

LAT 30°

DECLINATION SAME NAME AS LATITUDE

Main table with columns for HA, Alt., Az., and declination values from 16° 00' to 19° 30'.

HA 00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

LAT 30°

DECLINATION CONTRARY NAME TO LATITUDE

Main table with columns for latitude (16° 30', 17° 00', 17° 30', 18° 00', 18° 30', 19° 00', 19° 30') and rows for declination (00, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). Each cell contains two values: Altitude (Alt.) and Azimuth (Az.).

Lat. 30°

Lat. 31°

Lat. 32°

Lat. 33°

DECLINATION SAME NAME AS LATITUDE

Partial table header for the bottom section, showing columns for latitude (16° 30', 17° 00', 17° 30', 18° 00', 18° 30', 19° 00', 19° 30') and a column for HA.

A2 ALTITUDE CORRECTION TABLES 10°-90°—SUN, STARS, PLANETS

Nautical Almanac

ALTITUDE

OCT.—MAR. SUN			APR.—SEPT.			STARS AND PLANETS				DIP				
App. Alt.	Lower Limb	Upper Limb	App. Alt.	Lower Limb	Upper Limb	App. Alt.	Corr ⁿ	App. Alt.	Additional Corr ⁿ	Ht. of Eye	Corr ⁿ	Ht. of Eye	Ht. of Eye	Corr ⁿ
9 34	+10.8	-21.5	9 39	+10.6	-21.2	9 56	-5.3		1978	m		ft.	m	
9 45	+10.9	-21.4	9 51	+10.7	-21.1	10 08	-5.2		VENUS	2.4	-2.8	8.0	1.0	-1.8
9 56	+11.0	-21.3	10 03	+10.8	-21.0	10 08	-5.2		Jan. 1-July 20	2.6	-2.9	8.6	1.5	-2.2
10 08	+11.1	-21.2	10 15	+10.9	-20.9	10 20	-5.1		0	2.8	-3.0	9.2	2.0	-2.5
10 21	+11.2	-21.1	10 27	+11.0	-20.8	10 33	-5.0		42 + 0.1	3.0	-3.1	10.5	2.5	-2.8
10 34	+11.3	-21.0	10 40	+11.1	-20.7	10 46	-4.9		July 21-Sept. 2	3.2	-3.2	11.2	3.0	-3.0
10 47	+11.4	-20.9	10 54	+11.2	-20.6	11 00	-4.8		0	3.4	-3.3	11.2		See table
11 01	+11.5	-20.8	11 08	+11.3	-20.5	11 14	-4.7		47 + 0.2	3.6	-3.4	11.9		←
11 15	+11.6	-20.7	11 23	+11.4	-20.4	11 29	-4.6		Sept. 3-Sept. 29	3.8	-3.5	12.6		m
11 30	+11.7	-20.6	11 38	+11.5	-20.3	12 01	-4.5		0	4.0	-3.6	13.3	20	-7.9
11 46	+11.8	-20.5	12 10	+11.6	-20.2	12 05	-4.4		46 + 0.3	4.3	-3.6	14.1	22	-8.3
12 02	+11.9	-20.4	12 28	+11.8	-20.0	12 18	-4.3		0	4.5	-3.7	14.9	24	-8.6
12 19	+12.0	-20.3	12 46	+11.9	-19.9	12 35	-4.2		Sept. 30-Oct. 14	4.7	-3.9	15.7	26	-9.0
12 37	+12.1	-20.2	13 05	+12.0	-19.8	12 54	-4.1		0	5.0	-4.0	16.5	28	-9.3
12 55	+12.2	-20.1	13 24	+12.1	-19.7	13 13	-4.0		11 + 0.4	5.2	-4.1	17.4		
13 14	+12.3	-20.0	13 45	+12.2	-19.6	13 33	-3.9		41 + 0.5	5.5	-4.2	18.3	30	-9.6
13 35	+12.4	-19.9	14 07	+12.3	-19.5	13 54	-3.8		0	5.8	-4.3	19.1	32	-10.0
13 56	+12.5	-19.8	14 30	+12.4	-19.4	14 16	-3.7		6 + 0.5	6.1	-4.4	20.1	34	-10.3
14 18	+12.6	-19.7	14 54	+12.5	-19.3	14 40	-3.6		20 + 0.6	6.3	-4.5	21.0	36	-10.6
14 42	+12.7	-19.6	15 19	+12.6	-19.2	15 04	-3.5		31 + 0.7	6.6	-4.6	22.0	38	-10.8
15 06	+12.8	-19.5	15 46	+12.7	-19.1	15 30	-3.4		0	6.9	-4.7	22.9		
15 32	+12.9	-19.4	16 14	+12.8	-19.0	15 57	-3.3		Oct. 23-Nov. 25	7.2	-4.8	23.9	40	-11.1
