

## Three dimensional fluid distribution and crustal deformation around the focal area of Iwate-Miyagi Nairiku Earthquake

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The 2008 Iwate-Miyagi Nairiku Earthquake (M 7.2) was an unusually large earthquake, which occurred near the volcanic regions. We used new data at 66 sites in a few kilometer grid intervals and existing data at 44 sites on three profiles. We inverted detailed 3d resistivity structure. In our final resistivity structures, aftershocks are distributed in high resistivity zones and avoiding low resistivity anomalies. We found a pathway of fluids from Mt. Kurikoma to the hypocentral area at 10km depth. The hypocenter is located at the rim of the conductor.

Large coseismic slip zones are located in high resistivity in our model. On the other hand, post-seismic slip zones are located in low resistivity zones and high resistivity zones. Iinuma et al.(2009) showed two different kinds of triggers of post-seismic slips. One comes from fluids and the other comes from the static stress change caused by mainshock. Our results imply the different triggers of post-seismic slips as implying in the previous work. These results would come from the difference of character like ductile or brittle and the existence of fluids.

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