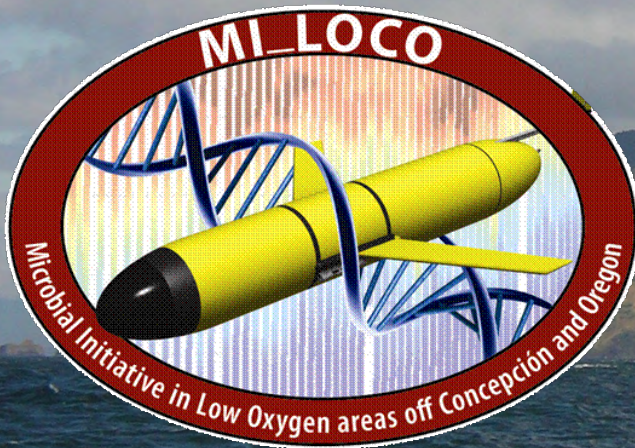
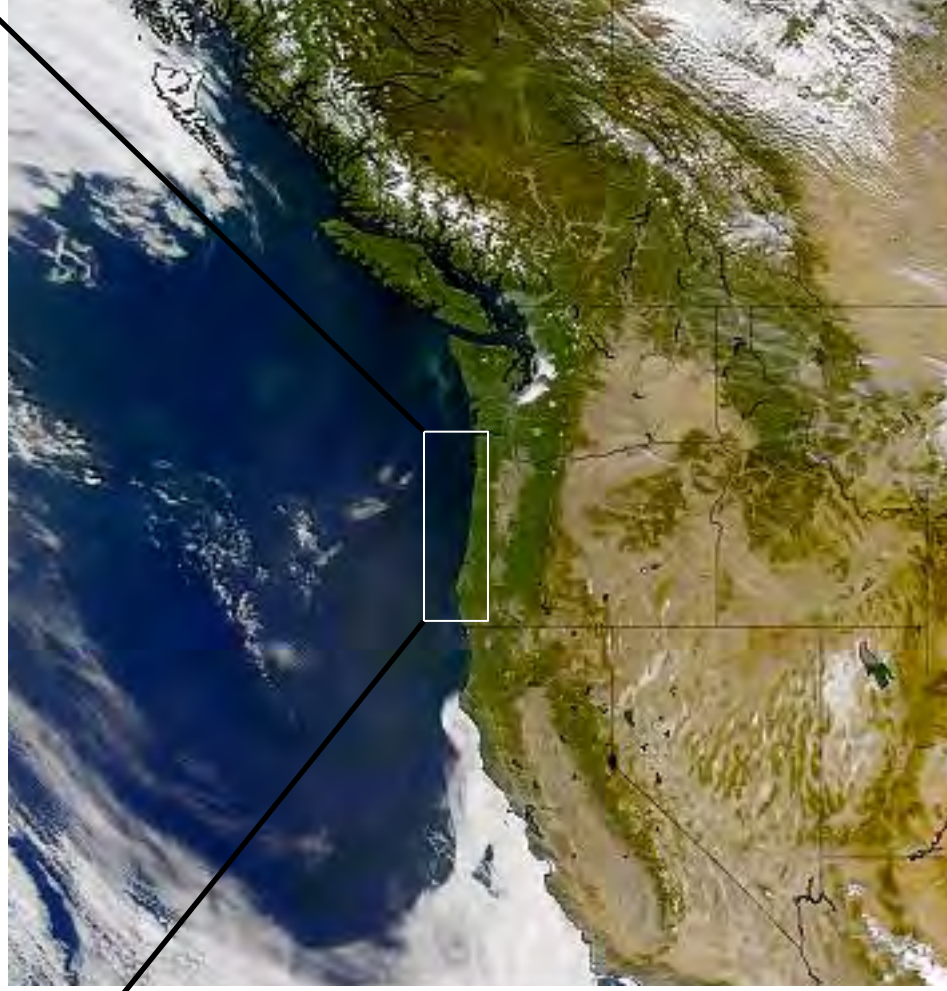
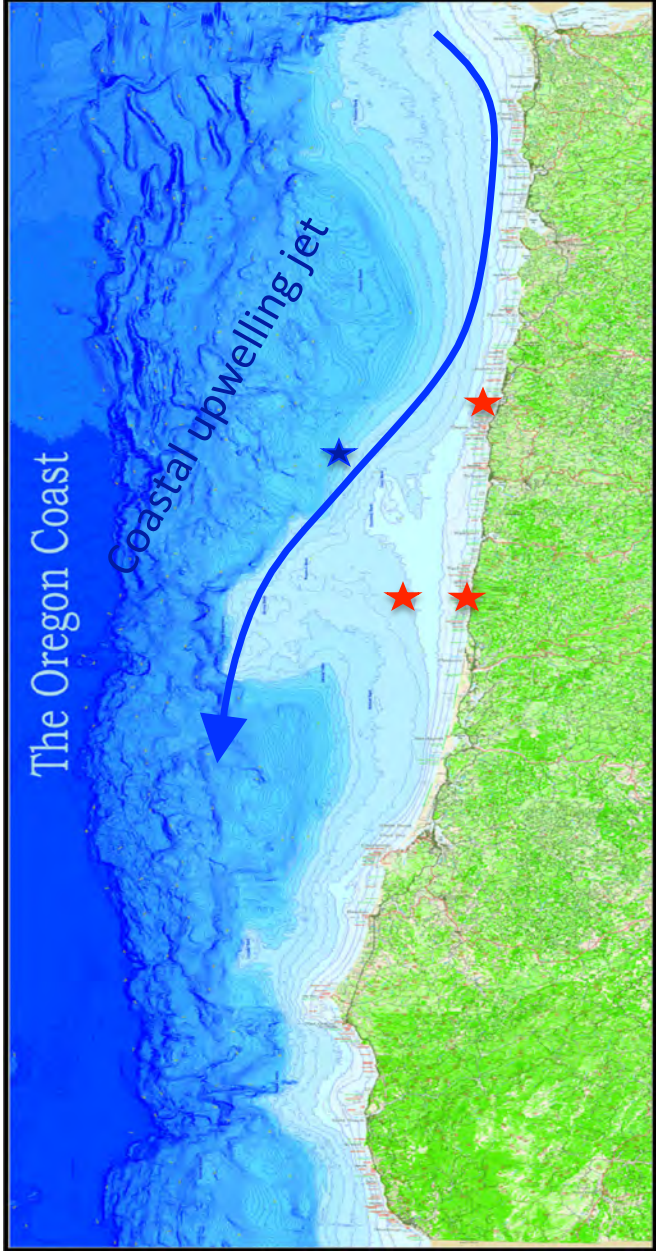


