

# Navigator *The Online Nautical Almanac*



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2012 JUL. 27, 28, 29 (FRI, SAT, SUN)

		ARIES		VENUS		MARS		JUPITER		SATURN	
G.M.T	GHA	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec	GHA	Dec
d h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
27	0	305 04.7	225 09.9 N18 44.0	113 04.3 S 5 11.3	237 14.3 N21 05.6	102 20.9 S 6 53.2					
	1	320 07.2	240 10.4 N18 44.2	128 05.4 S 5 11.9	252 16.2 N21 05.7	117 23.2 S 6 53.2					
	2	335 09.7	255 10.9 N18 44.4	143 06.5 S 5 12.6	267 18.2 N21 05.7	132 25.6 S 6 53.3					
	3	350 12.1	270 11.4 N18 44.7	158 07.6 S 5 13.2	282 20.2 N21 05.8	147 27.9 S 6 53.3					
	4	5 14.6	285 11.9 N18 44.9	173 08.8 S 5 13.8	297 22.2 N21 05.9	162 30.3 S 6 53.4					
F	5	20 17.1	300 12.3 N18 45.1	188 09.9 S 5 14.4	312 24.2 N21 05.9	177 32.6 S 6 53.4					
R											
I	6	35 19.5	315 12.8 N18 45.4	203 11.0 S 5 15.0	327 26.2 N21 06.0	192 35.0 S 6 53.5					
D	7	50 22.0	330 13.3 N18 45.6	218 12.1 S 5 15.6	342 28.2 N21 06.1	207 37.3 S 6 53.6					
A	8	65 24.5	345 13.8 N18 45.8	233 13.3 S 5 16.2	357 30.2 N21 06.1	222 39.7 S 6 53.6					
Y	9	80 26.9	0 14.3 N18 46.0	248 14.4 S 5 16.8	12 32.2 N21 06.2	237 42.0 S 6 53.7					
	10	95 29.4	15 14.7 N18 46.3	263 15.5 S 5 17.4	27 34.2 N21 06.3	252 44.4 S 6 53.7					
	11	110 31.8	30 15.2 N18 46.5	278 16.6 S 5 18.0	42 36.1 N21 06.3	267 46.7 S 6 53.8					
	12	125 34.3	45 15.7 N18 46.7	293 17.8 S 5 18.6	57 38.1 N21 06.4	282 49.1 S 6 53.8					
	13	140 36.8	60 16.1 N18 46.9	308 18.9 S 5 19.2	72 40.1 N21 06.5	297 51.4 S 6 53.9					
	14	155 39.2	75 16.6 N18 47.2	323 20.0 S 5 19.8	87 42.1 N21 06.5	312 53.8 S 6 54.0					
	15	170 41.7	90 17.1 N18 47.4	338 21.1 S 5 20.4	102 44.1 N21 06.6	327 56.1 S 6 54.0					
	16	185 44.2	105 17.5 N18 47.6	353 22.3 S 5 21.0	117 46.1 N21 06.7	342 58.5 S 6 54.1					
	17	200 46.6	120 18.0 N18 47.8	8 23.4 S 5 21.6	132 48.1 N21 06.7	358 00.8 S 6 54.1					
	18	215 49.1	135 18.5 N18 48.1	23 24.5 S 5 22.2	147 50.1 N21 06.8	13 03.2 S 6 54.2					
	19	230 51.6	150 18.9 N18 48.3	38 25.6 S 5 22.8	162 52.1 N21 06.8	28 05.5 S 6 54.2					
	20	245 54.0	165 19.4 N18 48.5	53 26.7 S 5 23.4	177 54.1 N21 06.9	43 07.8 S 6 54.3					
	21	260 56.5	180 19.8 N18 48.8	68 27.9 S 5 24.1	192 56.1 N21 07.0	58 10.2 S 6 54.4					

