

Navigator *The Online Nautical Almanac*


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Navigator
software


2013 SEP. 29, 30, OCT. 1 (SUN, MON, TUE)

		ARIES			VENUS			MARS			JUPITER			SATURN		
G.M.T		GHA		Dec	GHA		Dec	GHA		Dec	GHA		Dec	GHA		Dec
d	h															
29	0	7	55.2		140	40.4	S19 42.5	225	04.5	N15 59.6	258	18.9	N22 08.1	149	49.7	S12 41.3
	1	22	57.7		155	40.0	S19 43.4	240	05.5	N15 59.2	273	21.1	N22 08.0	164	52.0	S12 41.4
	2	38	00.1		170	39.6	S19 44.3	255	06.4	N15 58.7	288	23.2	N22 08.0	179	54.2	S12 41.5
	3	53	02.6		185	39.3	S19 45.2	270	07.3	N15 58.2	303	25.4	N22 08.0	194	56.4	S12 41.6
	4	68	05.1		200	38.9	S19 46.1	285	08.3	N15 57.8	318	27.5	N22 07.9	209	58.6	S12 41.7
S	5	83	07.5		215	38.5	S19 47.1	300	09.2	N15 57.3	333	29.7	N22 07.9	225	00.8	S12 41.8
U																
N	6	98	10.0		230	38.2	S19 48.0	315	10.2	N15 56.8	348	31.8	N22 07.9	240	03.0	S12 41.9
D	7	113	12.5		245	37.8	S19 48.9	330	11.1	N15 56.4	3	34.0	N22 07.8	255	05.2	S12 42.0
A	8	128	14.9		260	37.4	S19 49.8	345	12.1	N15 55.9	18	36.1	N22 07.8	270	07.4	S12 42.1
Y	9	143	17.4		275	37.1	S19 50.7	0	13.0	N15 55.4	33	38.3	N22 07.8	285	09.6	S12 42.1
	10	158	19.9		290	36.7	S19 51.6	15	14.0	N15 55.0	48	40.4	N22 07.7	300	11.8	S12 42.2
	11	173	22.3		305	36.3	S19 52.5	30	14.9	N15 54.5	63	42.6	N22 07.7	315	14.0	S12 42.3
	12	188	24.8		320	36.0	S19 53.4	45	15.8	N15 54.0	78	44.7	N22 07.7	330	16.2	S12 42.4
	13	203	27.3		335	35.6	S19 54.3	60	16.8	N15 53.6	93	46.9	N22 07.6	345	18.4	S12 42.5
	14	218	29.7		350	35.2	S19 55.3	75	17.7	N15 53.1	108	49.1	N22 07.6	0	20.6	S12 42.6
	15	233	32.2		5	34.9	S19 56.2	90	18.7	N15 52.6	123	51.2	N22 07.6	15	22.8	S12 42.7
	16	248	34.6		20	34.5	S19 57.1	105	19.6	N15 52.2	138	53.4	N22 07.5	30	25.1	S12 42.8
	17	263	37.1		35	34.1	S19 58.0	120	20.6	N15 51.7	153	55.5	N22 07.5	45	27.3	S12 42.9
	18	278	39.6		50	33.8	S19 58.9	135	21.5	N15 51.2	168	57.7	N22 07.5	60	29.5	S12 42.9
	19	293	42.0		65	33.4	S19 59.8	150	22.5	N15 50.8	183	59.8	N22 07.4	75	31.7	S12 43.0
	20	308	44.5		80	33.0	S20 00.7	165	23.4	N15 50.3	199	02.0	N22 07.4	90	33.9	S12 43.1
	21	323	47.0		95	32.7	S20 01.6	180	24.4	N15 49.8	214	04.1	N22 07.4	105	36.1	S12 43.2
	22	338	49.4		110	32.3	S20 02.5	195	25.3	N15 49.4	229	06.3	N22 07.3	120	38.3	S12 43.3
	23	353	51.9		125	31.9	S20 03.4	210	26.3	N15 48.9	244	08.5	N22 07.3	135	40.5	S12 43.4
30	0	8	54.4		140	31.6	S20 04.3	225	27.2	N15 48.4	259	10.6	N22 07.3	150	42.7	S12 43.5
	1	23	56.8		155	31.2	S20 05.2	240	28.2	N15 48.0	274	12.8	N22 07.2	165	44.9	S12 43.6
