

SOLAR OBSERVATION WORKSHEET

Name _____

Sheet ___ of ___

		Set ___ Direct	Set ___ Reverse	Set ___ Direct	Set ___ Reverse	Comments
1	Backsight					
2	Foresight					
3	Angle					2 - 1
4	Observation Time					
5	Time Zone Correction					If time not UTC
6	UT Time					4+5
7	Equation Time 0 ^h					From Ephemeris
8	Equation Time 24 ^h					From Ephemeris
9	Equation Time, obs.					(8-7)/24*6+7
10	-12 ^h					
11	GHA, hours					6+9+10
12	GHA, arc					11 * 15
13	Longitude					W longitude (-)
14	Latitude					
15	LHA					12 + 13
16	t *					
17	Declination 0 ^h					From Ephemeris
18	Declination 24 ^h					From Ephemeris
19	Declination, obs.					(18-17)/24*6+17
20	Z **					Azimuth of sun
21	Azimuth					20 - 3
22	Average per Set					

Average Azimuth of line _____

Note that values in red in Comments column indicate value for a specific row number. Black values are constant terms or set variables.

* If LHA > 180°, t = 360° - LHA and t is east and +. If LHA < 180°, t = LHA and t is west and -

** Z is computed from:

$$\tan Z = \frac{\sin t}{\tan \delta \cos \phi - \sin \phi \cos t}$$