Lloyd V. Berkner and Alan T. Waterman were two of the leading figures at the national level who moved the atmospheric sciences up toward the front ranks of science and technology. Both enjoyed an almost life-long personal and professional interest in the atmospheric sciences and both exercised this interest at many times and in many ways for the betterment of this science area.

The American Meteorological Society recognized their unusual accomplishments and elected both to the esteemed ranks of the AMS honorary membership. Additionally, the Cleveland Abbey Award, the Society’s award for long and distinguished service to atmospheric sciences by an individual, was presented to both Berkner and Waterman.

Berkner’s interest in atmospheric sciences came about through his early studies of world-wide radio transmission and ionospheric research. He was a radio specialist with the first Byrd Antarctic Expedition (1928-30). Thereafter he never lost his zeal for atmospheric research. While a research associate with the Carnegie Institute of Washington, Berkner was a major contributor to the development of research in the ionosphere.

As co-chairman with the late Dr. Carl-Gustaf Rossby, he organized the Committee on Meteorology of the National Academy of Sciences. After extended studies, this Committee reported in 1957 a series of recommendations on research and education in meteorology. This report led directly to the National Center for Atmospheric Research at Boulder, Colorado, the meteorology film program and other educational programs in the AMS, and to a sizeable increase in the support of university research.

Remarkably enough, Berkner was in the midst of a new career in the atmospheric sciences which was ended by his untimely death. With Prof. L. C. Marshall he was working on the history of the Earth’s atmosphere. His work related especially to the origin and stability of oxygen in the atmosphere and was published in a series of scientific articles. That he could maintain the pace of frontier research up to the end, at age 62, is rare testimony to this remarkable man.

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Alan Waterman’s early interest in meteorology came about, partly as the result of his assignment to the weather battalion of the Signal Corps in World War I. Here, with Robert A. Millikan, he pioneered in the development of atmospheric balloon sounding and balloon tracking.

Under early support of meteorology by the Office of Naval Research, Waterman, as deputy director and chief scientist, first directed the attention of ONR to the work of Rossby at Chicago, Von Neumann at Princeton, Langmuir at General Electric, Houghton at MIT, and Macelwane at St. Louis. Through these and other leaders in the field, ONR, in the mid-40s, encouraged the beginning of systematic federal support of university research in the weather sciences.

Later, as director of NSF, he continued and expanded the base of this support for meteorological research by establishing within NSF the Atmospheric Sciences Program, the National Weather Modification Research Program and the principal contract support for the National Center for Atmospheric Research. Around Waterman the NSF rallied the needed federal government involvement and financial commitment which allowed the Center to become a reality and grow to the international reputation it enjoys today. His simply stated advice to the fledgling atmospheric sciences program was, “Your biggest problem will be to plan large enough for the atmospheric sciences.”

In 1959 Dr. Waterman inspired the establishment of the Interdepartmental Committee on Atmospheric Sciences and served as its chairman for the next five years. This Committee brought together the many federal agencies having atmospheric sciences activities for common planning and coordination on national goals, needs and programs.

Lloyd Viel Berkner was born in Milwaukee, Wisconsin, 1 February 1905. He received a Bachelor’s degree in electrical engineering from the University of Minnesota. Honorary degrees have come to him from a dozen universities.

After his Antarctica experience with the Byrd Expedition, Berkner came to Washington as an engineer for the National Bureau of Standards and later served as a research physicist in terrestrial magnetism at Carnegie Institute of Washington.

Berkner culminated an illustrious career as a rear admiral in the U. S. Naval Reserve. For his World War II work as head of the radar section of the Navy’s Bureau of Aeronautics he was awarded the Legion of Merit.

In 1949 he was called to the State Department and as consultant he organized a task force to review the growing impact of science in the development of foreign policy. This

Alan Towers Waterman was born in Cornwall-on-the-Hudson, New York, on 4 June 1892. He received his undergraduate and graduate degrees at Princeton University, earning a Ph.D. in physics there in 1916. He held twenty-one honorary degrees.

For more than a quarter of a century he was in the physics department at Yale, leaving in 1942 to join the Office of Scientific Research and Development. There he served with Vannevar Bush, scientific elder statesman of World War II. He held several positions including chief of the Office of Field Service. In 1946 Waterman became deputy chief and chief scientist of the then newly established Office of Naval Research. It was here under Waterman that many of the basic policies for federal government support of research were formulated and carried out. He went directly from ONR to NSF.
study led to the creation of science attachés at our major missions abroad. Continuing with his international interest, he conceived the idea of the International Geophysical Year and worked intensely toward its successful realization. Berkner also served as president of the International Council of Scientific Unions, the International Scientific Radio Union, and the American Geophysical Union.

