

TABLE 25
Change of Altitude in Given Time from Meridian Transit

a (table 24)	t, meridian angle														a (table 24)
	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	55'	1° 00'	1° 05'	1° 10'	
	0 ^m 20'	0 ^m 40'	1 ^m 00'	1 ^m 20'	1 ^m 40'	2 ^m 00'	2 ^m 20'	2 ^m 40'	3 ^m 00'	3 ^m 20'	3 ^m 40'	4 ^m 00'	4 ^m 20'	4 ^m 40'	
0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3
0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.5
0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.6
0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.7
0.8	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.8
0.9	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.9
1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	1.0
2.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	2.0
3.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.6	0.7	0.8	0.9	1.1	3.0
4.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.5	4.0
5.0	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.3	1.6	1.8	5.0
6.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.9	1.1	1.3	1.6	1.9	2.2	6.0
7.0	0.0	0.1	0.1	0.2	0.3	0.5	0.6	0.8	1.0	1.3	1.6	1.9	2.2	2.5	7.0
8.0	0.0	0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.2	1.5	1.8	2.1	2.5	2.9	8.0
9.0	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.1	1.4	1.7	2.0	2.4	2.8	3.3	9.0
10.0	0.0	0.1	0.2	0.3	0.5	0.7	0.9	1.2	1.5	1.9	2.2	2.7	3.1	3.6	10.0
11.0	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.3	1.6	2.0	2.5	2.9	3.4	4.0	11.0
12.0	0.0	0.1	0.2	0.4	0.6	0.8	1.1	1.4	1.8	2.2	2.7	3.2	3.8	4.4	12.0
13.0	0.0	0.1	0.2	0.4	0.6	0.9	1.2	1.5	2.0	2.4	2.9	3.5	4.1	4.7	13.0
14.0	0.0	0.1	0.2	0.4	0.6	0.9	1.3	1.7	2.1	2.6	3.1	3.7	4.4	5.1	14.0
15.0	0.0	0.1	0.3	0.4	0.7	1.0	1.4	1.8	2.2	2.8	3.4	4.0	4.7	5.4	15.0
16.0	0.0	0.1	0.3	0.5	0.7	1.1	1.5	1.9	2.4	3.0	3.6	4.3	5.0	5.8	16.0
17.0	0.0	0.1	0.3	0.5	0.8	1.1	1.5	2.0	2.6	3.1	3.8	4.5	5.3	6.2	17.0
18.0	0.0	0.1	0.3	0.5	0.8	1.2	1.6	2.1	2.7	3.3	4.0	4.8	5.6	6.5	18.0
19.0	0.0	0.1	0.3	0.6	0.9	1.3	1.7	2.3	2.8	3.5	4.3	5.1	5.9	6.9	19.0
20.0	0.0	0.1	0.3	0.6	0.9	1.3	1.8	2.4	3.0	3.7	4.5	5.3	6.3	7.3	20.0
21.0	0.0	0.2	0.4	0.6	1.0	1.4	1.9	2.5	3.2	3.9	4.7	5.6	6.6	7.6	21.0
22.0	0.0	0.2	0.4	0.7	1.0	1.5	2.0	2.6	3.3	4.1	4.9	5.9	6.9	8.0	22.0
23.0	0.0	0.2	0.4	0.7	1.1	1.5	2.1	2.7	3.4	4.3	5.2	6.1	7.2	8.3	23.0
24.0	0.0	0.2	0.4	0.7	1.1	1.6	2.2	2.8	3.6	4.4	5.4	6.4	7.5	8.7	24.0
25.0	0.0	0.2	0.4	0.7	1.2	1.7	2.3	3.0	3.8	4.6	5.6	6.7	7.8	9.1	25.0
26.0	0.0	0.2	0.4	0.8	1.2	1.7	2.4	3.1	3.9	4.8	5.8	6.9	8.1	9.4	26.0
27.0	0.0	0.2	0.4	0.8	1.2	1.8	2.4	3.2	4.0	5.0	6.0	7.2	8.5	9.8	27.0
28.0	0.1	0.2	0.5	0.8	1.3	1.9	2.5	3.3	4.2	5.2	6.3	7.5	8.8	10.2	28.0

Caution.—If this table is entered with the meridian angle of the Moon in arc units, such units should correspond to the meridian angle in time units as given in the Increments and Corrections section of the *Nautical Almanac*.

