

Detection of short term SSE by GEONET

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When NIED reported that a short term slow slip event(SSE), which occurred in Tokai region in December 2004, was detected by tiltmeter, GSI examined GEONET data whether any deformation related the event could be detected. However, it was concluded that there are no significant signal caused by short term SSE on GEONET data in Tokai region.

However, Hama et al.(2008) reported that the horizontal movement caused by short term SSE in December 2004 can be detectable on several GEONET sites. Therefore same noise reduction method is applied to GEONET F2 solution data of 84 GEONET sites from January 2004 to December 2005 in same target area and were used to verify the effectiveness of the method.

Even though some suspicious signal were detected in the data along events, it is difficult to determine a threshold value to detect SSE occurrence, as comparable deformation was seen on other terms when no SSE event occurred.