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bative mathematical methods in statistical mechanics, by means of which he was able to solve several long-open important problems concerning critical phenomena, phase transitions and quantum field theory."

Mark Tincknell has become an assistant professor of physics at Purdue University. Tincknell, who most recently worked at Oak Ridge National Laboratory, will join the high-energy nuclear physics group at Purdue.

Louise Dolan, formerly an associate professor at Rockefeller University in New York, has become a physics professor at the University of North Carolina, Chapel Hill.

Gary Feldman, formerly a professor at the Stanford Linear Accelerator Center, became a physics professor at Harvard University last fall.

This summer **Albert Libchaber** will leave his professorship at the University of Chicago to begin a joint appointment as a physics professor at Princeton University and a fellow at the NEC Research Institute in Princeton, New Jersey.

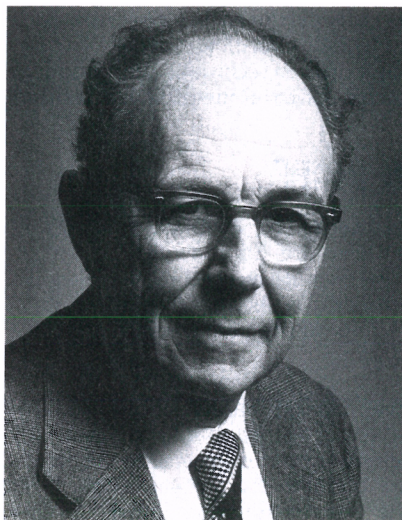
OBITUARIES

Harold E. Edgerton

Harold E. Edgerton died unexpectedly on 4 January 1990 after suffering a heart attack. He was 86 years old and had been a member of the MIT faculty since 1932.

Known to one and all simply as Doc, Edgerton was honored for his multi-fold accomplishments in diverse fields and for an inventive genius that transformed the strobe light from a laboratory curiosity into an impor-

Harold E. Edgerton



tant tool for science, industry and photography. There is today hardly a field of engineering and science that does not use stroboscopic-light instrumentation to collect basic data. In the study of particle physics, for example, much of the present-day knowledge comes from the study of photographs made with flash lamps.

Doc Edgerton gained international fame as a deep-sea explorer and marine archaeologist, and his applications of sonar technology in those fields were well-known. But it was as a photographer of the "unseen" that he was best known to the general public. Millions of people have seen his stop-action photos, which froze the rapidly fluttering wings of a hummingbird or caught the corona of the spatter of a milkdrop.

After receiving his undergraduate degree from the University of Nebraska, Doc began graduate work at MIT, where he received his master's degree in 1927 and his doctorate in 1931. It was while working on his doctoral thesis, "Benefits of Angularly-Controlled Field Switching on the Pulling-into-Step Ability of Salient-Pole Synchronous Motors," that Edgerton first turned to stroboscopic photography.

Needing to determine the exact positions of the armatures of the motors he was studying, he rigged a mercury vapor lamp so that it would flash at the same speed as the rotating armature. He succeeded in taking excellent pictures of less than 10 microseconds' duration, and he and his associates then went on to develop flash lamps that were ever more brilliant, faster and more reliable. They solved complex circuitry problems and developed new components. Doc also made many advances in high-speed motion picture techniques. Throughout his career, his greatest accomplishments came from the discovery of practical solutions to practical problems.

An entrepreneur as well as a scientist and engineer, he was a founding partner of EG&G, a corporation named for its founders, Edgerton, Kenneth J. Gernsmaier and Herbert E. Grier, that specialized in electronic technology. The company had major responsibilities for the instrumentation used in A-bomb tests, and its high-powered strobes were used to pump light into the first ruby laser.

Doc Edgerton had a long collaboration with Jacques-Yves Cousteau in undersea research. One of their first accomplishments was to take pictures at the bottom of the five-mile-deep Romanche Trench in the South At-

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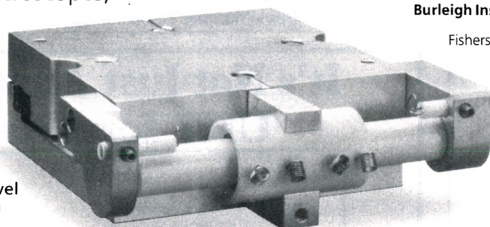
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lantic. The collaboration also led Edgerton to experiment widely with underwater cameras, sonar recorders and depth finders. As a result, archaeologists, geologists, oceanographers and marine biologists all benefited from using his new and improved tools. Doc himself worked in many waters, most frequently the Mediterranean and the Atlantic, where he helped find the remains of the USS Monitor, the ironclad battleship used in the Civil War.

Above all, Doc Edgerton was a teacher, and accessibility to students was his hallmark. His office door was always open, and although he might tell a visitor he had "just five microseconds," he would spend hours with students, sharing with them the excitement of a new experiment. Hundreds of MIT students have become better scientists and engineers—and better people—because of the stimulation of his teaching and his example of a life well and fully lived. At the time of his death, long after his official retirement, he was still meeting with students and still working with them daily in his laboratory. Doc will be deeply missed, but by none more than the generations of students, myself among them, to whom he was a very special friend and mentor.

PAUL E. GRAY

Massachusetts Institute of Technology
Cambridge, Massachusetts

Charlotte Moore Sitterly

Charlotte Moore Sitterly died of heart failure at her home in Washington, DC, on 3 March 1990. Sitterly, whose publications appear under her maiden name, Charlotte E. Moore, was 91 years old.

An astronomer, Moore made significant contributions to the description and interpretation of the solar spectrum over a period of some 60 years. She was more widely known, however, for her critical compilations of atomic spectroscopic data obtained from laboratory observations. Her tables of wavelengths with energy-level identifications sorted by multiplets are still indispensable for astronomers and spectroscopists, and her classic reference *Atomic Energy Levels* is one of the most highly respected and frequently cited sources of basic atomic data ever published.

Moore graduated from Swarthmore College in 1920. She then went to the Princeton University Observatory, where, as an assistant, she began an association with Henry Norris Russell that lasted until his death in 1957.