[JJ] Evening Poster | S (Solid Earth Sciences) | S-SS Seismology

[S-SS13]Earthquake prediction and forecast

convener:Toshitaka Baba(Graduate School of Science and Technology, Tokushima University)
Thu. May 24, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)
This session provides the opportunity for contributions that fall within the scientific spectrum of earthquake prediction and forecasting. We welcome theoretical, observational or numerical papers that are either on long- or short-term predictions, and either based on deterministic or probabilistic approaches.

[SSS13-P03]On the pre-slip of the 1946 Nankai earthquake – verification by the tide level data –

*Yasuhiro Umeda[1], Satoshi Itaba[1] (1.Advanced Industrial Science and Technology)
Keywords:1946 Nankai earthquake, pre-slip, well water, tide, Tosashimizu

Well water in the coastal area of the Pacific Ocean remarkably decreased before the 1946 Nankai earthquake. Umeda and Itaba (2017) proposed a pre-slip model before the earthquake. The model was verified by the tide level data of Tosashimizu and Uwajima. Fig. 1 shows the difference of sea level anomaly at two observation points (upper solid line) and the 24 hour moving average (dotted line). 9 days before the earthquake, relative change (uplift of Tosashimizu and subsidence of Uwajima) was found on the Fig. 1. It coincides with one week before when the well water decreases. Atmospheric pressure at this time was stable as shown in Fig. 1. There is no contradiction between the change amount of 12 hours obtained from observation and that estimated from the model. However, this level of tidal change can be seen in the other period (from October to December), so it is not necessarily meaningful. Amplitudes of half-day and daily cycles are due to the observed tide level being smaller than the astronomical tide level.