

عنوان مقاله:

DATA USABLE BANDWIDTH FOR EARTHQUAKES RECORDED ON SSA₂ ACCELEROGRAMS OF IRAN STRONG MOTION NETWORK
(ISMN)

محل انتشار:

نهمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1403)

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خلاصه مقاله:

Seismic data processing in engineering seismology often involves bandpass filtering, a critical step in analyzing strong motion data. This study focuses on selecting the usable data bandwidth using accelerograms from the Iran Strong Motion Network (ISMN) recorded by SSA₂ devices. Criteria for establishing the lowest usable frequency included signal-to-noise ratios, Fourier Amplitude Spectra (FAS) shape analysis, and visual inspection of filtered time series. An iterative process was employed to adjust filter corner frequencies, resulting in different frequency band limits for each recording component. The upper-frequency limit is heavily influenced by the limitations of recording equipment. For 90% of the current dataset, the usable bandwidth ranges from 0.35 Hz to 1.8 Hz. The methodology outlined in this study provides insights into selecting appropriate frequency ranges for subsequent seismological analyses.

کلمات کلیدی:

Earthquakes, Data Processing, Iran Strong Motion Network, SSA₂ Accelerographs

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