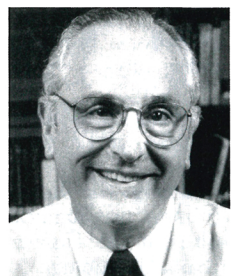


WE HEAR THAT

AAS Names Recipients of 1999 Prizes

The American Astronomical Society has identified the individuals who will receive the society's awards for 1999.

John N. Bahcall, the Richard Black Professor of Natural Sciences at the Institute for Advanced Studies in Princeton, New Jersey, is being awarded the society's highest honor, the Henry Norris Russell Lectureship. The citation notes that Bahcall has



BAHCALL

"worked tirelessly to advance the detection of solar neutrinos" and praises his other notable contributions including "developing the standard methods used to identify absorption

line systems in QSO [quasi-stellar object] spectra, and putting together a comprehensive model of our Galaxy."

The Dannie Heineman Prize for Astrophysics, given jointly by AAS and the American Institute of Physics, is going to **Kenneth C. Freeman**. According to the citation, he has made "seminal contributions to our understanding of the formation, structure, dynamics and evolution of galaxies and their subsystems, both luminous and dark." Freeman is a professor in the research school of astronomy and astrophysics at Australian National University in Canberra.

Lars Bildsten will receive the Helen B. Warner Prize. Bildsten is being cited for "his fundamental work on stellar structure, including nuclear burning on neutron stars, the role of neutron stars as gravity wave sources, suggesting enhancements in planned gravity wave experiments, and the theory of lithium depletion." Bildsten was director of the Theoretical Astrophysics Center and an associate professor of physics and astronomy at the University of California, Berkeley. Beginning this month, he will become a permanent member of the Institute for Theoretical Physics at the University of California, Santa Barbara, as well as a professor of physics there.

The Newton Lacy Pierce Prize is going to **Dennis F. Zaritsky**, currently

an associate professor of astronomy at Lick Observatory and the University of California, Santa Cruz. He is being recognized for his "fundamental and wide-ranging observational work on galaxy structure, dynamics, and evolution, and his leadership in building equipment and performing major directed surveys that address these topics." Zaritsky will become an associate professor of astronomy at the University of Arizona, beginning in September.

The George Van Biesbroeck Prize, given for extraordinary service to the astronomy community, is going to the late **Barry M. Lasker**, an astronomer at the Space Telescope Science Institute in Baltimore, who died suddenly in February (see PHYSICS TODAY, June, page 78). Lasker and his team produced the Digitized Sky Survey and the *Guide Star Catalog* upon which all Hubble Space Telescope observations are dependent. The citation states that he and his team "improved the photometric and astrometric calibrations of the DSS and improved the technology of scanning instruments for multi-aperture research. Thus his work was not limited to the HST requirements alone, but it was a service to all of astronomy." The citation also takes note of Lasker's "selfless devotion to service to the community."

AAPT Awards Presented at Winter Meeting

The following individuals were honored at the 1999 winter meeting of the American Association of Physics Teachers, held in Anaheim, California, in January.

David L. Goodstein received the Oersted Medal, AAPT's most prestigious award. In accepting the award, he

gave a lecture entitled "Now Boarding: The Flight from Physics," in which he discussed the decline in enrollment of undergraduates who major in physics. Goodstein is vice provost, the

Frank J. Gilloon Distinguished Teaching and Service Professor, and a professor of physics and applied physics at Caltech.



GOODSTEIN

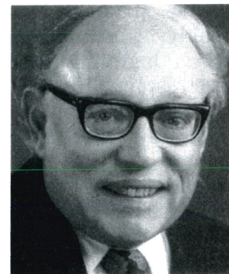
The Richtmyer Memorial Lecture Award went to **Wayne H. Knox**, head of the advanced photonics research department at Lucent Technologies, Bell Laboratories in Holmdel, New Jersey. Knox's lecture was entitled "Ultrafast Science and Technology: What an Exciting Time!"

Distinguished Service Citations were given to the following individuals: **Lisa Grable** (North Carolina State University), **Robert Hilborn** (Amherst College), **Marsha Hobbs** (Jackson Preparatory School, Jackson, Mississippi), **H. Tom Hudson** (University of the Incarnate Word), and **Gerard Lietz** (DePaul University).

OSA Recognizes Contributions to Optics

The Optical Society of America has announced the recipients of many of its 1999 awards. Most of these awards will be presented at the society's annual meeting in Santa Clara, California, in September.

The Frederic Ives Medal/Jarus W. Quinn Endowment, OSA's most prestigious honor, is going to **Stephen E. Harris**, a professor of electrical engineering and applied physics at Stanford University. According to the medal citation, Harris is being honored for "pioneering work in nonlinear optics, XUV lasers and laser spectroscopy, from electromagnetically induced transparency and lasing without inversion to nonlinear optics at maximal coherence."



HARRIS

This year's Allen Prize recipient is **Blake G. Crowther** for his "contributions to the development of innovative instrumentation for the retrieval of atmospheric aerosol characteristics by hyperspectral analysis of downwelling irradiance." Crowther is an optical engineer at Space Dynamics Laboratory in Logan, Utah.

Alain Aspect, the leader of the atom optics group at the Institut d'Optique Théorique et Appliquée in Orsay, France, is the winner of the Max Born Award for his "fundamental contributions to quantum optics, including ex-

periments on the violation of Bell inequalities in atomic radiative cascade, and the manipulation of atoms by laser light."

The Joseph Fraunhofer Award/Robert M. Burley Prize goes to **David F. Welch**, chief technical officer and vice president of corporate development at SDL in San Jose, California. OSA has chosen Welch for his "significant contributions to the invention and development of advanced laser diode products [including] over 50 high power semiconductor laser products, developed either directly from his research or under his supervision."

