ing individuals with prizes or medals for 2003.

Martin C. Gutzwiller received the society's most important award for theoretical physics, the Max Planck Medal, for his contributions to the quantum theory of condensed matter. Gutzwiller is an IBM research staff member emeritus and an adjunct professor of physics at Yale University.

The society's top award for experimental physics, the Stern–Gerlach Medal, went to **Reinhard Genzel**, director at the Max Planck Institute for Extraterrestrial Physics, near Munich, and a physics professor at the University of California, Berkeley. He was recognized for his contributions to infrared astronomy and adaptive optics.

Brian Foster was honored with the Max Born Prize, given jointly by the society and the UK's Institute of Physics for outstanding contributions to physics. Foster, who was recognized for his contributions to experimental particle physics, is a professor of experimental physics at the University of Bristol in the UK.

The Gentner–Kastler Prize, presented jointly by the German Physical Society and the French Physical Society, went to **Hartmut Löwen**, professor of physics in the Heinrich Heine University's Institute of Theoretical Physics, in Düsseldorf. He was cited for his research on colloidal phenomena in particular and his contributions to soft matter physics in general.

Christoph H. Keitel was the recipient of the Gustav–Hertz Prize, which is given to an outstanding young physicist. The society acknowledged his contributions to the theory of interaction between light and matter. Keitel is a research group leader and lecturer in the University of Freiburg's Institute of Physics.

Christian Peth, a scientist in the optics characterization group at the Laser Laboratory in Göttingen, was awarded the Georg Simon Ohm Prize for his development of a laser-driven gaseous target used for the production of soft x-rays.

Klaas Bergmann, professor of physics at the Kaiserslautern University of Technology, received the Robert Wichard Pohl Prize for his contributions to experimental molecular physics, especially for the development of the so-called STIRAP method.

The Walter Schottky Prize, which honors contributions by young researchers in the field of condensed matter physics, was presented to **Jurgen Smet**. A senior scientist at the Max Planck Institute for Solid State Physics in Stuttgart, he was cited for his experimental research on quantum Hall systems involving the quasiparticle characteristics of composite fermions.

Fritz Haake, professor of theoretical physics at the University of Duisburg–Essen, won the Marian Smoluchowski–Emil Warburg Physics Prize for his contributions to the theory of quantum optics and quantum chaos. The prize, presented jointly by the German Physical Society and the Polish Physical Society, is given for outstanding contributions to pure or applied physics.

Uta Fritze–von Alvensleben, assistant professor at the University of Göttingen, received the Hertha Sponer Prize, the society's award for young outstanding female physicists. She was cited for her research on the formation and evolution of galaxies, in particular the development of computer models.

Kirshner Elected President of AAS

Members of the American Astronomical Society recently elected **Robert Kirshner** as their president for 2003. Kirshner, who takes office at the society's annual meeting next month, will serve as president-elect in 2003 and as president in 2004–05, and succeeds **Catherine Pilachowski** (see PHYSICS TODAY, May 2001, page 77).


Kirshner

Kirshner received his AB in astronomy in 1970 from Harvard University and his PhD in astronomy from Caltech in 1975. After completing a postdoc at the Kitt Peak National Observatory in Tucson, Arizona, he became a member of the astronomy faculty at the University of Michigan, Ann Arbor, in 1977. In 1986, Kirshner joined Harvard's astronomy department and served as chair from 1990 to 1997. Beginning in 1998, he was the associate director for optical and infrared astronomy at the Harvard–Smithsonian Center for Astrophysics (CfA), a position he held for five years. The same year he joined the CfA, he was elected to the National Academy of Sciences.

Currently, Kirshner is the Clowes Professor of Science at Harvard. His research interests include supernovae and observational cosmology, especially the recent discovery of dark energy using supernovae. Kirshner has written several books directed toward the nonphysicist on astronomical topics and is a frequent public lecturer on the subject.

"The AAS has been important to me, as to every astronomer in North America," Kirshner says. "I hope I can do something useful for an organization that has helped me so much."

In other AAS election results, **Chris Impey** (University of Arizona) will serve a three-year term as a society vice-president and **Geraldine Peters** (University of Southern California) will begin a three-year term as one of the AAS representatives on the US national committee of the International Astronomical Union. The new education officer will be **George D. Nelson** (Western Washington University in Bellingham, Washington). Also, **Todd Boroson** (National Optical Astronomy Observatory), **Carol Christian** (Space Telescope Science Institute), and **Alycia Weinberger** (Carnegie Institution of Washington) will serve three-year terms as AAS councilors.

Jurnak Is Elected ACA Vice President

Frances Jurnak took office on 1 January as vice president of the American Crystallographic Association for 2003. A professor of physiology and biophysics at the University of California, Irvine (UCI), she succeeds **Raymond E. Davis**, who is now ACA's president (see PHYSICS TODAY, March 2002, page 84).

Jurnak received her BS in chemistry in 1968 from the Catholic University of America in Washington, DC, and her PhD in chemistry at the University of California, Berkeley, in 1973. From 1974 to 1977, she was a postdoctoral fellow at MIT in the field of molecular biology. Immediately following that position, she did postdoctoral work in biochemistry at the Penn State Milton S. Hershey Medical Center, in Hershey, Pennsylvania, until 1979. That same year, Jurnak established her own laboratory in the biochemistry department at the University of


Jurnak

California, Riverside, where she eventually became a full professor in the department of biochemistry and a research scientist in the agricultural experiment station. At Riverside, Jurnak worked on the structure-function relationships of elongation factor Tu and on pectate lyases, which led to the discovery of the parallel beta helix fold.

