ID: Type: **Poster**

new GT5 event in a previously aseismic region of the Brazilian Phanerozoic Parnaiba Basin

The low Brazilian seismicity, with only three continental earthquakes of magnitude five in the last three decades and, until recently, the low number of seismic stations, explain why it is very difficult to detect events at regional distances that can be classed as Ground True 5 (GT5). In the first PTS - CTBTO RSTT meeting (in 2012) seismologists from the South America were encouraged to cooperate in identifying GTx events. At that time, Brazil appeared completely empty in the world map of GT events. With the deployment of the Brazilian Seismographic Network (RSBR) and using aftershock sequences well recorded by local and regional stations as reference events, it was possible to relocate mainshocks suitable for GT5 events. We studied the aftershock activity after a 4.6 mb mainshock on January 3, 2017. This event was registered by 25 regional stations of the RSBR. A local seismic network, with 5 stations permitted the earthquake to be relocated with an accuracy of a GT5 event. For hypocentral location an accurate velocity model was determined using phase conversion, clearly identified on the interface sediment-basement. In this work, we present a new GT5 event in order to better define the 3D velocity model for Brazil.

Primary author: VIEIRA BARROS, Lucas (Seismological Observatory)

Presenter: VIEIRA BARROS, Lucas (Seismological Observatory)

Track Classification: Theme 2. Events and Nuclear Test Sites