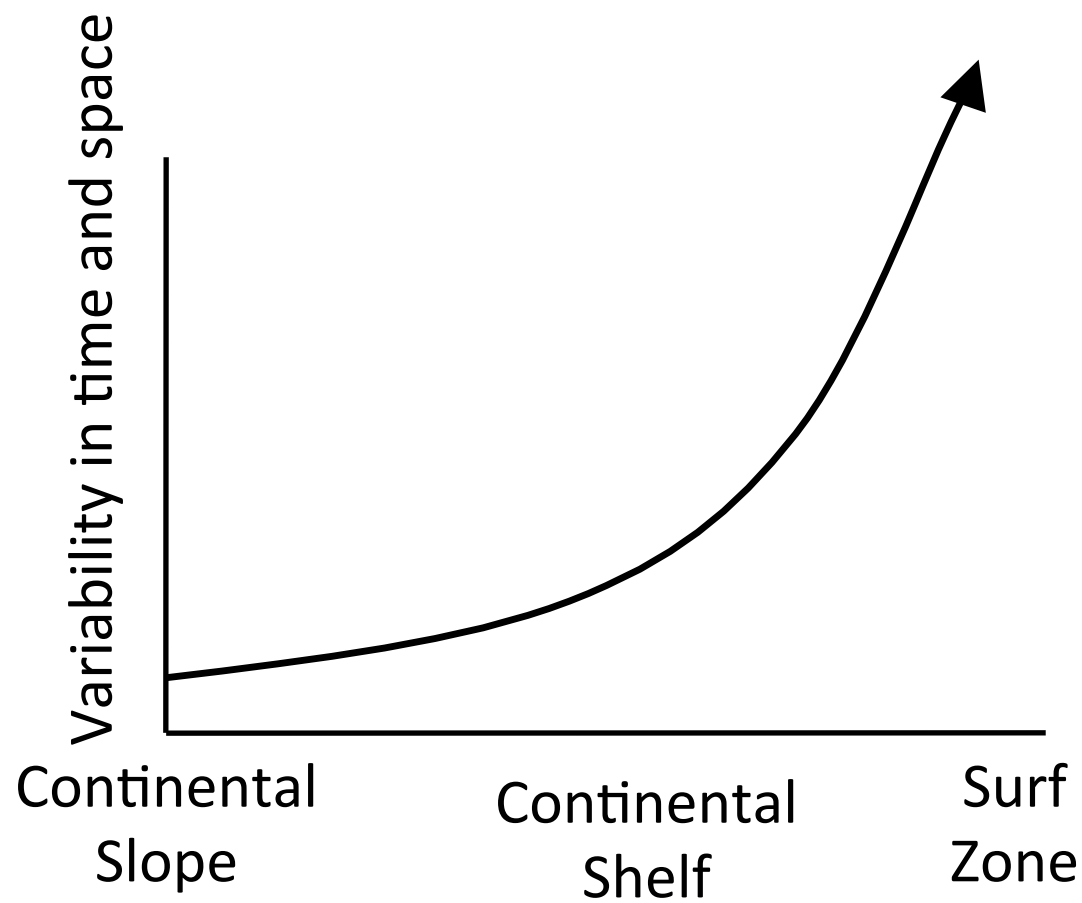
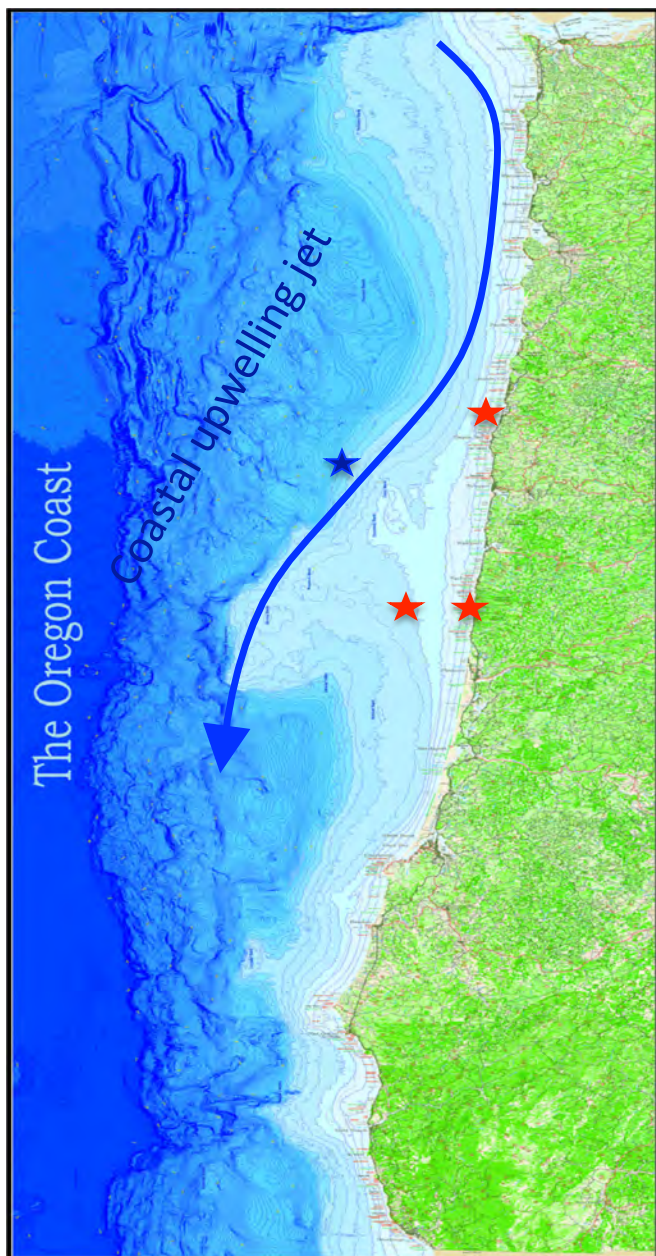
Nearshore Ocean Acidification Monitoring in Oregon

