

遠地 P 波の高周波震動継続時間から推定される 1994 年三陸はるか沖地震と 2003 年十勝沖地震の地震破壊伝播 Rupture propagations inferred from HFER durations for the 1994 far east off Sanriku and 2003 Tokachi-oki earthquakes

原辰彦^{1*}

HARA, Tatsuhiko^{1*}

¹ 独立行政法人 建築研究所 国際地震工学センター

¹ IISEE/BRI

Hara (2011, EPS, 63, 525-528) showed a clear azimuthal dependence of high frequency energy radiation (HFER) durations measured from teleseismic P waves for the 2011 off the Pacific coast of Tohoku Earthquake. He suggested that it reflected the rupture propagation that generated high frequency energies. In this study, we investigated whether such azimuthal dependences were observed for the 1994 far east off Sanriku earthquake (Mw 7.7) and the 2003 Tokachi-oki earthquake (Mw 8.3). We applied the measurement procedure of high frequency energy radiation duration of Hara (2007, EPS, 59, 227-231) to these earthquakes, and found their azimuthal dependences. We calculated high frequency energy radiation durations referring to previous rupture process models of these earthquakes, and compared them to the observed high frequency energy radiation durations. For the 1994 far east off Sanriku earthquake, we found a good correlation between them. For the 2003 Tokachi-oki earthquake, although the observed azimuthal dependence is consistent with the direction of the rupture propagation, there is a substantial difference between their absolute values, which needs further detailed analyses.

キーワード: 高周波震動継続時間, 地震破壊伝播, 方位角依存性

Keywords: high frequency energy radiation duration, rupture propagation, azimuthal dependence