	41.3
23	84	59.4	205	12.8	355	06.6		56.4	171	43.1
24	100	01.9	220	12.1	10	10.0	+26	56.5	186	45.0
Dif	—		-6		-7		+35		+18	
							0		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 22 ^d 3	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 03 ^m 3					R°: 41 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	13.9	-23 04.1	265	32.6	-10 20.8	132	60 N	15 04	16 01	16 57	1 38 85	11 03 1		
1	194	13.6	04.0	280	07.8 ¹⁶²	34.0 ¹³²	132	58	21	12	17 05	31 82	11 4		
2	209	13.3	03.8	294	42.9 ¹⁶¹	-10 47.1 ¹³¹	131	56	35	22	11	26 78	17 8		
3	224	13.0	03.6	309	18.0 ¹⁶¹	-11 00.1 ¹³⁰	130	54	48	31	17	21 74	23 11		
4	239	12.7	03.4	323	53.1 ¹⁶¹	13.1 ¹³⁰	130	52	15 59	39	23	16 72	29 13		
5	254	12.4	-23 03.2	338	28.2 ¹⁶¹	-11 26.1 ¹³⁰	130	50	16 08	16 46	17 28	1 12 70	11 33 16		
6	269	12.1	-23 03.0	353	03.2 ¹⁶⁰	-11 39.0 ¹²⁹	129	45	16 28	17 02	17 39	1 03 65	11 44 20		
7	284	11.8	02.8	7	38.2 ¹⁶⁰	-11 51.8 ¹²⁸	128	40	45	15	49	0 56 61	11 53 24		
8	299	11.5	02.6	22	13.2 ¹⁶⁰	-12 04.6 ¹²⁸	128	35	16 59	27	17 58	50 57	12 00 27		
9	314	11.2	02.4	36	48.1 ¹⁵⁹	17.4 ¹²⁸	128	30	17 11	37	18 07	44 55	07 30		
10	329	10.9	02.2	51	23.0 ¹⁵⁹	30.1 ¹²⁷	127	20	32	17 56	23	35 49	19 34		
11	344	10.6	-23 02.0	65	57.9 ¹⁵⁹	-12 42.7 ¹²⁶	126	10 N	17 50	18 13	18 39	0 26 46	12 29 38		
12	359	10.3	-23 01.8	80	32.7 ¹⁵⁸	-12 55.3 ¹²⁶	126	0	18 07	18 30	18 56	0 19 41	12 39 42		
13	14	10.0	01.6	95	07.5 ¹⁵⁸	-13 07.9 ¹²⁶	126	10 S	24	18 47	19 14	11 38	48 46		
14	29	09.7	01.4	109	42.3 ¹⁵⁸	20.3 ¹²⁴	124	20	18 43	19 07	19 36	0 03 33	12 59 50		
15	44	09.4	01.2	124	17.1 ¹⁵⁸	32.8 ¹²⁵	125	30	19 05	32	20 05	** ** *	13 10 55		
16	59	09.2	01.0	138	51.8 ¹⁵⁷	45.2 ¹²⁴	124	35	17	19 47	23	** ** *	17 58		
17	74	08.9	-23 00.8	153	26.4 ¹⁵⁶	-13 57.5 ¹²³	123	40	19 32	20 05	20 46	** ** *	13 25 61		
18	89	08.6	-23 00.6	168	01.0 ¹⁵⁶	-14 09.7 ¹²²	122	45	19 50	20 27	21 16	23 55 22	13 34 66		
19	104	08.3	00.4	182	35.6 ¹⁵⁶	21.9 ¹²²	122	50	20 12	20 56	21 59	42 17	46 70		
20	119	08.0	-23 00.2	197	10.2 ¹⁵⁶	34.1 ¹²²	122	52	22	21 10	22 26	36 15	51 72		
21	134	07.7	-23 00.0	211	44.7 ¹⁵⁵	46.2 ¹²¹	121	54	34	28	23 06	30 12	13 57 75		
22	149	07.4	-22 59.8	226	19.1 ¹⁵⁴	-14 58.2 ¹²⁰	120	56	20 48	21 49	** ** *	22 10	14 03 78		
23	164	07.1	59.6	240	53.5 ¹⁵⁴	-15 10.2 ¹²⁰	120	58	21 04	22 17	** ** *	14 6	10 82		
24	179	06.8	-22 59.4	255	27.9 ¹⁵⁴	-15 22.1 ¹¹⁹	119	60 S	21 24	23 00	** ** *	23 05 2	14 18 87		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 17 ^m 0			Mag: -4.1 PMG: 9 ^h 20 ^m			Mag: -1.5 PMG: 23 ^h 14 ^m			Mag: -1.8 PMG: 11 ^h 32 ^m			Mag: +0.6 PMG: 4 ^h 02 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	100	01.9	220 12.1	-18 28.2	10 10.0	+26 56.5	186 45.0	-23 14.2	299 19.9	+9 58.3					
1	115	04.4	235 11.5	28.9	25 13.5	56.5	201 46.8	14.2	314 22.4	58.3					
2	130	06.8	250 10.8	29.5	40 17.0	56.5	216 48.7	14.2	329 24.9	58.3					
3	145	09.3	265 10.2	30.2	55 20.5	56.6	231 50.5	14.2	344 27.5	58.3					
4	160	11.8	280 09.5	30.9	70 24.0	56.6	246 52.3	14.2	359 30.0	58.4					
5	175	14.2	295 08.9	-18 31.5	85 27.4	+26 56.6	261 54.2	-23 14.2	14 32.5	+9 58.4					
6	190	16.7	310 08.2	-18 32.2	100 30.9	+26 56.7	276 56.0	-23 14.2	29 35.0	+9 58.4					
7	205	19.1	325 07.6	32.9	115 34.4	56.7	291 57.9	14.1	44 37.5	58.5					
8	220	21.6	340 06.9	33.6	130 37.8	56.7	306 59.7	14.1	59 40.0	58.5					
9	235	24.1	355 06.3	34.2	145 41.3	56.8	322 01.5	14.1	74 42.5	58.5					
10	250	26.5	10 05.6	34.9	160 44.8	56.8	337 03.4	14.1	89 45.1	58.6					
11	265	29.0	25 05.0	-18 35.6	175 48.3	+26 56.8	352 05.2	-23 14.1	104 47.6	+9 58.6					
12	280	31.5	40 04.3	-18 36.2	190 51.7	+26 56.9	7 07.1	-23 14.1	119 50.1	+9 58.6					
13	295	33.9	55 03.6	36.9	205 55.2	56.9	22 08.9	14.1	134 52.6	58.7					
14	310	36.4	70 03.0	37.5	220 58.7	56.9	37 10.8	14.1	149 55.1	58.7					
15	325	38.9	85 02.3	38.2	236 02.1	57.0	52 12.6	14.1	164 57.6	58.7					
16	340	41.3	100 01.7	38.9	251 05.6	57.0	67 14.4	14.1	180 00.2	58.8					
17	355	43.8	115 01.0	-18 39.5	266 09.1	+26 57.0	82 16.3	-23 14.0	195 02.7	+9 58.8					
18	10	46.3	130 00.4	-18 40.2	281 12.5	+26 57.1	97 18.1	-23 14.0	210 05.2	+9 58.8					
19	25	48.7	144 59.7	40.9	296 16.0	57.1	112 20.0	14.0	225 07.7	58.8					
20	40	51.2	159 59.1	41.5	311 19.5	57.1	127 21.8	14.0	240 10.2	58.9					
21	55	53.6	174 58.4	42.2	326 22.9	57.1	142 23.7	14.0	255 12.7	58.9					
22	70	56.1	189 57.7	42.8	341 26.4	57.2	157 25.5	14.0	270 15.3	58.9					
23	85	58.6	204 57.1	43.5	356 29.8	57.2	172 27.3	14.0	285 17.8	59.0					
24	101	01.0	219 56.4	-18 44.1	11 33.3	+26 57.2	187 29.2	-23 14.0	300 20.3	+9 59.0					
