

Long-term Crustal Strain Changes Observed in Northern Part of the Kinki District

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The observation of crustal strain has been carried out by using borehole-type multi-component strainmeters at Tsuruga and Imazu stations in northern part of the Kinki district. We investigate the strain data of twelve half years from 1996 observed at both stations. Seasonal strain change observed at Imazu is good correlation with the underground water level observed simultaneously. Seasonal strain change observed at Tsuruga is well described by output of the tank model which is inputted daily precipitation. Strain changes which correspond to processes of stabilization of strainmeter are approximated by using exponential functions. After seasonal and exponential strain changes are removed, trends of strain changes turned around 2000 and 2005. The turnings of trends cannot be explained by temporal changes of sensitivity of strainmeter or long-term variations of precipitations. We calculate expected strain changes which were caused by the slow slip event occurred in the Tokai district from 2000 to 2005, and compare them with observed ones. As a result, principal axes of strain are consistent with each other, though amounts of observed strain are about ten times larger than expected ones.