

Acclimation and adaptation to ocean acidification of key ecosystem components in the California Current System

- NSF funded, 2-year project
- Research question:
 - Do important coastal invertebrates (mussels & urchins) adapt to persistent variations in sea water chemistry (pH and carbonate saturation state)

OSU: Bruce Menge, Jack Barth, Francis Chan

UC Davis: Eric Sanford, Brian Gaylord, Tessa Hill, Ann Russell

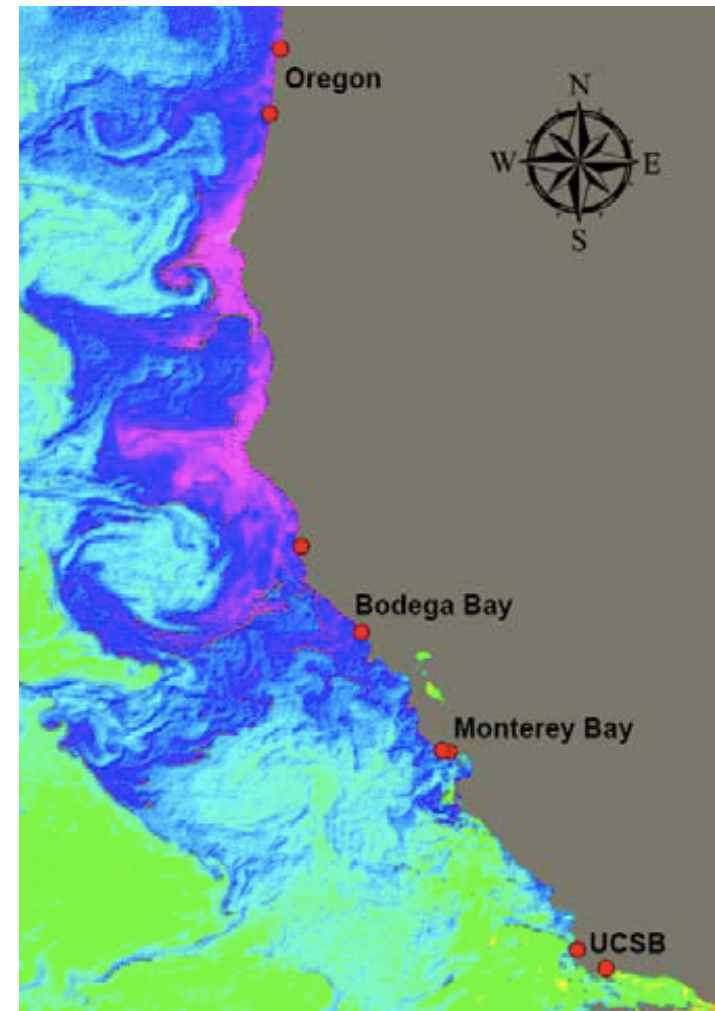
MBARI: Francisco Chavez

UC Santa Cruz: Pete Raimondi

UH: Margaret McManus

Stanford: Steve Palumbi

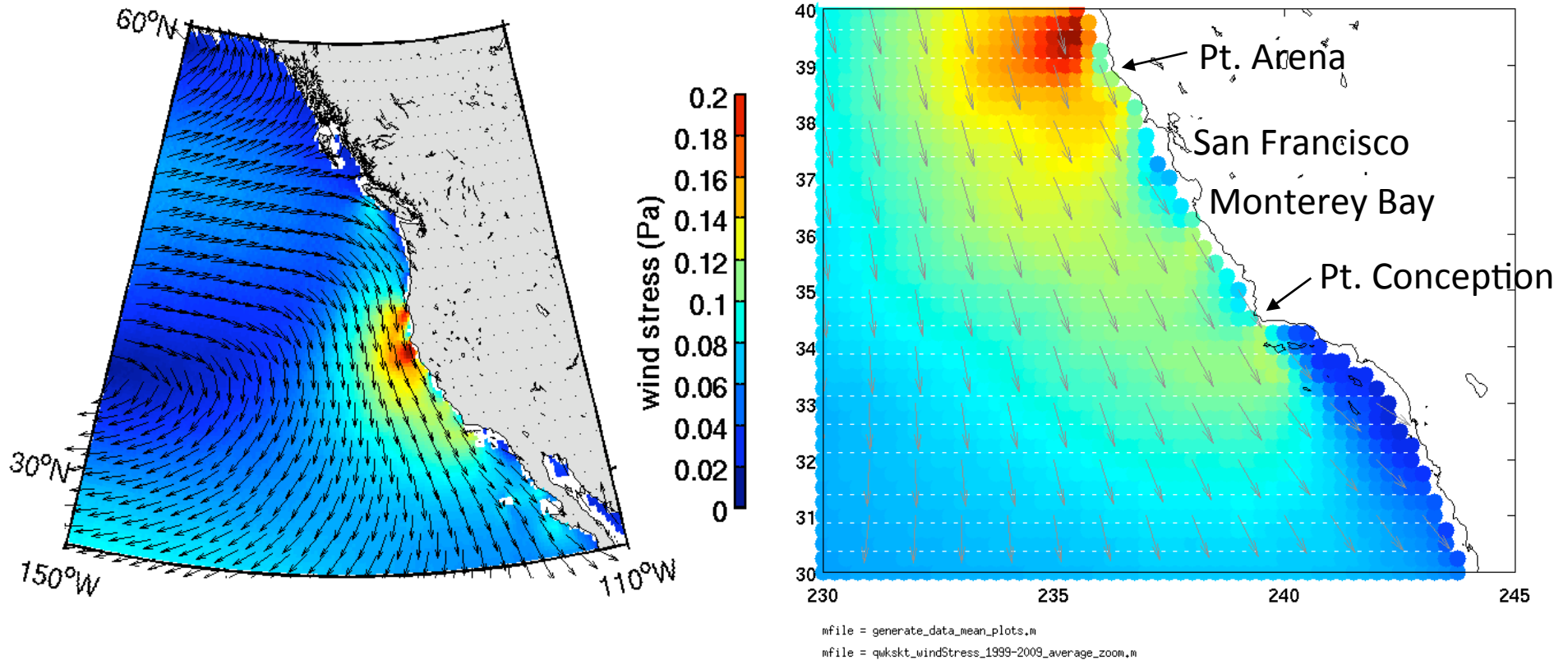
UC Santa Barbara: Gretchen Hofmann, Carol Blanchette, Libe Washburn



