



ID: P1.2-032

Type: E-poster

the Crustal and Upper Mantle Velocity Model and Seismic Event Location Accuracy in Jordan through Integrated Analysis of Local, International Monitoring System and Non-International Monitoring System Data Using the Regional Seismic Travel Time Model

This poster aims to show the result and method of a study to improve the understanding of Jordan's crustal and upper mantle structure and enhance the local model velocity by integrating seismic data from local Jordanian stations, International Monitoring System (IMS) stations, and non-IMS stations. Building on my previous research titled "Integrate Data from IMS and Non-IMS Stations..." the focus is on refining local and regional velocity models. Using the Regional Seismic Travel Time (RSTT) model provided by NDC in a box software for event location to re-evaluated using multiple velocity models(z. El-Isa 1987)(IASPI) for selected seismic events from the SEL3 and Revised Event Bulletin. Integrating data from Jordan's, IMS, and non-IMS stations with advanced travel time calculations provided by RSTT aims to improve the precision of seismic event localization and local velocity model. This poster will highlight the improvements in seismic event location accuracy and the refinement of the local velocity model. The expected outcomes will significantly enhance seismic monitoring capabilities in the region, contributing valuable insights for seismic hazard assessment and improving the reliability of monitoring and verification processes for Jordan and surrounding. Additionally, this study will contribute to advancing the objectives of the Comprehensive Nuclear-Test-Ban Treaty Organization, supporting the implementation of the Comprehensive Nuclear-Test-Ban Treaty and reinforcing global peace and security.

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Session Classification: P1.2 The Solid Earth and its Structure

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