

surpassed. His realization of the essential unity of the antibody reactions helped to bring order into a confused field. His papers, like those of his great predecessors, are classical in quality, commendable to students.

His second great contribution to medical science was the quality and nature of his teaching. Forty years ago, he was a very great teacher, who insisted on the interdependence of all branches of pathology and medicine. He made his students eager to know more and more about more and more. Pathology he regarded as one great subject, of which bacteriology, immunology, virology, hæmatology and morbid anatomy were all interdependent parts, and liable to suffer from individual elevation to specialist rank. He taught pathology as the true basis of all medicine and as especially valuable for the insight it gave into normal function. He was, thirty and forty years ago, a brilliant lecturer; but his greatest effect was obtained when demonstrating in the laboratory.

His creation of the Part II and Part I Pathology Triposes in Cambridge has benefited many generations of Cambridge medical graduates, and, through them, the whole of medicine.

As a principal leader in the Cambridge Medical School, as Master of Trinity Hall and, during the two difficult and anxious years which preceded the Second World War, as vice-chancellor, Dean's energies were necessarily devoted chiefly to administration. Outside Cambridge, he had many activities; at various times, and for many years at a time, he was chairman of the council of the Imperial Cancer Research Fund, secretary of the Pathological Society of Great Britain and Ireland, a member of the Royal Commission on the University of Durham. He served on the General Medical Council as representative of the University of Manchester during 1919-22, and of the University of Cambridge during 1942-57.

He received several honorary degrees—LL.D. of the Universities of Aberdeen and Western Reserve, honorary D.Sc. of the University of Liverpool. He was a Corresponding Fellow of the New York Academy of Medicine.

Dean was no dilettante, but he was well informed on a very wide range of subjects. To accompany him on a wine-buying expedition for the College; or to handle and appreciate some of the silver he had collected; or to inspect his seedling viruses in Trinity Hall; or to climb mountains with him, or swim with him, or to follow the boats in Mays or Lent races, or sit with him on boards and committees, or hear him quote Horace with a conscientiously archaic pronunciation, or just to drop in for a chat with him—these were all memorable experiences, and for the memory of them one is grateful. But one is chiefly grateful for the example of staunch, objective honesty of outlook on everything that came within his ken, and for the irrepressible humour of his commentary on it. An anonymous contributor to *The Lancet* has said "I owe it to him that I have had such an interesting life". Many others would acknowledge the same debt.

In 1908 he married Irene Wilson, who died in 1959, after being his close partner and perfect counterpart throughout a long joint career. Mrs. Dean shared the affection and regard in which he was held by many hundreds of younger people whom they helped, encouraged, guided and entertained.

E. T. C. SPOONER

Prof. Jerome T. Syverton

JEROME T. SYVERTON, whose death occurred on January 28, began an outstanding, active career in microbiology as an instructor in bacteriology at the University of North Dakota in 1928. Born in Courtenay, North Dakota, in 1907, he entered the University of North Dakota in 1923, obtaining the A.B. degree in 1927 and the B.S. degree in 1928. He graduated from Harvard University School of Medicine in 1931, and after an internship and assistant residency in medicine at Duke University Hospital in 1931-32, he became an assistant in pathology and bacteriology at the Rockefeller Institute for Medical Research, New York. There he obtained basic knowledge in virology under the guidance of Dr. P. K. Olitsky, and in 1932 became a member of the faculty of the University of Rochester School of Medicine and Dentistry.

Except for a sabbatical leave in 1942 at Vanderbilt University School of Medicine as visiting associate professor of pathology and bacteriology, Syverton's fundamental and pioneering work involving, for example, tumour viruses and multiple viral infections of single animal cells, as well as the development of his outstanding skill as a teacher and student adviser, was done during 1934-47 while in the Department of Bacteriology at the University of Rochester. For his outstanding research in virology, he received the Lilly Award in Bacteriology and Immunology in 1938. During 1944-46 he was on active duty in the United States Navy as a visiting investigator at the Rockefeller Institute, and member of Naval Medical Research Unit 2 in the Pacific Theatre. In 1947 he became professor and head of the Department of Microbiology at Louisiana State University School of Medicine, and since 1948 had been professor and head of the Department of Bacteriology at the University of Minnesota.

During his academic career Syverton's enthusiastic and vigorous approach to professional life, with simultaneous devotion to his family and friends, set an extraordinary example for students and associates. His graduate and postdoctoral students during twelve years at the University of Minnesota alone numbered more than 65. His productivity as an investigator was remarkable, and during 1957-58 he was recipient of the Commonwealth Fund Award for Creative Work. Eighty-seven articles describing his own work and 119 in conjunction with his students and associates were published between 1933 and 1960. His stature in science and academic medicine was evidenced by his membership of many scientific advisory committees, and his enthusiastic support of science at an international and national level was widely recognized and appreciated. The world's scientific community has lost a creative and productive investigator, the educational community an enthusiastic teacher, the community of his colleagues and associates a true friend, and his family an affectionate and lovable father.

