

*Observations of the Transit of Mercury on 1894 November 10.*  
*By Lieutenant Basil Taylor, R.N.*

*(Communicated by the Secretaries.)*

The first external contact is very approximate, as I did not know exactly the point of the Sun's limb to watch.

The first internal contact is timed as accurately as possible, but may be slightly too early through my inexperience in observation.

I was unable to see the Sun at the time of egress, as it was obscured by heavy clouds.

The instrument employed was a 2·25-inch refractor with power of 80 ; the telescope mounted on a tripod. The times were taken with two watches, which were compared shortly before with three chronometers on board this ship : the comparisons are given below.

Comparisons were also taken of the same chronometers after the observations, which gave the same errors.

Place of observation : Lat.  $32^{\circ} 19' 10''$  N., Long.  $64^{\circ} 49' 15''$  W.

			Times by			
			(i)		(ii)	
			h	m s	h	m s
External contact at Ingress ...	...	...	23	36 30	(?)	
Internal contact at Ingress ...	...	...	23	37 35	23	38 7
Error of (i) on G.M.T.			4	19 34·5	slow.	
Error of (ii) on G.M.T.			4	19 1·5	slow.	

*Comparisons of watches (i) and (ii) with Chronometers A, B, and D.*

			h	m	s
A.	2	26 0	A.	2	26 30
(i).	9	36 26	(ii).	9	37 29·5
Error of A. on G.M.T.			0 <sup>h</sup>	29 <sup>m</sup>	59 <sup>s</sup> fast.
			h	m	s
B.	12	35 0	B.	12	35 30
(i).	9	37 41	(ii).	9	38 44
Error of B. on G.M.T.			1 <sup>h</sup>	22 <sup>m</sup>	15 <sup>s</sup> slow.
			h	m	s
D.	3	30 30	D.	3	31 0
(i).	9	40 13	(ii).	9	41 17
Error of D. on G.M.T.			1 <sup>h</sup>	30 <sup>m</sup>	41 <sup>s</sup> fast.

The errors of the chronometers were ascertained by observations of the Sun with sextant and artificial horizon on various dates during the month of October.

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*1894 November 11.*