

## Tilt Observation at Sagara in the Tokai Region and Its Secular Variations

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Shizuoka Prefectural Government set up Tiltmeters at Sagara (Makinohara City) and Kamisaka (Shizuoka City) in the direction of the movement of Philippine Sea Plate, and observation started in May 1983 and in March 1985, respectively, in order to observe precursory phenomena of Tokai earthquake. Their results had been reported at the Coordinating Committee for Earthquake Prediction and some Academic Society Meetings until 1998. However, the data lacks were increased after changing the observation systems in 1998 and their reports have seldom been reported since 1998.

Leveling surveys have sometimes been performed between the two end sites of the tiltmeter at Sagara, and the lack of the tilt data were connected by using their leveling data.

Dividing the observation period into the following 7 period; 1. June 1983 - June 1989, 2. June 1989 - March 1991, 3. May 1991 - June 1994, 4. January 1996 - September 1998, 5. April 2001 - February 2003, 6. December 2003 - November 2004, and 7. February 2005 to October 2006, we obtained tilt velocity at each period. Their results were 1. northwestward 1.0 micro radian / year, 2. southeastward 0.2 micro radian / year, 3. northwestward 1.5 micro radian / year, 4. southeastward 0.7 micro radian / year, 5. southeastward 0.3 micro radian / year, 6. southeastward 0.6 micro radian / year, and 7. 0.0 micro radian / year.

Time fracturing phenomena of the crustal deformations in the Tokai District were already reported by some researchers, and we compared these tilt data with GPS data and leveling data obtained near the Sagara site. The results show that the periods of the tilts change were in harmony with those obtained from other data.