WILLIAM F. SCHERER

Prof. B. Davison

PHYSICISTS and mathematicians connected with the British and Canadian atomic energy projects have learned with regret of the sudden death of Boris Davison on January 24, while still a very productive mathematical physicist engaged on problems of neutron transport.

He was born in Gorky on July 10, 1908, and educated in Russia. He graduated from the University of Leningrad in 1931, and was engaged in hydrology for about seven years thereafter. Through his English grandfather he had a tie with England, and when in 1938 he was requested either to renounce British nationality or leave the U.S.S.R. he elected to go to England. He worked for a short period with Prof. L. Rosenhead, but his health broke down. After a considerable period of convalescence he joined the atomic energy research team at the University of Birmingham under Prof. R. E. Peierls, in 1942. His powers as a mathematician enabled him to make many important contributions, particularly to neutron transport theory, a subject which was to occupy most of his attention for the rest of his life. For some of this work he was awarded the Ph.D. of the University of Birmingham in 1944.

His connexion with Canada started when he joined the Montreal Laboratory of the joint United Kingdom-Canadian Atomic Energy Project in 1943. His association with the late Dr. G. Placzek was a very fruitful one, and he accompanied Drs. Placzek and Mark to Los Alamos. He moved to the new Chalk River Laboratory as a member of the United Kingdom staff in the Theoretical Physics Branch and in 1947 returned to England to work at Harwell. In 1954 he joined the staff of the Computation Centre in the University of Toronto, lectured in numerical analysis and reactor physics and was appointed associate

professor of physics in 1960. For the past six years he served Atomic Energy of Canada, Ltd., as a consultant. His knowledge, experience and talent have contributed in many ways to the technical success of the Canadian Atomic Energy programme.

In 1957 his book on *Neutron Transport Theory* was published: it established him publicly as the authority in this subject to which he brought a remarkable combination of analytical power and precision, an uncommon facility in numerical analysis and physical perception. Not only has he expounded the methods of other mathematicians but he has also delineated carefully the boundary of the region within which they can be effectively applied. In his preface he was generous in acknowledging assistance, but those who knew him know well his patience and the exacting standards he set for himself.

Much of Davison's work was concerned with improving mathematical representation of nuclear processes in reactors and with the associated computational problems. He was a ready inventor of algorithms for computing and for avoiding pathological conditions in large calculations.

He was a gentle, shy man, painstaking, kind and generous in helping his fellows, but intolerant of pretence. His intellectual life was not confined to the subject of his specialty. He had a broad, modern interest in science and he liked poetry.

He is survived by his wife Olga.

W. H. WATSON

NEWS and VIEWS

The First Manned Earth-Satellite, 1961 μ

THE spaceship-satellite *Vostok*, launched from the U.S.S.R. at 06.07 U.T. on April 12, carried the first man to make a journey in orbit about the Earth, Major Y. A. Gagarin of the Soviet Air Force. The satellite, which weighed 4,725 kgm. (10,417 lb.) excluding the final-stage rocket, was projected into an orbit inclined at $65^{\circ} 04'$ to the equator, and having an orbital period of 89.1 min. Its height above the Earth varied between 175 km. at perigee and 302 km. at apogee. The satellite, designated 1961 μ 1, made one revolution about the Earth: its deceleration by retro-rocket motor began at 07.25 U.T. and the cabin was safely and successfully brought to Earth in the U.S.S.R. at 07.55 U.T., close to the pre-determined area. The satellite's radio transmissions were on frequencies of 9.019, 20.006 and 143.625 Mc./s. It is reported that on his historic flight Major Gagarin was able clearly to see coastlines, mountain ranges and large cities, and that to him the Earth appeared light blue in colour against a very dark sky. The final-stage rocket, 1961 μ 2, which separated from the satellite, remained in orbit for several days.

The Henry Draper Medal: Dr. M. Schwarzschild

DR. MARTIN SCHWARZSCHILD, professor of astronomy, Princeton University, has been awarded the Henry Draper Medal of the U.S. National Academy of Sciences for his work in the field of stellar evolution. Dr. Schwarzschild was born in Potsdam, Germany, in 1912, and took his Ph.D. degree in astronomy at the University of Göttingen in 1935. He was a Research Fellow at the University of Oslo during 1936-37 and at Harvard College Observatory during 1937-40.



Major Yuri Alekseyevich Gagarin