we hear that

as associate director for high-energy physics on 1 October; Cool will then join Rockefeller University. **Frederick Mills,** former professor and director of the physical-sciences laboratory at the University of Wisconsin, has already become the new chairman of the accelerator department. He replaces **G. Kenneth Green** who is still at Brookhaven.

Giovanni P. Rutelli has retired from the University of Maryland and is now a professor emeritus.

The new director of the division of nuclear materials at the Atomic Energy Commission is **Ralph F. Lumb,** the former president of Advance Technology Consultants Corp. He succeeds **Russell P. Wischow,** who is now vice-president and secretary of E. R. Johnson Associates.

obituaries

Sydney Chapman

Sydney Chapman, British geophysicist and president of the Special Committee for the International Geophysical Year, died in Boulder, Colo. on 16 June.

Chapman's productive career spans 60 years—from his first published paper in 1910 at age 22 on a topic in pure mathematics to his current work on magnetospheric and auroral physics.

In the hard-nosed world of professional physicists the word "hero" scarcely exists. Yet I have no hesitation in stating that Chapman was a hero to me. His special forte was in reducing a bewildering array of phenomenological knowledge to a relatively simple physical model, which he then subjected to rigorous analysis. There are few topics in geomagnetism, the kinetic theory of gases, the physics and chemistry of the earth's upper atmosphere, the physics of the aurorae and solar–terrestrial and lunar–terrestrial physics to which he has not made a substantial and, usually, a pioneering contribution. He was studying the physics of ionized gases long before the word "plasma" had been applied to this field. He was considering the interaction of hot, ionized gas from the sun with the magnetic field of the earth 30 years before most physicists were aware that interplanetary space was not "essentially" a perfect vacuum.

CHAPMAN

Chapman inspired three generations of geophysicists with his wise insight, his lucid lectures, his quiet, almost boyish, lightheartedness and his utmost personal and professional integrity. Among his instructors and mentors at the Universities of Manchester, Oxford, and Cambridge were Reynolds, Lamb, Schuster, Littlewood, Rutherford, Geiger and Larmor. His lifelong work continued in the tradition of classical physics that such names suggest.

The two volume *Geomagnetism* that he wrote with Julius Bartels is the standard reference work on the subject, as is *The Mathematical Theory of Non-Uniform Gases* (with T. G. Cowling).

During the period 1953–1959, Chapman was the leader in organizing and executing the International Geophysical Year, a worldwide effort of cooperative work by individuals and groups in nearly every country of the civilized world. This effort culminated in 1957–58 with many new discoveries and with the first successful launching of satellites for scientific purposes by both the USSR and the US.

For 22 years, Chapman was professor of mathematics at Imperial College, London. Following his retirement as Sedleian Professor of Natural Philosophy at Oxford in 1953, he divided his time between the Geophysical Institute of the University of Alaska and the High Altitude Observatory in Boulder, Colo. with a series of visiting professorships at the Universities of Michigan, Minnesota, Iowa, Istanbul, Ibadan, Göttingen and Cairo and at California Institute of Technology.

During his latter years, he enjoyed an especially warm and productive collaboration with Syun-Ichi Akasofu of the University of Alaska. His wife Katharine preceded him in death by three years. Their three sons and one daughter live in England.

An 80th birthday commemorative book *Sydney Chapman, Eighty—From His Friends,* edited by S.-I. Akasofu, B. Fogle and B. Haurwitz, is a collection of warm tributes by friends and colleagues and other material constituting an informal biography.

JAMES A. VAN ALLEN
University of Iowa

William M. Pierce

William M. Pierce, professor emeritus at Ohio University, died on 31 May at the age of 73.

Pierce received his PhD in 1928 at Cornell University and taught there before joining Williams College. He then taught at Columbia University, Converse College, Eastern Illinois University and Illinois Wesleyan University. In 1946 he joined Ohio University, where he stayed until he retired in 1966.

At Ohio, he developed and taught a physical-science course. For several years he represented the Appalachian Section on the council of the American Association of Physics Teachers and served on its Committee on High-School Awards.

C. C. Chen

Ching-Chiang Chen died on 30 April after a long illness at the age of 41. Chen had been an assistant professor at Frostburg State College, Md., since 1965.

He was a native of Kwangton, China, and a graduate of the National Taiwan University in Formosa and of the University of Minneapolis, where he began his studies in 1960. Before joining Frostburg State College, Chen taught at Nanyang University, Singapore, the National Taiwan University and the Air Force Signal School at Kangshen, Formosa.

Julius Arthur Brown

Julius Arthur Brown died on 2 May at the age of 90. Brown graduated from Dartmouth College in 1902 and was one of the original Rhodes Scholars, taking his degree at the New College, Oxford.

For 35 years Brown taught physics and astronomy at the American University, Beirut and for ten years was dean of arts and sciences. He also taught at Dartmouth, Columbia, Colgate and Jacksonville Universities and at the American University of Cairo and Colby College. □