

Eruption in Eyjafjallajökull

Status Report: 17:00 GMT, 15 June 2010

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Based on: IMO seismic monitoring; IES-IMO GPS monitoring; IMO hydrological data; web camera; lightning detection system and flights over the eruption site 11 and 14 June.

Steam clouds:

Height (a.s.l.): Have been observed at over a hundred meters.
Heading:
Colour: White.
Tephra fallout: None.
Lightning: None were measured on the UK Met Office's system.
Noises: No reports

Meltwater: Low discharge from Gígjökull.

Mudflood: No mudfloods in the past few days.

Conditions at eruption site: At the eastern, southern and western sides of the crater lake is a wall of ice. On the northern side a tephra wall rises 20 meters above the water. The ice walls at the southwestern corner of the crater are melting, i.e. at the site of the vent that was active 4 – 6 June. The rate of melting is assumed to be about one cubic meter per second.

Seismic tremor: Low tremor level. Pulses are observed off and on.

Earthquakes: A few small, shallow earthquakes have been recorded beneath the Eyjafjallajökull summit in the last weeks. Thirteen microearthquakes were recorded in the Mýrdalsjökull caldera from 11 to 14 June, most at a shallow depth.

GPS deformation: The seismic activity beneath Mýrdalsjökull glacier does not appear to be related to inflation of the area. No significant vertical deformation has been observed at GPS stations at or around the glacier. However, a station at the northeastern caldera rim (AUST), moved about three centimeters towards the southwest from the 9th to the 13th of June, inward to the caldera.

Overall assessment: The level of water in the crater lake only rose about 1 – 2 meters over the weekend. Several days or weeks are therefore likely to pass before the crater has filled with water, and up to months if the melting slows down. It is important that the water level be checked regularly. The water volume is now less than 0.5 million cubic meters. If the water level rises 20 meters, the volume will be 3 million cubic meters. The resulting flood would flow to the north, down the Gígjökull valley glacier, and could reach a maximum of 1500-2000 cubic meters per second.