



IN MEMORIAM

William M. Kaula
Professor Emeritus of Geophysics
Los Angeles
1926 — 2000

UCLA lost a devoted and eminent member of its faculty with the passing of William Mason Kaula on April 1, 2000. Bill arrived on campus in 1963 as a professor in the Institute of Geophysics and Planetary Physics. Except for a three-year leave of absence in the mid 1980s to serve as chief of the National Geodetic Survey of the National Oceanic and Atmospheric Administration in Rockville, Maryland, Bill spent the next thirty-seven years in dedicated and energetic service to the UCLA family. He was chair of both the former Department of Geophysics and Space Physics and the Department of Earth and Space Sciences. Bill served twice as a member of UCLA's Council on Academic Personnel and once as its chair. He attached great importance to this service and in his last days he was troubled by his inability to carry out his duties in CAP.

William Kaula's early life took a circuitous path to academia. Bill was born in Sydney, Australia, on May 19, 1926, to Edna Mason, an Australian of British descent, and Edgar (Ed) Kaula, an American of Czech descent. The family moved from Australia, to New Zealand, to Holland, and back to the United States. Bill spent his teenage years at the Kaula home in Somerville, Massachusetts. Intellectual pursuits — chess, reading, music, and philosophy — were his favorite pastimes, and he pursued these avidly throughout his life. The time for college arrived in the midst of World War II; at his father's suggestion, Bill applied to and was accepted in the class of 1948 at the U.S. Military Academy. Bill's intellectual leanings seem at odds with his choice of West Point as a college, but in later years Bill credited his military education and experience with teaching him the discipline and organization that helped him succeed in science. Colleagues who visited Bill in his office at UCLA were always impressed by its organization. Everything was in its place and those places were usually out of sight. Bill felt strongly that he not only benefited greatly from the experience of attending West Point, but it helped him serve the country very well in ways other than military.

Bill's West Point career began slowly. However, he turned things around fairly quickly, despite being near the bottom of his class in athletics and military aptitude. He attributed the change in direction to helping a roommate with his studies. In his last three years Bill attained the distinction of Star Man. In 1987, Bill was elected to the National Academy of Sciences. He was the first USMA graduate to attain this honor since George Squires, Chief of the Signal Corps in 1919. He was particularly proud of this achievement.

After graduating from West Point, Bill joined the Corps of Engineers and was assigned to the Hanau Engineer Depot in Germany. Several years later he was offered the opportunity to attend graduate school and elected geodesy "because it was vaguely a mixture of something easy — mathematics — and something that got you out-of-doors — surveying." Though it must not have been obvious to Bill, he opened the door to his scientific future when he went to Ohio State in 1952 to study geodesy. Bill found himself to be the first and only student in a new program with one faculty member who promptly left to spend a summer in Finland, advising Bill to study a certain geodetic text in his absence. Bill studied the recommended text and more and obtained his masters in Geodesy. Though he would later receive an honorary Doctor of Science from Ohio State, the master's degree was the highest formal degree Bill earned. Bill took pleasure and pride in the fact that he did not have a Ph.D. when he was appointed a tenured professor at UCLA. No one had been appointed to the tenured faculty in Physical Sciences at UCLA without a Ph.D. for 15 years prior to Bill's appointment; no one without a Ph.D. has received such an appointment since.

Subsequent to his being labeled as a geodesist, Bill was assigned by the Army to carry out a topographic survey of the island of New Britain, northwest of New Guinea. Bill described this posting as the most satisfying of his military career and he learned a new skill at the time, the ability to communicate in Pidgin English. Bill enjoyed the turn of an uncommon phrase and took pleasure in rattling off the tongue-twisting names of towns in New South Wales such as Wagga Wagga and Woolloomooloo. Bill's pride in his Australian origins was evident on such occasions.

