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Analyzing of Seismic Recording in Frequency Domain at Nuclear Bomb Explosion: Case Study North Korea's Nuclear Test

A research has been done to compare frequency response, its dominant frequency and its correlation between North Korea's Nuclear Test Explosions. We used recent North Korea's Nuclear Test Explosions that recorded in the CTBTO's Seismic Stations nearby Korean Peninsula. We used seismic recording data in MiniSEED dataset format of the events from each station and its dataless SEED format. Dataless SEED is used to remove the instrument responses that existed inside the MiniSEED dataset to make the true seismic waveform recording without instrument interferences. The seismic waveform data from each station are processed using Trend Frequency Analysis and Analysis of Spectral Ratio Method to see the frequency response and its dominant frequency . After acquiring its frequency responses, we made correlation of the frequency response between nuclear explosion to determine the frequency similarities between those events. Determining the seismic frequency occurence of nuclear explosions in Korean Peninsula will help seismologist to identify and separate which one is the nuclear activities and the earthquake activities

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