



## Don Hartill, longtime Cornell physics professor and Village of Lansing mayor, dies at 86

Donald Hartill, a beloved professor of physics at Cornell University and a driving force behind decades of experimental research in particle physics, died on April 16. He was 86.

After earning his bachelor's degree from MIT in 1961 and a Ph.D. from Caltech in 1967, Hartill held a research appointment at CERN before arriving at Cornell in 1968 as a young assistant professor in what was then the Laboratory for Nuclear Studies.

Hartill joined Cornell as the lab's 10 GeV synchrotron had just come online, and Hartill quickly became immersed in experimental work that helped define the lab's trajectory for decades. He began with internal target and electron scattering experiments before becoming a key figure in the development of the Cornell Electron Storage Ring (CESR) and the CLEO particle detector.

One of Hartill's most lasting and influential achievements at Cornell was the system he helped to develop for individually controlling the steering magnets in the Cornell Electron Storage Ring (CESR) - a defining feature of CESR's adaptability and longevity. Unlike many accelerator storage rings, which are optimized for a single purpose, CESR's individually tunable magnets allowed it to evolve over time—supporting experiments ranging from CLEO (focused on high-

energy physics), to CESRTA (the CESR Test Accelerator for accelerator physics research), to CHESS (Cornell High Energy Synchrotron Source, optimized for X-ray production).

CESR endures—not just because it was built to adapt, but because the person behind it lived that way too.

A theme throughout Hartill's career was this same kind of adaptability. He moved fluidly across institutions, disciplines, and generations of experimental technology, always returning to Cornell with fresh insight and new tools. During a sabbatical at Stanford, he worked on the Mark I drift chamber—technology he later adapted and implemented at the CLEO project to great success. Earlier, during his postdoctoral work at CERN, he studied proportional chambers, another innovation he helped introduce to Cornell's experimental infrastructure.

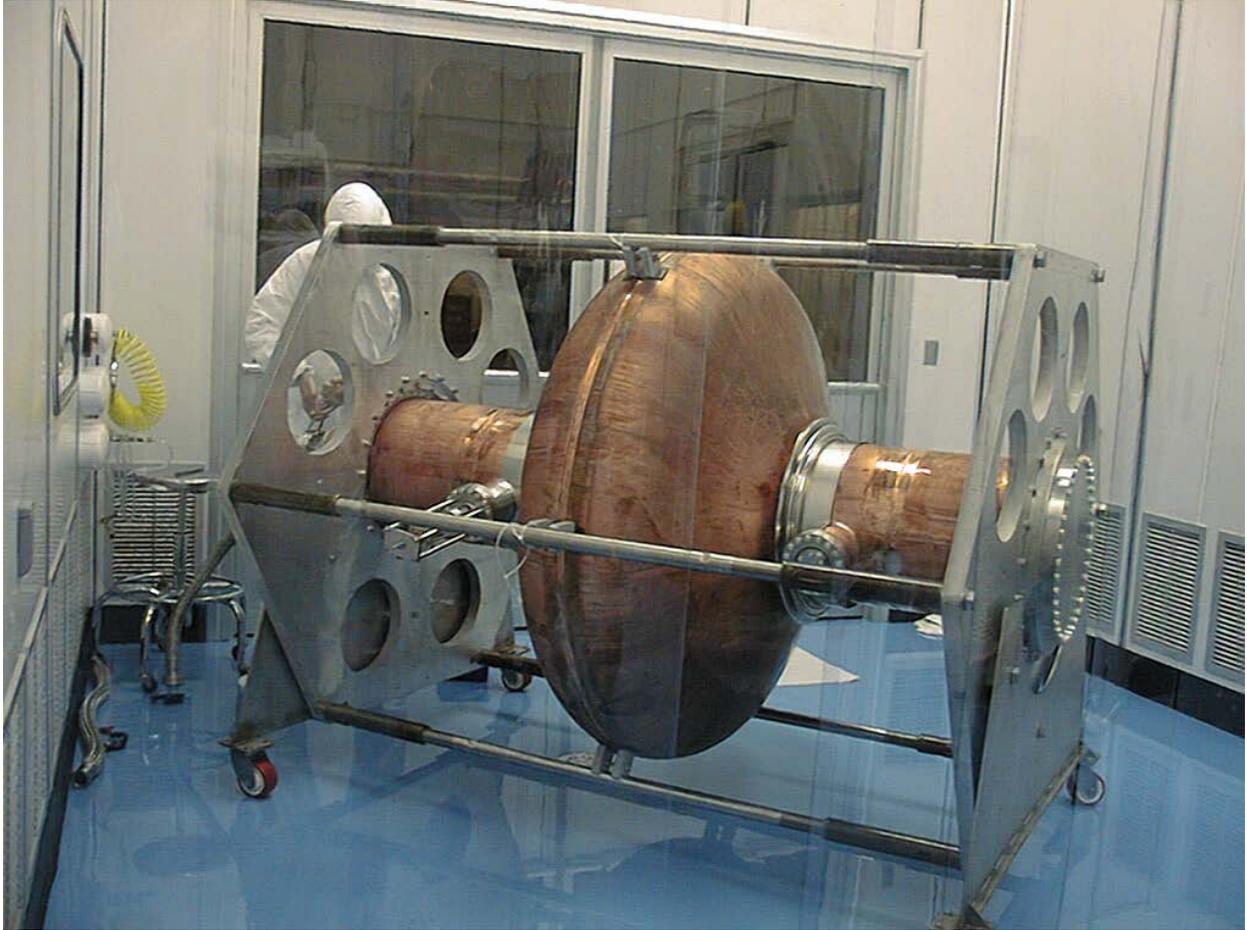
These were not passive adoptions; Hartill had a gift for transforming borrowed technologies into essential components of homegrown systems. His deep understanding of electronics and his collaborative instinct allowed him to tailor solutions that elevated the work of everyone around him. He was known for saying, humbly but confidently, “Yes, I understand Ohm's Law,” when solving especially thorny challenges in high-energy physics experiments—always with a quiet sense of humor and steady determination.

