

AAS NAMES RECIPIENTS OF 1993 PRIZES

Each year the American Astronomical Society presents prizes in recognition of individuals who have made noteworthy contributions to astronomy. This year **P. James E. Peebles**, Albert Einstein Professor of Science at Princeton University, was awarded the Henry Norris Russell Lectureship. AAS cited him for being "a pioneer in understanding the origin of the light elements, the characteristics of the cosmic background radiation and the growth of cosmic structure due to gravity." He was also cited for "the discovery of dark matter in galaxy halos and stressing the importance of the statistical analysis of the spatial distribution of galaxies, along with the use of the correlation function as a measure of galaxy clustering."

John C. Mather, head of the infrared astrophysics branch at the NASA Goddard Space Flight Center, is the winner of the 1993 Daniel Heineman Prize in Astrophysics, awarded jointly by AAS and the American Institute of Physics. Under his leadership, AAS said, "the Cosmic Background Explorer team has made a precise measurement of the spectrum of the cosmic microwave background and the detection of minute temperature fluctuations in this radiation. The COBE mission has provided superb observational data, which have profound cosmological significance."

AAS selected **Arlin P. S. Crotts**, an assistant professor of astronomy at Columbia University, to receive the Newton Lacy Pierce Prize. "Discoverer of the interstellar light echoes around supernova 1987A, Crotts was also first to establish the nature of the even more interesting echoes within 2" of the supernova," the citation said.

The Helen P. Warner Prize goes to **John F. Hawley**, an assistant professor of astronomy at the University of Virginia. He was cited by AAS for contributions to computational astrophysics. "Hawley invented a powerful new approach to magnetohydro-

dynamic calculations," the citation said, and with this tool, Hawley and Steven Balbus "discovered the almost universal nature of a powerful MHD instability."

The AAS Annenberg Foundation Award, which recognizes leadership in astronomy education, is being given to **Dorrit Hoffleit**, a researcher on star catalogues and the history of astronomy, particularly that of Yale University. As director of the Maria Mitchell Observatory on Nantucket, Massachusetts, from 1957 to 1978, Hoffleit oversaw a summer youth program whose alumnae include 21 women astronomers—"roughly 3% of all women astronomers in AAS," the citation noted.

AGU BESTOWS MEDALS AT BALTIMORE MEETING

At a ceremony during the spring meeting of the American Geophysical Union, six individuals were presented with awards in honor of their achievements in geophysics. The two winners of the James B. Macelwane Medal were **Michael Gurnis** and **David J. McComas**. Gurnis, an associate professor of geophysics at the University of Michigan, was cited for "addressing some important problems dealing with the relation between the large-scale dynamics of the Earth's interior and geochemical and geological observations." McComas, leader of the space and atmospheric sciences group at Los Alamos National Laboratory, was chosen for "redefining his field of study, which encompasses the composition of solar system plasmas, their source regions, and their interactions with the various planetary obstacles that exist in the heliosphere." His work involves "unique applications of existing spacecraft data and . . . the innovative design of startlingly new plasma instrumentation." The John Adam Fleming Medal was given to **Alexander J. Dessler** of Rice University. "Dessler has achieved distinction in four separate but related roles," the citation said: "researcher, editor,

educator and administrator." His research has included pioneering work on the magnetospheres of Earth and other planets. He is currently director of the space science lab at the NASA Marshall Space Flight Center and chairman of the space physics and astronomy department at Rice.

Kurt Lambeck received the Charles A. Whitten Medal. Many of "our perceptions about the behavior of the Earth in its rotation, tidal dissipation, postglacial rebound, lithospheric evolution and other aspects have been strongly influenced by Kurt Lambeck," the citation said. Lambeck is director of the Australian National University's research school of Earth sciences in Canberra.

The Roger Revelle Medal went to **Syukuro Manabe**, who was cited for being "the initial developer of numerical modeling approaches to climate dynamics." Without Manabe's pioneering work on global warming, the citation said, "the current level of awareness simply would not have been possible." Manabe is a senior researcher at the National Oceanic and Atmospheric Administration's geophysical fluid dynamics laboratory at Princeton University.

The Walter Sullivan Award for Excellence in Scientific Journalism went to **John McPhee**, a staff writer for *The New Yorker* magazine. McPhee was chosen for his series "Annals of the Former World: Assembling California," which appeared in *The New Yorker* in September 1992. The series discusses plate tectonics and the evolution of the US's West Coast.

PHYSICISTS HONORED AT APS DIVISION MEETINGS

Several divisional meetings of the American Physical Society in May and June were highlighted by the presentation of APS prizes and awards.

At the May meeting of the APS division of atomic, molecular and optical physics in Reno, Nevada, the Herbert P. Broida Prize and the I. I.

Accessories for rf testing

PCB emissions scanner • Locates low-to-high emissions, displays color image, stores data for design corrections at development stage.

Dual-directional couplers • Seven models up to 15 kW, matched to AR amplifiers and antennas.

Ultra-broadband E-field monitor • Four-channel capability, 1 to 300 V/m, isotropic probes cover 10 kHz to 1000 MHz or 80 MHz to 40 GHz.

