

THE additions to the Zoological Society's Gardens during the past week include a Lesser White-nosed Monkey (*Cercopithecus petaurista*) from West Africa, presented by Mr. T. Risely Griffith; a Gray Ichneumon (*Herpestes griseus*) from India, presented by Capt. J. Cutting; a Gray Squirrel (*Sciurus cinereus*) from North America, presented by Mrs. Charles Neck; a Golden Eagle (*Aquila chrysaetos*), European, presented by Mr. H. V. Knox; a Bronze-winged Pigeon (*Phaps chalcoptera*) from Australia, presented by Mr. Augustus F. Spry; a — Hang-nest (*Xanthosomus icterocephalus*) from Venezuela, a Song Thrush (*Turdus musicus*), British, deposited; a White-thighed Colobus (*Colobus vellerosus*), a Moustache Monkey (*Cercopithecus cephus*), a Ludio Monkey (*Cercopithecus ludio*) from West Africa, received in exchange.

OUR ASTRONOMICAL COLUMN

THE LEYDEN OBSERVATORY.—Prof. H. G. van de Sande Bakhuyzen has published his Report for the year ending September 15, 1885. The work to which the meridian circle was devoted during the year was the continuation of the observation of a selected list of fairly bright stars situated in the immediate neighbourhood of the Pole. It is expected that this series of observations will be finished off during the present winter. With the 7-inch refractor, nine observations of Wolf's comet were made. Between October 1884 and March 1885, a series of measures have been made with Airy's double-image micrometer attached to this equatorial, for the purpose of determining the systematic errors of the measures of the diameters of Mars and Uranus obtained in former years. For this purpose, Prof. Bakhuyzen has measured the diameters of artificial disks, formed by circular holes in a copper plate, made so as to resemble, both in size and brightness, the planets themselves. The results of these investigations will be published shortly. The reduction of the meridian observations, 1877-85, is in a forward state, some parts being nearly completed. This work is intrusted to Dr. E. F. van de Sande Bakhuyzen, the First Observer. Some progress has also been made in the reduction of the zone observations, 1874-76. Prof. Bakhuyzen himself has been chiefly occupied with his monograph on the rotation-period of Mars, now published. In March 1885 work was commenced in connection with the erection of the new 10½-inch objective, and the instrument is now ready for use. The mounting has been supplied by the Repsolds, and the object-glass by Alvan Clark and Sons. Its performance, so far as it has yet been tested, appears to be remarkably good, and does not compare unfavourably with that of other instruments of similar size. In Prof. Bakhuyzen's hands it will doubtless do good work.

FABRY'S COMET.—Dr. H. Oppenheim gives the following ephemeris for this comet for Berlin midnight:—

1886	R.A.	Decl.	Log Δ	Log r
	h. m. s.	°		
Jan. 17	23 31 4	+21 53'4	0'2304	0'2025
19	23 29 58	22 5'3		
21	23 28 58	22 18'2	0'2316	0'1857
23	23 28 3	22 32'1		
25	23 27 14	22 46'9	0'2319	0'1682

BROOKS'S COMET.—The following elements and ephemeris have been computed for this comet by Dr. J. Palisa:—

$T = 1885 \text{ Nov. } 28^{\text{h}} 24^{\text{m}} 36^{\text{s}}$ Berlin M.T.
 $\pi = 301 \ 29 \ 50$
 $\Omega = 262 \ 30 \ 48$ } Mean Eq. 1886 0.
 $i = 42 \ 31 \ 27$
 $\log q = 0.04091$

Error of the middle place (0 - C).

$d\lambda \cos \beta = + 4''.7 \quad d\beta = 4''.5$

Ephemeris for Berlin Midnight

1886	R.A.	Decl.	Log Δ	Log r	Bright-ness.
	h. m. s.	°			
Jan. 14	21 5 25	+12 8'6	0'2921	0'1261	0.74
18	21 20 46	13 48'6	0'2989	0'1377	0.68
22	21 35 48	15 25'2	0'3064	0'1495	0.62
26	21 50 48	+16 57'4	0'3146	0'1614	0.57

The brightness on December 28 is taken as unity.

BARNARD'S COMET.—For Barnard's comet Dr. H. Oppenheim gives the following ephemeris, also for Berlin midnight:—

1886	R.A.	Decl.	Log Δ	Log r
	h. m. s.	°		
Jan. 17	2 37 45	+11 14'7	0'2136	0'3193
19	2 34 22	11 38'4		
21	2 31 8	12 2'5	0'2173	0'3068
23	2 28 4	12 27'0		
25	2 25 9	12 51'8	0'2213	0'2937

GORE'S NOVA ORIONIS.—Dr. Copeland, examining the spectrum of this object at Lord Crawford's Observatory, Dun Echt, finds distinct evidence of a spectrum of bright bands superposed on a well-marked spectrum of the third type; these bright bands corresponding to those ordinarily seen in cometary spectra, and obtained in the spectrum of a coal-gas flame.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1886 JANUARY 17-23

(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 January 17

Sun rises, 8h. om.; souths, 12h. 10m. 24'5s.; sets, 16h. 21m.; decl. on meridian, 20° 42' S.: Sidereal Time at Sunset, oh. 9m.

Moon (Full on January 20) rises, 13h. 53m.; souths, 21h. 44m.; sets, 5h. 39m.*; decl. on meridian, 18° 13' N.

Planet	Rises		Souths		Sets		Decl. on meridian
	h. m.	s.	h. m.	s.	h. m.	s.	
Mercury	6	40	10	36	14	32	22 59 S.
Venus	9	12	14	39	20	6	7 14 S.
Mars	21	30*	4	0	10	30	5 9 N.
Jupiter	22	39*	4	38	10	37	1 6 S.
Saturn	14	15	22	25	6	35*	22 36 N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

Occultations of Stars by the Moon

Jan.	Star	Mag.	Disap.		Reap.	Corresponding angles from vertex to right for inverted image
			h. m.	h. m.		
17	117 Tauri...	6	15 38	16 28	33	264°
18	130 Tauri...	6	0 54	1 59	124	310
18	26 Geminorum...	5½	20 37	21 44	43	271
20	1 Cancri ...	6	2 3	2 49	61	338
22	37 Sextantis ...	6	19 16	20 7	33	224

Variab'e-Stars

Star	R.A.		Decl.	h. m.
	h. m.	s.		
U Cephei ...	0 52'2	81	16 N.	Jan. 18, 0 2 m
Algol ...	3 0'8	40	31 N.	22, 23 41 m
ζ Geminorum ...	6 57'4	20	44 N.	19, 20 0 m
S Cancri ...	8 37'4	19	27 N.	18, 5 0 m
δ Libræ ...	14 54'9	8	4 S.	23, 7 30 M
U Coronæ ...	15 13'6	32	4 N.	19, 3 23 m
U Ophiuchi ...	17 10'8	1	20 N.	19, 17 20 m
				22, 1 11 m
				19, 23 6 m
				17, 18 41 m
				and at intervals of 20 8
β Lyræ ...	18 45'9	30	14 N.	Jan. 19, 19 0 m
η Aquilæ ...	19 46'7	0	43 N.	17, 0 0 m
δ Cephei ...	22 24'9	57	50 N.	19, 0 0 M
				22, 19 0 m

M signifies maximum; m minimum.

MR. AITKEN ON DEW¹

THE first point referred to in this paper is the source of the vapour that condenses to form dew. A short historical sketch is given of the successive theories from time to time advanced on this point, showing how in early times dew was supposed to descend from the heavens, and then afterwards it was suggested that it rose from the earth, while Dr. Wells, who has justly been considered the great master of this

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