
SSS014-P03

Room: Convention Hall

Time: May 27 17:15-18:45

Long-term slow slip events in the Bungo Channel deduced from leveling and sea level data

Akio Kobayashi^{1*}, Takeyasu Yamamoto²

¹Meteorological Research Institute, ²Sapporo District Meteorological Observat

We investigated leveling and sea level data for the period from 1979 to 2008 and found evidence of long-term slow slip events (SSEs) that may have occurred in the Bungo Channel, southwestern Japan, before the two most recent SSEs (1996?1997 and 2003) detected from GPS data. Subtracting GPS-derived steady-state vertical displacements related to ongoing subduction of the Philippine Sea plate from the vertical displacements observed by leveling suggests that discrete vertical displacements that might represent long-term SSEs have occurred in each of four intervals between leveling surveys. We calculated relative sea level differences between tidal stations in the Bungo Channel region and cross correlated them with the GPS-derived vertical displacements of the recent long-term SSE. These cross correlations and the discrete vertical displacements derived from leveling suggest that long-term SSEs may have occurred around 1979 ?1980, around 1985, and around 1991.

Keywords: long-term slow slip, sea level, leveling, vertical crustal movement, Bungo Channel