

William Aaron Nierenberg Biography



William Aaron Nierenberg was born in New York City on February 13, 1919. After graduating from Townsend Harris High School, he received three degrees in physics: the B.S. from City College of New York in 1939, the M.A. and Ph.D. from Columbia University in 1942 and 1947 under the direction of I.I. Rabi. Nierenberg's national reputation as a scientist developed from his experimental and theoretical work in low-energy particle physics during the 1950s at the University of California, Berkeley. Since 1965 when he became director of the Scripps Institution of Oceanography, he has contributed as administrator, consultant, and advisor in the areas of oceanographic research, military defense, and the global environment.

After graduating from Columbia University, where he participated in the Manhattan Project, Nierenberg became an assistant professor at the University of Michigan, 1948-50. In 1950, he joined the University of California, Berkeley physics department where he formed the Atomic Beam Laboratory, concurrently founding

the Atomic Beam Research Group at Berkeley's Lawrence Radiation Laboratory. His research during this period, 1950-65, resulted in over 100 publications relating to many theoretical and experimental areas within low-energy nuclear physics, especially magnetic moments and nuclear spin. It is for this work that he was elected to the National Academy of Sciences in 1971.

While yet primarily a physicist, Nierenberg began work in oceanography and scientific advising while still at UC-Berkeley. On sabbatical from Berkeley in 1953-54, he served as project director of Columbia's Hudson Laboratories, where he worked on underwater sound studies, his first research related to oceanography. In 1958, he began his first national consulting and advising when he acted for two years as consultant to the National Security Agency and as a member of the President's Science Advisory Panel on Antisubmarine Warfare. He promptly moved on to the international arena, developing his career as statesman of science to be NATO's Secretary General for Scientific Affairs in Paris, serving concurrently as Professeur Associate of the University of Paris (1960-62). Nierenberg had become fluent in French during a year at the University of Paris as an undergraduate in 1937-1938. In 1962, he joined JASON, an independent group that advises the Department of Defense on scientific matters related to national security. This has been his "longest continuous service." He served as chairman during the early 1980s.



Nierenberg was appointed S.I.O.'s seventh director on July 1, 1965. Nierenberg was also vice chancellor of marine science, professor of physics and geophysics, and dean of S.I.O.'s graduate program. He came to Scripps Institution of Oceanography at a time of increasing public interest in the oceans. For oceanography to develop fully as a field, however, Nierenberg felt it was necessary to improve funding and to invest in engineering, equipment, buildings, ships, and personnel. While director, he supervised a five-fold increase in S.I.O.'s budget, obtaining funding from federal, state, and private sources. He expanded the graduate education program and started an applied ocean sciences program, which stressed both engineering and oceanography. Among the first to recognize the value of satellites and computers in oceanography, Nierenberg started the first use of large-scale computers aboard research vessels at S.I.O., obtained remote access to the CRAY Supercomputer at UCSD, and established the first remote sensing satellite facility at an oceanographic research center.

"I try to start one new project each year," he said. Among these were the JOIDES Deep Sea Drilling Project, which was operated by S.I.O., and NORPAX, or North Pacific Experiment, which studied the impact of the air-ocean interface on short-term climatic changes. Many new research vessels and buildings were added during Nierenberg's administration. Notable among these was R/V Melville, the first in a series of research vessels designed specifically for oceanographic work. Nierenberg increased cooperative programs with other institutions and strengthened ties with outside organizations and agencies at local, state, national, and international levels. His awareness of the scientific political climate helped keep S.I.O. at the forefront of scientific advances.



Nierenberg, however, described his own primary role as that of advocate for the S.I.O. faculty and staff. He believed S.I.O. owed its success to its "hundreds of varied research programs, its bright, young, hard-working students, and its mission-oriented laboratories." According to his successor, Edward A. Frieman, Nierenberg "brought the institution to the forefront of modern science by spearheading innovative programs, initiating new technologies for oceanography, and recruiting outstanding faculty and staff."

Nierenberg retired in 1986, and was appointed director emeritus and professor emeritus. Edward Allen Frieman was next appointed director of S.I.O., a position he held ten years until his retirement in 1996. During his 21 years as director of an ever-growing research institute, Nierenberg was extremely active in science policy, serving extensively on committees and panels for the National Academy of Science's National Research Council (NRC) and the National Science Foundation's National Science Board (NSB), as well as on NASA's Space Advisory Board and the President's National Advisory Committee on Oceans

and Atmosphere (NACOA).

Bill Nierenberg died of cancer at his home in La Jolla, California, on September 10, 2000.

WILLIAM AARON NIERENBERG

B I B L I O G R A P H Y

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