When Bill's next assignment in the Army seemed less than ideal, he resigned from the military in 1957 to seek employment more satisfying to himself and more useful to the nation in those days of the "missile gap." He went to work for the Army Map Service in Bethesda, Maryland, and found the freedom to study variations in the Earth's gravity field, then thought to affect inertial guidance significantly. Within a year his supervisor moved to NASA and Bill was in charge at the Army Map Service. Bill moved to NASA in 1960 as a project scientist for a geodetic satellite. Multiple postponements in the project due to security considerations left Bill with time to master satellite orbital dynamics and embark on research on the implications of the gravity field for the nature of Earth's interior and applications of dynamical techniques to the evolution of natural orbits. Bill began publishing the results of his research at a rapid pace, and his productivity and findings led to his appointment at UCLA in 1963.

Bill's research flourished after arriving at UCLA, and he quickly published two books that were to become classics —Theory of Satellite Geodesy in 1966 and Introduction to Planetary Physics in 1968. Bill wanted to write a revised version of his unique planetary physics book, but unfortunately that never happened. Bill published over 250 papers on a broad range of subjects, including the gravity fields of the Earth and the terrestrial planets, their interior structures and dynamics, and their dynamical and thermal evolutions. His papers dealt with tides, chaotic dynamics, planetesimal distributions, accretion of terrestrial planets, formation of the solar system, origin of the Moon and comparative planetology.

Bill brought great distinction to UCLA with his many appointments, honors, and awards. He often served the National Aeronautics and Space Administration (NASA) in geodynamics and planetary exploration, as a team leader for the laser altimeter on the Apollo 15, 16, and 17 missions to the Moon, and as a team member for the radar and gravity experiments on the Magellan mission to Venus, as Chair of the Lunar and Planetary Review Panel, and twice as a member of the National Research Council Space Science Board. His service to the American Geophysical Union (AGU) included the presidency of the Geodesy Section and editor of the Journal of Geophysical Research – Solid Earth. Bill helped found the Division of Dynamical Astronomy (DDA) of the American Astronomical Society (AAS), and served as both vice chairman from 1974 to 1975 and chairman from 1975 to 1976. The AGU rewarded him with fellowship in the Union and the Whitten Medal. NASA presented Bill with its Medal for Exceptional Scientific Achievement. The AAS presented Bill with the Brouwer Award in 1989. In 1996, the asteroid 5685 was officially named "Kaula" in his honor. In 1987, as already mentioned, Bill was elected to the National Academy of Sciences.

Bill Kaula was not only an exceptional scientist; he was knowledgeable about a broad range of things. His interests as a youth followed him all his life. He was as comfortable discussing literature, art, music, and history as debating science. He traveled widely and kept detailed accounts of his adventures. He assembled an inspiring collection of poems and quotations known as "Prime Spells." He published his own poem about planetary evolution, "The Seven Ages of a Planet," in a paper in the scientific journal Icarus. One could always count on Bill for a recommendation of a good restaurant. His home with his wife Gene Kaula was often the place where visitors to the campus would be welcomed after a seminar. We have not been able to replace the warmth and hospitality of the Kaulas' living room; we are, however, trying to capture some of Bill's spirit by dedicating his office in the Earth and Space Sciences building as a Seminar/ Reading Room where faculty and visitors can gather for meetings and discussions or just to share a coffee in the presence of Bill's memorabilia.

Bill was first diagnosed with hairy cell leukemia in the mid-1980s. He was one of the first beneficiaries of the now standard cure for that condition, but after 1991 he fell victim to squamous cell carcinoma of the scalp. Throughout his long battles with both forms of cancer, Bill maintained a positive outlook and his wry sense of humor. He covered his physical scars with a cap and went on with his life as though nothing was wrong. He never stopped doing his science or working hard for UCLA. He had his laptop in his hospital room so he would not miss the opportunity to get something done. He welcomed visitors even near the end and more often than not he was the most cheerful and interesting person in the room. William Kaula is sorely missed by all who knew him.

Gerald Schubert