

temperature corresponding to various velocities is also calculated, and lead to the conclusion that the temperatures of meteors, even taking into account the low pressure of the medium traversed, are amply explained by the law of propagation of discontinuities.—On the decomposition of a luminous motion into simple elements, by M. Ch. Fabry.—On the constitution of white light, by M. Gouy.—Polarised light emitted by a Geissler tube submitted to the action of a magnetic field, by M. R. Dongier. The intensity of the red ray of hydrogen is distinctly reduced in a magnetic field; similar effects, but less marked, are observed with tubes containing chlorine, nitrogen, carbon dioxide, carbon monoxide and argon, the spectrum of the latter undergoing curious modifications in the magnetic field.—Time of establishing the electric spark, by MM. H. Abraham and J. Lemoine. The duration of the Kerr effect in carbon bisulphide is divided into three parts, the duration of the establishment of the luminous intensity of the spark, the time of discharge, and the time during which the carbon bisulphide preserves its doubly refracting power after the electric field has disappeared. Each of these phenomena, taken singly, has a duration of less than 1/100,000,000 of a second.—On the detection of silver in presence of mercury amido-chloride, by M. F. Leteur. From a mixture of silver and mercurous chloride it is not possible to extract the whole of the silver salt with aqueous ammonia, since when the silver chloride is small in proportion to the calomel, nearly the whole of it is retained by the mercury amido-chloride formed, even after repeated digestions with ammonia.—Action of copper upon acetylene; formation of a condensed hydrocarbon, cuprene, by MM. Paul Sabatier and T. B. Senderens. Acetylene, passed over copper heated to 200° undergoes a complicated transformation, giving a liquid hydrocarbon and a mixture of ethylene, propylene, butylene, ethane, and hydrogen. At the same time the copper becomes coated with a solid deposit, of the composition (C₇H₈)_n, to which the name of cuprene is given.—Acidimetry of the polybasic organic acids, by M. A. Astruc.—On isopyromucic acid, by M. L. J. Simon. The author has succeeded in obtaining good yields of the isopyromucic acid discovered by Limpricht, the existence of which has been denied by Oliveri and Peratoner, by the dry distillation of a mixture of mucic acid (350 gr.) and potassium bisulphate (550 gr.). The exact constitution of the acid is not yet worked out.—Genesis of terpene compounds in lavender, by M. Eugène Charabot.—On a new method for the extraction of india-rubber contained in the bark of divers plants, especially of *Landolphia*, by MM. A. Arnaud and A. Verneuil. The bark, finely powdered and ground up with warm water, gives up the whole of its india-rubber, no chemical reagent being necessary.—Defence of the organism against the injurious effects of glandular secretions, by MM. Charrin and Levaditi.—The intestinal reabsorption of sugars, by M. E. Hédon.—The peripheric organs of the sense of space, by M. E. de Cyon.—Photogrammetric focimetry in microscopy, by M. V. Legros.—On the endomorphic transformations of santoxin andesite, under the influence of calcareous enclosures, by M. A. Lacroix.—On the non-existence of the hexagonal system, by M. Fréd. Wallerant. The author concludes from the discussion of the crystallography of nepheline, potassium sulphate and arragonite, that the hexagonal system has no real existence in nature, and has only a theoretical importance.—The geology of Southern Australia, by M. Jules Garnier.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 8.

ROYAL SOCIETY, at 4.30.—The Spectrum of α -Aquilæ: Sir N. Lockyer, K.C.B., F.R.S., and A. Fowler. (1) On the Production of Artificial Colour-blindness by Moonlight: (2) On the Relation of Artificial Colour-blindness to Successive Contrast: G. J. Burch.—On Electrical Effects due to Evaporation of Sodium in Air and other Gases: W. C. Henderson.—On Electric Touch and the Molecular Changes produced in Matter by Electric Waves: Prof. J. C. Bose.
ROYAL INSTITUTION, at 3.—Modern Astronomy: Prof. H. H. Turner, F.R.S.
CHEMICAL SOCIETY, at 8.30.—Victor Meyer Memorial Lecture: Prof. T. E. Thorpe, F.R.S.
SOCIETY OF ARTS (Imperial Institute), at 4.30.—The Projects of Railway Communication with India: J. M. Maclean.
MATHEMATICAL SOCIETY, at 8.—A Formula in the Theory of the Theta-Functions: Prof. A. C. Dixon.—Some Elementary Distributions of Stress in Three Dimensions: J. H. Michell.
INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Standardisation of Electrical Engineering Plant: R. P. Sellon.
CAMERA CLUB, at 8.15.—Steam Turbines, Land and Marine: A. A. Campbell Swinton.

FRIDAY, FEBRUARY 9.

