

**2008 HANS BETHE AWARD TO RAYMOND JEANLOZ**



The Federation of American Scientists (FAS) has chosen Raymond Jeanloz, a professor of geophysics and astronomy at the University of California, Berkeley, as the recipient of the 2008 Hans Bethe Award for “his demonstration of the reliability of the U.S. nuclear stockpile in the presence of a moratorium on nuclear testing.”

In addition to his primary scientific work on the behavior of matter at high temperatures and pressures and its application to planetary interiors, Jeanloz applies his expertise to vital questions of national security as the chair of the National Academy of Science’s Committee on International Security and Arms Control (CISAC). Under his leadership, CISAC published several studies and analyses of major security issues, such as nuclear weapons policy, the management of weapons-useable material, and the future of U.S. nuclear forces (www.nas.edu/cisac). At the conclusion of his review of the National Nuclear Security Administration’s Stockpile Stewardship Program, Jeanloz proclaimed it an amazing success and confirmed the ability of the United States to sustain its nuclear weapons stockpile.

“Raymond Jeanloz’s investigation into the effects of aging of materials, components, and systems within the U.S. nuclear arsenal found that the materials that make up the nuclear core are far more stable and predictable than anyone would have anticipated,” said Ivan Oelrich, vice president of the strategic security program at the Federation of American Scientists. “His conclusion that the U.S. stockpile will be stable for periods of at least 60 years took the wind out of the sails of advocates for new nuclear weapons.”

Jeanloz’s analysis demonstrates the resilience of the U.S. nuclear weapons establishment and provides an opportunity for an extensive examination of post–Cold War nuclear weapons policy and its role in the 21<sup>st</sup> century. “The world’s only superpower would send a negative signal to the non-nuclear states if it felt the need to develop new types of nuclear weapons,” wrote Raymond Jeanloz in the March 2003 edition of *Arms Control Today*.

Throughout the 1990s, Jeanloz advised the U.S. Department of Energy, adding a responsible voice to the National Nuclear Security Administration Advisory Committee. As a Berkeley professor, Jeanloz has served on committees and panels including the National Security Panel and Nonproliferation, Arms Control and International Security Advisory Committee of the Lawrence Livermore National Laboratory.

Hans A. Bethe cofounded the Federation of Atomic Scientists, now the Federation of American Scientists (FAS), with the belief that scientists had an obligation to participate in the difficult choices that were forced on the U.S. by the extraordinary advances in nuclear physics, demonstrated by the development and use of atomic weapons. The FAS Hans Bethe Award is presented annually to an outstanding individual using science to promote a more secure world.

ADAPTED FROM FAS WEBSITE

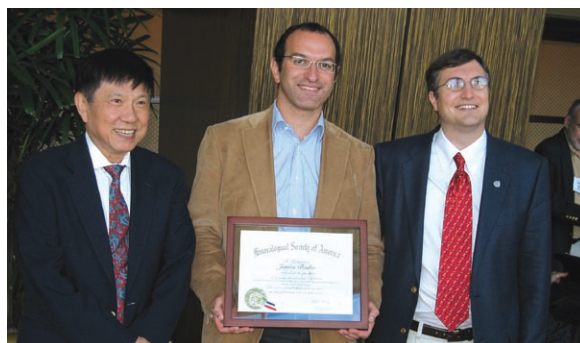
**MSA AWARDS TO EVANS AND BADRO**

Dr. Bernard W. Evans, University of Washington, Seattle, WA, received the 2008 Roebling Medal of the Mineralogical Society of America, given for a lifetime of outstanding original research in mineralogy. His lasting contributions include showing how “petrologic mineralogy” can be used to understand the chemical and physical evolution of the Earth’s crust and mantle and his pioneer use of the electron microprobe for petrological studies. He has studied basaltic and basic igneous rocks, contact metamorphism, metamorphosed mantle rocks, blueschists, and the thermodynamics of amphiboles.



Bernard W. Evans with citationist Donna L. Whitney and MSA president Peter J. Heaney

The Mineralogical Society of America Award is given for outstanding contributions by a scientist beginning his or her career. Dr. James Badro, Institut de Physique du Globe de Paris, Paris, France, is the 2008 award recipient. He is recognized for his work on the behavior of materials at the extreme pressures and temperatures of the Earth’s deep interior. In particular, his work on the electronic or magnetic transitions and sound velocity in mantle minerals aims at understanding the make-up and processes of Earth’s mantle, which can only be studied remotely and indirectly.



James Badro with citationist Ho-kwang “Dave” Mao and MSA president Peter J. Heaney

**OBITUARY**

**PROFESSOR HITOSHI SAKAI  
1930–2008**



Professor Sakai with his wife

Prof. Hitoshi Sakai, internationally renowned geochemist and former president of the International Association of GeoChemistry (IAGC), died in Japan on 30 September 2008 after a protracted illness. He was 78 years old. The geochemistry community mourns his passing. Over the course of a long career, Hitoshi Sakai made important contributions to understanding the fractionation of stable isotopes and behavior of thermal fluids in various geological and geochemical environments. He served as vice president of IAGC from 1988 to 1992 and then as its president from 1992 to 1996. Hitoshi began his professional career

at Okayama University at Misasa, where he organized and hosted the 4<sup>th</sup> International Symposium on Water–Rock Interactions in 1983. He then moved to the Ocean Research Institute of the University of Tokyo in 1983 and undertook research worldwide on submarine hydrothermal systems. During this time he was co–chief scientist of Leg 111 of the Ocean Drilling Program at the important Site 504B on the flank of the Costa Rica rift near the Galapagos spreading centre; a focus of this program was hydrothermal circulation in oceanic crust. Hitoshi then taught at Yamagata University until his retirement in 1996.