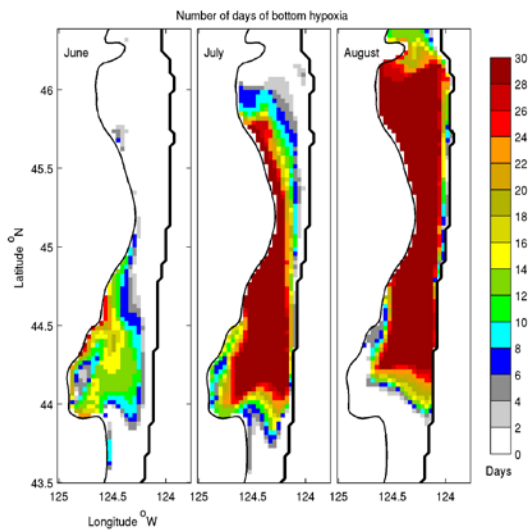
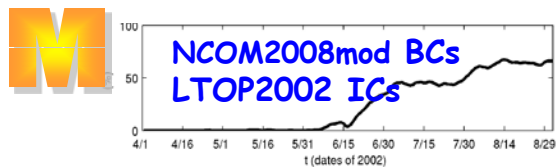
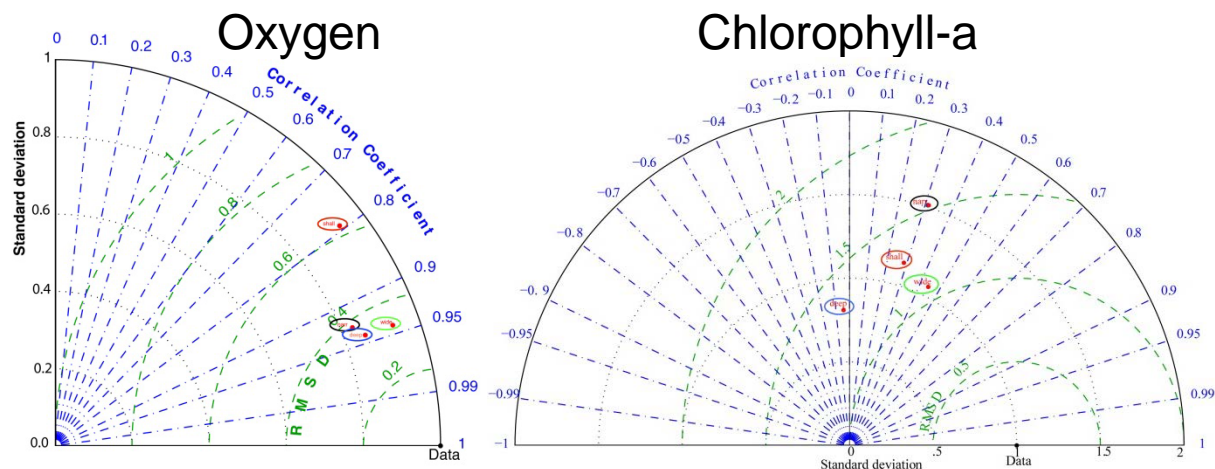


# Oxygen On The Oregon Shelf In 2002



Summer 2002

A simple ecosystem and oxygen model was coupled to a 3D circulation model to assess the impact of the alongshore and cross-shore boundary conditions and initial conditions on the severity and spatial extent of summer hypoxia.



Using boundary conditions from the NCOM model with the nitrate field corrected based on the GLOBEC data and initial conditions from the GLOBEC April 2002 cruise, we were able to show that hypoxic events started on Heceta Bank and expanded farther north over the summer. Comparison between in situ data (GLOBEC 2002) and model outputs shows that modeled oxygen and chla (green circle) compared better to the data for the wider portion of the shelf (green) than on the narrow part (blue). Chla in shallow regions (red) compared better with the observations than the offshore chla (blue). Since an empirical chl/N ratio (corresponding to measured values on the shelf) was taken to convert modeled phytoplankton into chla, this would indicate the necessity to have an explicit chla component in the model to adequately represent the chla field.