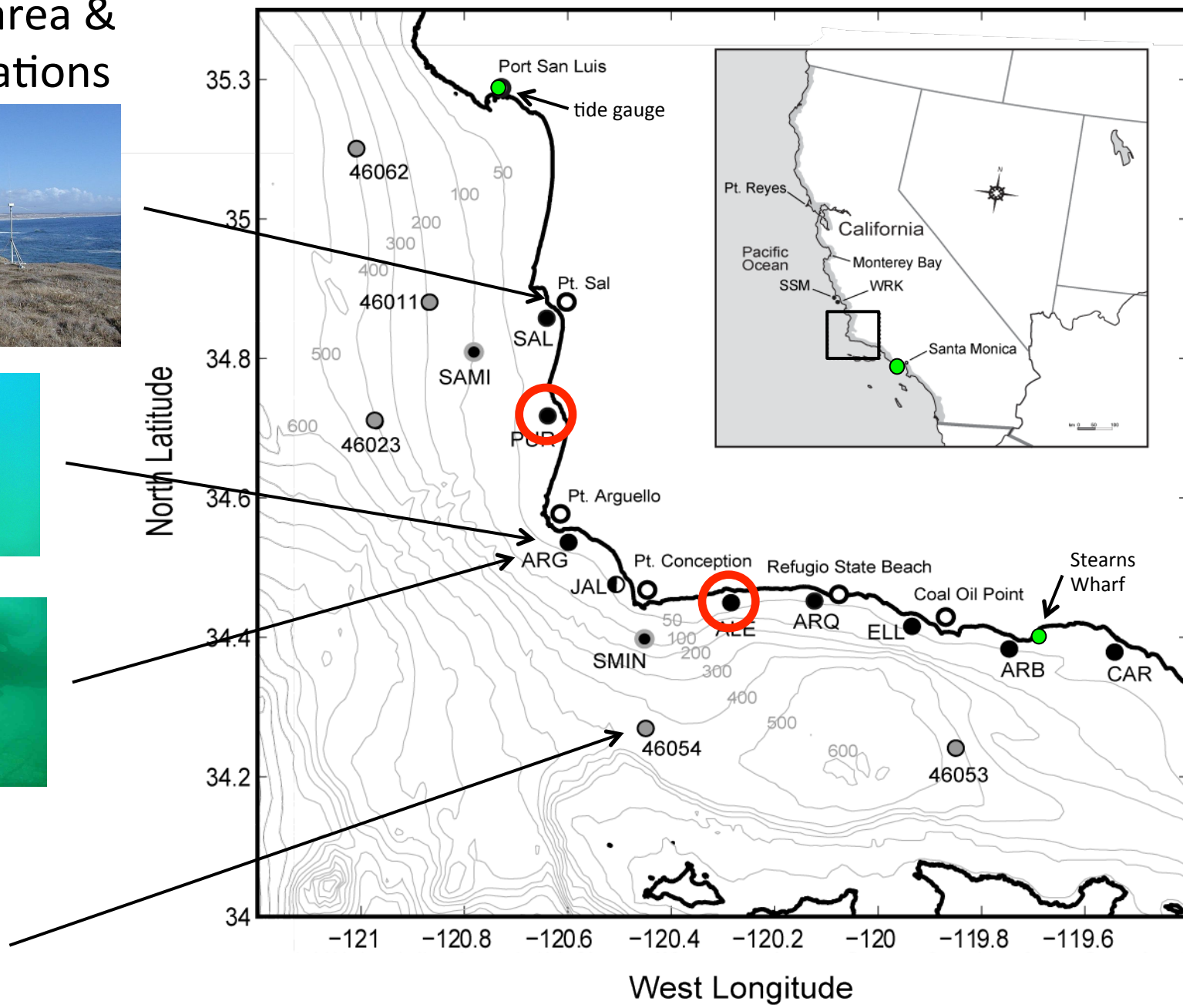
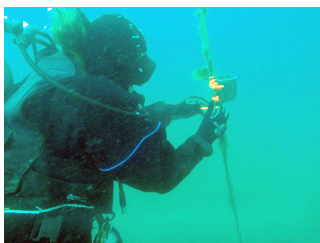
"New ocean acidification observations in two contrasting upwelling regimes"

