

helium 0.340 and nitrogen 1.102, *i.e.* greater than the densities of the liquid phases at atmospheric pressure (0.070, 0.1456, and 0.85 respectively) or the solid phases.—C. Barus: (1) Achromatic and superchromatic fringes with a calcite rhomb. The effects of plate glass and Iceland spar compensators on the fringes produced by a modified interferometer are described. (2) Vibration of the air filament in quill tubes: single telephonic exciter.—T. W. Richards and W. T. Richards: Preliminary attempt to measure gravimetrically the distance-effect of chemical affinity. A horizontal plate of aluminium 6 cm. square, hanging from one arm of a balance, was exactly counterpoised and allowed to rest very nearly on flat surfaces of various metallic oxides, sulphur, iodine, and bromine. The sulphur and iodine were cast on plate glass and mica was interposed when the halogens were used, separating the surfaces by 0.02 mm. and 0.01 mm. respectively. With the oxides, the plates were probably less than 0.001 mm. apart. In no case was any attractive effect so great as 0.1 mg. observed. The force of chemical affinity must decrease very rapidly with increase of separation of the attracting atoms.—L. W. Yolton: The effects of cutting the giant fibres in the earthworm, *Eisenia foetida* (Sav.). Operated worms showed the normal creeping movements, but a sharp stimulus such as causes a normal worm to contract was not transmitted beyond the wound.—H. Shapley: On the relative velocity of blue and yellow light (*v.* NATURE, p. 206).—F. B. Sumner: Size-factors and size-inheritance. From a statistical treatment of a series of rabbits, Castle has concluded that genetic agencies affecting rabbits are general in action, influencing all parts of the body in the same direction, and that this probably applies to all vertebrates. From studies of the deer-mouse, this view is contested.—H. L. Smith: A generalisation of Volterra's derivative.

Official Publications Received.

- Comité International des Poids et Mesures. Procès-Verbaux des Séances. Deuxième Série, Tome 10, Session de 1923. Pp. vii+122. (Paris: Gauthier-Villars & Cie.)
- Statens Meteorologisk-Hydrografiska Anstalt. Årsbok, 4, 1922. V: Hydrografiska mätningar i Sverige. Pp. 35+5 planscher. (Stockholm.) 7 kr.
- Memoirs of the Geological Survey of India. Vol. 45, Part 2: The Gwalior and Vindhyan Systems in South-Eastern Rajputana. By Dr. A. M. Heron. Pp. vii+129-189+plates 27-42. (Calcutta: Geological Survey of India.) 3 rupees.
- British Research Association for the Woollen and Worsted Industries. Report of the Council, 1923. Pp. 17. (Headingley, Leeds.)
- The Institution of Gas Engineers. Eighth Report of the Research Sub-Committee of the Gas Investigation Committee of the Institution of Gas Engineers ("Fairweather" Recording Calorimeter). Pp. 97-174. Ninth Report (Aeration and Air Injection). Pp. 175-229. Tenth Report (The Manufacture of Blue Water Gas). Pp. 293-375. (London: 28 Grosvenor Gardens.)
- Poradnik dla Samouków, T.4: Krystalografja, Wskazówki Metodyczne dla Studujących. Pp. xiv+228. (Warszawa: Im. Mianowskiego.)

Diary of Societies.

MONDAY, FEBRUARY 11.

- INSTITUTION OF HEATING AND VENTILATING ENGINEERS, INC. (at Holborn Restaurant) (Annual General Meeting), at 2.30.—Sir George Croydon Marks: Industry and Invention.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. W. S. Handley: General Peritonitis.
- BRITISH PSYCHOLOGICAL SOCIETY (Education Section) (at London Day Training College), at 6.—T. P. Tomlinson: Intelligence Tests in City and Urban Schools.
- ROYAL GEOGRAPHICAL SOCIETY (at Æolian Hall), at 8.30.—L. S. Fortescue: Persian Azerbaijan and the Western Elburz.

TUESDAY, FEBRUARY 12.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Prof. J. Barcroft: The Respiratory Pigments in Animal Life and their Significance (I).
- KING'S COLLEGE ENGINEERING SOCIETY (at Institution of Mechanical Engineers), at 5.30.—Vice-Admiral Sir George Goodwin: Economics as applied to Mechanical Engineering

- ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Scientific and Technical Group), at 7.—Dr. F. C. Toy and S. O. Rawling: A New Electric Density Meter, dispensing with the Eye.
- INSTITUTION OF WELDING ENGINEERS (at Institute of Marine Engineers, Inc.), at 7.—J. R. Boorer: Some Chemical Aspects of Welding.
- QUEKETT MICROSCOPICAL CLUB, at 7.30.—D. J. Scamfield: Presidential Address.

WEDNESDAY, FEBRUARY 13.

- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. R. L. Knaggs: Osteogenesis imperfecta.
- INSTITUTION OF CIVIL ENGINEERS (Informal Meeting), at 7.—H. J. F. Gourley and others: Discussion on The Capacity to be provided in Service-Reservoirs.
- ROYAL SOCIETY OF ARTS, at 8.—Prof. H. Maxwell Lefroy: The Preservation of Timber from the Death Watch Beetle.

