III. Emersion of *Aldebaran* on Feb. 10, 1832, by the Rev. M. Ward. N. latitude 52° 43′ 45″ 18. W. longitude 8^m 46^s,8.

	h	m	s
Instantaneous emersion of Aldebaran	2	57	28,9
Aldebaran transited mid. wire of circle	4	26	13,3
West limb of ☽ ditto ditto	4	28	51,3
Daily gain of the clock.....			1,63

IV. Stars observed with the Moon at Blackheath, from August 1831 to January 1832, by Mr. Wrottesley. The observations were made with a five foot transit.

V. Observations made at the East India Company's Observatory at St. Helena, by Mr. Johnson.

These consist, first, of observations of the moon and moon-culminating stars from January to August 1830; secondly, of observations of the solstices of December 1829, and of June and December 1830. The latitude of the observatory deduced from them is 15° 55′ 23″,65, while from several of the Greenwich stars, observed alternately by direct vision and reflexion, it is 15° 55′ 26″,54.

VI. On the Planetary Theory, by Mr. Lubbock.

The object of this paper is to point out some simplifications which may be obtained in developing the functions R and $r\left(\frac{dR}{dr}\right)$ by the use of the binomial theorem. Mr. Lubbock applies this method to the determination of that part of $r\left(\frac{dR}{dr}\right)$ which contains the first powers only of the eccentricities.

VII. On the Rotation of *Venus*, by the Rev. Mr. Hussey.

Mr. Hussey's object in this paper is to shew that the time of rotation of *Venus* asserted by Bianchini, of 23 days and 8 hours, is a near approximation to the truth, in opposition to Cassini and Schroeter, who fixed the same, the former at 23^h 15^m, the latter at 23^h 21^m; and to Sir W. Herschel, who, though he declares the time of rotation to be doubtful, thinks it cannot be so much as 24 days. The observations of Bianchini are quoted at length, in his own words, by Mr. Hussey, who also enters minutely into the arguments used by the younger Cassini, in support of his father's observations. From a review of the whole argument, Mr. Hussey concludes from Cassini, Maraldi, and Herschel, not having been able with powerful instruments to distinguish the spots of *Venus*, that their latitudes were unfavourable for such observations; that the observations of Schroeter are not to be depended upon, as Sir W. Herschel was unable to verify the same, with a more powerful telescope; that Cassini's observations are in the same predicament, having been made with an inferior instrument, imperfectly mounted and without a micrometer, and not having been much relied on by the observer himself; that we are justified in placing confidence in the observations of Bianchini, from the favourable circumstances under which they were made, the minuteness with which they are

detailed, from their correctness having been ascertained by several bystanders, from the superior nature of the instruments employed, from the measurements being micrometrical, and from the character of the observer. Annexed to this paper were several diagrams of the spots of *Venus*.

VIII. Observations on the Magnitudes of Stars. By Mr. Birt; communicated by Mr. Lubbock.

These observations were made between April 1830 and January 1831. In the notes subjoined to them, the author has pointed out various discrepancies between the magnitudes assigned to the same star by different observers, from all of which, in some cases, his own determination differs. The principal instances are *Pollux*, γ and α *Cassiopeæ*, α, ε, and ζ *Cephei*, $\varkappa$ and ι *Ophiuchi*, β and ε *Aquilæ*, and $\varkappa$ and λ *Lyræ*.

IX. Stars observed with the Moon, at the Royal Observatory, Greenwich, in January and February 1832.

		h m s	Daily Rate of Transit Clock.
January 11.	μ Piscium	1 21 4,62	+0″,03
	ν Piscium	1 32 22,70	
	☽ 1 L.	1 57 2,58	
	ξ^2 Ceti	2 18 55,28	
14.	☽ 1 L.	4 54 8,28	+0″,02
	115 Tauri	5 17 4,54	
	119 Tauri	5 22 4,18	
15.	119 Tauri	5 22 4,06	−0″,02
	☽ 1 L.	6 0 0,00	
	ν Geminorum	6 18 41,24	
25.	β Libræ	15 7 38,34	−0″,23
	☽ 2 L.	15 28 45,36	
	β^1 Scorpii	15 55 20,24	
February 9.	(4) Ceti	3 2 48,04	+0″,04
	ξ Tauri	3 18 43,50	
	☽ 1 L.	3 30 12,84	
	48 Tauri	4 6 53,93	
14.	θ Cancri	8 22 41,44	+0″,10
	☽ 1 L.	8 45 54,14	
	π^2 Cancri	9 6 37,38	

X. Occultations and Stars observed with the Moon, at the Observatory, Cambridge, in January and February, 1832.

Day.	Name.	Time of Transit. h m s	Clock's losing rate. s
January 11.	μ Piscium	1 21 11,02	1,02
	ν Piscium	1 32 29,40	
	Moon 1 L.	1 57 8,58	
	ξ^2 Ceti	2 19 2,14	
14.	Moon 1 L.	4 54 10,67	1,01
	115 Tauri	5 17 7,68	
	119 Tauri	5 22 7,46	
January 25.	β Libræ	15 7 31,35	0,99
	Moon 2 L	15 28 37,90	