Libe Washburn, Carol Blanchette, Paul Matson, Gretchen Hofmann

NE Pacific: June-Sept. 1999-2009

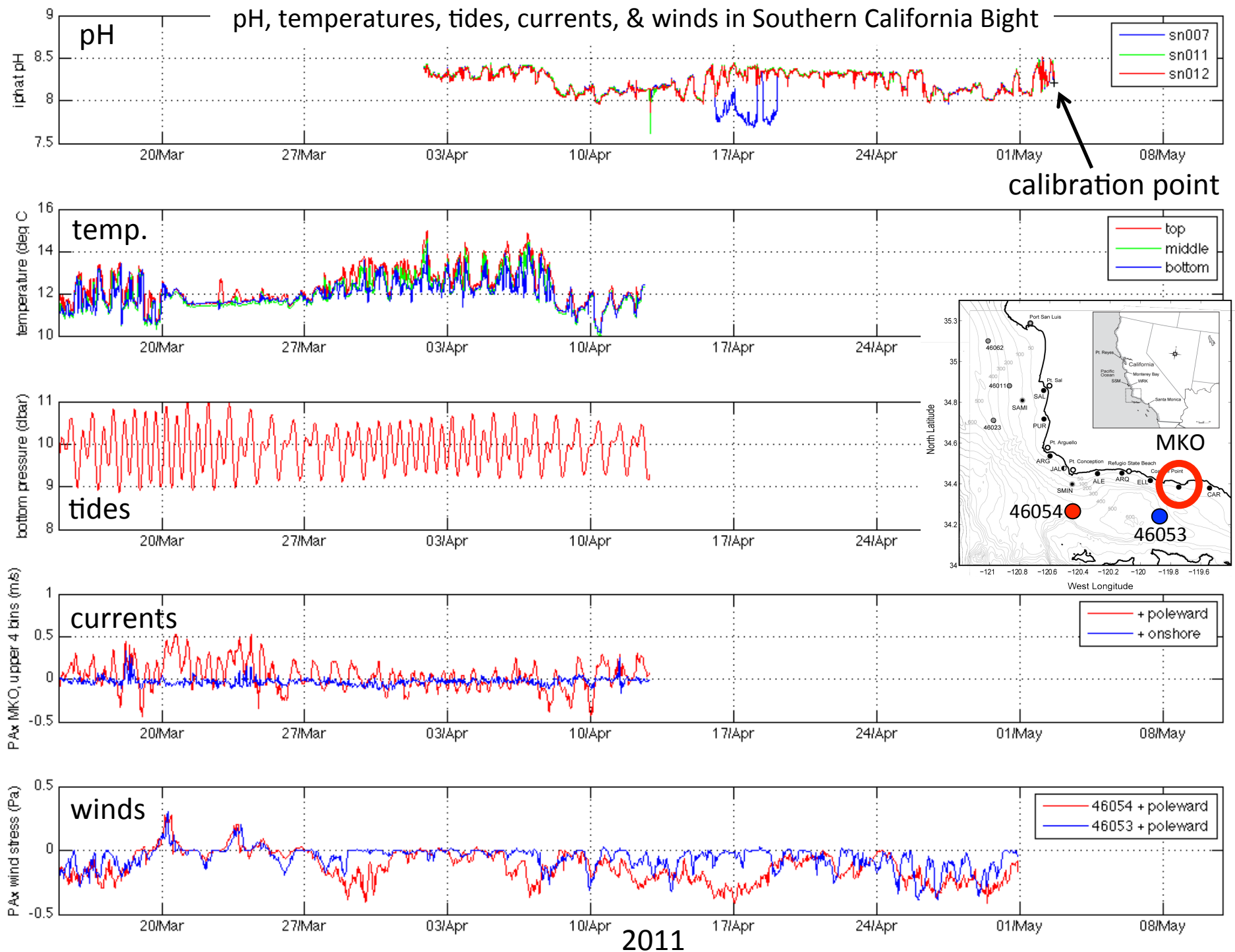


