



*New Satellite of Saturn.*

“The distance of  $x$  from the *centre of Saturn* was found to be,

Sept. 21,	at 12 <sup>h</sup> 30 <sup>m</sup> ,	$x$ following <i>Saturn</i>	220"	1	measure.
22	10 30	—	192	5	measures.
23	9 05	—	145	5	”
28	9 00	$x$ preceding <i>Saturn</i>	156	5	”

“On each of these nights, with the exception of the 22d, the observations were continued long enough to identify the satellite by its motion.

“The presence of the moon prevented our obtaining further observations of the new satellite till the 13th of October, although we lost much time in observing accidental stars, which could only be distinguished from the satellite by their not partaking of the motion of *Saturn*.

“On the 13th of October it was again seen following *Saturn*,

At 7 <sup>h</sup> 40 <sup>m</sup> $x$ distant from centre of <i>Saturn</i> 202"					
Oct. 14	7 00	$x$	—	152	

“The motion of  $x$  among the stars was sensible in three hours.

Oct. 15, at 9<sup>h</sup> 35<sup>m</sup>  $x$  distant from centre of *Saturn* 92"·4,  $x$  following.

“The foregoing positions are approximately satisfied by a periodic time of 21 days.

“The orbit is nearly coincident with the plane of the ring.”

We are informed by Mr. Everett, that the name selected for the satellite discovered by Mr. Bond is “*Hyperion*.”

Mr. Lassell complains, “that he has been completely baffled by the weather, which has never been clear, except on moonlight nights.” He suspects that *Hyperion* varies considerably in brightness.

*Transit of Mercury.\* Nov. 8–9, 1848.*

CAMBRIDGE. (Professor Challis.)

	Greenwich M.T.	
	h m s	
External contact	23 5 30·0	} Professor Challis, Northumberland Equat <sup>l</sup> , power 215.
Internal contact	23 6 47·8	
—	23 6 47·0	{ Mr. Breen, 5-foot Equat <sup>l</sup> , power 120.

“The external contact was noted when planet had made a very small impression on the sun’s limb. The internal contact well observed.”

\* Several gentlemen have misunderstood the description of the transit inserted in p. 550 of the *Nautical Almanac*, and so lost the *external* contact, which is, however, a very unsatisfactory phenomenon. The description in the *N.A.* applies to the transit as seen through an inverting telescope, *i. e.* the north, west, and east are the upper, right-hand, and left-hand limb, as seen in the telescope. This would have been evident on referring to the elements at p. 552. In the *N.A.* for 1849, p. xx, the Superintendent stated, to prevent such mistakes, “that the angles of contact have reference to the phases as seen in an inverting telescope.”