

## Societies and Academies

## PARIS

Academy of Sciences, May 4 (*C.R.*, 202, 1469–1540). ERNEST ESCLANGON: The dynamics of limited relativity applied to central forces. The case of the planets. VICTOR GRÉGOIRE was elected *Correspondant* for the Section of Botany in succession to the late Hugo de Vries. C. TIKHOTZKY: The  $K$  transformation of congruences. NATAN ARONSAJN:  $N$ -dimensional homotropy. ALEXANDRE GHKA: A property of functions representable by Cauchy's integral. H. MILLOUX: The study of meromorph functions in a circle. CHARLES JAEGER: Theory of the ram strokes in forced [water] mains with multiple characteristics. Distribution of the resonance surcharges along any main. G. RUMER: Wave theory of the neutrino. ARSÈNE DATZEFF: The properties of the acceleration operator and a remark on potential. ALBERT ARNULF, DANIEL BARBIER, DANIEL CHALONGE and Mlle. RENÉE CANAVAGGIA: Results of the study of 48 stellar spectra made at the Jungfrauoch in 1935. ALEXANDRE PROCA: The fundamental equations of elementary particles. J. CLAEYS, J. ERRERA and H. SACK: The absorption of ultra-sounds in liquids. Confirmation of work by Biquard, with extension to a wider range of frequencies. The absorption measured is many times that calculated from the classical formulæ. CHARLES REICHART: The electrification of insulating liquids by flow or filtration. With petrol as the fluid, it was found that the negative charges hitherto observed are only the beginning of the phenomenon, and were followed by positive charges. During the purification of the petrol, it was noted that electric charges were produced by filtration. PIERRE JOLIBOIS and PIERRE DE BECO: Faraday's law and electrolysis by the spark. W. UYTERHOEVEN and C. VERBURG: The temperature of the electrons ( $T_e$ ) in a discharge in the positive column in a neon-sodium mixture. ROBERT J. WALLEN: The disintegration of boron by neutrons. GEORGES GOLDFINGER: Study of the photochemical decomposition of azomethane. No definite order can be assigned to the reaction. It may vary between 0 and 2. The experimental results are given graphically. RENÉ AUDUBERT and OTAKAR VIKTORIN: The emission of ultra-violet light during the anodic oxidation of aluminium. WILFRIED HELLER: The dynamic principle of thixotropic solidification and its application. JEAN AMIEL: The application to the slow combustion of benzene of the theory of chain reactions. The author shows that there is no real contradiction between his experimental results and those of Hinshelwood and Fort. A formula is developed which accounts qualitatively for both sets of experiments. GEORGES COSTEANU and PAUL RENAUD: The diffusion of gases on leaving capillary tubes. MLADEN PAIĆ and Mlle. VALÉRIE DEUTSCH: The absorption of proteins. The influence of salts on the adsorption of haemoglobin by kaolin. MARCEL PATRY: The potassium tellurates. Analogy with sulphates and selenates. The potassium salts, metatellurate, selenate and sulphate, give analogous X-ray diagrams. The metatellurate is not isomorphous with the osmate. ETIENNE CANALS, MAX MOUSSERON, LOUIS SOUCHE and PIERRE PEYROT: The Raman spectra of some substituted cyclohexenes. PIERRE CARRÉ and P. JULLIEN: Pyruvyl chloride. One of the products of the reaction between thionyl chloride and pyruvic acid in the presence of pyridine is pyruvyl chloride.

It could not be isolated but was identified by forming its anilide. GILBERT MATHIEU: The Givetian age of the marbles of Ville-Dé-d'Ardin (Deux-Sèvres). DANIEL BARBIER, DANIEL CHALONGE and ETIENNE VASSY: The measurement of the amount of ozone in the lower layers of the atmosphere during the winter at Abisko (Swedish Lapland). Mlle. MADELEINE FOURCROY: The progressive attenuation of the acceleration transmitted to a rootlet by a wounded root. JEAN CHAZE: Complements to the study of the humoral properties of the mushroom towards the mole. Mlle. ANDRÉE TÉTRY: Description of a worm new to the French fauna, *Eisenia metallorum*. RADU VLADESCO and GEORGES NICHITA: The influence of pilocarpine on glandular and muscular metabolism. ANDRÉ KLING and GUY LECORDIER: The influence exerted by vitamin D and by certain cancer forming hydrocarbons on the values taken by the hydrophily coefficient of the lipids. JACQUES POCHON: Ubiquity and plasticity of *Plectridium cellulolyticum*.