Dif	—		-7	-7	+35	0	+18	0	+25	0					

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	48.9	48.9	49.0	48.9	48.7	48.4	48.2	47.9	47.8	47.8	47.8	47.9
2 - β Cas	<i>Caph</i>	2.3	357	37.0	37.2	37.3	37.2	36.9	36.5	36.1	35.8	35.6	35.6	35.7	35.9
3 - γ Peg	<i>Algenib</i>	2.8	356	36.1	36.2	36.2	36.1	36.0	35.7	35.5	35.2	35.1	35.1	35.1	35.2
4 - α Phe	<i>Ankaa</i>	2.4	353	20.5	20.6	20.6	20.6	20.4	20.1	19.8	19.6	19.4	19.4	19.4	19.5
5 - α Cas	<i>Schedar</i>	2.2	349	46.6	46.8	46.9	46.8	46.6	46.3	45.9	45.5	45.3	45.2	45.3	45.4
6 - β Cet	<i>Diphda</i>	2.0	348	60.8	60.9	60.9	60.9	60.8	60.5	60.3	60.1	59.9	59.8	59.8	59.9
7 - γ Cas	<i>Navi</i>	1.6	345	43.2	43.4	43.6	43.5	43.3	42.9	42.5	42.1	41.9	41.7	41.8	41.9
8 - β And	<i>Mirach</i>	2.1	342	28.1	28.3	28.3	28.3	28.2	27.9	27.6	27.3	27.2	27.1	27.0	27.1
9 - α Eri	<i>Achernar</i>	0.5	335	30.1	30.3	30.5	30.6	30.5	30.2	29.9	29.5	29.2	29.1	29.1	29.3
10 - γ And	<i>Almak</i>	2.3	328	55.0	55.1	55.2	55.2	55.1	54.9	54.6	54.3	54.0	53.9	53.8	53.8
12 - α Ari	<i>Hamal</i>	2.0	328	6.4	6.5	6.5	6.6	6.5	6.3	6.0	5.7	5.5	5.4	5.3	5.3
11 - α UMi	<i>Polaris</i>	2.0	319	58.5	71.5	82.1	88.4	86.9	78.0	65.2	50.6	37.1	27.6	23.6	26.9
13 - θ Eri	<i>Acamar</i>	3.3	315	21.8	21.9	22.1	22.2	22.2	22.0	21.8	21.5	21.3	21.1	21.0	21.0
14 - α Cet	<i>Menkar</i>	2.5	314	20.1	20.2	20.3	20.3	20.3	20.1	19.9	19.7	19.5	19.3	19.2	19.2
15 - β Per	<i>Algol</i>	2.1	312	50.4	50.5	50.6	50.7	50.7	50.5	50.2	49.9	49.6	49.4	49.3	49.2
16 - α Per	<i>Mirfak</i>	1.8	308	47.3	47.5	47.7	47.8	47.8	47.6	47.2	46.9	46.6	46.3	46.1	46.1
17 - η Tau	<i>Alcyone</i>	2.9	303	1.2	1.3	1.4	1.5	1.5	1.3	1.1	0.9	0.6	0.4	0.2	0.2
18 - γ Eri	<i>Zaurak</i>	3.0	300	24.3	24.4	24.6	24.7	24.7	24.6	24.4	24.2	23.9	23.7	23.6	23.5
19 - α Tau	<i>Aldebaran</i>	0.9	290	54.8	54.9	55.0	55.1	55.1	55.0	54.8	54.6	54.4	54.2	54.0	53.9
20 - β Ori	<i>Rigel</i>	0.1	281	16.5	16.6	16.7	16.8	16.9	16.8	16.7	16.5	16.3	16.0	15.8	15.7
21 - α Aur	<i>Capella</i>	0.1	280	41.4	41.5	41.6	41.8	41.9	41.8	41.6	41.3	41.0	40.7	40.4	40.2
22 - γ Ori	<i>Bellatrix</i>	1.6	278	37.0	37.1	37.2	37.3	37.3	37.3	37.1	36.9	36.7	36.5	36.3	36.2
23 - β Tau	<i>Elnath</i>	1.7	278	18.5	18.6	18.7	18.8	18.9	18.8	18.7	18.4	18.2	17.9	17.7	17.5
24 - δ Ori	<i>Mintaka</i>	2.2	276	54.1	54.2	54.3	54.4	54.5	54.4	54.3	54.1	53.9	53.7	53.5	53.3
25 - ε Ori	<i>Alnilam</i>	1.7	275	51.1	51.1	51.2	51.4	51.4	51.4	51.2	51.1	50.8	50.6	50.4	50.3
26 - ζ Ori	<i>Alnitak</i>	1.9	274	42.9	43.0	43.1	43.2	43.3	43.2	43.1	42.9	42.7	42.5	42.3	42.1
27 - κ Ori	<i>Saiph</i>	2.1	272	58.3	58.3	58.4	58.6	58.6	58.6	58.5	58.3	58.1	57.9	57.7	57.5
28 - α Ori	<i>Betelgeuse</i>	0.4	271	6.3	6.4	6.5	6.6	6.7	6.6	6.5	6.3	6.1	5.9	5.6	5.5
29 - β Aur	<i>Menkalinan</i>	1.9	269	58.8	58.8	59.0	59.2	59.3	59.2	59.1	58.8	58.5	58.2	57.9	57.7
30 - β CMa	<i>Mirzam</i>	2.0	264	14.5	14.5	14.6	14.8	14.9	14.9	14.8	14.6	14.4	14.2	14.0	13.8
31 - α Car	<i>Canopus</i>	-0.7	263	57.8	58.0	58.2	58.5	58.7	58.8	58.7	58.5	58.3	57.9	57.7	57.5
32 - γ Gem	<i>Alhena</i>	1.9	260	27.8	27.8	27.9	28.0	28.1	28.1	28.0	27.8	27.6	27.4	27.1	26.9
33 - α CMa	<i>Sirius</i>	-1.5	258	37.7	37.8	37.9	38.0	38.1	38.1	38.1	37.9	37.7	37.5	37.3	37.1
34 - ε CMa	<i>Adhara</i>	1.5	255	16.0	16.1	16.2	16.4	16.5	16.5	16.5	16.3	16.1	15.9	15.7	15.5
35 - δ CMa	<i>Wezen</i>	1.9	252	49.4	49.4	49.6	49.7	49.8	49.9	49.8	49.7	49.5	49.3	49.0	48.8
36 - η CMa	<i>Aludra</i>	2.5	248	54.0	54.0	54.1	54.3	54.4	54.5	54.4	54.3	54.1	53.9	53.6	53.4
37 - α Gem	<i>Castor</i>	2.0	246	13.8	13.7	13.8	13.9	14.1	14.1	14.0	13.9	13.7	13.4	13.1	12.9
38 - α CMi	<i>Procyon</i>	0.4	245	4.5	4.5	4.6	4.7	4.8	4.8	4.8	4.7	4.5	4.3	4.0	3.8
39 - β Gem	<i>Pollux</i>	1.1	243	33.3	33.3	33.3	33.5	33.6	33.6	33.6	33.4	33.2	33.0	32.7	32.5
40 - ζ Pup	<i>Naos</i>	2.3	239	2.1	2.1	2.2	2.4	2.6	2.7	2.7	2.6	2.4	2.2	1.9	1.7
41 - γ Vel	<i>Regor</i>	1.8	237	33.3	33.3	33.4	33.6	33.8	34.0	34.0	33.9	33.8	33.5	33.2	32.9
42 - ε Car	<i>Avior</i>	1.9	234	19.6	19.6	19.8	20.1	20.4	20.6	20.7	20.7	20.5	20.1	19.7	19.4
43 - δ Velorum		2.0	228	46.1	46.0	46.2	46.4	46.6	46.8	46.9	46.9	46.7	46.5	46.1	45.8
44 - ζ Hydrae		3.1	226	3.1	3.0	3.1	3.2	3.3	3.3	3.3	3.2	3.1	2.9	2.7	2.4
45 - λ Vel	<i>Suhail</i>	2.2	222	55.8	55.7	55.8	55.9	56.1	56.2	56.3	56.3	56.2	56.0	55.7	55.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.3	40.2	40.4	40.8	41.2	41.6	41.9	42.0	41.8	41.4	40.9	40.4
47 - ι Car	<i>Aspidiske</i>	2.3	220	40.4	40.3	40.4	40.6	40.9	41.2	41.3	41.3	41.2	40.9	40.5	40.2
48 - α Lyn	<i>Elvashak</i>	3.1	219	37.3	37.1	37.1	37.2	37.4	37.5	37.5	37.4	37.3	37.1	36.8	36.5