Over the years, Hartill held visiting appointments at institutions around the world, including the Stanford Linear Accelerator Center and the Osservatorio Astrofisico di Arcetri in Florence, Italy. He was recognized as a Fellow of both the American Physical Society and the American Association for the Advancement of Science.

His colleagues emphasize that Hartill's technical contributions were as deep as they were broad. David Cassel, a longtime faculty member in Cornell's Physics Department and a collaborator on the CLEO project, noted, “Don contributed significantly to nearly all of the experimental work at Cornell. Most of us were users of the chambers and electronics that Don developed. It wasn't just nominal work—he made deep, meaningful contributions to the CLEO detectors.”

Hartill's name appears on all 500+ published CLEO papers, not as a courtesy, but as recognition of his essential role.

He worked closely with the superconducting radio frequency (SRF) group at the Cornell Laboratory for Accelerator-based ScienceS, CLASSE, pioneering techniques to identify and resolve performance-limiting defects in SRF cavities, and building perhaps the world's largest SRF cavity. His innovative use of second sound detection in superfluid helium remains a widely respected diagnostic approach in the field.



*200MHz Cavity. – the world's largest superconducting cavity*

Outside the lab at Cornell, Hartill played a vital role in the broader scientific community. He served on numerous review and advisory committees for organizations including the National Science Foundation, the Department of Defense, Fermilab board of overseers, CERN, and LIGO. His work on the LIGO committee, in particular, helped navigate complex technical issues as the groundbreaking project advanced toward gravitational wave detection. Hartill was known for his ability to address substantial scientific projects with many technical issues, bringing clarity, rigor, and a collaborative spirit. Hartill remained active on scientific panels until late in life.

One of Hartill's enduring points of pride was his involvement in NSF oversight of scientific research in Antarctica, serving on the U.S. Antarctic Program Blue Ribbon Panel, a group responsible for evaluating both research and logistics, making multiple trips to the continent—often annually—to support U.S. programs there.

Even after his official retirement from Cornell in 2016, Hartill remained a valued advisor and mentor in the physics department, serving as chair and continuing to support collaborative research efforts. Colleagues remember him as a steady presence—curious, kind, and generous with his time.

Hartill's contributions extended far beyond the lab bench. He served in numerous leadership roles over his long career, culminating in his appointment as director of CLASSE in 2020. Taking over from Ritchie Patterson—who had served as interim director for more than eight years—Hartill was entrusted with keeping the lab on “a continuous upward trajectory,” a challenge he embraced with characteristic steadiness and warmth.

His leadership came at a particularly difficult moment: the start of the COVID-19 pandemic. Under Hartill's guidance, CLASSE became one of the first laboratories on the Cornell campus to reopen for critical research. Thanks to his clear-eyed decision-making, deep institutional knowledge, and commitment to safety, the lab navigated the crisis with minimal disruption while protecting the health of its staff and researchers.



*Don Hartill, left, with CHESS Director Joel Brock at the CLASSE Heroes event.*

“Don combined rigorous scientific insight with compassion and calm authority,” said Ritchie Patterson, professor of physics and former director of CLASSE. “During a time of great uncertainty, he helped CLASSE move forward with clarity and confidence.”

In addition to his scientific contributions, Hartill was a deeply engaged civic leader. He was the fifth and longest-standing mayor of the Village of Lansing, serving the community as mayor for 25 years and being involved as a trustee member and deputy mayor since 1989. During his tenure, he helped shepherd the village through significant periods of growth and change, balancing development with the needs of residents and the protection of green space. His approach to governance mirrored his approach to science—thoughtful, inclusive, and solutions-

oriented. He was known in the community for listening carefully, speaking with clarity, and working tirelessly to improve the lives of his neighbors.

Hartill is remembered not only for his technical brilliance but also for his generosity, mentorship, and humility. “You would have a hard time naming someone with a more celebrated and successful career,” said Cassel. “But Don was never one to boast. He simply showed up and made things work—for all of us.”

He is survived by his family, friends, colleagues, and the many students and collaborators whose work and lives were shaped by his quiet excellence.