

## Characteristics of stress fields around the Itoigawa-Shizuoka Tectonic Line active fault system by temporary seismic observations

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The Itoigawa-Shizuoka Tectonic Line active fault system consists of north (north-trending east-dipping reverse fault), middle (northwest-trending left-lateral strike-slip fault) and south segments (north-trending west-dipping reverse fault). It is important to investigate whether the reactivation of these faults can occur under the present stress state.

Earthquake focal mechanisms are the most fundamental information of the stress state. In the case of microearthquakes, however, it is difficult to obtain a unique focal mechanism solution, because the number of stations detecting events decreases and their azimuthal coverage becomes poor. Therefore, we have made temporary observations in the south, central, and the southern part of the north segments since September 2005, changing the observation region. The events were recorded at sample rates of 200 Hz in continuous mode and by off-line recording with GPS clock. We determined focal mechanism solutions using absolute amplitudes and P-wave polarity, which made it possible to increase the number of uniquely constrained focal mechanism solutions. Stress fields deduced from suites of focal mechanisms suggest that except for the southern part of the south segment, they agree well with the faulting style and slip sense that were estimated by the trenching survey and seismic reflection profiling.

We have started a temporal observation around the north segment since August 2008. Although the number of determined focal mechanisms is not enough, we found that microearthquakes with large strike-slip components are also occurring in the north segment.

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