49 - α Hyd	<i>Alphard</i>	2.0	218	0.7	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.5	0.3	0.0
50 - α Leo	<i>Regulus</i>	1.4	207	48.4	48.3	48.3	48.3	48.4	48.5	48.5	48.5	48.4	48.3	48.1	47.8

ESTRELLAS, 2007
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	7.9	7.8	7.8	7.7	7.7	7.8	7.9	8.0	8.1	8.2	8.3	8.3
2 - β Cas	<i>Caph</i>	2.3	+59	11.6	11.5	11.4	11.3	11.2	11.2	11.3	11.4	11.6	11.8	11.9	12.0
3 - γ Peg	<i>Algenib</i>	2.8	+15	13.4	13.4	13.3	13.3	13.4	13.4	13.5	13.7	13.7	13.8	13.8	13.8
4 - α Phe	<i>Ankaa</i>	2.4	-42	16.3	16.2	16.1	16.0	15.8	15.7	15.6	15.6	15.6	15.7	15.9	15.9
5 - α Cas	<i>Schedar</i>	2.2	+56	34.9	34.8	34.7	34.5	34.5	34.5	34.5	34.7	34.8	35.0	35.1	35.2
6 - β Cet	<i>Diphda</i>	2.0	-17	57.0	57.0	56.9	56.8	56.7	56.6	56.5	56.4	56.4	56.5	56.5	56.6
7 - γ Cas	<i>Navi</i>	1.6	+60	45.6	45.5	45.4	45.3	45.2	45.2	45.3	45.4	45.5	45.7	45.9	45.9
8 - β And	<i>Mirach</i>	2.1	+35	39.7	39.6	39.6	39.5	39.4	39.5	39.6	39.7	39.8	39.9	40.0	40.0
9 - α Eri	<i>Achernar</i>	0.5	-57	12.3	12.3	12.1	12.0	11.8	11.6	11.5	11.5	11.5	11.7	11.8	11.9
10 - γ And	<i>Almak</i>	2.3	+42	22.1	22.0	22.0	21.9	21.8	21.8	21.9	21.9	22.1	22.2	22.3	22.4
12 - α Ari	<i>Hamal</i>	2.0	+23	29.9	29.9	29.8	29.8	29.8	29.8	29.9	30.0	30.1	30.1	30.2	30.2
11 - α UMi	<i>Polaris</i>	2.0	+89	18.1	18.1	18.1	17.9	17.8	17.7	17.6	17.6	17.7	17.9	18.1	18.3
13 - θ Eri	<i>Acamar</i>	3.3	-40	16.7	16.8	16.7	16.6	16.4	16.3	16.1	16.0	16.0	16.1	16.3	16.4
14 - α Cet	<i>Menkar</i>	2.5	+4	7.1	7.1	7.1	7.1	7.1	7.2	7.3	7.4	7.4	7.4	7.4	7.4
15 - β Per	<i>Algol</i>	2.1	+40	59.2	59.2	59.2	59.1	59.0	59.0	59.0	59.1	59.2	59.3	59.3	59.4
16 - α Per	<i>Mirfak</i>	1.8	+49	53.5	53.5	53.4	53.4	53.3	53.2	53.2	53.2	53.3	53.4	53.5	53.6
17 - η Tau	<i>Alcyone</i>	2.9	+24	7.8	7.8	7.8	7.7	7.7	7.7	7.7	7.8	7.9	7.9	7.9	8.0
18 - γ Eri	<i>Zaurak</i>	3.0	-13	29.3	29.4	29.4	29.3	29.2	29.1	29.0	28.9	28.9	28.9	29.0	29.1
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.5	31.5	31.5	31.5	31.5	31.5	31.6	31.6	31.6	31.7	31.7	31.7
20 - β Ori	<i>Rigel</i>	0.1	-8	11.6	11.6	11.6	11.6	11.6	11.5	11.4	11.3	11.3	11.3	11.3	11.4
21 - α Aur	<i>Capella</i>	0.1	+46	0.5	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.4	21.4	21.4	21.4	21.4	21.5	21.5	21.6	21.6	21.6	21.6	21.5
23 - β Tau	<i>Elnath</i>	1.7	+28	36.9	37.0	37.0	37.0	36.9	36.9	36.9	36.9	36.9	36.9	36.9	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	17.3	17.4	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.8	11.9	11.8	11.8	11.7	11.7	11.6	11.6	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.3	56.3	56.3	56.3	56.2	56.2	56.1	56.0	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.0	39.9	39.8	39.8	39.7	39.7	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.6	24.5	24.5	24.5	24.6	24.6	24.6	24.7	24.7	24.7	24.7	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.1	57.0	56.9	56.9	56.9	56.9	56.9	57.0
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.7	57.7	57.6	57.5	57.4	57.3	57.2	57.3	57.3	57.5
31 - α Car	<i>Canopus</i>	-0.7	-52	42.0	42.1	42.2	42.2	42.1	41.9	41.8	41.6	41.5	41.6	41.7	41.8
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.6
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.5	43.6	43.7	43.7	43.6	43.5	43.4	43.3	43.3	43.3	43.4	43.5
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	58.9	59.0	59.1	59.1	59.0	58.9	58.8	58.7	58.6	58.6	58.7	58.8
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.2	24.3	24.4	24.4	24.4	24.3	24.2	24.0	24.0	24.0	24.1	24.2
36 - η CMa	<i>Aludra</i>	2.5	-29	19.0	19.1	19.2	19.2	19.1	19.1	18.9	18.8	18.7	18.7	18.8	18.9
37 - α Gem	<i>Castor</i>	2.0	+31	52.4	52.5	52.5	52.5	52.5	52.5	52.4	52.4	52.4	52.3	52.3	52.2
38 - α CMi	<i>Procyon</i>	0.4	+5	12.5	12.4	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.3
39 - β Gem	<i>Pollux</i>	1.1	+28	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4
40 - ζ Pup	<i>Naos</i>	2.3	-40	1.3	1.5	1.6	1.6	1.6	1.5	1.4	1.3	1.2	1.1	1.2	1.3
41 - γ Vel	<i>Regor</i>	1.8	-47	21.3	21.5	21.6	21.7	21.7	21.6	21.5	21.3	21.2	21.2	21.2	21.4
42 - ϵ Car	<i>Avior</i>	1.9	-59	31.8	32.0	32.1	32.2	32.2	32.1	32.0	31.8	31.7	31.7	31.7	31.8
43 - δ Velorum		2.0	-54	43.9	44.1	44.3	44.4	44.4	44.3	44.2	44.0	43.9	43.9	43.9	44.0
44 - ζ Hydrae		3.1	+5	55.1	55.1	55.0	55.0	55.1	55.1	55.1	55.1	55.1	55.1	55.0	54.9
45 - λ Vel	<i>Suhail</i>	2.2	-43	27.5	27.7	27.9	27.9	28.0	27.9	27.8	27.7	27.5	27.5	27.5	27.6
46 - β Car	<i>Miaplacidus</i>	1.7	-69	44.6	44.8	44.9	45.1	45.1	45.1	45.0	44.8	44.7	44.6	44.6	44.7
47 - ι Car	<i>Aspidiske</i>	2.3	-59	18.1	18.3	18.5	18.6	18.6	18.6	18.5	18.3	18.2	18.1	18.1	18.2
