

longitude about 95° west. Captain Ault reports continued excellent observational results for the full programme since leaving Easter Island. Twenty-three bottom samples were obtained on the trip from Balboa to Easter Island to Callao; those from Easter Island to longitude 95° west were red clay with volcanic mud. It is expected that the *Carnegie* will sail on Feb. 3 from Callao for Papeete, Tahiti.

THE claim by Leone Caetani, author of the "Annali del' Islam," that the great Moslem migration into North Africa was due to the increasing desiccation of Arabia at that period, has been discussed by Prof. Alois Musil in an Appendix, No. 10, to his work on Northern Negd in the fifth volume of his "Explorations in Arabia," in process of publication by the American Geographical Society. Prof. Musil insists that this claim is quite invalid, and that there is no evidence of any material climatic change in Arabia during historic times. Prof. Musil's detailed discussion of this question is useful, as the view that the Arab emigration was due to increasing desiccation has been adopted recently by Sir Thomas Arnold (1924), and by Prof. MacMillan Brown, "Problems of the Pacific," 1927.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A junior assistant (engineer) at the Fuel Research Station, East Greenwich—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (Feb. 14). An assistant for work on virus diseases of the potato, and an assistant for field work in connexion with the development of potato culture, each under the Department of Agriculture for Scotland—The Establishment Officer, Department of Agriculture for Scotland, Queen Street, Edinburgh (Feb. 16). A reader in mathematics at Birkbeck College—The Academic Registrar, University of London, South Kensington, S.W.7 (Feb. 18). A lecturer in agriculture in the University of Leeds—The Registrar, The University, Leeds (Feb. 18). A professor of electrical engineering at the College of Engineering, Guindy, Madras—The Secretary to the High Commissioner for India, General Department, 42 Grosvenor Gardens, S.W.1 (Feb. 23). An evening lecturer in magnetism and electricity at the Wimbledon Technical Institute—The Principal, Technical Institute, Wimbledon, S.W.19. A Secretary to the Technical Institute, Wandsworth—The Principal, Technical Institute, Wandsworth, S.W.18.

Our Astronomical Column.

COMET SCHWASSMANN-WACHMANN (2).—The new comet 1929a proves to be one of short period, like the first one discovered by the same observers. Images of the comet were found on plates taken on Jan. 4 and 12 (the latter at Uccle Observatory). From these positions, combined with photographic observations on Jan. 20, Prof. G. van Biesbroeck and Mr. Y. C. Chang have computed the following orbit (*I.A.U. Circ.*, No. 218):

T	1929 April 1-36 U.T.
ω	2° 15'
Ω	126 36
i	3 39
log q	0.3075
Period	6.825 years.

EPHEMERIS FOR 0^h.

	R.A.	N. Decl.	log r .	log Δ .
Jan. 28.	5 ^h 39 ^m 16 ^s	20° 59'	0.3201	0.0988
Feb. 5.	5 39 1	21 23	0.3174	0.1161
13.	5 41 57	21 47	0.3149	0.1348
21.	5 47 25	22 10	0.3126	0.1546

The distance from the sun is diminishing, but that from the earth increasing; the brightness should not diminish rapidly. The comet should be observable until May at least. If these elements are accurate, there was a near approach to Jupiter (about one-third of a unit) in November 1926.

FORBES'S COMET.—The following are the latest observations to hand of Forbes's Comet:

U.T.	R.A. 1928.0.	S. Decl. 1928.0.	Observer.
Dec. 8-47988	12 ^h 54 ^m 21.15 ^s	31° 55' 9.4"	G. van Biesbroeck, Yerkes.
9-48678	12 56 50.03	32 22 2.7	" "
10-48032	12 59 15.77	32 47 48.7	" "
8-06210	12 53 19.23	31 43 36.1	H. E. Wood, Johannesburg.

Astr. Nach., 5608, reports an observation of this comet: Oct. 27-81 U.T., R.A. 11^h 1^m 24^s, N. Decl. 8° 32.2'. There is little doubt that the comet was seen, but the position given is very rough.

A POSSIBLE COMPANION TO SIRIUS B.—A letter from Dr. R. T. A. Innes in the *Observatory* for January states that a faint star has been suspected near Sirius B on several nights ranging from Feb. 4, 1926, to Mar. 20, 1928. Its distance from B varies from 1" to 2" and the period is estimated to be from 18 months to two years. It is estimated as of magnitude 12. On some evenings several observers saw it. Various eyepieces were tried, and every precaution was taken to guard against illusion, but the object is so difficult that its existence is not absolutely guaranteed. Dr. van den Bos recalls that Prof. Fox suspected the duplicity of B with the 18½-inch Clark refractor. He gave P.A. 231°, distance 0.8", date 1920.110.

Dr. van den Bos also gives some measures of the companion of Procyon, though this was so difficult that he does not guarantee its objective existence:

	P.A.	Dist.
Feb. 8, 1927	198.6°	3.06"
Oct. 27, 1928	230.7	2.07

He had purposely consulted no ephemeris on either occasion, but afterwards found that the first position was in fair accord with Dr. Spencer Jones's ephemeris.

It may be worth while to point out that the distance and period as estimated by Dr. Innes are not compatible with each other. From the meridian observations of the bright star, the mass of Sirius B has been deduced as 0.96 of the sun's mass. If Sirius B is double, this would be the joint mass of its two components. The parallax 0.38" is very well determined. Taking the mass as equal to that of the sun, a semi-major axis of 1.52" would give a period of 8 years. One of 1.00", the smallest value suggested by Dr. Innes, would give a period of 4.27 years. Thus, either the distances given by him are considerably overestimated or the period is underestimated. The distance given by Prof. Fox, 0.8", would give a period of 3 years, if assumed to be the unforeshortened length of the semi-major axis. The distances were estimated, not measured, at Johannesburg, the suspected star being too faint to set a wire upon.