

Seismic Source of Moderate Earthquakes in Colombia

The National Seismological Network of Colombia operated by Colombian Geological Survey receive in real time seismic data from 48 broad band stations and 47 strong motion stations installed along the Colombian territory and data from stations of neighbor countries. This high density of the data allows to retrieve source parameters of moderate earthquakes. Moment tensor solutions from earthquakes with $M_w > 4.0$ recorded between 2012 and 2017 in Colombia and offshore areas were obtained. Moment tensor inversions were calculated with the inversion of complete regional waveforms in the range of 0.01–0.1Hz using the ISOLA code. The epicenters, depths and magnitudes estimated by national network were used as input, centroid position and depth were refined by spacial and time grids-searching around the starting parameters and the quality of the solutions was assessed taking advantage of the ISOLA tools. This new catalog with a considerable increase of the total number of available solutions has great potential to improve our understanding of the regional seismicity and of the ongoing tectonics.

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