48 - α Lyn	<i>Elvashak</i>	3.1	+34	21.7	21.7	21.8	21.8	21.9	21.8	21.8	21.7	21.7	21.6	21.5	21.4
49 - α Hyd	<i>Alphard</i>	2.0	-8	41.3	41.4	41.5	41.5	41.5	41.5	41.4	41.4	41.3	41.3	41.4	41.5
50 - α Leo	<i>Regulus</i>	1.4	+11	55.9	55.8	55.8	55.9	55.9	55.9	55.9	55.9	55.9	55.8	55.7	55.6

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	13.7	13.5	13.4	13.5	13.7	13.8	14.0	14.0	14.0	13.9	13.6	13.2
52 - ν	Hydrae	3.1	197	30.2	30.0	29.9	30.0	30.1	30.1	30.2	30.2	30.2	30.1	29.8	29.6
53 - β	UMa Merak	2.4	194	25.4	25.1	25.0	25.1	25.3	25.5	25.6	25.7	25.7	25.5	25.2	24.8
54 - α	UMa Dubhe	1.8	193	56.9	56.6	56.5	56.6	56.8	57.0	57.2	57.3	57.3	57.1	56.8	56.3
55 - β	Leo Denebola	2.1	182	38.5	38.3	38.2	38.2	38.2	38.3	38.3	38.4	38.4	38.3	38.1	37.9
56 - γ	Crv Gienah	2.6	175	57.3	57.1	57.0	57.0	57.0	57.0	57.1	57.2	57.2	57.2	57.0	56.7
57 - α	Cru Acrux	1.4	173	15.1	14.7	14.5	14.5	14.6	14.7	15.0	15.2	15.4	15.3	15.0	14.6
58 - γ	Cru Gacrux	1.6	172	6.6	6.3	6.1	6.0	6.1	6.2	6.4	6.6	6.7	6.7	6.4	6.1
59 - γ	Cen Muhlifain	2.2	169	31.4	31.1	30.9	30.8	30.8	30.9	31.1	31.2	31.3	31.3	31.1	30.8
60 - β	Cru Mimosa	1.3	167	58.0	57.6	57.4	57.3	57.4	57.5	57.7	57.9	58.1	58.0	57.8	57.4
61 - ε	UMa Alioth	1.8	166	24.6	24.2	24.0	24.0	24.0	24.2	24.4	24.6	24.7	24.7	24.6	24.3
62 - α^2	CVn Cor Caroli	2.9	165	54.4	54.2	54.0	53.9	54.0	54.0	54.2	54.3	54.4	54.3	54.2	54.0
63 - ε	Vir Vindemiatrix	2.8	164	22.0	21.7	21.6	21.5	21.5	21.6	21.6	21.7	21.8	21.7	21.6	21.4
64 - ζ	UMa Mizar	2.3	158	56.6	56.3	56.0	55.9	56.0	56.1	56.3	56.5	56.7	56.7	56.6	56.3
65 - α	Vir Spica	1.0	158	36.5	36.2	36.1	36.0	36.0	36.0	36.0	36.1	36.2	36.2	36.1	35.9
66 - η	UMa Alkaid	1.9	153	2.6	2.3	2.0	1.9	1.9	2.0	2.2	2.3	2.5	2.6	2.5	2.3
67 - β	Cen Hadar	0.6	148	55.3	54.9	54.6	54.4	54.3	54.3	54.5	54.8	55.0	55.0	54.9	54.6
68 - θ	Cen Menkent	2.1	148	13.6	13.3	13.1	12.9	12.9	12.9	13.0	13.1	13.2	13.2	13.1	12.9
69 - α	Boo Arcturus	0.0	145	60.2	60.0	59.8	59.7	59.6	59.6	59.7	59.8	59.9	60.0	59.9	59.7
70 - α^1	Cen Rigel Kentaurus	0.0	139	59.1	58.6	58.3	58.0	57.9	57.9	58.1	58.4	58.6	58.7	58.6	58.3
71 - α^2	Lib Zubenelgenubi	2.8	137	11.1	10.8	10.6	10.4	10.3	10.3	10.3	10.4	10.5	10.6	10.5	10.4
72 - β	UMi Kochab	2.1	137	19.7	19.0	18.5	18.1	18.1	18.4	18.8	19.4	20.0	20.4	20.5	20.3
73 - β	Lib Zubeneschamali	2.6	130	39.3	39.0	38.8	38.7	38.6	38.5	38.5	38.6	38.7	38.8	38.8	38.6
74 - α	CrB Alphecca	2.2	126	15.3	15.0	14.8	14.6	14.5	14.5	14.6	14.7	14.8	14.9	14.9	14.8
75 - α	Ser Unukalhai	2.7	123	50.9	50.6	50.4	50.2	50.1	50.1	50.1	50.2	50.3	50.4	50.4	50.3
76 - α	Sco Antares	0.9	112	32.6	32.3	32.1	31.9	31.7	31.6	31.6	31.6	31.8	31.9	31.9	31.8
77 - α	TrA Atria	1.9	107	39.5	38.9	38.3	37.8	37.4	37.1	37.1	37.4	37.8	38.1	38.2	38.1
78 - ε	Scorpii	2.3	107	21.0	20.7	20.4	20.1	19.9	19.8	19.8	19.9	20.0	20.1	20.2	20.1
79 - η	Oph Sabik	2.4	102	18.5	18.3	18.0	17.8	17.6	17.5	17.4	17.5	17.6	17.7	17.8	17.7
80 - α	Her Rasalgethi	3.1	101	15.7	15.5	15.3	15.0	14.9	14.8	14.7	14.8	14.9	15.1	15.1	15.1
81 - λ	Sco Shaula	1.6	96	29.0	28.7	28.5	28.2	27.9	27.8	27.7	27.7	27.9	28.0	28.1	28.0
82 - α	Oph Rasalhague	2.1	96	11.3	11.1	10.9	10.7	10.5	10.4	10.3	10.4	10.5	10.6	10.7	10.7
83 - θ	Sco Sargas	1.9	95	33.0	32.7	32.4	32.1	31.8	31.6	31.5	31.6	31.8	31.9	32.0	31.9
84 - γ	Dra Eltanin	2.2	90	48.9	48.7	48.4	48.1	47.9	47.7	47.7	47.9	48.1	48.4	48.6	48.6
85 - ε	Sgr Kaus Australis	1.9	83	50.7	50.5	50.2	50.0	49.7	49.5	49.4	49.4	49.5	49.7	49.8	49.7
86 - α	Lyr Vega	0.0	80	42.7	42.6	42.3	42.1	41.8	41.7	41.6	41.7	41.8	42.0	42.2	42.2
87 - σ	Sgr Nunki	2.0	76	4.8	4.6	4.4	4.1	3.8	3.6	3.5	3.5	3.6	3.7	3.8	3.8
88 - α	Aql Altair	0.8	62	13.4	13.3	13.1	12.9	12.7	12.4	12.3	12.3	12.3	12.5	12.6	12.6
89 - γ	Cyg Sadr	2.2	54	23.2	23.2	23.0	22.8	22.5	22.2	22.1	22.1	22.1	22.3	22.5	22.6
90 - α	Pav Peacock	1.9	53	27.4	27.2	27.0	26.6	26.2	25.8	25.5	25.4	25.5	25.7	25.9	26.1
91 - α	Cyg Deneb	1.3	49	35.4	35.4	35.2	35.0	34.7	34.4	34.2	34.2	34.3	34.4	34.6	34.8
92 - α	Cep Alderamin	2.4	40	19.6	19.7	19.5	19.2	18.8	18.4	18.1	18.1	18.2	18.4	18.7	19.0
93 - ε	Peg Enif	0.7	33	52.3	52.2	52.1	52.0	51.8	51.5	51.3	51.2	51.2	51.2	51.3	51.4
94 - δ	Cap Deneb Algedi	2.9	33	8.8	8.7	8.6	8.4	8.2	8.0	7.7	7.6	7.6	7.6	7.7	7.8
95 - α	Gru Al Na'ir	1.7	27	50.1	50.0	49.9	49.7	49.4	49.1	48.8	48.6	48.6	48.7	48.8	49.0
96 - β	Gruis	2.1	19	13.8	13.9	13.8	13.6	13.3	13.0	12.7	12.5	12.4	12.5	12.6	12.8
97 - α	PsA Fomalhaut	1.2	15	29.5	29.5	29.5	29.3	29.1	28.9	28.6	28.4	28.3	28.3	28.4	28.5
98 - β	Peg Scheat	2.4	13	58.5	58.5	58.5	58.4	58.2	57.9	57.6	57.5	57.4	57.4	57.5	57.6
99 - α	Peg Markab	2.5	13	43.5	43.5	43.5	43.4	43.2	42.9	42.7	42.5	42.4	42.4	42.5	42.6

