

for cosmic-ray physics, Shapiro heads a group investigating the composition, energy spectra and other properties of cosmic rays. He was principal investigator for Gemini cosmic-ray experiment S-9, a collaborative project with Goddard Space Flight Center that was flown on Gemini XI.

Last year the Naval Research Laboratory established a chair of cosmic-ray physics to confer special recognition on Shapiro as a distinguished scientist of exceptional accomplishment. He served since 1953 as superintendent of the nucleonics division at the Laboratory. In 1965 he resigned from that position to concentrate on astrophysical research.

Ives Medal Presented To Edwin Land by OSA

For his contributions to optics, Edwin H. Land, president of the Polaroid Corp. receives the 1967 Frederic E. Ives Medal from the Optical Society of America this month. The medal was endowed by Herbert E. Ives, in 1928, in honor of his father, who was known for his early work in color photography and for the invention of the halftone printing process.

Land's principal contributions are in polarized light, photography and color vision. While still an undergraduate at Harvard, he was concerned by the



LAND

fact that polarization was difficult to use in scientific research, although it is a common property of radiation. He conceived the idea of suspending submicroscopic polarizing elements, having the same alignment, in a clear sheet of glass or plastic. The result of this technique was the original polariz-

ing sheet, known as "Polaroid J-sheet." Subsequent research led to the development of a wide variety of crystalline and noncrystalline polarizers.

In photography he is known for the invention of the Polaroid Land camera, that produces pictures instantly. Land's work in optics led him to propose revisions in classical concepts of color vision, when he developed a two-color photographic system that yields a full range of colors. This system suggested a modification of the Young-Helmholtz three-color theory.

George A. Morton Receives David Richardson Medal

For outstanding contributions in the applications of optics, George A. Morton of Radio Corporation of America has been selected as the second recipient of the David Richardson Medal by the Optical Society of America. The medal was established in honor of David Richardson for his contributions to the development of diffraction gratings.

The director of the conversion laboratory at RCA, Morton is widely recognized in the field of applied optics. He has worked extensively in television, electronics, electron optics, infrared imaging, computers, nucleonics and related areas. His developments on photomultipliers for scintillation counting has led to extensive applications in nuclear physics, and his research on photoconductors is the basis for a major portion of current infrared activity.

Arthur H. Compton Award Goes to Norman Hilberry

The Arthur Holly Compton Award for outstanding contributions to education in the fields of nuclear science and engineering has been granted to Norman Hilberry, professor of nuclear engineering at the University of Arizona. The recently established award, which carries a stipend of \$1000, is conferred annually by the American Nuclear Society. It is in recognition of the late Arthur Holly Compton, scientist, teacher and Nobel laureate.

Hilberry was a member of the cosmic ray expedition to South America, that was sponsored by the University of Chicago and the US State Depart-

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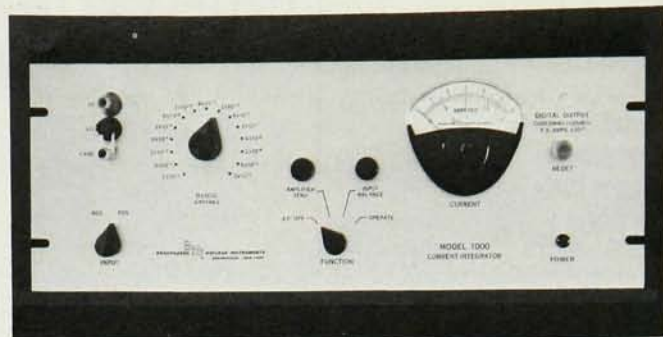
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ment in 1941. In 1955, he organized and directed the International School of Nuclear Science and Engineering at Argonne. Several years later, he was leader of a field mission to review the atomic energy programs of 17 Latin American Republics, for the International Atomic Energy Agency. He was director at Argonne from 1957 to 1961, and a senior scientist there from 1961 to 1964.

Compton Medal Conferred Upon Alan T. Waterman

The American Institute of Physics has chosen Alan T. Waterman as the recipient of its highest award, the Karl Taylor Compton Gold Medal for Distinguished Service in the Advancement of Physics. Established in memory of K. T. Compton, first chairman of the AIP governing board, the award recognizes outstanding statesmanship in science. It has been awarded on three other occasions since its inception in 1957.

Waterman, who retired as first director of the National Science Foundation in 1963, has been instrumental in formation of attitudes and policies concerning basic research in the US. Convinced of the importance of universities as a source of basic research,



WATERMAN

he sponsored the federal grant to universities as a means of supporting fundamental investigations in science. He was successful in promoting a policy that led to the support of research by other federal agencies. He rejected the concept of the NSF as sole agency for the support of such research. Waterman encouraged long-range stimulation of scientific endeavor even in areas that did not seem to be of