

DOE Honors Lawrence Award Winners

Seven scientists, including six who do physics-related work, garnered the US Department of Energy's E. O. Lawrence Award in categories ranging from materials to nuclear technology, at a ceremony last month in Washington, DC. The prize is given for contributions in the field of atomic energy. Each of the winners received a gold medal and \$25 000.

In the materials research category, **Jeffrey Brinker** was recognized for his "innovations in sol-gel chemistry to create nanostructured materials that have applications to energy, manufacturing, defense, and medicine." He is a senior scientist at Sandia National Laboratories and a professor in the departments of chemistry and chemical and nuclear engineering at the University of New Mexico in Albuquerque. He also codirects the university's center for microengineered materials.

The award in the national security category went to **Bruce Goodwin**, associate director for defense and nuclear technologies at Lawrence Livermore National Laboratory (LLNL). DOE acknowledged that he has provided "the crucial insight to design and implement fundamental experiments on the properties of plutonium that enabled the resolution of anomalous results from underground nuclear tests." The citation added that the "fundamental resolution of important discrepancies reduces the reliance on empirical factors and is essential for confidence in our ability to address the issues of aging nuclear weapons and their refurbishment without further nuclear testing."

Keith Hodgson was honored in the chemistry category for his "development and application of synchrotron radiation to investigate biological structure and function." The citation added that his "innovative methods of rapidly obtaining the complete x-ray structures of macromolecular crystals and of determining the structures of the metal centers in macromolecules at atomic-level resolution in solution have contributed substantially to the burgeoning structural biology revolution." He is the Howard H. and Jessie T. Watkins University Professor of

Chemistry and the Stanford Synchrotron Radiation Laboratory at Stanford University and is the director of the SSRL at SLAC.

Saul Perlmutter, senior scientist in Lawrence Berkeley National Laboratory's physics division, received the award in the physics category. DOE cited his "leading contributions to an unexpected discovery of extraordinary importance: the determination, through careful study of distant supernovae, that the expansion of the universe is speeding up rather than slowing down" (see PHYSICS TODAY, June 1998, page 17).

In the environmental science and technology category, the award went to **Benjamin Santer**, a physicist at the program for climate model diagnosis and intercomparison at LLNL. He was recognized for his "seminal and continuing contributions to our understanding of the effects of human activities and natural phenomena on the Earth's climate system."

Paul Turinsky, who heads North Carolina State University's department of nuclear engineering and is the technical director of the university's electric power research center, received the award in the nuclear technology category. He was cited for his "numerous original contributions to nuclear engineering research, in particular for his breakthrough development of stochastic algorithms, methodologies, and codes for in-core fuel cycle management in light-water reactors that have significantly improved both the safety and economics of nuclear power." DOE also recognized his leadership at the center "where, in a challenging industry, he has achieved national and international collaboration between nuclear power plant reactor designers and operators."

AAS Recognizes Achievements

Each year, the American Astronomical Society presents several awards and prizes to individuals to acknowledge their contributions to astronomy. The recipients for 2002 are as follows.

The Henry Norris Russell Lectureship, AAS's highest honor, went to **George Wallerstein**, professor emeritus of astronomy at the University of Washington, for his "contributions to

our understanding of the abundances of the elements in stars and clusters." The citation also noted that Wallerstein has served as a "notable teacher" whose students have had many significant accomplishments.

Eric Priest, James Gregory Professor of Mathematics and Wardlaw Professor at St. Andrew's University, Scotland, received the George Ellery Hale Prize in honor of his "seminal contributions to investigations of the role of the magnetic field in solar activity, and for his tireless advocacy of solar physics in all corners of the world."

The George Van Biesbroeck Prize went to **Victor Blanco** for his "outstanding service in building the Cerro Tololo Inter-American Observatory and in leading its scientific, technical, and support staff." According to AAS, CTIO, under Blanco's leadership, became the model for a national observatory. The citation added that his "diplomacy and personal warmth created a climate of cooperation that has made CTIO the prime example of a successful and productive international scientific organization." Blanco, now retired, was director and staff astronomer at CTIO.

The Heineman Prize for Astrophysics, given jointly by AAS and the American Institute of Physics, was presented to **J. Richard Bond**, director of the Canadian Institute for Theoretical Astrophysics, to acknowledge his "pioneering research on the generation of microwave background fluctuations in the cold dark matter paradigm, the growth of these fluctuations, and the analysis of [cosmic microwave background] fluctuations as examples of outstanding work in the field of astrophysics."

