

AAS Divisions Award Four Prizes

Three divisions of the American Astronomical Society have announced the winners of their awards for 2003.

The Dirk Brouwer Award, presented by the division on dynamical astronomy, went this year to **William Ward**, institute scientist in the space studies department at the Southwest Research Institute in Boulder, Colorado. He was recognized for his "many contributions to the field of dynamical astronomy over the past 30 years."

The historical astronomy division awarded the LeRoy Doggett Prize for Historical Astronomy to **Michael Hoskin**, a fellow of Churchill College at Cambridge University. According to the citation, he has "long been renowned for both his scholarship and the high standards he has maintained in editing and publishing," and, as founder and editor of the *Journal for the History of Astronomy*, he has "helped to define the field of historical astronomy and give it a central focus."

Reta Beebe received the Harold Masursky Award, given by the division for planetary sciences, for her "outstanding service to planetary science and exploration" through a combination of managerial, programmatic, and public service activities. Beebe is a professor of astronomy at New Mexico State University in Las Cruces.

The division for planetary sciences also awarded its Gerard P. Kuiper Prize to **Steven Ostro**, senior research scientist at NASA's Jet Propulsion Laboratory in Pasadena, California. He received the award for his "years of research demonstrating the power of radar techniques to wrest information from asteroids."

Science Writers Recognized by AIP

In 2003, four individuals have received awards for their science writing from the American Institute of Physics.

The Science Writing Award to a Scientist was presented to **Ray Jayawardhana**, assistant professor of astronomy at the University of Michigan, Ann Arbor, and a contributing editor to *Astronomy* magazine. He was recognized for "Beyond Black," an article he wrote for the June 2002 issue of that magazine.

The Science Writing Award to a Journalist went to **Diane Tennant**, staff-writer for *The Virginian-Pilot*, for

her seven-part article "A Cosmic Tale," which appeared in the 24–30 June 2001 issues of the newspaper.

Illustrator and author **Ron Miller** received the Science Writing Award for Children's Literature for four books in the Twenty-First Century Books series *Worlds Beyond*. At present, his works for that series are *Extrasolar Planets*, *The Sun*, *Jupiter*, and *Venus*.

Host **Bob McDonald**, senior producer **Jim Handman**, and producer **Pat Sensen**, all of *Quirks & Quarks*, a Canadian Broadcasting Corp radio show, shared the Science Writing Award in Broadcast Media for a segment entitled "It's About Time! Inside the Fourth Dimension." It aired on 8 September 2001 and can be heard at <http://www.radio.cbc.ca/programs/quirks/archives/01-02/sep0801.htm>.

Muller Is to Lead SoR

Susan Muller took office for a two-year term as president of the Society of Rheology during the society's annual meeting in October. She replaced **William Russel** (see PHYSICS TODAY, February 2002, page 67).



Muller

"I am delighted to serve the Society of Rheology and its membership," said Muller. She added that she "looks forward to working with the society to find ways of increasing membership and to serving mem-

bers who find themselves tackling an increasingly diverse array of synthetic and biological materials processing issues."

Muller is a professor of chemical engineering at the University of California, Berkeley (UCB) and an associate faculty scientist in the materials sciences division of Lawrence Berkeley National Laboratory. She received her undergraduate degree in chemical engineering from Princeton University in 1981 and her PhD in chemical engineering from MIT in 1986. After completing her postdoc at Schlumberger Cambridge Research in Cambridge, England, in 1987, Muller joined AT&T Bell Laboratories (now Lucent Technologies' Bell Labs) in Murray Hill, New Jersey, as a member of the technical staff. In 1991, she joined the UCB faculty as an assistant professor.

Muller was promoted to associate professor in 1997 and to professor in 2001. At UCB, Muller's research interests include non-Newtonian fluid mechanics, polymer dynamics, rheology, and microfluidics.

The society's new vice president is **Andrew Kraynik** (Sandia National Laboratories in Albuquerque, New Mexico). **Jeffrey A. Giacomin** (University of Wisconsin–Madison) retained his position as secretary and **Montgomery T. Shaw** (University of Connecticut, Storrs) was reelected treasurer. **Morton M. Denn** (City College of the City University of New York) also was reelected as editor of the society's *Journal of Rheology*. The new members-at-large on the society's executive committee are **Wesley Burghardt** (Northwestern University in Evanston, Illinois), **Timothy Lodge** (University of Minnesota in Minneapolis), and **Lynn Walker** (Carnegie Mellon University).

Bahcall Elected Vice President of APS

On 1 January 2004, **John Bahcall** of the Institute for Advanced Study in Princeton, New Jersey, will be the new vice president of the American Physical Society. Bahcall, who will become the society's president-elect in 2005 and president in 2006, succeeds **Marvin Cohen** (see PHYSICS TODAY, November 2002, page 88). **Helen Quinn** is the society's president for 2004 (see PHYSICS TODAY, December 2001, page 70).

Bahcall received all of his professional degrees in physics: his AB from the University of California, Berkeley, in 1956; his MS from the University of Chicago in 1957; and his PhD in 1961 from Harvard University. After spending two years as a research fellow at Indiana University, Bahcall taught physics at Caltech, where he remained for the next eight years.

