

ASTRONOMICAL SOCIETY ACKNOWLEDGES OUTSTANDING RESEARCH

Among the highlights of the January meeting of the American Astronomical Society in Phoenix were lectures from several recipients of 1992 AAS awards.

Lawrence H. Aller of the University of California, Los Angeles, gave the Henry Norris Russell Lecture. AAS chose Aller for this honor because of his pioneering achievements in the astrophysical study of gaseous nebulae, the chemical analysis of stars and the analysis of the solar photosphere. "Most of the concepts and methods Aller originated are part of the common knowledge of today," the award citation stated. "His textbooks have influenced at least a generation of astronomers, and his former students are everywhere." Aller's research has dealt mainly with three areas: physical processes in gaseous nebulae, ionized hydrogen regions in the

Triangulum galaxy, M33, and in the Magellanic Clouds; stellar chemical compositions, with special reference to abundance differences; and the spectra and chemical compositions of planetary nebulae, which are the ejecta of highly evolved stars.

Aller earned a PhD in astronomy from Harvard University in 1943. After working at the Harvard Observatory, the University of California and Indiana University, he joined the faculty of the University of Michigan in 1948. Aller moved to UCLA in 1962, and he is currently an emeritus professor of astronomy and a research astronomer there.

The Newton Lacy Pierce Prize Lecture was given by Alexei V. Fillipenko of the University of California, Berkeley. The Pierce Prize, which honors work in observational astronomy by an individual who is no more than 35

years old, went to Fillipenko for "outstanding observational prowess and interpretation of the evolution of supernova spectra, and for his seminal investigations concerning the connection between active galactic nuclei and starburst phenomena."

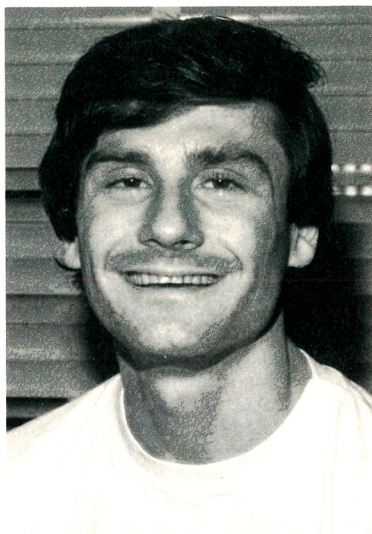
After receiving a PhD in astronomy from the California Institute of Technology in 1984, Fillipenko joined the Berkeley faculty. He is currently an associate professor of astronomy and a senior member of the university's Center for Particle Astrophysics.

The first AAS Annenberg Foundation Award was presented at the meeting to Carl Sagan of Cornell University. The annual award was created to recognize an individual who has displayed leadership in astronomy education. The award citation stated that Sagan "may have reached more persons than any other

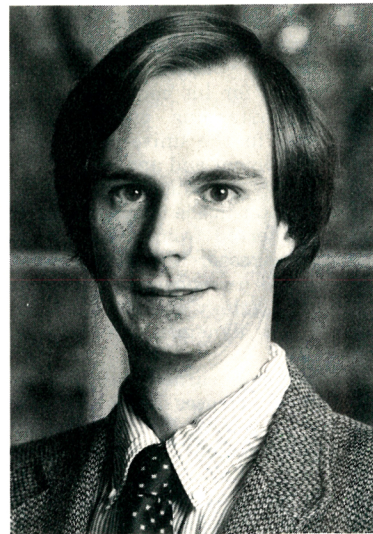
Lawrence H. Aller



Alexei V. Fillipenko



Edmund Bertschinger



astronomer, through his television series, "Cosmos," his writings for *Parade* magazine and other mass circulation publications, his books for the general reader and his lectures that enthral listeners of all ages."

Sagan earned a PhD in astronomy and astrophysics from the University of Chicago in 1960. From 1962 to 1968 he was a lecturer and assistant professor of astronomy at Harvard. Since then he has been at Cornell, where he is currently the David Duncan Professor of Astronomy and Space Sciences and director of the Laboratory for Planetary Studies.

The Bruno Rossi Prize Lecture, sponsored by the AAS high-energy astrophysics division, was given by Gerald H. Share of the Naval Research Laboratory. He was cited for "his ingenuity and leadership in adapting the solar gamma-ray spectrometer on the Solar Maximum Mission to detect radioactive cobalt in supernova 1987A, to observe diffuse 511-keV positron annihilation radiation from the galactic center and to study the spectra of gamma-ray bursts."

