

Hagstrum wins AVS 1974 Welch Award

Homer D. Hagstrum will receive the 1974 Medard W. Welch Award of the American Vacuum Society. The presentation will take place on 10 October at the society's annual symposium in Anaheim, California. The award, consisting of a medal and \$1000, recognizes outstanding current research in vacuum science and technology, vacuum metallurgy, thin films and surface science.

He was cited "for pioneering contributions to ultrahigh vacuum studies of solid surfaces, especially the incorporation into a single vacuum chamber of multiple experimental measurements on controlled, individual surfaces and the development of an experimental technique to measure with high precision the energy distribution of electrons ejected from surfaces by the neutralization of slow ions." At the meeting, Hagstrum will deliver an address reviewing the development and status of ion-neutralization spectroscopy, a technique that he developed for the examination of solid surfaces.

After earning his doctorate in 1940 at the University of Minnesota, Hagstrum



HAGSTRUM

joined Bell Laboratories, where he now heads the surface-physics research department. His work has included electron impact on molecules, mass spectroscopy and electron ejection from solids by ions.

Ryle receives ASP radioastronomy medal

Sir Martin Ryle has won the Astronomical Society of the Pacific's Catherine Wolfe Bruce Gold Medal for his role in the advancement of radioastronomy. He is head of the University of Cambridge Mullard radioastronomy observatory.

Ryle has developed innovative astronomical instrumentation and studied radio source counts and galactic structure. His most recent research involves studying the position of radio sources in the sky.

Fischer honored by NASA and Interior Department

William A. Fischer, senior scientist in the Department of the Interior's Earth Resources Observation Systems program, has received the first William T. Pecora Award. The award was established by the Interior Department and

NASA in recognition of "outstanding contributions of individuals or groups toward the understanding of the Earth and its atmosphere by means of remote sensing."



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Fischer was honored for his supervisory work on the experiments of the EROS program, aimed at applying high-altitude data to natural resource and environmental studies.

A geologist and photogrammetrist at the US Geological Survey's national center, Fischer joined the USGS in 1942 as one of the nation's first photogeologists. In 1973 he received NASA's Exceptional Scientific Achievement Medal and in 1972 the Interior Department honored him with its Distinguished Service Award.

AAS Newton Lacy Pierce Prize to Edwin Kellogg

The American Astronomical Society has presented its first Newton Lacy Pierce Prize to Edwin M. Kellogg, an astronomy lecturer at Harvard University. The prize is awarded annually to "an astronomer under 35 years of age for outstanding achievement over the past five years in observational astronomical research based on measurements of radiation coming from any kind of astronomical object."

Kellogg earned his PhD in 1966 from the University of Pennsylvania and his research has concentrated chiefly on extragalactic x-ray objects. As project scientist for the construction of the UHURU x-ray satellite, he assumed primary responsibility for developing the data-analysis system. The satellite has facilitated the discovery of many extragalactic x-ray objects and of the x-ray emission associated with clusters of galaxies.

Flemming Awards presented to Hummer and Snow

David G. Hummer and Joel A. Snow have received Arthur S. Flemming Awards as outstanding achievers among young Federal executives. Hummer is chairman of the Joint Institute for Laboratory Astrophysics in Boulder, Colorado, and was cited for his role in "developing practical methods for predicting and describing the behavior produced by the passage of intense radiant energy through gases."

Snow is the deputy assistant director for science and technology in the National Science Foundation's directorate for research applications. He was cited for "his leadership in the early develop-