Death of Harold Clayton Urey

January 9, 1981

Harold Clayton Urey, who began his academic career as a rural schoolteacher in Indiana and went on to earn a Nobel Prize in chemistry, died at his La Jolla home at 11:30 p.m. Monday, January 5. He was 87.

Urey helped pave the way to the atomic age with his discovery in 1931 of heavy hydrogen, or deuterium, a discovery for which he received the 1934 Nobel Prize in chemistry. His later research ranged from the measurement of the climatic history of the world to investigating the possibility of life existing on Mars.

"Urey was the greatest scientist ever to come to San Diego," said Roger Revelle, professor of political science at the University of California, San Diego and one of the people responsible for bringing Urey to the San Diego campus in 1958.

"Urey was one of the first Americans to win a Nobel Prize. His coming here gave reality to our whole effort to build a great university," Revelle said. "He was a refreshing man to be around because he was always willing to discuss new ideas."

Urey was born April 29, 1893 in Walkerton, Indiana. He received a bachelor of science degree in 1917 from the University of Montana, Missoula, and spent two years as a research chemist at the Barrett Chemical Company in Philadelphia before returning to the University of Montana as a chemistry instructor.

Urey received his doctorate in chemistry from the University of California, Berkeley in 1923, then spent a year studying under physicist Niels Bohr at the Institute for Theoretical Physics in Copenhagen. Since 1935 he has been awarded more than a score of honorary degrees from universities around the world.

Urey was an associate professor of chemistry at Johns Hopkins University from 1924 to 1929, when he joined the faculty at Columbia University. It was while he was an associate professor at Columbia that he discovered deuterium, a substance which was to become a major fusionable material in the hydrogen bomb. During World War II, he was one of three program chiefs in the Manhattan Project and directed the effort at Columbia which resulted in the isolation of pure Uranium 235, used in the production of the first atomic bomb. He resigned his post at Columbia after the atomic bomb was dropped on Hiroshima, and eventually became a critic of nuclear weapons and nuclear power plants.

Urey became distinguished service professor of chemistry at the Institute for Nuclear Studies at the University of Chicago in 1945. He taught at the University of Chicago until 1958, when he came west to join the faculty of the infant San Diego campus of the University of California.

In a testimony to Urey, faculty of the UC San Diego Department of Chemistry wrote that Urey was "one of the founding members of this department. His presence here helped to attract other outstanding people. He set a standard of quality in science and commitment to teaching which has been, and will continue to be, our goal.

Urey Hall, the first academic building to be constructed on the San Diego campus, was named in honor of Urey and his wife, Frieda. Urey's last official appearance on campus was in the fall of 1979, when a plaque honoring the Ureys was placed on the building.

At UC San Diego, Urey's research concentrated on the field of cosmochemistry, another area in which he was considered a pioneer. He became involved in the Apollo lunar exploration program, and was one of six UC San Diego scientists commissioned by the National Aeronautics and Space Administration to analyze lunar samples.

"He was one of the prime movers in persuading Geoffrey and me to come to UCSD," said Margaret Burbidge, professor of physics, director of the university's Center for Astrophysics and Space Sciences and president-elect of the American Association for the Advancement of Science. Her husband, Dr. Geoffrey Burbidge, is also a professor of physics and is director of the Kitt Peak National Observatory in Arizona.

"Dr. Urey has always been an inspiration to me, ever since our days at the University of Chicago," said Burbidge.

In 1978, Urey was sent a fragment of the Kirin meteorite, a two-ton meteorite which fell in China in 1976, as a gift from scientists in the People's Republic of China. Urey turned down an invitation to visit China, saying he was "pretty old for such a long trip."

Urey suffered from heart trouble and Parkinson's disease during his last years. He held the title University Professor Emeritus from the University of California, but his declining health and failing eyesight confined him to his home.

Dr. Stanley Miller, a colleague of Urey's at UC San Diego and one of his students at the University of Chicago, called Urey "one of the most distinguished scientists of the century."

"Harold Urey was one of this nation's greatest scientists," said UC San Diego Chancellor Richard Atkinson. "With his wide-ranging curiosity, his brilliant intellect and his capacity for hard work, he set a standard for a life in science which few approach. He was one of those rare men for whom teaching and research were not separate activities, but complementary aspects of his scientific life.

"Urey exerted a major influence on the progress of UC San Diego from a fledgling university in the early 1960s to its present distinction," Atkinson said. "In particular, our outstanding Department of Chemistry owes much to his presence and counsel. There is no life I would recommend our students to emulate more than Harold Urey's. We have lost a good friend, an active colleague and a great scientist."

Urey is survived by his wife, Frieda; his children, Gertrude Elizabeth Baranger, Frieda Rebecca Brown, Mary Alice Lorey and John C. Urey; three sisters; 10 grandchildren and a great-grandchild.

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