

TABLE 20  
Meridian Angle and Altitude of a Body on the Prime Vertical Circle

Table with columns for Latitude (0 to 85) and Declination (0 to 5 degrees). Each declination column has two sub-columns for Altitude (t and Alt.). Values are in italics.

Numbers in italics indicate nearest approach to prime vertical

TABLE 20  
Meridian Angle and Altitude of a Body on the Prime Vertical Circle

Table with columns for Latitude (0 to 85) and Declination (6 to 11 degrees). Each declination column has two sub-columns for Altitude (t and Alt.). Values are in italics.

Numbers in italics indicate nearest approach to prime vertical

**TABLE 20**  
Meridian Angle and Altitude of a Body on the Prime Vertical Circle

Latitude	Declination (same name as Latitude)												Latitude
	12°		13°		14°		15°		16°		17°		
	t	Alt.	t	Alt.	t	Alt.	t	Alt.	t	Alt.	t	Alt.	
0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	0
1	85.3	4.8	85.7	4.4	86.0	4.1	86.3	3.9	86.5	3.6	86.7	3.4	1
2	80.5	9.7	81.3	8.9	81.9	8.3	82.5	7.7	83.0	7.3	83.4	6.9	2
3	75.7	14.6	76.9	13.5	77.9	12.5	78.7	11.7	79.5	10.9	80.1	10.3	3
4	70.8	19.6	72.4	18.1	73.7	16.8	74.9	15.6	75.9	14.7	76.8	13.8	4
5	65.7	24.8	67.7	22.8	69.5	21.1	70.9	19.7	72.2	18.4	73.4	17.3	5
6	60.4	30.2	62.9	27.7	65.1	25.6	66.9	23.8	68.5	22.3	69.9	20.9	6
7	54.7	35.9	57.9	32.8	60.5	30.2	62.7	28.1	64.6	26.2	66.3	24.6	7
8	48.6	42.0	52.5	38.2	55.7	35.1	58.4	32.5	60.7	30.3	62.6	28.4	8
9	41.8	48.8	46.7	44.1	50.6	40.3	53.8	37.2	56.5	34.6	58.8	32.3	9
10	33.9	56.6	40.2	50.5	45.0	45.9	48.8	42.1	52.1	39.0	54.8	36.4	10
11	23.9	66.6	32.7	58.0	38.8	52.1	43.5	47.5	47.3	43.8	50.5	40.7	11
12	0.0	90.0	23.0	67.6	31.5	59.3	37.5	53.4	42.2	49.0	46.0	45.3	12
13	23.0	67.6	0.0	90.0	22.2	68.4	30.5	60.4	36.4	54.7	41.0	50.3	13
14	31.5	59.3	22.2	68.4	0.0	90.0	21.5	69.2	29.6	61.4	35.4	55.8	14
15	37.5	53.4	30.5	60.4	21.5	69.2	0.0	90.0	20.9	69.9	28.8	62.3	15
16	42.2	49.0	36.4	54.7	29.6	61.4	20.9	69.9	0.0	90.0	20.3	70.5	16
17	46.0	45.3	41.0	50.3	35.4	55.8	28.8	62.3	20.3	70.5	0.0	90.0	17
18	49.1	42.3	44.7	46.7	39.9	51.5	34.4	56.9	28.1	63.1	19.8	71.1	18
19	51.9	39.7	47.9	43.7	43.6	48.0	38.9	52.7	33.0	57.8	27.4	63.9	19
20	54.3	37.4	50.6	41.1	46.8	45.0	42.6	49.2	38.0	53.7	32.9	58.7	20
21	56.4	35.5	53.0	38.9	49.5	42.5	45.7	46.2	41.7	50.3	37.2	54.7	21
22	58.3	33.7	55.2	36.9	51.9	40.2	48.5	43.7	44.8	47.4	40.8	51.3	22
23	60.0	32.1	57.1	35.1	54.0	38.3	50.9	41.5	47.5	44.9	43.9	48.4	23
