

## Eruption in Eyjafjallajökull

Status Report: 17:00 GMT, 30 April 2010

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Compiled by: *MJR / MTG / FS / GS / SSJ*

**Based on:** IMO seismic monitoring; IES-IMO GPS monitoring; IMO hydrological data; web cameras of the eruption site from Vodafone, Mila, and Múlakot; IMO weather radar measurements; information from scientists at Gígjökull; and aerial observations from the Icelandic Coastguard (observation plane TF-SIF).

### Eruption plume:

**Height (a.s.l.):** Detected by weather radar at 15:20 GMT at an elevation of 2.8 km over the eruption site. TF-SIF observations at 15:40 GMT confirmed a steam plume rising to 4.5–5.1 km (15–17,000 ft). Clouds of ash at lower elevations observed drifting south of the eruption site.

**Heading:** South and south-west from the eruption site, but probably remaining close to Eyjafjallajökull due to light winds.

**Colour:** White (steam) clouds at higher elevation; dark grey (ash) clouds seen intermittently at lower elevation (see above).

**Tephra fallout:** Dark, fine-grained ash-fall reported over a 10 km region south of Eyjafjallajökull between Núpur and Skógar.

**Lightning:** No detections today over the eruption site (17:00 GMT).

**Noises:** Booming sounds reported in the vicinity of Eyjafjallajökull.

**Additional note:** Plumes of white plume were noticed over Gígjökull (15:40 GMT); this steam probably represents the position of the northward-flowing lava flow.

### Meltwater:

Web-camera views show continued discharge of water from Gígjökull due to lava-ice interactions. At 05:00 GMT a flood was detected leaving the Gígjökull lake basin. The flood reached a maximum discharge about two hours later at the old bridge over Markarfljót, ~18 km downstream. The flood was comparable in size to yesterday's gauged flows. At 14:00 GMT, meltwater flow beneath the bridge was  $\sim 200 \text{ m}^3 \text{ s}^{-1}$ . Discharge from Gígjökull decreased during the afternoon. Steaming blocks of rock are being deposited in the Gígjökull basin; these blocks are probably solidified lava from eruption. The electrical conductivity of Krossá and Steinhóltsá remains high (see reports from 28 and 29 April for details).

**Conditions at eruption site:**

Airborne radar surveys from TF-SIF show a well-formed crater. Lava is spreading northward from the crater toward the head of Gígjökull. Ice continues to be melted by the propagating lava front.

**Seismic tremor:** Intensity comparable to the preceding six days of eruptive activity.

**Earthquakes:** No locatable seismicity detected beneath Eyjafjallajökull.

**GPS deformation:** Horizontal displacement towards the centre of the volcano, in addition to vertical subsidence. These observations are consistent with deflation of a magma reservoir beneath Eyjafjallajökull.

**Magma flow:** No measurements possible today.

**Other remarks:** No measurable geophysical changes within the Katla volcano.

**Overall assessment:** Plume elevations and magma discharge levels remain similar to the preceding seven days of activity. Lava continues to flow north from the eruption site and down the Gígjökull glacier. Today's explosive activity and ash production represents a fraction of conditions during the height of the eruption (14–17 April). Presently, there are no measurable indications that the eruption is about to end.