



Kenneth Lorimer Cook, Ph.D.

1915 – 1996

Founder and first director of
the University of Utah Seismograph Stations
from 1966 to 1976

Kenneth L. Cook (B.S. physics, Massachusetts Institute of Technology, 1939; Ph.D. geology and physics, University of Chicago, 1943) was a distinguished scientist and educator, acclaimed as the “Father of Utah Geophysics.” After early career work in geophysical exploration with the U.S. Bureau of Mines and the U.S. Geological Survey, Dr. Cook joined the faculty of the University of Utah in 1952, becoming Professor of Geophysics in 1955. He developed and expanded the Department of Geophysics, which he headed from 1952 until 1968, when the department was merged into a combined Department of Geology and Geophysics. He retired in December 1981 but remained active as professor emeritus until his death in 1996.

Dr. Cook’s teaching and pioneering research in exploration and solid earth geophysics of Earth’s crust and upper mantle were wide-ranging—from the use of gravity, magnetic, electrical resistivity, and regional seismic refraction techniques to seismology, tectonics, and the correlation of strain and tilt with earthquakes. More than 60 graduate theses in geophysics (13 Ph.D., 48 M.S.) were completed under his direct supervision. The breadth and distinction of his scientific engagement were reflected by his active membership in more than a dozen national and international professional societies and organizations.

(Photo credit: Special Collections, J. Willard Marriott Library, University of Utah)



1950s — Dr. Kenneth L. Cook in the 1950s examining seismograms from the Salt Lake City (SLC) recording station on the University campus (below).

Dr. Cook assumed administrative responsibility for station SLC in 1952, including the routine transmission of seismographic data to the U.S. Coast and Geodetic Survey. At the time, SLC was the sole seismographic installation operated by the University of Utah.

(Photo credit: Utah Historical Society)

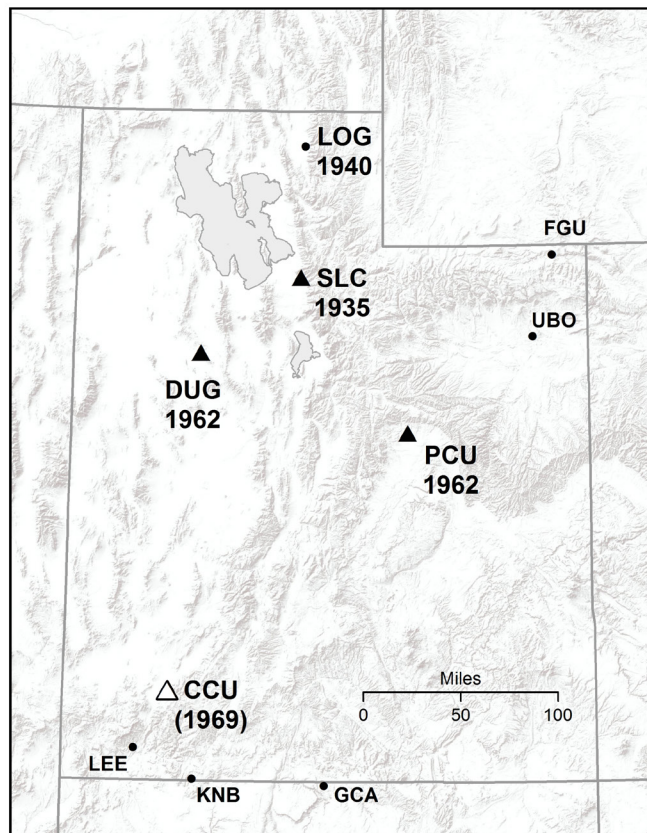
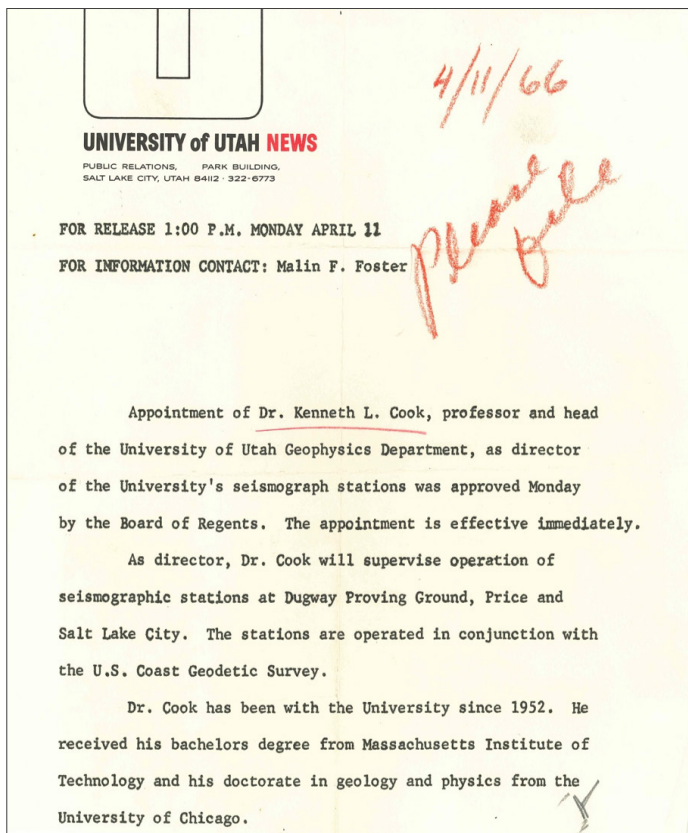
The “Seismograph Laboratory” Building (station SLC), formerly located southeast of the Park Building on the University campus.

