named for the man who first detected radio waves from the Milky Way in 1931.

#### Wayne W. Scanlon Receives Navy Achievement Award

The Navy award for Distinguished Achievement in Science was given to Wayne W. Scanlon of the Naval Ordnance Laboratory, Silver Spring, Md. It recognizes his 18 years of research into the properties of the lead chalcogenides semiconductors.

Scanlon was the first to achieve accurate measurements of lead sulfide properties in the high-temperature intrinsic region; determine the true energy gaps in lead sulfide, lead selenide and lead telluride and their alloys; prepare lead sulfide with controllable

properties; produce an effective lead telluride detector; and relate lifetime in lead sulfide to dislocation density.

The award consists of a medal, lapel pin and \$5000. Scanlon is presently chief of the applied-physics department at the laboratory, a fellow of the American Physical Society and a member of the American Association for the Advancement of Science

#### Raphael Levine Receives Quantum Molecular Award

Raphael D. Levine received the award of the International Academy of Quantum Molecular Science for his research in the quantum mechanics of molecular rate processes. It is presented annually to a young scientist doing research in quantum molecular science. Levine is jointly with Ohio State and Hebrew University in Jerusalem.

#### Carl Adams, Former Chairman at Louisville

Carl E. Adams, head of the physics department at the University of Louisville, died on 22 Oct. at the age of 52. He was also chairman of the natural sciences division from 1959 until 1965 when he was appointed physics chairman. Adams wrote a number of papers on his research in physical acoustics and ultrasonics and on the history and teaching of physics.

Born in Boston, he spent his boyhood in Detroit and received a BS degree from the University of Michigan in 1937 and a MS degree in 1938. In 1939 Adams joined the faculty at the University of Louisville, where he served as instructor and assistant professor until 1947, when he resumed graduate study in physics at Brown University. He received a PhD from Brown in 1949 and rejoined the faculty at the University of Louisville. In 1956-57, he was a Carnegie visiting fellow in General Education at Harvard.

Adams contributed many book reviews to the Journal of the Acoustical Society and the American Journal of Physics. He held membership in the American Association of Physics Teachers, the Kentucky Association of Physics Teachers, the Acoustical Society of America, the Southeastern Section of the American Physical Society and the Midwest Section of the History of Science Society.

#### H. C. Hayes Was Pioneer In Underwater Acoustics

Harvey C. Hayes, pioneer in the development of underwater acoustics, died recently at the age of 89. He retired in 1947 as superintendent of the sound division of the Naval Research Laboratory in Washington.

Prior to the second world war, Hayes and his colleagues were developing active sonar and improving passive sonar for surface ships and submarines. They developed the tunable sonar used in the war. Hayes, at the end of the war, was working on a new sonar for surface ships and on exploiting helicopters and blimps as sonar platforms.

Hayes received the Distinguished Civilian Service Award from the Navy in 1945 and the Pioneer's Award of the Acoustical Society of America in 1959.

#### Alexander McLay Dies; Professor at McMaster

Alexander B. McLay, professor of physics at McMaster University, Ontario, died recently. He was the author of several papers on absorption spectra of metal vapors, analysis of spectra, hyperfine structure and nuclear spin. McLay was a member of the Optical Society of America and a fellow of the American Physical Society, the Royal Society of Canada and also of the Canadian Association of Physicists.

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