

(92 miles), and Osaka (348 miles) leads to the following conclusions:—(1) The frequent occurrence of earthquakes, both unfelt and strong, terminated at or immediately before the opening of the eruption; (2) the principal centre of the after-shocks coincides roughly with the centre of elevation of the sea-bed to the north of the Sakura-jima, which is 8.9 miles from Kagoshima; (3) the mean duration of the preliminary tremor at this place was 1.94 seconds, corresponding to a focal distance of 8.9 miles, from which it follows that the focal depth was very small; and (4) in the after-shocks the first distinct displacement was usually directed towards or from the source of disturbance, while the mean directions of the maximum vibrations were parallel and perpendicular to the line joining the craterlets on the two flanks of the volcano.

C. D.

University and Educational Intelligence.

AN introductory public lecture to a series of seven courses of lectures on the history of science will be given by Sir W. H. Bragg at University College (University of London) on Thursday, October 7, at 5 p.m. The courses arranged are as follows:—The General History and Development of Science, Dr. A. Wolf; The More Important Developments in Physical Science during the Nineteenth Century, Sir W. H. Bragg, Prof. E. J. Garwood, Mr. D. Orson Wood, and others; Egyptian Science, Prof. Flinders Petrie; The History of the Biological and Medical Sciences from Early Times to the Eighteenth Century, Dr. Charles Singer; The History of the Biological Sciences since the Eighteenth Century, Prof. J. P. Hill; Elementary Astronomy, treated Historically, Prof. L. N. G. Filon; and The History of Mathematics up to the Eighteenth Century, Mr. T. L. Wren.

IN the annual report for 1919-20 of the Coventry Public Libraries several points are worthy of notice. Figures are given showing the number of issues which have been made during the past and the previous year. Of the total of 380,170 issues of books in 1919-20, 167,758 were of technical and literary books, while 144,296 were works of fiction. The figures are significant of the use to which the library is put by the inhabitants. As compared with the previous year, the number of issues of technical works has increased by 26,976, while the increase for fiction was only 2087. These figures indicate the revival of study which was to be expected with the return of students to peaceful occupations. In the issues of the home-reading libraries similar figures were observed, the increase in the demand for works on the arts and sciences being 6449. On the other hand, research work, by which is meant the study of the accumulated data of a subject before proceeding with investigations, has declined since the armistice. Only one-twelfth of the 82,245 volumes in stock are classed as fiction. The libraries are intended chiefly for the use of students, and their continued popularity shows that they are appreciated as such.

THE President of the Board of Education has addressed a letter to the Vice-Chancellor of the University of London (Dr. Russell Wells), under date September 24, with reference to the Government offer of a site for the University behind the British Museum, explaining that, with the consent of the vendor (the Duke of Bedford), it is possible for the offer to remain open until the Senate's meeting on October 20, but no longer. Mr. Fisher expresses general approval of the proposed conditions to be attached to acceptance of the offer which were dis-

cussed by the Senate in July, save that respecting freedom from debt as regards the new buildings before the old buildings are vacated. He suggests a revision of the wording of this condition, but admits that the Government fully shares the view as to the undesirability of the University and King's College entering upon the occupation of their new buildings under an embarrassing load of debt. Mr. Fisher further explains that the Government offer is not available for any alternative site, since on a review of all the circumstances the Government has come to the definite conclusion "that the site behind the British Museum is the most suitable and the only one which they would feel justified in acquiring for offer to the University." In conclusion, Mr. Fisher expresses his earnest hope that the Senate will decide to accept the offer which the Government has made.

THE educational system of Japan (Bulletin No. 57, 1919, of the United States Bureau of Education) is the result of a fusion of the traditional training in national humanistic studies with that in modern science. Progress is possible on the latter side only. Technical education of an elementary type is given in the vocational schools, to which students who have passed through the elementary schools are admitted. In 1915-16 the number of technical schools attached to such vocational institutes was 9001, an increase of 533 over the preceding year; while that of the private technical schools was 366, an increase of 20. Approximately 95,000 pupils were enrolled in all schools of this kind, exclusive of continuation schools. The technical continuation schools admit students who have passed the standard of the elementary schools, though the individual school authorities have power to admit or refuse any candidate. In the year 1915-16 407,600 male pupils and 89,601 females were enrolled in these schools, an increase of nearly 50,000 over the numbers joining during the previous year. Within the next six years it is proposed to spend some four and a half million pounds on higher education. The technical and high schools already in existence will accommodate 14,000 students only, while during the year 1917-18 about 56,000 applied for admission. This money will therefore be devoted to the building of ten new high schools and eighteen new technical and commercial institutes. Great prominence is given to the rapid but efficient training of teachers of all grades.

Societies and Academies.

PARIS.

Academy of Sciences, August 30.—M. Henri Deslandres in the chair.—G. Humbert: An arithmetical link between the real ternary quadratic forms and the indefinite forms of Hermite.—H. Deslandres: The recognition in stars of the successive layers of their atmosphere and the periodic variations of these stars. From the study of the calcium lines in the solar spectrum the existence of three layers in the solar atmosphere has been deduced. The same method can be applied to the fixed stars, and an account is given of the results obtained up to the present by various observers.—E. Arès: The specific heat of saturated vapours at low temperatures. Reply to a communication by G. Bruhat.—J. Andradé: The regulating organs of chronometers.—E. Jougnet: Waves of shock in solid bodies.—M. Galbrun: The deformation of a helical spring.—M. d'Azambuja: The spectrum of the new star in Cygnus. On August 25 and 28 the spectrum of the new star presented the appearance usual with novæ in the course of the first stage of their evolution.—M. Burson: The spectrum of Nova Cygni.