

on Sept. 7-17. Particulars of membership, etc., may be obtained from the Secretary, Leplay House 65 Belgrave Rd., S.W.1.

THE council of the Institution of Mining and Metallurgy has made the following awards: The Gold Medal of the Institution to Prof. William Frecheville, in recognition of his services to the mining industry during a long and distinguished professional career, and to mining engineering education; The Consolidated Gold Fields of South Africa, Ltd., Gold Medal and Premium to Dr. Sydney W. Smith, for his paper, embodying much original research, on "Liquation in Molten Alloys and its possible Geological Significance"; and the Arthur Claudet Students' Prize to Mr. Robert A. Mackay for a paper on "The Influence of Superimposed Strata on the Deposition of Certain Lead-Zinc Ores."

THE Report of the Secretary of the Smithsonian Institution, submitted on Dec. 9 last, records the acquisition of the Dognin collection of Lepidoptera, by means of gifts from friends amounting to 50,000 dollars. The collection contains 82,000 specimens, of which 3000 are types mostly from the New World, and will thus, it is claimed, give the United States National Museum a better representation of American species in this group than exists in any other museum. In the same report Dr. Walcott states that during

the year the Smithsonian Institution directed or took part in forty scientific expeditions to various parts of the world. Most of these expeditions were for the collection of natural history specimens, and the report emphasises the urgent need for making such collections before more species of animals and plants are extinguished by the rapid encroachments of civilised man. This great activity was rendered possible by the generosity of other organisations and of many private citizens.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A male assistant horticultural instructor at the Hertfordshire Agricultural Institute, Oaklands, St. Albans—The Clerk of the County Council, 28 Castle Street, Hertford (April 14). A head of the department of pharmacy of the Bradford Technical College—The Principal, Technical College, Bradford (April 23). A lecturer in geography (man or woman) at Bedford College for Women—The Secretary, Bedford College for Women, Regent's Park, N.W.1 (May 14). A teacher of woodwork and metal work at St. Olave's School, Tower Bridge, S.E.1—The Head Master. A sanitary inspector in connexion with the Sudan Medical Service—The Controller, Sudan Government, London Office, Wellington House, Buckingham Gate, S.W.1. Civilian education officers of the Royal Air Force—The Secretary, Air Ministry, Adastral House, Kingsway, W.C.2.

Our Astronomical Column.

COMETS.—A later orbit of Stearns's comet, including observations up to Mar. 18, has been computed by Messrs. J. P. Möller and Bengt Strömrgren (*Copenhagen Circ.* 144).

$$\begin{aligned} T &= 1927 \text{ Mar. } 1.5645 \text{ U.T.} \\ \omega &= 6^\circ 57'.64 \\ \Omega &= 214 \quad 31.64 \\ i &= 87 \quad 8.15 \end{aligned} \left. \vphantom{\begin{aligned} T \\ \omega \\ \Omega \\ i \end{aligned}} \right\} 1927.0$$

$$\log q = 0.56575$$

The plane of the orbit agrees well with that found by Mr. L. E. Cunningham, but the date of perihelion is six months earlier, so that no increase in light is to be expected. The comet is, however, an easy telescopic object, and should be followed for several months. The following observation was obtained by Dr. A. C. D. Crommelin:

	R.A. 1927.0	S. Decl.
Mar. 27 ^d 0 ^h 48 ^m 39 ^s U.T.	15 ^h 9 ^m 22 ^s .40	1° 43' 33".2

The comet was about 1' in diameter, with distinct central condensation; the position is in good agreement with that calculated from the above orbit, which is probably near the truth. The following are the positions for 0^h calculated from it:

April 5, R.A. 15 ^h 3 ^m 32 ^s ;	N. Decl. 1° 36';
R.A. 14 ^h 57 ^m 12 ^s ;	N. Decl. 4° 38'.

Mr. G. Merton has found an image of Pons-Winnecke's comet on a plate taken Feb. 25.06804 U.T. R.A. 1927.0, 14^h 4^m 25^s.54; N. Decl. 23° 49' 13".6; magnitude, 15; diameter, 15". He has also measured a photograph of comet Comas Sola taken by Mr. F. J. Hargreaves and gives the following position:

Mar. 23.8729 U.T.;	R.A. 1927.0, 4 ^h 36 ^m 26 ^s .67;
N. Decl. 30° 27' 43".5;	magnitude, 12.6.

MERCURY AS AN EVENING STAR.—Herr C. Schoch writes to say that he had many replies to his request

for observations of Mercury as an evening star in February (*NATURE*, Feb. 12, p. 252). At Arosa, in Switzerland, it was visible for the first time on Feb. 13, the *arcus visionis* being 10°.2, the same as the value indicated by the old Babylonian observations. The duration of visibility was 62 minutes at Arosa, 66 minutes at Steglitz, the longest duration recorded at Babylon being 72 minutes. He noted the colour of Mercury, seen from Steglitz, as yellow, without admixture of red. Only three reports were received from England, the weather being generally cloudy.

Herr Schoch's latest value of the solar acceleration in a century is 2".98 if measured by the increase of speed, but 1".49 if measured by the distance gained, which is the more usual method. He ascribes the acceleration to the lengthening of the day by tidal friction, and gives the formula, length of day = 24^h (reckoned as in 1900) + 0^s.00194*T*, so that 52,000 years from 1900 will be required to make the day 1 second longer. *T* denotes the centuries after 1900.

SOUTHERN DOUBLE STARS.—Mr. W. H. van den Bos, who is observing southern double stars, gives a third list in *Bull. Astron. Instit. Netherlands*, 3, 114, containing 423 new pairs and bringing his total discoveries to 634, of which 50 are nearer than 0.24", 104 between 0.25" and 0.54", and 87 between 0.55" and 1.04". Very few are of types *B* and *M*. More than one-third are of type *G*, the order then being *A*, *K*, *F*. ψ Sagittarii is an interesting star. The magnitudes are 5.5, 6.0, separation 0.2", spectrum *F5*. This has also been observed as a spectroscopic double at the Lick Observatory station at Santiago; both spectra visible, relative velocity 130 km. sec. Mr. van den Bos says "This can hardly relate to the visual pair, unless the eccentricity and inclination are large, the period short, and the spectrograms taken near the node."