	22		275	59.0		195	20.3	N18	49.0		83	29.0	S	5	24.7		207	58.1	N21	07.0		73	12.5	S	6	54.4
	23		291	01.4		210	20.7	N18	49.2		98	30.1	S	5	25.3		223	00.1	N21	07.1		88	14.9	S	6	54.5
28	0		306	03.9		225	21.2	N18	49.4		113	31.2	S	5	25.9		238	02.0	N21	07.2		103	17.2	S	6	54.5
	1		321	06.3		240	21.6	N18	49.7		128	32.4	S	5	26.5		253	04.0	N21	07.2		118	19.6	S	6	54.6
	2		336	08.8		255	22.1	N18	49.9		143	33.5	S	5	27.1		268	06.0	N21	07.3		133	21.9	S	6	54.6
	3		351	11.3		270	22.5	N18	50.1		158	34.6	S	5	27.7		283	08.0	N21	07.4		148	24.3	S	6	54.7
	4		6	13.7		285	23.0	N18	50.3		173	35.7	S	5	28.3		298	10.0	N21	07.4		163	26.6	S	6	54.8
S	5		21	16.2		300	23.4	N18	50.6		188	36.8	S	5	28.9		313	12.0	N21	07.5		178	29.0	S	6	54.8
A																										
T	6		36	18.7		315	23.9	N18	50.8		203	37.9	S	5	29.5		328	14.0	N21	07.6		193	31.3	S	6	54.9
U	7		51	21.1		330	24.3	N18	51.0		218	39.1	S	5	30.1		343	16.0	N21	07.6		208	33.7	S	6	54.9
R	8		66	23.6		345	24.8	N18	51.2		233	40.2	S	5	30.7		358	18.0	N21	07.7		223	36.0	S	6	55.0
D	9		81	26.1		0	25.2	N18	51.5		248	41.3	S	5	31.3		13	20.0	N21	07.8		238	38.3	S	6	55.0
A	10		96	28.5		15	25.6	N18	51.7		263	42.4	S	5	31.9		28	22.0	N21	07.8		253	40.7	S	6	55.1
Y	11		111	31.0		30	26.1	N18	51.9		278	43.5	S	5	32.5		43	24.0	N21	07.9		268	43.0	S	6	55.2
	12		126	33.5		45	26.5	N18	52.1		293	44.7	S	5	33.1		58	26.0	N21	08.0		283	45.4	S	6	55.2
	13		141	35.9		60	26.9	N18	52.4		308	45.8	S	5	33.7		73	28.0	N21	08.0		298	47.7	S	6	55.3
	14		156	38.4		75	27.4	N18	52.6		323	46.9	S	5	34.3		88	30.0	N21	08.1		313	50.1	S	6	55.3
	15		171	40.8		90	27.8	N18	52.8		338	48.0	S	5	35.0		103	32.0	N21	08.1		328	52.4	S	6	55.4
	16		186	43.3		105	28.2	N18	53.0		353	49.1	S	5	35.6		118	34.0	N21	08.2		343	54.8	S	6	55.4
	17		201	45.8		120	28.6	N18	53.3		8	50.2	S	5	36.2		133	36.0	N21	08.3		358	57.1	S	6	55.5
	18		216	48.2		135	29.1	N18	53.5		23	51.4	S	5	36.8		148	38.0	N21	08.3		13	59.4	S	6	55.6
	19		231	50.7		150	29.5	N18	53.7		38	52.5	S	5	37.4		163	40.0	N21	08.4		29	01.8	S	6	55.6
	20		246	53.2		165	29.9	N18	53.9		53	53.6	S	5	38.0		178	41.9	N21	08.5		44	04.1	S	6	55.7
	21		261	55.6		180	30.3	N18	54.1		68	54.7	S	5	38.6		193	43.9	N21	08.5		59	06.5	S	6	55.7
	22		276	58.1		195	30.7	N18	54.4		83	55.8	S	5	39.2		208	45.9	N21	08.6		74	08.8	S	6	55.8
	23		292	00.6		210	31.1	N18	54.6		98	56.9	S	5	39.8		223	47.9	N21	08.7		89	11.2	S	6	55.8
29	0		307	03.0		225	31.6	N18	54.8		113	58.1	S	5	40.4		238	49.9	N21	08.7		104	13.5	S	6	55.9
	1		322	05.5		240	32.0	N18	55.0		128	59.2	S	5	41.0		253	51.9	N21	08.8		119	15.8	S	6	56.0
	2		337	07.9		255	32.4	N18	55.3		144	00.3	S	5	41.6		268	53.9	N21	08.9		134	18.2	S	6	56.0
	3		352	10.4		270	32.8	N18	55.5		159	01.4	S	5	42.2		283	55.9	N21	08.9		149	20.5	S	6	56.1
	4		7	12.9		285	33.2	N18	55.7		174	02.5	S	5	42.8		298	57.9	N21	09.0		164	22.9	S	6	56.1
S	5		22	15.3		300	33.6	N18	55.9		189	03.6	S	5	43.4		313	59.9	N21	09.0		179	25.2	S	6	56.2
U																										
N	6		37	17.8		315	34.0	N18	56.2		204	04.7	S	5	44.0		329	01.9	N21	09.1		194	27.6	S	6	56.3
D	7		52	20.3		330	34.4	N18	56.4		219	05.8	S	5	44.7		344	03.9	N21	09.2		209	29.9	S	6	56.3
A	8		67	22.7		345	34.8	N18	56.6		234	07.0	S	5	45.3		359	05.9	N21	09.2		224	32.2	S	6	56.4
Y	9		82	25.2		0	35.2	N18	56.8		249	08.1	S	5	45.9		14	07.9	N21	09.3		239	34.6	S	6	56.4

