children became part of our extended family. I know now enough of university life and problems to realize how immensely difficult it was for Satish at his young age to reform time-honored curricula and professor-student interaction, and to instill the self-confidence necessary to reach for new research vistas. That he succeeded beyond all expectations was evident to me on my later, shorter trips to Bangalore.

Many years ago Satish told me that accurate weather prediction could improve India's economy decisively. With the flock of satellites he helped organize, Satish did indeed do something about the weather. Now future geophysical satellites will be launched from the Satish Dhawan Space Center, named in his honor last September. □

Charles Steidel

Paul Wennberg

Two New MacArthurs Named

Charles Steidel, professor of astronomy, and Paul Wennberg, professor of atmospheric chemistry and environmental engineering science, have been named MacArthur Fellows, a prestigious honor bestowed each year on innovators in a variety of fields and commonly known as the "genius grants." The John D. and Catherine T. MacArthur Foundation of Chicago named 24 recipients of the award this year, each of whom will receive a $500,000 "no strings attached" grant over the next five years.

Steidel's expertise is cosmology, a field to which he has made numerous contributions in the ongoing attempt to understand the formation and evolution of galaxies and the development of large-scale structure in the universe. In particular, Steidel is known for the development of a technique that effectively locates early galaxies at prescribed cosmic epochs, allowing for the study of large samples of galaxies in the early universe.

Access to these large samples, which are observed primarily using the Keck telescopes on Hawaii's Mauna Kea, allows for the mapping of the distribution of the galaxies in space and for detailed observations of many individual galaxies. These are providing insights into the process of galaxy formation when the universe was only 10 to 20 percent of its current age.

Steidel did his undergraduate work at Princeton (BA '84), earned his PhD from Caltech ('90) and has been a faculty member at Caltech since 1995.

Wennberg, who is a specialist in how both natural and human processes affect the atmosphere, is particularly interested in measuring a class of substances known as radicals. These radicals are implicated in processes that govern the health of the ozone layer as well as the presence of greenhouse gases.

Wennberg has earned recognition in the field for developing airborne sensors to study radicals and their chemistry. One of the early scientific results from these measurements demonstrated that conventional thinking was incorrect about how ozone is destroyed in the lower stratosphere, affecting assessments of the environmental impacts of chlorofluorocarbons and stratospheric aircraft.

A graduate of Oberlin College (BA '85) and Harvard University (PhD '94), Wennberg joined the Caltech faculty in 1998. □—*RT*

Honors and Awards

Frances Arnold, the Dickinson Professor of Chemical Engineering and Biochemistry, has been selected by the Delaware Section of the American Chemical Society to receive the 2003 Carothers Award, for her "outstanding contributions and advances in industrial applications of chemistry."

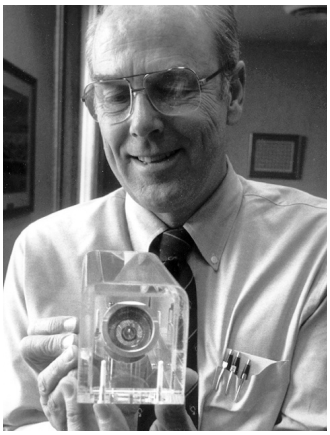
Barry Barish, the Linde Professor of Physics and director of the Laser Interferometer Gravitational-Wave Observatory (LIGO), has been nominated to the National Science Board by President George W. Bush. The National Science Board was created in 1950 to "promote the progress of science; advance the national health, prosperity, and welfare; and secure the national defense."

Jacqueline Barton, the Hanisch Memorial Professor and professor of chemistry, has been chosen by the American Chemical Society to be the 2003 recipient of the Ronald Breslow Award for Achievement in Biomimetic Chemistry. Sponsored by the Breslow Endowment, the award recognizes "outstanding contributions to the field of biomimetic chemistry" and consists of $5,000 and a certificate.