24	61.5	30.7	58.8	33.6	55.9	36.5	53.0	39.5	49.9	42.7	46.6	46.0	24
25	62.9	29.5	60.3	32.2	57.7	34.9	54.9	37.8	52.1	40.7	49.0	43.8	25
26	64.2	28.3	61.7	30.9	59.3	33.5	56.7	36.2	54.0	39.0	51.2	41.8	26
27	65.3	27.3	63.1	29.7	60.7	32.2	58.3	34.8	55.8	37.4	53.1	40.1	27
28	66.4	26.3	64.3	28.6	62.0	31.0	59.7	33.5	57.4	36.0	54.9	38.5	28
29	67.5	25.4	65.4	27.6	63.3	29.9	61.1	32.3	58.8	34.6	56.5	37.1	29
30	68.4	24.6	66.4	26.7	64.4	28.9	62.3	31.2	60.2	33.5	58.0	35.8	30
31	69.3	23.8	67.4	25.9	65.5	28.0	63.5	30.2	61.5	32.4	59.4	34.6	31
32	70.1	23.1	68.3	25.1	66.5	27.2	64.6	29.2	62.7	31.3	60.7	33.5	32
33	70.9	22.4	69.2	24.4	67.4	26.4	65.6	28.4	63.8	30.4	61.9	32.5	33
34	71.6	21.8	70.0	23.7	68.3	25.6	66.6	27.6	64.8	29.5	63.0	31.5	34
35	72.3	21.3	70.7	23.1	69.1	24.9	67.5	26.8	65.8	28.7	64.1	30.6	35
36	73.0	20.7	71.5	22.5	69.9	24.3	68.4	26.1	66.8	28.0	65.1	29.8	36
37	73.6	20.2	72.2	21.9	70.7	23.7	69.2	25.5	67.6	27.3	66.1	29.1	37
38	74.2	19.7	72.8	21.4	71.4	23.1	69.9	24.9	68.5	26.6	67.0	28.4	38
39	74.8	19.3	73.4	20.9	72.1	22.6	70.7	24.3	69.3	26.0	67.8	27.7	39
40	75.3	18.9	74.0	20.5	72.7	22.1	71.4	23.7	70.0	25.4	68.6	27.1	40
41	75.8	18.5	74.6	20.1	73.3	21.6	72.0	23.2	70.7	24.8	69.4	26.5	41
42	76.3	18.1	75.1	19.6	73.9	21.2	72.7	22.8	71.4	24.3	70.2	25.9	42
43	76.8	17.7	75.7	19.3	74.5	20.8	73.3	22.3	72.1	23.8	70.9	25.4	43
44	77.3	17.4	76.2	18.9	75.0	20.4	73.9	21.9	72.7	23.4	71.5	24.9	44
45	77.7	17.1	76.7	18.5	75.6	20.0	74.5	21.5	73.3	22.9	72.2	24.4	45
46	78.2	16.8	77.1	18.2	76.1	19.7	75.0	21.1	73.9	22.5	72.8	24.0	46
47	78.6	16.5	77.6	17.9	76.6	19.3	75.5	20.7	74.5	22.1	73.4	23.6	47
48	79.0	16.2	78.0	17.6	77.0	19.0	76.0	20.4	75.0	21.8	74.0	23.2	48
49	79.4	16.0	78.4	17.3	77.5	18.7	76.5	20.1	75.6	21.4	74.6	22.8	49
50	79.7	15.7	78.8	17.1	77.9	18.4	77.0	19.7	76.1	21.1	75.1	22.4	50
52	80.4	15.3	79.6	16.6	78.8	17.9	77.9	19.2	77.1	20.5	76.2	21.8	52
54	81.1	14.9	80.3	16.1	79.6	17.4	78.8	18.7	78.0	19.9	77.2	21.2	54
56	81.8	14.5	81.0	15.7	80.3	17.0	79.6	18.2	78.8	19.4	78.1	20.7	56
58	82.4	14.2	81.7	15.4	81.0	16.6	80.4	17.8	79.7	19.0	79.0	20.2	58
60	83.0	13.9	82.3	15.1	81.7	16.2	81.1	17.4	80.5	18.6	79.8	19.7	60
65	84.3	13.3	83.8	14.4	83.3	15.5	82.8	16.6	82.3	17.7	81.8	18.8	65
70	85.6	12.8	85.2	13.8	84.8	14.9	84.4	16.0	84.0	17.1	83.6	18.1	70
75	86.7	12.4	86.5	13.5	86.2	14.5	85.9	15.5	85.6	16.6	85.3	17.6	75
80	87.9	12.2	87.7	13.2	87.5	14.2	87.3	15.2	87.1	16.3	86.9	17.3	80
85	88.9	12.0	88.8	13.1	88.8	14.1	88.7	15.1	88.6	16.1	88.5	17.1	85

