

## Stress tensor inversion in the Nobi fault area, Central Honshu, Japan

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A stress tensor inversion method was applied to 702 focal mechanism solutions in the Nobi fault area, Central Honshu, Japan, which are obtained by using HASH (Hardebeck and Shearer, 2002) that is a method using a first motion polarity of P-wave as data. The study area, 35.3-36.1N and 136.0-137.0E, is gridded with 0.1 X 0.1 spacing in the east-west and north-south directions, respectively. The focal mechanisms are divided into three groups according to the depth of hypocenter: 2-7 km, 5-10km, and 8-13km. From each group the focal mechanisms are selected that the epicenters are located within a radius of 15 km centered at each grid. The SATSI is applied to the data at each group of depth, which is a stress tensor inversion method developed by Hardebeck and Michael (2006). The spatial pattern of stress is obtained at each depth: 2-7 km, 5-10km, and 8-13km. We find that (1) the maximum principal stress ( $\sigma_1$ ) is oriented east-west direction almost all over the study area, and (2) the  $\sigma_1$  direction rotates clockwise by some tens degrees around the Nobi fault.

Keywords: Nobi fault, joint seismic observations, focal mechanism, stress tensor inversion, inland earthquake, active fault