Project in Michigan. He continued his research career with the Navy, joining the NRL in 1967 as chief scientist. His work for the crystallographic community includes serving as treasurer, vice president and president of the American Crystallographic Association and researching the structure of atoms, molecules, glasses, crystals and solid surfaces.

in brief

Barry Raleigh, who was coordinator of the earthquake prediction program of the United States Geologic Survey in California, has been named to succeed Neil D. Opdyke as director of Columbia University's Lamont-Doherty Geological Observatory.

Warren K. Sinclair has become the first full-time president of the National Council on Radiation Protection and Measurements. Previously, Sinclair had divided his time between his position as Associate Laboratory Director for Biomedical and Environmental Research at Argonne National Laboratory and serving as president of NCRP.

Sir Nevill Francis Mott, a Nobel Prize winner in Physics for his work on noncrystalline conductors, has been awarded an honorary membership by the Society of Photographic Scientists and Engineers.

Edwin E. Salpeter has become director of Cornell University's Center for Radiophysics and Space Research. **Thomas Gold**, director since 1959, will continue his research on the derivation of hydrocarbons in the Earth as John L. Wetherill Professor Astronomy at Cornell. **Peter J. Gierasch**, professor of astronomy at Cornell, has been named associate director of the Center.

David Harker, Research Scientist Emeritus at the Medical Foundation of Buffalo, was accorded the Honorary Degree of Doctor of Science from the State University of New York, the first time in the State University's history that such an honor has been given. Harker, a distinguished researcher in crystallography, was cited for his "long and outstanding career in science."

Richard Athnes, formerly professor in the College of Earth and Mineral Sciences at Pennsylvania State University in University Park, has been appointed director of the Atmospheric Analysis and Prediction Division of the National Center for Atmospheric Research in Boulder.

The National Academy of Engineering has chosen **Jacob P. Den Hartog**, professor of mechanical engineering emeritus at the Massachusetts Institute of Technology, to receive the Academy's Engineering Founders Award. Hartog, known for his contributions to the science of mechanical vibration and shock, was recognized for "outstanding accomplishments in developing the theory and advancing the art of vibrational effects in mechanical design, extensive government and industrial contributions, and inspired teaching of two generations of engineers."

obituaries

Harry F. Olson

OLSON

Harry F. Olson was "Mr. Acoustics" at the RCA Laboratories from 1928, when he received his PhD from the University of Iowa, until his retirement in 1967. From the time of his first paper, published in the first volume of the *Journal of the Acoustical Society of America*, Olson concentrated his research and development efforts on microphones, loudspeakers and sound- and video-reproducing equipment. The advent of sound motion pictures in the early 1930s gave Olson the money and staff to engage in pioneering developments of these instruments. In 1931, his Model 44 high-fidelity ribbon microphone became the movie industry's standard because of its flat response over a wide frequency range and its directivity. In 1932, the RCA double-voice-coil dynamic (direct radiator) loudspeaker led the march toward today's world of hi-fi equipment.

On almost the same day in 1938, Olson and Benjamin Bauer invented the low-cost, unidirectional, single-element cardioid microphone that is so widely used today. In later years the RCA laboratories under his direction developed higher-order gradient microphones, noise-canceling microphones, miniature and unobtrusive microphones and many types of loudspeakers.

Olson wrote ten books and about 135 scientific papers and held over 100 patents. His first book, *Applied Acoustics* (1934), written jointly with F. Massa, contained every fact known about acoustic transducers and their use and measurement. In the late 1930s, Olson presented 30 lectures at Columbia University, which led to the first edition of his *Elements of Acoustical Engineering* (1940) and its subsequent editions up to 1957. These publications not only expanded the material of his earlier books but also devoted much attention to phonograph recording and reproducing systems, audio and video magnetic-tape recorders and sound-on-film recording. These books dealt also with speech and music, communication of information, underwater sound and ultrasonics. Olson seemed most proud of his books on *Dynamical Analogies*, which were translated into many languages and did much to introduce acoustics into the curricula of mechanical engineering departments in universities everywhere. Books Olson published in later years included *Musical Engineering*, *Physics and Engineering* and *Modern Sound Reproduction*.

Certainly Olson's laboratory's contributions to videotape recording should receive special mention. In the early 1950s he organized a team of engineers to develop a TV recorder. In May 1956, the newly completed machine was moved to the NBC studios in New York and was used for the world's first broadcast of a tape-recorded color program through the complete broadcast-studio chain on special magnetic tape provided by the 3-M company.

Olson's accomplishments have not gone unnoticed by his peers. Among the many honors he received were the Gold Medal of the Acoustical Society of America (1981), and its first Silver Medal (1974). He was that Society's president in 1953–1954 and was president of the Audio Engineering Society in 1959. He will long be remembered by his colleages and by members of the audio and acoustical professions for his books and many innovative contributions.

LEO L. BERANEK
Winchester, Massachusetts