

عنوان مقاله:

A REVIEW ON SONIC WAVE PROPAGATION IN ROCKS

محل انتشار:

هفتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1394)

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خلاصه مقاله:

Different theories on the propagation of sonic waves in rocks are studied. Early laboratory works show that the attenuation of sound waves, which based on the definition includes seismic waves as well, is frequency independent. Most of the theories also agreed that absorption in rocks is independent of frequency. Therefore it is possible for the high frequency signals of an earthquake to reach the distance. However, seismometers and accelerometers which are utilized for measuring the seismic wave fields, have a rather short bandwidth. An experiment was done in 1980s to measure the sonic signals accompanying earthquakes other than those measured by seismometers and accelerometers. But the effective frequency bandwidth of the recording system in this experiment was between 40-70 Hz. More measurements are needed to investigate the quality of sound waves that come with an earthquake.

کلمات کلیدی:

Seismic Signals, Ultrasonic Waves, Earthquake Prediction, Seismometer Frequency, Wave Propagation

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