	2	38	59.3		170	30.8	S20 06.1	255	29.1	N15 47.5	289	14.9	N22 07.2	180	47.1	S12 43.7
	3	54	01.8		185	30.5	S20 07.0	270	30.1	N15 47.0	304	17.1	N22 07.2	195	49.3	S12 43.7
	4	69	04.2		200	30.1	S20 07.9	285	31.0	N15 46.5	319	19.3	N22 07.1	210	51.5	S12 43.8
M	5	84	06.7		215	29.7	S20 08.8	300	31.9	N15 46.1	334	21.4	N22 07.1	225	53.7	S12 43.9
O																
N	6	99	09.1		230	29.3	S20 09.7	315	32.9	N15 45.6	349	23.6	N22 07.0	240	55.9	S12 44.0
D	7	114	11.6		245	29.0	S20 10.6	330	33.8	N15 45.1	4	25.7	N22 07.0	255	58.1	S12 44.1
A	8	129	14.1		260	28.6	S20 11.5	345	34.8	N15 44.7	19	27.9	N22 07.0	271	00.3	S12 44.2
Y	9	144	16.5		275	28.2	S20 12.4	0	35.7	N15 44.2	34	30.1	N22 06.9	286	02.5	S12 44.3
	10	159	19.0		290	27.9	S20 13.3	15	36.7	N15 43.7	49	32.2	N22 06.9	301	04.7	S12 44.4
	11	174	21.5		305	27.5	S20 14.2	30	37.6	N15 43.3	64	34.4	N22 06.9	316	07.0	S12 44.5
	12	189	23.9		320	27.1	S20 15.0	45	38.6	N15 42.8	79	36.5	N22 06.8	331	09.2	S12 44.5
	13	204	26.4		335	26.7	S20 15.9	60	39.5	N15 42.3	94	38.7	N22 06.8	346	11.4	S12 44.6
	14	219	28.9		350	26.4	S20 16.8	75	40.5	N15 41.9	109	40.9	N22 06.8	1	13.6	S12 44.7
	15	234	31.3		5	26.0	S20 17.7	90	41.4	N15 41.4	124	43.0	N22 06.7	16	15.8	S12 44.8
	16	249	33.8		20	25.6	S20 18.6	105	42.4	N15 40.9	139	45.2	N22 06.7	31	18.0	S12 44.9
	17	264	36.3		35	25.2	S20 19.5	120	43.3	N15 40.4	154	47.4	N22 06.7	46	20.2	S12 45.0
	18	279	38.7		50	24.9	S20 20.4	135	44.3	N15 40.0	169	49.5	N22 06.6	61	22.4	S12 45.1
	19	294	41.2		65	24.5	S20 21.3	150	45.3	N15 39.5	184	51.7	N22 06.6	76	24.6	S12 45.2
	20	309	43.6		80	24.1	S20 22.1	165	46.2	N15 39.0	199	53.8	N22 06.6	91	26.8	S12 45.3
	21	324	46.1		95	23.7	S20 23.0	180	47.2	N15 38.6	214	56.0	N22 06.5	106	29.0	S12 45.3
	22	339	48.6		110	23.4	S20 23.9	195	48.1	N15 38.1	229	58.2	N22 06.5	121	31.2	S12 45.4
	23	354	51.0		125	23.0	S20 24.8	210	49.1	N15 37.6	245	00.3	N22 06.5	136	33.4	S12 45.5
1	0	9	53.5		140	22.6	S20 25.7	225	50.0	N15 37.2	260	02.5	N22 06.4	151	35.6	S12 45.6
	1	24	56.0		155	22.2	S20 26.6	240	51.0	N15 36.7	275	04.7	N22 06.4	166	37.8	S12 45.7
	2	39	58.4		170	21.8	S20 27.4	255	51.9	N15 36.2	290	06.8	N22 06.4	181	40.0	S12 45.8
	3	55	00.9		185	21.5	S20 28.3	270	52.9	N15 35.7	305	09.0	N22 06.3	196	42.2	S12 45.9
	4	70	03.4		200	21.1	S20 29.2	285	53.8	N15 35.3	320	11.2	N22 06.3	211	44.4	S12 46.0
T	5	85	05.8		215	20.7	S20 30.1	300	54.8	N15 34.8	335	13.3	N22 06.3	226	46.6	S12 46.1
U																
