

to Prof. Louis N. G. Filon (London) and an Indian Premium to Mr. F. C. Temple (Jamshedpur, India).

THE Institute of Metals programme for the session 1924-25 covers the work not only of the parent Institute, but also of its six branches located in various metallurgical centres. More than thirty lectures dealing with various phases of non-ferrous metallurgy are enumerated in the programme. Prof. H. A. Lorentz is to deliver the annual May lecture. Copies of the programme can be obtained from the secretary of the Institute, Mr. G. Shaw Scott, 36-38 Victoria Street, Westminster.

AN attractive list of free popular lectures to be delivered on Saturday afternoons at the Horniman Museum, Forest Hill, has just been issued. The lecture hour is 3.30, beginning on October 11, and the subjects of the lectures are "The Development of Modern Radio Communication," "Cornish Scenery and its Causes," "Social Life among Insects," "Some Famous Pharaohs," "The Amulets of Ancient Egypt and of Modern London," "Evolution and Darwinism," "Prehistoric Man and the Land of Lyonesse," "The Eggs of Animals," and "The Glory that was Thebes." No tickets will be required.

THE Chadwick Public Lecture programme for this autumn includes lectures in London on "Defective Hygiene and Child-Life," with special reference to the effect produced on growth and development of children by town dwelling and slum areas, by Dr. Lawson Dick; "Rats," by Mr. Mark Hovell; "Smoke," with a review of its causes, its effects on vegetation, fabrics, masonry and metal work, and its influence on health and the death-rate, by Prof. J. B. Cohen; and "Ante-Natal and Post-Natal Child Physiology and Hygiene," by Dr. W. M. Feldman. Further

information about these lectures can be obtained of the secretary of the Chadwick Trust, Mrs. Aubrey Richardson, at 13 Great George Street, Westminster.

MESSRS. J. and A. Churchill announce for publication early next year a "Dictionary of Perfumery," by E. J. Parry, which will deal with the raw materials of the perfumery trade and with allied subjects from the points of view of the chemist, the manufacturer and the user. The work, which will be in two volumes, will contain special signed contributions by Messrs. A. C. Marrin, C. T. Bennett, T. H. Durrans, M. Dewhirst, A. Garden, M. Salamon, and W. H. Simmons.

MESSRS. Thomas Murby and Co. are publishing shortly "A Handbook of the Geology of Ireland," by the late Prof. G. A. J. Cole and T. Hallissy, which is based on Prof. Cole's contributions to "The Handbook of Regional Geology," a German publication. Another work in the same publishers' list of announcements is "Useful Aspects of Geology," by Prof. A. J. Shand, which aims at giving an account of the various ways in which a knowledge of geology can be turned to use, and at showing where to go for fuller information on each particular subject.

MESSRS. Ernest Benn, Ltd., announce for early publication, under the title "Science and Labour," the principal papers read at the Conference on Science and Labour at the British Empire Exhibition in May last. The subjects dealt with include The Place of Science in Government; Scientific Research in Relation to Industry; The Co-operation of Science and Labour in Production; Science and the Human Factor, and Science in Educational Organisation. Among the contributors are Lord Askwith, Sir Richard Glazebrook, Sir Richard Gregory, Mr. Hugo Hirst, Sir Thomas Holland, Sir Oliver Lodge, Sir Arthur Newsholme, and Mr. Sidney Webb.

Our Astronomical Column.

THE TOTAL SOLAR ECLIPSE OF JANUARY 24, 1925.—The Journal of the R.A.S. of Canada for August-September 1924 contains an interesting article on this eclipse by R. M. Motherwell, of the Dominion Observatory, Ottawa, illustrated by a map of the track over Canada and the United States.

The eclipse comes at a bad season of the year, with a rather low sun, and the weather prospects are poor; but it is visible in a very populous region, including the observatories of the University of Toronto, of Columbia University, and of Vassar College, so that the most is likely to be made of the occasion. Portions of all the great lakes lie within the zone of totality; Niagara and Buffalo are near the central line. New York is just outside the southern boundary.

Totality lasts nearly two minutes on the central line. A large partial eclipse is visible throughout the British Isles. In the Western Hebrides the solar crescent left uncovered will be only some 8" in width, but the sun will be too low there for any useful work.

This eclipse is a recurrence after the triple Saros of that of December 1870 visible in South Spain, North Africa, and Sicily. It was interesting from Prof. Young's discovery of the reversing layer, and the beautiful coronal photographs obtained by Mr. Brothers.

PROF. LA ROSA'S THEORY ON THE CAUSE OF STELLAR VARIABILITY.—Prof. La Rosa's suggestion that stellar variability may be explained on the ballistic theory of

light was recently noticed in this column. The theory supposes that light follows the law of projectiles, the total velocity being compounded of the velocity of the source and that of light, so that in the case of a distant star revolving in an orbit, the light that leaves the star in equal time intervals arrives in unequal intervals, thus causing an apparent light-variation.

Prof. de Sitter criticises the theory in *Bull. Astron. Instit. Netherlands*, vol. ii. No. 57, on the ground that since the number of waves of any definite length that enter the eye per second would be altered in the same ratio as the light-intensity, an enormous Doppler shift, far beyond any actually observed, would result if the theory were true.

Prof. La Rosa replies to this criticism in *Astr. Nach.* No. 5319. He notes that his theory is not really a wave-theory but a corpuscular or "quantum" one. Still it is convenient to use the language of the wave-theory. The point he lays stress on is that the spectral shift observed does not depend on the number of waves that enter the eye per second, but on the distance between crest and crest of these waves, and this distance would depend on the actual velocity of the star in the line of sight.

Probably most astronomers will consider that Prof. La Rosa's theory is difficult of acceptance on other grounds (notably the Michelson-Morley experiment); but that possibly the particular objection raised by Prof. de Sitter is not decisive.