THURSDAY, FEBRUARY 14.

- ROYAL SOCIETY, at 4.30.—Dr. C. Chree and R. E. Watson: Atmospheric Pollution and Potential Gradient at Kew Observatory, 1921 and 1922.—Prof. E. Wilson and E. F. Herron: The Electrical Conductivity of Magnetite.—C. E. I. Mann: The Determination of Coefficients of Diffusion in Gels by means of Chemical Analysis, and a Comparison of Results obtained from those yielded by the Indicator Method.—C. E. P. Brooks: The Difference-Periodogram. A Method for the Rapid Determination of Short Periodicities.—Prof. J. Proudman and Dr. A. T. Doodson: The Principal Constituent of the Tides of the North Sea.—D. H. Bangham and F. P. Burt: The Behaviour of Gases in Contact with Glass Surfaces.
- LONDON MATHEMATICAL SOCIETY (at Royal Astronomical Society), at 5.—E. A. Milne: The Star and the Atom. (Lecture.)
- ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Sir William Bragg: The Crystalline Structure of Organic Substances (2).
- INSTITUTION OF ELECTRICAL ENGINEERS (Joint Meeting with the Physical Society of London), at 6.—Continuation of Discussion on Loud-Speakers for Wireless and other Purposes.
- SOCIETY OF DYERS AND COLOURISTS (London Section) (at Dyers' Hall, Dowgate Hill), at 7.—Prof. J. F. Thorpe: Staining and Dyeing.
- OPTICAL SOCIETY (Annual General Meeting) (at Imperial College of Science and Technology), at 7.30.—T. Smith: The Addition of Aberrations.—J. W. Gifford: The Choice of Wave-lengths for Achromatism in Telescopes.—E. F. Fincham: A New Form of Corneal Microscope.—D. Baxandall: The Troughton Dividing Engine (1793).
- INSTITUTION OF CHEMICAL ENGINEERS (at Engineers' Club, Coventry Street), at 8.—D. M. Newitt: The Transport, Storage, and Distribution of Hydrochloric Acid, with an Account of a Complete Modern Installation.
- INSTITUTE OF METALS (London Local Section) (at Institute of Marine Engineers, Inc.), at 8.—W. B. Clarke: Metals for Lamp Manufacture.
- BRITISH PSYCHOLOGICAL SOCIETY (at University College), at 8.30.—Extraordinary General Meeting to discuss the formation of branches of the Society.

FRIDAY, FEBRUARY 15.

- INSTITUTION OF PUBLIC LIGHTING ENGINEERS AND SUPERINTENDENTS (at 197 High Holborn), at 2.—Inaugural Meeting.
- GEOLOGICAL SOCIETY OF LONDON, at 3.—Annual General Meeting.
- ROYAL SOCIETY OF ARTS (Indian Section), at 4.30.—Sir Richard M. Dane: Salt Manufacture in India.
- ROYAL ASTRONOMICAL SOCIETY, at 5.—Geophysical Discussion.—Dr. C. Chree: Periodicities in Terrestrial Magnetism.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—V. E. Negus: The Mechanism of the Larynx.
- ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Pictorial Group), at 7.—Annual Meeting.
- JUNIOR INSTITUTION OF ENGINEERS, at 7.30.—Prof. D. S. Capper: Some Suggestions for Road Transport Development.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Dr. J. H. Jeans: The Origin of the Solar System.

SATURDAY, FEBRUARY 16.

- SCHOOL NATURE STUDY UNION (in Botanical Theatre, University College), at 3.—Prof. J. A. Thomson: Some Unsolved Problems of Everyday Natural History.

PUBLIC LECTURES.

SATURDAY, FEBRUARY 9.

- HORNIMAN MUSEUM (Forest Hill), at 3.30.—E. Lovett: The Origin of Children's Toys.

WEDNESDAY, FEBRUARY 13.

- ROYAL INSTITUTE OF PUBLIC HEALTH, at 4.—Dr. P. C. Varrier-Jones: Settlements for Tuberculosis.
- UNIVERSITY COLLEGE, at 6.—Prof. Karl Pearson: The Contributions of Sir Francis Galton to Photography.

THURSDAY, FEBRUARY 14.

- KING'S COLLEGE, at 5.30.—Dr. E. W. Scripture: What the Voice looks like.

FRIDAY, FEBRUARY 15.

- BEDFORD COLLEGE FOR WOMEN, at 5.15.—Sir F. W. Keeble: The Influence of Biological Discovery on Human Progress—A Forecast.
- KING'S COLLEGE, at 5.30.—Dr. H. Lamb: The Internal Constitution of the Earth. (Succeeding Lectures on February 22 and 29.)

SATURDAY, FEBRUARY 16.

- HORNIMAN MUSEUM (Forest Hill), at 3.30.—Dr. C. A. Raisin: Glaciers and Ice-work of the Past.