ROYAL INSTITUTION, at 9.—Symbiosis and Symbiotic Fermentation: Prof. J. Reynolds Green.
ROYAL ASTRONOMICAL SOCIETY, at 3.—Anniversary Meeting.
PHYSICAL SOCIETY, at 5.—Annual General Meeting.—Address by the President, Prof. O. J. Lodge, F.R.S.
INSTITUTION OF CIVIL ENGINEERS, at 8.—Underground Sources of Water.—Supply: D. E. Lloyd-Davies.
MALACOLOGICAL SOCIETY, at 8.—Annual General Meeting.—Also, Lecture on the Pearly Nautilus: Dr. Arthur Willey.

MONDAY, FEBRUARY 12.

SOCIETY OF ARTS, at 8.—The Nature and Yield of Metalliferous Deposits: Bennett H. Brough.
CAMERA CLUB, at 8.15.—Mountaineering in Switzerland and Scotland: Prof. Norman Collie.

TUESDAY, FEBRUARY 13.

ROYAL INSTITUTION, at 3.—Structure and Classification of Fishes: Prof. E. Ray Lankester, F.R.S.
INSTITUTION OF CIVIL ENGINEERS, at 8.—Papers to be further discussed: Moving Loads on Railway Underbridges: W. B. Farr.—Note on the Floor System of Girder Bridges: C. F. Findlay.—Paper to be read, *time permitting*: Corrosion of Marine Boilers: John Dewrance.
ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Annual General Meeting.
ANTHROPOLOGICAL INSTITUTE, at 8.30.

WEDNESDAY, FEBRUARY 14.

SOCIETY OF ARTS, at 8.—The Diffraction Process of Colour Photography: Prof. R. W. Wood.
ESSEX FIELD CLUB (at Bishopsgate Institute), at 7.—Some New Sections in, and Contributions to, the Fauna of the River Drift of the Uj hall Estate, Ilford: J. P. Johnson and G. White.—The Stalk-eyed Crustacea, their Families and Genera; with especial reference to the Essex Species: Edward Lovett.

THURSDAY, FEBRUARY 15.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Genesis and Development of the Wall and Connecting Threads in the Plant Cell. Preliminary Communication: W. Gardiner, F.R.S.—Total Eclipse of the Sun, January 22, 1898. Observations at Viziadrug: Sir N. Lockyer, F.R.S.—Captain Chisholm-Batten, and Prof. A. Pedler, F.R.S.—Photographs of Sound Waves: Prof. R. W. Wood.
ROYAL INSTITUTION, at 3.—Modern Astronomy: Prof. H. H. Turner, F.R.S.
LINNEAN SOCIETY, at 8.—Photography of British Plants: J. C. Shenston.—A New Land Planarian from the Pyrenees: Dr. R. F. Scharff.
CHEMICAL SOCIETY, at 8.—(1) Ammonium Amidosulphite; (2) Products of Heating Ammonium Sulphites, Thiosulphates, and Trithionate: Edward Divers and Masataka Ogawa.—Note on the Refraction and Magnetic Rotation of Hexamethylene: Dr. S. Young, F.R.S., and Emily C. Fortey.—The Combination of Sulphur Dioxide and Oxygen: Edward J. Russell and Norman Smith.—Note on the Estimation of Gases containing Sulphur: E. J. Russell.—(1) Apinin and Apigenin. II. Note on Vitexin; (2) The Yellow Colouring Principles of various Tannin Matters, VII.: A. G. Perkin.

FRIDAY, FEBRUARY 16.

ROYAL INSTITUTION, at 9.—Life in Indo-China: H. Warington Smyth.
EPIDEMIOLOGICAL SOCIETY, at 8.30.—Insanitary Property and Workmen's Dwellings in Liverpool: Dr. E. W. Hope.

CONTENTS.

	PAGE
Faraday and Schönbein. By Prof. R. Meldola, F.R.S.	337
The Animals of Britain and their Origin. By F. E. B.	341
Our Book Shelf:—	
Rocques: "Le Cidre."—A. J. B.	342
"Liverpool School of Tropical Diseases"	342
Cragin: "Our Insect Friends and Foes; how to Collect, Preserve and Study them"	342
Letters to the Editor:—	
The Effects of Lightning upon Electric Lamps, (Illustrated.)—Sydney Webb; Sir G. G. Stokes, Bart., F.R.S.	343
The Mathematical Tripos.—Prof. G. H. Bryan, F.R.S.	346
Floating Stones.—Prof. A. W. Brightmore	346
Engineering at Cambridge	346
The Natural History of the Shores of Barents Sea. (Illustrated.) By J. W. G.	348
International Committee of Weights and Measures	350
Notes	350
Our Astronomical Column:—	
Comet Giacobini (1900 a)	355
Second New Algol Variable in Cygnus	355
The Computation of Occultations	355
Light Curve of Ceraski's First Algol Variable	355
Reduction of Star Photographs	355
Technical Instruction in relation to Industrial Progress	356
University and Educational Intelligence	357
Societies and Academies. (Illustrated.)	357
Diary of Societies	360