ESTRELLAS, 2007
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	27.3	27.5	27.6	27.8	27.8	27.8	27.8	27.7	27.5	27.4	27.4	27.5
52 - ν	Hydrae	3.1	-16	13.8	13.9	14.0	14.1	14.1	14.1	14.0	14.0	13.9	13.9	13.9	14.0
53 - β	UMa Merak	2.4	+56	20.4	20.5	20.6	20.7	20.8	20.8	20.8	20.6	20.5	20.3	20.2	20.1
54 - α	UMa Dubhe	1.8	+61	42.5	42.6	42.7	42.8	42.9	42.9	42.9	42.7	42.6	42.4	42.2	42.2
55 - β	Leo Denebola	2.1	+14	31.8	31.7	31.7	31.8	31.8	31.9	31.9	31.9	31.8	31.8	31.7	31.5
56 - γ	Crv Gienah	2.6	-17	34.9	35.0	35.1	35.1	35.2	35.2	35.1	35.1	35.0	35.0	35.0	35.1
57 - α	Cru Acrux	1.4	-63	8.1	8.2	8.4	8.6	8.7	8.8	8.8	8.7	8.6	8.4	8.4	8.3
58 - γ	Cru Gacrux	1.6	-57	8.9	9.1	9.3	9.4	9.6	9.6	9.6	9.6	9.4	9.3	9.2	9.2
59 - γ	Cen Muhlifain	2.2	-48	59.7	59.9	60.0	60.2	60.3	60.4	60.4	60.3	60.2	60.1	60.0	60.0
60 - β	Cru Mimosas	1.3	-59	43.4	43.6	43.7	43.9	44.0	44.1	44.1	44.1	43.9	43.8	43.7	43.7
61 - ϵ	UMa Alioth	1.8	+55	54.9	54.9	55.0	55.1	55.3	55.4	55.4	55.3	55.2	55.0	54.8	54.7
62 - α^2	CVn Cor Caroli	2.9	+38	16.5	16.5	16.5	16.6	16.7	16.8	16.8	16.8	16.7	16.6	16.4	16.3
63 - ϵ	Vir Vindemiatrix	2.8	+10	55.1	55.0	55.0	55.0	55.1	55.1	55.2	55.2	55.1	55.1	55.0	54.9
64 - ζ	UMa Mizar	2.3	+54	52.9	52.9	53.0	53.1	53.3	53.4	53.4	53.3	53.2	53.1	52.9	52.7
65 - α	Vir Spica	1.0	-11	11.9	12.0	12.1	12.2	12.2	12.2	12.1	12.1	12.1	12.1	12.1	12.2
66 - η	UMa Alkaid	1.9	+49	16.3	16.3	16.3	16.4	16.6	16.7	16.7	16.7	16.6	16.5	16.3	16.1
67 - β	Cen Hadar	0.6	-60	24.2	24.3	24.4	24.6	24.7	24.9	24.9	24.9	24.8	24.7	24.6	24.5
68 - θ	Cen Menkent	2.1	-36	24.2	24.3	24.4	24.5	24.6	24.7	24.7	24.6	24.6	24.5	24.5	24.5
69 - α	Boo Arcturus	0.0	+19	8.5	8.4	8.4	8.4	8.5	8.6	8.6	8.7	8.6	8.6	8.4	8.3
70 - α^1	Cen Rigil Kentaurus	0.0	-60	51.7	51.8	51.9	52.0	52.2	52.3	52.3	52.3	52.3	52.2	52.0	52.0
71 - α^2	Lib Zubenelgenubi	2.8	-16	4.3	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
72 - β	UMi Kochab	2.1	+74	7.2	7.1	7.2	7.3	7.5	7.6	7.7	7.7	7.6	7.4	7.2	7.0
73 - β	Lib Zubeneshamali	2.6	-9	24.6	24.7	24.8	24.8	24.8	24.8	24.7	24.7	24.7	24.7	24.7	24.8
74 - α	CrB Alphecca	2.2	+26	41.2	41.1	41.1	41.1	41.2	41.3	41.4	41.5	41.4	41.4	41.3	41.1
75 - α	Ser Unukalhai	2.7	+6	24.0	23.9	23.9	23.9	24.0	24.0	24.1	24.1	24.1	24.1	24.0	23.9
76 - α	Sco Antares	0.9	-26	26.9	26.9	27.0	27.0	27.1	27.1	27.1	27.1	27.1	27.1	27.0	27.0
77 - α	TrA Atria	1.9	-69	2.3	2.3	2.3	2.4	2.5	2.6	2.8	2.8	2.8	2.8	2.7	2.5
78 - ϵ	Scorpii	2.3	-34	18.4	18.4	18.4	18.5	18.5	18.6	18.6	18.6	18.6	18.6	18.5	18.5
79 - η	Oph Sabik	2.4	-15	44.1	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.1	44.1	44.1	44.2
80 - α	Her Rasalgethi	3.1	+14	22.7	22.6	22.6	22.6	22.7	22.8	22.9	22.9	23.0	23.0	22.9	22.8
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.8	6.7	6.7	6.7
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	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3
84 - γ	Dra Eltanin	2.2	+51	29.0	28.9	28.8	28.8	29.0	29.1	29.3	29.4	29.5	29.5	29.4	29.2
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	22.9	22.9	22.9	22.9	22.9	23.0	23.0	23.0	23.0	23.0	23.0
86 - α	Lyr Vega	0.0	+38	47.2	47.1	47.0	47.0	47.1	47.3	47.4	47.5	47.6	47.6	47.6	47.4
87 - σ	Sgr Nunki	2.0	-26	17.4	17.4	17.4	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3	17.3
88 - α	Aql Altair	0.8	+8	53.1	53.0	53.0	53.0	53.1	53.2	53.3	53.4	53.4	53.4	53.4	53.3
89 - γ	Cyg Sadr	2.2	+40	16.7	16.5	16.4	16.4	16.5	16.6	16.8	16.9	17.1	17.1	17.1	17.0
90 - α	Pav Peacock	1.9	-56	42.9	42.8	42.7	42.6	42.5	42.5	42.6	42.7	42.8	42.9	42.9	42.8
91 - α	Cyg Deneb	1.3	+45	18.3	18.1	18.0	18.0	18.0	18.2	18.3	18.5	18.6	18.7	18.7	18.7
92 - α	Cep Alderamin	2.4	+62	37.0	36.8	36.7	36.6	36.6	36.7	36.9	37.1	37.3	37.4	37.4	37.4
93 - ϵ	Peg Enif	0.7	+9	54.4	54.3	54.3	54.3	54.3	54.5	54.6	54.7	54.7	54.8	54.8	54.7
94 - δ	Cap Deneb Algedi	2.9	-16	5.9	5.9	5.8	5.7	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.5
95 - α	Gru Al Na'ir	1.7	-46	55.8	55.7	55.6	55.5	55.4	55.3	55.3	55.3	55.4	55.5	55.6	55.6
96 - β	Gruis	2.1	-46	51.1	51.0	50.9	50.7	50.6	50.5	50.5	50.5	50.6	50.7	50.8	50.8
97 - α	PsA Fomalhaut	1.2	-29	35.3	35.2	35.1	35.0	34.9	34.8	34.7	34.7	34.8	34.8	34.9	34.9
98 - β	Peg Scheat	2.4	+28	7.3	7.3	7.2	7.1	7.1	7.2	7.4	7.5	7.6	7.7	7.8	7.8
99 - α	Peg Markab	2.5	+15	14.6	14.5	14.5	14.5	14.5	14.6	14.7	14.9	15.0	15.0	15.0	15.0

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

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

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2007

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	-32.2	26 00	-40.8	52 00	-41.2	78 00	-33.2	104 00	-18.5	130 00	0.0	156 00	+18.4
