

2002 DPS Prize Recipients

Eberhard Grün, 2002 [Gerard P. Kuiper Prize](#) [1] recipient

CITATION: The Division for Planetary Science of the American Astronomical Society awards the 2002 Gerard P. Kuiper Prize for outstanding contributions to the field of planetary science to Eberhard Grün. Grün holds positions at both the Max-Planck-Institut für Kernphysik in Heidelberg, Germany, where he is a Senior Scientist, and at the University of Hawai'i's Institute of Geophysics and Planetology. Grün is a leading expert in the study of dust in the solar system and has spearheaded its in situ exploration for decades. He is recognized for the 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 complex by combining impact micro-crater data from lunar rocks, spacecraft meteoroid penetration and impact ionization data, and photographic and radar meteor data. Prior to the Voyager flybys, Grün foresaw the existence of dust rings around Jupiter and their replenishment from the Jovian satellites, as well as dust charging and interaction with the charged particle fluxes in the Jovian system. His career is an unbroken record of high quality work that has provided us with a good fraction of what we understand about the smallest bodies in the solar system.

The Kuiper Prize is awarded annually by the Division for Planetary Sciences (DPS), the largest division of the American Astronomical Society (AAS). The Kuiper Prize was established by the DPS to recognize outstanding contributors to planetary science (excluding work primarily with the Sun or Earth), awarding scientists whose achievements have most advanced our understanding of the solar system. This prize is the highest professional honor awarded by the DPS. Grün will receive the Kuiper Prize and associated cash award at special ceremonies on Wednesday afternoon, October 9, 2002, in the Ballroom of the Birmingham Jefferson Convention Center in Birmingham, Alabama, the site of this year's DPS Meeting. He will then address the DPS membership; the title of his lecture is "Dust Astronomy."

Grün received his doctorate at the University of Heidelberg in 1970 and continued there to become lecturer and senior scientist and leader of the cosmic dust group. He has been a visiting researcher at the Goddard Space Flight Center, Ames Research Center, and Jet Propulsion Laboratory, all NASA centers, as well as at the Lunar and Planetary Institute in Houston. He has been Principal Investigator for dust experiments aboard Helios 1, Helios 2, Galileo, Ulysses, and Cassini, a Co-Investigator for Nozomi, and provided dust sensors for Giotto.

Dr. Grün is recognized for the discovery of interstellar grains passing through the solar system, the discovery of Jupiter dust streams in interplanetary space, and major insights into the science of micrometeorites in space through the use of a variety of study techniques. In 2000, Grün was elected a Fellow of the American Geophysical Union. Minor Planet 1981 EY20 was designated 4240 Grün in honor of his spacecraft measurements of interplanetary dust.

Speaking of his years of experience, he stated, "I entered the field of dust research as a young scientist in the early days when the focus was on understanding the hazards from dust to manned and unmanned space activities. It was obvious that small meteor particles entering the Earth's atmosphere at very high speed will easily do harm to any spacecraft when such a particle hits it. When it was recognized that shielding sensitive space equipment could easily control this danger much interest went away.

"But dust has many other faces, which makes it an exciting subject of astrophysical and planetary research. Dust particles come in various sizes, compositions, and shapes. Therefore, a multitude of parameters have to be determined in order to comprehensively characterize dust grains in space. The description of the dynamics of dust involves many disciplines: Keplerian dynamics, interactions with the

radiation field and the plasma and magnetic environment. Dust cannot easily be characterized, it follows its own dynamics and disperses rapidly from its source, it is like smoke from a fire. This aspect however has a positive side: dust gives messages from remote processes and objects by which it was generated.

"Dust can be found everywhere in the solar system: From the heat in the F-corona to the deep freeze of the Kuiper belt and the Oort cloud dust plays an important role. We know today that almost each planet has its dusty shell.

"Through its wide distribution in the solar system dust can tell stories about its parents (comets, asteroids, satellites, and even interstellar matter) which otherwise are not easily readable.

"Taking a multi-disciplinary approach involving in situ space measurements, astronomical observations, theoretical studies, and laboratory investigations makes progress in the field. The close cooperation of astronomers, cosmochemists, dynamicist, and experimental physicists has, in fact, proven beneficial in solving dusty problems. It has been a privilege to work with many leading scientists in the various fields to help developing the field of dust research. I am honored to receive the Kuiper Prize of the DPS."

Brett J. Gladman, 2002 [Harold C. Urey Prize](#) [2] recipient

CITATION: The Division for Planetary Science of the American Astronomical Society awards the 2002 Harold C. Urey Prize for outstanding achievement in planetary research by a young scientist to Brett J. Gladman. Gladman, a Research Astronomer at the Observatoire de la Côte d'Azur in France, is recognized for his studies of orbital stability combining numerical and analytical results to elucidate the structure of the early solar system; his careful and extensive simulations of the orbital evolution of meteorites, fireballs, and NEOs that have fundamentally altered our understanding of the delivery paths of these objects; and his development of "pencil-beam" techniques to explore the outer solar system, leading to the discovery of 2 Uranian satellites and of more than a half-dozen Trans-Neptunian Objects.