This building was constructed in 1935 as a depression-era WPA project and housed various generations of on-site, paper-recording seismographs associated with station SLC until 1976. Two Bosch-Omori horizontal-pendulum seismographs, first installed on campus by Dr. James E. Talmage in 1907, were moved to this building in 1935 and operated there until 1939.

(Photo credit: Special Collections, J. Willard Marriott Library, University of Utah)



Original University of Utah Seismograph Stations



Seismograph Stations in the Utah Region in 1966

Formal beginning of "The University of Utah Seismograph Stations"

The above press release reports an action by the University of Utah Board of Regents on April 11, 1966, which effectively recognized the University of Utah Seismograph Stations as an organizational entity and appointed Dr. Kenneth L. Cook as its first director, a position he held until 1976.

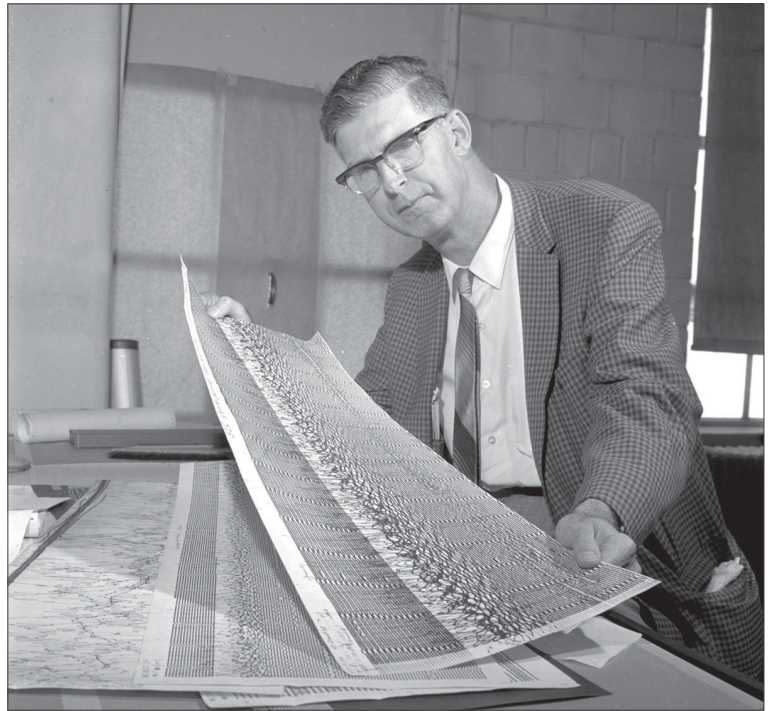
When the "University of Utah Seismograph Stations" (UUSS) formally began in April 1966, the University operated three seismographic stations: SLC, DUG, and PCU (solid triangles); a fourth station was later added in Cedar City (CCU, open triangle). Station LOG, owned by Utah State University, transmitted paper seismograms to the University of Utah for analysis from 1963 to 1976. Non-UUSS stations operating in the Utah region in 1966 (dots) included two stations operated at dam sites by the U.S. Bureau of Reclamation (FGU, GCA) and three stations sponsored by the Department of Defense for nuclear test monitoring (UBO, LEE, KNB).

In the mid-1970s, UUSS seismologists combined data from non-UUSS and UUSS stations to relocate all recorded earthquakes in the Utah region from July 1962 through September 1974.

Dr. Kenneth L. Cook examining seismograms of the magnitude 9.2 Great Alaska Earthquake of March 27, 1964.

The paper seismograms shown here typify the era of the University of Utah Seismograph Stations from 1962 to 1974 when seismographs operated in specially constructed small buildings and recordings were made in darkened vaults on photographic paper. The records were developed on-site and then mailed by station attendants to the University of Utah campus for analysis. Nearly 100,000 paper seismograms were processed in this way. Dr. Cook secured state and federal funds to build seismographic vaults in Utah at Dugway (station DUG, opened in 1962), at Price (station PCU, opened in 1962), and at Cedar City (station CCU, opened in January 1969). These added to station SLC, built in 1935 on the University of Utah campus, and station LOG, built in 1940 on the campus of Utah State University, and formed a skeletal statewide seismographic network.