10		97	27.7		15	35.6	N18	57.0		264	09.2	S	5	46.5		29	09.9	N21	09.4		254	36.9	S	6	56.5
11		112	30.1		30	36.0	N18	57.3		279	10.3	S	5	47.1		44	11.9	N21	09.4		269	39.3	S	6	56.6
12		127	32.6		45	36.4	N18	57.5		294	11.4	S	5	47.7		59	13.9	N21	09.5		284	41.6	S	6	56.6
13		142	35.1		60	36.8	N18	57.7		309	12.5	S	5	48.3		74	15.9	N21	09.6		299	43.9	S	6	56.7
14		157	37.5		75	37.2	N18	57.9		324	13.6	S	5	48.9		89	17.9	N21	09.6		314	46.3	S	6	56.7
15		172	40.0		90	37.6	N18	58.1		339	14.7	S	5	49.5		104	19.9	N21	09.7		329	48.6	S	6	56.8
16		187	42.4		105	38.0	N18	58.4		354	15.9	S	5	50.1		119	21.9	N21	09.7		344	51.0	S	6	56.8
17		202	44.9		120	38.4	N18	58.6		9	17.0	S	5	50.7		134	23.9	N21	09.8		359	53.3	S	6	56.9
18		217	47.4		135	38.7	N18	58.8		24	18.1	S	5	51.3		149	25.9	N21	09.9		14	55.6	S	6	57.0
19		232	49.8		150	39.1	N18	59.0		39	19.2	S	5	51.9		164	27.9	N21	09.9		29	58.0	S	6	57.0
20		247	52.3		165	39.5	N18	59.2		54	20.3	S	5	52.5		179	29.9	N21	10.0		45	00.3	S	6	57.1
21		262	54.8		180	39.9	N18	59.5		69	21.4	S	5	53.1		194	31.9	N21	10.1		60	02.7	S	6	57.1
22		277	57.2		195	40.3	N18	59.7		84	22.5	S	5	53.7		209	33.9	N21	10.1		75	05.0	S	6	57.2
23		292	59.7		210	40.7	N18	59.9		99	23.6	S	5	54.4		224	35.9	N21	10.2		90	07.3	S	6	57.3

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 | v 0.4 d 0.2 | v 1.1 d 0.6 | v 2.0 d 0.1 | v 2.3 d 0.1

2012 JUL. 27, 28, 29 (FRI, SAT, SUN)

		SUN				MOON					STARS											
G.M.T	d h	GHA	Dec			GHA	v	Dec	d	HP	Name	SHA	Dec									
		°	'			°	'	°	'	'		°	'									
	27	0		178	22.1	N19	09.8		85	27.4	7.3	S17	20.0	8.1	59.3		Acamar	315	18.8	S40	15.0	
		1		193	22.1	N19	09.2		99	53.6	7.2	S17	28.0	8.0	59.4		Achernar	335	27.1	S57	10.0	
		2		208	22.1	N19	08.6		114	19.7	7.1	S17	35.9	7.9	59.4		Acrux	173	10.3	S63	10.4	
		3		223	22.1	N19	08.1		128	45.8	7.1	S17	43.6	7.8	59.4		Adhara	255	13.3	S28	59.4	
		4		238	22.1	N19	07.5		143	11.8	7.0	S17	51.3	7.7	59.4		Albireo	67	11.0	N27	59.4	
F	5		253	22.2	N19	06.9		157	37.8	6.9	S17	58.8	7.5	59.4								
R																	Aldebaran	290	50.3	N16	32.0	
I	6		268	22.2	N19	06.4		172	03.6	6.9	S18	06.3	7.4	59.4		Alioth	166	21.4	N55	53.8		
D	7		283	22.2	N19	05.8		186	29.5	6.8	S18	13.6	7.3	59.4		Alkaid	152	59.4	N49	15.3		
A	8		298	22.2	N19	05.2		200	55.2	6.7	S18	20.8	7.2	59.4		Al Na-ir	27	44.0	S46	53.7		
Y	9		313	22.2	N19	04.7		215	20.9	6.7	S18	27.9	7.1	59.4		Alnilam	275	47.2	S	1	11.6	
		10		328	22.2	N19	04.1		229	46.5	6.6	S18	34.9	7.0	59.4							
		11		343	22.2	N19	03.5		244	12.1	6.6	S18	41.7	6.9	59.5		Alphard	217	57.0	S	8	42.9
																	Alphecca	126	11.4	N26	40.6	
		12		358	22.2	N19	02.9		258	37.6	6.5	S18	48.5	6.7	59.5		Alpheratz	357	43.9	N29	09.7	
		13		13	22.2	N19	02.4		273	03.0	6.4	S18	55.1	6.6	59.5		Altair	62	08.5	N	8	54.3

