

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—An assistant lecturer in phonetics at the Glasgow Training Centre of the National Committee for the Training of Teachers—The Director of Studies, Training Centre, Jordanhill, Glasgow (Feb. 2). A graduate in engineering for physics, mechanics, mathematics and machine drawing at the Southall Technical Institute—The Principal, Southall Technical College, Southall, Middlesex (Feb. 2). A junior demonstrator in physiology at the University of Durham College of Medicine—The Registrar, College of Medicine, Newcastle-upon-Tyne (Feb. 2). A laboratory assistant in the Bacteriological and Pathological Laboratory, Birkenhead—The Town Clerk, Town Hall, Birkenhead (Feb. 6). A principal of the High Wycombe Technical Institute—The Secretary for Education, Educa-

tion Department, County Offices, Aylesbury (Feb. 7). A head of the engineering department of the Leicester College of Technology—The Registrar, College of Technology, Leicester (Feb. 21). An assistant in the London Museum—The Keeper, London Museum, St. James's, S.W.1 (Mar. 14). An entomologist under the Indian Research Fund Association, able to undertake independent inquiries on malaria in the field or laboratory—The Secretary, Indian Research Fund Association, Simla, India (Mar. 31). A woman lecturer in geography at the Warrington Training College, Liverpool—The Principal, Warrington Training College, Wavertree, Liverpool. A full-time teacher of draughtsmanship (engineering), under the London County Council—The Education Officer (S.S.5), the County Hall, Westminster Bridge, S.E.1.

Our Astronomical Column.

Light-Variation of Eros.—*Beob. Zirk.*, No. 3, contains some observations of maxima and minima of Eros, made at Hamburg-Grossborstel by M. Beyer. The principal period is still $5^h 16^m 14^s$, but the light-range is notably smaller than it was at the beginning of December. Similar changes of light-range have been observed at other apparitions; they favour the theory that the planet is double, and that mutual occultations occur when the earth is near the plane of rotation, but not otherwise. Duplicity ought to be detected by the great American telescopes at this near approach, if it exists. Prof. Yamamoto notes in *U.A.I. Circ.*, No. 309, that even if the variation arises from regions of very different albedo on the planet's surface, it may cause the centre of light to be shifted some $0.1''$ from the centre of figure, which would be an appreciable amount in researches of such delicacy as are now being carried out. There was a request to observers with large instruments to try to observe the shape of the planet, but no reports have yet been received on the subject.

Locating the Sun's Corona.—In *Comptes Rendus* for Nov. 10, M. Lyot, of the Meudon Observatory, describes work conducted by him during July and August last, at the observatory of the Pic du Midi, for detecting the sun's corona without the unique conditions afforded by a total solar eclipse. M. Lyot states that from his observing station the purity of the atmosphere was such that, by the interposition, in the optical train, of a metal disc slightly larger than the image of the sun formed by a 4-cm. objective, the prominences at the sun's limbs were clearly visible without recourse to a spectroscope. Working under these conditions with a very sensitive polariscope, he explored the sky immediately surrounding the sun's disc. It was found that the proportion of polarised light (the plane of which appeared to be radial) was insensible at about $6'$ from the sun's limbs but increased inwards. M. Lyot proved to his satisfaction that the origin of the polarisation was neither atmospheric nor instrumental, and he concludes that he has observed the polarisation of the sun's inner corona. Figures for July 29 and 31 derived from the observations made at various position angles at a constant distance of $80''$ from the sun's limbs show two minima that correspond to the position of the sun's axis on those days. A further substantiation was made by observing the strength and length of two bright lines of the spectrum that were visible with a direct vision spectroscope. These lines were evidently the coronal lines $\lambda 5303$ and $\lambda 6374$, and their variation at different

position angles around the disc corresponded generally with the degree of polarisation observed. These results are of great interest, for they indicate a means of studying frequently certain attributes of the sun's corona that have hitherto been available to observation during the brief and infrequent occasions of a solar eclipse.

Rotation of the Galaxy.—Sir Arthur Eddington chose this topic as the subject for the Halley Lecture on May 30, which has been published at Oxford by the Clarendon Press. After a brief historical sketch, he gives a proof of the formula published by Dr. Oort a few years ago, which states that the radial velocities of the stars contain a term varying as twice the sine of their galactic longitude, this being measured from the centre of galactic rotation. He notes that the same formula was published by Gylden in 1871, but did not then attract much attention.

The formula gives two alternative positions for the galactic centre, diametrically opposite to each other. The one in Sagittarius is now selected, on other grounds, but Gylden chose the one in Gemini. Prof. Turner had also been led to the position in Gemini by consideration of the two stellar drifts; but that method likewise gave two opposite positions as possible. Dr. Plaskett, in the George Darwin Lecture of the Royal Astronomical Society delivered last May, showed that the radial velocities of the stars of types *O* and *B* supported Oort's position of the centre, and further indicated that the interstellar gas shares the rotation of the stars. Sir Arthur Eddington notes that, owing to the viscosity of this gas, it does not appear that its rotation could be maintained indefinitely; this tends to support the shorter time-scale that limits the duration of the stellar system to a few thousands of millions of years, whereas the long scale gives millions of millions.

Galactic rotation gives an explanation of the fact that the quick-moving stars are all moving towards one hemisphere; these are really the laggards, and the sun is moving from them, not they from the sun. Stars with high speed in the rotational direction would escape from the galaxy, the attraction of which could not control them. They have already been eliminated. Sir Arthur Eddington notes that the aspect of the spiral nebulae is far from suggesting stability. As our galaxy is believed to resemble them, this consideration also favours the shorter time-scale. The rapid recession of the spirals, if taken as real, is shown to provide an argument tending in the same direction.