

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A junior secretary (male) in the External Registrar's department of the University of London—The Secretary, University of London, South Kensington, S.W.7 (Dec. 16). A graduate assistant in mechanical engineering at the Wakefield Technical College—The Director of Education, Education Offices, Town Hall, Wakefield (Dec. 17). A Paterson research scholar in the cardiographic department of London Hospital—The House Governor, London Hospital, E.1 (Dec. 19). An additional research fellow in the department of glass technology of the University of Sheffield—The Registrar, The University, Sheffield (Dec. 23). A junior assistant at the National Physical Laboratory with a good honours degree or equivalent qualifications in engineering—The Director, National Physical Laboratory, Teddington (Dec. 24). A principal of the Constantine Technical College, Middlesbrough—The Director of Education, Education Offices, Middlesbrough (Dec.

31). A lecturer in inorganic and physical chemistry at the Sir John Cass Technical Institute—The Principal, Sir John Cass Technical Institute, Jewry Street, E.C.3 (Dec. 31). An assistant lecturer in geography in the University of Manchester—The Registrar, The University, Manchester (Jan. 11). An assistant in the department of art of the National Museum of Wales—The Director, National Museum of Wales, Cardiff (Jan. 14). An entomologist and a plant breeder in the Agricultural Department, Iraq; the entomologist must have had specialised training in entomology and experience of research work and of pest control measures; the plant breeder must have had specialised training in genetics and, preferably, experience of plant breeding work—The Private Secretary (Appointments), Colonial Office, 2 Richmond Terrace, Whitehall, S.W.1. An adviser in mycology for the Bristol Province under the Advisory Scheme of the Ministry of Agriculture and Fisheries—The Registrar, The University, Bristol.

### Our Astronomical Column.

NEW COMET.—The tenth cometary discovery of 1927 is reported from Melbourne in a telegram distributed by the I.A.U. Bureau, Copenhagen. It was made by Mr. F. Skjellerup on Dec. 3 at 17 h. 30 m. D.T. in R.A.  $16^{\text{h}} 12^{\text{m}} 12^{\text{s}}$ , S. Decl.  $53^{\circ} 57'$ . The comet was of the third magnitude, and had a tail  $1^{\circ}$  long; it was moving towards the sun.

It appears very probable that this is De Vico's long-period comet 1846 IV., which has been searched for by southern observers since 1920. If so, its period is  $81\frac{1}{2}$  years, and its perihelion passage about Dec. 15. No one has computed the perturbations of this comet since 1846, and it is possible to represent the position within a few degrees by the unperturbed elements; moreover, if identical, it would be only one-third of a unit from the earth, so any departure from its predicted place would appear exaggerated. If the identity is right, it will cross the equator about the time of perihelion, and will then pass in to high north declination. The period is several years longer than the predicted one, but that causes no surprise. The comet Brorsen-Metcalf, 1847 V., returned in 1919, nine years before it was expected. Mr. Skjellerup made several cometary discoveries when he lived in South Africa, but this is the first he has made since he moved to Melbourne.

DETECTION OF A NEW NAKED-EYE CEPHEID.—*Harvard Observ. Circular* 316 contains the interesting announcement that the fourth magnitude star Beta Doradus has just been discovered to be a Cepheid variable, with a photographic light-range of 1.4 magnitude, and a visual one of nearly a magnitude. Miss Applegate was the first to suspect the Cepheid character, which she did by noting periodic changes in the type of spectrum; R. E. Wilson on the same grounds classed the star as a pseudo-Cepheid, not knowing of the light variation. This was not easy to detect photographically, the star's image being too large on most plates for accurate measures; but by a lucky chance, several images were found on plates with ten minutes' exposure taken in 1925 and 1926 for the light-curve of Nova Pictoris. The adopted period is 9.841696 days, and on plotting the observations with this period the variation is quite evident. The light-curve is symmetrical on each side of maximum and minimum, without any sign of a second harmonic. Prof. Bailey's visual photo-

metric observations made in 1899 at Arequipa were examined; it was found that his observations of this star showed an unusually large range, and in consequence he took a number of extra observations of it. These are now found to conform well with the adopted curve, but Bailey did not discover that the variation was regular.

Beta Doradus is one of the stars in the *Nautical Almanac* list, its magnitude being 3.81, spectral type *F5p*, proper motion according to Richelberger  $-0.0031$  sec. in R.A.,  $+0.0005$  in decl. The absolute magnitude from the period-luminosity curve is  $-1.9$ , giving a parallax of  $0.0043$ , and a distance of 760 light-years.

SOLAR ACTIVITY DURING 1926.—The final values for the mean daily area of sunspots and Wolf's sunspot number for the year 1926 have recently been published by the observatories of Greenwich and Zürich respectively (*Monthly Notices R.A.S.*, Nov. 1927, and *Astronomische Mitteilungen*, Nr. 116). The mean daily area of spots, corrected for foreshortening and expressed in millionths of the sun's hemisphere, is stated to be 1262 and the Wolf's sunspot number 63.9. Mean daily areas for periods of a solar rotation (Greenwich) and spot numbers for each month (Zürich) are also given in the respective publications.

The following table shows the progress of the present sunspot cycle since the last minimum in 1923:

Year.	Mean Daily Area.	Wolf's Number.	Mean Solar Latitude of Spots.
1923	55	5.8	$\left\{ \begin{array}{l} 6^{\circ}.4* \\ 24^{\circ}.4\ddagger \end{array} \right.$
1924	276	16.7	22.7
1925	830	44.3	20.2
1926	1262	63.9	18.6

\* Old cycle spots.

† New cycle spots.

The average provisional spot-number for the first six months of 1927 is 79, but since June the sun's activity has fallen off somewhat. Judging from the trend of the mean latitude of the spots—a fairly sure indication—the maximum year of the cycle should be 1928.