Since 1971, Bahcall has been affiliated with the Institute for Advanced Study. He is currently the Richard Black Professor of Natural Sciences there and a visiting lecturer with the rank of professor at Princeton University. The recipient of numerous honors and awards, Bahcall is a leader within the astrophysics community. He has written or cowritten four books on astrophysics and served as president of the American Astronomical Society (1990–92). When he becomes president of APS, Bahcall will be the first person ever to have held the rank of president in both societies.

In his candidate statement, Bah-

call said, "The APS must help members of Congress and the executive branch to understand that the future of our nation depends upon having a strong technological base, which in turn depends upon research and education in the physical sciences. The APS can play a significant role in increasing awareness of the dangers from the spread of weapons of mass destruction and in outreach programs that stimulate scientific literacy and promote interest in scientific activities." In addition to increasing federal support for physics, Bahcall said that it is important "to join with physicists in industry to reverse the tragic and dangerous decline of physics research in the private sector."

In other APS election results, **Philip Bucksbaum** (University of Michigan, Ann Arbor) was selected as the new chair-elect of the nominating committee, and the society's new international councillor will be **Sukekatsu Ushioda** (Tokoku University in Sendai, Japan). **Evelyn Hu** (University of California, Santa Barbara) and **Art Ramirez** (Lucent Technologies' Bell Labs in Murray Hill, New Jersey) are the newly elected general councillors of the society.

In Brief

The National Academy of Engineering, at its annual meeting in Washington, DC, in October, bestowed its Arthur M. Bueche Award on **Robert A. Frosch**. He was recognized for having "a career of advances in aerospace and automotive technology, and 'industrial ecology,' and for administration of research and development in industry, government, and academia." He is a senior research fellow with the Belfer Center for Science and International Affairs in Harvard University's John F. Kennedy School of Government.

Also at its annual meeting, the ANAE presented its Founders Award to **Carver Mead**, Gordon and Betty Moore Emeritus Professor of Engineering and Applied Science at Caltech. The academy acknowledged Mead for his "visionary contributions in the field of microelectronics, including VLSI (Very Large Scale Integration) technology and computational neural systems."

On 1 December, **Vladimir Agranovich** began his appointment to the NanoTech Institute of the University of Texas at Dallas as the insti-

tute's first "Pioneer of Nanoscience." The purpose of this position is to help bring science and technology pioneers to the university for extended sabbaticals. Agranovich retains his post as head of the theoretical department in the Institute of Spectroscopy at the Russian Academy of Sciences near Moscow.

Next month, **Matthew Colless**, senior fellow of the research school of astronomy and astrophysics at the Australian National University, will become the new director of the Anglo-Australian Observatory in Sydney.

Obituaries

Jean Brossel

With the death of Jean Brossel on 4 February 2003 in Périgueux, France, the scientific community has lost a key figure in the development of modern atomic physics and quantum optics in France after World War II.

Brossel was born in Périgueux in 1918 and entered the Ecole Normale Supérieure de Paris in 1938. The war interrupted his studies for two years, but he completed them in 1945. At that time, French laboratories were in bad shape: The research groups were disorganized and the equipment was very poor. Alfred Kastler of the physics laboratory at the Ecole Normale advised Brossel to go to Manchester, England, to receive research training in Samuel Tolansky's group at the physics laboratories of Manchester University. Brossel did. There, he learned Fabry-Pérot techniques and applied them to the study of atomic surfaces and the measurement of atomic hyperfine structures. The expertise he gained during that stay was very useful in his subsequent research work.

After three years in Manchester, Brossel returned to Paris. In the meantime, Kastler had received an offer from MIT to send one of his students to Francis Bitter's group for PhD work. Kastler proposed that Brossel go, and Brossel happily accepted the offer and went to MIT in 1948. Bitter's idea for detecting magnetic resonance in the excited state by changing the Zeeman structure of the emission spectrum didn't come to fruition. But while working on that same idea, Brossel came up with another one—the double resonance method—that turned out to be very successful and made for an outstand-

On 3 November, **Steven J. Dick** became the new director of NASA's history office and chief historian at NASA headquarters in Washington, DC. Before joining NASA, Dick worked as an astronomer and historian of science at the US Naval Observatory.

In October, **Louise Johnson** joined Diamond Light Source, a synchrotron facility in Oxfordshire, England, as director of life sciences. Johnson will continue her affiliation with Oxford University, where she is the David Phillips Professor of Molecular Biophysics.



Jean Brossel

ing PhD thesis. Instead of looking for a change in the frequency of emitted light, Brossel suggested that one look for a change in the light's polarization. That change would result from the radio-frequency-induced transfers between the excited Zeeman sublevels. Kastler had independently come up with the same idea and, a few months later, proposed the optical pumping method—polarizing atoms in the ground state through a transfer of angular momentum from polarized photons to atoms.

After completing his doctoral work, Brossel returned to Paris. In 1951, he and Kastler founded a research group that is now called the Laboratoire Kastler Brossel, and so started a great period at the Ecole Normale. Researchers at the lab demonstrated optical pumping the following year and obtained a wealth of exciting new results. They observed multiphoton RF