

AAS 1981 awards to go to Giacconi, Press, Margon



GIACCONI



PRESS



MARGON

The American Astronomical Society has selected the 1981 winners of its awards, which will be presented at its January meeting next year in Boulder, Colorado.

Riccardo Giacconi is the winner of the Henry Russell Lectureship. Professor of astronomy at Harvard and Associate Director, High Energy Division, the Harvard-Smithsonian Center for Astrophysics, he is cited as "a distinguished astrophysicist who has had a major impact on x-ray astronomy."

"Giacconi led the group which designed the UHURU satellite, used it to discover a few hundred new x-ray sources and studied many of these sources in detail. His work put the classification of x-ray sources on a sound footing and elucidated the properties of compact objects in binary orbits. He and his group designed the Einstein Observatory, launched in 1978, which gives unprecedented angular resolution for the x-ray sky. Their observations have already shed light on flare activity in normal stars, on galaxy-gas interaction in clusters and on the relation of quasars to the diffuse x-ray background."

Giacconi, who will receive \$500, is also the winner of the Dannie Heine-man Prize in Astrophysics awarded by AAS and AIP (see page 76).

William H. Press, professor of astron-

omy and physics at Harvard, will receive the society's Helen B. Warner Prize, awarded to a North American astronomer under 35 years old. Press will receive the \$1000 prize "in recognition of his important theoretical contributions to relativistic astrophysics and cosmology. His work includes a fundamental investigation of the stability of the Kerr metric, a significant discussion of gravitational lensing by cosmological objects, seminal studies of the development of fluctuations in cosmologies, a careful analysis of the formation of close binaries by tidal capture, a novel investigation of the development of an acoustic instability in interstellar clouds, and a path-breaking analysis of the role of strong hydrodynamic phenomena in radiatively stable stellar interiors."

Press received an AB from Harvard in 1969 and from Caltech an MS in 1971 and a PhD in physics in 1972. He was assistant professor at Caltech (1972-73) and at Princeton (1974-76). Since 1976 he has been at Harvard.

The Society is awarding the Newton Lacy Pierce Prize, which includes \$1000, to Bruce Margon, associate professor of astronomy at the University of Washington. The prize goes to a North American astronomer under 35 years old for outstanding achievement in observational research based on measure-

ments of radiation.

Margon is recognized "for his unique contributions to our current understanding of cosmic x-ray sources. He has carried out energetic and innovative observational studies of the far ultraviolet radiation from nearby stars and the optical counterparts of x-ray emitting quasars, galaxies, and binary stellar systems. Of special importance has been Margon's discovery of the bizarre nature of [the star] SS433 and his vigorous leadership in the pursuit of a comprehensive observational picture of this project."

Margon was educated at Columbia University (AB, 1968) and the University of California at Berkeley (MA, 1971; PhD in astronomy, 1973). He worked at Berkeley as a research astronomer (1974-76) and as an assistant professor (1976-78). In 1978 he became associate professor of astronomy at the University of California at Los Angeles. His present position, at the University of Washington, began in 1980.

Acoustic Society presents 1981 Gold Medal to Olson

The Acoustical Society of America will award Harry F. Olson its 1981 Gold Medal "for his innovative and lasting contributions in acoustic transduction,

we hear that

sound reproduction, electronic music and speech synthesis, and his service to the Society." The presentation takes place at the Society's May meeting.

Olson was educated at the University of Iowa; he received a BE in 1924, an MS in 1925 and, for experiments on resonance radiation of atoms and on the reflections of atoms from crystal, a PhD in 1928. After two years at the University of Iowa as a physics assistant, he started his career at RCA. From 1930 to 1932 he worked in the company's Photophone Division. In 1932 he became the head of the Acoustic Research Lab in Camden, N.J. Ten years later he moved to a new facility of his design in Princeton, the Acoustic and Electromechanical Lab. From 1966 until his retirement in 1968, he was vice-president in charge of acoustics and electromechanical research.

In the Photophone Division he developed bidirectional velocity and unidirectional cardioid microphones for use in movies. At the same time, he made advances in developing loudspeakers for almost every conceivable application.

During World War II Olson worked on voice communication transducers for use in noisy environments and on underwater transducers operating at frequencies as high as 60 MHz for antisubmarine warfare.

After the war, Olson turned his attention to audio equipment for broadcasting and recording studios and for sound reproduction systems. He demonstrated in a classic experiment that listeners preferred a wider range of sound than they got with the high-frequency cutoff of 5000 Hz that earlier work had established. Olson, with Herbert Belar, created the RCA Electronic Music Synthesizer. Using primitive digital control and analog techniques, the synthesizer could pro-

duce any audio signal that could be conceived and specified by an operator. It became the fundamental instrument of electronic music. Olson also helped develop videotape recording technology and worked on tape coatings.

Olson wrote books on acoustic engineering that have long been standard reference works throughout the world. He served the Acoustic Society as associate editor of its *Journal* for 30 years and as its vice-president and president.

Harvey Mudd bestows 1981 Wright Prize on Luis Alvarez

Harvey Mudd College awarded the 1981 Wright Prize for interdisciplinary scientific accomplishments to Luis W. Alvarez. Alvarez, Nobel laureate and professor emeritus of physics at Berkeley, has received \$20 000, delivered a public lecture, and conducted seminars for students during three days.

Alvarez was educated at the University of Chicago (BS, 1932; PhD in physics, 1936). He has taught at Berkeley since 1938 and has been associate director of the Lawrence Berkeley Lab during the years 1954-59 and 1976-78.

In the 1950s Alvarez and his group made possible the discovery of scores of fundamental particles by their development of large-scale liquid-hydrogen bubble chambers, their invention of semiautomatic track-measuring equipment, and their introduction of programming procedures for computers to reduce track data to physically meaningful form.

Alvarez has made important contributions in many other areas of physics. He was codiscoverer of the east-west effect in cosmic rays, demonstrated orbital electron capture by nuclei, collaborated in building the first proton linear accelerator based on the use of

cavity resonators, and developed the ground-controlled-approach blind landing system, which uses microwave radar.

Last year he theorized that the sudden extinction of dinosaurs resulted from the collision of an asteroid with Earth. Discovering the consistent presence of iridium in samples of soil strata from the time of dinosaur extinction, Alvarez argued that the asteroid's impact ejected so much dust into Earth's atmosphere, that it blocked sunlight, suppressed photosynthesis, and deprived the creatures of their food.

The Wright Prize, made possible by a gift from H. Dudley Wright, aims to honor outstanding scientists and engineers who have transcended the confines of single disciplines.

Frederick Reines wins Oppenheimer Prize

Frederick Reines, professor of physics at the University of California, Irvine, received the 13th annual J. Robert Oppenheimer Memorial Prize. The Scientific Council of the Center for Theoretical Studies at the University of Miami honored Reines with the \$1000 award in recognition of his contributions to elementary-particle physics.

Reines earned ME (1939) and MS (1941) degrees from Stevens Institute of Technology and a PhD from NYU in theoretical physics in 1944. He worked at Los Alamos from 1944 to 1959. He was professor of physics at Case Institute of Technology 1959 to 1966, when he went to Irvine to become professor of physics and Dean of Physical Sciences, which position he held until 1974.

The second experimentalist to receive the prize, his research has concerned nuclear fission, the physics and

OLSON

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