Similarly, flights for NASA's Operation IceBridge mission throughout the 2010s carried Schaller to the far ends of the planet, with close passes over glaciers in Antarctica and Greenland. "One of my fondest memories is flying over the North Pole at about 1,500 feet while the Icebridge team was making measurements of the thickness of the sea," she says. "I was leading a live chat with a classroom back in the United States, and they were asking if we saw Santa."

Crounse has flown on nearly a dozen DC-8 research campaigns over the past two decades. One of the most memorable projects, he says, was the Atmospheric Tomography Mission from 2016 to 2018, during which the DC-8 circumnavigated the globe during each of the four seasons of the year. The missions took him to sites including Alaska, Hawaii, the Azores, Chile, and New Zealand. He also traveled over the western United States in 2019 to quantify the atmospheric impacts of major wildfires. "The airplane would go from its maximum altitude, which is somewhere around 12 kilometers, down to about 500 meters above the ocean," he says. "And it would do that repeatedly throughout the whole flight. That dataset has proven invaluable for understanding the global atmosphere."

The DC-8's rugged nature—this was a tough, overbuilt machine, the scientists agree—helped it to withstand its many shaky trips through the atmospheric boundary layer, the lowest portion of the atmosphere affected by Earth's surface. But even a durable plane does not last forever, especially when decades have passed since the last one was built. "Every time something breaks it's just a big effort to find that part," Boogaard says. "You can compare it to an old car."

But, Wennberg notes, "this old car was an enormous asset for airborne investigations. With its ability to host a large payload and operate from only a few hundred feet above the ground to more than 40,000 feet, the DC-8 was a workhorse for Caltech earth scientists studying global change in atmospheric composition, the glaciers, the oceans, and the terrestrial biosphere."

NASA recently acquired a Boeing 777 to serve as its next-generation airborne lab, and Boogaard will be moving to the East Coast to oversee its various missions. The DC-8, meanwhile, is not going to the boneyard. NASA has donated the plane to Idaho State University. "They are using it to train the next generation of aircraft technicians," Boogaard says. "They're going to get hands-on real-time experience with a beautiful aircraft." [C]

In Memoriam

Camilla Chandler Frost (1925–2024)
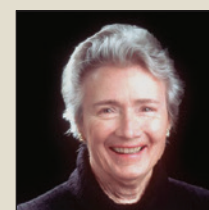
Frost, a life member of the Caltech community, passed away on February 7, 2024, at age 98. Frost was appointed to the Caltech Board of Trustees in 1977 and became a life member in 2007. She served as co-chair of Caltech's Biological Sciences Initiative. The Chandler family's philanthropy has supported endowed professorships as well as the Norman Chandler Scholarship Fund, the Norman Chandler Memorial Laboratory, and the Camilla Chandler Frost Laboratories.

David Goodstein (1939–2024)
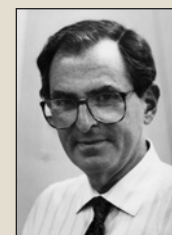
Goodstein, the Frank J. Gilloon Distinguished Teaching and Service Professor, Emeritus, and professor of physics and applied physics, emeritus, passed away on April 10, 2024, at age 85. He served as a professor at Caltech for 40-plus years and as the Institute's vice provost from 1987 to 2007. In the 1980s, Goodstein was the director and host of *The Mechanical Universe,* an educational TV series. He authored several books, including *Feynman's Lost Lecture,* which was written with his wife, Judy Goodstein, Caltech university archivist, emeritus.

Fred C. Anson (BS '54, 1933–2024)
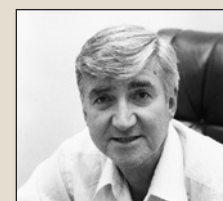
Anson (BS '54), the Elizabeth W. Gilloon Professor of Chemistry, Emeritus, passed away on May 22, 2024, at age 91. Anson spent his entire career at Caltech. He was appointed assistant professor in 1958, associate professor in 1962, full professor in 1968, and the Gilloon Professor in 1995. His research focused on the kinetics, mechanisms, and catalysis of electrode reactions. Anson was chair of Caltech's Division of Chemistry and Chemical Engineering from 1984–1994.

Virginia V. Weldon (1935–2024)
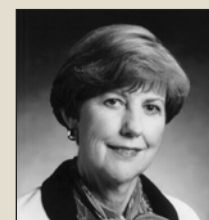
Weldon, a life member of the Caltech community, passed away on May 23, 2024, at age 88. Weldon was first named to the Caltech Board of Trustees in 1996 and became a life member in 2010. She served on the pediatrics faculty at the Washington University School of Medicine and as co-director of the division of pediatric endocrinology and metabolism. Later, she became deputy vice chancellor for medical affairs and vice president of Washington University Medical Center. She was Monsanto's senior vice president, public policy, from 1989–1998.

Edward C. Stone (1936–2024)
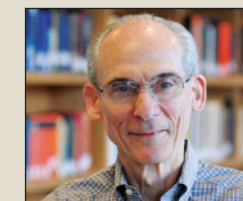
Stone, the David Morrisroe Professor of Physics, Emeritus, passed away on June 9, 2024, at age 88. Stone spent six decades at Caltech, leading numerous space missions, overseeing the construction of the W. M. Keck Observatory, establishing the Institute's Space Radiation Lab, and more. He served as project scientist for NASA's twin Voyager spacecraft for 50 years. He was chair of Caltech's Division of Physics, Mathematics and Astronomy from 1983–88, and director of JPL from 1991–2001.

Jeff Kimble (1949–2024)
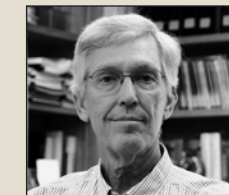
Kimble, the William L. Valentine Professor of Physics, Emeritus, passed away on September 2, 2024, at age 75. Kimble became a professor at Caltech in 1989, the William L. Valentine Professor in 1997, and professor emeritus in 2021. He helped found and served as the inaugural director of the Institute for Quantum Information (now the Institute for Quantum Information and Matter). A giant in the field of quantum optics and quantum information science, Kimble's cavity quantum electrodynamics experiments formed the basis of many current quantum technologies. Kimble and colleagues conceived and demonstrated the methods for generating squeezed light that are now employed at LIGO (the Laser Interferometer Gravitational-wave Observatory).