

Township 21 South, Range 8 West.

CHAINS

| Observation | Telescope | Sun | Watch time | Vertical angle | Horizontal angle |
|-------------|-----------|-----|-------------------------------------|----------------|------------------|
| First Do | Direct | ☉ | 10h 47 ^m 20 ^s | 47° 39' 30" | 58° 03' 00" |
| | Reversed | | 10 53 40 | 49° 10' 30" | 55° 29' 00" |
| Mean- | | | 10h 50 ^m 30 ^s | 48° 25' 00" | 56° 46' 00" |
| Second Do | Direct | ☉ | 10h 48 ^m 30 ^s | 47° 51' 00" | 57° 43' 00" |
| | Reversed | | 10 55 00 | 49° 22' 00" | 55° 06' 30" |
| Mean- | | | 10h 51 ^m 45 ^s | 48° 36' 30" | 56° 24' 45" |
| Third Do | Direct | ☉ | 10h 49 ^m 35 ^s | 47° 59' 30" | 57° 28' 00" |
| | Reversed | | 10 56 03 | 49° 31' 00" | 54° 48' 30" |
| Mean- | | | 10h 52 ^m 49 ^s | 48° 45' 15" | 56° 08' 15" |
| Fourth Do | Direct | ☉ | 10h 50 ^m 25 ^s | 48° 08' 00" | 57° 11' 00" |
| | Reversed | | 10 57 25 | 49° 42' 00" | 54° 27' 30" |
| Mean- | | | 10h 53 ^m 55 ^s | 48° 55' 00" | 55° 49' 15" |

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| By first observation flag bears | S. 0° 57' 58" E. |
| By second observation flag bears | S. 0° 57' 55" E. |
| By third observation flag bears | S. 0° 58' 00" E. |
| By fourth observation flag bears | S. 0° 58' 38" E. |
| Mean true bearing of flag ----- | S. 0° 58' 08" E. |
| Bearing of flag by solar transit ----- | S. 0° 58' 00" E. |

Indicated discrepancy between observation for meridian by direct solar observations and observation for meridian with solar transit is 0° 00' 08"

In order to verify the latitude of this station and the reading of my watch, I make a meridian observation of the sun, first setting on the lower limb and noting the transit of the west limb, then, after reversal of the instrument, setting on the upper limb and noting the transit of the east limb, as follows:

| | |
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| Mean observed altitude ----- | 61° 25' 30" |
| Reduced latitude ----- | 43° 44' 04" |
| Watch time of observation ----- | 1h 11 ^m 53 ^s |
| Watch fast of l. m. t. ----- | 1h 14 ^m 52 ^s |
| Same by reference to radio time signals and calculated difference in longitude ----- | 1h 14 ^m 50 ^s |

Every 30 min. from 8 to 10.30 a.m. and from 1.30 to 6 p.m. (all app.t.), I make proper settings on the arcs of the solar attachments and ascertain that the resulting orientations of the instruments, when compared with the meridian established by direct solar observations, have maximum errors of less than 1' 30".

I repeat the tests of the arcs daily by noon observation, and verify the meridional indications at frequent intervals throughout the survey.

The observed magnetic declination is 21° 03' E.

Preliminary to the resurvey all lines are retraced and diligent search is made for all original corners. Identified corners are reestablished in their original positions and all lost corners are reestablished by proportionate measurements based on the official