0 30	-32.4	26 30	-40.9	52 30	-41.1	78 30	-32.9	104 30	-18.1	130 30	+0.3	156 30	+18.7
1 00	-32.7	27 00	-41.0	53 00	-41.0	79 00	-32.7	105 00	-17.8	131 00	+0.7	157 00	+19.1
1 30	-32.9	27 30	-41.1	53 30	-40.9	79 30	-32.5	105 30	-17.5	131 30	+1.1	157 30	+19.4
2 00	-33.1	28 00	-41.1	54 00	-40.8	80 00	-32.3	106 00	-17.1	132 00	+1.4	158 00	+19.7
2 30	-33.4	28 30	-41.2	54 30	-40.7	80 30	-32.0	106 30	-16.8	132 30	+1.8	158 30	+20.0
3 00	-33.6	29 00	-41.3	55 00	-40.6	81 00	-31.8	107 00	-16.5	133 00	+2.2	159 00	+20.4
3 30	-33.8	29 30	-41.4	55 30	-40.5	81 30	-31.5	107 30	-16.1	133 30	+2.5	159 30	+20.7
4 00	-34.0	30 00	-41.4	56 00	-40.4	82 00	-31.3	108 00	-15.8	134 00	+2.9	160 00	+21.0
4 30	-34.2	30 30	-41.5	56 30	-40.3	82 30	-31.0	108 30	-15.5	134 30	+3.3	160 30	+21.3
5 00	-34.4	31 00	-41.5	57 00	-40.2	83 00	-30.8	109 00	-15.1	135 00	+3.6	161 00	+21.6
5 30	-34.6	31 30	-41.6	57 30	-40.1	83 30	-30.5	109 30	-14.8	135 30	+4.0	161 30	+21.9
6 00	-34.9	32 00	-41.7	58 00	-40.0	84 00	-30.3	110 00	-14.4	136 00	+4.4	162 00	+22.3
6 30	-35.1	32 30	-41.7	58 30	-39.9	84 30	-30.0	110 30	-14.1	136 30	+4.7	162 30	+22.6
7 00	-35.3	33 00	-41.7	59 00	-39.8	85 00	-29.8	111 00	-13.7	137 00	+5.1	163 00	+22.9
7 30	-35.5	33 30	-41.8	59 30	-39.7	85 30	-29.5	111 30	-13.4	137 30	+5.5	163 30	+23.2
8 00	-35.7	34 00	-41.8	60 00	-39.5	86 00	-29.3	112 00	-13.0	138 00	+5.8	164 00	+23.5
8 30	-35.8	34 30	-41.9	60 30	-39.4	86 30	-29.0	112 30	-12.7	138 30	+6.2	164 30	+23.8
9 00	-36.0	35 00	-41.9	61 00	-39.3	87 00	-28.7	113 00	-12.3	139 00	+6.5	165 00	+24.1
9 30	-36.2	35 30	-41.9	61 30	-39.2	87 30	-28.5	113 30	-12.0	139 30	+6.9	165 30	+24.4
10 00	-36.4	36 00	-42.0	62 00	-39.0	88 00	-28.2	114 00	-11.6	140 00	+7.3	166 00	+24.7
10 30	-36.6	36 30	-42.0	62 30	-38.9	88 30	-27.9	114 30	-11.3	140 30	+7.6	166 30	+25.0
11 00	-36.8	37 00	-42.0	63 00	-38.7	89 00	-27.6	115 00	-10.9	141 00	+8.0	167 00	+25.3
11 30	-37.0	37 30	-42.0	63 30	-38.6	89 30	-27.4	115 30	-10.6	141 30	+8.3	167 30	+25.6
12 00	-37.1	38 00	-42.0	64 00	-38.4	90 00	-27.1	116 00	-10.2	142 00	+8.7	168 00	+25.9
12 30	-37.3	38 30	-42.1	64 30	-38.3	90 30	-26.8	116 30	-9.9	142 30	+9.1	168 30	+26.2
13 00	-37.5	39 00	-42.1	65 00	-38.1	91 00	-26.5	117 00	-9.5	143 00	+9.4	169 00	+26.4
13 30	-37.6	39 30	-42.1	65 30	-38.0	91 30	-26.2	117 30	-9.1	143 30	+9.8	169 30	+26.7
14 00	-37.8	40 00	-42.1	66 00	-37.8	92 00	-25.9	118 00	-8.8	144 00	+10.1	170 00	+27.0
14 30	-38.0	40 30	-42.1	66 30	-37.7	92 30	-25.6	118 30	-8.4	144 30	+10.5	170 30	+27.3
15 00	-38.1	41 00	-42.1	67 00	-37.5	93 00	-25.3	119 00	-8.1	145 00	+10.8	171 00	+27.6
15 30	-38.3	41 30	-42.1	67 30	-37.3	93 30	-25.1	119 30	-7.7	145 30	+11.2	171 30	+27.8
16 00	-38.4	42 00	-42.0	68 00	-37.2	94 00	-24.8	120 00	-7.3	146 00	+11.6	172 00	+28.1
16 30	-38.6	42 30	-42.0	68 30	-37.0	94 30	-24.5	120 30	-7.0	146 30	+11.9	172 30	+28.4
17 00	-38.7	43 00	-42.0	69 00	-36.8	95 00	-24.2	121 00	-6.6	147 00	+12.3	173 00	+28.7
17 30	-38.9	43 30	-42.0	69 30	-36.6	95 30	-23.9	121 30	-6.3	147 30	+12.6	173 30	+28.9
18 00	-39.0	44 00	-42.0	70 00	-36.5	96 00	-23.6	122 00	-5.9	148 00	+13.0	174 00	+29.2
18 30	-39.1	44 30	-41.9	70 30	-36.3	96 30	-23.3	122 30	-5.5	148 30	+13.3	174 30	+29.5
19 00	-39.3	45 00	-41.9	71 00	-36.1	97 00	-22.9	123 00	-5.2	149 00	+13.7	175 00	+29.7
19 30	-39.4	45 30	-41.9	71 30	-35.9	97 30	-22.6	123 30	-4.8	149 30	+14.0	175 30	+30.0
20 00	-39.5	46 00	-41.8	72 00	-35.7	98 00	-22.3	124 00	-4.4	150 00	+14.4	176 00	+30.2
20 30	-39.6	46 30	-41.8	72 30	-35.5	98 30	-22.0	124 30	-4.1	150 30	+14.7	176 30	+30.5
21 00	-39.8	47 00	-41.8	73 00	-35.3	99 00	-21.7	125 00	-3.7	151 00	+15.0	177 00	+30.7
21 30	-39.9	47 30	-41.7	73 30	-35.1	99 30	-21.4	125 30	-3.3	151 30	+15.4	177 30	+31.0
22 00	-40.0	48 00	-41.7	74 00	-34.9	100 00	-21.1	126 00	-3.0	152 00	+15.7	178 00	+31.2
22 30	-40.1	48 30	-41.6	74 30	-34.7	100 30	-20.8	126 30	-2.6	152 30	+16.1	178 30	+31.5
23 00	-40.2	49 00	-41.6	75 00	-34.5	101 00	-20.4	127 00	-2.2	153 00	+16.4	179 00	+31.7
23 30	-40.3	49 30	-41.5	75 30	-34.3	101 30	-20.1	127 30	-1.9	153 30	+16.7	179 30	+32.0
24 00	-40.4	50 00	-41.4	76 00	-34.1	102 00	-19.8	128 00	-1.5	154 00	+17.1	180 00	+32.2
24 30	-40.5	50 30	-41.4	76 30	-33.8	102 30	-19.5	128 30	-1.1	154 30	+17.4	180 30	+32.4
25 00	-40.6	51 00	-41.3	77 00	-33.6	103 00	-19.1	129 00	-0.8	155 00	+17.7	181 00	+32.7
25 30	-40.7	51 30	-41.2	77 30	-33.4	103 30	-18.8	129 30	-0.4	155 30	+18.1	181 30	+32.9
26 00	-40.8	52 00	-41.2	78 00	-33.2	104 00	-18.5	130 00	0.0	156 00	+18.4	182 00	+33.1

