

Strain response of under ground water at Donzurubo observation

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The hydrographic Department, Japan Coast Guard (1948) reported that the water level of many well at the coast of the Kii and Shikoku district were dropped several days before the 1946 Nankai earthquake (M8.0). Recently, the changes of strain are expected before the next Nankai great earthquake by precursory slip at the plate boundary. We think that the drop of the water level before the earthquake was caused by the strain changes as mentioned above. We have surveyed the water level of the old well at Kii district. On the contrary, the expected strain changes are calculated by pre-slip model. We would like to obtain the response coefficient of water level to strain. Simultaneous observation of strain and water level was carried out in the vault at Donzurubo observatory. We get the coefficient of 50-100mm/10⁻⁷ strain and 20mm/10⁻⁷ strain for long period over several days and for short period than one day, respectively.