

seen from the catalogue dealing with the "Analysis of Coal and its By-Products," just issued by Baird and Tatlock (London), Ltd. It has 136 quarto pages, is illustrated, and seems to include more than most of those interested in fuel analysis are likely to require. Thoughtfully, the proposed standardised methods of coal analysis are included in summarised form, and also a variety of useful information, presumably to encourage us to look inside as often as possible. A catalogue of "Apparatus for Testing Petroleum Products" stocked by the same firm occupies 44 pages and covers the requirements of the tests of the Institution of Petroleum Technologists.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A temporary lecturer in agriculture under the Wilts County Council Agricultural Committee—The Organiser of Agricultural Education, Polebarn House, Trowbridge (Aug. 6). A junior assistant in the department of civil engineering of the Queen's University of Belfast—Prof. Hummel, The Queen's University, Belfast (Aug. 13). A director of the School of Egyptian Arts and Crafts, Cairo—The Under-Secretary of State, Ministry of Education, Cairo, Egypt (Aug. 15). An assistant lecturer in mathematics in the Bradford Technical College—The Principal, Bradford Technical College, Bradford (Aug. 23). An assistant woman lecturer and demonstrator in botany and an assistant woman demonstrator in physics at the Royal Holloway

College—The Principal, Royal Holloway College, Englefield Green, Surrey (Aug. 25). Three posts at the Royal Veterinary College, namely, a principal, a director of the Research Institute in Animal Pathology, and a professor of pathology—The Secretary, Royal Veterinary College, Camden Town, S.W.1 (Aug. 31). A professor of English language and literature in the University of Melbourne—The Agent-General for Victoria, Victoria House, Melbourne Place, W.C.2 (Oct. 1). Two research scholars at the John Innes Horticultural Institution—one, a botanist, to work at genetic and cytological problems, and one, a chemist, to work at problems of migration and storage with the plant—The Director, John Innes Horticultural Institution, Merton, S.W.19. An assistant lecturer in physics in the University College of the South-West of England—The Registrar, University College of the South-West of England, Exeter. Evening lecturers at the Croydon Polytechnic for electrical generation and transmission, advanced building construction and quantity surveying—The Principal, Croydon Polytechnic, Scarbrook Road, Croydon. A science master at the Leeds Grammar School—The Headmaster's Secretary, Grammar School, Leeds. A chief lecturer to take charge of the chemical department of the Woolwich Polytechnic—The Principal, Woolwich Polytechnic, S.E.18. A junior assistant under the directorate of Metallurgical Research, Research Department, Woolwich—The Chief Superintendent, Research Department, Woolwich, S.E.18.

Our Astronomical Column.

RECENT MAGNETIC DISTURBANCE.—A considerable magnetic disturbance, lasting about 9 hours, was registered between July 21 and 22 at Greenwich and at Abingdon, Surrey. The disturbance, which commenced suddenly at 21^h on July 21, reached its greatest intensity between 2^h and 5^h on the following morning and died away rapidly soon after 6^h. The excursion shown by the declination magnet amounted to fully one degree. The disturbance was also well shown by the vertical force magnetometer.

A superficial examination of the sun's disc showed no spots likely to be connected with this disturbance. At 21^h on July 21, there were three unimportant groups of spots at distances of 38° west, 7° east, and 48° east of the sun's central meridian. A large regular spot was a little way on the disc at a distance of 78° east of the central meridian. It is possible, however, that spectroscopic observations may come to hand as an indication of an usually active region on the sun not represented by a sunspot, and at the time placed somewhere in line with the earth.

THE PLANET JUPITER.—Mr. W. E. Demming writes: "This planet may now be well observed, as it rises at the end of July at 9^h 37^m P.M. G.M.T., and will shortly be in view throughout the night as it comes above the horizon four minutes earlier daily, and arrives at opposition on Sept. 22. Mr. F. Sargent, of the University of Durham Observatory, states, in a letter to me, that he obtained a good observation of the planet's markings on the night of July 18 with a 10½-inch reflecting telescope. He says the Red Spot is really true to its name in colour, for it is a bright, brick red. It is quite an obvious, easy feature. By comparison with an observation by the Rev. T. E. R. Phillips on July 21, 1926, he found that the rotation period, during the past 12 months, was 9^h 55^m 37^s, whereas the previous 12 months gave

9^h 55^m 33^s, or 4 seconds less. The direct inference is that the motion of the object has recently undergone a considerable slackening in its rate of motion. Following the Red Spot there is a distinct prolongation of the south-temperate belt which bends northwards towards the south margin of the south equatorial belt. Mr. Sargent observed several dark and white spots on the margin of the north equatorial belt and states that according to his estimates the length of the Red Spot is now only 20°, but one boundary of the marking appears to be indefinite. Forty or fifty years ago the length of the spot was about 32°."

A DISCUSSION OF STELLAR VARIABILITY.—Prof. C. D. Perrine contributes a discussion on this subject to *Astr. J.* No. 5505. His argument is that all types of stellar variation are due to a common cause which he takes to be pulsation of the type now generally assumed to explain Cepheid variables. It is rather curious that Prof. Perrine for a long time upheld the binary character of the Cepheids; in abandoning this explanation for these variables, he also abandons it for stars where it seems to be well established. For example, the duplicity of Capella was confirmed by the interferometer, and the eclipse explanation of Algol's light changes was confirmed by the fact that the rotation of the principal star could be measured by the Doppler effect (the two limbs being successively under observation). The results fitted in harmoniously with the binary hypothesis.

Prof. Perrine reaches his conclusion by grouping all the known variables by period and light-range and showing that they lie along continuous curves, each type filling up gaps left by the others. Probably few will adopt his new conclusions in their entirety, but statistical discussions of this kind are always of value, and afford material for further study.