

## Eruption in Eyjafjallajökull

Status Report: 18:00 GMT, 26 April 2010

Icelandic Meteorological Office and Institute of Earth Sciences, University of Iceland

Compiled by: MJR / GNP / BO / FS

**Based on:** IMO seismic monitoring; IES-IMO GPS monitoring; IMO river gauges; information from local police and IES geologists inspection of tephra

### Eruption plume:

**Height (a.s.l.):** Mean elevation of 4.8 km (~16,000 ft) between 12:00 and 14:00 GMT; elevation of 3.9 km recorded at 17:40 GMT

[From aerial observations and radar measurements]

**Heading:** Eastwards at elevations above ~4 km (~13–14,000 ft)

**Colour:** Mostly white (steam) to the east of the crater, but grey tephra pulses above the crater

**Tephra fallout:** No ash-fall reported, although light ash-fall possible over Mýrdalsjökull

**Lightening:** No detections over the eruption site since 19 April 2010

**Noises:** Report from ~20 km SE of the volcano of booming sounds (02:30 GMT)

**Meltwater:** Continuing discharge of water from Gígjökull due to ice-melt at the eruption site. Discharge at the old Markarfljót bridge, 18 km from Gígjökull, is estimated at 110–130 m<sup>3</sup> s<sup>-1</sup>, of which 30–40 m<sup>3</sup> s<sup>-1</sup> is baseflow.

**Conditions at eruption site:** No visual observations. Radar images show continuous build-up of a tephra crater/cone in the northern ice cauldron. The diameter of the crater is 200 m and the height of the crater cone is 150 +/- 20 m.

**Seismic tremor:** Intensity comparable to the last three days of eruptive activity

**Earthquakes:** *M*<sub>l</sub> 1.7 earthquake detected ~8 km east of the eruption at 16:18 GMT

**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:

Not visible but total magma flow considered similar as last two days (20–40 tonnes s<sup>-1</sup>)

**Other remarks:** No measurable geophysical changes within the Katla volcano. Earthquake activity on the north-western edge of Vatnajökull is unconnected with the ongoing eruption.

**Overall assessment:** Magma flow-rate and plume height has remained at similar levels during the last few days. Lava continues to flow northward. No signs of melting or meltwater discharge towards the south. There is no indication that the eruption is about to end; however, it is an order of magnitude smaller than in the first explosive phase.