

## 跡津川断層周辺で発生する微小地震のメカニズム解と応力蓄積過程 Focal mechanisms of the small earthquakes in and around the Atotsugawa fault and stress accumulation process

高田 陽一郎<sup>1\*</sup>, 勝俣 啓<sup>2</sup>, 片尾 浩<sup>1</sup>, 小菅 正裕<sup>3</sup>, 飯尾 能久<sup>1</sup>, 鷺谷 威<sup>4</sup>, 歪集中帯大学合同地震観測グループ<sup>1</sup>  
TAKADA, Youichiro<sup>1\*</sup>, KATSUMATA, Kei<sup>2</sup>, KATAO, Hiroshi<sup>1</sup>, KOSUGA, Masahiro<sup>3</sup>, IIO, Yoshihisa<sup>1</sup>, SAGIYA, Takeshi<sup>4</sup>,  
Japanese University Group of the Joint Seismic Observations at NKTZ<sup>1</sup>

<sup>1</sup> 京大・防災研, <sup>2</sup> 北海道大学 地震火山研究観測センター, <sup>3</sup> 弘前大学理工学部, <sup>4</sup> 名古屋大学環境学研究科  
<sup>1</sup>DPRI, Kyoto Univ., <sup>2</sup>ISV, Hokkaido Univ., <sup>3</sup>Hirosaki Univ., <sup>4</sup>Nagoya Univ.

To understand the stress accumulation process in and around the Atotsugawa fault system with higher spatial resolution than previous reports (Katsumata et al., 2010; Imanishi et al., 2011), we examined the focal mechanisms for very small earthquakes in this region using the data observed from January 2005 to December 2008 with temporary deployed seismometers and permanent stations. We determined the focal mechanisms from P-wave first-motion polarities by the method of Maeda (1992). The P and S-wave arrival times, and P-wave polarities were automatically determined by the algorithm recently developed by Horiuchi et al. (2011). In most depth ranges, the obtained focal mechanisms correspond to various types of faulting (normal, reverse, and right-lateral strike slip). At the deepest part, on the other hand, the right-lateral strike slip seems to be dominant, which is consistent with Imanishi et al. (2011). We have checked the automatically picked P-wave arrivals by WIN system (Urabe and Tsukada, 1991) just in case. Finally, we estimated the stress field in and around the Atotsugawa fault system from the focal mechanisms by a conventional stress inversion technique (Gephart and Forsyth, 1984). The earthquakes less than 15 focal solutions were adopted as input data for the stress inversion.

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