Francis Chan, Bruce Menge, Burke Hales, Jack Barth

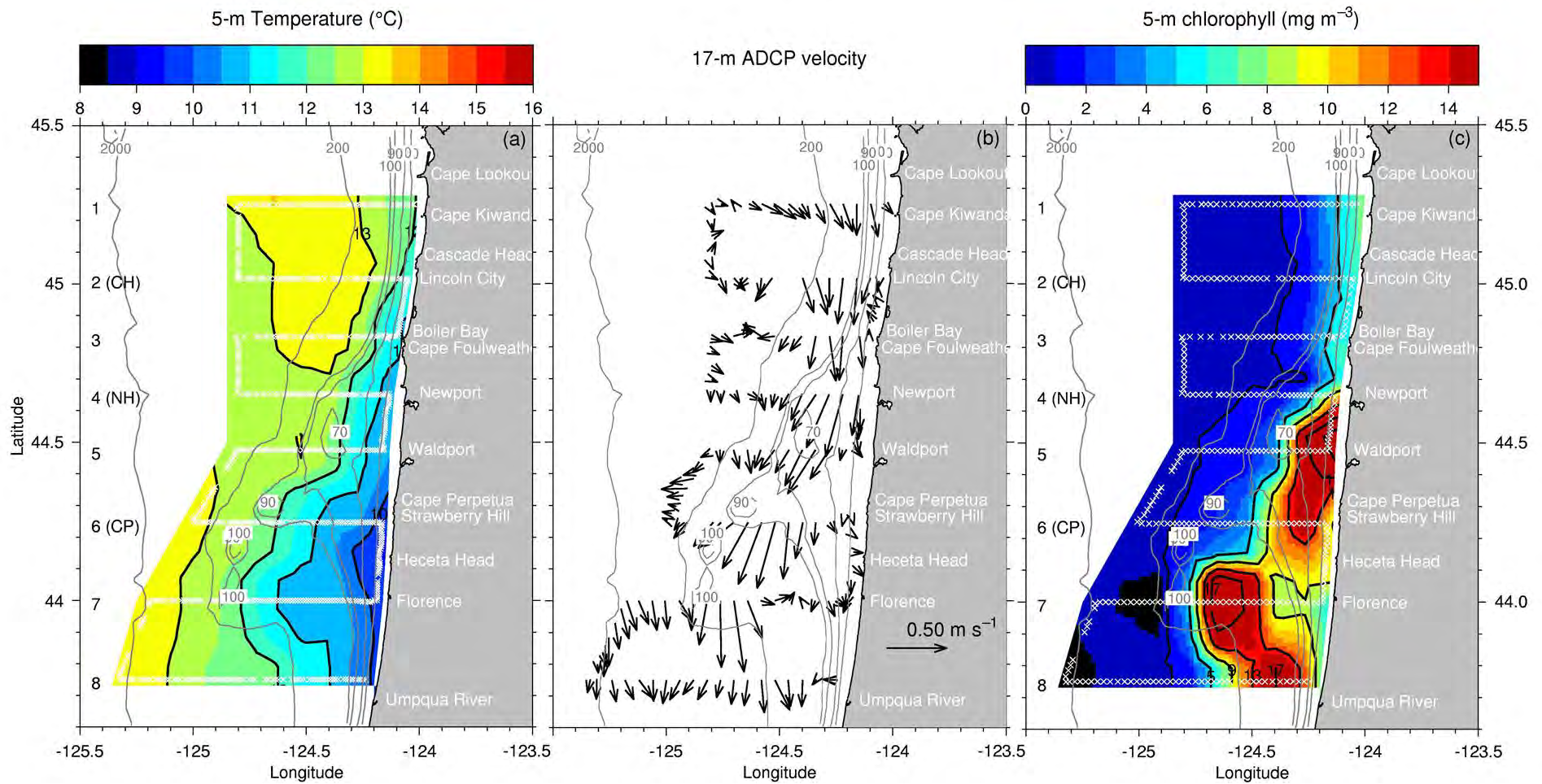


- Hypoxia and OA as coupled changes to ocean chemistry
- OA expression in nearshore waters
- Ecological impacts of OA



