



## **Earthquake Activity in the North Greenland Region**

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Many local and regional earthquakes are recorded on a daily basis in northern Greenland. The majority of the earthquakes originate at the Arctic plate boundary between the Eurasian and the North American plates. Particularly active regions away from the plate boundary are found in NE Greenland and in northern Baffin Bay. The seismograph coverage in the region is sparse with the main seismograph stations located at the military outpost, Stations Nord (NOR), the weather station outpost Danmarkshavn (DAG), Thule Airbase (TULEG), and the former ice core drilling camp (NEEM) in the middle of the Greenland ice sheet. Furthermore, data is available from Alert (ALE), Resolute (RES), and other seismographs in northern Canada as well as from a temporary deployment of BroadBand seismographs along the north coast of Greenland from 2004 to 2007. The recorded earthquakes range in magnitude from less than 2 to a 4.8 event, the largest in NE Greenland, and a 5.7 event, the largest recorded in northern Baffin Bay. The larger events are recorded widely in the region allowing for focal mechanisms to be calculated. Only a few existing focal mechanisms for the region can be found in the ISC bulletin. Two in NE Greenland representing primarily normal faulting and one in Baffin Bay resulting from reverse faulting. New calculations of focal mechanisms for the region will be presented as well as improved hypocenters resulting from analysis involving temporary stations and regional stations that are not included in routine processing.