

CHICAGO.—Same night, (*July 12th*, 1858,) and same Station.*2d.*—With horizon roof, No. 2.

NAMES OF STARS.	Observed true altitudes of Star affected by corrections for refraction and errors of Sextant.	True Sidereal time of observation deduced.	Time of observation noted by Sidereal Chronometer, No. 2,557.	Chronometer No. 2,557, fast of Sidereal time by each observation
Alpha LYRÆ, (Vega,) East	° ' "	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>
	57 36 09.5	15 41 24.32	16 42 54	1 01 29.68
	58 00 50.1	15 43 38.45	16 45 18.9	1 01 30.45
	58 13 55.4	15 44 49.55	16 46 19	1 01 29.45
	58 26 25.7	15 45 56.46	16 47 26.5	1 01 30.04
	59 07 23.9	15 49 39.78	16 51 10.2	1 01 30.42

Mean result of 5 observations on Alpha LYRÆ, East, (at 15*h.* 45*m.*) +1 01 30.01

Alpha BOOTIS, (Arcturus,) West.....	° ' "	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>
	58 56 56.2	15 53 03.18	16 54 33	1 01 29.82
	58 43 41	15 54 32.14	16 56 02.7	1 01 30.53
	58 30 50.7	15 55 57.76	16 57 28	1 01 30.24
	58 22 50.5	15 56 58.87	16 58 21	1 01 30.13
	58 14 22.8	15 57 46.78	16 59 17	1 01 30.22
	58 05 32.6	15 58 44.95	17 00 15	1 01 30.05
	57 56 59.9	15 59 40.98	17 01 11.5	1 01 30.52
	57 44 59.7	16 00 59.32	17 02 29.6	1 01 30.28

Mean result of 8 observations on the Star Alpha BOOTIS, West, (at 15*h.* 57*m.*) +1 01 30.22

Mean result of 5 observations on the Star Alpha LYRÆ, East, (at 15*h.* 45*m.*) as above +1 01 30.01

Second result with horizon roof, No. 2:—Fast of Sidereal time by a mean of these results, from E. and W. Stars, (at 15*h.* 50*m.*) +1 01 30.11

First result with horizon roof, No. 1, as above, derived from the same E. and W. Stars. (at 15*h.* 52*m.*) +1 01 30.26

CHRONOMETER ERROR:—Fast of Sidereal time, the two sets agreeing within 15 of a second, (at 15*h.* 51*m.*) +1 01 30.18

By Comparison:—Chronometer No. 141, slow of mean Solar time for this Station, (at 8*h.* 28*m.* Mean time) — 4 44.48