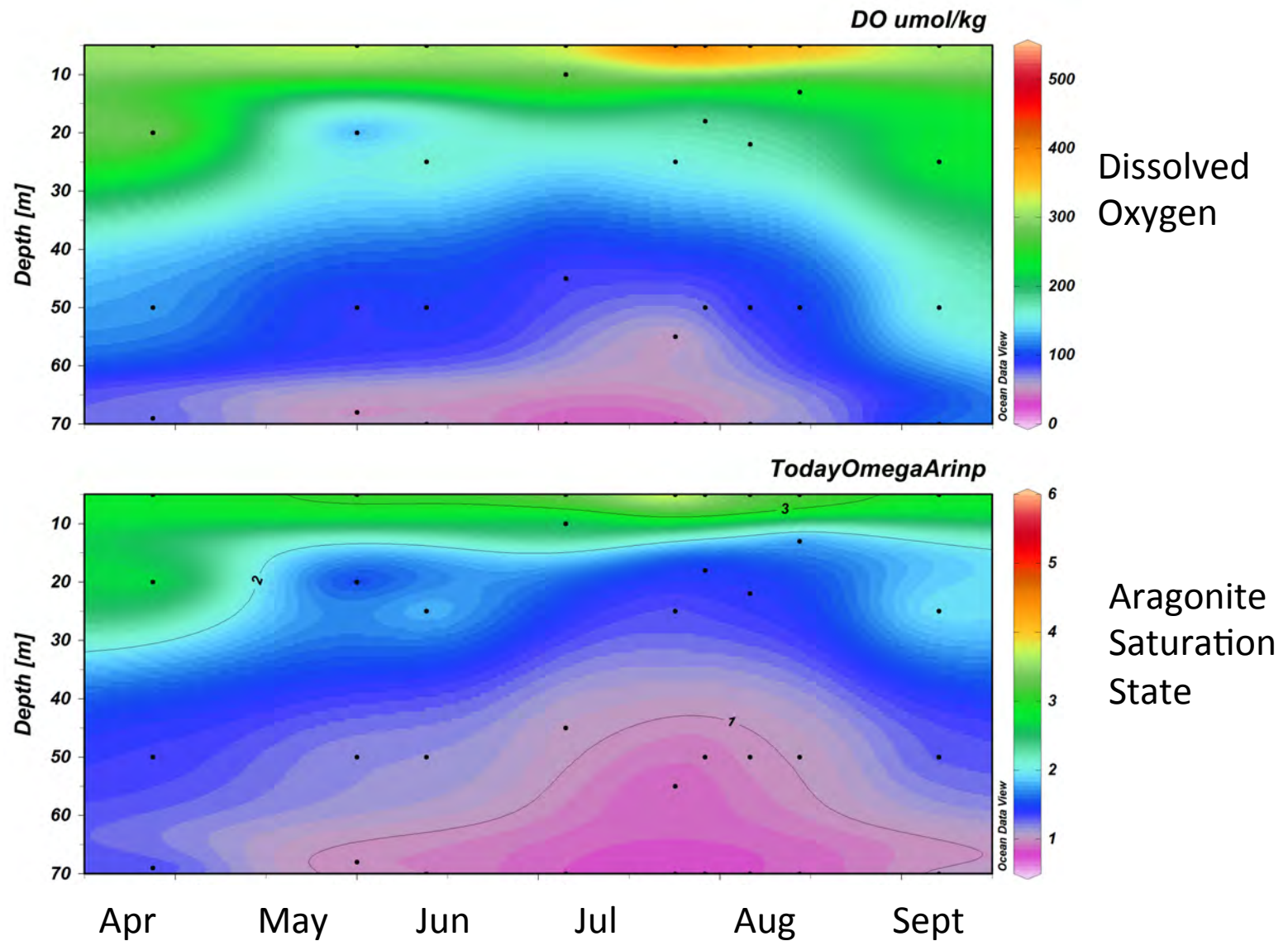


Strong bio-physical coupling and gradients



Barth et al. 2003

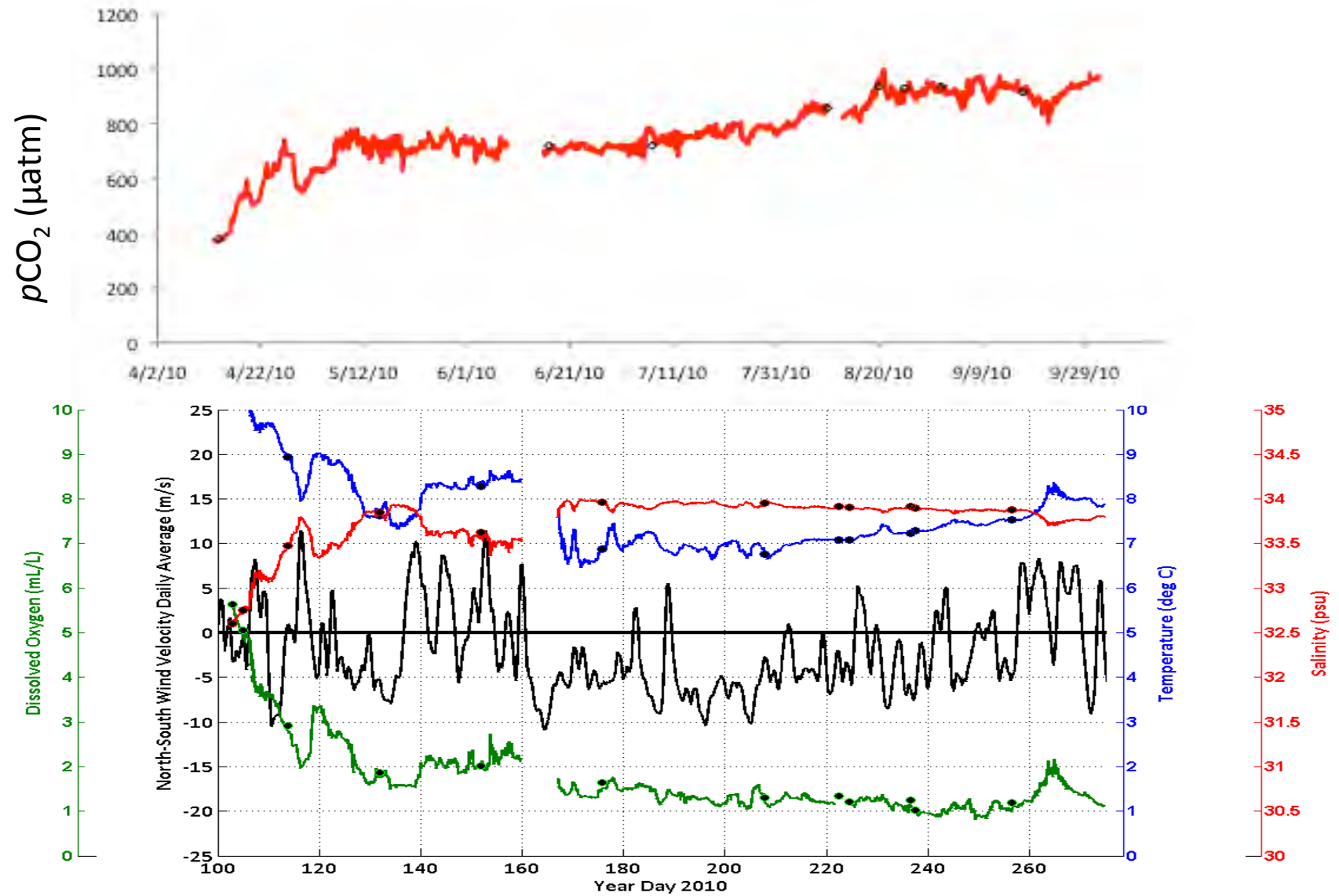
Hypoxia – OA coupling