TABLE 25
Change of Altitude in Given Time from Meridian Transit

a (table 24)	t, meridian angle														a (table 24)
	1° 15'	1° 20'	1° 25'	1° 30'	1° 35'	1° 40'	1° 45'	1° 50'	1° 55'	2° 00'	2° 05'	2° 10'	2° 15'	2° 20'	
	5 ^m 00'	5 ^m 20'	5 ^m 40'	6 ^m 00'	6 ^m 20'	6 ^m 40'	7 ^m 00'	7 ^m 20'	7 ^m 40'	8 ^m 00'	8 ^m 20'	8 ^m 40'	9 ^m 00'	9 ^m 20'	
0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2
0.3	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3
0.4	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.4
0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.5
0.6	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.6
0.7	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.7
0.8	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1	0.8
0.9	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2	0.9
1.0	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.0
2.0	0.8	0.9	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.1	2.3	2.5	2.7	2.9	2.0
3.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.7	2.9	3.2	3.5	3.8	4.0	4.4	3.0
4.0	1.7	1.9	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.3	4.6	5.0	5.4	5.8	4.0
5.0	2.1	2.4	2.7	3.0	3.3	3.7	4.1	4.5	4.9	5.3	5.8	6.3	6.8	7.3	5.0
6.0	2.5	2.8	3.2	3.6	4.0	4.4	4.9	5.4	5.9	6.4	6.9	7.5	8.1	8.7	6.0
7.0	2.9	3.3	3.7	4.2	4.7	5.2	5.7	6.3	6.9	7.5	8.1	8.8	9.4	10.2	7.0
8.0	3.3	3.8	4.3	4.8	5.3	5.9	6.5	7.2	7.8	8.5	9.3	10.0	10.8	11.6	8.0
9.0	3.8	4.3	4.8	5.4	6.0	6.7	7.4	8.1	8.8	9.6	10.4	11.3	12.2	13.1	9.0
10.0	4.2	4.7	5.4	6.0	6.7	7.4	8.2	9.0	9.8	10.7	11.6	12.5	13.5	14.5	10.0
11.0	4.6	5.2	5.9	6.6	7.4	8.1	9.0	9.9	10.8	11.7	12.7	13.8	14.8	16.0	11.0
12.0	5.0	5.7	6.4	7.2	8.0	8.9	9.8	10.8	11.8	12.8	13.9	15.0	16.2	17.4	12.0
13.0	5.4	6.2	7.0	7.8	8.7	9.6	10.6	11.7	12.7	13.9	15.0	16.3	17.6	18.9	13.0
14.0	5.8	6.6	7.5	8.4	9.4	10.4	11.4	12.5	13.7	14.9	16.2	17.5	18.9	20.3	14.0
15.0	6.2	7.1	8.0	9.0	10.0	11.1	12.2	13.4	14.7	16.0	17.4	18.8	20.2	21.8	15.0
16.0	6.7	7.6	8.6	9.6	10.7	11.9	13.1	14.3	15.7	17.1	18.5	20.0	21.6	23.2	16.0
17.0	7.1	8.1	9.1	10.2	11.4	12.6	13.9	15.2	16.7	18.1	19.7	21.3	23.0	24.7	17.0
18.0	7.5	8.5	9.6	10.8	12.0	13.3	14.7	16.1	17.6	19.2	20.8	22.5	24.3	26.1	18.0
19.0	7.9	9.0	10.2	11.4	12.7	14.1	15.5	17.0	18.6	20.3	22.0	23.8			19.0
20.0	8.3	9.5	10.7	12.0	13.4	14.8	16.3	17.9	19.6	21.3	23.1				20.0
21.0	8.8	10.0	11.2	12.6	14.0	15.6	17.2	18.8	20.6						21.0
22.0	9.2	10.4	11.8	13.2	14.7	16.3	18.0	19.7	21.6						22.0
23.0	9.6	10.9	12.3	13.8	15.4	17.0	18.8	20.6							23.0
24.0	10.0	11.4	12.8	14.4	16.0	17.8	19.6	21.5							24.0
25.0	10.4	11.9	13.4	15.0	16.7	18.5	20.4								25.0
26.0	10.8	12.3	13.9	15.6	17.4	19.3									26.0
27.0	11.2	12.8	14.4	16.2	18.0	20.0									27.0

Caution.—If this table is entered with the meridian angle of the Moon in arc units, such units should correspond to the meridian angle in time units as given in the Increments and Corrections section of the *Nautical Almanac*.