E	6	100	08.3		230	20.3	S20 31.0	315	55.7	N15 34.3	350	15.5	N22 06.2	241	48.8	S12 46.1
S	7	115	10.7		245	20.0	S20 31.8	330	56.7	N15 33.8	5	17.7	N22 06.2	256	51.0	S12 46.2
D	8	130	13.2		260	19.6	S20 32.7	345	57.6	N15 33.4	20	19.8	N22 06.2	271	53.2	S12 46.3

A	9	145 15.7	275 19.2 S20 33.6	0 58.6 N15 32.9	35 22.0 N22 06.1	286 55.4 S12 46.4
Y	10	160 18.1	290 18.8 S20 34.5	15 59.5 N15 32.4	50 24.2 N22 06.1	301 57.6 S12 46.5
	11	175 20.6	305 18.4 S20 35.3	31 00.5 N15 32.0	65 26.3 N22 06.1	316 59.8 S12 46.6
	12	190 23.1	320 18.1 S20 36.2	46 01.5 N15 31.5	80 28.5 N22 06.0	332 02.0 S12 46.7
	13	205 25.5	335 17.7 S20 37.1	61 02.4 N15 31.0	95 30.7 N22 06.0	347 04.2 S12 46.8
	14	220 28.0	350 17.3 S20 37.9	76 03.4 N15 30.5	110 32.8 N22 06.0	2 06.4 S12 46.9
	15	235 30.5	5 16.9 S20 38.8	91 04.3 N15 30.1	125 35.0 N22 05.9	17 08.7 S12 46.9
	16	250 32.9	20 16.5 S20 39.7	106 05.3 N15 29.6	140 37.2 N22 05.9	32 10.9 S12 47.0
	17	265 35.4	35 16.2 S20 40.5	121 06.2 N15 29.1	155 39.4 N22 05.9	47 13.1 S12 47.1
	18	280 37.9	50 15.8 S20 41.4	136 07.2 N15 28.6	170 41.5 N22 05.8	62 15.3 S12 47.2
	19	295 40.3	65 15.4 S20 42.3	151 08.2 N15 28.2	185 43.7 N22 05.8	77 17.5 S12 47.3
	20	310 42.8	80 15.0 S20 43.1	166 09.1 N15 27.7	200 45.9 N22 05.8	92 19.7 S12 47.4
	21	325 45.2	95 14.6 S20 44.0	181 10.1 N15 27.2	215 48.0 N22 05.7	107 21.9 S12 47.5
	22	340 47.7	110 14.2 S20 44.9	196 11.0 N15 26.8	230 50.2 N22 05.7	122 24.1 S12 47.6
	23	355 50.2	125 13.9 S20 45.7	211 12.0 N15 26.3	245 52.4 N22 05.7	137 26.3 S12 47.7
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			v -0.4 d 0.9	v 1.0 d 0.5	v 2.2 d 0.0	v 2.2 d 0.1

2013 SEP. 29, 30, OCT. 1 (SUN, MON, TUE)

		SUN			MOON					STARS		
G.M.T		GHA	Dec		GHA	v	Dec	d	HP	Name	SHA	Dec
d	h	°	°		°	'	°	'	'		°	°
29	0	182 23.9 S	2 23.3		250 52.6	13.1 N15	56.1	5.9	54.4	Acamar	315 17.8 S	40 14.8
	1	197 24.1 S	2 24.3		265 24.8	13.2 N15	50.1	6.0	54.4	Achernar	335 26.1 S	57 09.9
	2	212 24.3 S	2 25.3		279 56.9	13.2 N15	44.0	6.1	54.4	Acrux	173 09.7 S	63 10.5
	3	227 24.6 S	2 26.2		294 29.1	13.2 N15	37.9	6.1	54.4	Adhara	255 12.4 S	28 59.3
	4	242 24.8 S	2 27.2		309 01.3	13.2 N15	31.7	6.2	54.4	Albireo	67 10.6 N	27 59.7
S	5	257 25.0 S	2 28.2		323 33.6	13.2 N15	25.4	6.3	54.4			
U										Aldebaran	290 49.0 N	16 32.1
N	6	272 25.2 S	2 29.2		338 05.8	13.2 N15	19.0	6.4	54.4	Alioth	166 21.1 N	55 53.2
D	7	287 25.4 S	2 30.1		352 38.1	13.3 N15	12.6	6.4	54.4	Alkaid	152 59.2 N	49 14.8
A	8	302 25.6 S	2 31.1		7 10.4	13.3 N15	06.1	6.5	54.4	Al Na-ir	27 43.1 S	46 53.6