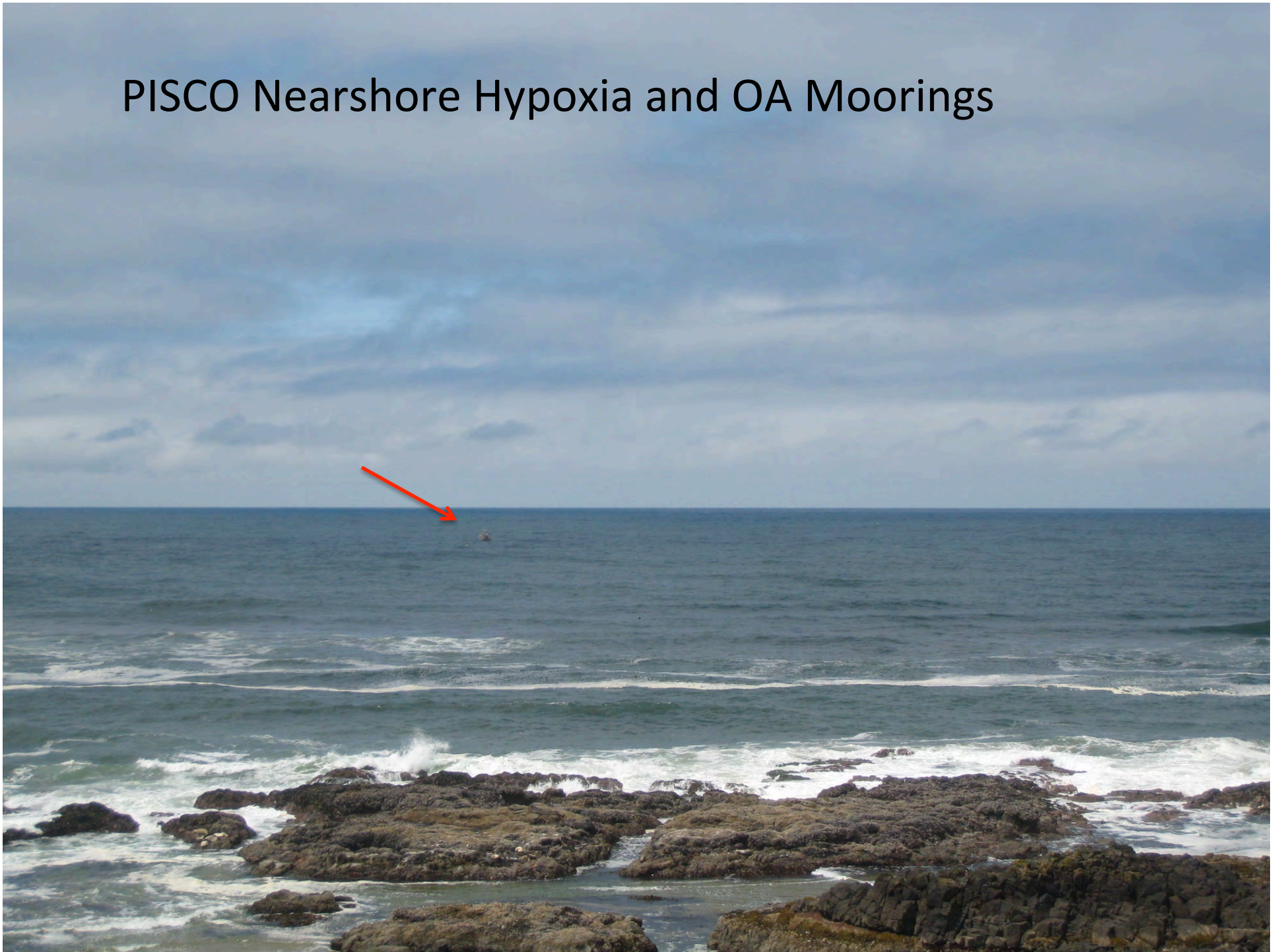


SAMI pCO₂ & pH

MI_LOCO Mid-Shelf Lander Time-Series

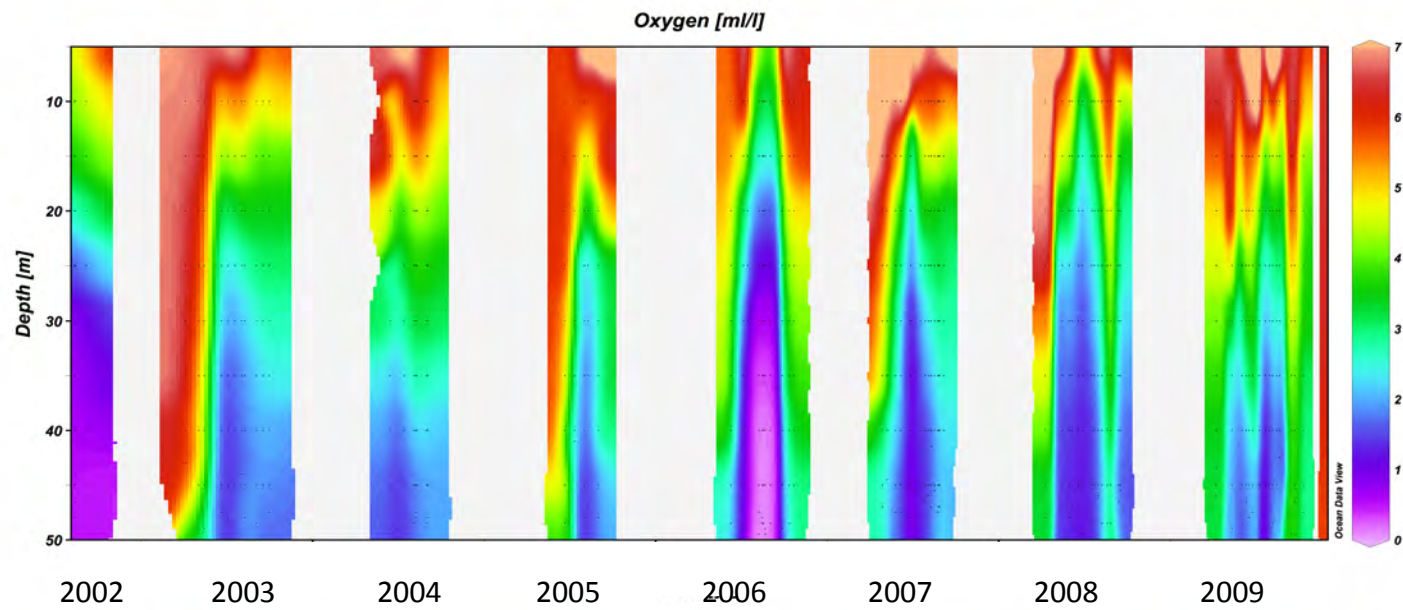


PISCO Nearshore Hypoxia and OA Moorings

