Real-time Estimation of fault geometry to obtain accurate seismic intensity for large earthquakes

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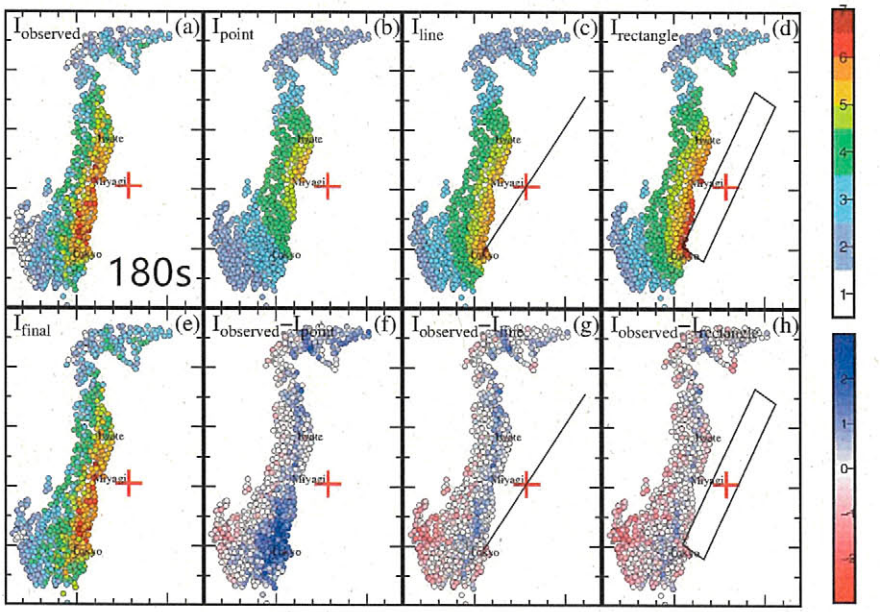
We find a method to estimate the surface project of the fault at real-time by using the method of Yamamoto et al. (2008) and data of real-time seismic intensity. We find relevance between observed seismic intensity and the intensity calculated from the edge of the fault model, and the determine the most suitable model of fault by grid search. The fault model is parameterized by epicenter, fault length, fault width, and relatively location of the fault. We test the method using Tohoku earthquake and Wenchuan earthquake.

Estimated intensity at 180s after the event for 2011 M_w9.0 Tohoku earthquake



Estimated intensity at 150s after the event for 2008 M_w8.0 Wenchuan earthquake