Y	9	317 25.8 S	2 32.1		21 42.7	13.3 N14	59.5	6.6	54.5	Alnilam	275 46.0 S	1 11.6
	10	332 26.0 S	2 33.0		36 15.0	13.3 N14	52.9	6.6	54.5			
	11	347 26.2 S	2 34.0		50 47.3	13.3 N14	46.2	6.7	54.5	Alphard	217 56.1 S	8 43.1
										Alphecca	126 11.1 N	26 40.4
	12	2 26.4 S	2 35.0		65 19.6	13.3 N14	39.4	6.8	54.5	Alpheratz	357 42.9 N	29 10.2
	13	17 26.6 S	2 36.0		79 52.0	13.4 N14	32.6	6.8	54.5	Altair	62 07.9 N	8 54.6
	14	32 26.8 S	2 36.9		94 24.4	13.4 N14	25.7	6.9	54.5	Ankaa	353 15.1 S	42 13.8
	15	47 27.0 S	2 37.9		108 56.8	13.4 N14	18.7	7.0	54.5			
	16	62 27.2 S	2 38.9		123 29.2	13.4 N14	11.7	7.0	54.5	Antares	112 26.2 S	26 27.6
	17	77 27.4 S	2 39.8		138 01.6	13.4 N14	04.6	7.1	54.6	Arcturus	145 55.8 N	19 06.8
										Atria	107 28.0 S	69 03.2
	18	92 27.6 S	2 40.8		152 34.0	13.4 N13	57.4	7.2	54.6	Avior	234 18.2 S	59 33.1
	19	107 27.9 S	2 41.8		167 06.5	13.5 N13	50.1	7.2	54.6	Bellatrix	278 31.7 N	6 21.7
	20	122 28.1 S	2 42.8		181 39.0	13.5 N13	42.8	7.3	54.6			
	21	137 28.3 S	2 43.7		196 11.4	13.5 N13	35.5	7.4	54.6	Betelgeuse	271 01.0 N	7 24.5
	22	152 28.5 S	2 44.7		210 43.9	13.5 N13	28.0	7.4	54.6	Canopus	263 56.0 S	52 42.0
	23	167 28.7 S	2 45.7		225 16.4	13.5 N13	20.5	7.5	54.6	Capella	280 34.0 N	46 00.4
										Castor	246 07.8 N	31 51.3
30	0	182 28.9 S	2 46.6		239 48.9	13.5 N13	13.0	7.6	54.7	Deneb	49 31.1 N	45 20.2
	1	197 29.1 S	2 47.6		254 21.5	13.5 N13	05.3	7.6	54.7			
	2	212 29.3 S	2 48.6		268 54.0	13.5 N12	57.7	7.7	54.7	Denebola	182 33.8 N	14 29.7
	3	227 29.5 S	2 49.5		283 26.6	13.6 N12	49.9	7.7	54.7	Diphda	348 55.4 S	17 54.5
	4	242 29.7 S	2 50.5		297 59.1	13.6 N12	42.1	7.8	54.7	Dubhe	193 52.1 N	61 40.4
M	5	257 29.9 S	2 51.5		312 31.7	13.6 N12	34.2	7.9	54.7	Elnath	278 12.3 N	28 36.9
O										Eltanin	90 46.2 N	51 29.7
N	6	272 30.1 S	2 52.5		327 04.3	13.6 N12	26.3	7.9	54.7			
D	7	287 30.3 S	2 53.4		341 36.9	13.6 N12	18.3	8.0	54.8	Enif	33 46.6 N	9 56.6
A	8	302 30.5 S	2 54.4		356 09.5	13.6 N12	10.3	8.0	54.8	Fomalhaut	15 23.4 S	29 32.8
Y	9	317 30.7 S	2 55.4		10 42.1	13.6 N12	02.2	8.1	54.8	Gacrux	172 01.2 S	57 11.4
	10	332 30.9 S	2 56.3		25 14.7	13.6 N11	54.0	8.2	54.8	Gienah	175 52.4 S	17 37.0
	11	347 31.1 S	2 57.3		39 47.4	13.6 N11	45.8	8.2	54.8	Hadar	148 48.2 S	60 26.4
	12	2 31.3 S	2 58.3		54 20.0	13.6 N11	37.5	8.3	54.9	Hamal	328 00.2 N	23 31.7
	13	17 31.5 S	2 59.3		68 52.6	13.6 N11	29.1	8.3	54.9	Kaus Austr.	83 43.6 S	34 22.6
	14	32 31.7 S	3 00.2		83 25.3	13.7 N11	20.8	8.4	54.9	Kochab	137 21.1 N	74 06.2
