E. Margaret Burbidge and Walter H. Munk among 19 winners of the National Medal of Science awarded during a White House ceremony

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Dr. E. Margaret Burbidge, director of the Center for Astrophysics and Space Sciences at the University of California, San Diego, and Dr. Walter H. Munk, professor of geophysics at UCSD's Scripps Institution of Oceanography are among 19 winners of the National Medal of Science to be awarded during a White House ceremony February 27.

The ceremony is scheduled for 11:30 a.m. (EST), with President Reagan scheduled to make the award presentations. Presidential Science Advisor George Keyworth will make introductory remarks.

The Medal, established by Congress in 1959, is awarded by the President to individuals "deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical, behavioral or social sciences."

Individuals are chosen by a special committee of the National Science Foundation to receive the award, based on nominations from a variety of sources. Since its establishment, there have been more than 160 Medal winners.

"I am delighted that Professors Margaret Burbidge and Walter Munk have received this outstanding recognition," said UCSD Chancellor Richard C. Atkinson, who planned to attend the ceremony. "The history of science in the 20th century will show them to be major figures whose work contributed fundamentally to our understanding of the world in which we live. They also are active members of the faculty who take a keen interest in the overall welfare of the university."

Dr. Burbidge is one of the world's most prominent astronomers. Her research interests cover a wide variety of topics including nucleosynthesis, the nature of quasars and the properties of galaxies. She was the co-principal investigator on the recently completed Faint Object Spectrograph project, one of the five experiments included aboard the Space Telescope to be launched in 1986.

Dr. Munk has made fundamental contributions to the understanding of ocean current and circulation, tides, wave propagation in solid and fluid bodies, and the wobble of the Earth's axis during rotation. The breadth of his interests have led to his being called "both a generalist and a specialist."

Burbidge is a member of the National Academy of Sciences and the American Philosophical Society. She was president of the American Astronomical Society from 1976-78, the first woman to hold that post, and served as president of the American Association for the Advancement of Science, the world's largest scientific organization, in 1982-83.

During her distinguished career she has received many honors including the Russell Lectureship of the American Astronomical Society, the Catherine Wolfe Bruce Medal from the Astronomical Society of the Pacific, and eight honorary doctoral degrees.

In 1983, the American Astronomical Society bestowed upon her its highest honor when it named her Henry Norris Russell Lecturer, a distinction awarded annually to a senior astronomer on the basis of eminence in astronomical research.

In July 1984, she was named a University Professor by the University of California, a title given to only a handful of outstanding faculty members in the UC system.

Burbidge joined the UCSD faculty in 1964 and spent 1972-73 as director of the Royal Greenwich Observatory in England, the first woman to hold that position.

Burbidge carries out numerous professional activities, including serving as member-at-large of the National Aeronautics and Space Administration Advisory Council, and as trustee for the La Jolla Institute and the San Diego Hall of Science.

She has been very active in efforts to improve science education activities at the pre-college level throughout the United States and the United Kingdom where she received her education.

Burbidge, who admits a fascination with astronomy since she was a small child, earned her bachelor of science degree with First Class Honors from the University of London. She earned her Ph.D. at the University of London Observatory.

Burbidge, a member of the UCSD Department of Physics, was named the first director of the Center for Astrophysics and Space Sciences in 1979.

Munk, born in Vienna, Austria, was sent to New York when he was 14 to work in the family brokerage business. Evening classes in physics at Columbia University turned him to a career in science. He received a B.S. degree in physics and an M.S. degree in geophysics from the California Institute of Technology. He became a United States citizen in 1939.

A summer fellowship program after his third year of college introduced Munk to the research of Scripps, where he enrolled in graduate studies in 1941. He received a Ph.D. in oceanography from the University of California in 1947.

He was named an assistant professor at Scripps in 1947 and advanced to professor of geophysics in 1954. That year he also became a member of UC's Institute of Geophysics, based at UCLA, and in 1960 established a branch of the institute on the Scripps campus. The purpose of the new unit was "to study the planet Earth, its atmosphere, oceans and interior, using the methods of experimental and mathematical physics."

Munk was appointed director of the UCSD laboratory and an associate director of the systemwide institute, renamed the Institute of Geophysics and Planetary Physics (IGPP).

Munk's scientific research has been in physical oceanography and geophysics. He pioneered in the use of high-speed computers for analyzing geophysical data. During the 1946 testing of nuclear weapons at Bikini Atoll, Munk participated in analysis of the currents and diffusion in the lagoon and the water exchange with the open sea.

In 1963, Munk led a study of attenuation in ocean swell generated in the Antarctic area. The program measured fluctuations with pressure-sensing devices lowered to the ocean floor. In addition, measurements were made at six Pacific Ocean locations and from the floating instrument platform FLIP. Munk and his family operated the recording station on American Samoa during the three-month project.

In 1969, Munk began measuring tides in the deep sea, using highly sophisticated pressure-sensing instruments that were dropped free-fall to the ocean floor and retrieved by acoustic release.

Munk has written or co-authored more than 200 scientific papers. He has published on internal waves in the ocean, edge waves, variations in sea level, litter on the sea, the physics of the air-sea boundary layer, tsunamis, and rotation of the Earth. The book "The Rotation of the Earth," by Munk and Dr. Gordon J. F. MacDonald (1960) was awarded a Monograph Prize by the American Academy of Arts and Sciences.

Munk has received many honors for his scientific research. He was elected to the National Academy of Sciences in 1956, to the Royal Society of London in 1976 and has been a Guggenheim Fellow three times. Among his honors is the first award of the Maurice Ewing Medal, sponsored jointly by the American Geophysical Union and the U.S. Navy (1976), the Alexander Agassiz Gold Medal of the National Academy of Sciences (1977), and the Captain Robert Dexter Conrad Award of the U.S. Navy (1978). Munk was named California Scientist of the Year in 1969.

He is a member or fellow of more than a dozen professional societies and has served on many university, national and international committees.

(February 25, 1985) For more information contact: Paul Lowenberg, 452-3120