## AMSTERDAM

Royal Academy (*Proc.*, 39, No. 4, April, 1936). F. M. JAEGER, E. ROSENBOHM and R. FONTEYNE: The exact measurement of the specific heats of metals at high temperatures (23). The calorimetric, electric and thermoelectric behaviour of ductile titanium. (1), (2) and (3) Measurements on purest titanium of the specific heat, electrical resistance and thermoelectric E.M.F. against gold show the transition point  $\alpha \rightarrow \beta$  titanium at  $905^\circ\text{C}$ . as well as a number of subsidiary transition points, the nature of which is investigated. E. ROSENBOHM and F. M. JAEGER: The determination of the thermoelectric force of metals in a vacuum by means of the photographically recording double galvanometer. Application of the Saladin-Le Chatelier method to the determination of the electrical resistance of iron and the thermoelectric forces of the Fe-Cu and Ni-Cu thermocouples at high temperatures. A. VAN KREVELD and L. S. ORNSTEIN: The most general photographic density law. Mathematical discussion of the most general law and comparison with experimental data. L. S. ORNSTEIN and H. BRINKMAN: Remark on the paper "The Mechanism in the Positive Column of a Discharge". Generalisation of an equation given in a previous paper by the authors and T. Hamada. J. DE VRIES: Configurations of points and circles. J. G. VAN DER CORPUT: Distribution functions (7). J. G. VAN DER CORPUT: On some Vinogradoff methods (2). R. WEITZENBÖCK: On the theory of  $p$ -relations. A. A. NJJLAND: Mean light curves of long-period variables (27). R. Canum Venaticorum. The light of this star varies with a period of 326 days and an amplitude of 2 magnitudes. J. H. DE BOER, W. G. BURGERS and J. D. FAST: The transition of hexagonal  $\alpha$ -titanium into cubic  $\beta$ -titanium at a high temperature. Electrical resistance and X-ray measurements indicate the existence of a transition at  $882 \pm 20^\circ\text{C}$ . C. S. MEYER: Some integrals from the theory of Bessel and Whittaker functions (2). C. A. SPIERENBURG: The comitant system of a cubic and two quadratic binary forms. M. P. BOTH: Transport of nitrogenous substances under the influence of differences in humidity. Transport occurs when there is a difference in humidity between different leaves, and takes place through the sieve tubes. B. VAN DER EYKEN: Dentition and teeth development in the irisforelle (*Salmo irideus*) (4). Intermaxillary and ploughshare bone. J. OHM:

Interference of several kinds of nystagmus. A. DE BUCK: Degenerated cysts and black spores in *Anopheles* infected with benign tertian malaria. Typical banana-shaped black spores are not found before the cysts reach maturity, and are never found in uninfected *Anopheles*.

## CRACOW

Polish Academy of Science and Letters, March 2. F. LEJA: A family of harmonic functions in the plane connected with a given function on the frontier of a domain. T. BANACHIEWICZ: Various points concerning the theory of stars with eclipses. E. R. SMITH and M. WOJCIECHOWSKI: A differential method for determining density by means of twin flasks. The method is capable of measuring the density of a solution of heavy water in comparison with that of ordinary water with an accuracy of one part per million. B. KAMIENSKI and B. ZAPIOR: The dielectric potential and surface tension of  $\beta$ -eucaine, procaine and orthocaine for various concentrations of hydrogen ions. J. TOKARSKI: The podolian loess. (2) The physiography of the podolian loess and the problem of its stratigraphy. J. LATKOWSKI and M. LLE. B. CHARLAMPOWICZ: The biological action of short waves ( $\lambda = 6$  m.). Physico-chemical and morphological researches on the influence of short waves on the composition of the blood. The modifications observed are attributed to the rise of temperature produced in the blood of the animals examined. S. KÉLER: *Hordahlemia*, a new species of the genus *Mallophaga*. H. LICHE: Contributions to the ethology of the Dermestes (Coleoptera). M. LLE. J. ACKERMANN: (1) Methodical researches on the determination of lipids in the organs of animals. (2) Experimental histochemical researches on the metabolism of lecithine in the animal organism. The absorption of lecithine in the intestine.

## MOSCOW

Academy of Sciences, C.R., 1, No. 4, 1936. J. A. MINDLIN: Expansion of any function into a Schlömilch series. A. POLAK: Open expressions and stable transformations. Z. SURIKOVA: Generalised linear differential systems. N. MOISSEJEV: Unessential character of one of the limitations imposed on topographical systems in Liapunov's theory of stability. K. M. KOSONOGOVA: A new method of photography. The new process is based on the combined action of light and electrochemical polarisation. P. PAVINSKI: Heisenberg's oscillator model and nuclear momenta. D. AVADALIAN: Exothermic transformations of aluminium oxide. A. J. CHARIT and N. V. CHAUSTOV: Flavins and metabolism (4). Flavin content in the liver of cattle during different seasons. M. MITZKEVICH: Stimulating action of 'catabolists' on the regeneration of the extremities in *Triton cristatus* and *Amblystoma tigrinum*. H. FRIESEN: Cosmic rays and mutations. No increase in mutations was observed in *Drosophila* exposed to cosmic rays of great intensity during the stratosphere ascent to the altitude of 15,900 m. (see also NATURE of May 23, p. 870). P. A. SCHWARZ and S. F. KUZMIN: Investigation of the potato in its genetic aspect. (1) Protein content of certain species and hybrids of potato. J. M. URANOWSKY: Determination of the longitudinal axis of extremities in the transplantation of regeneration buds in a late stage.