15 59	+13.0	-19.3	16 44	+12.9	-18.9	16 26	-3.2		0	7.5	-4.8	24.9	42	-11.4
16 28	+13.1	-19.2	17 15	+13.0	-18.8	17 28	-3.1		4 + 0.6	7.9	-4.9	26.0	44	-11.7
16 59	+13.2	-19.1	17 48	+13.1	-18.7	18 02	-3.0		12 + 0.7	8.2	-5.1	27.1	46	-11.9
17 32	+13.3	-19.0	18 24	+13.2	-18.6	18 08	-2.9		22 + 0.8	8.5	-5.2	28.1	48	-12.2
18 06	+13.4	-18.9	19 01	+13.3	-18.5	18 38	-2.8		0	8.8	-5.3	29.2		ft.
18 42	+13.5	-18.8	19 42	+13.4	-18.4	19 17	-2.7		Nov. 26-Dec. 3	9.2	-5.4	30.4	2	-1.4
19 21	+13.6	-18.7	20 25	+13.5	-18.3	19 58	-2.6		0	9.5	-5.4	31.5	4	-1.9
20 03	+13.7	-18.6	21 11	+13.6	-18.2	20 42	-2.5		6 + 0.5	9.9	-5.5	32.7	6	-2.4
20 48	+13.8	-18.5	22 00	+13.7	-18.1	21 28	-2.4		20 + 0.6	10.3	-5.6	33.9	8	-2.7
21 35	+13.9	-18.4	22 54	+13.8	-18.0	22 19	-2.3		31 + 0.7	10.6	-5.7	35.1	10	-3.1
22 26	+14.0	-18.3	23 51	+13.9	-17.9	23 13	-2.2		0	11.0	-5.8	36.3		See table
23 22	+14.1	-18.2	24 53	+14.0	-17.8	24 11	-2.1		11 + 0.4	11.4	-5.9	37.6		←
24 21	+14.2	-18.1	26 00	+14.1	-17.7	25 14	-2.0		41 + 0.5	11.8	-6.0	38.9		ft.
25 26	+14.3	-18.0	27 13	+14.2	-17.6	26 22	-1.9		0	12.2	-6.2	40.1	70	-8.1
26 36	+14.4	-17.9	28 33	+14.3	-17.5	27 36	-1.8		Dec. 20-Dec 31	12.6	-6.3	41.5	75	-8.4
27 52	+14.5	-17.8	30 00	+14.4	-17.4	28 56	-1.7		0	13.0	-6.4	42.8	80	-8.7
29 15	+14.6	-17.7	31 35	+14.5	-17.3	30 24	-1.6		46 + 0.3	13.4	-6.5	44.2	85	-8.9
30 46	+14.7	-17.6	33 20	+14.6	-17.2	32 00	-1.5		0	13.8	-6.6	45.5	90	-9.2
32 26	+14.8	-17.5	35 17	+14.7	-17.1	33 45	-1.4		MARS	14.2	-6.6	46.9	95	-9.5
34 17	+14.9	-17.4	37 26	+14.8	-17.0	35 40	-1.3		Jan. 1-Mar. 22	14.7	-6.8	48.4		
36 20	+15.0	-17.3	39 50	+14.9	-16.9	37 48	-1.2		0	15.1	-6.9	49.8	100	-9.7
38 38	+15.1	-17.2	42 31	+15.0	-16.8	40 08	-1.1		41 + 0.2	15.5	-7.0	51.3	105	-9.9
41 08	+15.2	-17.1	45 31	+15.1	-16.7	42 44	-1.0		75 + 0.1	16.0	-7.1	52.8	110	-10.2
43 59	+15.3	-17.0	48 55	+15.2	-16.6	45 36	-0.9		0	16.5	-7.2	54.3	115	-10.4
47 10	+15.4	-16.9	52 44	+15.3	-16.5	48 47	-0.8		Mar. 23-Dec. 31	16.9	-7.2	55.8	120	-10.6
50 46	+15.5	-16.8	57 02	+15.4	-16.4	52 18	-0.7		0	17.4	-7.3	57.4	125	-10.8
54 49	+15.6	-16.7	61 51	+15.5	-16.3	56 11	-0.6		60 + 0.1	17.9	-7.4	58.9		
59 23	+15.7	-16.6	67 17	+15.6	-16.2	60 28	-0.5		0	18.4	-7.5	60.5		
64 30	+15.8	-16.5	73 16	+15.7	-16.1	65 08	-0.4		0	18.8	-7.6	62.1	130	-11.1
70 12	+15.9	-16.4	79 43	+15.8	-16.0	70 11	-0.3		0	19.3	-7.7	63.8	135	-11.3
76 26	+16.0	-16.3	86 32	+15.9	-15.9	75 34	-0.2		0	19.8	-7.8	65.4	140	-11.5
83 05	+16.1	-16.2	90 00			81 13	-0.1		0	20.4	-7.9	67.1	145	-11.7
90 00						87 03	0.0		0	20.9	-8.0	68.8	150	-11.9
						90 00	0.0		0	21.4	-8.1	70.5	155	-12.1

App. Alt.	Corr ⁿ
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App. Alt. = Apparent altitude = Sextant altitude corrected for index error and dip.
For daylight observations of Venus, see page 260.

For bub