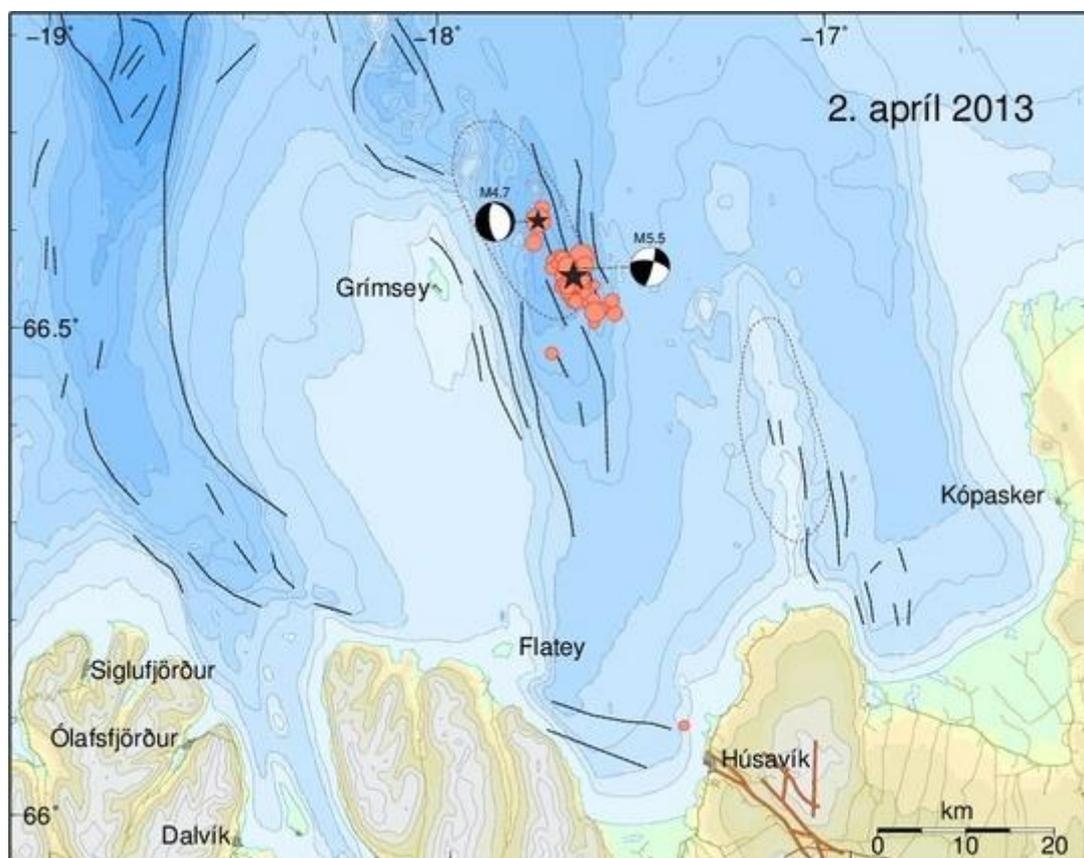


# Earthquake sequence east of Grímsey

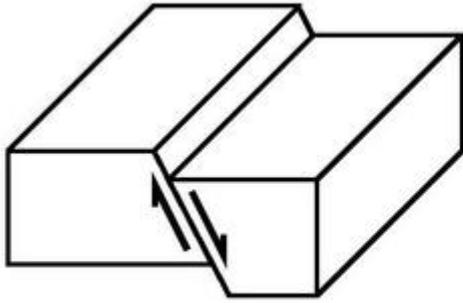
[2.4.2013](#)

A M5.5 earthquake occurred at 00:59 on 2nd April 2013 about 15 km east of Grímsey island offshore North Iceland. The earthquake was felt at Grímsey, Húsavík, Raufarhöfn, Mývatnssveit, Akureyri and Sauðarkrúkur. Several hundreds aftershocks have been detected following the mainshock. The source region is located on a fault system that reaching from Öxarfjörður to the north of Grímsey, the so called Grímsey lineament. Another M4.7 earthquake followed this morning at 08:56 and was located about 7.5km northwest of the night's main event.

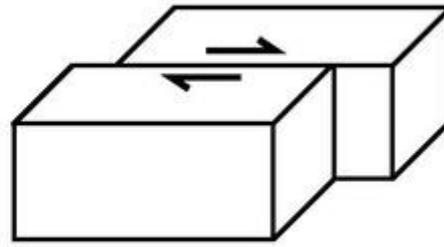


Both mainshocks are shown as black stars in the map, aftershocks that have been manually revised so far are shown as red dots. The M5.5 mainshock is located on a north-south striking left lateral strike-slip fault, see black lines in the map. The M4.7 event around 9 am was located on a normal fault to the north-west.

