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Source mechanism of the eastern Mino earthquake (Mj 5.1) with Isochron Backprojection Method

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An earthquake (eastern mino earthquake; Mj 5.1) has occurred beneath the high density seismogram networks (HDSN; cf. Aoki *et al.* 1999 and Okubo, 2011) that consisted with more than 50 stations among 30km x 20km area on the 14th Dec. 2011. This earthquake had normal faulting type mechanism in subducting philipine sea slub (Saiga and Okubo, reviewing). Seismic motion of this earthquake includes high frequency components (Okubo and Saiga, 2012; JPGU), we can resolve detailed rupture process using with the dense seismogram networks and the high frequency phenomena.

In order to analyze rupture process of the eastern mino earthquake, we applied isochron backprojection method (IBM; eg. Festa and Zollo, 2006, Pulido *et al.*, 2008). We used the waveform records of our stations and some Hi-net (Obara *et al.*, 2002) observatories within 65 km hypocentral distances as datasets of IBM. First, we picked up S wave arrival time from waveforms, and calculated acceleration amplitudes. And we estimated the S wave velocity structure around the epicenter from Matsubara *et al.* (2008) with Vp/Vs = 1.73 assumption. And also we assume that rupture velosity does not beyond the S wave velocity and the maximum rupture length does not extend above the Matsuda's fault length-Magnitude relation (Matsuda, 1975), in IBM analysis.

We will discuss rupture process of the eastern mino earthquake and relations with aftershock hypocenters distribution, in presentation.

Keywords: source mechanism, main rupture, s waveform, dense seimometer array, high frequency seismic motion