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Poster
Accurately understanding and estimating sea level trends along the Pacific coasts are critical to risk management and policy decisions. The magnitudes of the sea level rise based on long-record tide gauge and satellite altimetry measurements fluctuate with different time spans of data, resulting in controversial conclusions. In this study, we utilize 60-year Church & White sea level reconstruction data set to examine the relationship between the global mean sea level rise and sea level variations associated with the aliasing of the decadal variability. Specifically, we systematically test the sensitivity of the relation between the sea level trends and trends in Pacific Decadal Oscillation (PDO) index to the time span of the data records in the entire North Pacific. Preliminary results show that the PDO trends are significantly negatively (positively) correlated with the sea level trends in the western (eastern) Pacific. These sensitivity tests have significant implications for the Pacific coastal risk management. The possible 'worst scenario' when the long-term sea level change works in accordance with the sea level trends due to aliasing of decadal-to-interdecadal sea level variations will also be addressed.
OSTS session
Science Results from Satellite Altimetry
Meeting name
Ocean Surface Topography Science Team (OSTST) Meeting
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