TABLE 25															
Change of Altitude in Given Time from Meridian Transit															
a (table 24)	t, meridian angle														a (table 24)
	2° 25'	2° 30'	2° 35'	2° 40'	2° 45'	2° 50'	2° 55'	3° 00'	3° 05'	3° 10'	3° 15'	3° 20'	3° 25'	3° 30'	
	9m 40"	10m 00"	10m 20"	10m 40"	11m 00"	11m 20"	11m 40"	12m 00"	12m 20"	12m 40"	13m 00"	13m 20"	13m 40"	14m 00"	
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.1
0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.2
0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	0.3
0.4	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.3	0.4
0.5	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6	0.5
0.6	0.9	1.0	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	2.0	0.6
0.7	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	0.7
0.8	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.5	2.6	0.8
0.9	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.7	2.8	2.9	0.9
1.0	1.6	1.7	1.8	1.9	2.0	2.1	2.3	2.4	2.5	2.7	2.8	3.0	3.1	3.3	1.0
2.0	3.1	3.3	3.6	3.8	4.0	4.3	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.5	2.0
3.0	4.7	5.0	5.3	5.7	6.0	6.4	6.8	7.2	7.6	8.0	8.4	8.9	9.3	9.8	3.0
4.0	6.2	6.7	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.7	11.3	11.9	12.5	13.1	4.0
5.0	7.8	8.3	8.9	9.5	10.1	10.7	11.3	12.0	12.7	13.4	14.1	14.8	15.6	16.3	5.0
6.0	9.3	10.0	10.7	11.4	12.1	12.8	13.6	14.4	15.2	16.0	16.9	17.8	18.7	19.6	6.0
7.0	10.9	11.7	12.5	13.3	14.1	15.0	15.9	16.8	17.7	18.7	19.7	20.7	21.8	22.9	7.0
8.0	12.5	13.3	14.2	15.2	16.1	17.1	18.1	19.2	20.3	21.4	22.5	23.7	24.9	26.1	8.0
9.0	14.0	15.0	16.0	17.1	18.2	19.3	20.4	21.6	22.8	24.1	25.4	26.7	28.0	29.4	9.0
10.0	15.6	16.7	17.8	19.0	20.2	21.4	22.7	24.0	25.4	26.7	28.2	29.6			10.0
11.0	17.1	18.3	19.6	20.9	22.2	23.5	25.0	26.4	27.9	29.4					11.0
12.0	18.7	20.0	21.4	22.8	24.2	25.7	27.2	28.8							12.0
13.0	20.2	21.7	23.1	24.7	26.2	27.8	29.5								13.0
14.0	21.8	23.3	24.9	26.6	28.2	30.0									14.0
15.0	23.4	25.0	26.7	28.5	30.2										15.0
16.0	24.9	26.7	28.5	30.3											16.0
17.0	26.5	28.3	30.3												17.0
a (table 24)	t, meridian angle														a (table 24)
	3° 35'	3° 40'	3° 45'	3° 50'	3° 55'	4° 00'	4° 05'	4° 10'	4° 15'	4° 20'	4° 25'	4° 30'	4° 35'	4° 40'	
	14m 20"	14m 40"	15m 00"	15m 20"	15m 40"	16m 00"	16m 20"	16m 40"	17m 00"	17m 20"	17m 40"	18m 00"	18m 20"	18m 40"	
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.1
0.2	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.2	0.2
0.3	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.7	0.3
0.4	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.2	2.2	2.3	0.4
0.5	1.7	1.8	1.9	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	0.5
0.6	2.1	2.2	2.2	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.4	3.5	0.6
0.7	2.4	2.5	2.6	2.7	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.8	3.9	4.1	0.7
0.8	2.7	2.9	3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.2	4.3	4.5	4.6	0.8
0.9	3.1	3.2	3.4	3.5	3.7	3.8	4.0	4.2	4.3	4.5	4.7	4.9	5.0	5.2	0.9
1.0	3.4	3.6	3.8	3.9	4.1	4.3	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	1.0
2.0	6.8	7.2	7.5	7.8	8.2	8.5	8.9	9.3	9.6	10.0	10.4	10.8	11.2	11.6	2.0
3.0	10.3	10.8	11.3	11.8	12.3	12.8	13.3	13.9	14.4	15.0	15.6	16.2	16.8	17.4	3.0
4.0	13.7	14.3	15.0	15.7	16.4	17.1	17.8	18.5	19.3	20.0	20.8	21.6	22.4	23.2	4.0
5.0	17.1	17.9	18.8	19.6	20.5	21.3	22.2	23.1	24.1	25.0	26.0	27.0	28.0	29.0	5.0
6.0	20.5	21.5	22.5	23.5	24.5	25.6	26.7	27.8							6.0
7.0	24.0	25.1	26.3	27.4											7.0
8.0	27.4	28.7	30.0												8.0

Caution.—If this table is entered with the meridian angle of the Moon in arc units, such units should correspond to the meridian angle in time units as given in the Increments and Corrections section of the *Nautical Almanac*.