	15	47 31.9 S	3 01.2		97 58.0	13.7 N11	12.3	8.5	54.9	Markab	13 37.8 N	15 17.0
	16	62 32.1 S	3 02.2		112 30.6	13.7 N11	03.8	8.5	54.9	Menkar	314 14.6 N	4 08.7
	17	77 32.3 S	3 03.1		127 03.3	13.7 N10	55.2	8.6	54.9			
										Menkent	148 07.7 S	36 26.2
	18	92 32.5 S	3 04.1		141 36.0	13.7 N10	46.6	8.6	55.0	Miaplacidus	221 40.1 S	69 46.3
	19	107 32.7 S	3 05.1		156 08.7	13.7 N10	37.9	8.7	55.0	Mirfak	308 39.7 N	49 54.4
	20	122 32.9 S	3 06.0		170 41.3	13.7 N10	29.2	8.7	55.0	Nunki	75 58.0 S	26 16.6
	21	137 33.1 S	3 07.0		185 14.0	13.7 N10	20.4	8.8	55.0	Peacock	53 18.6 S	56 41.4
	22	152 33.4 S	3 08.0		199 46.7	13.7 N10	11.6	8.8	55.0			
	23	167 33.6 S	3 09.0		214 19.4	13.7 N10	02.7	8.9	55.1	Polaris	318 39.2 N	89 18.2

1	0	182	33.8	S	3	09.9	228	52.1	13.7	N	9	53.8	8.9	55.1	Pollux	243	27.6	N27	59.4
	1	197	34.0	S	3	10.9	243	24.8	13.7	N	9	44.8	9.0	55.1	Procyon	244	59.6	N 5	11.3
	2	212	34.2	S	3	11.9	257	57.6	13.7	N	9	35.8	9.0	55.1	Rasalhague	96	06.4	N12	33.4
	3	227	34.4	S	3	12.8	272	30.3	13.7	N	9	26.7	9.1	55.1	Regulus	207	43.6	N11	54.0
	4	242	34.6	S	3	13.8	287	03.0	13.7	N	9	17.6	9.1	55.2					
T U E	5	257	34.8	S	3	14.8	301	35.7	13.7	N	9	08.4	9.2	55.2	Rigel	281	11.7	S 8	11.1
															Rigil Kent	139	52.0	S60	53.6
															Sabik	102	12.4	S15	44.3
	6	272	35.0	S	3	15.7	316	08.4	13.7	N	8	59.2	9.2	55.2	Schedar	349	39.6	N56	36.9
	7	287	35.2	S	3	16.7	330	41.1	13.7	N	8	49.9	9.3	55.2	Shaula	96	21.7	S37	06.7
D A Y	8	302	35.4	S	3	17.7	345	13.8	13.7	N	8	40.6	9.3	55.2					
	9	317	35.6	S	3	18.6	359	46.5	13.7	N	8	31.2	9.4	55.3	Sirius	258	33.6	S16	44.0
	10	332	35.8	S	3	19.6	14	19.2	13.7	N	8	21.8	9.4	55.3	Spica	158	31.3	S11	13.9
	11	347	36.0	S	3	20.6	28	51.9	13.7	N	8	12.3	9.5	55.3	Suhail	222	52.5	S43	29.2
															Vega	80	38.8	N38	48.2
		2	36.2	S	3	21.6	43	24.6	13.7	N	8	02.8	9.5	55.3	Zuben-ubi	137	06.0	S16	05.8
		17	36.4	S	3	22.5	57	57.3	13.7	N	7	53.3	9.6	55.4					
		32	36.6	S	3	23.5	72	30.0	13.7	N	7	43.7	9.6	55.4					
		47	36.8	S	3	24.5	87	02.7	13.7	N	7	34.0	9.6	55.4					
		62	37.0	S	3	25.4	101	35.4	13.7	N	7	24.3	9.7	55.4					
		77	37.2	S	3	26.4	116	08.1	13.7	N	7	14.6	9.7	55.5					
		92	37.4	S	3	27.4	130	40.8	13.7	N	7	04.9	9.8	55.5					
		107	37.6	S	3	28.3	145	13.4	13.7	N	6	55.1	9.8	55.5					
		122	37.8	S	3	29.3	159	46.1	13.7	N	6	45.2	9.8	55.5					
		137	38.0	S	3	30.3	174	18.7	13.7	N	6	35.3	9.9	55.5					
		152	38.2	S	3	31.2	188	51.4	13.6	N	6	25.4	9.9	55.6					
		167	38.4	S	3	32.2	203	24.0	13.6	N	6	15.5	10.0	55.6					
		S.D.	16.0	d	1.0	S.D.	14.8	14.9	15.1										