

Noise Field Characteristics of a Small Aperture Seismic Array on the Southeast Coast of China

In order to obtain the differences of characteristics of the noise field between the seismic arrays along the coast and the seismic arrays in the mainland, we use the data from Fuqing array and LZDM array in this research. Cross-correlation method was used in this research to tell us the truth that the noise cross-correlation between site pairs along the coast present a linear relation with the increasing of the separation between two sites in 0.1-1 Hz and 0.5-1.5 Hz, while the noise cross-correlation in the mainland show different type. The noise cross-correlation values for the array located along the coast are very high, and dropped to 0.5 in 2000m, 1200m, 750m, 500m and 200m for the frequency bands of 0.1-1, 0.5-1.5, 0.8-2.5, 1-2 and 2-4 respectively, while the noise cross-correlation values for the array in the mainland are very low, and dropped to 0.5 in 200m for the frequency bands of 0.5-1.5, which show us the array along the coast was effected by the low frequency sea wave severely. We also find obvious minus cross-correlation values in Fuqing array, and the LZDM array show blurred minus cross-correlation values.

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