

Source process of 1998 M6.3 earthquake off Sanriku

Tomomi Okada[1], Toshihiro Igarashi[1], Toru Matsuzawa[2], Norihito Umino[1], Akira Hasegawa[3]

[1] RCPEV, Tohoku Univ., [2] RCPEVE, Tohoku Univ., [3] RCPEV, Graduate School of Sci., Tohoku Univ.

A moderate (M6.3) interplate earthquake occurred off Sanriku on May 31, 1998. We estimate spatio-temporal slip distribution of this earthquake by Hartzell & Heaton (1983) 's multi-time window method using empirical Green's function. We use waveform data regionally observed by broad-band seismograph network and ocean bottom seismographs.

Spatial extent of the estimated rupture area is about 40km x 30km, which coincides with that of the aftershock area. Large amount of slip is released near the main shock hypocenter and along the margin of the rupture area. We relocate hypocenters of aftershocks precisely by master event method. Most of aftershocks consist of two clusters and aftershock activity is low in the area with high amount of slip in the main shock rupture.