## Forthcoming Events

[Meetings marked with an asterisk are open to the public.]

## Monday, June 15

ROYAL GEOGRAPHICAL SOCIETY, at 5.—Miss Mary Deveton: "Economic Geography of Swaziland".  
A. Geddes: "Population Maps of Bengal".

## Tuesday, June 16

EUGENICS SOCIETY, at 5.15.—(at the Linnean Society, Burlington House, Piccadilly, W.1).—Dr. R. B. Cattell: "Is National Intelligence Declining?"\*

ROYAL STATISTICAL SOCIETY, at 5.15.—(at the Royal Society of Arts, John Street, Adelphi, W.C.2).—Prof. Major Greenwood, F.R.S.: "English Death Rates, Past, Present and Future" (Valedictory Address as President).

INSTITUTION OF CIVIL ENGINEERS, at 6.—Asa W. K. Billings: "Water Power in Brazil, with Special Reference to the São Paulo Development" (Special Lecture).

## Wednesday, June 17

ROYAL METEOROLOGICAL SOCIETY, at 5.—Discussion on "Thunderstorm Researches" to be opened by Prof. T. H. Laby, F.R.S.

## Thursday, June 18

ROYAL SOCIETY, at 4.30.—Dr. F. H. A. Marshall, F.R.S.: "Sexual Periodicity and the Causes which Determine it" (Croonian Lecture).

INSTITUTION OF ELECTRICAL ENGINEERS, June 15–20. Summer Meeting to be held in Glasgow and the West of Scotland.

## Official Publications Received

## Great Britain and Ireland

The Institution of Professional Civil Servants. Annual Report of Council for the Year 1935. Pp. xiv+46. (London: Institution of Professional Civil Servants.) [185]  
Proceedings of the Royal Irish Academy. Vol. 43, Section B, No. 1: The Pigment of the Flowering Currant (*Ribes sanguineum*), varieties *Splendens* and *Atroroseum*. By Dr. Thomas J. Nolan and Thomas G. Brady. Pp. 12. 1s. Vol. 43, Section B, No. 2: A Note on Dalradian Pillow Lavas, Strabane, Co. Tyrone. By Dr. William J. McCallien. Pp. 13–22+1 plate. 1s. Vol. 43, Section B, Nos. 3 and 4: The Physiological Basis of the Sensation of Cold; iv. An Analysis of the Influence of Temperature and of Thyroid Extract on the Oxygen Consumption of the Anaesthetised Rabbit; v. The Relation between Basal Metabolism, the Regulation of Temperature and the Sensation of Cold. By J. M. O'Connor. Pp. 23–42. 1s. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) [185]  
The Carnegie United Kingdom Trust. Twenty-second Annual Report, January–December 1935, approved by the Trustees at their General Meeting held on Friday, March 6th, 1936. Pp. vi+103+4 plates. (Dunfermline: Carnegie United Kingdom Trust.) [195]

## Other Countries

Kungl. Svenska Vetenskapsakademiens Handlingar. Serien 3, Band 15, No. 4: Die Während der schwedischen Expedition nach Spitzbergen 1898 und nach Grönland 1899 eingesammelten Harpactiden. Von Karl Lang. Pp. 55. Serien 3, Band 15, No. 5: Femte jämförelsen mellan Svenska Riksprototyperna för metern och kilogrammet och mynt- och justeringsverkets huvuddikare. Av A. Grabe, T. Swensson och E. Walldow. Pp. 57. (Stockholm: Almqvist and Wiksells Boktryckeri A.-B.) [125]  
Ochrona Przyrody: Organ Państwowej Rady Ochrony Przyrody. Rocznik 15. Pp. vi+338. (Kraków: Państwowej Rady Ochrony Przyrody.) 7 zl. [155]  
Instituto Español de Oceanografía. Notas y Resúmenes, Serie 2, No. 86: Hidrografía del Estrecho de Gibraltar en Marzo de 1933 (Campanías del guardacostas *Xauen*). Por Prof. Rafael de Buen. Pp. 16. Notas y Resúmenes, Serie 2, No. 91: Caracteres oceanográficos del Estrecho de Gibraltar en 1934 (Campanías del *Xauen*). Por Prof. Rafael de Buen. Pp. 20. Trabajos, No. 14: Condiciones oceanográficas de la costa Catalana entre la frontera francesa y el Golfo de San Jorge (Campanías del *Xauen* en Marzo de 1933 y de 1934). Por Prof. Rafael de Buen y Francisco de P. Navarro. Pp. 47+1 plate. (Madrid: Instituto Español de Oceanografía.) [155]