

Title

Using wavelet techniques to discriminate between explosions and natural earthquakes.

Authors

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Abstract

Wavelets analysis is used to discriminate between explosions and natural earthquakes. We applied wavelets techniques to analyze the seismograms of a set of mining explosions, reported in catalogs as earthquakes, and compared them with natural earthquakes that occurred in the same region (within a radius of 10 km). We conclude that earthquakes show high energy at lower frequencies (levels), and the power remains strong for a long time whereas explosions show energy at higher frequencies (levels) than the earthquake, and the energy of the signals does not last long as in the case of the earthquake.