ID: Type: **Poster**

T1.2-P07. Evaluating the Regional Seismic Travel Time Model (RSTT)

The RSTT model was developed to account for the effects of crust and upper-mantle structure on regional seismic phase travel-times. RSTT was designed with real-time monitoring in mind and travel times can be computed on the fly in ~1ms. Originally the RSTT model only covered the Eurasia region. This was followed by numerous upgraded models that initially incorporated North America before the most recent model (rstt.3.0.4) was developed which has global coverage. In this study we undertake an analysis of the current RSTT model released in October 2014. We focus on how the velocity structure and travel-time errors for each of the phases have evolved. We examine travel time differences for events at a variety of depths at each of the IMS stations and link this to crustal thickness. Existing IDC Source Specific Station Corrections (SSSC) (available at only 44 IMS stations) were compared with RSTT derived SSSC. The RSTT model extends to a distance of 1500km compared with IDC regional phase observations at distances of ~2000km. If the RSTT model is to be implemented at the IDC in their routine production of seismic event bulletins, it needs to be decided how to incorporate phase observations and errors between 1500-2000km.

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