

# Site Characteristics Around the PS14-ROSC Seismic Station

*Tuesday, 20 June 2023 11:53 (1 minute)*

The primary seismic station PS14-ROSC is located near the town of Rosal in the central part of the eastern cordillera, close to the Colombian National Seismological Network headquarters. The signal to noise ratio of seismic data shows low quality data. Using the power spectral densities (PSD), we analysed changes in the seismic background noise levels in the station. We integrated microtremor measurements with geological observations to characterize the local site effects of the station and surrounding area in order to find an optimal place to relocate the bunker and improve the quality of the data. We conducted miniature microtremor array measurements to estimate the S wave velocity structure beneath the studied area. The spectral relationship of the horizontal components with the vertical H/V allows us to estimate the fundamental period of the ground. We calculated the phase velocity dispersion curves of Rayleigh waves using the methodologies SPAC, CCA, NC-CCA and we inferred the shear wave velocity profiles  $V_s$  by inversion technique.

## E-mail

ppedraza@sgc.gov.co

## Promotional text

Miniature microtremor array for seismic station characterization studies.

## Oral preference format

**Primary author:** PEDRAZA GARCIA, Patricia (Colombian Geological Survey)

**Co-authors:** Mr GARCÍA, Helber (Colombian Geological Survey); Mrs CASTILLO, Luisa (Colombian Geological Survey)

**Presenter:** PEDRAZA GARCIA, Patricia (Colombian Geological Survey)

**Session Classification:** Lightning talks: P1.2-2

**Track Classification:** Theme 1. The Earth as a Complex System: T1.2 The Solid Earth and its Structure