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# of NetVisa Association and Location Performance Using Ground Truth Events and RSTT Model Based SSSCs

The CTBTO's International Data Centre is in the process of implementing NetVISA to perform the automatic association and location steps in the next generation IDC software. NetVISA (Arora et al., 2013) applies a Bayesian approach with a forward physical model using probabilistic representations of the propagation, station capabilities, background seismicity and noise statistics to obtain the maximum a posteriori solution to the highly nonlinear problems of phase association and event location. By default NetVisa uses the iasp91 travel time tables to calculate the forward problem, but it will also be capable of using Source-Station Specific Corrections (SSSCs) to account for the 3D structure of the upper mantle and crust. In this study, we compare Ground Truth (GT0-5) events locations as established by the International Seismological Centre (ISC) for 2013 to the NetVisa locations, IDC's automatic Standard Event Bulletin (SEL3) and Reviewed Event Bulletin (REB), and locations obtained with the iLoc (Bondár and Storchak, 2011) software. iLoc is enabled to use travel times computed from the global 3D upper mantle model Regional Seismic Travel Times (RSTT; Myers et al., 2010), while the REB locations use empirical correction tables.

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