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Analysis of the Las Gonzalez Mérida, seismicity burst 2015-16, implementing SeisComp3 tool

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An extensive phase identification (i.e. Pg,Pn,Sg,Sn,Lg) and analysis is still pending in order to better precise the location and nature of the main seismic events (5.1 and 4.8 Mw) that took place within the two branches of the Boconó fault in Las Gonzalez sector in Western Venezuela. Along with these two events (Nov 14th and 11th) in 2015, an intense aftershock sequence of almost one thousand events took place until March 31th in 2016. During this time period, FUNVISIS, the Venezuelan Foundation for Seismological Research, had deployed the GIAME project (Integrated Geoscience of the Andes) with a significant number additional receivers covering the area; this dataset is still available for extensive work, and a tool as SeisComP3 could exploit their full potential and contribute to our better understanding of this stress release process and the geometry of the faulted area. We expect that our proposed phase analysis, with an increased number and more consistent time readings, will provide a better constraint for the locations of the events; also, when used with on-going efforts with relative location strategies (Waldhauser, 2001), we expect that dipping fault will be better captured with a better determined velocity model for the region.

Promotional text

This research put into practice the NDC capacities developed in the training course Seiscomp3. in order to solve and apply CTBT developments into a broad dataset and can provided insites for the Venezuela NDC.

Primary author: Ms RAMIREZ, Keyla (Fundación Venezolana de Investigaciones Sismológicas (FUNVISIS), Caracas, Venezuela)

Presenter: Ms RAMIREZ, Keyla (Fundación Venezolana de Investigaciones Sismológicas (FUNVISIS), Caracas, Venezuela)

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