(Photo credit: Deseret News, July 4, 1966)

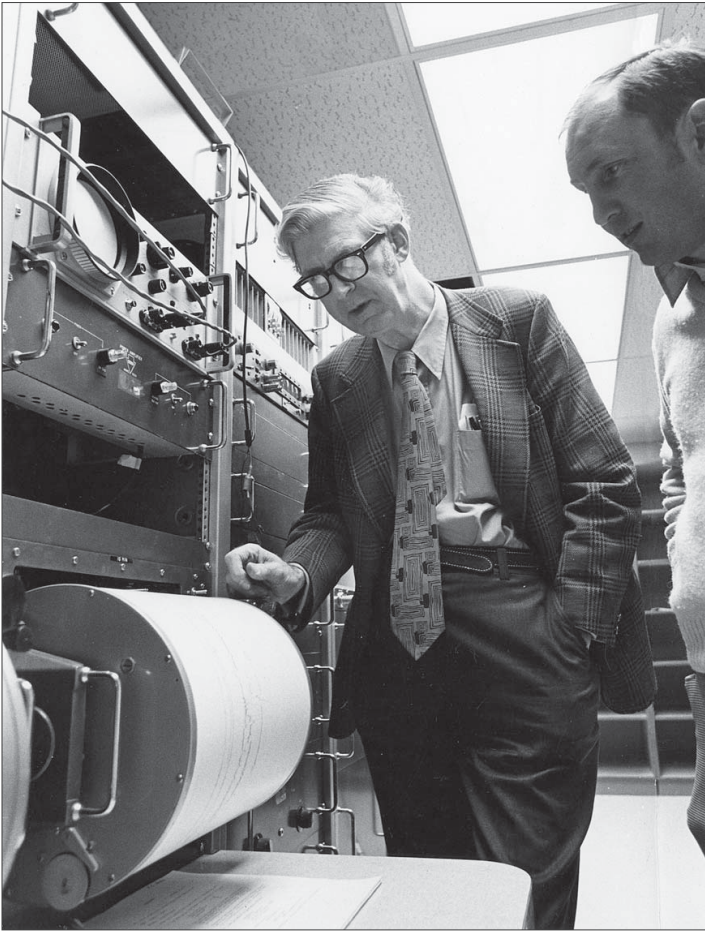


Dr. Kenneth L. Cook (center) viewing a multichannel seismographic film record at the Uinta Basin Seismological Observatory (UBO) in July 1970.

This photo accompanied a news story reporting the transfer of UBO from the federal government to the University of Utah for academic research. Research analyst Galen Cary is at left; Nils Hofmann, station manager, at right. Instrumentation at UBO included an array of ten densely-spaced borehole seismometers with centralized recording. UBO and four similar seismic arrays

in the U.S. were built by the Department of Defense in the early 1960s to evaluate detection capabilities for monitoring underground nuclear tests. Operation of the UBO array was discontinued in September 1973, after which seismographic equipment was moved to the Wasatch Front to bolster a regional telemetered seismic network started in 1974. The network was recorded on multichannel 16-mm film recorders ("Develocorders") from 1974 through 1980, producing records like the one shown here.

(Photo credit: Salt Lake Tribune, July 25, 1970)



Drs. Kenneth L. Cook (left) and Robert B. Smith (right) examining a helicorder record in Room 720 of the W. C. Browning Building (the original network telemetry lab of the Seismograph Stations).

This photo accompanied a news story in January 1974 announcing a major expansion of the University of Utah's seismograph network under the direction of K. L. Cook, R. B. Smith, and S. H. Ward. At the time of this photo, the network included seven on-site recording stations and only two telemetered stations. By the end of 1975, an additional 25 telemetered stations were added to form a regional network with continuous centralized recording on the University campus that covered much of the Wasatch Front area.

(Photo credit: Salt Lake Tribune, January 12, 1974)

Dr. Kenneth L. Cook and former Utah Governor Calvin L. Rampton at Dr. Cook's retirement celebration (April 2, 1982).

During Governor Rampton's term of office (1965–1977), Dr. Cook served on two advisory bodies to the governor: the Utah Geological Hazards Committee (1967–1977) and the Utah Nuclear Energy Commission (1971–1973). Persuaded that seismic monitoring was vital to the welfare and safety of the people of Utah, Governor Rampton initiated state funding to the University of Utah Seismograph Stations in 1971 and helped establish this funding as a line-item appropriation from the Utah State Legislature beginning in 1972.

(Photo credit: Wayne Kenneth Cook, from VHS recording)





Historical display commemorating the founding of
the University of Utah Seismograph Stations

Dr. Kenneth L. Cook, founding director

Installed April 2016
Frederick Albert Sutton Building - first floor lobby
University of Utah campus

Image selections and text: Dr. Walter J. Arabasz
Design and installation: Diamond Phillips, Salt Lake City, UT