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Data Assesment and Regional Seismic Travel Time (RSTT) Modelling in Venezuela and the Caribbean Sea

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Geophysical data has been gathered to assess these data sets to achieve reliable earthquake re-localisation. These data would serve as input for the Regional Seismic Travel Time (RSTT) global model's workflow to achieve accurate RSTT in Venezuela and the Venezuelan part of the Caribbean Sea. Therefore, the data sets are extensive including the compilation of earthquakes, mine blasts and seismic data shots from various seismic projects that have taken place in the last decades, which would serve as a significant improvement in the RSTT model and the International Monitoring System (IMS) data for re-localization, proposed in the area region. Most of these data sets have served in the past for geological characterization and basin analysis within the oil exploration industry, geohazard assessment, and local velocity model building for a better understanding of seismic risk. However, proper data integration would allow a significant improvement, given the previous efforts made in data integration, to achieve consistent Moho depths that best describe addressing the lateral variations and heterogeneities within the Venezuelan crust, which would benefit improving seismic phases picking for the National Data Center and IMS data.

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Promotional text

Regional Seismic Travel Times (RSTT) models represent a significant improvement for phase picking within a region, helping to minimize and constrain re-localization solutions; this work aims to integrate local geophysical data to RSTT model in Venezuela.

Oral preference format

in-person

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