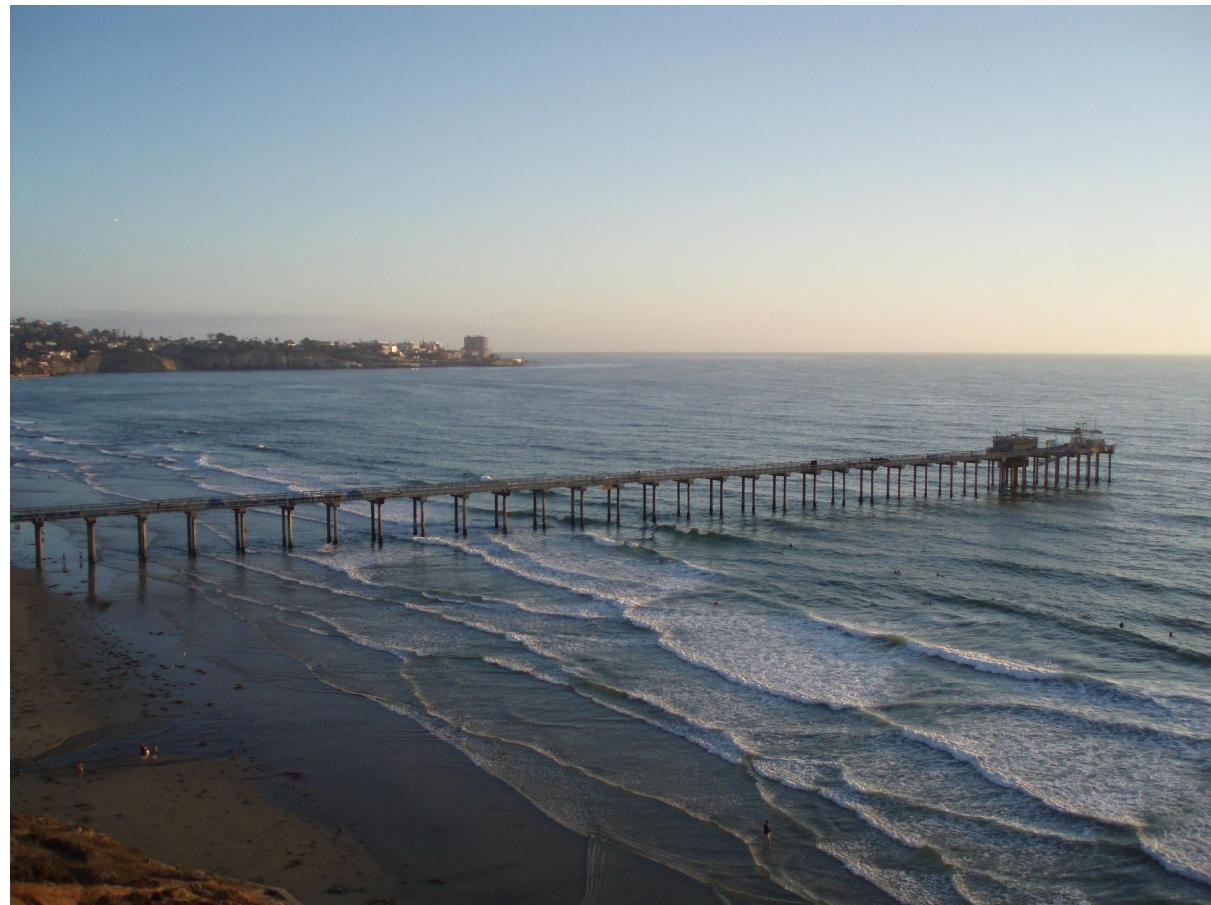


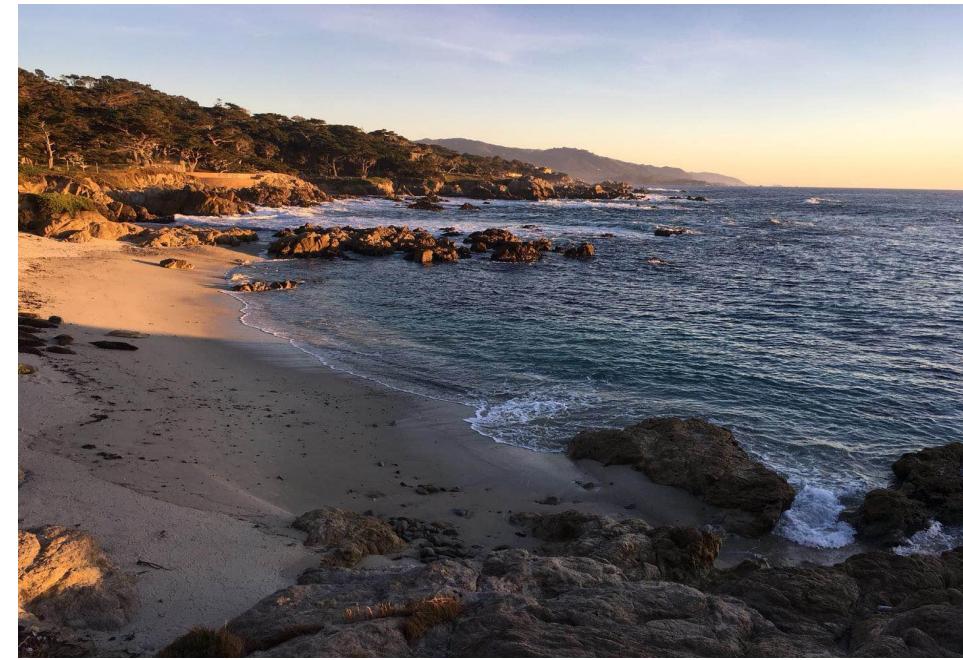
La Jolla Cove



Scripps Beach



Big Sur



17-Mile Drive at Monterey

