

To find the Altitude

1. Add together the correct altitude
 and the polar distance from the same sun table
 2. From the sum subtract the sum of the
 sines of the latitudes then add together the
 log secant of the polar distance reflecting 10 in each index the
 log cosine of the half sum: and the log sine of the remaining then
 half the sum of these 4 logarithms being brought for in the column
 of sines will correspond to the hour of the day in which the hour

Example 1st

Sun's cor alt 13 40
 Latitude 34 30 secant 10 20 58 5
 Polar dist 96 54 secant 00 00 28 6
 Half sum 16 12 4
 Sum 32 cosine 9 20 6 4
 Sine alt 13 40
 Remainder 64 12 sine 9 56 6 4
 Sum 37 40 5
 Time corresponding to sum 37 40 2
 Subst in the column of time 5th 7m 4s
 Time per watch shew 21 00 5

Sun alt 15 54
 Lat 39 54 sine 11 5 11
 Polar dist 72 32 cosine 00 22 8 6
 Sum 21 24 20
 Sine 64 10 cosine 9 63 2 4
 Sum 15 54
 48 10 sine 3 54 2 8 8
 Sum 3 54 2 8 8

Sun alt 29 25 P. M. Dec 23 20 18 signs
 Alt 14 58 00 05 9 9 5 secant
 Cor alt 15 18 00 03 4 9 1 cosine
 Alt 27 25 9 74 5 1 2 cosine
 Sum 21 11 55 19 65 5 0 3
 Sine 58 37 9 52 9 0 1 52 7 5 5
 Alt 15 10
 40 4 7 1 1 1 5 6 3 9 52 2 2 2

36 00
 21 36
 56 23
 443 59

Example 2nd

Sun alt 10 4 8 10 0 4 7 7
 Latitude 36 2 1 0 0 9 3 9 8
 Polar dist 58 5 6 0 100 5 0 6
 Sum 21 4 6 0 5 9 9 4 6 5 1 7
 Sine 7 3 0 2 9 9 4 6 0 7
 Sum 1 1 0 0 2 1 9 5 1 0 2 2
 Sum 6 2 0 2 7 7 5 5 1 1
 Sum 7 5 5 6 7 (7 6 22 m 8 2 5)

Cor alt 10 3 3 0 0 9 5 6 6
 Lat 36 2 1 0 0 9 3 9 8
 Polar dist 58 5 6 0 100 5 0 6
 Sum 21 4 6 0 5 9 9 4 6 5 1 7
 Sine 7 3 0 2 9 9 4 6 0 7
 Sum 1 1 0 0 2 1 9 5 1 0 2 2
 Sum 6 2 0 2 7 7 5 5 1 1

Lat 30 31 8 sine Dec 20 3 3 8
 Observed alt sun 38 40 P. M.
 Alt 38 40
 12
 3 5 3 0 0 0 0 5 2
 3 5 3 0 0 0 0 0 5 2
 7 8 0 0 9 7 4 2 1 6
 21 12 54 9 4 7 9 7 4
 5 6 2 7 9 3 4 9 9 0
 3 5 5 8 9 6 2 4 5 5
 2 5 3 4 3 1 1 8 2 4 8 2 0