



TerraSAR-X image shows spread of lava at Bardarbunga

16 September 2014

The lava outflow on the Holuhraun field northeast of Iceland's Bardarbunga volcano continues unabated. The lava field has grown to cover an area greater than 25 square kilometres. In this satellite image, the extent of the lava field is revealed using different colours.

To create this image, three sets of data were acquired at different times, but from the same viewpoint, and then superimposed. They date from 13 August, 4 September and 15 September 2014 and were acquired by the German radar satellite TerraSAR-X. Yellow shows the growth of the lava field between 13 August and 4 September; red shows the expansion between 4 and 15 September. It is obvious that the area has doubled. A second eruption area can also be seen as a small red spot in the lower right corner of the image.

Researchers at the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) Remote Sensing Technology Institute (Institut für Methodik der Fernerkundung; IMF) are continuing to monitor the area. Radar images can be used to analyse changes to Earth's surface throughout the entire process. The DLR Earth Observation Center also measures the emissions of sulphur dioxide on a daily basis.

Additional research

DLR is combining its research work on the effects of volcanic ash on air traffic in the VOLCANic Ash impact on the air Transport System VolcATS project. This project includes a satellite-supported process that quickly determines and predicts the distribution of ash in the air and contributes to flexible air traffic management so that ash-free and hence safe regions for commercial aviation can be approved. In addition, the still inadequately understood effects of volcanic ash on aircraft engines are being investigated, and an ash warning system for commercial airliners is being designed. Participants include the DLR Institutes of Atmospheric Physics, Flight Guidance, Materials Research, Propulsion Technology, Flight Systems and Air Transportation Systems, together with DLR Flight Experiments.

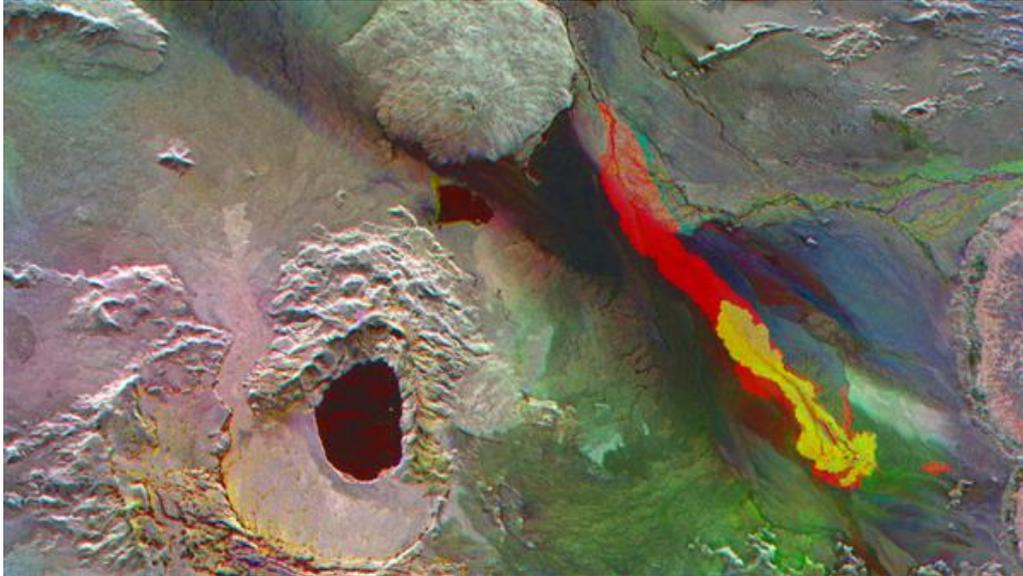
During the Eyjafjallajökull eruption in 2010, the airspace over Germany was able to be re-opened on the basis of measurement flights performed by the DLR Falcon. The Falcon is the only research aircraft in Europe that is legally able to fly at high altitudes and over long distances in volcanic ash clouds.

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Spread of lava on the Holuhraun field



This image shows the expansion of the Holuhraun lava field to the north of the Bardarbunga volcano. Yellow shows the growth of the lava field between 13 August and 4 September; red shows the expansion between 4 and 15 September. It is obvious that the area has doubled in the shorter second period. A second eruption area can also be seen as a small red spot in the lower right corner of the image.

Credit: DLR.

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