

TABLE 7.—CORRECTION OF CLOCK TIMES AT THE MEAN OF EXCHANGES, ETC.—continued.
To find the Weights to be given to each day's work.

Date.	New Zealand.	Sydney.	Exchange.	$\sqrt{[r_o^2]}$	$\frac{1}{100 [r_o^2]}$	$p.$
1883.	r_o	r_o	r_o			
December 5	·027	·012	·005	·030	11	3
" 15	·017	·014	·003	·022	20	6
" 16	·024	·011	·004	·027	14	4
" 18	·018	·012	·003	·022	21	6

Difference of Longitude and Probable Error, applying weights as found above.

Date.	Difference of Longitude.	$p.$	Products.	$v.$	$vv.$	$pvv.$
1883.	H. M. S.		S.			
December 5	1 34 16·996	3	50·988	+·013	·0002	·0005
" 15	16·978	6	101·868	—·005	·0000	·0002
" 16	17·066	4	68·264	+·083	·0069	·0276
" 18	16·926	6	101·556	—·057	·0033	·0194
		19)	322·676			·0477
			16·983			

$$r_o = \sqrt{\left(\frac{·0477}{3 \times 19}\right)} \times ·6745 = ·020s.$$

Difference of Longitude, Sydney-Wellington = 1h. 34m. 16·983s. ±·020s.

Difference of Longitude and Probable Error, applying weights proportional to $\frac{S \times W}{S + W}$ where
S=number of stars observed at Sydney, and W=number of stars observed at Wellington
on each night of exchange.

Date.	Difference of Longitude.	Number of Clock Stars observed.		$p.$	Products.	$v.$	$vv.$	$pvv.$
1883.	H. M. S.	S.	W.		S.			
December 5	1 34 16·996	4	20	2	33·992	+·011	·0001	·0002
" 15	16·978	9	25	4	67·912	—·007	·0000	·0002
" 16	17·066	7	16	3	51·198	+·081	·0066	·0197
" 18	16·926	11	16	4	67·704	—·059	·0035	·0139
				13)	220·806			·0340
					16·985			

$$r_o = \sqrt{\left(\frac{·0340}{3 \times 13}\right)} \times ·6745 = ·020s.$$

Difference of Longitude, Sydney-Wellington = 1h. 34m. 16·985s. ±·020s.