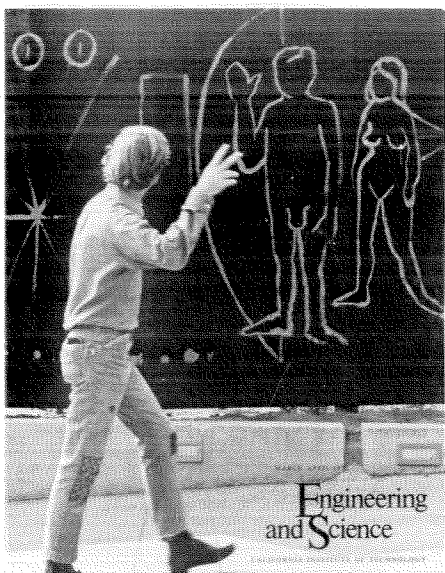
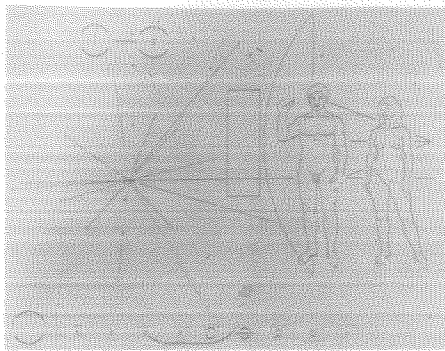


Random Walk



unidentified one more important person—the Caltech security guard who allowed us to complete our project. The wall was made of pure redwood and had no other graffiti on it. We planned a quick attack and a quick retreat after dark, but the guard arrived just as the naked figures began to appear. While Sarah painted and our children played underfoot, I began a frantic explanation of Pioneer 10 and the plaque. The guard remained silent. He revealed nothing about the rules he was operating under or whether he bought my story or not. A small crowd gathered. But then nothing happened; Sarah completed the painting and everyone drifted away. The guard did his job well. I hope he sees this letter.

Andrew P. Ingersoll
Professor of Planetary Science

Honors and Awards

Fred Anson, professor of chemistry and chairman of the Division of Chemistry and Chemical Engineering, has won the 1989 American Chemical Society Award in the Division of Analytical Chemistry for his achievements in pure and applied chemistry.

Professor of Chemistry John Baldeschwieler, has received the 1988 Richard C. Tolman Medal from the Southern California Section of the American Chemical Society in recognition of his broad accomplishments in chemistry and his extensive public service.

Assistant Professor of Cosmochemistry and Planetary Science Geoffrey Blake is one of 91 Sloan Fellows for 1989. The Alfred P. Sloan Foundation selects outstanding young scholars from a nationwide pool of applicants.

Bren Professor of Chemistry Peter Dervan has received the 1988 Harrison Howe Award from the Rochester Section of the American Chemical Society for his work in DNA sequence recognition and mechanistic organic chemistry.

Harry Gray, Beckman Professor of Chemistry and director of the Beckman Institute, and Steven Koonin, professor of theoretical physics, have been elected Fellows of the American Association for the Advancement of Science (AAAS), an honor bestowed on AAAS members "whose efforts on behalf of science

... are scientifically or socially distinguished."

Leroy Hood, Bowles Professor of Biology, has been awarded an \$800,000 grant from the L. K. Whittier Foundation to develop a gene analyzer that will automate DNA-based diagnostic techniques.

George Housner, Braun Professor of Engineering, Emeritus, has been named the first recipient of the Earthquake Engineering Research Institute's George W. Housner Medal. The medal was established in his honor to recognize advances in earthquake safety.

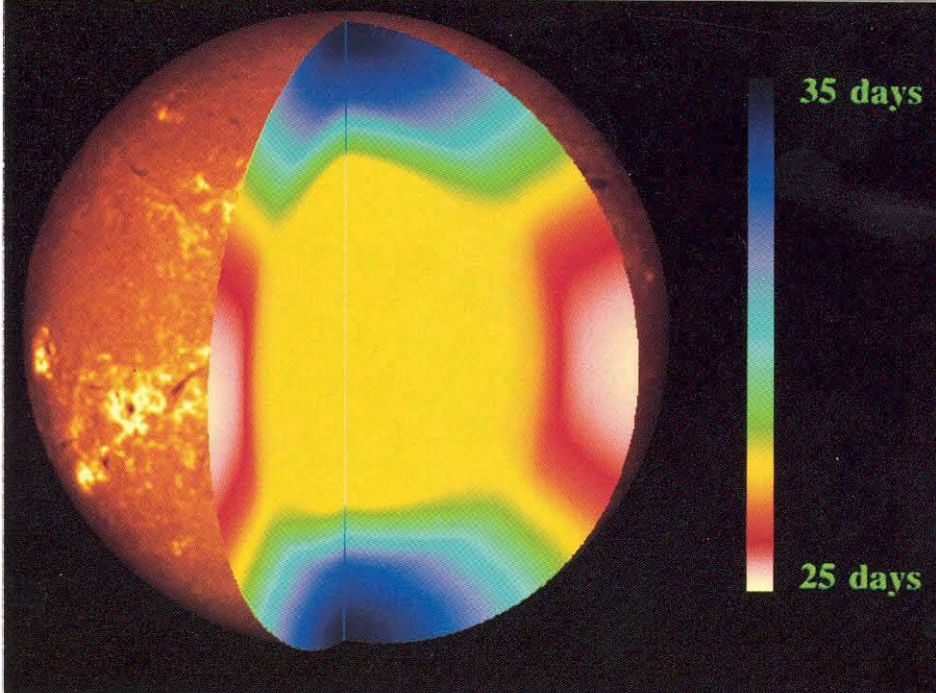
Christoph Koch, assistant professor of computation and neural systems, has been awarded a James S. McDonnell Foundation grant of \$150,000 for the next four years.