Share earned a PhD in physics from the University of Rochester in 1966, after which he joined NRL. He is now an astrophysicist there.

Some of the 1993 award recipients were also announced at the meeting; they will be covered in an upcoming issue of PHYSICS TODAY.

Three other individuals, in addition to those mentioned above, were honored with awards from AAS in 1992: Edmund Bertschinger of MIT was given the Helen B. Warner Prize; Robert H. Dicke of Princeton University received the Beatrice M. Tinsley Prize; and Stanton Peale of the University of California, Santa Barbara, received the Dirk Brouwer Award.

The Warner Prize recognizes outstanding work by an astronomer who is 35 years or younger. Bertschinger was chosen for his contributions to the "understanding of large-scale structures in the universe through the development and application of a methodology by which the distribution of matter in the nearby universe can be inferred from galaxy velocities." His research interests are in theoretical astrophysics, including cosmology, galaxy and structure formation, gas dynamics, and general relativity.

Bertschinger earned a PhD in astrophysical sciences from Princeton University in 1984. He was a postdoctoral fellow at the University of Virginia from 1983 to 1985 and a research fellow at the University of California, Berkeley, from 1985 to

1986. He then joined the physics faculty at MIT, where he is currently an associate professor.

The Tinsley Prize, which is given every other year, went to Dicke for his "outstanding role in the introduction of diverse and pioneering methods of measurement applied in the fields of microwave radiation, radioastronomy, gravity physics, lunar science and cosmology."

Dicke earned a PhD in physics from the University of Rochester in 1941. During World War II he worked at the MIT Radiation Lab. In 1946 Dicke joined the physics faculty at Princeton, and since 1984 he has been Emeritus Albert Einstein Professor of Science there.

AAPT HONORS CONTRIBUTIONS TO TEACHING AND RESEARCH

At its winter meeting in New Orleans, the American Association of Physics Teachers recognized several individuals for their contributions to physics education and research.

Anthony P. French of MIT was presented with the Melba Newell Phillips Award. AAPT cited him for "his creative leadership, for his dedicated service and for his exceptional contributions to physics education." Although his early work was in experimental nuclear physics, French has for the past three decades focused on physics education, including the development of curriculums and teaching materials. He has also been an active member of AAPT, serving as president in 1985 and as a member of various committees.

French earned his doctorate in physics from the University of Cambridge in 1948. Before emigrating to the US he worked at the Atomic Energy Research Establishment and then at Cambridge's Cavendish Laboratory. In 1955 he joined the physics faculty at the University of South Carolina. Since 1962 French has been a professor of physics at MIT.

The 52nd Richtmyer Memorial Lecture was given by Richard E. Smalley of Rice University, who spoke on "Carbon and the Challenge of Nanotechnology." Smalley is widely known for the discovery and characterization of the molecular C_{60} . In the pursuit of his research, he has developed a number of experimental techniques, including supersonic beam laser spectroscopy and supercold pulsed beams.

Smalley earned a PhD in chemistry from Princeton University in 1973.

The Brouwer Award is given by the AAS division on dynamical astronomy. In addition to fundamental work on spin-orbit resonance and tidal heating of the Moon and Io, Peale was cited for "definitive work on Cassini states of rotation of planets and satellites, and on excitation and damping of rotational wobbles of planets and satellites."

Peale earned a PhD in engineering physics from Cornell in 1965. For the next three years he was an assistant professor of astronomy and geophysics at the University of California, Los Angeles. In 1968 he moved to the University of California, Santa Barbara, where he is now a professor of physics.



Anthony P. French

After a three-year postdoctoral fellowship at the University of Chicago, he moved to Rice, where he is now the Gene and Norman Hackerman Professor of Chemistry and a professor of physics.

AAPT gave Distinguished Service Citations to several individuals: James Cederberg, Carole Escobar, Judy Franz, Marvin Nelson, Francis Peterson, Ronald Thornton and Jay Zimmerman.

Cederberg, who holds the Grace Whittier Chair of Science at St. Olaf College, was cited for combining "excellence in research with excellence in teaching at a liberal arts college." He earned a PhD in physics from Harvard in 1963.

Escobar, a physics teacher at Bellport High School in Brookhaven, New York, was cited for her work on