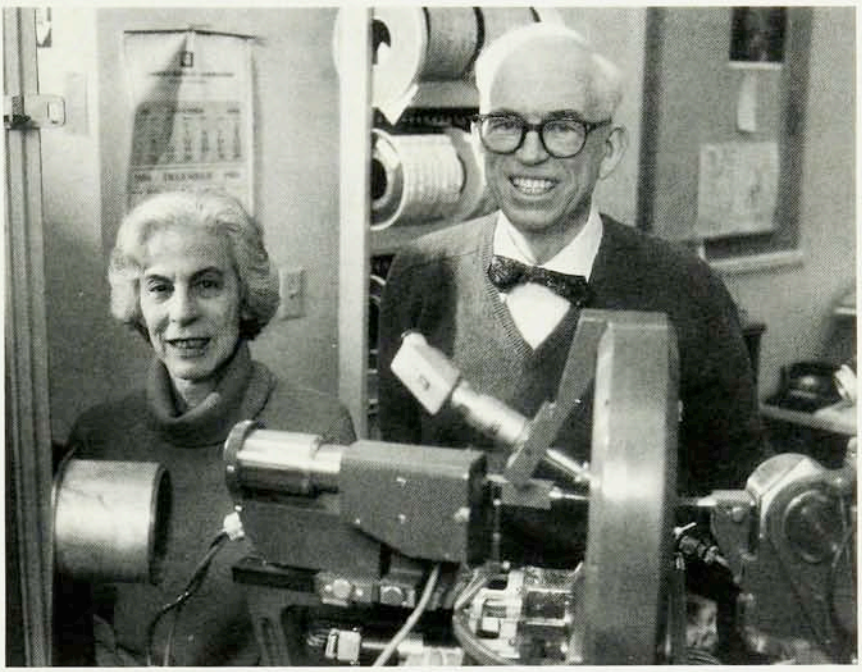
Templetons honored for work in crystallography

David H. and Lieselotte K. Templeton in March shared the third A. L. Patterson Award of the American Crystallographic Association for "their pioneering contributions to our understanding of anomalous scattering of x rays." David Templeton received his BS from Louisiana Tech University (then the Louisiana Polytechnic Institute, 1941), his MA from the University of Texas (Austin, 1943) and his PhD in chemistry from the University of California (Berkeley, 1947). He has been at Berkeley since 1946, becoming a full professor of chemistry in 1958 and serving as dean of the college of chemistry for 1970–75. Lieselotte received her BS (1946) and PhD (1950) from Berkeley. Since then she has been associated intermittently with Berkeley and with the Lawrence Berkeley Laboratory. She is currently a specialist in the chemistry department of the University of California. Over the last 10 years, the Templetons have used synchrotron radiation extensively to study anomalous scattering near absorption edges in materials such as the lanthanides. Using the polarized nature of synchrotron radiation they found x-ray dichroism and birefringence in bromate salts and other crystals, and measured changes in anomalous scattering with direction of polarization. They also studied applications of these properties to the phase problem of x-ray diffraction.



LIESELOTTE K. AND DAVID H. TEMPLETON

In March ACA presented the first annual Pauling Prize, which recognizes outstanding papers by students, to S. R. Ruberu and T. W. Panunto (both at the University of Minnesota chemistry department) for their paper "Physical and chemical properties of cyclamers."

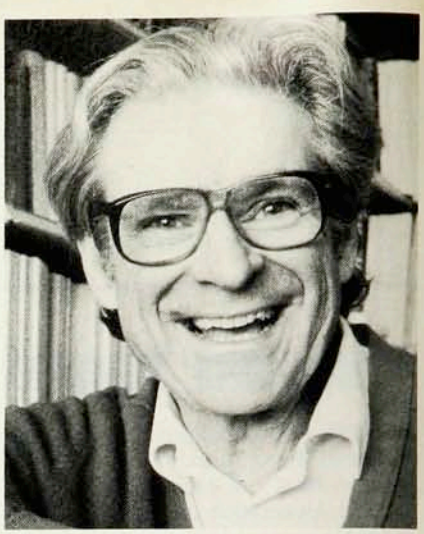
ASP 1987 Bruce Medal to Salpeter; 1986 medal to Whipple

The Astronomical Society of the Pacific will present its 1987 awards to three individuals in July.

