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Poster
The 20-year global mean sea level (GMSL) climate record made possible by the TOPEX and Jason altimeter missions is an important indicator of climate change. It is being increasingly relied upon for determining evidence of changing rates in the climate system (both accelerations and decelerations). Therefore, understanding the variability within the GMSL time series and also among the different estimates produced by various institutions is becoming more important. Decomposing the record into a long-term and seasonal components leaves a signal with variability on different time scales, from seemingly random short fluctuations to interannual and possible decadal periods. Previous work (Masters et al., 2012) showed that the differences among the GMSL time series produced by various institutions are mainly due to processing methods, such as employing shallow water editing and different averaging techniques (gridding versus non-gridding of the sea surface anomalies). Since then, some institutions have revised their time series to correct errors and improve the ancillary data that go into the sea surface anomaly calculations. In this work, we summarize new processing at the University of Colorado and its effects on the estimated GMSL time series. We also repeat the comparison of the different institutional time series and investigate the remaining causes of discrepancies between them. In order to further understand climate system signals reflected in the time series, we investigate the variability of derived rates of sea level change over interannual and decadal time scales and look at their possible causes.
OSTS session
Quantifying Errors and Uncertainties in Altimetry Data
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