

in sums of 200,000 dollars, the incomes from which would be devoted to professorships such as that now conferred on Prof. Michelson. The present professorship is due to the generosity of Mr. M. A. Ryerson, of Chicago, formerly president of the board of trustees and donor of the Ryerson Physical Laboratory of the University.

THE autumn meeting of the Institute of Metals is to be held at Glasgow on September 1-4, under the presidency of Prof. T. Turner, Feeney professor of metallurgy in the University of Birmingham. The proceedings commence with the fourth autumn lecture, by Sir John Dewrance, who will take as his subject "Education, Research and Standardisation." Sixteen papers on various aspects of the constitution and properties of metals and alloys are to be submitted for discussion at the meeting. The lighter side of the programme announces visits to works and places of interest in the neighbourhood of Glasgow, and special arrangements are being made for the entertainment of the ladies present. Railway vouchers enabling members of the Institute and their friends to purchase return railway tickets to Glasgow at the rate of a single fare and a third can be obtained from the secretary of the Institute of Metals, 36 Victoria Street, London, S.W.1.

THE Council of the Institution of Electrical Engineers; which took an important part in founding the Society of Radiographers in the year 1920, and, under that Society's constitution, has up to now nominated six out of the eighteen members of the Society's Council, has withdrawn its nominees and terminated the Institution's connexion with the Society. This action has been taken because the majority of the Council of the Society of Radiographers has resolved upon certain alterations of the Society's articles, with which the Council of the Institution of Electrical Engineers is in entire disagreement, as in the Council's opinion these alterations will materially lower the professional status of non-medically qualified radiographers.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned: An advisory agricultural economist at the Seale-Hayne Agricultural College, Newton Abbot—The Secretary and Bursar (August 4). A second assistant in botany in the University of Aberdeen—The Secretary (August 19). An assistant lecturer in physics at the University College of Wales, Aberystwyth—The Secretary (August 30). A laboratory assistant for the Veterinary Research Department of the Government of Uganda—The Crown Agents for the Colonies, 4 Millbank, Westminster, S.W.1, quoting M13/800.

### Our Astronomical Column.

THE JULIAN DAY.—A matter that excited much interest was settled by the International Astronomical Union, after a long discussion, by a considerable majority. When it was decided that the astronomical day should begin at midnight, instead of noon, a diversity of view was manifested as to whether the Julian day should follow suit, or begin at noon, as heretofore. Speaking broadly, the former view was held in America, the latter in Europe. The matter is of especial importance for variable-star observers, since it has for long been the custom to use the Julian day both for the elements of these and for recording observations.

It was further pointed out that the whole point of the institution of the Julian day system was to have a method of recording time that should be independent of all changes of style or calendar changes, and that once established such a system should not be lightly broken. It was, indeed, admitted that there had been a change of two hours since its institution; its beginning was then noon at Alexandria, afterwards altered to Greenwich noon. However, a change of two hours applied to comparatively rough early observations is of little moment compared with a change of twelve hours in accurate modern observations. Many of the Americans, including Prof. Shapley, admitted the force of these arguments, and supported the retention of the noon beginning, which was afterwards confirmed by the Union as a whole.

An endeavour was also made to agree on a name for the new astronomical day that begins at Greenwich midnight. A very large section expressed disapproval of continuing to use the phrase Greenwich Mean Time for the new system, but no alternative was found that commanded general assent; it was agreed to leave the matter open, as being comparatively unimportant, provided one made clear what time-system one was

using. The title "Universal Time" met with most support, and the Astronomer-Royal said he would endeavour to get this name inserted in the Nautical Almanac as a second title, Greenwich Mean Time continuing to be the first title.

PERTURBATIONS OF MINOR PLANET 944, HIDALGO.—Discovered by Dr. Baade of Bergedorf in 1920, Hidalgo is one of the most interesting of the minor planets, being near the orbit of Mars when in perihelion, and near that of Saturn when in aphelion. Its period,  $13\frac{2}{3}$  years, does not differ greatly from that of Jupiter; its orbit is inclined to the ecliptic at the high angle of  $43^\circ$ , the greatest of any minor planet. However, its passage of the descending node takes place not more than half a unit from Jupiter's orbit, and the question of the perturbations by the latter is of interest. Mr. K. Jantzen investigates the secular perturbations by Jupiter in Bulletin of Vilno Observatory, No. 5, using the method given by Hills in vol. 1 of the Amer. Ephem. Papers. The circle of eccentric anomaly was divided into 192 parts, this large number being necessary owing to the near approach to Jupiter's orbit, which occurs when  $E = 83^\circ$ .

The final values of the secular perturbations of the elements are,  $e + 14''.4$ ,  $i - 16''.2$ ,  $\Omega - 26''.5$ ,  $\pi - 65''.3$ ,  $L + 57''.6$ . The method of special perturbations would have to be used at the time of a near approach of the two bodies; there was actually a fairly near approach (less than an astronomical unit) in 1922. This was probably the closest in the last century or thereabouts.

Some authorities are inclined to rank this body as a comet rather than a planet. It seems, however, better to limit the term comet to bodies showing nebulosity. Hidalgo always appeared stellar.