Rules For Determining The Longitude at Sea Sept. the 1st 1845

R.S. add the Suns altitudes and Chronometer time all if 3 sights Lik. them by 3 if four sights divide the Sum of the by 4 as thus—

Chronometer time 7h 00m 18s
Chronometer time 7-03-35
4-03-57
7-01-58
Chronometer Rate — 01 57
true chronometer time 6-30-01
true time by watch 4-00-55
Longitude in time 2-29-06
5
12-25 30
3
true Longd 37-16-30

observed Altitude 26° 12"
Observed Altitude 26° 05
52° 17"
Dip — 26-08
Suns true altitude 26-18
Latitude 18° 38 Secant
Polar distance — 90 10 Cosecant
sum — 165-06
half sum 82-33 cosine
Suns true altitude 41-15
26-18 Sine
Remainder ----

Declination 0h 16" 35'
2 17 correction Table 5th
00-14-18
3" 55
00-10-23
90 00 00
Polar distance — 90-10-23

Logarithms in Table 27th

0 2338
0 0 000
9=5 81 92
9=8 19 11
sum 14 24 41
9 12 20†

† seek in Table 27th until under the Log sines you find number to correspond with the half sum of the Log sines

and against this number you will find hours P M and A M and against this number you find the sum

Subtract from the true Chronometer time Equation of time 4h 08" 16' Subt + 7 21 4-00 55 true watch time

‡ the Equation of time is to be found in the Nautical almanack

Constantinople Manuscript

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Penmanship

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† the Equation of times is to be founde in the Nautical Almanacks and if the sun be North and the ship be south you must subtract the declination from 90° but if they are both north or both south add the declination to 90° and you will have the Polar distance N B if one be North and the other South add but if they are both North or both south subtract the declination from 90°