

## Decadal prediction of sea level in the western North Pacific (I1 poster)

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Japan islands in the western North Pacific are located at the latitude of boundary between the subtropical and subpolar gyres and at the area where the strong Kuroshio and Oyashio currents meet. Therefore, sea level around Japan could be dynamically influenced by the change in these ocean current systems. Historical tide gauge and recent satellite altimetry data show that sea level around Japan varies on decadal to bidecadal time scales in the past several decades in addition to the global mean sea level rise. Near-term climate prediction experiments conducted with a climate model at Meteorological Research Institute (MRI-CGCM3) do not show significant predictability of sea level around Japan on the decadal time scale. However, sea level changes similar to the observation are recognized in the prediction after the 1980s. It is known that there are decadal to multi-decadal atmosphere-ocean variability in the North Pacific such as the Pacific Decadal Oscillation (PDO) and the North Pacific Gyre Oscillation (NPGO). Sea level variability around Japan is mainly caused by the westward propagation of sea level anomalies forced by wind stress curl anomalies in the central North Pacific associated with PDO and NPGO. In order to gain more accurate decadal prediction of sea level around Japan, it is important to reproduce atmosphere and ocean fields related to the phases of these climate modes at the initial state and to predict those phase transitions.