This cluster at about 7.5 km distance to the main cluster was most likely activated due to static stress changes induced by the M5.5 earthquake. The mechanisms are illustrated in the figure below: M5.5 strike-slip faulting (sniðgengishreyfingar) on the right, M4.7 normal-faulting (siggengishreyfingar) on the left.



siggengishreyfingar



sniðgengishreyfingar

Earthquake sequences are common in this area. It is impossible to predict the further development of the seismic activity and how it might influence faults in its vicinity. Further large events can not be excluded.

(Subsequent report on next page)

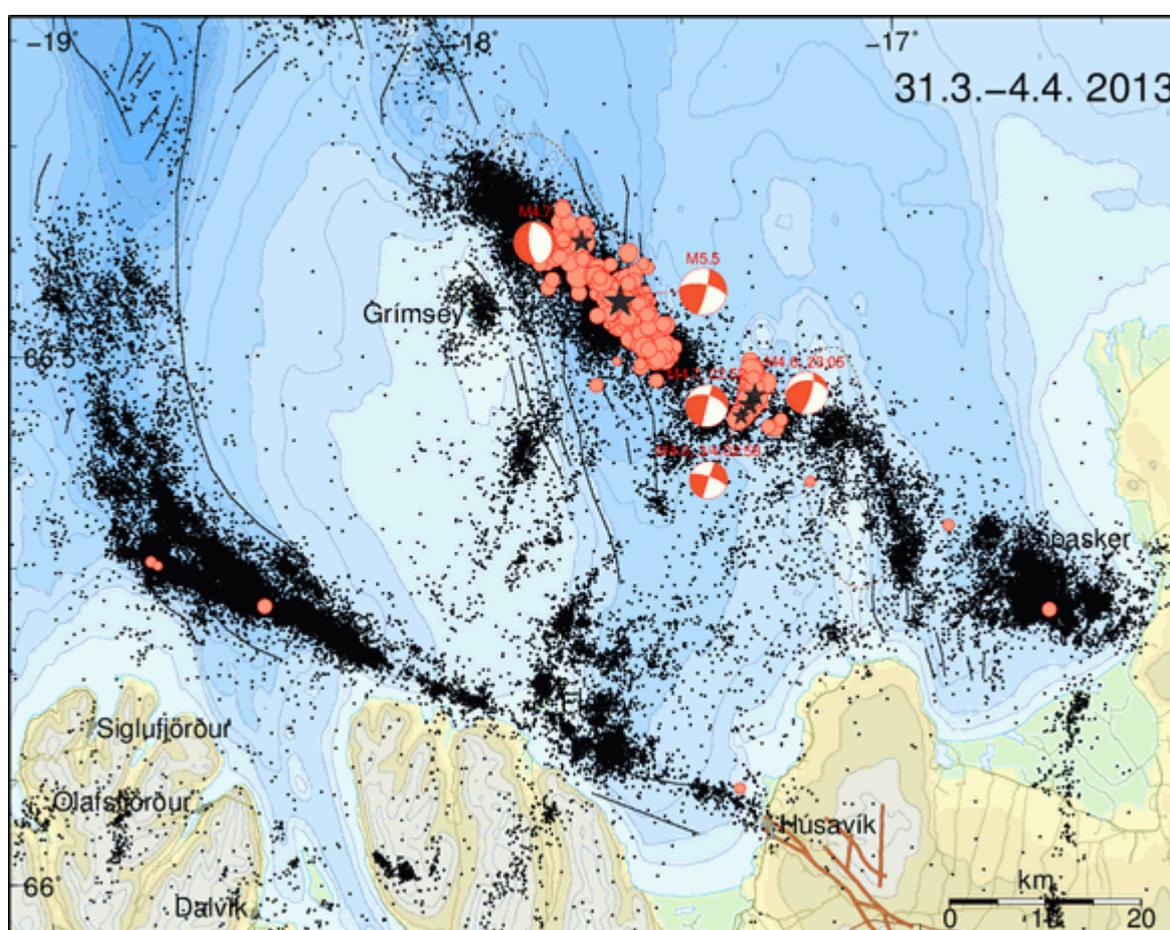
## Earthquake activity east of Grímsey has decreased

[12.4.2013](#)

An M5.5 earthquake occurred 00:59 2nd April 2013 15 km east of Grímsey, offshore North Iceland, followed by several hundred aftershocks.

This marked the onset of an intensive swarm, activating different parts of the Grímsey fault system.

The events of 2nd April were reported earlier (see above). Later that evening new activity started 15-20 km southeast of the main cluster, and around 23:00 two earthquakes M4.7 and 4.6 were measured in that area and felt widely in North Iceland. Both were on a left lateral strike-slip faulting.