A member of the National Academy of Sciences for over 20 years, Berkner served on many of its boards and committees. As chairman he organized the Space-Science Board which operates in an advisory capacity for planning the scientific aspects of the U. S. space program.

From 1951 to 1960 Berkner was head of Associated University Inc., formed by nine universities to manage the Brookhaven National Laboratory on Long Island, New York, and the National Radio Astronomy Observatory at Greenbank, West Virginia.

He became president of the Graduate Research Center of the Southwest in 1960, retiring in 1965 because of a heart ailment, but continuing as chairman of its Board of Trustees. The Center (recently renamed “Southwest Center for Advanced Studies”) was created to encourage the expansion of graduate education in the universities of the southwest.

A leader in shaping U. S. science policy for over two decades, Berkner died on 4 June 1967. He was stricken with a heart attack while attending a meeting of the Council of the National Academy of Sciences, of which he was treasurer.

Waterman—continued

Dr. Waterman came to NSF on the day of its establishment, 6 April 1951, and directed that agency for 12 years until he retired in 1963. A “scientist’s scientist,” he was immensely involved in the development that brought about the present relationship of what has been called “Big Government, Big Science.” More than any other single person, he made the Foundation an important bulwark of the nation’s scientific strength. He left an indelible mark of quality and of integrity in every field of activity in which the Foundation was involved.

Following the precepts set forth in the famous report by Vannevar Bush, “Science, the Endless Frontier,” as embodied in the National Science Foundation Act of 1950, Dr. Waterman, in concert with the National Science Board, established the basic philosophy still used in the Foundation, whereby scientists themselves largely determine the direction and progress of basic research. The Foundation early established the pattern of giving strong support to research at the nation’s colleges and universities where much of the best basic research and all of the training of future scientists, engineers, and physicians is carried out.

To the widely endorsed concept of providing strong support to advanced students already committed to scientific careers, the Foundation, under his leadership, added the next logical step of assisting improvement of scientific education on the earlier rungs of the educational ladder. Thus the nation is also strengthened through a better informed citizenry, with an ever-increasing depth of understanding of what science is, and what part it plays in the lives of everyone.

Since his retirement he was active in various advisory and administrative activities serving on numerous boards and committees; including special consultant to the President, National Academy of Sciences; and Board of Trustees, University Corporation of Atmospheric Research. Dr. Waterman died on 30 November 1967 at the age of 75, following a brief illness.—Earl G. Droessler

Edward John Minser
1904–1968

On 14 January Edward J. Minser, director of meteorology for Trans World Airlines, died suddenly at his home in Prairie Village, Kans.

Mr. Minser was born in St. Paul, Minn., and attended the U. S. Naval Aerological School in Washington, D. C. After several years service in the Navy and a brief period as an observer with the Weather Bureau, he joined Transcontinental Air Transport, a predecessor of Trans World Airlines, in 1929. He remained with the company after it became TWA, advancing through the positions of chief meteorologist, regional director for operations, and general manager of passenger service, to become director of meteorology in 1959.

A pioneer in aviation meteorology, he was one of the first to make studies of aircraft icing, aircraft lightning discharges, and atmospherics. His research into the weather of the North Atlantic made possible the development of pressure pattern flying and, ultimately, of high-altitude flying. Another major contribution was his introduction of the daily analysis of the 10,000-ft constant-level pressure-temperature charts at TWA’s Kansas City Forecast Center. He was the author of The Geophysical Features of the North Atlantic Ocean, a pilot and dispatcher guidance study written for the Air Transport Command, and of a number of articles which appeared in scientific and technical publications. In 1944–46 he was editor of the Journal of Aeronautical Meteorology. One of the founders of the Air Transport Association’s Meteorological Committee, he was named its first chairman in 1987, a post to which he was re-elected annually for more than ten years.

Mr. Minser joined the American Meteorological Society in 1933 and became a professional member in 1945. The Society certified him as a consulting meteorologist in 1961. He was a member of the Council in 1939–41, served on the Meisinger Award Committee 1938–39, the Nominating Committee and the Board of Editors in 1941, the Advisory Committee on Meteorological Education 1945–48 (during part of which time he was acting chairman), and had been on the Committee on Chapters since 1962. He was an associate editor of the Journal of Meteorology in 1941, and a founding member of the Society’s Kansas City Chapter.

He is survived by his wife, Geraldine Minser, who resides at 6525 Granada Drive, Prairie Village, Kans.