14		28	22.2	N19	01.8		287	28.4	6.4	S19	01.6	6.5	59.5		Ankaa	353	16.1	S42	13.9	
15		43	22.3	N19	01.2		301	53.7	6.3	S19	08.0	6.4	59.5							
16		58	22.3	N19	00.6		316	18.9	6.2	S19	14.2	6.3	59.5		Antares	112	26.8	S26	27.6	
17		73	22.3	N19	00.1		330	44.1	6.2	S19	20.3	6.1	59.5		Arcturus	145	56.3	N19	07.2	
															Atria	107	28.8	S69	03.1	
18		88	22.3	N18	59.5		345	09.2	6.1	S19	26.4	6.0	59.5		Avior	234	18.9	S59	33.1	
19		103	22.3	N18	58.9		359	34.3	6.1	S19	32.2	5.9	59.5		Bellatrix	278	32.9	N 6	21.6	
20		118	22.3	N18	58.3		13	59.3	6.0	S19	38.0	5.8	59.5							
21		133	22.3	N18	57.7		28	24.3	6.0	S19	43.6	5.6	59.5		Betelgeuse	271	02.2	N 7	24.5	
22		148	22.3	N18	57.2		42	49.2	5.9	S19	49.1	5.5	59.6		Canopus	263	56.9	S52	42.1	
23		163	22.4	N18	56.6		57	14.0	5.8	S19	54.5	5.4	59.6		Capella	280	35.7	N46	00.4	
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28	0		178	22.4	N18	56.0		71	38.8	5.8	S19	59.8	5.2	59.6		Deneb	49	31.4	N45	19.7
	1		193	22.4	N18	55.4		86	03.6	5.7	S20	04.9	5.1	59.6						
	2		208	22.4	N18	54.8		100	28.3	5.7	S20	09.8	5.0	59.6		Denebola	182	34.5	N14	30.1
	3		223	22.4	N18	54.3		114	52.9	5.6	S20	14.7	4.8	59.6		Diphda	348	56.4	S17	54.8
	4		238	22.4	N18	53.7		129	17.5	5.6	S20	19.4	4.7	59.6		Dubhe	193	53.0	N61	41.1
S	5		253	22.4	N18	53.1		143	42.1	5.5	S20	24.0	4.6	59.6		Elnath	278	13.7	N28	36.9
A															Eltanin	90	46.0	N51	29.5	
T	6		268	22.5	N18	52.5		158	06.6	5.5	S20	28.4	4.4	59.6						
U	7		283	22.5	N18	51.9		172	31.0	5.5	S20	32.7	4.3	59.6		Enif	33	47.3	N 9	56.2
R	8		298	22.5	N18	51.3		186	55.4	5.4	S20	36.9	4.2	59.6		Fomalhaut	15	24.3	S29	33.0
D	9		313	22.5	N18	50.7		201	19.8	5.4	S20	40.9	4.0	59.6		Gacrux	172	01.8	S57	11.3
A	10		328	22.5	N18	50.2		215	44.1	5.3	S20	44.8	3.9	59.6		Gienah	175	53.1	S17	36.8
Y	11		343	22.5	N18	49.6		230	08.4	5.3	S20	48.6	3.8	59.6		Hadar	148	48.8	S60	26.3
	12		358	22.6	N18	49.0		244	32.6	5.2	S20	52.2	3.6	59.6		Hamal	328	01.4	N23	31.3
	13		13	22.6	N18	48.4		258	56.8	5.2	S20	55.7	3.5	59.6		Kaus Austr.	83	44.3	S34	22.6
	14		28	22.6	N18	47.8		273	21.0	5.2	S20	59.0	3.3	59.7		Kochab	137	19.9	N74	06.6
	15		43	22.6	N18	47.2		287	45.1	5.1	S21	02.2	3.2	59.7		Markab	13	38.7	N15	16.5
	16		58	22.6	N18	46.6		302	09.2	5.1	S21	05.2	3.0	59.7		Menkar	314	15.7	N 4	08.4
	17		73	22.7	N18	46.0		316	33.2	5.1	S21	08.1	2.9	59.7						
															Menkent	148	08.3	S36	26.1	
	18		88	22.7	N18	45.5		330	57.3	5.0	S21	10.9	2.8	59.7		Miaplacidus	221	40.7	S69	46.3
	19		103	22.7	N18	44.9		345	21.3	5.0	S21	13.5	2.6	59.7		Mirfak	308	41.4	N49	54.1
	20		118	22.7	N18	44.3		359	45.2	5.0	S21	16.0	2.5	59.7		Nunki	75	58.7	S26	16.7
	21		133	22.7	N18	43.7		14	09.2	4.9	S21	18.3	2.3	59.7		Peacock	53	19.5	S56	41.5
	22		148	22.8	N18	43.1		28	33.1	4.9	S21	20.5	2.2	59.7						
	23		163	22.8	N18	42.5		42	57.0	4.9	S21	22.5	2.0	59.7		Polaris	319	18.9	N89	17.8
-----														Pollux	243	28.8	N27	59.6		
29	0		178	22.8	N18	41.9		57	20.8	4.9	S21	24.4	1.9	59.7		Procyon	245	00.7	N 5	11.5
	1		193	22.8	N18	41.3		71	44.7	4.8	S21	26.2	1.7	59.7		Rasalhague	96	06.8	N12	33.3

