

Dr. E. Margaret Burbidge named 1982 Catherine Wolfe Bruce medalist of the Astronomical Society of the Pacific

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FOR IMMEDIATE RELEASE

Dr. E. Margaret Burbidge, Director of the Center for Astrophysics and Space Science at the University of California, San Diego, has been named the 1982 Catherine Wolfe Bruce medalist of the Astronomical Society of the Pacific. This award, which is given annually for distinguished contributions to the science of astronomy, is one of the highest honors an astronomer can receive.

Previous winners include Edwin Hubble, Harlow Shapley, Fred Hoyle, Allan Sandage, and many other noted astronomers of the 20th Century. Like the previous recipients, Dr. Burbidge is being recognized for a lifetime of research work in a variety of astronomical fields. She is the first woman recipient in the 84-year history of the award.

In 1957, Dr. Burbidge was a co-author of the classic paper that established our basic understanding of how stars produce heavy elements. Working with her husband Geoffrey Burbidge, William Fowler, and Fred Hoyle (a team affectionately referred to as B2FH by astronomers), she and her coworkers showed the specific pathways by which nuclear reactions at the centers of stars have built up the heavier elements we find in the universe and in ourselves. As a recent history of astronomy puts it, "It is this work that provided the fundamental framework on which virtually all subsequent studies of stellar [element production] are based."

Dr. Burbidge also did important work on the detailed properties of galaxies, particularly their rotation, masses and element abundances. She and her coworkers were responsible for many of the early determinations of the masses of other galaxies. In the 1960's Dr. Burbidge turned her attention to unusual galaxies and the strange newly discovered objects which we now call quasars. Working with her husband and other

collaborators (many of whom she trained), she explored the properties of galaxies disrupted by explosive events and pushed outward the limit of the redshifts found in quasar spectra.

Using some of the world's most powerful astronomical instruments, Dr. Burbidge was able to detect and record spectra of some of the faintest galaxies and quasars and to determine some of the detailed properties of these often puzzling objects. She and her coworkers correctly interpreted the dark absorption lines in the spectra of quasars as the lines of ordinary elements at a variety of different redshifts (and not necessarily at the redshift associated with the radiation the quasar was emitting).

She is continuing her investigations of quasars and galaxies and has been an active proponent and a coinvestigator for the Space Telescope, which is to be carried into orbit by the Space Shuttle in 1985. Currently she is chairwoman of the Space Telescope Institute Committee of the Association of Universities for Research in Astronomy.

Dr. Burbidge received her Ph.D. from the University of London and has held many faculty and administrative positions, including the directorship of the Royal Greenwich Observatory. She was president of the American Astronomical Society from 1976 to 1978, having won their Warner Prize (given for significant contributions by

a young astronomer) with Geoffrey Burbidge in 1959. Currently she is serving as president of the American Association for the Advancement of Science.

The Astronomical Society of the Pacific is an international non-profit scientific and educational organization, founded in 1889, which works to increase public understanding of astronomy. Each year the Society offers four major astronomical awards, of which the Bruce medal is the most prestigious.

Dr. Burbidge will accept her medal at the Society's 93rd annual Scientific Meeting to be held between June 26 and July 1, 1982, at the University of California, San Diego.

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