



Home Conference Details Registration Sponsors Organisation Contact



Geostationary Thermal-InfraRed monitoring of volcanic activity in the Virunga National Park, Democratic Republic of Congo

MSc Efthymia Pavlidou, ITC, ESA, University of Twente
Mark van der Meijde, Christoph Hecker

Theme: Earth Observation & Planetary Science

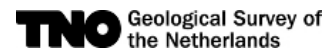
Abstract

We monitor volcanic activity in the Democratic Republic of Congo using Geostationary Land Surface Temperature data provided by EUMETSAT's LSA-SAF, with a 3x3 km spatial and 15 minute temporal resolution. Our study area covers the Virunga National park including two major active volcanoes of the African continent: shield volcano Nyamuragira and stratovolcano Nyiragongo, which hosts a permanent lava lake. The dataset extends in two years (2011-2012) and covers the Nyamuragira eruption period between November 2011 and April 2012. We apply a newly developed method (Pavlidou et al, submitted for publication) which allows for near-real time identification of contextual extremes even over a constantly elevated background using single-pixel time series. We detected anomalies induced both by lava flows and by volcanic activity in the permanent lava lake. We present the results and validate them against ground data (reported by GORISK Scientific Network and the Global Volcanism Program) and high resolution Landsat imagery. We conclude that application of the method is promising for satellite monitoring of volcanic activity, especially over areas with limited ground monitoring facilities.

[View all posters](#)

[View full programme](#)

Our sponsors



READ MORE

Conference venue

NH Koningshof
Locht 117
5504 RM Veldhoven
The Netherlands

Phone : +31 (0)40- 253 7475

Email : nhkoningshof@nh-hotels.com

Website : <http://www.nh-hotels.com>



Organisation NAC 2016

Marjolein van Veldhoven-Boonstra
Research support office
PO Box 80115
3508 TC Utrecht

Phone : +31 (0)30- 253 8928

Email : info@nacgeo.nl

Website : <http://www.nacgeo.nl>