



AARON N. BLOCH

Hopkins University. There, with Dwaine Cowan, he built a world-renowned group devoted to the synthesis and characterization of new organic conductors. He played a major role as a pioneer and leader in this field because he combined the insight of a first-rate solid-state chemist with mastery of the relevant condensed matter theory. The second of his major scientific interests, the microscopic basis of global trends in the properties of solids, also emerged at Johns Hopkins with his discovery of the capacity of the so-called Bloch-Simons radii, extracted from atomic wavefunctions, to organize the structures of solids.

In 1981 he left Johns Hopkins for the Exxon Corporate Research Laboratories, where he played a leadership role in building their capabilities. Noteworthy among his achievements during this period was the formation and leadership of a profoundly influential research program on the physics of complex fluids. The alumni of that group continue to play a dominant role in the subject worldwide.

Also while with Exxon, Bloch developed further an interest in and an extraordinary talent for the management and fostering of creative intellectual endeavors. He began to exercise this talent on a wider stage in 1988, when he joined Columbia University as vice provost with responsibilities for science, engineering and technology transfer. There he helped build one of the nation's most successful technology-transfer programs.

In 1992 he moved from Columbia to the State University of New York at Buffalo, assuming the office of university provost. In that position he was

able for the first time to give full scope to his broad intellectual interests, which extended well beyond science; to his deep concern for education, educators and especially students; and to his conviction that the current challenges facing universities could be met while still building excellence.

Bloch served on the American Physical Society Council and chaired APS's Panel on Public Affairs in 1994. He was also a member of the Committee on Public Policy of the American Institute of Physics.

He was a person of warmth and wit, a fond friend of many and a leader to more.

MORREL H. COHEN

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Lee C. Northcliffe

The physics community experienced a great loss when Lee Northcliffe, a well-known nuclear physicist, died on 4 June 1994.

He was born in Manitowoc, Wisconsin, in 1926 and served in the US Navy in 1944-45. He received his BS, MS and PhD (1957) from the University of Wisconsin. Lee was a faculty member at Yale University from 1957 to 1965 and a visiting scientist at Oak Ridge National Laboratory from 1962 through 1966.

At Texas A&M University he rose from associate professor in 1965 to full professor in 1970. He initiated the nucleon-nucleon research program at the Texas A&M Cyclotron Institute. In the nucleon-nucleon group his colleagues included E. P. Chamberlin, Robert Graves, John C. Hiebert, Charles W. Lewis and John W. Watson. Lee also was one of the coprincipal investigators for the initial nucleon physics program at Los Alamos National Laboratory's Clinton P. Anderson Meson Physics Facility.

Lee was a prominent and respected researcher in nucleon-nucleon studies, proposing and carrying out many experiments in the medium-energy range at Los Alamos. Among his coworkers were Tarlochan Bhatia, Howard Bryant, Michael Evans, Mahavir Jain, Subrata Nath, Peter J. Riley, Harold Spinka and W. Brad Tipkens. Lee proposed the first neutron beam experiment at the LAMPF nucleon physics laboratory (area B). The program used both polarized and unpolarized targets for the measurement of spin variables and resulted in a unique determination of the nucleon-nucleon elastic amplitudes from 400 to 800 million electron volts. Con-

straints on time reversal invariance and on dibaryon resonances also came out of this work, for which Lee encouraged and supported an extensive development of large area gas counters and scintillator neutron detectors. Lee was interested in extending the spin studies to higher energy and collaborated with physicists at Brookhaven National Laboratory and the National Laboratory for High Energy Physics (KEK) at Tsukuba, Japan, to that end. Lee is also well-known for his definitive work on the stopping of charged particles. His monograph *Range and Stopping Power Tables for Heavy Ions*, written with Ralph Schilling, is still used extensively worldwide.

A quiet and thoughtful person, Lee will always be remembered and admired by his colleagues for his open and unassuming way of dealing with people. Behind this agreeable interaction style was a patient, steady and tenacious core that served him well in experimental work. He was conscientious in teaching, and his class notes were always meticulously prepared. He loved backpacking in the wilderness, especially with his sons David and Chris. He also enjoyed playing a violin that he had crafted himself. Lee Northcliffe left behind many colleagues and students who remember that he always strived to be good, not necessarily to just look good.

GEORGE GLASS

JAMES E. SIMMONS

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Shyamadas Chatterjee

Shyamadas "S. D." Chatterjee, the doyen of Indian physicists, passed away in Calcutta on 27 May at the age of 86.

He earned his BSc degree in 1930 and his MSc degree in physics in 1932 from the University of Calcutta, where his teachers included Nobel laureate C. V. Raman. In 1938 Chatterjee joined the Bose Institute, in Calcutta, and demonstrated his experimental skills by constructing one of India's first Wilson cloud chambers.

When news of the discovery of nuclear fission reached India in 1939, Chatterjee set up his own experiment with indigenous components to detect emitted neutrons. The following year he became the first researcher to detect the spontaneous fission of uranium. His estimate of the half-life of