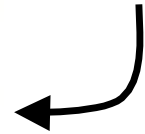




50m Inner-Shelf Station

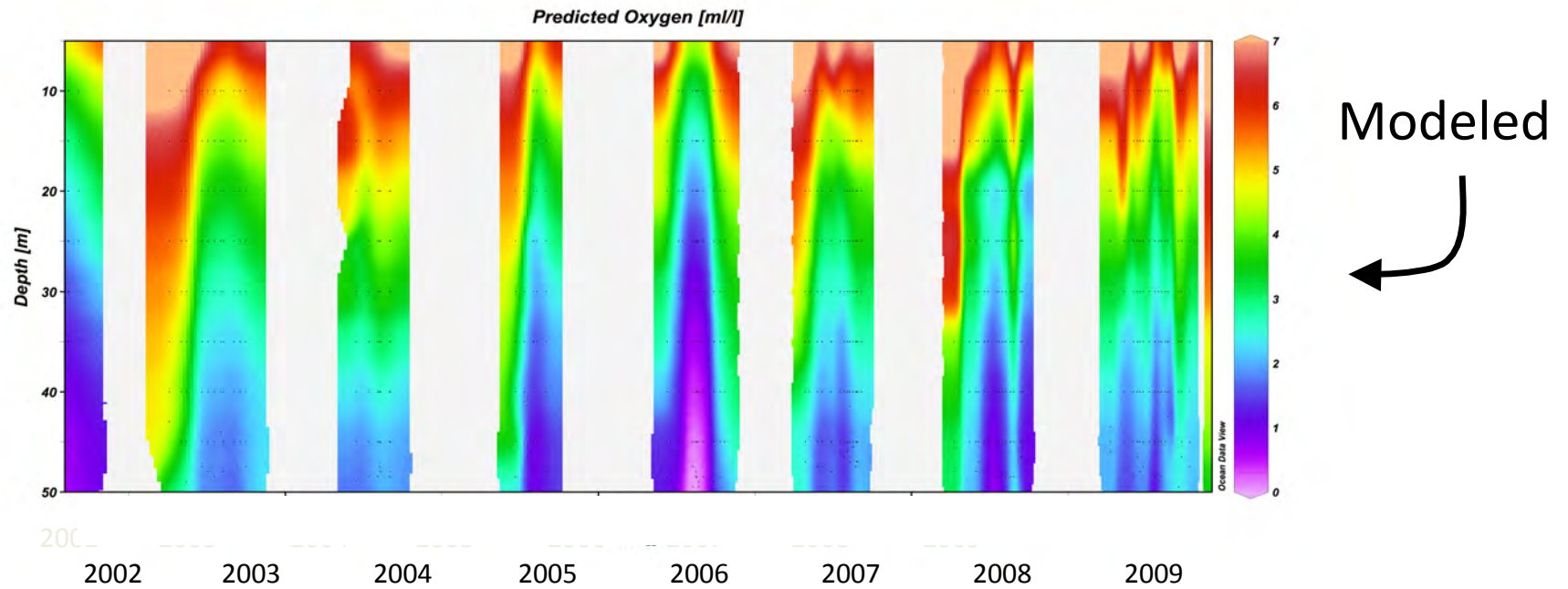
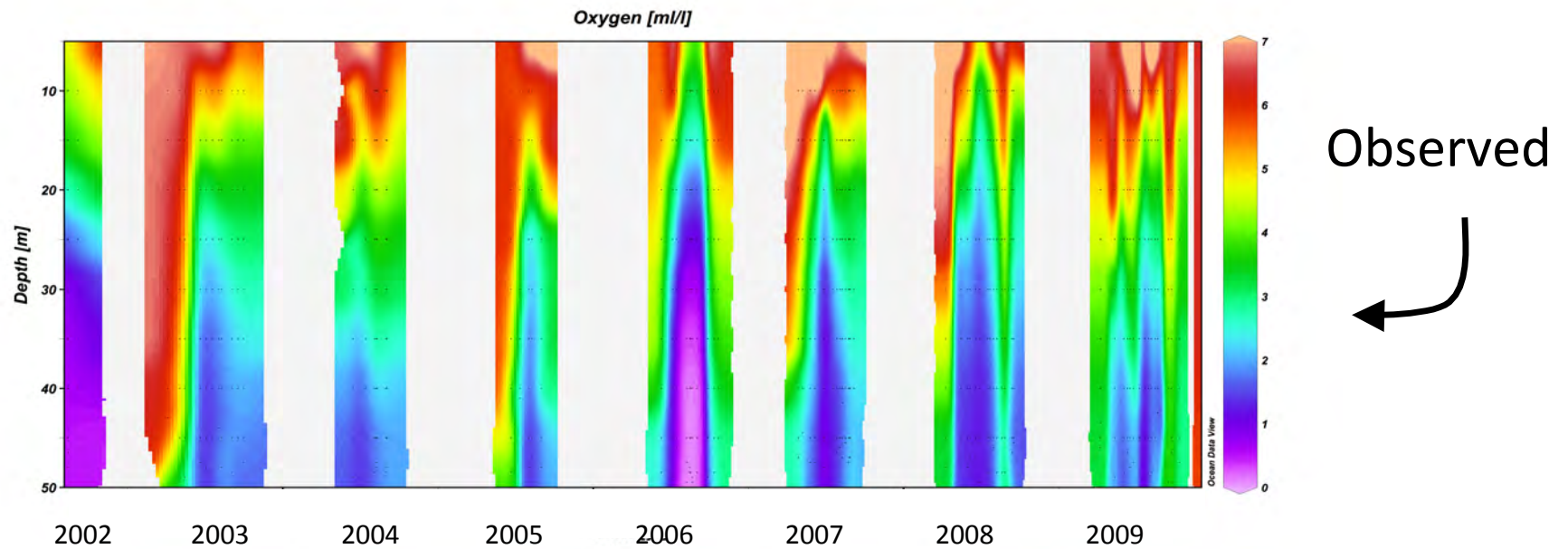


