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 reoearch 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 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 nonequilibrium distribution of excited states.

BASS

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–diatomic 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 Beligique and the University of California. He was educated at Stanford University and the Unversity 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

HARRIS

collisions and in the development of new techniques for generating vacuum ultraviolet and soft x-ray radiation.

The Tesla Award, which consists of a plaque and $1000, was given to Holley, "for contributions to the evolution of turbine generator designs with achievement in performance and reliability." Holley is currently general manager of the electric utility systems engineering department for the General Electric Company.

Typhoon Lee, an astrophysicist at The University of Chicago, has received the 1978 Robert J. Trumpler Award of the Astronomical Society of the Pacific for his work on the isotopic composition of meteorites.

V. S. Letokhov of the Institute of Spectroscopy, Moscow and **V. P. Chebotayev** of Novosibirsk have been awarded Lenin Prizes of the Soviet Union for their fundamental contributions to nonlinear laser spectroscopy.

The director of the National Resource for Computation in Chemistry at Lawrence Berkeley Laboratory (see PHYSICS TODAY, January 1978, page 103) is **William A. Lester Jr,** who was formerly manager of the molecular interactions group at IBM San Jose.

Roman Smoluchowski has left Princeton University to join the faculty of the University of Texas at Austin as a professor of astronomy and physics.

Robert Lindsay, professor of physics at Trinity College, Hartford, Connecticut, has been named Brownell-Jarvis professor of natural philosophy and physics there.

Thomas A. Dillon became the new deputy director of the National Bureau of Standards on 18 June. Dillon was acting director of the Advanced Systems and Ma-

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terials Production Divison of the Department of Energy. Dillon succeeded **Robert S. Walleigh,** who had been acting deputy director since July 1975. Walleigh has been appointed senior adviser on international affairs at NBS.

Ming-Chang Lin and George Sigel Jr are the 1978 recipients of the Pure Science and Applied Science awards from the Naval Research Laboratory's Chapter of Sigma Xi, the Scientific Research Society of North America.

The Director General of the International Atomic Energy Agency has named the following scientists as new directors:

Vitaliy Frolov (USSR) as director of the division of research and laboratories. Frolov is the vice-president for science at the Engineering and Physical Institute in Moscow.

Hans-Juergen Laue (Federal Republic of Germany) as director of the division of nuclear power and reactors. Since 1970 he has been head of the division on planning, implementation and coordination of cooperation projects within bilateral contracts at the Gesellschaft für Kernforschung in Karlsruhe.

Harold E. Pryor (USA) as director for the division of scientific and technical information. Pryor is deputy assistant administrator for industry affairs and technology utilization.

Krishna Sundaram (India) as director of the division of life sciences. Since 1972, Sundaram has worked as director of the biomedical group at the Bhabha Atomic Research Center.

obituaries

Theodorus Niemeijer

The statistical physics community lost one of its talented members when Theodorus Niemeijer, associate professor at the Technological University of Delft, died on 27 August 1977 at the age of 40. Niemeijer studied theoretical physics in Leiden and obtained his PhD under the direction of T. W. Ruygrok at the University of Utrecht on a thesis dealing with the dynamics of the XY model. This work, in which he studied the time-dependent correlation function of the spins in a linear chain, attracted considerable attention at the time, since it contained one of the first exact expressions for a non-trivial time-dependent correlation function. Indeed, this thesis has acquired renewed relevance because the XY model turns out to be not only a model of mathematical interest but a prototype of a class of systems that can be realized in nature. After his doctorate Niemeijer worked for a year at the University of Toronto and subsequently for a year at the FOM Institute for Atomic and Molecular Physics in Amsterdam. In 1970 he came to the Technological University of Delft, where he was the theoretician of the low temperature section. As a result of his efforts there, together with several students, he published a series of articles on dipolar salts. This research brought him in contact with P.H.E. Meijer of the Catholic University of America in Washington, DC, which led to a fruitful collaboration and frequent mutual visits. In addition he was a visiting professor at Temple University and the University of Alberta.

Although Niemeijer came to Delft to support the experimental low temperature group, his heart went out to pure theory. His study in the summer of 1972 of the renormalization theory of Wilson was meant as a small excursion back to his old love, spin systems. His contributions to the real space renormalization theory of critical phenomena, however, was so successful that this research became his main interest. It is therefore even more tragic that he died at the time when recognition for his work was becoming world-wide.

Although possessing a strong and critical personality, Dorus collaborated with many on an amicable basis. If he were interested in a problem he worked day and night on it. This interest extended far beyond physics and was manifest in a deep sense of culture, especially classical music. His love of the flute gave him particular pleasure and relaxation. When the news of his death reached the IUPAP Statistical Physics conference in Haifa, it came as a severe blow to many. We will remember Dorus both as a good physicist and a good friend.

J.M.J. VAN LEEUWEN
Delft Technological University

J. D. GUNTON
Temple University

Bronislaw Kuchowicz

Bronislaw Kuchowicz, noted physicist and astrophysicist at the N. Copernicus Astronomical Center of the Polish Academy of Sciences, died 3 June 1978 in Warsaw, Poland at the age of 46. Kuchowicz carried out his undergraduate and graduate studies in physics at universities in both Poznan and Warsaw, receiving his MA in 1955 from Warsaw and his PhD in 1967 from Poznan. Over his career he worked at Dubna, in the Department of Radiochemistry at Warsaw, and at the Lebedev Institute prior to assuming his present position at the Copernicus Center. Over the past few years he has been a visiting fellow at the Institute of Astronomy in Cambridge (UK) and a visitor at Aspen, Chicago, Princeton, Brookhaven, Irvine and Urbana.

Kuchowicz worked in a broad range of fields, from general relativity, cosmology, and neutrino physics to cosmo- and radiochemistry. To each he brought his imaginative ideas. He is probably best known in the US for his comprehensive bibliographic references, *The Bibliography of the Neutrino, (1967), Nuclear Astrophysics, a Bibliographic Survey, (1967),* and *Nuclear and Relativistic; Astrophysics and Nuclidic Cosmochemistry,* (1971, 4 vols.). He was the author of more than 110 scientific papers. Bronislaw Kuchowicz will be remembered by all with whom he came in contact for his extreme generosity and kindness.

DAVID N. SCHRAMM
University of Chicago
BOHDAN PACZINSKI
N. Copernicus Center
Warsaw, Poland

William Wei-Nien Yu

William Wei-Nien Yu, senior scientist and application engineering manager of The Hamamatsu Corporation, died in New York on 21 June.

Yu, a native of China, received his BS degree in physics with honors from the City College of New York. He received his PhD in physics from Columbia University in 1971, having worked under Haskell Reich on helium-3. He spent several years as a physics instructor first at Columbia and then at CCNY.

In 1972 he joined me as a research associate establishing the picosecond laser and spectroscopy laboratory at CCNY. He became fascinated with the possibility of using the picosecond laser to unravel some of the more subtle mysteries of nature—in particular, some of the primary processes in photosynthesis. His work at the picosecond laboratory at City College opened a new era in photosynthesis research. In this connection Yu published numerous scientific papers and presented many lectures. He was a brilliant scientist. In 1977, he joined the Hamamatsu Corporation, directing their research and sales efforts in picosecond laser techniques and devices such as the temporal dispenser.

Those who worked with him will always remember his warm and helpful personality. He was a loyal and true friend. He was a born teacher who tried to explain the most complex physical concepts in the simplest terms. He would spend many untiring hours with students sharing his vast knowledge.

To work with him was a great pleasure; we shall miss Bill very much.

ROBERT R. ALFANO
The City College of New York □