

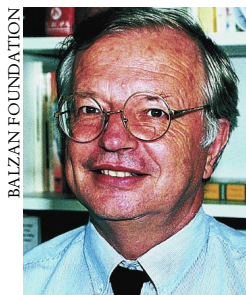
model of the motions of plates at Earth's surface. In 1968, he computed a global map of the relative movement of the six major plates. This map became the foundation for improved understanding of how earthquakes are distributed and for large-scale reconstruction of how continents and ocean basins were configured in the past.

Le Pichon also took the lead in using submersibles to explore the deep ocean. From the 1970s to the 1980s, he and his colleagues began high-resolution studies of midoceanic ridges, studies that led to the discovery of hydrothermal sources. He extended those studies to deep-sea trenches in the eastern Mediterranean Sea and to the Pacific Ocean trenches of Japan. Since the late 1990s, he has used ge-

octic methods to help him clarify interseismic deformation.

The foundation says that Le Pichon's "leading role in the development of marine geology in France and in many international programs, together with his gift of

combining mathematics, geophysics, and geology, [has] been the basis for his excellent teamwork and guidance of young talent in the earth sciences."



LE PICHON

Rubin Wins Cosmology Prize

The Peter Gruber Foundation will present its Cosmology Prize for 2002 to **Vera Rubin** this month in a ceremony at the Carnegie Observatory's Centennial Symposia II in Pasadena, California. She will receive a gold medal and \$150 000. The foundation, which is based in St. Thomas, US Virgin Islands, annually awards the prize to recognize individuals who have contributed to fundamental advances in cosmology. Jury members appointed by the International Astronomical Union in Paris select the recipients.

An astronomer at the Carnegie Institution of Washington's Department of Terrestrial Magnetism, Rubin is "preeminent in studying the motions of galaxies," reports the foundation. Her "pioneering studies of deviations of galaxy motions from classic Hubble theory demonstrated that large-scale structure existed in the universe." Through her explo-

rations of the rotation of spiral galaxies, she has found that most of the universe is unseen dark matter.

The foundation notes that Rubin is a role model for women in the sciences, particularly in astronomy. In 1965, she became the first woman sanctioned to observe at Palomar Observatory and, in 1996, was the first woman since 1828 to receive the Gold Medal from the Royal Astronomical Society in London. "By example and gentle voice," says the citation, "she has championed equal rights and revealed the incredible beauty of the universe."



RUBIN

IOP Announces Award Winners for 2002

At a ceremony to be held in London in January, the Institute of Physics will give awards to 14 individuals who have contributed to the development, management, understanding, and communication of physics worldwide.

The IOP will present its Paul Dirac Medal and Prize to **Christopher Hull** for his "pioneering work in superstring theory." He is a professor of theoretical physics at Queen Mary, University of London.

Terry Quinn, director of the Bureau International des Poids et Mesures in Sevres, France, will receive the Glazebrook Medal and Prize. He is being honored for his "leadership [in] international metrology."

In recognition of his "contributions to the study of electronic properties of condensed matter," the IOP will award its Guthrie Medal and Prize to **Michael Springford**, an emeritus professor of physics at the University of Bristol.

The Bragg Medal and Prize will go to **Ian Lawrence** for his "innovative contributions to physics education." He is a lecturer in physics education at the UK's University of Birmingham.

Michael Lockwood will receive the Charles Chree Medal and Prize for his "contributions to sun-climate relationships." He holds joint appointments as a professor in the solar-terrestrial physics group in the University of Southampton's department of

physics and astronomy and as chief scientist of the space science and technology department at the Rutherford Appleton Laboratory in Didcot, Oxfordshire, UK.

The IOP will present its Duddell Medal and Prize to **Stephen Myers**, director of the Super Proton Synchrotron-Large Hadron Collider division at CERN. He is being honored for his "contributions to the development of the major charged particle accelerator projects at CERN."

Peter Barham will receive the Kelvin Medal and Prize for his "innovative public activities promoting physics." He is a reader in physics at the University of Bristol.

The IOP's Mott Medal and Prize will be given to **Phil Woodruff** for his "contributions to the field of surface and interface science." He is a professor of physics and an Engineering and Physical Sciences Research Council (EPSRC) senior fellow at the University of Warwick.

The Thomas Young Medal and Prize will be presented to **J. Roy Sambles**, professor of experimental physics at the University of Exeter. The IOP is recognizing his "contributions to the study of optical properties of thin films."

Sean Langridge will receive the Charles Vernon Boys Medal and Prize for his "contributions to the field of modern magnetism." He is an instrument scientist at the Rutherford Appleton Laboratory.

The IOP will hand out its Maxwell Medal and Prize to **Tchavdar Todorov** for "theoretical contributions to electronic conduction in atomic-scale conductors." He is a reader in applied mathematics and theoretical physics with the atomistic simulation group in the school of mathematics and physics at the Queen's University Belfast.

Three winners will share the Paterson Medal and Prize. **Colin Cameron**, **Maurice Stanley**, and **Christopher Slinger** will be acknowledged for "the development of a computer-generated holography system" whose first applications, according to the IOP, will include industrial aerospace. The winners work for QinetiQ in the UK. Cameron is a team leader for holographic computational systems, Stanley is a team leader for spatial light modulator technology, and Slinger is the holography technical leader and chief technology officer for Holographic Imaging, a joint venture formed by QinetiQ and the Ford Motor Co.