Observed

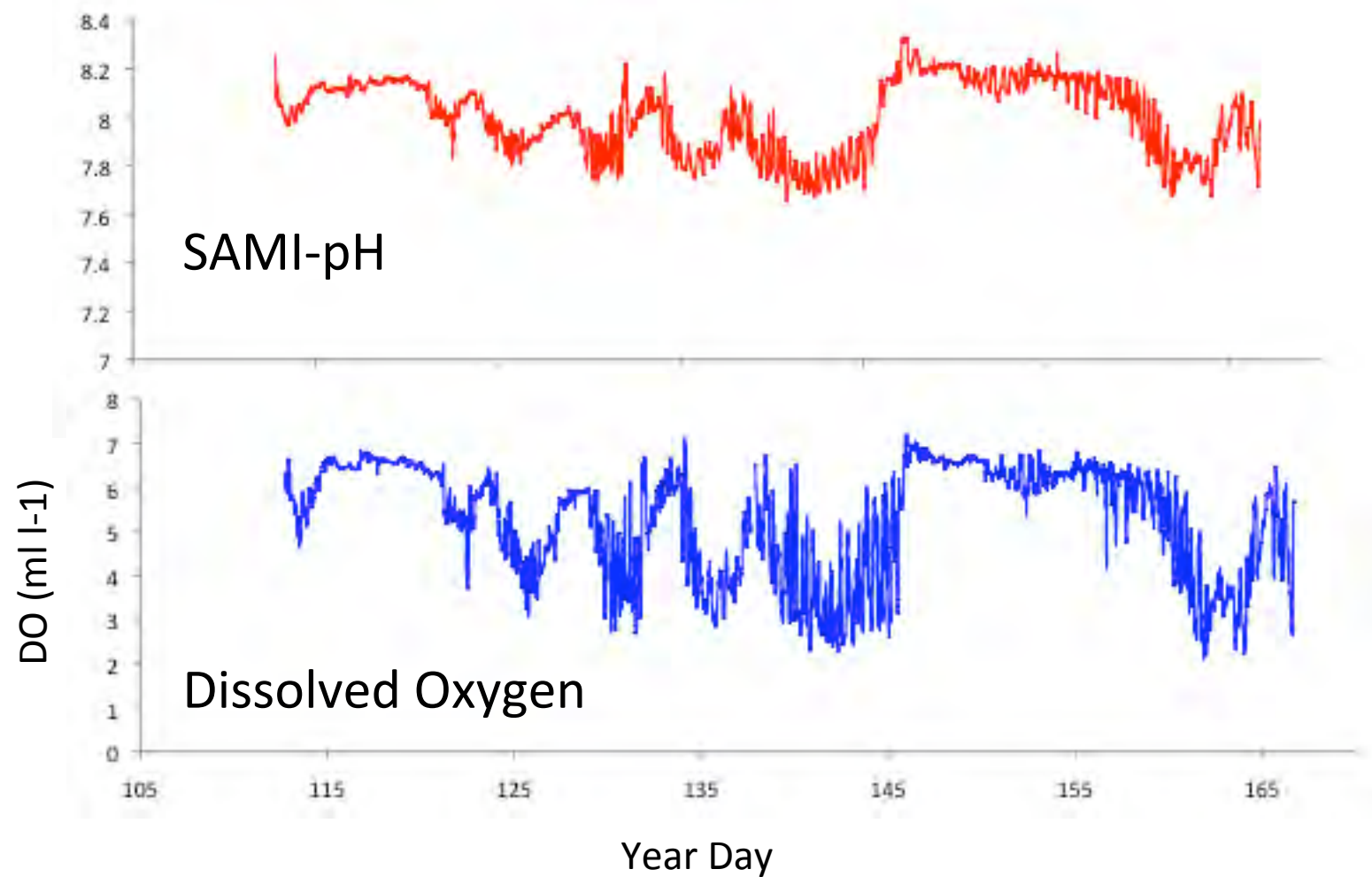


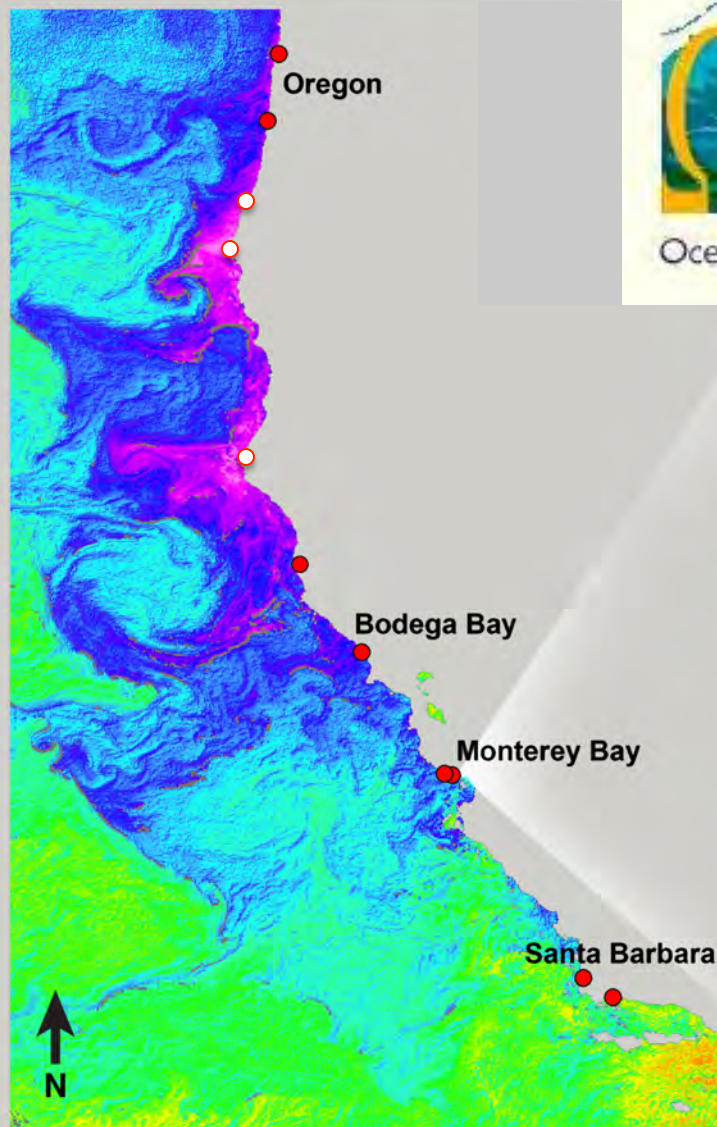
20C_ _ _ _ _

50m Inner-Shelf Station



15m Inner-Shelf Mooring (LB-15)

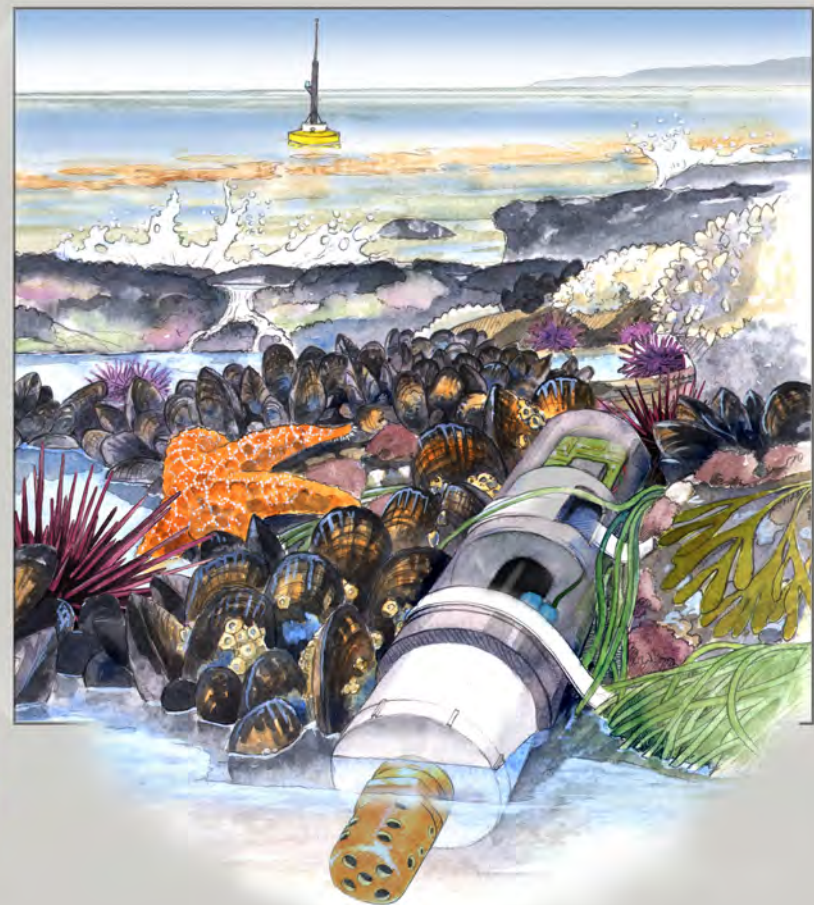




Sea surface temperature (degrees C)



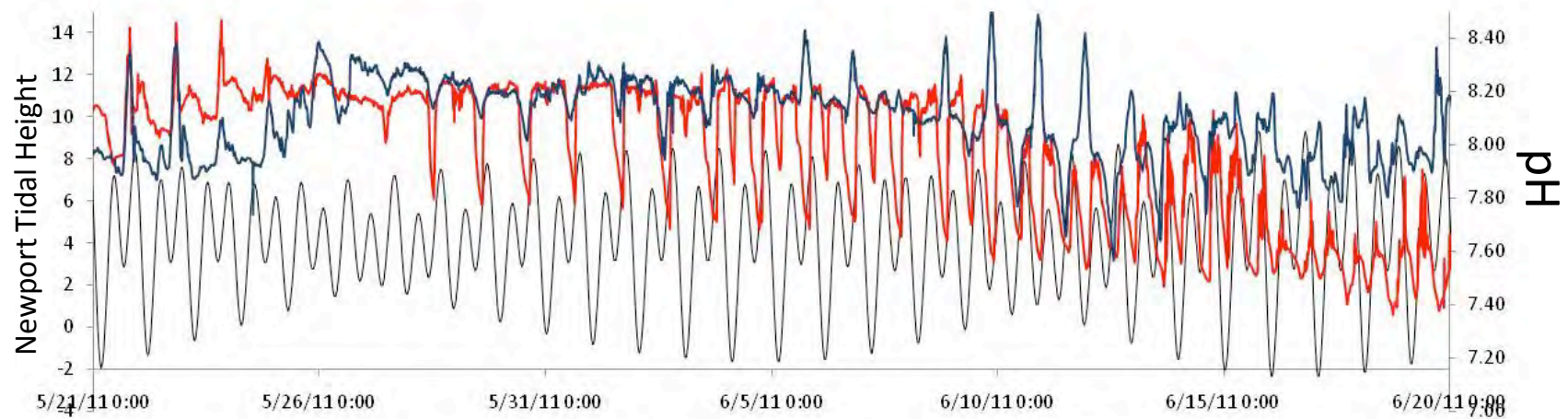
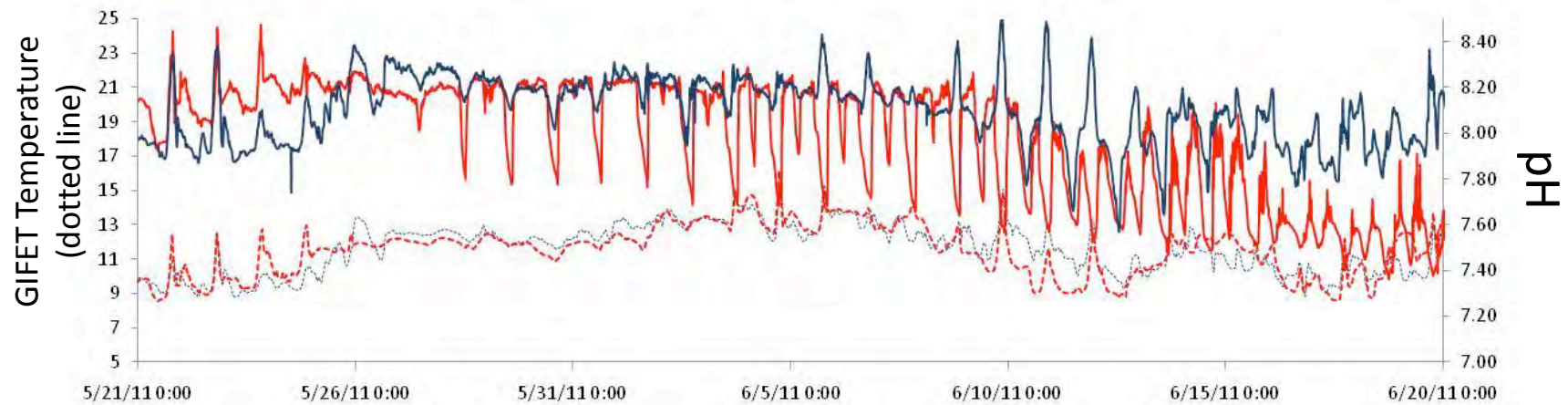
Ocean Margin Ecosystems Group for Acidification Studies



