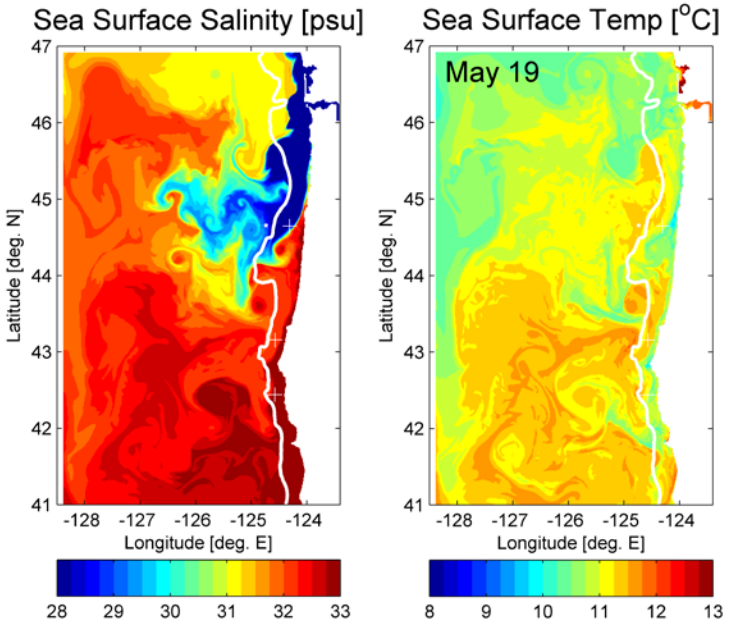
Bias reduction in the Sea Surface Temperature (SST) forecasts based on GOES satellite data

Based on comparisons with infrared (GOES) and microwave (AMSE-R) satellite data, our coastal ocean forecast model set off Oregon has a cold bias in early spring, potentially associated with the Columbia River plume. New model runs including the Columbia River fresh water discharge have shown that the warming effects may be associated with trapping the heat in a strongly stratified surface boundary layer.

(Left) Sea surface salinity from the model shows the extent of the Columbia River Plume (5/19/2002).

(Right) In the area of the river plume, events of increasing SST are found in the model, consistent with the satellite data.



Synthesis of the ocean circulation model and satellite data helps to improve forecasting of ocean conditions (esp. currents and SST) to benefit search-and-rescue operations, safe navigation, and fisheries planning.

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(Courtesy of A. Kurapov)

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