the MIT Research Laboratory of Electronics from 1952–61.

Wiesner was a good friend of the MIT physics department. During his tenures as dean of science (1964–66), provost (1966–71) and president of MIT (1971–80), the Center for Theoretical Physics was founded and, with his support, the department's condensed matter and astrophysics divisions were brought up to full strength. Key personnel were recruited in these areas, as well as in nuclear, particle and atomic physics, and the department's present profile was established.

Wiesner's support of the physics department is but one example of his dedication to MIT's intellectual quality and breadth. He helped to expand the institute's commitment to the humanities; to the social sciences, literature and the fine arts; and, not surprisingly, to its participation in the study of the ways in which science and technology and the arts intersect. The work pursued at MIT's Media Laboratory, which he helped found, is an example of the possible positive consequences of the achievements of science and technology for communication and the arts.

A most important idea was the inclusion of health sciences in MIT's teaching and research. The development of a superb biology department, with a strong emphasis on molecular biology, was part of the institute's evolution during the Wiesner years.

In his own words, Wiesner considered his role while president of MIT to be that of an "enthusiasm amplifier": He would find ways to implement bright ideas that faculty and students brought to him.

Jerry, as his many friends called him, was a man who cared: He cared passionately about peace and justice, about intellectual rectitude and truth, and also about friends and colleagues and students and neighbors. He would listen carefully and then act confidently to help, to create, to inform and to advise, to make the world around him better. He was indeed a most uncommon man.

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Odd Dahl

Odd Dahl, a pioneer in nuclear physics, died on 2 June 1994 in Bergen, Norway, at the age of 95.

Dahl had a modest formal education and entered scientific instrumentation by accident when Roald Amundsen hired him in 1922 as an air pilot for an Arctic expedition by ship. On the second takeoff from a makeshift airstrip on the ice, his plane was damaged beyond repair. Confined to ship for the next few years, he redirected his energy to inventing and making oceanographic instruments. Harald Sverdrup, the expedition's scientific leader, became his tutor when Dahl turned to the ship's library to study physics.

At Sverdrup's recommendation, Dahl was hired in 1926 by the Carnegie Institution of Washington, DC, where he gained a solid reputation in the development of instrumentation for studying terrestrial magnetism, in the study of the Kennedy–Heaviside layer and in nuclear physics. One of his best-known contributions, made in collaboration with Lawrence Hafstad and Merle Tuve, was using a Tesla coil to demonstrate the production of gamma rays, beta rays and protons with energies above one million volts.

He continued to make important contributions in the US until 1935, when he was asked to join the Chr. Michelsen's Institute in Bergen. In Norway he built three Van de Graaff machines: one in Trondheim (0.5 MV, in the mid-1930s), one in Bergen (1.5 MV, in the early 1940s) for radiation therapy and another in Bergen (1.5 MV, in the late 1940s) for research. He also built a betatron in Bergen. These were remarkable achievements in a small country with limited funds.

Dahl, together with Gunnar Randers, felt that it was important for Norway to enter the field of nuclear energy. Under their supervision Norway became the first country other than the wartime nuclear powers to construct a nuclear reactor. They had no access to classified work, but the reactor functioned very well and starting in 1951 was a successful international research tool for many years. Dahl built a solar observatory for the University in Oslo in 1954, which also was very successful.

In 1951 Dahl was invited by the new CERN laboratory to take responsibility for the design of a Cosmotron-like proton synchrotron of 10–12 GeV. However, Dahl's intuition led him to switch plans to the new principle of alternating-gradient focusing only weeks after Ernest Courant, Stanley Livingston and Hartland Snyder invented it in 1952. This courageous decision was one of the most important taken in the history of CERN.

Dahl returned to Norway in 1954. In the later part of his professional life, he designed payloads for scientific rockets launched in northern Nor-

way. He retired at the age of 70.

Odd Dahl was a remarkable personality. He accepted only challenging tasks, and his intuition never failed him. Although many considered him daring, he proved able to complete what he took on.

He was very inspiring to work for and with. He created well-integrated teams in which each member nevertheless had considerable freedom. It was a privilege and a pleasure to work with Odd Dahl.

KJELL JOHNSEN
CERN
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Willem J. Luyten

Internationally known astronomer Willem J. Luyten died at his home in Minneapolis on 21 November 1994, at the age of 95. Luyten was best known for his extensive and fundamental work on stellar motions, white dwarfs and the stellar luminosity function. He was born in Samarang, Java, and became interested in astronomy when he saw Comet Halley in 1910.

Luyten was educated at the Universities of Amsterdam and Leiden, where he earned his BA and PhD, and he came to the US in 1921. In 1931 he joined the faculty of the University of Minnesota, where he would spend his entire academic career and where he was often a one-man astronomy department. He became professor emeritus in 1967.

Luyten produced the Bruce and Palomar proper-motion surveys that generated fundamental data on positions and motions for hundreds of thousands of stars. In the mid-1960s, at the beginning of the now-famous Luyten–Palomar proper-motion survey, he recognized that this major survey, covering two-thirds of the sky, would be a formidable task that could not be accomplished in one senior astronomer's remaining years. To remedy this situation he proposed an automated measuring machine, completely computer controlled. Funded by NASA, the "blink machine" was built by engineers at Control Data Corporation and dedicated in 1970. It is still in use today in the Minnesota astronomy department.

Luyten was well known for his dedication to detail, his insight into fundamental astronomical problems, and his wit and humor.

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Edward A. Mason

Edward A. Mason, emeritus professor of chemistry and engineering at Brown University, died on 27 October 1994, after the initially promising therapy for his cancer ultimately did not succeed. He was 68.

After receiving his BS at the Virginia Polytechnic Institute (1947) and his PhD in chemistry from the Massachusetts Institute of Technology (1951), Ed was a research fellow at the University of Wisconsin, Madison (1952–53); an assistant professor of chemistry at Pennsylvania State University (1953–55); and a professor of molecular physics at the University of Maryland (1955–67). He came to Brown in 1967.

As a result of the post-Sputnik interest in the upper atmosphere, Ed set out to predict transport properties of gases at high temperatures and low pressures. These calculations required accurate interaction energies for atoms and molecules. With his colleague Joseph T. Vanderslice, Ed developed an elegant and simple method for obtaining these energies from spectroscopic data.

Ed developed the first usable, quantitative treatments of the transport properties of molecular gases, for which he showed the importance of the internal degrees of freedom and inelastic collisions, particularly in thermal conductivity. By recognizing that the methods of classical kinetic theory break down at high electric field strengths, he was able to give the first accurate account of the motion of ions in gases under the influence of these fields, a problem that had been unsolved for 50 years.

This solution has been significant in interpreting experiments in drift tables and collision-dominated ion–cyclotron resonance. His contributions to transport theory are widely used by engineers concerned with gas transport in porous media; his general statistical mechanical theory of transport through membranes includes, corrects and extends all previous treatments. Recently he had found a compact, analytical equation of state for dense fluids that is simple, general and remarkably accurate—something that had been sought without success since the time of van der Waals.

Ed set an example for all who knew him: He helped us to be careful, to be honest and to do things the right way. We miss him.

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