## obituaries

penetrating contributor in this area.

Early in this new career he attained the distinction, unusual for a physicist, of publishing an article in Foreign Affairs (41, 360, 1973). This article remains a classic in its simplicity and beauty in analyzing non-Western attitudes towards change and the implications of scientific advance to traditional ways of thinking. Dart proposed a view of science as a "second culture" that complemented rather than destroyed those traditions.

In recent years Dart pursued similar research in Papua, New Guinea where his observations and conclusions on science and culture further enriched our understanding of the ways different societies relate to the natural world.

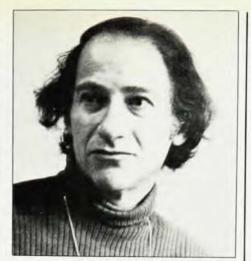
Dart was a quiet, modest man who derived pleasure from the fascination and inner excitement that the exploration of virgin territory in human knowledge can bring. At the same time he was spurred by a Quaker tradition of dedication to service with which his research closely harmonized. His impact on the University of Oregon, where he directed the Honors Program for many years, remains in the memory of faculty and students who sought his wise, always sympathetic counsel.

MICHAEL MORAVCSIK University of Oregon

## **Edgar Lipworth**

Edgar Lipworth, professor of physics at Brandeis University, died 14 July at the age of 53. He was born and educated in England. From 1944 to 1946 he worked on radar and antisubmarine devices for the Air Ministry and the Telecommunication Research Establishment. After getting his BA degree at Manchester University in 1947, he came to the United States for graduate studies at Columbia University. He obtained his PhD under the advisement of Willis Lamb with a measurement of the Lamb shift in singly ionized helium. From 1956 to 1961 he held a position at the Radiation Laboratory in Berkeley, working there on spins and magnetic properties of radioactive nuclei using the Rabi beam method.

Lipworth joined the Brandeis physics department in the fall of 1961, a time when its graduate program was only five years old and entirely oriented towards theoretical physics. Together with Stephan Berko he succeeded in building up an impressive experimental research program in a very short time. A magnetic resonance apparatus with a high electric field allowed him to study the Stark shifts in the Zeeman and hyperfine structure of atoms. He is probably best known for his attempt to measure the electric dipole moment of the electron, which if not equal to zero would imply time-reversal viola-



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tion by the electron. The experiment gave a value compatible with zero, but its upper limit was reduced by several orders of magnitude to a value of  $3\times 10^{-24}\,e$  cm. Together with Norman F. Ramsey and his collaborators, Lipworth tried to determine whether the neutron had an electric dipole moment.

The scientific work of Edgar Lipworth is published in over 40 papers and articles. He was a Fellow of The American Physical Society and he served as the chairman of the Division of Electron and Atomic Physics in 1966–67. He was awarded a Guggenheim Fellowship for the year 1974–75 and spent his year at Hebrew University in Jerusalem.

Edgar Lipworth was a dedicated teacher and took a deep interest in the welfare of his students. His many friends and collaborators will always remember him as a devoted scientist and a gentle, considerate man.

MAX CHRETIEN Brandeis University

## D. Nelson Limber

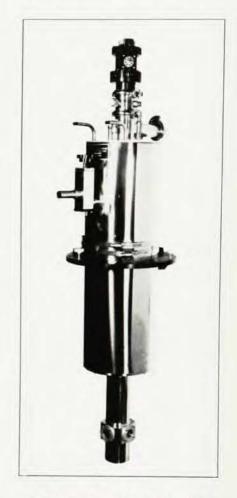
Professor of astronomy at the University of Virginia, D. Nelson Limber died 16 April in Charlottesville. Born in May, 1928 in Alexandria, Virginia, Limber received both AB and MSc degrees in physics from Ohio State University in 1950, and a PhD in astronomy from the University of Chicago in 1953.

Limber held a postdoctoral fellowship at Princeton in 1953 and had been appointed to the faculties of the University of Rochester (1956) and the University of Chicago (1958) before returning to Virginia to join the department of astronomy at the University of Virginia in 1968.

Throughout his career, Limber concentrated on problems of stellar function and dynamics, taking particular interest in analyzing stars with extended gaseous envelopes.

An effective and popular teacher at the University, Limber was much sought after for his advice by students and colleagues alike.

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