## Plate coupling variation of the Nankai trough megathrust zone revealed by GNSS-A observation

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Yokota et al. (2016) estimated inter-plate slip deficit rate of Nankai Trough subduction zone using GNSS-A seafloor geodetic data obtained from 2006 (partially 2012) to June 2015, and revealed spatial heterogeneity of slip defect rates which was not clearly detected from terrestrial observation network. Using the same data, Nishimura et al. (2018) estimated slip deficit rate and plate coupling rate from advanced model considering block motion of micro plate. However, temporal variation of the coupling state could not be discussed due to the inadequacy of temporal resolution of GNSS-A data.

Recently, Yokota & Ishikawa (2020) analyzed GNSS-A data up to 2018 statistically and revealed the existence of slow slip around the shallow side of strong coupling regions estimated by Nishimura et al. (2018). However, the crustal velocities used to estimate the plate coupling is mean values without considering transient variation such as slow slip. Because the mean velocity of the site including the slow slip period becomes slower, it is trivial that the slow slip area overlaps with the weakly fixed area.

To investigate the relationship between the slow slip area and the strong coupling region more properly, it is necessary to estimate start and end time of slow slip events accurately. With the current ability of GNSS-A observation, this is difficult task because of the fewness of the observation frequency and the shortness of the observation period. In this presentation, we report how accurate the temporal variation of velocity field and plate coupling can be detected.