



IN MEMORIAM

Albert E. Whitford
Professor of Astronomy and Astrophysics, Emeritus
Santa Cruz
1905 — 2002

Albert E. Whitford, astronomer, professor of astronomy and astrophysics emeritus and director of Lick Observatory from 1958 to 1968, died in Madison, Wisconsin, at age 96 on March 28, 2002, following a short illness. He was an outstanding research astrophysicist, especially well known for his pioneering work on photoelectric photometry of stars and galaxies, leading to knowledge of their physical nature and distances, and of the interstellar dust in our Galaxy.

Albert was born in Milton, Wisconsin, on October 22, 1905, and did his undergraduate study, leading to a B.A. in 1926, at Milton College in his hometown. From there Albert moved on to graduate work in physics at the University of Wisconsin in nearby Madison, specializing in experimental physics. As an assistant to Joel Stebbins, the great pioneer of photoelectric photometry in America, Albert developed a greatly improved electronic system, which enabled them together to push the measurements to much fainter stars. They made a good team, and after completing his Ph.D. in physics in 1932, Albert decided to become an astronomer. He spent two years at Caltech and Mount Wilson Observatory as a postdoctoral fellow, honing his skills.

In 1935, Albert returned to Madison in a research position, and was promoted to the faculty as an assistant professor in 1938. Stebbins depended heavily on him for his electronic expertise, as they continued their collaboration at Wisconsin and at Mount Wilson whenever they could use the telescopes there. Their research was outstanding and their techniques were widely copied, but never equaled by other astronomers.

In 1937, Albert married Eleanor B. Whitelaw, whose brother had been a fellow physics graduate student with him. She was a graduate of Park College in Missouri, and then earned a master's degree at the University of Chicago, where she worked until they were married. They had three children, William C. Whitford, Mary W. Graves, and Martha W. Barss, and nine grandchildren, all of whom survived them both. In the 1950s Eleanor went back to work, this time on the staff of the Wisconsin State Legislature in Madison. She died in 1986 after forty-eight years of their highly compatible marriage.

In the summer of 1940, following the fall of France, Albert, well known among physicists for his electronic skills, was heavily recruited to join the nascent Radiation Laboratory, America's radar-development center at M.I.T. He moved to Cambridge with his family in early January 1941, nearly a year before Pearl Harbor, and worked there and in England until after the war ended. Whitford was out of astronomy and scientific research for five years, until January 1946 when he returned to Wisconsin as associate professor of astronomy. He and Stebbins had always wanted to measure quantitatively the radiation from stars over as wide a spectral range as possible, and Albert moved quickly to do so, obtaining and putting into peacetime astronomical use new infrared detectors that had been developed during the war years, to push out to longer wavelengths.

When Stebbins retired in 1948, Albert was promoted to full professor and director of Washburn Observatory. He continued observing visits to Mount Wilson and to Lick Observatory on Mount Hamilton, California. By now he was working especially on faint galaxies, and on objects near the center of our galaxy, cooperating with Edwin Hubble and Walter Baade at Palomar Observatory. Whitford was also working – mostly at Washburn Observatory – on photoelectric photometry of faint, highly luminous O and B stars. W. W. Morgan at nearby Yerkes Observatory used his results to determine the extinction by interstellar dust along the line of sight to these distant objects, and thus to locate the spiral arms in our galaxy.

During this period, Albert convinced the Wisconsin administration to provide funds for a new, research-level 36-inch reflector at a new Pine Bluff Observatory, built outside the city of Madison and its bright lights. This telescope was optimized for photoelectric photometry and spectrophotometry, and proved very useful for astrophysical research after it went into operation in 1958.

But by then Albert had been offered and accepted the directorship of Lick Observatory, and left for California soon after the new telescope's dedication. At Lick, the 120-inch reflector, then the second largest telescope in the world, had been under construction for several years. He devoted full time and all his energies to pushing it through to completion, and into full operation by early 1960. Albert was quiet and understated, but determined and decisive, and by now he was a leader in American astronomy. Scientists trusted his clear thinking and careful study of any problem in which he was involved. He played an important role in the conferences and committees that led to the founding of Kitt Peak National Observatory, the first observatory built specifically for use by all American research astronomers.

In 1965, Lick Observatory became part of the very new UC Santa Cruz campus, which then had its first college still partly under construction, Whitford led the move of the Lick faculty to it from Mount Hamilton the next year. He and they gave instant hard-science research credibility to what until then had been seen as an almost completely undergraduate institution. The Lick astronomers, including Albert, taught undergraduate courses and started what soon became an excellent new graduate program in astronomy and astrophysics. Whitford became a valued adviser to several students, who did their Ph.D. theses in observational astrophysics, particularly on stellar populations in galaxies.

Albert was the chair of the first survey of the needs of astronomy, organized by the National Academy of Sciences. The resulting "Whitford Report," issued in 1964, was widely accepted and was used by the NSF and other government agencies for long-range planning. It was so successful that surveys like it have been repeated each decade since, and it has been used as a model by other sciences.

In 1968 Albert stepped down from the directorship but continued active research until he reached the mandatory retirement age in 1973. After that, as an emeritus professor his interest in astrophysical research never flagged. He continued observing, now on visits to Cerro Tololo Interamerican Observatory in Chile, and he read papers assiduously, attended colloquia and meetings, and discussed current work with his younger colleagues. In 1996, at the age of 90, he was honored by a symposium held at UCSC on the "Structure, Kinematics, and History of the Galactic Nuclear Bulge," at which several of the speakers, leading authorities in the field (as he was), were former graduate students he had advised and inspired. Later that year he moved from Santa Cruz back to Madison, near his roots. There as a visiting emeritus professor, he had a shared office in the Wisconsin astronomy department, where he continued to read and discuss research.

Albert was elected to the National Academy of Sciences in 1954, and was the president of the American Astronomical Society from 1967 to 1970. He was its Henry Norris Russell lecturer, its highest honor, in 1986. The Astronomical Society of the Pacific awarded him its Catherine Wolfe Bruce gold medal in 1996, and astronomers everywhere respected and admired him.

Donald E. Osterbrock