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Photo 1954, courtesy Lowell Observatory Archives

### **Wilson, Albert George**

Born Houston, Texas, USA, 28 July 1918

Died Sebastopol, California, USA 27 August 2012

Albert G. Wilson supervised the National Geographic Society-Palomar Observatory Sky Survey, directed the Lowell Observatory, and was the founding co-editor of *Icarus*. His discoveries included four dwarf galaxies in the Local Group, several supernovae, a comet, and at least five asteroids. His main interest, however, was theoretical cosmology, especially the idea of discretization.

The son of oil company geologist Arthur Rector Wilson and homemaker and writer Hazel Mildred Straw, Wilson grew up in Denver but moved back to Houston with his family when he finished high school. He had decided at age five that he wanted to be an astronomer, but he attended Rice Institute (now University) in Houston, where he asked the president why there was no astronomy and was told that the damp, cloudy climate precluded it.

Upon receiving his B.S. in electrical engineering in 1941, Wilson entered graduate school at the California Institute of Technology—another institution that did not offer any astronomy—in mathematics. His graduate work was interrupted by two years in the United States Navy, installing radar on ships. He returned to Caltech to submit his thesis in 1947 on an applied mathematics problem dealing with the spread of heat after a major impact. At this time he became a senior research fellow at Caltech and began work with **Fritz Zwicky** on the search for supernovae with the 18-inch Schmidt telescope. He would always feel close to Zwicky and his “morphological” approach to science.

In 1948 **Jesse Greenstein** came to Caltech and founded the program in astronomy. Wilson, a staff member of both Caltech and the Mount Wilson and Palomar Observatories from 1949 to 1953, helped organize the astrophysics library and taught both undergraduate and graduate courses. He taught practical astronomy to graduate students, including Helmut Abt and Allan Sandage. He was put in charge of observations for the National Geographical Society-Palomar

Observatory Sky Survey, working under **Ira Bowen**. It was during this period that he and R. G. Harrington discovered Leo I and Leo II. Later, Wilson announced the discoveries of two more local group galaxies, the Draco and Ursa Minor Dwarfs. During this period Wilson began writing popular articles for such publications as *Scientific American* and *National Geographic*.

Lowell Observatory, a private institution in Flagstaff, Arizona, founded by wealthy Bostonian **Percival Lowell** in 1894, was in the doldrums. For many decades three aging astronomers, Director **Vesto [V.M.] Slipher**, his brother **Earl [E.C.] Slipher**, and **Carl Lampland**, had hoarded most of the telescope time but had published very little. V. M. had devoted most of his energies to his business ventures, E. C. to politics. The sole trustee, Roger Lowell Putnam, busy with business and politics in far-off Massachusetts, finally decided to force some changes after Lampland died in 1951. He heard of Wilson from astronomer **John Duncan**, ascertained that Wilson was acceptable to the Slipher brothers, and hired him as assistant director effective 1 July 1953 with the understanding that if all went well V. M. would retire and Wilson would succeed him after a year.

Wilson served as director of Lowell Observatory from 11 November 1954 to 3 January 1957. It did not go well. His attitude may be shown by an excerpt from a letter he wrote the trustee in 1955:

There will be a period of being tough. But we suffer from some deeply entrenched inefficiency. A completely new broom must be used for the sweeping. I, nor anyone else, could not get the Lowell Observatory on a productive basis with the existing set up. I tried for seven months to sell my program, win them over, but all I got was some rather contemptible back stabbing. Now the program goes on whether they like it or not, and if they continue to drag their feet they will have to go.

The opposition, which led to his early resignation, came not from the elderly Sliphers, who were supportive, but from such younger staff members as Harold Johnson and Henry Giclas. Half a century later, Wilson recalled gratefully that his successor, John S. Hall, thanked him for doing much of the necessary “dirty work” to modernize the historic observatory.

Despite constant battles with the staff, Wilson achieved quite a bit during his short tenure at Lowell. He hosted the first ever “Astrobiology Seminar” and planned a meeting of the Astronomical Society of the Pacific (held at Lowell after his resignation), began a survey for a new dark-sky site, initiated seminar and guest investigator programs, and obtained outside support for several programs, including observations of a Mars opposition from South Africa and a solar eclipse from Sri Lanka. He also joined with Russell Morgan and Ralph Sturm of Johns Hopkins University to test their electronic image-orthicon intensifier, developed for medical uses, on planetary photography. He became interested in—and wrote about—Mars, astrobiology, and scintillation layers in the Earth’s atmosphere. He served on the Council of the American Astronomical Society and the Board of Trustees of the Astronomical Society of the Pacific, both from 1955 to 1958.

Returning to southern California, Wilson worked as a senior member of the research staff at the Rand Corporation from 1957 to 1966. His work was supported by the United States Air Force, and he had plenty of time for his own research, which was in galaxies and cosmology. One of the visitors there was **Zdenek Kopal**, who wanted to start a journal of solar-system studies, so the two of them founded *Icarus* in 1962 and jointly edited it for its first six years, after which they turned it over to Carl Sagan.

It was at Rand that Wilson met mathematician Dominic G. B. Edelen, who shared his interest in the idea of discretization (what now probably would be called quantization) in astronomy. The two wrote several articles and a book together on the subject before and after Edelen went off to become a professor at Lehigh University. Their ideas have received little support.

In 1966, Wilson became associate director of the Douglas Advanced Research Laboratories, where he had no difficulties in managing engineers and scientists. He even got Douglas to sponsor a 1968 symposium on Hierarchical Structures. Lancelot Law Whyte, Wilson, and Wilson's wife Donna edited the proceedings, which included contributions by such astronomers as **Edward Harrison** and **Thornton Page** as well as Wilson's own ideas on hierarchical structure in the cosmos.

Wilson retired from Douglas in 1972 rather than move to Saint Louis after the McDonnell-Douglas merger. He then taught astronomy and philosophy of science, including such courses as "Math, Myth, and Metaphor" as an adjunct professor at the University of Southern California and the University of California, Los Angeles. He was associated with the Institute for Man and Science and the Institute for the Future.

Wilson was married to Frances Malich from 1940–1957. They had four children. In 1961 he married Donna Scott, an editor and writer who coauthored some of his writings until her death in 1998.

Wilson spent his last years living quietly in Sebastopol, California, studying Buddhist philosophy. He noted that he had three things in common with Percival Lowell: both were primarily mathematicians but with interests in astronomy and in Eastern philosophy.

Joseph S. Tenn

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