

tioned as ready for issue in the last Report, were distributed in 1885. Mr. Pogson's attention was chiefly directed, during the year, to the necessary preliminary investigations for the publication of the meridian-circle observations from 1862 to the present time. The formation of the star ledgers and the deduced catalogues of mean positions for each year were completed for the years 1862, 1863, and partly for 1864, which will form the first of the eight volumes about to be published. The star ledgers for the next three years—1865-67—are also in progress, for the second volume of the series. Except for time observations and determinations of positions of a few comparison stars for equatorial observations, the meridian-circle will be little used until the publication of its past results is accomplished. Only 352 complete positions of stars were determined in 1885, making 52,074 during the past twenty-four years. A few observations of minor planets were made with the equatorials during the year. We are glad to find that there is at length a prospect of the publication of the Madras meridian observations, the long delay in which has been a serious blot on the fair fame of the Observatory.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1887 JANUARY 23-29

(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 23

Sun rises, 7h. 54m.; souths, 12h. 12m. 4'4s.; sets, 16h. 30m.; decl. on meridian, 19° 27' S.; Sidereal Time at Sunset, oh. 41m.

Moon (New, January 24) rises, 7h. 14m.; souths, 11h. 40m.; sets, 16h. 9m.; decl. on meridian, 18° 13' S.

Planet	Rises h. m.	Souths h. m.	Sets h. m.	Decl. on meridian
Mercury ...	7 38	11 34	15 30	23 0 S.
Venus ...	8 34	13 4	17 34	17 34 S.
Mars ...	8 49	13 36	18 23	14 36 S.
Jupiter...	1 0	6 2	11 4	11 54 S.
Saturn...	14 59	23 6	7 13*	22 6 N.

* Indicates that the setting is that of the following morning.

Oculations of Stars by the Moon (visible at Greenwich)

Jan.	Star	Mag.	Disap.	Reap.	Corresponding angles from vertex to right for inverted image
			h. m.	h. m.	
28 ...	4 Ceti	6	19 16	20 13	179 296
28 ...	5 Ceti	6	19 42	20 26	196 281

Variable Stars

Star	R.A.	Decl.	h. m.
	h. m.		
U Cephei ...	0 52.3	81 16 N.	Jan. 26, 22 21 m
λ Tauri ...	3 54.4	12 10 N.	" 24, 20 33 m
ζ Geminorum ...	6 57.4	20 44 N.	" 28, 19 25 m
S Cancri ...	8 37.5	19 26 N.	" 24, 0 55 m
R Virginis ...	12 32.8	7 37 N.	" 26, 0 m
V Virginis ...	13 22.0	2 35 S.	" 23, M
δ Libræ ...	14 54.9	8 4 S.	" 24, 18 23 m
U Coronæ ...	15 13.6	32 4 N.	" 27, 2 15 m
U Ophiuchi...	17 10.8	1 20 N.	" 25, 3 30 m
		and at intervals of 20 8	
R Scuti ...	18 41.4	5 50 S.	Jan. 27, m
β Lyræ...	18 45.9	33 14 N.	" 26, 3 0 M
δ Cephei ...	22 25.0	57 50 N.	" 28, 1 0 m

M signifies maximum; m minimum.

Meteor-Showers

On January 28 a radiant near δ Coronæ Borealis is in evidence. The meteors from this radiant are very swift, R.A. 236°, Decl. 25° N. Another radiant giving very swift meteors lies near σ Leonis, R.A. 168°, Decl. 7° N.

GEOGRAPHICAL NOTES

It is all but certain that Mr. Stanley will lead the Emin Pasha Relief Expedition by the Congo route. He will certainly go to Zanzibar, prepared to follow whatever route circumstances may indicate as likely to prove the most successful. At

Port Said he will meet with Dr. Junker, who may give him information of critical importance. At all events, Mr. Stanley and his staff and the whole of the baggage will proceed, in the first instance, to Zanzibar. If a steamer is handy, the Expedition, after recruiting a caravan and laying in a store of suitable goods for trade by the way, will sail round the Cape to the Congo; that at least is Mr. Stanley's present intention. All the available steamers belonging to the King of the Belgians will be placed at his disposal, and probably by the beginning of May he will be at the limit of navigation and ready for his land journey eastwards to Lake Albert Nyanza; if, indeed, he does not give the lake a wide berth westwards and go direct to Wadelai. A camp as a base of operations will be established, as far as safe from the Congo, and left in charge of a trustworthy member of the staff. About fifty donkeys will be taken to carry the heavy baggage, and the caravan will consist of about 100 men, with a few Egyptian soldiers to maintain discipline. The staff consists of half-a-dozen carefully selected men, among whom are two able engineer officers, under whose care the interests of science will be attended to. Four or five carefully rated chronometers and other instruments are being taken, so that we may expect some good results. It is probable that Mr. Stanley will endeavour to solve the Albert Nyanza and the Wellé-Mobangi problem, as well as other obscure points in African hydrography, on his return journey. It is to be hoped that Emin Pasha will not think of coming away, as Dr. Junker states he wishes to do; but if he does, then no doubt Mr. Stanley will be able to make arrangements to carry on the work which Emin has begun so well. Mr. Stanley leaves England to-morrow, and the good wishes of all will go with him. He is confident of being able to reach Emin Pasha by July 1, and possibly may be back in Europe about Christmas; in that case, we fear, he could not do much exploring work.

DR. LENZ has at last arrived at Zanzibar, having taken less than eighteen months to cross the African continent from the mouth of the Congo. A fortnight ago we gave some account of his journey up the Congo from Stanley Falls to Nyangwe and Kasonge; it will be interesting to know what route he followed after leaving the Upper Congo. It will be remembered that Dr. Lenz went out eighteen months ago for the purpose, if possible, of reaching Emin Pasha and Dr. Junker. From Zanzibar the late Dr. Fischer started through Masai Land on a similar errand. In both cases the object has not been accomplished, and no wonder, now that we know the real facts. Much good work, however, has been done by both men. Dr. Lenz is a man of scientific training and experience in African travelling, and there can be no doubt that the results of his just completed journey will be a gain to science. It is possible that Mr. Stanley may meet with Dr. Lenz on his way to Zanzibar; and if so may obtain some information that will be of service on his great expedition.

THE Rev. Thomas Brydges, a missionary in Tierra del Fuego, in the large island of Onisim, among the Ona and the Yagbons, mentions a curious circumstance with reference to the people, illustrating the influence of environment on the acquirement of habits. Between men and women there is a fair subdivision of labour. Among other things, the men make and fit up the canoes, but the women are the rowers. The result is that the women are good swimmers, but the men cannot swim at all. The reason is that often on the coast there is not a single tree to which to fasten the canoes. The women, therefore, after landing their husbands, have to row the canoes to a spot where sea-weed has been massed together, in order to moor the canoes thereon; after which operation they are compelled to swim back. So, also, when the canoe is wanted, the woman has to swim out for it and row back for her husband.

THE current number of the *Mittheilungen* of the Geographical Society of Vienna (Band xxix. No. 10) has a large map of the route from Ango-Ango to Leopoldville, made by Herr Baumann, of the Austrian Congo Expedition, with accompanying remarks, and a comparison with other recent maps of the same part of the river. There is an interesting note by Herr Baumann on the numerical systems of the Why or Wai Negroes and of the Mandingoes. The former, although they have a writing of their own—the Mandingoes use Arab letters—have no expression in their language for 100, and use the English, while the Mandingoes, Bantus, and other tribes can count with ease up to 1000. Herr Baumann also writes on the region around Stanley Falls,