Edwin E. Salpeter (Cornell University) will receive the 1987 Catherine Bruce Medal for his lifelong contributions to astronomy, in particular for his elucidation of the fusion cycle that powers older stars. Salpeter received his MSc from Sydney University (Australia, 1945) and his PhD from Birmingham University (England, 1948). He went to Cornell in 1949 as a research associate; he is now the James Gilbert White Distinguished Professor in the Physical Sciences and director of Cornell's center for radiophysics and space research. In 1952 Salpeter proposed that older stars, which have exhausted much of their hydrogen, could be fueled by the fusion of three helium nuclei into a carbon nucleus (triple-alpha process). In addition, Salpeter has studied the structure of collapsed stars, energy production mechanisms in quasars (such as giant black holes), the formation rate of stars of different masses in the Galaxy, the theory of the growth of dust grains around and between the stars, and the interior layers of Jupiter.

Stephan E. Schneider (University of Virginia) will receive the Robert J. Trumpler Award for his PhD thesis "Galaxy groups: Neutral hydrogen and dynamics," which he completed at Cornell in 1985. While making radio observations of groups of galaxies, Schneider discovered an enormous cloud of hydrogen gas between the galaxies of a group in the constellation Leo; this was the first observation of intergalactic matter in a group of galaxies that is outside any member of the group.

Alan N. Stockton (University of Hawaii) will recieve the Muhlmann Prize for his detailed studies of redshifts of faint galaxies surrounding quasars. He observed that many of the galaxies he examined exhibited almost exactly



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the same redshift as the accompanying quasar, indicating that the quasars and galaxies were moving together through space. Stockton received his BS in physics from the University of California at Berkeley (1964) and his PhD from the University of Arizona (1968). He has been a research scientist in the Institute for Astronomy at Hawaii since 1968.

In 1986 the society presented its Bruce Medal to Fred Lawrence Whipple (Harvard–Smithsonian Center for Astrophysics) for his contributions to astronomy and the study of comets. Whipple received his AB from UCLA in 1927. After receiving his PhD in 1931 from the University of California at Berkeley, he became a staff member of the Harvard College Observatory. During World War II he worked on radar defense systems, and from 1946 to 1958 he served on the Rocket and Satellite Research Panel, an independent advisory group. In the late 1950s Whipple organized Project Moonwatch, an amateur group, and the Smithsonian 12-station network (for the International Geophysical Year), which used automatic telescope–camera systems to track artificial satellites orbiting the Earth. He was the Phillips Professor of Astronomy at Harvard, serving as chairman of the university's astronomy department from 1949 to 1956, and was director of the Smithsonian Institution Astrophysical Observatory from 1955 to 1973. Throughout his career Whipple has extensively studied the physics of comets; in 1950 he proposed his "dirty snowball" model of comet nuclei. In addition, his pioneering analysis of meteor trails photographed stereoscopically—that is, from two locations—led him to conclude that meteors generally originate in the solar system, and that bright meteors are composed of cometary debris. He is now senior

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scientist at the Smithsonian.

John M. Hill (University of Arizona) received the 1986 Trumpler Award for his PhD thesis "Multiple-object spectroscopy: The MX spectrometer design," which he completed at Arizona in 1984. Hill developed an optical instrument, nicknamed Medusa, that uses optical fibers to produce simultaneously spectra of as many as 32 objects in a field of the sky up to a half a degree across. In addition he has contributed much to the development of spin-casting methods for making large glass telescope mirrors.

H. Melvin Dyck (University of Wyoming) and Benjamin M. Zuckerman (UCLA) received the 1986 Muhlmann Prize for studies they conducted at the Mauna Kea Observatories in Hawaii. Using speckle interferometry they determined that very young stars are very often surrounded by large disks of material, which they conjecture may be protoplanetary systems. In addition, they identified a previously unknown companion star to the young variable T Tauri.

obituaries

Jerrold Reinach Zacharias

Jerrold Reinach Zacharias, Institute Professor Emeritus at the Massachusetts Institute of Technology, died on 16 July 1986 at the age of 81. Born in Jacksonville, Florida, he studied at Columbia University and obtained his PhD with Shirley L. Quimby. From 1931 to 1940 he taught at Hunter College while embarking on research in molecular beams with I. I. Rabi at Columbia. The work of that group on