DETERMINACIÓN DE LA LATITUD
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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	+33.1	208 00	+41.1	234 00	+40.8	260 00	+32.3	286 00	+17.1	312 00	-1.4	338 00	-19.7
182 30	+33.4	208 30	+41.2	234 30	+40.7	260 30	+32.0	286 30	+16.8	312 30	-1.8	338 30	-20.0
183 00	+33.6	209 00	+41.3	235 00	+40.6	261 00	+31.8	287 00	+16.5	313 00	-2.2	339 00	-20.4
183 30	+33.8	209 30	+41.4	235 30	+40.5	261 30	+31.5	287 30	+16.1	313 30	-2.5	339 30	-20.7
184 00	+34.0	210 00	+41.4	236 00	+40.4	262 00	+31.3	288 00	+15.8	314 00	-2.9	340 00	-21.0
184 30	+34.2	210 30	+41.5	236 30	+40.3	262 30	+31.0	288 30	+15.5	314 30	-3.3	340 30	-21.3
185 00	+34.4	211 00	+41.5	237 00	+40.2	263 00	+30.8	289 00	+15.1	315 00	-3.6	341 00	-21.6
185 30	+34.6	211 30	+41.6	237 30	+40.1	263 30	+30.5	289 30	+14.8	315 30	-4.0	341 30	-21.9
186 00	+34.9	212 00	+41.7	238 00	+40.0	264 00	+30.3	290 00	+14.4	316 00	-4.4	342 00	-22.3
186 30	+35.1	212 30	+41.7	238 30	+39.9	264 30	+30.0	290 30	+14.1	316 30	-4.7	342 30	-22.6
187 00	+35.3	213 00	+41.7	239 00	+39.8	265 00	+29.8	291 00	+13.7	317 00	-5.1	343 00	-22.9
187 30	+35.5	213 30	+41.8	239 30	+39.7	265 30	+29.5	291 30	+13.4	317 30	-5.5	343 30	-23.2
188 00	+35.7	214 00	+41.8	240 00	+39.5	266 00	+29.3	292 00	+13.0	318 00	-5.8	344 00	-23.5
188 30	+35.8	214 30	+41.9	240 30	+39.4	266 30	+29.0	292 30	+12.7	318 30	-6.2	344 30	-23.8
189 00	+36.0	215 00	+41.9	241 00	+39.3	267 00	+28.7	293 00	+12.3	319 00	-6.5	345 00	-24.1
189 30	+36.2	215 30	+41.9	241 30	+39.2	267 30	+28.5	293 30	+12.0	319 30	-6.9	345 30	-24.4
190 00	+36.4	216 00	+42.0	242 00	+39.0	268 00	+28.2	294 00	+11.6	320 00	-7.3	346 00	-24.7
190 30	+36.6	216 30	+42.0	242 30	+38.9	268 30	+27.9	294 30	+11.3	320 30	-7.6	346 30	-25.0
191 00	+36.8	217 00	+42.0	243 00	+38.7	269 00	+27.6	295 00	+10.9	321 00	-8.0	347 00	-25.3
191 30	+37.0	217 30	+42.0	243 30	+38.6	269 30	+27.4	295 30	+10.6	321 30	-8.3	347 30	-25.6
192 00	+37.1	218 00	+42.0	244 00	+38.4	270 00	+27.1	296 00	+10.2	322 00	-8.7	348 00	-25.9
192 30	+37.3	218 30	+42.1	244 30	+38.3	270 30	+26.8	296 30	+9.9	322 30	-9.1	348 30	-26.2
193 00	+37.5	219 00	+42.1	245 00	+38.1	271 00	+26.5	297 00	+9.5	323 00	-9.4	349 00	-26.4
193 30	+37.6	219 30	+42.1	245 30	+38.0	271 30	+26.2	297 30	+9.1	323 30	-9.8	349 30	-26.7
194 00	+37.8	220 00	+42.1	246 00	+37.8	272 00	+25.9	298 00	+8.8	324 00	-10.1	350 00	-27.0
194 30	+38.0	220 30	+42.1	246 30	+37.7	272 30	+25.6	298 30	+8.4	324 30	-10.5	350 30	-27.3
195 00	+38.1	221 00	+42.1	247 00	+37.5	273 00	+25.3	299 00	+8.1	325 00	-10.8	351 00	-27.6
195 30	+38.3	221 30	+42.1	247 30	+37.3	273 30	+25.1	299 30	+7.7	325 30	-11.2	351 30	-27.8
196 00	+38.4	222 00	+42.0	248 00	+37.2	274 00	+24.8	300 00	+7.3	326 00	-11.6	352 00	-28.1
196 30	+38.6	222 30	+42.0	248 30	+37.0	274 30	+24.5	300 30	+7.0	326 30	-11.9	352 30	-28.4
197 00	+38.7	223 00	+42.0	249 00	+36.8	275 00	+24.2	301 00	+6.6	327 00	-12.3	353 00	-28.7
197 30	+38.9	223 30	+42.0	249 30	+36.6	275 30	+23.9	301 30	+6.3	327 30	-12.6	353 30	-28.9
198 00	+39.0	224 00	+42.0	250 00	+36.5	276 00	+23.6	302 00	+5.9	328 00	-13.0	354 00	-29.2
198 30	+39.1	224 30	+41.9	250 30	+36.3	276 30	+23.3	302 30	+5.5	328 30	-13.3	354 30	-29.5
199 00	+39.3	225 00	+41.9	251 00	+36.1	277 00	+22.9	303 00	+5.2	329 00	-13.7	355 00	-29.7
199 30	+39.4	225 30	+41.9	251 30	+35.9	277 30	+22.6	303 30	+4.8	329 30	-14.0	355 30	-30.0
200 00	+39.5	226 00	+41.8	252 00	+35.7	278 00	+22.3	304 00	+4.4	330 00	-14.4	356 00	-30.2
200 30	+39.6	226 30	+41.8	252 30	+35.5	278 30	+22.0	304 30	+4.1	330 30	-14.7	356 30	-30.5
201 00	+39.8	227 00	+41.8	253 00	+35.3	279 00	+21.7	305 00	+3.7	331 00	-15.0	357 00	-30.7
201 30	+39.9	227 30	+41.7	253 30	+35.1	279 30	+21.4	305 30	+3.3	331 30	-15.4	357 30	-31.0
202 00	+40.0	228 00	+41.7	254 00	+34.9	280 00	+21.1	306 00	+3.0	332 00	-15.7	358 00	-31.2
202 30	+40.1	228 30	+41.6	254 30	+34.7	280 30	+20.8	306 30	+2.6	332 30	-16.1	358 30	-31.5
203 00	+40.2	229 00	+41.6	255 00	+34.5	281 00	+20.4	307 00	+2.2	333 00	-16.4	359 00	-31.7
203 30	+40.3	229 30	+41.5	255 30	+34.3	281 30	+20.1	307 30	+1.9	333 30	-16.7	359 30	-32.0
204 00	+40.4	230 00	+41.4	256 00	+34.1	282 00	+19.8	308 00	+1.5	334 00	-17.1	360 00	-32.2
204 30	+40.5	230 30	+41.4	256 30	+33.8	282 30	+19.5	308 30	+1.1	334 30	-17.4		
205 00	+40.6	231 00	+41.3	257 00	+33.6	283 00	+19.1	309 00	+0.8	335 00	-17.7		
205 30	+40.7	231 30	+41.2	257 30	+33.4	283 30	+18.8	309 30	+0.4	335 30	-18.1		
206 00	+40.8	232 00	+41.2	258 00	+33.2	284 00	+18.5	310 00	0.0	336 00	-18.4		