In 1997, she moved to UCI's department of physiology and biophysics. There, she has focused on the structures of proteins involved in carcinogenic mechanisms and in advanced molecular biological strategies for the preparation of soluble, folded proteins suitable for structural studies. She directs UCI's protein expression facility and codirects the structural molecular biology program in the Chao Family Comprehensive Cancer Center, which is in UCI's College of Medicine. Over her career, Jurnak has chaired or served as a member of numerous university committees on undergraduate and graduate education.

"I am delighted by this opportunity to serve the ACA," says Jurnak. She adds that she is "looking forward to preserving the best of the past while fostering technical innovations that will advance crystallographic goals in the future."

In other ACA election results, three individuals also took office in January, all for four-year terms. **Louis T. J. Delbaere** (University of Saskatchewan, Canada) was elected to the communications committee. **Katherine Kantardjieff** (California State University, Fullerton) began her term on the continuing education committee. Elected to the data committee was **Robert Sweet** (Brookhaven National Laboratory).

In Brief

At a ceremony in February in Washington, DC, the National Academy of Engineering awarded the 2003 Charles Stark Draper Prize, one of engineering's top honors, jointly to **Ivan Getting** and **Bradford Parkinson** for "pioneering the concept and development of a Global Positioning System that, with incredible precision, tells you where you are and helps you get to where you want to be." Getting, president emeritus of the California-based Aerospace Corp, and Parkinson, emeritus professor of aeronautics and astronautics at Stanford University, will share the $500 000 cash prize.

Roger-Maurice Bonnet took a new post as executive director of the International Space Science Institute in Bern, Switzerland, this past January. He previously was deputy director general of science at CNES, France's space agency. Before that, Bonnet served for 18 years as science program director of the European Space Agency.

Obituaries

Oreste Piccioni

Oreste Piccioni, an imaginative, innovative, and controversial particle physicist, died of complications from diabetes and lung cancer on 13 April 2002 at his home in Rancho Santa Fe, California.

Piccioni was born 24 October 1915 in Siena, Italy, and graduated in 1938 with a PhD in physics from the University of Rome under Enrico Fermi. He then began working under Gilberto Bernardini on cosmic rays, looking in particular at the newly discovered penetrating particles now known as muons.

By 1943, Piccioni was working independently, developing fast electronics that led to a precise measurement of the muon lifetime. Working under the exceedingly difficult wartime conditions of German occupation and Allied bombing, Piccioni, together with Marcello Conversi and Ettore Pancini, performed one of the most important experiments of early particle physics. Using a magnet for charge separation, they measured the decays of positive and negative muons individually, thus showing that the negative and the positive particles often end their lives by decaying rather than by being absorbed in matter. From that result, scientists soon realized that the muon could not be the one proposed by Hideki Yukawa to mediate the strong force.

After World War II, Piccioni went to MIT to work with Bruno Rossi. He then moved on to Brookhaven National Laboratory (BNL), where he developed fast electronics and beam transport magnets for the Cosmotron program. Piccioni's knowledge of strong-focusing quadrupole lenses influenced the work of Clyde Wiegand, a member of the Emilio Segrè group at the Lawrence Radiation Laboratory (Rad Lab) in Berkeley, California. Wiegand designed a quadrupole lens to transport the external proton beam of the Rad Lab's 184-inch cyclotron. Piccioni also invented a way of extracting circulating beams from weak-focusing proton synchrotrons. After successful use at the Cosmotron, the idea was adapted to the Berkeley Bevatron during the 1962 upgrade.

From December 1954 to January 1955, Piccioni visited the Rad Lab to discuss with Segrè, also a former member of Fermi's Rome group, a Bevatron experiment to discover the antiproton. Piccioni's plan was to extract a momentum-selected secondary beam that would be long enough for a time-of-flight determination of particle mass. The beam transport would require strong focusing lenses, for which Piccioni had some new ideas. After returning to BNL, he applied for a longer visit to the Rad Lab—not a trivial matter, because it was then difficult for foreigners to obtain the security clearance required for employees and long-term guests.

Having lost effective contact with Piccioni, Owen Chamberlain and Wiegand decided to duplicate Wiegand's cyclotron quadrupole for their antiproton beam line. Meanwhile, as Bevatron performance improved steadily, other groups also planned antiproton experiments. The Segrè group's counter-based experiment, which was in competition with that of Edward Lofgren's group and that of a collaboration of emulsion groups, was ready to begin running in late summer 1955, about the time that Piccioni returned to Berkeley for a long visit. The Segrè group, however, did not accept him as a member of its team, a blow from which he never recovered. His protests to other Rad Lab leaders were not persuasive, because he had been out of touch during the critical periods of design, fabrication, and setup. His contributions to the experiment were acknowledged at the 1959 ceremony during which Segrè and Chamberlain were awarded the Nobel Prize in Physics for the discovery of the antiproton. Seeking damages and public acknowledgment of his contributions, Piccioni later (1972) filed a lawsuit against Chamberlain and Segrè, but the lawsuit was unsuccessful.

By the end of 1955, there were few who doubted the discovery of the antiproton. But an important confirmation of both experiment and underlying particle theory would be the discovery of the antineutron. In late 1955, Piccioni joined Bruce Cork, Glen Lambertson, and William Wenzel of the Lofgren group to begin a search for the antineutron. For that