TABLE 25															
Change of Altitude in Given Time from Meridian Transit															
a (table 24)	t, meridian angle														a (table 24)
	4° 45'	4° 50'	4° 55'	5° 00'	5° 05'	5° 10'	5° 15'	5° 20'	5° 25'	5° 30'	5° 35'	5° 40'	5° 45'	5° 50'	
	19m 00"	19m 20"	19m 40"	20m 00"	20m 20"	20m 40"	21m 00"	21m 20"	21m 40"	22m 00"	22m 20"	22m 40"	23m 00"	23m 20"	
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0.1	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.1
0.2	1.2	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	0.2
0.3	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.6	2.7	0.3
0.4	2.4	2.5	2.6	2.7	2.8	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	0.4
0.5	3.0	3.1	3.2	3.3	3.4	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.5	0.5
0.6	3.6	3.7	3.9	4.0	4.1	4.3	4.4	4.6	4.7	4.8	5.0	5.1	5.3	5.4	0.6
0.7	4.2	4.4	4.5	4.7	4.8	5.0	5.1	5.3	5.5	5.6	5.8	6.0	6.2	6.4	0.7
0.8	4.8	5.0	5.2	5.3	5.5	5.7	5.9	6.1	6.3	6.5	6.7	6.9	7.1	7.3	0.8
0.9	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.3	7.5	7.7	7.9	8.2	0.9
1.0	6.0	6.2	6.4	6.7	6.9	7.1	7.4	7.6	7.8	8.1	8.3	8.6	8.8	9.1	1.0
2.0	12.0	12.5	12.9	13.3	13.8	14.2	14.7	15.2	15.6	16.1	16.6	17.1	17.6	18.1	2.0
3.0	18.0	18.7	19.3	20.0	20.7	21.4	22.0	22.8	23.5	24.2	24.9	25.7	26.4	27.2	3.0
4.0	24.1	24.9	25.8	26.7	27.6	28.5	29.4	30.3	31.3						4.0
a (table 24)	t, meridian angle														a (table 24)
	5° 55'	6° 00'	6° 05'	6° 10'	6° 15'	6° 20'	6° 25'	6° 30'	6° 35'	6° 40'	6° 45'	6° 50'	6° 55'	7° 00'	
	23m 40"	24m 00"	24m 20"	24m 40"	25m 00"	25m 20"	25m 40"	26m 00"	26m 20"	26m 40"	27m 00"	27m 20"	27m 40"	28m 20"	
"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
0.1	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	0.1
0.2	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.5	2.6	2.6	0.2
0.3	2.8	2.9	3.0	3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.6	3.7	3.8	3.9	0.3
0.4	3.7	3.8	3.9	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.9	5.0	5.1	5.2	0.4
0.5	4.7	4.8	4.9	5.1	5.2	5.3	5.5	5.6	5.8	5.9	6.1	6.2	6.4	6.5	0.5
0.6	5.6	5.8	5.9	6.1	6.2	6.4	6.6	6.8	6.9	7.1	7.3	7.5	7.7	7.8	0.6
0.7	6.5	6.7	6.9	7.1	7.3	7.5	7.7	7.9	8.1	8.3	8.5	8.7	8.9	9.1	0.7
0.8	7.5	7.7	7.9	8.1	8.3	8.6	8.8	9.0	9.2	9.5	9.7	10.0	10.2	10.5	0.8
0.9	8.4	8.6	8.9	9.1	9.4	9.6	9.9	10.1	10.4	10.7	10.9	11.2	11.5	11.8	0.9
1.0	9.3	9.6	9.9	10.1	10.4	10.7	11.0	11.3	11.6	11.9	12.2	12.5	12.8	13.1	1.0
2.0	18.7	19.2	19.7	20.3	20.8	21.4	22.0	22.5	23.1	23.7	24.3	24.9	25.5	26.1	2.0
3.0	28.0	28.8	29.6	30.4											3.0

Caution.—If this table is entered with the meridian angle of the Moon in arc units, such units should correspond to the meridian angle in time units as given in the Increments and Corrections section of the *Nautical Almanac*.