

1963 (out of 304 g/m² total litter fall), provides a tentative basis for estimating maximum canopy content if this total approximates total mass of foliage present in late June. If the late June caesium-137 concentration per unit mass of 1.27 $\mu\text{c./g}$ dry wt. is representative of the whole canopy, then foliage activity on a unit-area basis was 1.27 $\mu\text{c./g} \times 196 \text{ g/m}^2 = 249 \mu\text{c./m}^2$ at a seasonal maximum. This quantity represents about 27 per cent of the total radiocaesium introduced into tree trunks ($\sim 1 \text{ mc./m}^2$). This fraction is lower than the maximum canopy fraction of 40 per cent reported for white oak saplings³. The difference between the two species may be attributable to size. The oak saplings averaged 2.5 in. dbh whereas *Liriodendron* averaged 6 in. with individual trees up to 12.6 in. and 14.2 in. in diameter.

The prompt movement of caesium ions into leaves must not cease during late June, nor does the export start suddenly. The concentration in the foliage at any time represents a balance between income and opposing loss rates. The rate of decrease of foliage activity through late summer appears to be about 1.2 per cent of foliage radio-

caesium per day. The preliminary results (Fig. 4) emphasize the importance of rain as an agent in radiocaesium transfer. Approximately 20 per cent ($\sim 10.3 \mu\text{c./m}^2$) of the total litter burden ($\sim 52 \mu\text{c./m}^2$) was derived from rain leaching. Only 7 per cent of the original radiocaesium input to *Liriodendron* was transferred to the forest floor during the first growing season in contrast to white oak saplings³ where 20 per cent of the original input was transferred. Further data and computer simulation of simultaneous income and loss need to be combined for evaluating the general model of caesium flux for this interesting case of *Liriodendron* forest.

¹ Olson, J. S., in *Radioecology*, edit. by Schultz, V., and Klement, jun., A. W., 121 (Reinhold Publ., New York, 1963).

² Braun, E. L., *Deciduous Forests of Eastern North America* (Blakiston Co., Philadelphia, 1950).

³ Witherspoon, jun., J. P., Auerbach, S. I., and Olson, J. S., *Cycling of Caesium¹³⁷ in White Oak Trees on Sites of Contrasting Soil Type and Moisture*. U.S.A.E.C. Rep. ORNL-3328 (1962).

⁴ Fraser, D. A., and Mawson, C. A., *Canad. J. Bot.*, **31**, 324 (1953).

⁵ Graham, jun., Ben F., *Ecology*, **38**, 156 (1957).

⁶ Ealy, R. P., *Oklahoma A and M Coll. Exp. Sta. Tech. Bull. T-70* (1957).

⁷ Olson, J. S., in *Health Physics Div. Ann. Prog. Rep.*, **46**, U.S.A.E.C. Rep. ORNL-2806 (1959).

NEWS and VIEWS

CERN Research Directorate: Prof. B. Gregory

PROF. B. GREGORY has been appointed directorate member for research at CERN in succession to Prof. G. Puppi (*Nature*, **196**, 320; 1962), who has resumed his post as professor of advanced physics and director of the Institute of Physics at the University of Bologna. Prof. Gregory was born in Bergerac in 1919 and studied at the Ecole Polytechnique in Paris and the Massachusetts Institute of Technology. On returning from the United States, he worked in the Physics Laboratory of the Ecole Polytechnique in Paris. His primary interest has been the study of elementary particles from the point of view of strong and weak interactions, especially the use of bubble chambers. Until recently, he was the chairman of the Track Chamber Committee, which controls the experiments carried out at CERN with such kinds of instrument. By virtue of this position he has since 1960 been a member of the Scientific Policy Committee, which advises on the broad lines of CERN's scientific planning. Prof. Gregory will assume his post on a part-time basis until August 1964 and afterwards full time until the end of 1965.

Geophysics at Dallas: Prof. A. L. Hales

PROF. A. L. HALES left the Bernard Price Institute of Geophysical Research, University of the Witwatersrand, in 1962 to become first head of the Geosciences Division of the Southwest Center for Advanced Studies in Dallas, Texas. Prof. Hales graduated at the University of Cape Town in 1930 and at the University of Cambridge in 1933. In 1936 he gained a Ph.D. degree at the University of Cape Town. After holding lecturing appointments in the Mathematics Department of the University of the Witwatersrand, Prof. Hales joined the staff of the Bernard Price Institute as a senior research officer in 1946. From 1946 until 1954 he held the chair of applied mathematics at the University of Cape Town, and returned to the Bernard Price Institute in 1954 to succeed Dr. B. F. J. (now Sir Basil) Schonland as director. Prof. Hales has pursued wide interests in geophysics and has made important contributions to the theory of convection in the mantle, to the use of gravity measurements in the study of crustal structure, to the thermal contraction theory of mountain building, to palaeomagnetism and to crustal seismology. At the Southwest Center for Advanced Studies, which forms part of the newly formed Graduate Research Center of the Southwest, he is initiating both continental and oceanographic investigations of the crust

and upper mantle. Prof. Hales is a Fellow of the Royal Society of South Africa, of the Royal Astronomical Society, of the Cambridge Philosophical Society and of the American Geophysical Union.

Geophysics at Johannesburg: Prof. L. D. Nicolaysen

DR. L. D. NICOLAYSEN has been appointed director of the Bernard Price Institute of Geophysical Research and professor of geophysics at the University of the Witwatersrand in succession to Prof. Hales. Dr. Nicolaysen, who is thirty-five, is at present senior research officer at the Institute. After graduating in science (with distinction in geology) at the University of Cape Town in 1948, Dr. Nicolaysen was awarded the H. B. Webb scholarship and gained an M.Sc. degree in geology, with honours, in 1950. During part of this period he was a member of a research team which conducted a geological survey of Mauritius. Awarded a Carnegie Fellowship in 1951, Dr. Nicolaysen spent eighteen months as a Visiting Fellow at the Geophysical Laboratory in Washington and then studied at the Graduate College of Princeton University. In 1954 he was appointed Charles Allen Munn Fellow of the Graduate College, and, at the end of the year, for his work on African Precambrian Minerals he was awarded a Ph.D. degree. In 1958 Dr. Nicolaysen was invited to participate in a symposium on the measurement of geological age, held under the auspices of the U.S. National Academy of Science in Washington. Most of Dr. Nicolaysen's scientific work has been concerned with the measurement of the ages of various African rock formations by means of the radioactive decay of rubidium and uranium.

Recurrent Grants to British Universities

IN a statement in the House of Commons on February 5, the Minister for Science, Mr. Q. Hogg, announced that the total recurrent grant to existing universities for the remaining three years of this quinquennium would be increased by £3.5 million, £7.2 million and £9.8 million, respectively, making totals of £82.1 million, £91.8 million and £101.5 million for 1964-65, 1965-66 and 1966-67, respectively. The new level was fixed with the view of obtaining the 197,000 full-time students as recommended by the Robbins Report for the first year of the next quinquennium and took account of costs as calculated to July 1963 and the recently agreed increase in the wages of university technicians. Any adjustment in academic