

Characteristics of cross-correlation coefficient between seismograms of events occurred in the proximity to each other

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Among aftershocks of the 1995 Hyogo-Ken Nanbu earthquake, we selected a M3.4 event occurred west-off Awaji Island as a master event. For smaller events of $M > 2.0$ which occurred within 2.5km from the master event, we determined hypocenters relative to the master event. At 2 stations, we calculated cross-correlation coefficient of seismograms between the master event and the smaller events in four frequency bands of 2-4, 4-8, 8-16, and 16-32Hz. We found that cross-correlation coefficients decrease with increasing frequencies and increasing separation between events. Decay of cross-correlation with event-separation for 2-4, 4-8 Hz band is possibly caused by the heterogeneous structures