shorter than the preceding one by 0·0004s. The corrected elements of the star will therefore be as follows :—

1884 January 1, oh. 54m. 43·6s. Paris M.T. + 20h. 7m. 41·6s. (E − 1070) − 0·0002s. E.

THE NEW ALGOL-VARIABLE, Y CYGNI.—In the same number of *Gould's Astronomical Journal* Mr. Sawyer states that he has obtained observations of this star which render it probable that the true period is 1d. 12h. ±, or half the period which Mr. Chandler had adopted for it (see NATURE, vol. xxxvi. p. 377).

OLBERS' COMET, 1887.—The following ephemeris is in continuation of that given in NATURE, vol. xxxvi. p. 588 :—

Ephemeris for Berlin Midnight.

1887.	R.A. h. m. s.	Decl. ° ′	Log r.	Log Δ.	Brightness.
Nov. 11	14 24 15	13 59·0 N.	0·1152	0·3037	1·20
13	14 31 8	13 15·0			
15	14 37 51	12 31·6	0·1232	0·3098	1·12
17	14 44 25	11 48·9			
19	14 50 51	11 6·7	0·1317	0·3162	1·05
21	14 57 9	10 25·3			
23	15 3 18	9 44·7	0·1406	0·3226	0·98
25	15 9 20	9 5·0			
27	15 15 12	8 26·0 N.	0·1499	0·3291	0·91

The brightness on August 27 is taken as unity.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1887 *NOVEMBER* 13–19.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on November 13

Sun rises, 7h. 16m. ; souths, 11h. 44m. 23·6s. ; sets, 16h. 12m. : right asc. on meridian, 15h. 13·5m. ; decl. 17° 58′ S. Sidereal Time at Sunset, 19h. 42m.

Moon (New on November 15, 8h.) rises, 4h. 13m. ; souths, 10h. 6m. ; sets, 15h. 46m. : right asc. on meridian, 13h. 34·4m. ; decl. 4° 48′ S.

Planet.	Rises. h. m.	Souths. h. m.	Sets. h. m.	Right asc. and declination on meridian. h. m.	° ′
Mercury..	8 16	12 23	16 30	15 52·4	21 13 S.
Venus.....	2 56	8 52	14 48	12 20·9	1 39 S.
Mars.....	1 12	7 48	14 24	11 16·3	6 30 N.
Jupiter....	6 52	11 31	16 10	15 0·5	16 10 S.
Saturn....	21 21*	5 8	12 55	8 36·0	18 59 N.
Uranus...	3 52	9 28	15 4	12 56·8	5 23 S.
Neptune..	16 40*	0 21	8 2	3 48·3	18 13 N.

* Indicates that the rising is that of the preceding evening.

Occultations of Stars by the Moon (visible at Greenwich).

Nov.	Star.	Mag.	Disap. h. m.	Reap. h. m.	Corresponding angles from vertex to right for inverted image. °
18	33 Sagittarii	5	16 23	16 50	38 1
18	ξ^2 Sagittarii	4	18 2	19 5	103 330

Nov.	h.	
17	19	Mercury in inferior conjunction with the Sun.
18	7	Saturn stationary.

Variable Stars.

Star.	R.A. h. m.	Decl. ° ′		h. m.	
U Cephei	0 52·3	81 16 N.	Nov. 17,	2 8	*m*
Algol	3 0·8	40 31 N.	,, 16,	1 3	*m*
			,, 18,	21 52	*m*
S Cancri	8 37·5	19 26 N.	,, 14,	1 26	*m*
R Virginis	12 32·8	7 37 N.	,, 14,		*M*
U Ophiuchi	17 10·8	1 20 N.	,, 13,	0 3	*m*
		and at intervals of		20 8	
β Lyræ	18 45·9	33 14 N.	Nov. 15,	19 0	m_2
			,, 19,	0 0	*M*
R Lyræ	18 51·9	43 48 N.	,, 16,		*m*
δ Cephei	22 25·0	57 50 N.	,, 13,	21 0	*m*

M signifies maximum ; *m* minimum ; m_2 secondary minimum.

Meteor-Showers.