The Beatrice M. Tinsley Prize was shared by **Geoffrey W. Marcy**, professor of astronomy and director of the Center for Integrative Planetary Science at the University of California, Berkeley; **R. Paul Butler**, staff scientist with the Department of Terrestrial Magnetism, Carnegie Institution of Washington; and **Steven S. Vogt**, astronomer and professor of astronomy and astrophysics at UCO/Lick Observatory and the University of California, Santa Cruz. The three cowinners were recognized for their "pioneering work in characterizing planetary systems orbiting distant stars." According to the citation, approximately 60% of the planets now known outside our Solar System were

discovered by the three recipients and their collaborators.

Leon Van Speybroeck was presented with the Bruno Rossi Prize for his "singular contribution to high-energy astrophysics leading to the exquisite image quality produced by the x-ray optics and telescope of the Chandra X-ray Observatory." He is a senior astrophysicist at the Harvard-Smithsonian Center for Astrophysics.

The inaugural Joseph Weber Award for Astronomical Instrumentation went to **James E. Gunn**, Eugene Higgins Professor of Astronomy at Princeton University. He was cited for his "outstanding contributions to astronomical instrumentation which have influenced the development of instruments on major telescopes worldwide."

Adam Riess was the recipient of the Helen B. Warner Prize for his "significant contribution toward measuring cosmological distances unimaginable a decade ago through the study of Sne Ia and for the astonishing discovery of the acceleration of the universe and a nonzero cosmological constant." He is an associate astronomer at the Space Telescope Science Institute and an adjunct associate professor of astronomy at Johns Hopkins University, both located in Baltimore, Maryland.

Amy J. Barger, assistant professor of astronomy at the University of Wisconsin-Madison, received the Newton Lacy Pierce Prize for her "outstanding achievement in observational cosmology using data from x-ray through radio wavelengths to explore previously unknown populations of distant galaxies, giving a view of galaxies early in the history of the universe and showing that they are major contributors to the extragalactic background."

Michael Zeilik, professor of physics and astronomy at the University of New Mexico, received AAS's Education Prize for his work as an innovator in the field of astronomy education. Zeilik was cited for, among other things, his tireless championing of teaching strategies that go beyond the usual lecture. The citation also stated that the "research which he has done on the success of, or challenges faced by, these strategies has provided a major contribution to our understanding of student learning."

The Gerard P. Kuiper Prize went to **Eberhard Gruen** for his "discovery of interstellar grains passing through the solar system; the discovery of Jovian dust streams in interplanetary space; and major insights into the time evolution of the meteoritic com-

plex by combining impact microcrater data from lunar rocks, spacecraft meteoroid penetration and impact ionization data, and photographic and radar meteor data." He is a senior scientist at the Max Planck Institute for Nuclear Physics in Heidelberg, Germany, and a researcher at the University of Hawaii's Institute of Geophysics and Planetology.

Heidi Hammel, senior research scientist at the Space Science Institute in Boulder, Colorado, received the Carl Sagan Medal. According to the citation, her "dedication to communicating the excitement of planetary science is evident in the large number of lectures to children and the general public that have complemented her scientific career."

The Harold C. Urey Prize went to **Brett J. Gladman** for his "studies of orbital evolution combining numerical and analytical results to elucidate the dynamical structure of the solar system." The citation added that his "extensive simulations of the orbital evolution of meteorites from the Moon, Mars, and the main asteroid belt have fundamentally altered our understanding of the delivery paths of these objects." He is an associate professor of physics and astronomy at the University of British Columbia in Canada and a research scientist at CNRS.

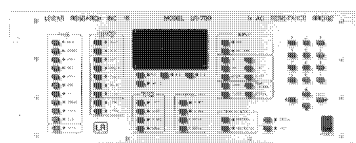
AAS also presented two popular science writing awards. This year's journalist award was shared by **Ron Cowen** and **Sid Perkins**, both writers for *Science News*. Cowen wrote "Stormy Weather" and Perkins wrote "Pinning Down the Sun-Climate Connection" as a two-part series that appeared in the January 2001 *Science News*, volume 159, on pages 26 and 45, respectively.

The corecipients of the scientist writing award were **Carolus J. Schrijver** and **Alan M. Title**. They were recognized for their two-part article "Today's Science of the Sun," which appeared in the February and March 2001 issues of *Sky and Telescope*. Schrijver is a staff physicist and Title is a principal scientist at Lockheed Martin's Advanced Technology Center in Palo Alto, California.

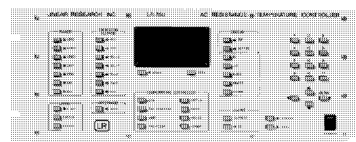
Optical Society Presents Prizes at Annual Meeting

The Optical Society of America announced the winners of its awards, medals, and prizes for 2002 at the society's annual meeting held in Orlando, Florida, in October.

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