ID: Type: **Poster**

2.3-P02. A Rupture Process Study of the 28 March 2005 Nias Earthquake Using Joint Inversion Method of Teleseismic, Geodetic, and Tsunami Dataset

The large 28 March 2005 Nias earthquake (Mw 8.6) occured on megathrust of the Sumatra subduction zone and generated a small tsunami. We estimated the slip distribution of the 2005 Nias earthquake using joint inversion of teleseismic, geodetic, and tsunami waveforms. We used 5 tide gauge stations around Indian Ocean, 9 GPS stations from Sumatran GPS array (SuGar), and 15 seismic station of IRIS array network to perform the joint inversion. We assumed that the fault length was 300 km and the width was 150 km. The result shows that the maximum slip amount of 12.37 m was found below Nias Island. The large slip area of the 2005 Nias earthquake did not reach the Sumatra trench. The rupture area of the 2005 Nias earthquake was similar to that of the 1861 earthquake. The total seismic moment was calculated to be 1.08 × 1022 Nm (Mw = 8.6) by the slip distribution.

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