Inter-Tidal pH

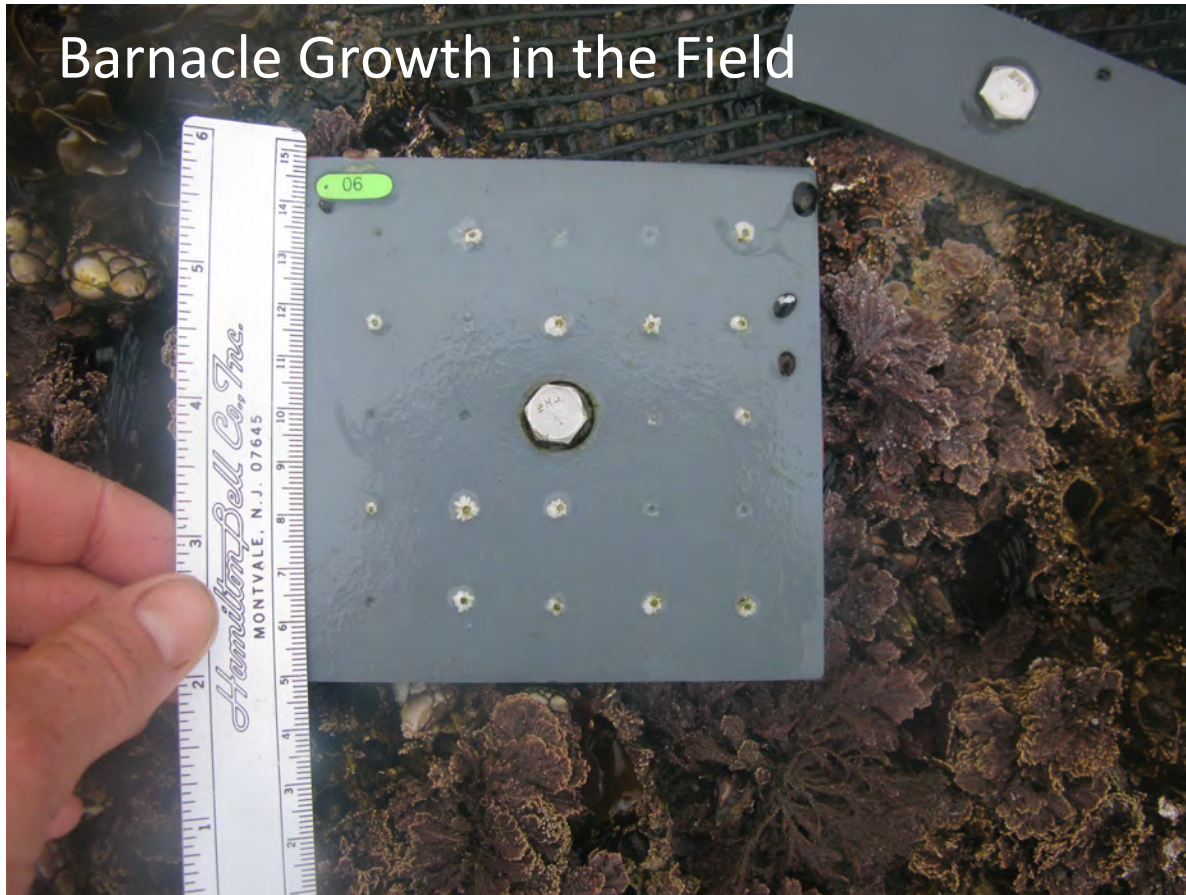
Red = GIFET 004-SH

Blue = GIFET 005-FC

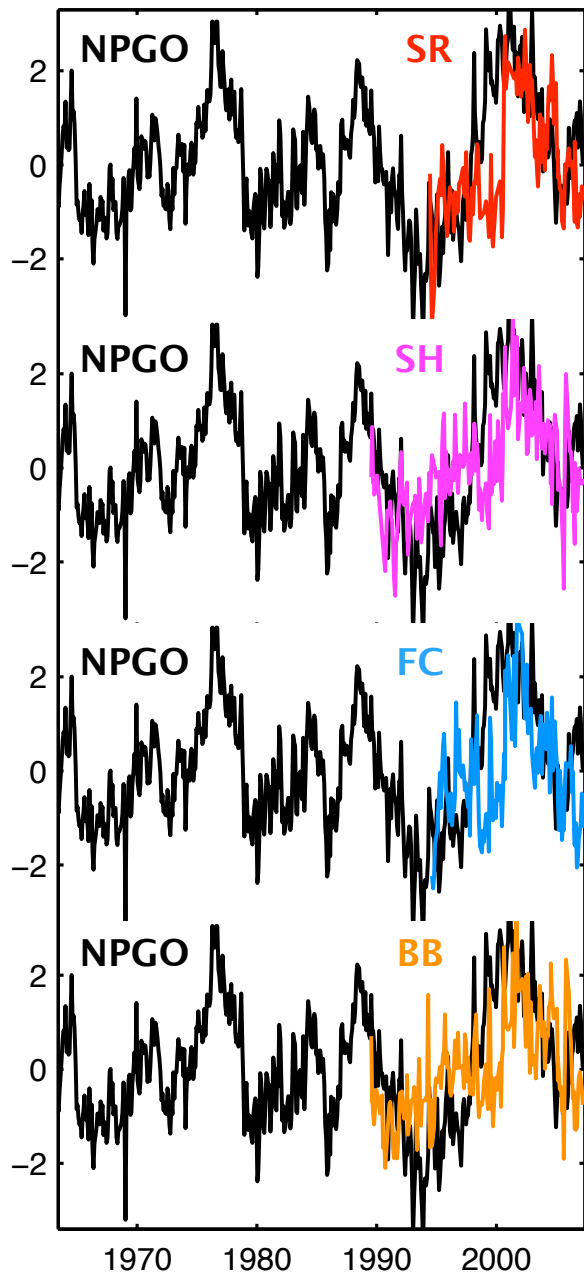




Ecological Monitoring is Critical



Recruitment of Mussels



Menge et al. 2009

New Tools

Real-Time Inner-Shelf DO Mooring



Challenges

Biology Happens





**Session on: Ocean
acidification in coastal and
estuarine environments**

Ocean Sciences 2012

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