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Poster
Our overall goal is a better understanding of the extent to which mid-ocean mesoscale variability can be attributed to remotely generated, radiating barotropic and baroclinic waves. In particular, we will examine the altimetric records for evidence of radiation from the most energetic and unstable flows: western boundary currents and their extensions, and the equatorial current systems. The observations will be compared with our best understanding of the generation mechanisms, radiation patterns and the extent to which the remotely generated energy can contribute to the mid-ocean eddy kinetic energy. This will be done with both analytical models and Global Circulation Models.

Using gridded sea-surface height (SSH) anomaly products from satellite altimetry, Farrar (2011) provided convincing evidence for barotropic Rossby waves coherent with and radiating away from Tropical Instability Waves to as far as 20 degrees north. With an enhanced analysis we show evidence that such radiating variability may be observable throughout most of the North Pacific. The phase and amplitude patterns of the observed coherent variability show a striking resemblance to those predicted by theoretical ray tracing of barotropic Rossby waves over the variable bathymetry of the North Pacific.
OSTS session
Science Results from Satellite Altimetry
Meeting name
Ocean Surface Topography Science Team (OSTST) Meeting
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