Pamela Bjorkman, professor of biology at Caltech and investigator of the Howard Hughes Medical Institute, was one of 11 international researchers to be awarded the Max Planck Research Prize by the Max Planck Society in Germany for her work in determining how the human immune system fights disease at the molecular level. She has also been elected a member of the American Philosophical Society.

Noel Corngold, professor of

Charles Elachi



Tom Everhart

applied physics, has been selected to receive the 2002 Wigner Award from the Honors and Awards Committee of the American Nuclear Society "in recognition of his outstanding achievements in the field of nuclear reactor physics."

Charles Elachi, director of JPL and a vice president of Caltech, has received the 2002 Takeda Award for his work in developing spaceborne radar instruments to monitor the global environment. The award, established last year by the Takeda Foundation of Japan, honors individuals who demonstrate outstanding achievements in the creation and application of new engineering knowledge to benefit human needs. Elachi shares half the approximately $800,000 award.

Richard Ellis, Steele Family Professor of Astronomy and director, Caltech Optical Observatories, has been elected a Fellow of the American Association for the Advancement of Science for his "seminal work in observational cosmology that has provided insight into the origin and evolution of galaxies and the distribution of the unidentified dark matter."

Thomas Everhart, president emeritus, has been awarded the Okawa Prize of approximately $80,000 from the Okawa Foundation for Information and Telecommunications, "for distinguished accomplishments in the development of scanning electron microscopy and microfabrication technologies; and for outstanding contributions and leadership in the development of science and technology, engineering education, and progress of the information industry." The Okawa Foundation was established in Japan in 1986 and began awarding the Okawa Prize in 1992.

Leroy Hood, BS '60, PhD '68, visiting associate in biology, will receive the 2002 Kyoto Prize in Advanced Technology "for outstanding contributions to biotechnology and medical technologies," according to the Inamori Foundation. The approximately $400,000 prize was awarded November 10 in Kyoto, Japan.

William Johnson, Mettler Professor of Engineering and Applied Science, has received several honors. He has been elected a fellow of ASM International, the Materials Information Society, "in recognition of his distinguished contributions to the field of materials science and engineering," particularly being noted for the invention of bulk metallic-glass-forming alloys and for the development of bulk metallic glasses as structural materials. He has also been selected to receive the 2003 Fellow Award and the 2004 Robert Franklin Mehl Award, both from the Minerals, Metals and Materials Society (TMS) in recognition of his contributions to materials science. In addition, he has received a Highly Cited Researchers Certificate from the Institute for Scientific Information in honor of "his accomplishments as one of the most highly cited and influential researchers in his field."

Joseph Kirschvink, BS, MS '75, professor of geobiology, has been elected a 2001 fellow of the American Association for the Advancement of Science for his "unique capabilities in producing innovative ideas for linking geologic events and biologic evolution through a study of rock and paleomagnetism and biomagnetism."

James Knowles, Kenan Professor and Professor of Applied Mechanics, Emeritus, has received the Warner T. Koiter Medal from the American Society of Mechanical Engineers, which is honoring him for "seminal contributions in nonlinear solid mechanics."

Lee Lindblom, BS '72, senior research associate in theoretical astrophysics, has been elected a fellow of the American Physical Society "for his fundamental, groundbreaking analyses of many microscopic aspects of the equilibria, oscillations, stability, evolution and gravitational radiation of relativistic rotating stars."

Shirley Malcom, member of the board of trustees, has been awarded the Public Welfare Medal, the most prestigious award of the National Academy of Sciences, established in 1914 to "honor extraordinary use of science for the public good." Malcolm is head of the Directorate for Education and Human Resources of the American Association for the Advancement of Science.

Carver Mead, BS '56, PhD '60, Moore Professor of Engineering and Applied Science, Emeritus, is being inducted as a Fellow of the Computer History Museum in Mountain View, California. The chairman and founder of Foveon, Inc., Mead is being recognized for his "many pioneering contributions in solid-state electronics."

Paul Patterson, professor of biology, was awarded $300,000 over three years by the McKnight Endowment Fund for Neuroscience for his research on mental illness. □