LOP Template

This template is provided for use with a small calculator (Casio fx-3650P or equivalent) wherein two equations have been previously recorded :

Prog 1 : $\sin^{-1}(\sin D \sin L + \cos D \cos A \cos L) \rightarrow H$

Prog 2 : $\cos^{-1}((\sin D - \sin L \sin H) \div (\cos L \cos H))$

LOP Template

Date UT	
Watch UT Time (h m s) 00 –	Error Watch Time (h m s) + / Chrono Time (h m s) = Obs. UT Time (h m s)
Observed body	Name Sextant Altitude at ° '
Assumed Position L : G :	Index Error : Height of Eye :

1 – Declination :

Dec at h | Var. Dec. *d* | ΔH | Dec at obs. time

N / S–(; + / – ; × ; = ; → ALPHA **D** EXE

Ephemerides ; Difference between observation time and ephemerides time ; Declination

2 – Local Hour Angle :

GHA at h | Var. GHA | ΔH | GHA at obs. time | G | Assumed Longitude | LHA

Ephemerides ; + / – ; × ; = ; ΔH ; GHA

G : + if East, – if West ; E / W

Assumed Longitude ; =

if > 360 : – 360 = ; if < 0 : + 360 = ; → ALPHA **A** EXE

LHA

3 – Assumed Latitude :

L

N / S– ; → ALPHA **L** EXE

Assumed Latitude

Corrections **additives** bord inférieur du soleil					
Hauteur observée	Elévation de l'œil				
	0m	2m	3m	4m	5m
6°	7',5	5',0	4',5	4',0	3',5
7°	8',7	6',2	5',6	5',1	4',4
8°	9',6	7',1	6',5	6',0	5',5
9°	10',3	7',7	7',2	6',7	6',0
10°	10',8	8',3	7',8	7',3	7',0
12°	11',7	9',2	8',6	8',1	7',5
15°	12',6	10',1	9',5	9',0	8',5
20°	13',5	11',0	10',5	9',9	9',5
30°	14',5	12',0	11',5	10',9	10',5
50°	15',3	12',8	12',2	11',7	11',0
90°	16',0	13',5	13',0	12',5	12',1

4 – Computed Altitude :

Prog 1 EXE → Comp. Alt.

5 – Intercept :

Hs | IE | 1st correction | 2nd correction | Ho | Hc | Intercept in ° | I

– ; – ; = ; – ; → ALPHA **H** ; = ; × 60 =

Stars and Planets : – 16'
Sun's lower limb : – 32'

Sextant Altitude ; Index Error ; Corrections Tables ; Observed Altitude ; Hc ; Intercept in °

Intercept in M
if I + : toward Pg
if I – : away from Pg

6 – Azimuth :

Prog 2 EXE → Z

If LHA < 180° (local afternoon)
– 360 = (do not care about –)

Version 1.2e