Study area & observations

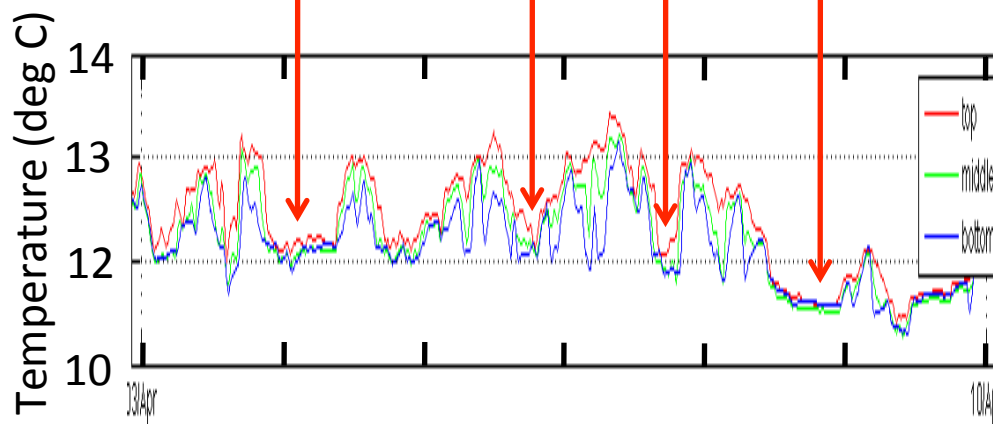
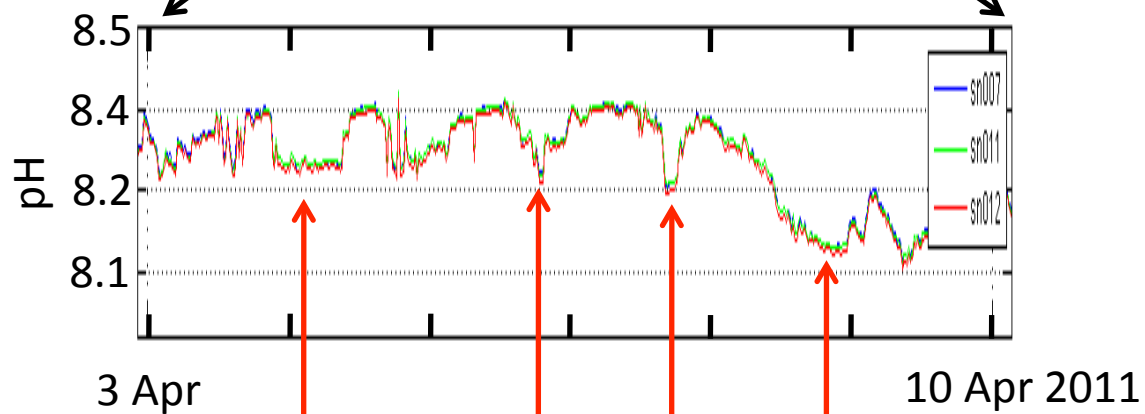
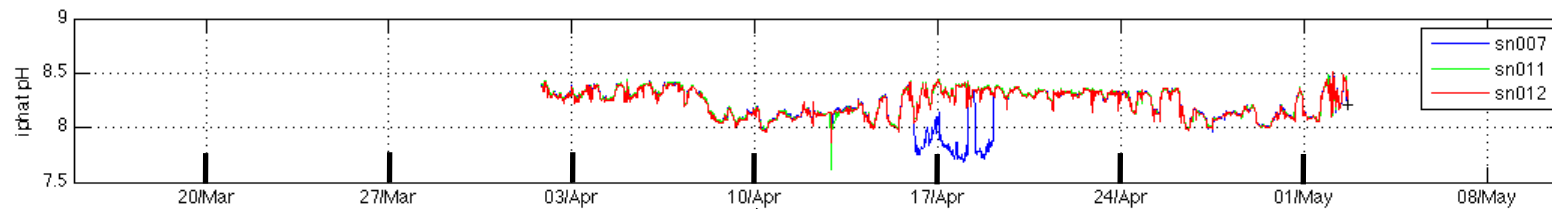


