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SCG061-01

Room:302

Time:May 25 16:30-16:45

## Anomalous depth dependency of the stress field in the 2007 Noto Hanto, Japan, earthquake: Potential involvement of a dee

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We have elucidated depth variations in the stress field associated with the 2007 Noto Hanto, Japan, earthquake by stress tensor inversion using high-quality aftershock data obtained by a dense seismic network. Aftershocks that occurred above 4 km in depth indicated a strike-slip stress regime. By contrast, aftershocks in deeper parts indicated a thrust faulting stress regime. This depth variation in the stress regime correlates well with that in the slip direction derived from a finite source model using geodetic data. Furthermore, the maximum principal stress (S1) axis was stably oriented approximately W20N down to the depth of the mainshock hypocenter, largely in agreement with the regional stress field, but, below that depth, the S1 axis had no definite orientation, indicating horizontally isotropic stress. One likely cause of these drastic changes in the stress regime with depth is the buoyant force of a fluid reservoir localized beneath the seismogenic zone.