Edward Lewis, Morgan Professor of Biology, Emeritus, is a co-recipient of the 1989 Wolf Prize in Medicine for his four decades of pioneering research in molecular biology and genetics.

Assistant Professor of Chemistry Daniel Weitekamp has been named a Dreyfus Teacher-Scholar for 1988. The Camille and Henry Dreyfus Foundation awards about a dozen of these \$50,000 grants annually to exceptional young faculty members nationwide.

Ahmed Zewail, professor of chemical physics, won the 1989 King Faisal International Prize in Science for his ultrafast laser chemistry work.

Two faculty members, along with 42 other international scientists, have been elected Foreign Members of the USSR Academy of Sciences. They are Roger Sperry, Nobel laureate and Board of Trustees Professor of Psychobiology, Emeritus, and Professor of Geology Peter Wyllie.



The sun's interior rotation has been measured for the first time by Assistant Professor Ken Libbrecht, using data from Caltech's Big Bear Solar Observatory and a technique called "heli-seismology" that uses waves on the sun's surface to probe its depths. The surface rotation varies from every 36 days at the poles to every 25 days at the equator. Libbrecht found that these rates extend inward some 130,000 miles—about 16 earth diameters—30% of the way to the center. Lower down, the sun appears to rotate rigidly once every 27 days, but the data only extends 260,000 miles into the sun. The false-color interior shows rotations, while the "skin" was taken from an unrelated photo.

Professorships

Four faculty members have been named to chaired professorships—two old and two new—and another new chair has been established.

John M. Allman was selected by the board of trustees as the second Hixon Professor of Psychobiology, succeeding Nobel laureate Roger Sperry, who held the chair for 30 years and is now Board of Trustees Professor of Psychobiology, Emeritus. Allman, whose research involves the cortical areas of the brain that are responsible for processing visual information, has been a member of the Caltech faculty since 1974 and professor of biology since 1984.

Roger D. Blandford, announced as the Richard Chace Tolman Professor of Theoretical Astrophysics, will be the second occupant of the Tolman chair. The first was Nobel laureate Richard Feynman, who was the Tolman Professor of Theoretical Physics from 1959 until his death in 1988. Blandford has brought new insights to such cosmic phenomena as pulsars, cosmic jets, and black holes, and is currently developing theoretical models that attempt to explain the birth of quasars. He joined

the faculty in 1976 and has been a full professor since 1979.

Of the two new professorships recently established, William L. Johnson has been named the Ruben and Donna Mettler Professor of Engineering & Applied Science. This chair was endowed by two donations of \$750,000 from the TRW Foundation and from the Mettlers. Ruben Mettler, a Caltech alumnus, serves as chairman of the Caltech board of trustees and is the retired chairman and chief executive officer of TRW Inc. Johnson, who earned his doctorate at Caltech and has been a member of the Caltech faculty since 1977, works in the area of materials science and solid state physics, including the study of superconducting materials, electronic structure of metals, rapidly quenched materials, and disordered and amorphous solids.

Hiroo Kanamori was selected to be the first holder of the John E. and Hazel Smits Professorship, which was established from bequests from their estates. Smits was a member of The Caltech Associates and a leader in the southern California hospital community. Kanamori's research focuses on the causes of earthquakes, and his interests also include tsunamis, volcanoes, and the structure of the Earth's crust and mantle. He has been professor of geophysics at Caltech since 1972.

A professorship in physics honoring Richard P. Feynman has been established by a \$1.5 million gift from Michael Scott, BS '65, the first president of Apple Computer. Scott, who vividly remembers his first day in Feynman's freshman physics class, wished in particular to recognize Feynman's genius as a teacher.