

publication in its journal, has been awarded for 1925-1926 to Dr. H. H. Hodgson, for work carried out in the Department of Colour Chemistry at the Technical College, Huddersfield. Dr. Hodgson has had two papers in the Society's journal during this period: (1) "Behaviour of the Sulphides of Sodium in Aqueous and Alcoholic Media" (July 1925), and (2) "The Action of Sulphur on the Monochloro-anilines" (Mar. 1926). During the year 1926, sixteen papers have been published in various scientific journals by Dr. Hodgson and his research students.

WE are informed by Messrs. Carl Zeiss (London), Ltd., that a contract has just been signed for the purchase of a Zeiss planetarium for the city of Vienna. The opening date has been fixed for May.

THE January number of *Watson's Microscope Record* (No. 10) contains a practical paper on "Critical Illumination," by Dr. F. J. Brislee; chapter 2 of "The Desmidiaceæ," by Mr. G. T. Harris; and a paper on "Relief Staining of Bacteria, Protozoa, Infusoria," by Dr. A. C. Coles, in which the use of a saturated aqueous solution of nigrosin is advocated as giving apparently permanent preparations showing minute characters and structure not otherwise seen. The *Record* is published three times a year, and will be forwarded free on application to Messrs. Watson and Sons, 313 High Holborn, W.C.1.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer on public health at the Westminster Hospital School of Medicine—The Dean, Westminster Hospital Medical School, 12 Caxton Street, S.W.1 (Mar. 1). An assist-

ant master at the Redhill Junior Technical School and Technical Institute to teach mathematics, with mechanics as a subsidiary subject—The Secretary, Education Committee, Municipal Buildings, Reigate (Mar. 2). A research bacteriologist at the Low Temperature Research Station, Cambridge—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (Mar. 11). A junior assistant at the Building Research Station, Garston, Watford—The Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (Mar. 11). An assistant lecturer in agriculture under the County of Southampton Education Committee—The Director of Education, The Castle, Winchester (Mar. 11). An assistant in the statistical department of the Rothamsted Experimental Station—The Secretary, Rothamsted Experimental Station, Harpenden (Mar. 17). An instructor in engineering science at the Kingston-upon-Thames Technical Institute—The Principal. A teacher of engineering subjects at a junior technical school of the Wandsworth Technical Institute—The Principal. A graduate for engineering subjects and mathematics at the Workington County Technical and Secondary School—The Principal. A senior laboratory assistant in the department of Pathology and Bacteriology of the University of Sheffield—The Professor of Pathology, The University, Sheffield. A part-time demonstrator of biology at St. Thomas's Hospital Medical School—The Medical Secretary, St. Thomas's Hospital Medical School, S.E.1. A junior physicist under the Linen Industry Research Association—The Secretary, Research Institute, Lambeg, Co. Antrim.

Our Astronomical Column.

A FIXED EASTER.—Mr. J. J. Withers, University of Cambridge, has introduced a bill in the House of Commons proposing to fix Easter as the Sunday following the second Saturday in April, and thus reduce its possible range from five weeks to one week. The matter has been before a special committee of the League of Nations for the last year or two, on which there were representatives of the principal religious bodies, and it was agreed that no insuperable obstacle lies in the way, if there is sufficient consensus of public opinion in favour of the change. The subject was dealt with in an article in our issue of Nov. 27, 1926. It is likely that the present bill is intended merely to strengthen the hands of the League of Nations committee; if so, there is nothing to be said against it. But it would be undesirable to give it legal effect before obtaining general ecclesiastical sanction.

There are millions of people in Great Britain and Ireland who would not admit the power of a secular legislature to fix the date of a religious festival; the public holiday, of course, lies within its competence, but to divorce this from the feast with which it has always been associated would meet with serious opposition.

SPECTROSCOPIC PARALLAXES.—Two papers on the spectroscopic parallaxes of stars are published in the current number of the *Astrophysical Journal* (vol. 64, No. 4). The first, by Adams, Joy, and Humason, gives the parallaxes of 410 *M*-type stars based on recent research into the behaviour of suitable lines in spectra of this type. The list includes all the Boss stars north of -30° declination, together with about

100 dwarf stars of faint visual magnitude; many stars classed as *K5* at Harvard are also included. For the giant *M*-type stars the lines used were at $\lambda\lambda 4207, 4258, 4389, 4489$ (Fe); $\lambda 4077$ (Sr⁺); *H γ* , and *H β* . The reduction curves were based, primarily, on mean parallaxes from parallactic and peculiar motions; these results being corrected by a method of successive approximations. For the dwarf stars the lines found to be most suitable were $\lambda\lambda 4318, 4435, 4454, 4586$ (Ca); $\lambda 4535$ (Ti blend); and $\lambda 4607$ (Sr). The reduction curves were based entirely on trigonometric parallaxes. The results show an interval of more than six magnitudes between the faintest giants and the brightest dwarfs, within which there is an entire absence of stars. The rapid variation in luminosity with spectral type for the dwarf *M*-type stars also suggests the possibility of obtaining parallaxes from this relation alone.

The second paper, by A. V. Douglas, is on *A*-type stars. Two methods of attack were used. The first, depending on the variation in relative intensities of arc and spark lines, resembled that devised by Adams for later type spectra. The pairs of lines found by Douglas to show the necessary variations were: $\lambda\lambda 4215:4227, 4233:4227, 4535:4481, \text{ and } 4549:4481$. In the second method a relation was discovered between luminosity and the width of the lines $\lambda 4481, H\delta, \text{ and } [K]$, so that seven criteria were finally available for determining parallaxes. The reduction curves were based on a combination of group with trigonometrical parallaxes, and were determined separately for stars of sharp and diffuse spectral lines. The final results are given in a list of parallaxes of 200 *A*-type stars.