William
Llovel
JPL/NASA/Caltech
Ichiro Fukumori, JPL/NASA/Caltech
Ou Wang, JPL/NASA/Caltech
Poster
Since 1993 and based on satellite altimetry data, sea level trends display a large regional variability. Some regions experience a sea level rise (e.g., the west tropical Pacific ocean, the subpolar north Atlantic ocean …) whereas other regions experience a sea level drop (e.g., the east tropical Pacific Ocean, golf of Alaska …). Those sea level trends appear to be steric in nature. Moreover, steric changes appear to be mainly thermosteric, although halosteric effects can reduce or enhance thermosteric changes in some specific regions (Stammer et al., 2013). Understanding and quantifying the processes involved in regional sea level changes are important tasks to better constrain and ascertain the physical processes involve in regional sea level changes and then, improve future predictions to anticipate potential impacts. In this study, we analyze the ocean heat content change and its origin by analyzing Estimating the Circulation and Climate of the Ocean (ECCO, Wunsch et al., 2009). We run different experiments to estimate and quantify the respective contribution of each atmospheric forcing (e.g., wind stress and diabatic forcing) to heat content change and regional sea level trends.
OSTS session
Science Results from Satellite Altimetry
Meeting name
Ocean Surface Topography Science Team (OSTST) Meeting
Download to PDF