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Regional seismic wave attenuation in Northeast China[1] NISHATH RANASINGHE, THOMAS HEARN, New Mexico State University, ANDREA GALLESGOS, Weston Geophysical Corporation, JAMES NI, New Mexico State University, ERIC SANDVOL, University of Missouri-Columbia — Study of regional seismic wave attenuation is an important aspect of global nuclear explosion monitoring and yield estimation. We studied, Pg and Lg seismic wave attenuation in Northeast (NE) China utilizing seismic data collected from 452 earthquakes that were recorded primarily by Northeast China Extended Seismic (NECESS) Array. A Pg attenuation map with an average Q_0 of 299 was created at a central frequency of 1 Hz by implementing the Two Station Method (TSM). We observe low Pg Q_0 values (<400) in the majority of areas in NE china except in the central parts of the Songliao Basin and Great Xing'an Range. Lg attenuation is studied by implementing both TSM and Reverse Two Station Method (RTSM) at central frequencies of 0.5, 1, 2 and 3 Hz. Although both methods show similar frequency dependent factors (η), RTSM method consistently shows higher Lg Q_0 values compared to TSM. We observe most of the sedimentary basins in NE china show low Lg Q_0 values (<400) while granitic mountain ranges consistently show high Lg Q_0 values (>800).

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