The Urey Prize is awarded annually by the Division for Planetary Sciences (DPS), the largest division of the American Astronomical Society (AAS). The Urey Prize was established by the DPS to recognize and encourage outstanding achievements in planetary science by a young scientist. Gladman will receive the Urey Prize and associated cash award at special ceremonies on Wednesday afternoon, October 9, 2002, in the Ballroom of the Birmingham Jefferson Convention Center in Birmingham, Alabama, the site of this year's DPS Meeting. He will then address the DPS membership; the title of his lecture is "Opening Pandora's Box: The Discovery of New Irregular Satellites of the Giant Planets."

Gladman received a Master of Science in Physics and Astronomy from Queen's University in 1990, a Master of Science from Cornell University in 1992, where he also received his PhD in astronomy and theoretical and applied mechanics in 1996. He became an Henri Poincaré Fellow at the Observatoire de la Côte d'Azur in Nice, France, in 1996, then an NSERC fellow at the Canadian Institute for Theoretical Astrophysics in 1997, and returned to the Observatoire de la Côte d'Azur in 1998 as a Chateaubriand International fellow, joining the staff of the observatory as a CNRS research astronomer in 1999. He recently became an associate professor in the Department of Physics and Astronomy at the University of British Columbia in Vancouver, Canada.

Gladman is recognized for his studies of the dynamical structure of the solar system; his extensive simulations of the orbital evolution of meteorites from the Moon, Mars, and the main asteroid belt have fundamentally altered our understanding of how these meteorites are delivered to Earth. His observations using electronic cameras on large telescopes to explore the outer solar system have led to the discovery of eleven new moons of Saturn and five of Uranus, as well as several dozen small bodies beyond the orbit of Neptune.

Dr. Gladman has been the recipient of several prizes and honors, including the designation of Minor

Planet 7638 Gladman in 1999, the AAS Henri Chretien International Collaborative Research Prize in 1998, and the Eleanor York Prize for public service in astronomy by Cornell University in 1996.

Heidi B. Hammel, 2002 [Sagan Medal](#) [3] recipient

CITATION: The Division for Planetary Science of the American Astronomical Society awards the 2002 Carl Sagan Medal for Excellence in Public Communication in Planetary Science to Heidi B. Hammel, a Senior Research Scientist with the Space Science Institute. Hammel's dedication to the communication of the excitement of planetary science is evidenced in the large volume of lectures to children and general non-science audiences that has complemented her scientific career. She has a talent for clear, understandable, and enthusiastic descriptions of scientific results. She achieved national prominence in her outstanding communications during the Shoemaker-Levy 9 impact into Jupiter in 1994, when she tirelessly served as the spokesperson for all planetary scientists involved in that event. Her ability to communicate scientific ideas in plain language with infectious energy gives the public a personal look at the excitement of our field, and has an impact beyond the borders of planetary science.

The Sagan Medal is awarded to an active planetary scientist whose efforts have significantly contributed to a public understanding of, and enthusiasm for, planetary science. Hammel will receive the Sagan Medal and associated cash award at special ceremonies on Wednesday afternoon, October 9, 2002, in the Ballroom of the Birmingham Jefferson Convention Center in Birmingham, Alabama, the site of this year's DPS Meeting. She will then address the DPS membership, the first Sagan Medal winner to be afforded this opportunity; the title of her lecture is, "Education and Public Outreach Opportunities for Ordinary Planetary Scientists." Sagan Medal winners are also encouraged to address a public audience on the topic of planetary science. Hammel has arranged to deliver that lecture, "The Future of Planetary Exploration", in conjunction with the semi-annual meeting of the AAS in January 2003 in Seattle, Washington.

Hammel received her undergraduate degree from the Massachusetts Institute of Technology in 1982 and her PhD in physics and astronomy from the University of Hawaii in 1988. After a postdoctoral position at the Jet Propulsion Laboratory (Pasadena, California), she returned to MIT, where she spent nearly nine years as a Principal Research Scientist in the Department of Earth, Atmospheric, and Planetary Sciences. She is presently a senior research scientist with Space Science Institute in Boulder, Colorado.

Hammel's research focuses primarily on the giant outer planets and their satellites. She is an acknowledged expert about the planet Neptune, and was a member of the Imaging Science Team for the Voyager 2 encounter with that planet in 1989. She has imaged Neptune and Uranus with the Hubble Space Telescope, and is part of a group working to develop the Next Generation Space Telescope for NASA.

In addition to her scientific research, which earned her the DPS Urey Prize in 1996, Dr. Hammel has the ability to communicate scientific ideas to the public in a clear language with infectious enthusiasm, providing the public with a personal look at the excitement of planetary science. She articulately and unselfishly portrays her work and the work of others to the public and is gifted with a combination of intelligence, enthusiasm, and belief in the value of public education, something often rare among scientists.

Hammel chooses education and public outreach projects that parallel her research in order to get the most out of both experiences. One recent endeavor was a program called "Live from the Hubble Space Telescope" which directly involved school children in making planetary observations with the orbiting observatory. "Getting science out of the ivory tower and into the public realm is one of the most important and exciting things a scientist can do," said Hammel. "I try to reach out to kids, especially girls, who may not have realized that science and engineering are careers they might pursue."

Dr. Hammel was made a Fellow of the American Association for the Advancement of Science earlier this year. She has been cited previously for her work in public outreach, winning the Astronomical Society of the Pacific's 1995 Klumpke-Roberts Award for public understanding and appreciation of astronomy; the 1996 Spirit of American Women National Award for encouraging young women to follow non-traditional career paths; and the Exploratorium's 1998 Public Understanding of Science Award.

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