

Recent earthquakes at Disko Island, Greenland.

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During the first weeks of April, 2016, the little village of Qeqertarsuaq on the south coast of Disko Island, West Greenland, experienced a large number of earthquakes. A large (for the region) Mb 4.7 event was recorded internationally, preceded by six smaller events in the hours before the larger event. A massive aftershock series followed during the next 3 weeks with more than 70 events, of which one was Mb 4.5. The majority of the earthquakes occurred within an area of 50 x 50 km just south of Disko Island. The location of the main event suggests a source depth in the upper crust. Sparse coverage of seismic profiles in the region show faults in the upper crust that have been active in recent geological time.

Earthquakes are not uncommon in the area. Since recording began in Greenland almost 100 years ago, nearly 700 earthquakes have been recorded in the nearby area. Since 2009 the station coverage in Greenland has increased from 5 stations to 19 today due the GLISN project (www.glisn.info). In this period two additional swarms of earthquakes have been recorded (23 events in August 2010 and 20 in February 2015), none of which had a large initial event. Prior to the GLISN project a similar sequence of 33 earthquakes was recorded by a temporary net of seismometers in February 2006, with magnitudes ranging from 1.2 to 3.5.