	R.A.	Decl. °	
From Lynx	125	40 N.	Swift ; streaks.
Near κ Leonis	142	27 N.	Very swift.
Near θ Ursæ Majoris.	143	49 N.	Very swift.
The Leonids	149	22 N.	Swift ; streaks.
Near ξ Ursæ Majoris.	166	32 N.	Swift ; streaks.

GEOGRAPHICAL NOTES.

THE November number of the *Scottish Geographical Magazine* contains an admirable paper by Mr. John Murray, on "Some Recent Deep-sea Observations in the Indian Ocean." Mr. W. W. Blair, C.E., contributes a useful paper on the "Cold Lakes of New Zealand." Prof. Mohn sends a list of the highest peaks in Northern Europe, with their heights from the latest determinations. They are, with heights in feet :—Galdhoppigen, South Norway, 8399 ; Glitter Tind, 8379 ; Snehætten, 7566 ; Oræfajökull, 6427 ; Sulitelma, Northern Norway, 6178 ; Petermann's Spitze, East Greenland, 11,418 ; Beerenberg, Jan Mayen, 8350 ; Mount Misery, Bear Island, 1785 ; Hornsund Tind, Spitzbergen, 4560 ; Richthofen Mount, Franz Josef Land, 5184. Of these mountains two are volcanic, Oræfajökull and Beerenberg.

THE new number (9) of the *Mittheilungen* of the Vienna Geographical Society contains a summary of our knowledge of the physical geography of the East Asiatic waters (the Western Pacific and its offshoots)—currents, temperatures, &c.—by Lieut. Adolf Glockner.

IN the September number of the *Bulletin* of the American Geographical Society, Mr. R. E. Peary gives a detailed account of his journey, in the summer and autumn of last year, into the interior of Greenland. He entered in the neighbourhood of Disco Island, considerably further north than the starting-point chosen by Nordenskjöld for his expedition. Mr. Peary's experiences were somewhat similar to those of Nordenskjöld. His course throughout the journey was due east. He only reached 100 miles from the edge of the ice-blink or interior ice, his highest elevation being 7525 feet. Mr. Peary sums up his observations of the character of the interior ice. The coast-line shows a great diversity of features, dependent upon the altitude, the season, and the elevation and configuration of the adjacent mountains. Whenever the ice projects down a valley in a long tongue or stream, the edges contract and shrink away from the warmer rocks on each side, leaving a deep cañon between, usually occupied by a glacier ; and the upper surfaces, disintegrated by the reflected heat from the mountains above, and shattered by the daily change of temperature more perhaps than by the forward flow, presents a chaotic labyrinth of crevasses, gullies, and rugged pinnacles, increasing in magnitude in direct proportion to the length of the tongue and its approach to the sea-level. As to the features of the interior beyond the coast-line, the surface of the "ice-blink" near the margin is a succession of rounded hummocks, steepest and highest on their landward sides, which are sometimes precipitous. Further in these hummocks merge into long flat swells, which in turn decrease in height towards the interior, until at last a flat gently rising plain is reached, which doubtless becomes ultimately level. In passing from the margin of the ice-blink to the remote interior, from one to five distinct zones may be noted, the number and width varying with the season, the latitude, and the elevation. In winter the entire surface is undoubtedly covered with a deep unbroken layer of fine dry snow. Late in the spring the warmth of the sun at midday softens the surface of the snow, along the land borders of the ice, and this freezes at night, forming a light crust. Gradually this crust extends up the interior, and with the advance of the season the snow along the border of the "ice-blink" becomes saturated with water. A little later the zone of slush follows the zone of crust into the interior, the snow along the border of the ice-blink melts entirely, forming pools in the depressions, and streams which cut deep gullies in the ice ; water-cavities form ; old crevasses open, and new ones appear. This zone rapidly widens, and extends into the interior in the footsteps of the others, and behind it the immediate border of the ice gets ragged and soiled ; pebbles, boulders, and moraines crop out of its melting surface, and by the end of the Arctic summer it is disintegrated and shattered by the heat, and eroded by the streams, into impassable roughness. Mr. Peary