

T1.1-P20. USING INFRASOUND AND SEISMIC NETWORKS FOR MONITORING ECUADORIAN VOLCANOES: CASE STUDY OF TUNGURAHUA AND REVENTADOR VOLCANOES

Infrasound and seismic methods have been used for monitoring eruptive activity at Tungurahua and Reventador volcanoes. Since July 2006, a seismo-infrasonic network recorded 6,000 explosions at Tungurahua larger than 45 Pa and 3 explosions larger than 1,000 Pa. During major eruptions (July 14-15, 2006; August 16-17, 2006; February 6-8, 2008, May 28, 2010; December 4, 2010; December 3-4, 2011; August 18, 2012) occurred seismic and infrasound tremors with complex waveforms. Post-eruption activity is frequently followed by swarms of less vigorous explosions. Explosion events occasionally triggered chugging events. In 2002 Reventador volcano produced the largest eruption in Ecuador in the last century (VEI-4). Since November 2004, periods of extended strombolian activity and short-lived vulcanian explosions are characterized by extrusion of lava domes, explosions, ash columns, lava and pyroclastic flows. A 120-sec seismic sensor and a microbarometer were installed on the south-east border of the caldera amphitheater. Non steady activity with fluctuations between quiescence and frequent explosions, tremor, and chugging events is recorded. Furthermore, the IG installed a regional network of six microbarometers for monitoring volcanoes such as Guagua Pichincha, Chimborazo, Antisana, Sangay, and the Galapagos Islands

Primary author: RUIZ ROMERO, Mario Calixto (Escuela Politécnica Nacional, Instituto Geofísico)

Presenter: RUIZ ROMERO, Mario Calixto (Escuela Politécnica Nacional, Instituto Geofísico)

Track Classification: 1. The Earth as a complex system