Dennis G. Deppe, a professor of electrical engineering at the University of Texas at Austin, is getting the Nick Holonyak Jr Award for the "development of the oxide-confined vertical-cavity surface-emitting laser."

The Ellis R. Lippincott Award is being given to **Mitsuo Tasumi** for his "outstanding contributions to vibrational spectroscopy in studying the structures and dynamics of synthetic polymers, proteins, photosynthetic systems, and a number of related small molecules." Tasumi is a professor emeritus at the University of Tokyo and a professor and dean of the faculty of science at Saitama University in Tokyo.

David Nesbitt is to receive the William F. Meggers Award for his "experimental and theoretical contributions to the understanding of the molecular structure and dynamics of weakly bound molecules through the use of high-resolution infrared laser spectroscopy." Nesbitt is a JILA fellow as well as a professor adjunct in the chemistry and biochemistry department at the University of Colorado at Boulder.

The John Tyndall Award, cosponsored with the IEEE/Laser and Electro-Optics Society, is going to **John B. MacChesney**, a researcher in the photonics materials research department at Lucent Technologies, Bell Laboratories. MacChesney is being honored for the "invention and development of the MCVF (modified chemical vapor deposition) process, which is one of the major techniques for the manufacture of low loss optical fibers and for high purity overlapping tubes using sol-gel techniques."

Bahaa E. A. Saleh, a professor in and chairman of the electrical and computer engineering department at Boston University, is this year's recipient of the Esther Hoffman Beller Award. Saleh is being cited for his "outstanding contribution to optical science and engineering education through innovative curricular development, imaginative teaching, textbook writing,

editorial activities, and administrative leadership."

The Edwin H. Land Medal is going to **Robert H. Webb** for his "numerous inventions, which have accelerated the development of new diagnostic tools to help prevent the loss of sight." Webb is a senior scientist at the Schepens Eye Research Institute and the Wellman Laboratories of Photomedicine in Boston, and an associate professor of dermatology and ophthalmology at Harvard Medical School.

The winner of the Adolph Lomb Medal is **Jun Ye**, an R. A. Millikan Prize postdoctorate fellow at Caltech. Ye is being recognized for his "pioneering achievements and technical leadership in the areas of ultrahigh sensitivity laser spectroscopy, frequency metrology and quantum optics."

The C. E. K. Mees Medal is going to **Toshimitsu Asakura** for his "outstanding seminal contributions to the broad field of optics, interdisciplinary distinguished contributions to numerous applications of lasers, and leadership and various significant contributions to international cooperation in the optics community." Asakura is a professor emeritus at Hokkaido University in Sapporo, Japan, and a professor in the faculty of engineering and dean in the graduate school of engineering at Hokkai-Gakuen University, also in Sapporo.

Milan R. Kokta, the manager of R&D at Bicon Crystal Products in Washougal, Washington, is to receive the David Richardson Medal for "the development of low loss, high optical quality laser crystals, particularly Ti-doped sapphire."

The R. W. Wood Prize is to be shared by **Carl Wieman** and **Eric Cornell** for their "creative inventiveness and persistent ingenuity applied to the development of laser techniques for cooling atoms, which led to the first demonstration of Bose-Einstein condensation in an atomic vapor." Wieman is a Distinguished Professor of Physics at the University of Colorado at Boulder and a JILA fellow. Cornell is a physicist at the National Institute of Standards and Technology facility in Boulder, Colorado, a JILA fellow, and a professor adjunct in the physics department at the University of Colorado at Boulder.

Helmut Lotsch, a retired physics editor at Springer-Verlag in Heidelberg, Germany, is to receive the OSA Leadership/New Focus Prize. Lotsch was chosen by OSA in recognition of his "outstanding accomplishments as editor of optics related journals and books of the highest scientific standard, and his ability in attracting internationally acclaimed scientists to contribute to well integrated and rapid pub-

lications that disseminate new aspects of optical science and technology to the optical community worldwide."

National Academy of Sciences Adds to Ranks

At the 136th annual meeting of the National Academy of Sciences in April, 60 new members were elected, bringing the total number of active members to 1825. Also elected were 15 foreign associates from ten countries, raising the number of foreign associates to 313. Among the newly elected members are

Robert H. Austin, a professor of physics at Princeton University

William A. Bardeen, a scientist at Fermilab

William F. DeGrado, a professor of biochemistry and biophysics at the University of Pennsylvania

Paul A. Fleury, dean of the University of New Mexico's school of engineering

Thomas J. Hanratty, the James W. Westwater Professor of Chemical Engineering emeritus at the University of Illinois, Urbana-Champaign

Wick C. Haxton, director of the National Institute for Nuclear Theory and a professor of physics at the University of Washington

Arthur Karlin, the Higgins Professor of Biochemistry and Molecular Biophysics at Columbia University

Margaret G. Kivelson, a professor of space physics at UCLA

Cherry Ann Murray, director of the Physical Research Laboratory at Bell Laboratories, Lucent Technologies in Murray Hill, New Jersey

Robert O. Pohl, a professor of physics at Cornell University

David E. Pritchard, a professor of physics at MIT

Ronald F. Probst, the Ford Professor of Engineering at MIT

Richard J. Saykally, a professor of chemistry at the University of California, Berkeley

Kerry E. Sieh, a professor of geological sciences at Caltech

Norman H. Sleep, a professor of geophysics at Stanford University

William J. Welch, a professor of electrical engineering and holder of the Watson and Marilyn Alberts Chair in the Search for Extraterrestrial Intelligence in the department of astronomy at the University of California, Berkeley.

The newly elected foreign associates include

Albrecht W. Hofmann, director of the geochemistry division of the Max Planck Institute for Chemistry in Mainz, Germany