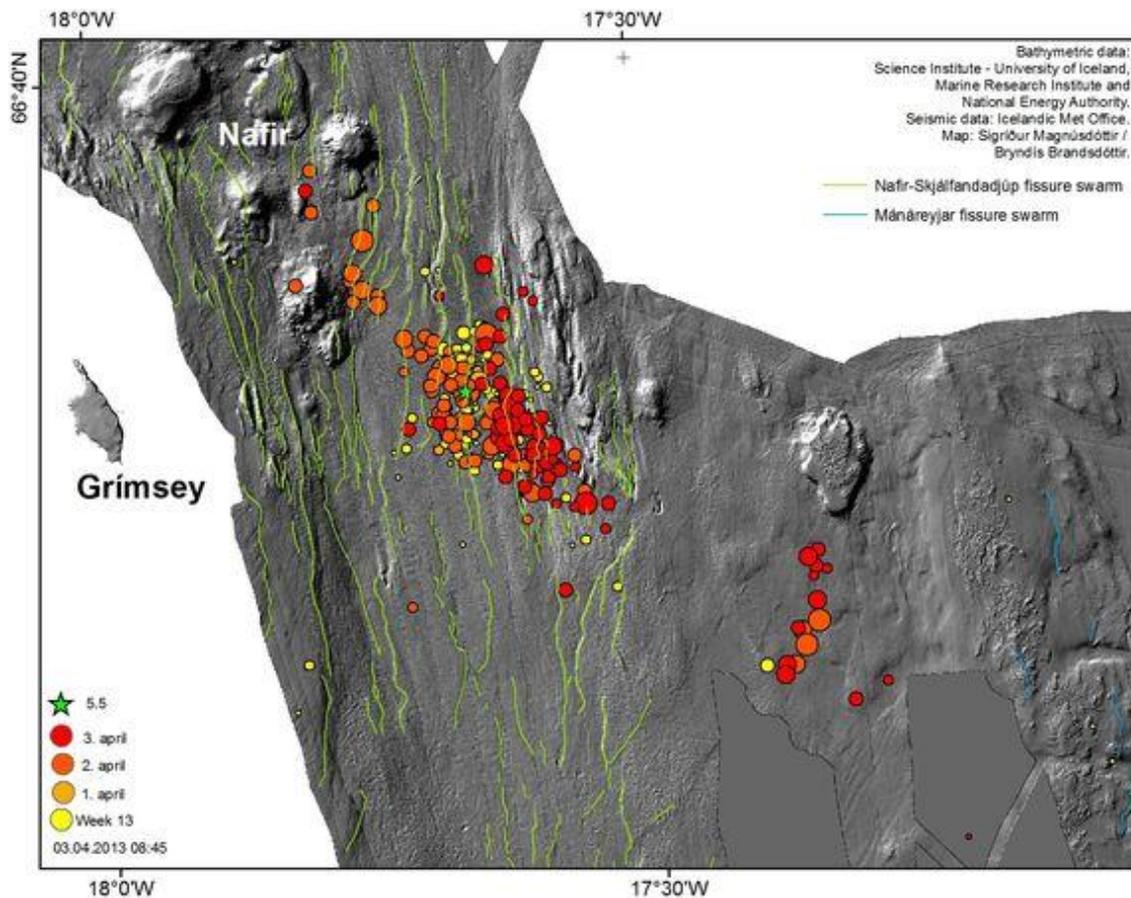
*Earthquakes in North Iceland, 31 March - 4 April 2013. Mainshocks are shown as black stars, manually revised aftershocks are shown as red circles. The M5.5 mainshock is located on a north-south striking left lateral strike-slip fault (see red and white symbol). Earthquakes from 1992-2012 are shown as black dots (black lines are mapped faults).*

The map above shows the activity from 31st March to the late afternoon of 4th April (18:30).

The activity continued with gradually decreasing intensity the following day on both clusters. Around midnight, however, two earthquakes of magnitude 3.4 and 3.6 occurred in the northwestern part of the cluster and were felt in Grímsey. This led to a temporary increase in activity, which since then has been slowly decreasing.

Below is a map of the bathymetry east of Grímsey. The earthquakes 2nd and 3rd April are shown.

### The Seabed east of Grímsey



*Bathymetry east of Grímsey. The earthquakes 2nd and 3rd April 2013 are shown. Authors: Sigríður Magnúsdóttir and Bryndís Brandsdóttir. Science Institute - University of Iceland. Marine Research Institute. National Energy Authority. Icelandic Meteorological Office.*

Click the image above for a full sized version.

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