Broadband fiberoptic data links • Modular plug-in analog systems for acquiring and measuring interference data, stimulating EUT, displaying results in color or monochrome, 10 kHz to 1 GHz.

Fiberoptic CCTV systems • Watch performance of EUT under hostile EMI and/or EMP shielded-room conditions, in color or monochrome.

TEM cells • Half again the bandwidth of comparable-size chambers: To 750 MHz for 15-cm EUT, 375 MHz for 30-cm EUT.

Computer bus interfaces • Two models, for isolated GPIB connection or isolated TTL connection, permit remote operation of amplifiers.

RF connection kit • Things you'd search for around the lab: Cables, coax adapters, connectors, fuses, lamps, fabricated cables.

Power combiner/dividers • Combine signals from four amplifiers, or divide one signal into four outputs.

High-power rf matching transformers • Match 50-ohm input to 12.5- or 200-ohm output. Up to 2 kW cw.

Call toll-free (1-800-933-8181), and one of our applications engineers will answer the phone.



**AMPLIFIER
RESEARCH**

160 School House Road,
Souderton, PA 18964-9990 USA • Fax 215-723-5688
In Europe, call EMV: Munich, 89-612-8054;
London, 908-566-556; Paris, 1-64-61-63-29. 6312

Rabi Prize were awarded. **Curt Wittig**, a professor of chemistry and director of the center for the study of fast transient processes at the University of Southern California, received the Broida Prize for "pioneering work in developing the field of photoinitiated reactions in weakly bonded species to study aligned-oriented reactions in the molecular frame, and his seminal contributions to the field of state-to-state unimolecular reactions." The Rabi Prize winner, **Timothy E. Chupp**, was cited for "his contributions to the development of high-density polarized noble gases by spin exchange with optically pumped alkali atoms, and in particular for his leadership and use of polarized ^3He as a target for fundamental experiments in nuclear physics." Chupp is an associate professor of physics at the University of Michigan.

Also in May, the meeting of the APS division of the physics of beams in Washington, DC, was the setting for presentation of the Robert R. Wilson Prize and the Award for Outstanding Doctoral Research in Beam Physics. The Wilson Prize went to **John P. Blewett**, a retired physicist who lives in College Park, Maryland, for "his many contributions, beginning in the 1930s, to accelerator physics and technology, [including] the experimental verification and first indirect observations of synchrotron radiation, the first application of the alternating gradient focusing concept to linear accelerators and many developments in the design and construction of accelerators and storage rings." The Doctoral Research Award was given to **John A. Palkovic**, a staff member at the Universities Research Association in Dallas, Texas, for "research on the physics of low-energy ion beams; particularly for the development of a new type of Gabor lens, for showing that a Gabor lens is not practical for focusing negative ion beams, for the development of diagnostic techniques to measure the emittance of low-energy beams, and for demonstrating that most of the emittance growth in such beams occurs in a halo containing only a small fraction of the beam."

The first Anesur Rahman Prize was presented during the Physics Computing '93 Conference, in Albuquerque, New Mexico, which took place from 31 May to 4 June; the APS division of computational physics was a cosponsor of the conference. **Kenneth G. Wilson**, the Hazel G. Youngberg Trustees Distinguished Professor of Physics at Ohio State University, received the prize for "his

pioneering efforts on behalf of the field of computational physics, and for the invention of lattice gauge theory, which established the framework for lattice field theory."

The 1993 Shock Compression Science Award was bestowed at the meeting of the APS Topical Group on Shock Compression of Condensed Matter, held in Colorado Springs, Colorado, at the end of June. The award recipient, **Robert A. Graham**, was cited for "contributions to the understanding of the properties of shock-compressed piezoelectrics, ferromagnets, dielectrics, polymers and semiconductors." Graham is a distinguished member of the technical staff at Sandia National Labs.

DOE NAMES RECIPIENTS OF E. O. LAWRENCE AWARDS

The seven categories of the E. O. Lawrence Awards, given by the US Department of Energy, honor outstanding contributions in atomic energy. Four of the 1993 awards went for physics-related work. **James G. Anderson**, the Philip S. Weld Professor of Atmospheric Chemistry at Harvard University, won in the environmental science and technology category for "the first direct measurements of the molecular fragments that determine the concentration of ozone in the upper atmosphere." **Alan R. Bishop**, leader of the condensed matter and statistical physics group at Los Alamos National Laboratory was cited in the materials science category for "his imaginative contributions to the development and application of 'nonlinear' or chaos concepts and techniques to a broad range of problems in materials science." **John W. Shaner**, acting program manager for weapons test diagnostics at Los Alamos, received the award in the national security category for "experiments on properties of condensed matter, for the development of scaling techniques important to arms control treaty verification and for contributions to establishing scientific exchanges with former Soviet weapons laboratories." **Carl E. Wieman**, professor of physics at the University of Colorado, Boulder, and chairman of the Joint Institute for Laboratory Astrophysics, was cited in the physics category for "innovation in the technology of atomic physics research used to measure the 'electroweak' force."