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tional methods in nuclear engineering.

Wagner, the Zinn Award winner, recently retired as Chairman of the Board of Directors, Tennessee Valley Authority after serving two terms in that capacity. He is currently a member of the Executive Committee of the Electric Utilities Advisory Committee to the Federal Energy Administration, and of the Board of Directors of the US National Committee, World Energy Conference.

Wang received his award, "In recognition of his vision and initiative and implementation of the first nuclear team from the US to the People's Republic of China in April, 1978." A delegation of scientists and engineers from the American Nuclear Society visited China for three weeks and took part in numerous informal exchanges of technical information with scientists in the People's Republic. Wang has been a member of the Board of Directors of the Society since 1972.

Acoustical society presents biennial award to Bass

The 1978 Biennial Award of the Acoustical Society of America was presented in May to Henry E. Bass of the University of Mississippi for his "theoretical and experimental reearch on the effects of molecular relaxation on sound propagation in multicomponent gases."

The Biennial Award is presented in the spring of even-numbered years to an active member of the Acoustical Society who is under 35 years of age and has contributed significantly to the science of acoustics.

Working with Hans Bauer in 1971 Bass extended Bauer's matrix formalism to vibrational relaxation in multicomponent mixtures. He used this theory to solve the problem of the frequency and humidity dependence of sound absorption

BASS



in the atmosphere and also to obtain transition rates from laser fluorescence and from laser-laser double-resonance experiments. With these rates he was able to predict the amplification of sound upon passing through a gas with a non-equilibrium distribution of excited states.

Bass has made significant contributions in predicting transition rates from classical trajectory calculations. As a visiting staff member at Los Alamos Scientific Laboratory, he and Don Thompson used this method to calculate energy transfer rates in diatomic-diatom molecular collisions.

Bass received his BS in 1965 and a PhD in physics in 1971 from Oklahoma State University. He is currently associate professor of physics at the University of Mississippi.

Banks wins Royal Society's ionospheric physics prize

The Council of the Royal Society awarded the 1978 Appleton Prize for Ionospheric Physics to P.M. Banks, head of the department of physics at Utah State University, for his theoretical and observational studies of the plasma flow between the ionosphere and the magnetosphere.

Within this field, Banks's contributions include analyses of the thermal plasma flow between the F2 layer and the magnetosphere and the influence of collisional heating of hydrogen and helium ions in the topside ionosphere. He has also studied the form of the electric field near the auroral zone, based on incoherent-scatter measurements, and the effects of the electric field in chemical reactions between oxygen, nitrogen and nitric oxide ions in the ionosphere. He is probably best known for his exploitation of the incoherent-scatter radar system at Chatanika in Alaska, the joint US/Canadian facility for the development of which the third Appleton Prize was awarded in 1975 to J.V. Evans.

Banks previously worked at the Office of Naval Research, Washington, D.C., at the Institut d'Aeronomie Spatiale de Beligie and the University of California. He was educated at Stanford University and the University of Maryland, and received his doctorate from Pennsylvania State University in 1965.

The Appleton Prize is awarded triennially at the sessions of the General Assembly of the International Union of Radio Science.

European societies honor Vinen and Walther

The British Institute of Physics recently announced the winners of two awards it administers in conjunction with other European physical societies. William

Vinen is the recipient of the 1978 Holweck Medal and Prize of the IOP and the French Physical Society, and Herbert Walther is to receive the 1978 Max Born Medal and Prize of the IOP and the German Physical Society.

Vinen, Poynting Professor of Physics at the University of Birmingham and a Fellow of the Royal Society, has worked extensively on superfluidity. During the early years of his career, at Cambridge, he studied the propagation of second sound in rotating superfluid helium and in 1961 discovered the quantum of circulation of helium at 1.3 K. Since 1962 he has been at Birmingham, where he and his colleagues have been studying light scattering from liquid helium and ultrasonic attenuation in the superconducting mixed state.

Walther, professor of experimental physics at the University of Munich, is described in the Max Born Medal citation as "an internationally recognized leader in the field of high-resolution spectroscopy with variable frequency lasers." After earning his first degree and doctorate at Heidelberg he held positions at the Universities of Hanover, Bonn and, from 1971, Cologne. Here he and his colleagues developed several methods for stabilizing continuously operating dye lasers with unprecedentedly narrow bandwidths, and they used these lasers to attack a range of problems previously examined by high-frequency spectroscopy. Walther left Cologne for his present position in Munich in 1975.

Stephen Harris receives Sarnoff Award from IEEE

Stephen E. Harris, professor of electrical engineering at Stanford University, received the David Sarnoff Award of the Institute of Electrical and Electronics Engineers in June. Earlier this year, the IEEE bestowed the Nikola Tesla Award to Charles H. Holley.

The Sarnoff award, sponsored by the RCA Corporation, recognizes an outstanding contribution in the field of electronics. It consists of a gold medal, a bronze replica, a certificate and \$1000.

The award citation reads, "for scientific discoveries and device inventions in the field of lasers, quantum electronics, and nonlinear optics."

Harris received a BS in electrical engineering from Rensselaer Polytechnic Institute in 1959. After a year at Bell Telephone Laboratories, he attended Stanford University where he received an MS in 1961 and a PhD in 1963, both in electrical engineering.

Since 1963 he has been on the faculty of Stanford University. His research work has been in the fields of lasers, quantum electronics, nonlinear optics and acousto-optics. His present interests are in the areas of selective laser-induced inelastic