206 30	+40.9	232 30	+41.1	258 30	+32.9	284 30	+18.1	310 30	-0.3	336 30	-18.7		
207 00	+41.0	233 00	+41.0	259 00	+32.7	285 00	+17.8	311 00	-0.7	337 00	-19.1		
207 30	+41.1	233 30	+40.9	259 30	+32.5	285 30	+17.5	311 30	-1.1	337 30	-19.4		
208 00	+41.1	234 00	+40.8	260 00	+32.3	286 00	+17.1	312 00	-1.4	338 00	-19.7		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2007

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	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
100	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
120	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	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	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
260	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
280	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
300	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4	0.5
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	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	0.0	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	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.1	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.3	+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	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.4
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5	-0.5
180	-0.1	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.1	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.3	-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	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.4
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5	+0.5
360	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	50
60	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.6	60
70	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	70
80	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	80
90	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	90
100	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	100
110	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	110
120	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	120
130	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	130
140	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-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	-0.9	-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	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	230
240	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	250
260	+0.5	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	+0.9	+1.0	260
270	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.2	270
280	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.0	+1.2	+1.4	280
290	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.5	290
300	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	300
310	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	310
320	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	320
330	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	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	+0.6	+0.7	+0.8	+0.9	+1.1	360

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2007**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2007)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 22	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 27	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 22	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0'1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 7	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 12	-0'3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 28	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 2	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 26	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 30	+15.2			Oct 18	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	46 30	+15.3			Nov 10	+0'2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	48 30	+15.4			Dic 15	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	50 30	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	52 30	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	54 30	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	56 30	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	58 30	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	60 30	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1						
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

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