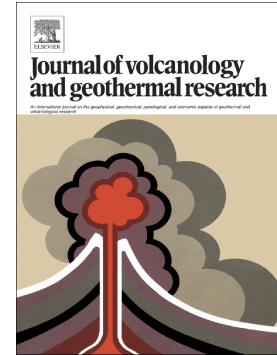


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Morphology and structural evolution of the Merapi lava dome monitored by camera drones

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Abstract

Dome building volcanoes display rapid and profound topographic changes that are important to quantify for hazard assessment. However, as hazardous lava domes often develop on high altitude volcanoes associated with a steep sided topography, direct field access and the study of morphological and structural changes remain challenging. Merapi Volcano in Indonesia is a type example of such a volcano, where soon after the 2010 eruption a new lava dome developed and was partially destroyed again by six explosions between 2012 and 2014 with 1-2- km plumes high. The biggest explosion occurred on 18 November 2013 and left elongated open fissures splitting the dome and an explosion crater. Here, we investigate topographic changes by comparing close range photogrammetric data acquired by camera drones before and after these

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