

Investigation of the strainmeter records concerning the short-term slow slip events in Aichi Prefecture

Akio Kobayashi[1]; Takeyasu Yamamoto[1]; Koji Nakamura[2]; Kazuhiro Kimura[2]

[1] MRI; [2] JMA

A transient crustal deformation was observed by the strainmeters in the Tokai region in July 2005. Many low frequency earthquakes occurred in a same period in Aichi Prefecture. It is thought that the observed strain change is caused by the short-term slow slip event. We found 20 similar strain changes in the period from Sep 1999 to Dec 2005, and these strain changes were also accompanied by low frequency earthquakes. There are three patterns of the strain changes, and the areas of the low frequency earthquakes were different in each pattern. The feature of the patterns of those strain changes can be explained by the slips on the plate boundary in the vicinity of the epicenters of each low frequency earthquakes. We also checked the records of the strainmeters from 1984, and found 11 strain changes for 15 years. The strain changes according to the short-term slow slips had occurred almost regularly since at least 1984. Moreover, the frequency of the strain change is high from 1988 to 1990, and it is interesting that this period is corresponding to the period of the long-term SSE in the vicinity of Lake Hamana already pointed out.