Numbers in *italics* indicate nearest approach to prime vertical

**TABLE 20**  
Meridian Angle and Altitude of a Body on the Prime Vertical Circle

Latitude	Declination (same name as Latitude)												Latitude
	18°		19°		20°		21°		22°		23°		
	t	Alt.	t	Alt.	t	Alt.	t	Alt.	t	Alt.	t	Alt.	
0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	90.0	0.0	0
1	86.9	3.2	87.1	3.1	87.3	2.9	87.4	2.8	87.5	2.7	87.6	2.6	1
2	83.8	6.5	84.2	6.2	84.5	5.9	84.8	5.6	85.0	5.3	85.3	5.1	2
3	80.7	9.8	81.2	9.3	81.7	8.8	82.2	8.4	82.5	8.0	82.9	7.7	3
4	77.6	13.0	78.3	12.4	78.9	11.8	79.5	11.2	80.0	10.7	80.5	10.3	4
5	74.4	16.4	75.3	15.5	76.1	14.8	76.8	14.1	77.5	13.5	78.1	12.9	5
6	71.1	19.8	72.2	18.7	73.2	17.8	74.1	17.0	74.9	16.2	75.7	15.5	6
7	67.8	23.2	69.1	22.0	70.3	20.9	71.3	19.9	72.3	19.0	73.2	18.2	7
8	64.4	26.8	65.9	25.3	67.3	24.0	68.5	22.9	69.6	21.8	70.7	20.9	8
9	60.8	30.4	62.6	28.7	64.2	27.2	65.6	25.9	66.9	24.7	68.1	23.6	9
10	57.1	34.2	59.2	32.2	61.0	30.5	62.7	29.0	64.1	27.6	65.5	26.4	10
11	53.3	38.1	55.6	35.9	57.7	33.9	59.6	32.2	61.2	30.6	62.7	29.2	11
12	49.1	42.3	51.9	39.7	54.3	37.4	56.4	35.5	58.3	33.7	60.0	32.1	12
13	44.7	46.7	47.9	43.7	50.6	41.1	53.0	38.9	55.2	36.9	57.1	35.1	13
14	39.9	51.5	43.6	48.0	46.8	45.0	49.5	42.5	51.9	40.2	54.0	38.3	14
15	34.4	56.9	38.9	52.7	42.6	49.2	45.7	46.2	48.5	43.7	50.9	41.5	15
16	28.1	63.1	33.6	57.8	38.0	53.7	41.7	50.3	44.8	47.4	47.5	44.9	16
17	19.8	71.1	27.4	63.9	32.9	58.7	37.2	54.7	40.8	51.3	43.9	48.4	17
18	0.0	90.0	19.3	71.7	26.8	64.6	32.2	59.6	36.5	55.6	40.1	52.3	18
19	19.3	71.7	0.0	90.0	18.9	72.2	26.2	65.3	31.5	60.4	35.8	56.4	19
20	26.8	64.6	18.9	72.2	0.0	90.0	18.5	72.6	25.7	65.9	31.0	61.1	20
21	32.2	59.6	26.2	65.3	18.5	72.6	0.0	90.0	18.2	73.1	25.3	66.5	21
22	36.5	55.6	31.5	60.4	25.7	65.9	18.2	73.1	0.0	90.0	17.9	73.5	22
23	40.1	52.3	35.8	56.4	31.0	61.1	25.3	66.5	17.9	73.5	0.0	90.0	23
24	43.1	49.4	39.3	53.2	35.2	57.2	30.4	61.8	24.8	67.1	17.6	73.9	24
25	45.8	47.0	42.4	50.4	38.7	54.0	34.6	58.0	30.0	62.4	24.5	67.6	25
26	48.2	44.8	45.1	48.0	41.7	51.3	38.1	54.8	34.1	58.7	29.5	63.0	26
27	50.4	42.9	47.5	45.8	44.4	48.9	41.1	52.1	37.5	55.6	33.6	59.4	27
28	52.3	41.2	49.6	43.9	46.8	46.8	43.8	49.8	40.5	52.9	37.0	56.3	28
29	54.1	39.6	51.6	42.2	49.0	44.9	46.2	47.7	43.2	50.6	40.0	53.7	29
30	55.8	38.2	53.4	40.6	50.9	43.2	48.3	45.8	45.6	48.5	42.7	51.4	30
31	57.3	36.9	55.0	39.2	52.7	41.6	50.3	44.1	47.7	46.7	45.1</		