intertidal pH measurement
near Point Purisima, CA

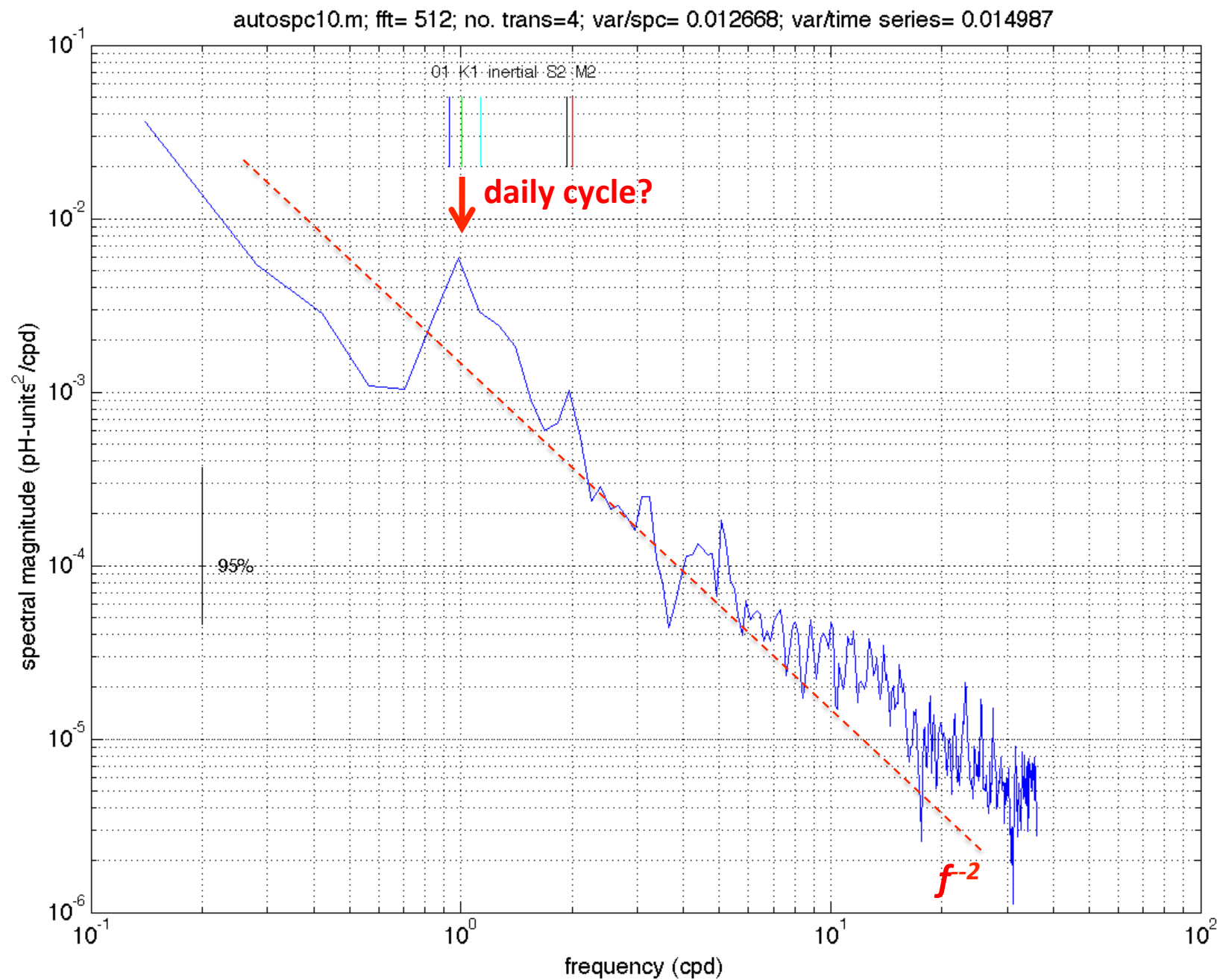




changing pH and water masses



pH spectrum – April 2011



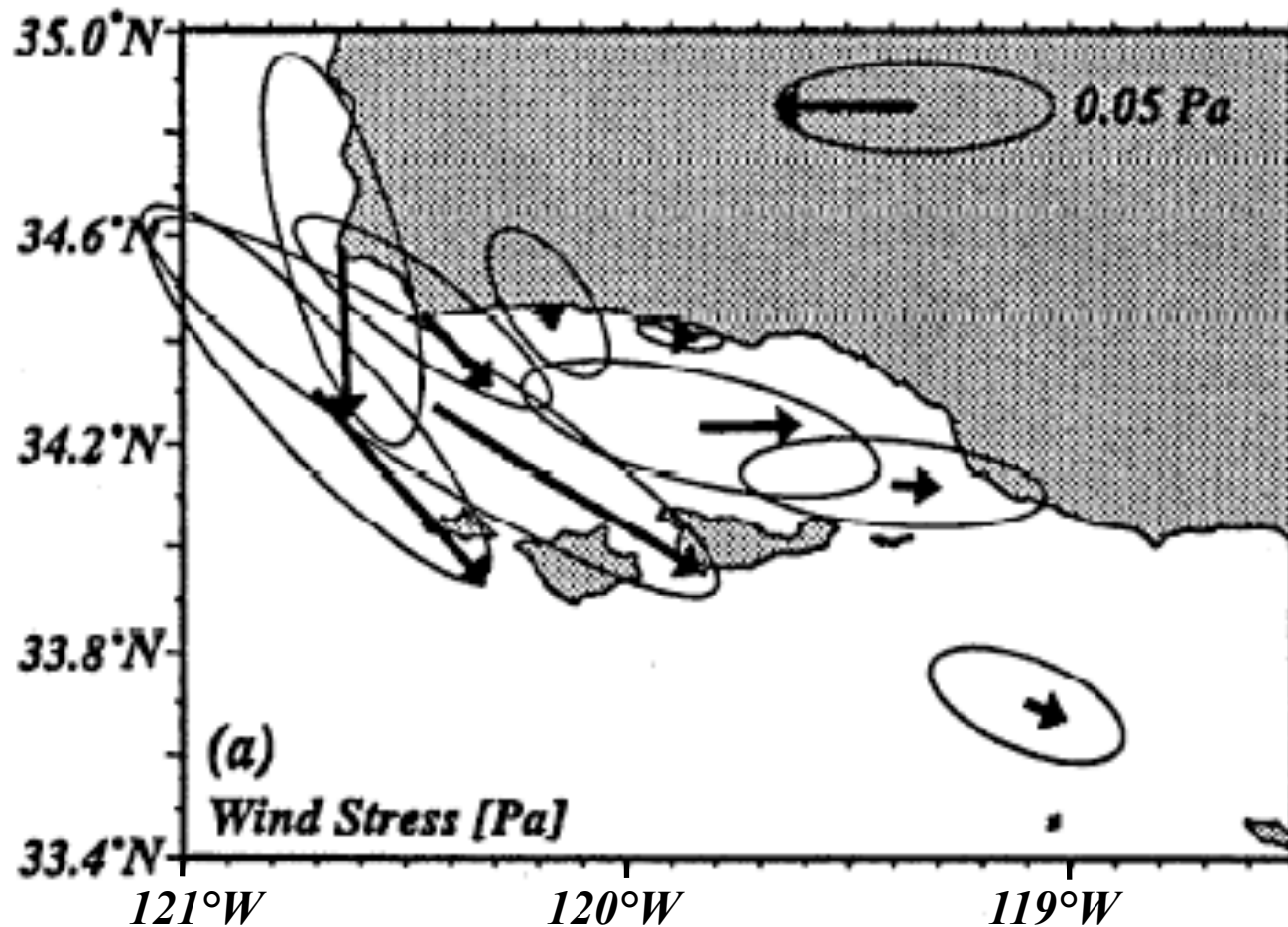
Other Southern & Central California OA observations

1. Southern California Coastal Ocean Observing System (SCCOOS) & Central & Northern California Coastal Ocean Observing System (CenCOOS)
 - glider lines with oxygen (Rudnick and Davis, SIO) - operational
 - pH at municipal piers – under discussion
2. Santa Barbara Coastal Long Term Ecological Research (SBC-LTER)
 - adding oxygen and pH sensors to near-shore moorings – planned
 - developing collaboration with California Current Ecosystem LTER
3. Moored observations offshore of Pt. Conception (Send, SIO)
 - two moorings operational

end

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pH, temperature, tides, currents, & winds

