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TITLE: FUTUREVOLC: A European volcanological supersite in Iceland, a monitoring system and network for the future (*Invited*)

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ABSTRACT BODY: FUTUREVOLC is a collaborative project funded through a FP7 Environment “supersite” call of the European Union, with 26 partners in 10 countries. The main objectives of FUTUREVOLC are to establish an integrated volcanological monitoring procedure, develop new methods to evaluate volcanic crises, increase scientific understanding of magmatic processes and improve delivery of relevant information to civil protection and authorities. To reach these objectives the project combines broad expertise in seismology, volcano deformation, volcanic gas and geochemistry, infrasound, eruption monitoring, physical volcanology, satellite studies of plumes, meteorology, ash dispersal forecasting, and civil protection. The consortium members together with a more extensive group of collaborators, has applied to CEOS for making the Iceland volcanoes a permanent geohazard supersite. In summer 2013 FUTUREVOLC partners improved volcano monitoring in Iceland by installing new equipment, including seismometers, GPS receivers, an infrasound array, and electrical sensors. A key element of the project is to combine Icelandic ground based monitoring data with satellite observations in an improved manner. This applies to different disciplines, including e.g. deformation from ground observations and InSAR, and quantification of volcanic ash clouds during eruptions by combining measurements from ground based infrared (IR) cameras and satellite microwave and IR detectors. The FUTUREVOLC project has open data policy for real-time data streams, near real-time data and science products. Implementation of a data hub will begin in 2013 with making available data for the 2010 Eyjafjallajökull eruption. Access of monitoring data through one common interface will allow timely information on magma movements from combined interpretation of relocated earthquake sources, magma sources inferred from ground and space geodetic data, and measurements of volcanic volatiles. For better response during eruptions, the project will develop operational models of magma discharge rate, contributing directly to improved forecasts of ash dispersion.

<http://www.futurevolc.hi.is>

KEYWORDS: 4315 NATURAL HAZARDS Monitoring, forecasting, prediction , 4341 NATURAL HAZARDS Early warning systems, 8419 VOLCANOLOGY Volcano monitoring, 8414 VOLCANOLOGY Eruption mechanisms and flow emplacement.

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Additional Details

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