

SOCIETIES AND AWARDS

AAS cites Giacconi and Tousey

The American Astronomical Society has awarded its Helen B. Warner Prize to Riccardo Giacconi and has named Richard Tousey to the Henry Norris Russell Lectureship.

Giacconi, who is vice president in charge of space research and systems for American Science and Engineering Inc., was cited for his pioneering contributions to x-ray astronomy. He and his colleagues (Herbert Gursky, Frank Paolini and Bruno Rossi) played a major role in designing the

weaker than the sun if it had a similar corona. Therefore it came as a great surprise when an x-ray flux almost equal to that of the sun was reported in Scorpius. Thus far about 12 x-ray sources have been detected, but the origin of such emission remains a baffling astrophysical problem.

Giacconi has also participated in development of an image-forming telescope for x rays, using total external reflection under grazing incidence. Such a device has already been used to take x-ray photographs of the sun,

throughout the ultraviolet. Tousey is currently preparing an atlas of the UV solar spectrum which he hopes to complete within the next year. He is also intensively studying the x-ray region by photographic means. Besides his work on the solar spectrum, he has made notable contributions in physical and physiological optics through his research on visual acuity, dark adaptation, spherical aberration of the eye and atmospheric attenuation of light and sky brightness. Tousey has received many honors, including the Ives and Draper medals. He is a fellow of both the American Physical Society and the Optical Society of America and is a vice president of the American Astronomical Society.



GIACCONI



TOUSEY

experiments that culminated in the discovery of galactic x rays. Using Geiger counters aboard Aerobee rockets during 1962 and 1963, the group detected a strong x-ray flux in the constellation Scorpius, away from the galactic center by some five or ten degrees of arc. Their work was subsequently reported in *Physical Review Letters* (1 Dec. 1962 and 15 Dec. 1963). Herbert Friedman and his group at the US Naval Research Laboratory also located an x-ray flux in that part of the sky early in 1963.

Before the discovery of galactic x rays the only known stellar x-ray source was the sun's million-degree corona. To most astronomers the search for x rays from other stars appeared to be an insurmountable task, for the nearest star beyond the sun (Alpha Centauri) would produce a flux some ten orders of magnitude

He is currently working toward the design of large x-ray telescopes for detailed galactic and extra-galactic studies.

Giacconi is a native of Genoa, and he received his doctorate from the University of Milan in 1954. He later taught at Milan and was research associate at Indiana and Princeton universities before joining AS&E in 1959. He is a member of the American Astronomical Society, the American Geophysical Union and the Italian Physical Society.

Richard Tousey, who is head of the Naval Research Laboratory rocket spectroscopy branch, was cited by the astronomers for his "pioneering investigations of the sun by means of rockets." These investigations, which began in 1946 with the use of captured German V-2 rockets, resulted in a detailed record of the solar spectrum

Royal Society honors

The British Royal Society has awarded Denys H. Wilkinson of the University of Oxford its 1965 Hughes Medal and has given Raymond A. Lyttleton of the University of Cambridge a Royal Medal.

Wilkinson is an experimental nuclear physicist who began his research as a member of the British atomic energy team during World War II. He has made a detailed study of the validity of charge independence and, with his students, has analyzed isobaric spin-selection rules that apply in many nuclear transitions. In recent years Wilkinson has developed a mass formula for the components of isospin multiplets, and in a series of important experiments he has investigated short-lived excited states of light nuclei using pulsed-beam techniques. Educated at Jesus College, Cambridge, he taught nuclear physics at that university for several years until going to Oxford in 1957. Wilkinson was appointed professor of experimental physics at Oxford in 1959, and since 1962 he has headed the department of nuclear physics. He is a fellow of the Royal Society.

Raymond Lyttleton is well known for his theoretical studies in many fields of geophysics and astronomy, es-



Painted by Gloria Velasco, a junior at Los Alamos High School. Sixth in the series.

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pecially in applying dynamics to astronomical problems. He evolved (with Hoyle) the first satisfactory model of a main-sequence star and gave the first correct specification of the boundary conditions of stellar interiors. His studies of the interstellar medium include an examination of the interaction between stars and interstellar matter and the problem of accretion. Lyttleton is also distinguished for his work on comets and the constitution of the earth and planets, as well as for studies in cosmology. He was educated at Clare College, Cambridge, and also studied at Princeton University as a visiting fellow. During World War II he worked in the Ministry of Supply, and in 1945 he was appointed lecturer in mathematics at Cambridge. Lyttleton is presently a fellow and lecturer at St. Johns College and a reader in theoretical astronomy. He is also a fellow of the Royal Society.

NBS honors Lauriston Taylor

The National Bureau of Standards has presented its annual Edward B. Rosa award to Lauriston S. Taylor, former NBS associate director. Taylor was cited for his "outstanding leadership and significant individual contributions in the development of national and international standards for radiation protection." In 1927 Taylor joined the bureau to organize the nation's first program for radiation standards. As head of the NBS radiation research program he obtained basic and theoretical data on the interactions of radiation with nuclei, atoms and molecules, and he developed radiation sources and standards. Taylor has also contributed extensively to the radiological literature and is co-author of *Physical Foundations of Radiology*. A member of numerous national and international radiation committees, he has served since 1928 with the International Commission on Radiological Units and Measurements and the International Commission on Radiological Protection. In December 1964 Taylor retired from NBS and joined the staff of the National Academy of Sciences, where he is now special assistant to NAS president Frederick Seitz.