2		208	22.8	N18	40.7		86	08.5	4.8	S21	27.8	1.6	59.7		Regulus	207	44.4	N11	54.3	
3		223	22.9	N18	40.1		100	32.3	4.8	S21	29.2	1.4	59.7							
4		238	22.9	N18	39.5		114	56.1	4.8	S21	30.5	1.3	59.7		Rigel	281	12.9	S 8	11.2	
S	5		253	22.9	N18	38.9		129	19.9	4.8	S21	31.7	1.2	59.7		Rigil Kent	139	52.5	S60	53.5
U																Sabik	102	13.0	S15	44.3
N	6		268	22.9	N18	38.3		143	43.7	4.8	S21	32.7	1.0	59.7		Schedar	349	40.9	N56	36.2
D	7		283	22.9	N18	37.7		158	07.4	4.8	S21	33.5	0.9	59.7		Shaula	96	22.4	S37	06.7
A	8		298	23.0	N18	37.1		172	31.1	4.7	S21	34.2	0.7	59.7						
Y	9		313	23.0	N18	36.5		186	54.9	4.7	S21	34.8	0.6	59.7		Sirius	258	34.6	S16	44.0
	10		328	23.0	N18	35.9		201	18.6	4.7	S21	35.2	0.4	59.7		Spica	158	31.9	S11	13.7
	11		343	23.0	N18	35.3		215	42.3	4.7	S21	35.4	0.3	59.7		Suhail	222	53.3	S43	29.1
																Vega	80	39.0	N38	48.0
	12		358	23.1	N18	34.7		230	06.0	4.7	S21	35.6	0.1	59.7		Zuben-ubi	137	06.6	S16	05.7
	13		13	23.1	N18	34.1		244	29.8	4.7	S21	35.5	0.0	59.7						
	14		28	23.1	N18	33.5		258	53.5	4.7	S21	35.3	0.2	59.7						
	15		43	23.1	N18	32.9		273	17.2	4.7	S21	35.0	0.3	59.7						
	16		58	23.2	N18	32.3		287	40.9	4.7	S21	34.5	0.5	59.7						
	17		73	23.2	N18	31.7		302	04.6	4.7	S21	33.9	0.6	59.7						
	18		88	23.2	N18	31.1		316	28.4	4.7	S21	33.1	0.8	59.7						
	19		103	23.2	N18	30.5		330	52.1	4.7	S21	32.1	0.9	59.7						
	20		118	23.3	N18	29.9		345	15.9	4.7	S21	31.1	1.1	59.7						
	21		133	23.3	N18	29.3		359	39.6	4.8	S21	29.8	1.2	59.7						
	22		148	23.3	N18	28.7		14	03.4	4.8	S21	28.5	1.4	59.7						
	23		163	23.3	N18	28.1		28	27.2	4.8	S21	26.9	1.5	59.7						
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			S.D.	15.8	d	0.6		S.D.	16.2	16.3	16.3									

[Next 3 days](#)**Pages served: 221442**

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