



The Greenland Ice Sheet Monitoring Network (GLISN)

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The Greenland Ice Sheet Monitoring Network (GLISN) is a broadband, multi-use seismological network, enhanced by selected geodetic observations, designed with the capability to allow researchers to understand the changes currently occurring in the Arctic, and with the operational characteristics necessary to enable response to those changes as understanding improves. GLISN was established through an international collaboration, with 10 nations coordinating their efforts to develop the current 32-station observing network during the last four years. Denmark, Canada, France, Germany, Italy, Japan, Norway, Poland, Switzerland, and USA have all contributed stations, equipment and/or data to the project and continue to operate the network as a shared responsibility.

GLISN is designed for detecting, locating, and characterizing glacial earthquakes and other cryo-seismic phenomena; monitoring tectonic seismicity; and improving constraints on Earth structure. Glacier-deformation processes that generate seismic radiation provide a quantitative means for monitoring changes in glacier behavior over time. Complementing data from satellites, geodesy, and other sources, GLISN provides a powerful tool for detecting change, and will advance new frontiers of research in studies of glacial systems; the underlying geological and geophysical processes affecting the Greenland Ice Sheet; interactions between oceans, climate, and the cryosphere; and other multidisciplinary areas of interest to geoscience and climate dynamics.

All data from the network are freely and openly available, with complete metadata, via the IRIS Data Management Center in the US as well as through ORFEUS, GEOFON and GEUS data centers in Europe.