"Jim Arnold-Fest" - July 25 in Sumner Hall Auditorium, SIO

July 21, 1993

MEDIA ADVISORY

EVENT: "Jim Arnold-Fest" -- a celebration in honor of James R. Arnold, one of the founding professors of UCSD and an internationally recognized authority in the history of the moon and solar system.

DATES/TIMES: Monday, July 25

morning and afternoon, symposium and invited talks; evening, formal banquet and roast.

LOCATION: Sumner Hall Auditorium, UCSD's Scripps Institution of Oceanography

BACKGROUND: To celebrate Jim Arnold's 70th birthday, about 150 to 200 friends, students and colleagues are expected to gather at UCSD to swap stories and share research inspired by Arnold's work.

A copy of the program is attached.

Arnold, a professor of cosmochemistry, joined the UCSD Department of Chemistry in 1958 from Princeton University, and became the department's first chairman in 1960.

The son of a lawyer and archeologist, Jim Arnold was born May 5, 1923 in Metuchen, New Jersey.

He graduated from Princeton in 1943, continuing his graduate work there till he received his Ph.D. in 1946. While at Princeton, he worked on the Manhattan Project for two years during World War II.

Arnold served as a postdoctoral fellow at the newly formed Institute for Nuclear Studies at the University of Chicago and, in 1947, he moved to Harvard University as a National Research Fellow. He returned to Chicago one year later to work with W. F. Libby in the development of radiocarbon dating.

In 1955, Arnold joined the chemistry department at Princeton University and moved to UCSD three years later.

In the 1950s, Arnold was one of the developers of the liquid scintillation spectrometer for carbon-14 and tritium, the latter a radioactive form of hydrogen. He discovered several cosmic-rayproduced radio-isotopes in nature, and studied their distribution in the environment.

During the 1960s, his work focused on cosmic-ray products in meteorites and then lunar samples. With several colleagues, he demonstrated the approximate constancy of cosmic rays over periods up to millions of years. This work was applied to the history of meteorites in the solar system, and has been accompanied by theoretical studies on the origin of these objects.

Arnold served as a consultant to NASA and was one of the original group of lunar sample investigators. His group made the first measurements of isotopes produced by high-energy solar storm particles in lunar surface

materials. Since then, this work was developed to define the intensity and spectral shape of solar storm particles reaching our part of the solar system. Using these isotopes as tracers, his group measured the rate of turnover of the lunar soil due to meteorite impact. He constructed a model to explain the very slow rates of turnovers observed, and in particular, the smoothness of the surface of most regions. He and his colleagues also built and used a gamma-ray detector flown on Apollo 15 and 16 to map the content of several elements over the surface of the moon.

More recently, his group has carried out laboratory simulations of early solar system processes. They also have conducted studies of processes for extracting oxygen from lunar rocks, and have developed concepts for using ultra-thin, but superstrong tethers for space transportation.

Arnold has served on numerous NASA committees and boards, is a member of the American Association for the Advancement of Science, the National Academy of Sciences, the American Academy of Arts and Sciences and a member of the International Academy of Astronautics.

He was named a recipient of the Atomic Energy Commission's E. 0. Lawrence Award in 1968; was honored two years later by NASA with a medal for "Exceptional Scientific Achievement;" and, in 1976, was awarded the Leonard Medal of the Meteoritical Society.

In 1979, Arnold was appointed the first director of the California Space Institute, a statewide research organization with emphasis on the useful applications of space. In 1983, he was named the first Harold C. Urey Professor of Chemistry at UCSD.

Arnold, a resident of La Jolla, also holds the distinction of having an asteroid named for him-- Asteroid "2134 Jimarnold," so named in 1973 by two planetologists who discovered it.

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