



MOMANIC Project – Temporary seismic installation to study the unrest at MOMotombo and MASaya volcanoes in NICaragua

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In the past three years, the region around the volcanoes Masaya and Momotombo, which includes Nicaraguans capital Managua, has shown an unusually high seismic and volcanic activity.

On April 10, 2014, a M6.3 earthquake occurred near Momotombo volcano followed by intense aftershock activity and a migration of seismicity towards Managua. In the following 2 years, the seismic activity remained considerably higher than in the previous network operation time (1975-2013). In December 2015 and January 2016, Momotombo volcano erupted after 110 years of quiescence. Since Mid December 2015, Masaya volcano has a lava lake in its main crater with gradually increasing activity.

With 30 broadband stations, we temporarily (Dec16-March17) densified the seismic network from the seismological department of INETER around these volcanoes. With this network, we expect to be able to image the magma chambers and feeding channels of the volcanoes using both, ambient noise tomography and earthquake tomography. A detailed analysis of the present seismicity shall provide us with a better understanding of the underlying tectonic processes and possible interactions between seismic and volcanic activity.

In this contribution, we will present the project as well as first results from the field campaign.

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