

Examples of Application of foregoing Tables.

1. Required the *Hour Angle* and *Azimuth of Polaris*, at Linden, Montgomery County, on June 10, 1897, at 8h. 33m. 12s. p. m., according to pocket watch keeping *standard* time.

Geographical position of Linden: Lat. 39.0°, Long. 77.05° W.

Watch time of observation, 1897, June 10	h. m. s.	
	8 33 12	p.
Watch fast on standard time, 1 m.	m. s.	
	-1 00	
Reduction of standard time to Linden	}	- 9 12
local mean time = 4 (75-77.05) = 8.2 m. - 8 12	}	
Linden local mean time of observation, 1897, June 10 ..	8 24 00	p.
Astronomical time of " " " " ..		h. m.
Astron. time, U. C. Polaris, June 1, 1897 (Table XV) ..	20 35.6	8 24.0
Reduction to June 9 ¹ (p. 514)	- 31.5	
	20 04.1	
<i>Check:</i> Astron. time U. C. Polaris, June 15, 1897	19 40.7	
Reduction to June 9 or 6 days	+ 23.6	
	20 04.3	
Hence astron. time U. C. Polaris, June 9, 1897	20 04.3, subtract ²	20 04.2
<i>Hour angle of Polaris</i> , at observation	12 19.8	
Subtract from	23 56.1	
<i>Time argument</i> for Table XVII	11 36.3	
<i>Azimuth of Polaris</i> , at observation	0° 08.5'	E.
<i>To obtain the meridian lay off 0° 08.5' to the west.</i>		

2. Required the *Hour Angle* and *Azimuth of Polaris*, for Easton, Talbot County, at 6h. 20.4m. a. m., standard time, November 20, 1900.

Geographical Position of Easton: Lat. 38°.8, Long. 76°.1 W.

Standard time of observation, Nov. 20	h. m.	
	6 20.4a	
Reduction of standard time to Easton local mean		
time = 4(75 - 76.1) = -4.4 m.	-4.4	
Easton local mean time of observation, Nov. 20	6 16.0a	h. m.
Astronomical time of observation 1900, Nov. 19	18 16.0	
Astron. time U. C. Polaris, 1897, Nov. 15 (Table XV)	h. m.	
	9 40.4	
Reduction to 1900, Nov. 15	+4.3 m. }	
Reduction to 1900, Nov. 19	-11.5	
Astronomical time U. C. Polaris, 1900, Nov. 19	9 28.9	9 28.9
Hour Angle of Polaris, at observation and Time Arg., for table XVII	8 47.1	
Azimuth of Polaris, at observation (Table XVII)	1 09.5 W.	
<i>To obtain the meridian lay off 1° 09.5' to the east.</i>		

¹ By reference to table XV, the surveyor will observe that the times between June 1 and 15 are greater than 8 h. 24 m.; consequently, the culmination for one day earlier, June 9, will be used; see directions p. 524 (bottom).

² To subtract, take one day from June 10 and add its equivalent, 24 h. to 8 h. 24 m., making June 9, 32 h. 24 m. (which is the time expressed by June 10, 8 h. 24 m.); then subtract in the usual manner.