

### University of Saskatchewan Linear Accelerator Laboratory

THE University of Saskatchewan Linear Accelerator Laboratory was officially opened on November 6, 1964. More than one hundred European, American and Canadian scientists attended the ceremonies, and sessions of contributed and invited papers were held. This occasion marked the bringing into operation of a linear electron accelerator with 140-MeV maximum unloaded energy and a mean current of 200  $\mu$ amp at 100 MeV. The energy can be varied continuously from 5 MeV to its maximum value. Pulse durations from 5 nsec to 1  $\mu$ sec are available at a repetition rate of 0-1,400 pulses/sec. The energy spectrum at the output of the accelerator is about 2 per cent. The director of the Accelerator Laboratory is Prof. L. Katz.

### Biology at Euratom

A REPORT of the European Atomic Energy Community, entitled *Euratom's Biology Programme 1961-64: Report and Perspectives*, by R. K. Appleyard, describes the progress and growth of the Biology Division since its inception three years ago (Pp. 37. (EUR. 1884. e.) Brussels: European Atomic Energy Community — Euratom, 1964). The report is divided into three parts dealing briefly with administrative and political factors and more fully with the scientific programme of the Division. The basic policy of the Division is to encourage research by contractual arrangements with individual institutes or centres of research within the six member countries and to act as a centre for community effort within the field of radiobiology. Financial resources, and the uses to which they were put, are described in some detail, both within the text and by tables and diagrams in the appendixes. Direct research activities of the scientific staff of the Division were chiefly limited to investigations of environmental contamination and the movement of isotopes in ecological systems. Work done under contract was much more broadly based, however, and represented the greater part of the expenditure of the Division. One avowed aim of the support of outside work was to "encourage not only original ideas but new growing points of research activity and enhanced responsibilities among younger research workers". The latter intentions did not seem to be reflected in the contractual programmes listed in Appendix 3. The rate of accumulation of publications from the activities of the Division was also shown in Appendix 3. Although the total yield of publications was impressive, a list of selected literature would have been more instructive.

### Yale Arbovirus Research Unit

THE Rockefeller Foundation Virus Laboratories moved in December 1964 from New York to New Haven, Connecticut, where the virus research programme of the Foundation will be associated with the Department of Epidemiology and Public Health of Yale University as the Yale Arbovirus Research Unit. Dr. W. G. Downs, director of the Foundation's virus programme, and Dr. M. Theiler, former director of the Laboratories, have been appointed professors in the Yale University School of Medicine. Dr. L. Whitman, acting director of the Laboratories, Dr. Sonja M. Buckley, Dr. J. Casals-Ariet, Dr. Dolphine H. Clarke, and Dr. R. W. Speir, of the staff of the Laboratories, will also have faculty affiliation. In New Haven the Laboratories will be located, in a new building recently completed for the Department of Epidemiology and Public Health, at 60 College Street.

### Journal of Applied Ecology

RECENT developments in the expanding field of ecology have stimulated the British Ecological Society to publish a third journal to supplement their two existing journals, the *Journal of Ecology* (started 1913) and the *Journal of*

*Animal Ecology* (started 1932) (*The Journal of Applied Ecology*, 1, No. 1, May 1964. Edited by A. H. Bunting and V. C. Wynne-Edwards. Pp. vi+218. Oxford: Blackwell Scientific Publications, 1964. Published twice a year, 70s. net. Annual subscription, post free, 120s., U.S. and Canada, 20 dollars). The first number contains sixteen papers and several book reviews. Six titles suggest something of the range of subjects covered: J. N. Black, "An Analysis of the Potential Production of Swards of Subterranean Clover (*Trifolium subterraneum* L.) at Adelaide, South Australia"; A. D. Ansell, K. F. Lander, J. Coughlan and F. A. Loosmore, "Studies on the Hard-shell Clam, *Venus mercenaria*, in British Waters"; Donald A. Spencer, "Porcupine Population Fluctuations in Past Centuries revealed by Dendrochronology"; F. H. W. Groen, "A Map of Annual Average Potential Water Deficit in the British Isles"; G. Szeicz, J. L. Monteith and J. M. dos Santos, "Tube Solarimeter to Measure Radiation among Plants"; David Jenkins, Adam Watson and G. R. Miller, "Predation and Red Grouse Populations". The contributors, editors, publishers and printers are all to be congratulated on the high standard of presentation in this first number. Further numbers will help to clarify the exact scope of this new journal in relation to its older stablemates.

### The British Journal for the Philosophy of Science

THE purpose of the British Society for the Philosophy of Science is to study the logic, the method and the philosophy of science as well as those of the various special sciences, including the social sciences. The current number of the *Journal* (15, No. 59; November 1964) begins with three logical articles on the confirmation paradoxes by William M. Baumer, P. R. Wilson and Judith Schoenberg, respectively. An important section, "A New Approach to the Theory of Fundamental Processes", is by Mendel Sachs, of Boston University. It is remarkable how often to-day statements can be found in Mach's *The Science of Mechanics* which make good starting-points for modern physical theories. In a new attempt towards a unified theory in physics, Sachs quotes Mach: "However well fitted atomic theories may be to reproduce certain groups of facts, the physical inquirer who has laid to heart Newton's rules will only admit those theories as provisional helps, and will strive to attain, in a more natural way, a satisfactory substitute". The essential point of departure of the new approach is in the introduction of the following fundamental postulate: "The laws of Nature must be described in terms of field variables that may be associated only with elementary interactions". Sachs applies his theory to an interpretation of the Dirac field, the production and annihilation of particle-antiparticle pairs, Pauli's exclusion principle, electron spin, the Lamb shift in the spectrum of hydrogen and the hydrogen equation which has an additional term—a fundamental length. The new approach introduces the elementary interaction instead of the elementary particle as the fundamental entity of Nature. The three manifestations of elementary interactions in terms of the gravitational (Einstein), electromagnetic (Maxwell) and matter (Dirac) field descriptions can all be represented in terms of fundamental spinor and quaternion field variables. The quantitative predictions which result from this method are being studied at present.

### The British Association of Industrial Editors, Ltd.

THE periodic 'house magazine' is such an important instrument of communication between management and staff in our large industrial organizations to-day, and its appeal and popularity have become so firmly established, not only in the firms concerned but, by virtue of a wider circulation, in the minds of a larger public, both in the United Kingdom and overseas, that it is not surprising that there now exists an association of people primarily concerned with these industrial publications and with the