between 80 and 120 kilometres per hour. The results obtained, so far, are inconclusive.—G. **Sagnac**: Optical systems in motion and the translation of the earth.—A. **Leduc**: The application of the Lenz principle to the phenomena accompanying the charge of condensers.—L. **Décombe**: A physical interpretation of non-compensated heat.—A. **Lafay**: A method of observation of the trajectories followed by the elements of an air current deflected by obstacles of variable forms. As an indicator, a gas is used the refractive index of which is higher than that of air, but approximately the same density. Such a gas casts a sharp shadow on a screen, and hence the motion of the air currents can be followed. Acetylene, a mixture of acetylene and carbon dioxide, and ethylene are suggested as suitable for this method of working.—MM. **Chéneveau** and **Heim**: The extensibility of vulcanised indiarubber.—G. **Friedel** and F. **Grandjean**: The structure of liquids with focal conics.—Louis **Matruchot**: A new fungus pathogenic to man. This fungus, to which the name *Mastigocladium Blochii* has been given, has been obtained in pure cultures direct from the lesions in man, and hence appears to be the sole cause of the diseased condition observed.—T. **Klobb**: The dextrorotatory phytosterols (anthesterols) from *Anthemis nobilis*.—Gabriel **Bertrand** and R. **Veillon**: The action of the Bulgarian ferment on the monobasic acids derived from reducing sugars.—A. **Marie** and M. **MacAuliffe**: Comparative measurements of individuals of both sexes from lunatic asylums with normal men and women. The inmates of the asylums are generally smaller than the normal, especially in the bust. Details of the comparison of various limbs and parts of the body are also given.—E. **Deschamps**: The treatment of epilepsy of gastro-intestinal origin. Remarks on a recent note of M. Doumer on the same subject.—A. **Bonnet**: Researches on the causes of the variations of the aërial entomological faunule.—M. **Gignoux**: The layers containing *Strombus bubonius* in the western Mediterranean.—J. **Bosler**: The relations between the earth currents and magnetic disturbances.—M. **Birkeland**: The zodiacal light.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 16.

ROYAL SOCIETY, at 4.30.—The Constitution of the Alloys of Aluminium and Zinc: Dr. W. Rosenhain and S. L. Archbutt.—The Production and Properties of Soft Röntgen Radiation: R. Whiddington.—Experiments on Stream-line Motion in Curved Pipes: Prof. J. Eustice.

ROYAL GEOGRAPHICAL SOCIETY, at 5.—Research Meeting. Some Antarctic Problems: Prof. Edgeworth David, F.R.S.

LINNEAN SOCIETY, at 8.

ROYAL INSTITUTION, at 3.—Problems of Animals in Captivity: P. Chalmers Mitchell, F.R.S.

ILLUMINATING ENGINEERING SOCIETY, at 8.—*Discussion* on School Lighting. Openers: Dr. James Kerr and Dr. N. Bishop Harman.

FRIDAY, FEBRUARY 17.

ROYAL INSTITUTION, at 9.—The Stimulation of Digestive Activity: Prof. H. E. Armstrong, F.R.S.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Annual General Meeting. *Further discussion*: Modern Electrical Dock-equipment, with Special Reference to Electrically-operated Coal-hoists: W. Dixon and G. H. Baxter.

MONDAY, FEBRUARY 20.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Composition of the Acids flowing from the Thompson Displacement Apparatus for the Manufacture of Guncotton: G. W. MacDonald.—(1) Ammonium Sulphate and its Instability; (2) The Hydrolysis of Ammonium Salts: Watson Smith.—A Study of some Reactions in Gels: Emil Hatschek.—A New Still Water Calorimeter: J. H. Coste and B. R. James.

ROYAL SOCIETY OF ARTS, at 8.—Brewing and Modern Science: Prof. Adrian J. Brown.

VICTORIA INSTITUTE, at 4.30.—Science in Relation to Christian Missions: Rev. F. Baylis.

TUESDAY, FEBRUARY 21.

ROYAL INSTITUTION, at 3.—Heredity: Prof. F. W. Mott, F.R.S.

ZOOLOGICAL SOCIETY, at 8.30.—Report on the Deaths which occurred in the Zoological Gardens during 1910: Dr. H. G. Plimmer, F.R.S.—On *Tragelaphus buxtoni*, an Antelope from Abyssinia: R. Lydekker.—A Contribution to the Study of the Variations of the Common Salamander (*Salamandra maculosa*): E. G. Boulenger.—On a Collection of Fishes from the Lake Ngami Basin, Bechuanaland: G. A. Boulenger, F.R.S.—Observations on different Gibbons of the Genus Hylobates now or recently living in the Society's Gardens, and on a *Symphalangus syndactylus*, with Notes on Skins in the Natural History Museum: Dr. F. D. Welch.

ROYAL ANTHROPOLOGICAL SOCIETY, at 8.15.—Prehistoric and Aboriginal Pottery Manufacture: Rev. J. W. Hayes.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Coast Erosion: W. T. Douglass.

ROYAL STATISTICAL SOCIETY, at 5.—The Fatality of Fractures of the Lower Extremity and of Lobar Pneumonia. A Study of Hospital Mortality Rates, 1751-1901: M. Greenwood, jun., and R. H. Candy.

WEDNESDAY, FEBRUARY 22.

ROYAL SOCIETY OF ARTS, at 8.—Water Finders: Prof. J. Wertheimer.

GEOLOGICAL SOCIETY, at 8.—The Geology of the Districts of Worcester, Robertson, and Ashton (Cape Colony): R. H. Rastall.—Geology of Northern Albania: Baron Ferencz Nopcsa, Jr.

BRITISH ASTRONOMICAL ASSOCIATION, at 5.

THURSDAY, FEBRUARY 23.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Transmission of Flagellates living in the Blood of certain Freshwater Fishes: Miss M. Robertson.—Report on the Separation of Tonium and Actinium from certain Residues and on the Production of Helium by Tonium: Dr. B. B. Boltwood.—The Secondary γ-Rays produced by β-Rays: J. A. Gray.—The Specific Heat of Water and the Mechanical Equivalent of the Calorie at Temperatures from 0° to 80° C. With Additional Note on the Thermoid Effect: W. R. Bousfield and W. E. Bousfield.—On the Measurement of Specific Inductive Capacity: Prof. C. Niven, F.R.S.

ROYAL INSTITUTION, at 3.—Problems of Animals in Captivity: P. Chalmers Mitchell, F.R.S.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Long Distance Transmission of Electrical Energy: W. T. Taylor.—Extra High Pressure Transmission Lines: R. B. Matthews and C. T. Wilkinson.

FRIDAY, FEBRUARY 24.

ROYAL INSTITUTION, at 9.—Mouvement Brownien et Réalité Moléculaire: Prof. Jean Perrin.

PHYSICAL SOCIETY, at 5.—Flames of Low Temperature supported by Ozone: Hon. R. J. Strutt, F.R.S.—The Movement of a Coloured Index along a Capillary Tube, and its Application to the Measurement of the Circulation of Water in a Closed Circuit: Dr. Albert Griffiths.—An Optical Lever of High Power suitable for the Determination of Small Thicknesses and Displacements: E. H. Rayner.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Design and Construction of Works for the Bacterial Purification of Sewage: R. J. Samuel.

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