Verner Edward Suomi

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Submitted by the NAE Home Secretary

Professor Emeritus Verner E. Suomi died at University Hospital in Madison, Wisconsin, on Sunday, July 30, 1995, after a long battle with heart disease. Internationally recognized as the father of satellite meteorology," Professor Suomi invented numerous satellite instruments, leading to a better understanding of the global atmospheric circulation. For his Ph.D. thesis (1953), he studied the local energy budget, using a cornfield as his experimental laboratory. In conducting the first meteorological experiment from the *Explorer VII* satellite in 1959, he analyzed the radiative energy balance of the earth. This was followed by planetary investigations with similar instruments for Venus and Jupiter space probes. Professor Suomi's most influential invention was the spin-scan camera, enabling geostationary weather observations. The technology is still used worldwide today.

Professor Suomi was born December 6, 1915, in Eveleth, Minnesota. He received a B.S. in 1938 from Winona Teachers' College, Winona, Minnesota, where he met Paula Meyer. They were married August 10, 1941, in Immanuel Lutheran Church, Potsdam, Minnesota, near the Meyer family farm. The Suomis have three children: Lois was born in 1943; Stephen, in 1945; and Eric, in 1950.

Professor Suomi taught science in Minnesota high schools from 1938 through 1941. At the start of World War II, he enrolled in a civil air patrol course and began studying meteorology. He was so taken with the nascent science, he initiated studies at the University of Chicago and taught practical meteorology to pilots. He came to the University of Wisconsin (UW) in Madison in 1948, and was one of the first faculty members of the Department of Meteorology. In 1953 he received his Ph.D. at the University of Chicago. He taught at UW-Madison for his entire career, except for appointments at the National Science Foundation (1962) and as chief scientist of the United States Weather Bureau (1964). In Wisconsin, Professor Suomi taught in the Departments of Meteorology and Soil Science and the Institute for Environmental Studies. He held the Harry Wexler professorship in meteorology and twice directed the department (1950 to 1952 and 1954 to 1957). Professor Suomi retired from formal teaching in 1986 but continued teaching a weekly undergraduate meteorology course in emeritus status, saying it was a joy to him.

In 1965 Professor Suomi founded the Space Science and Engineering Center to specialize in atmospheric research and instrument development for satellites and space probes. Later, the computer system McIDAS was developed to manage data from "his" satellites. He was also the first director of the Cooperative Institute for Meteorological Satellite Studies, founded in 1980 through the joint sponsorship of UW and the National Oceanic and Atmospheric Administration. Professor Suomi never forgot his real employers or purpose, he said, and every morning looked at the dedication plaque in his Center: "to the understanding of man's physical environment and its use for the benefit of mankind." That characterizes his work. His inventions led to useful products that expanded knowledge—geostationary satellites to show weather systems passing over the face of the earth, a powerful computer system to enable earth scientists to "drink from the fire hydrant" of enormously large satellite databases and to enhance images of the planets, and instruments to measure Earth's and other planets' heat budgets.

Professor Suomi was honored numerous times during his scientific career and each time acknowledged the help of his colleagues. At the ceremony in May 1994 to present him with the World Meteorological Organization's International Meteorological Organization Prize, he recognized University of Wisconsin contributions to his success, "all the way from deans to technicians. Without their very significant encouragement and help, it never would have come to pass." His earlier honors include the National Medal of Science, the first Walter Ahlstrom Prize (Finland), the Franklin Medal (given by Pennsylvania's scientific Franklin Institute), and awards from the American Meteorological Society, National Aeronautics and Space Administration, and National Oceanic and Atmospheric Administration. He was a member of the National Academy of Engineering, the American Meteorology Society, the American Geophysical Union, the Finnish Academy of Sciences (Helsinki), the Deutsch Akademie der Naturforscher, the International Academy of Astronautics (Paris), the American Philosophical Society (Philadelphia), the Academy of Arts and Sciences (Boston), Phi Kappa Phi, and the American Association for the Advancement of Science. He was elected president of the American Meteorological Society and of the American Geophysical Union's Atmospheric Science Section in 1968 and served on many influential committees, many of them as a director.

University of Wisconsin Provost John Wiley, who worked with Professor Suomi while he was dean of the graduate school, said, "Verner Suomi was a giant of modern science. His inventions were simple and elegant, and their consequences are ubiquitous. Anyone looking at a satellite image of Earth on the evening weather is looking at the product of a rare mind."

Professor Suomi credited the schools of iron-range country in northern Minnesota with giving him a grounding in practical scientific thought, an emphasis that he instilled in his many students. It was said of him that "he studied nature with the efficiency of an engineer and with the subtlety and insight of a true scientist." He brought that insight to his

teaching, much done informally outside the classroom. Professor Suomi's professional contributions are enormously important, but his work has a far greater impact among the ranks of new scientists who are involved in observing and increasing the understanding of our global geophysical environment and in direct applications of weather imaging to humankind's daily activities.