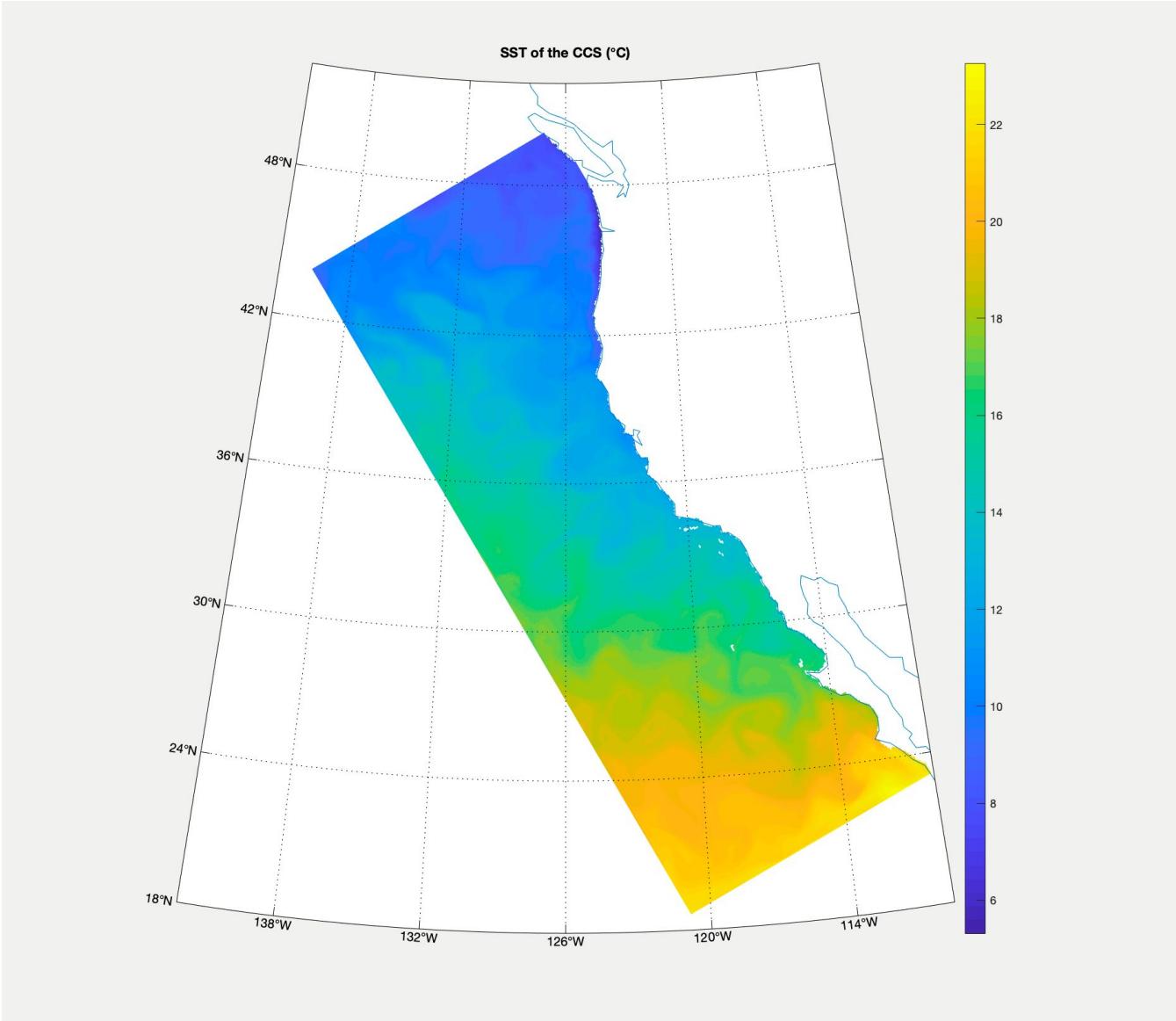


Bay Area

Study of California Current System

Yunchun Pan

Overview of CCS

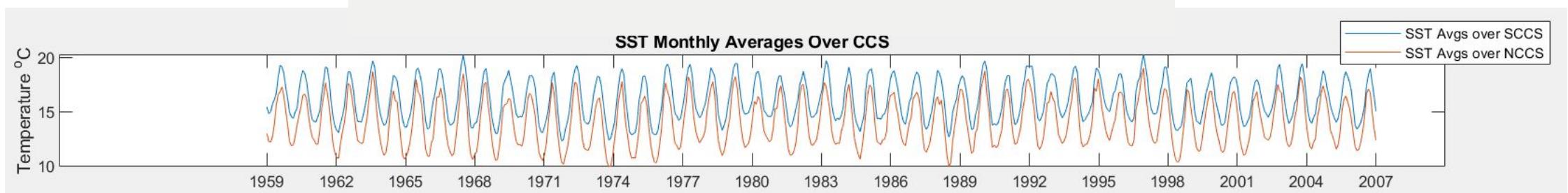
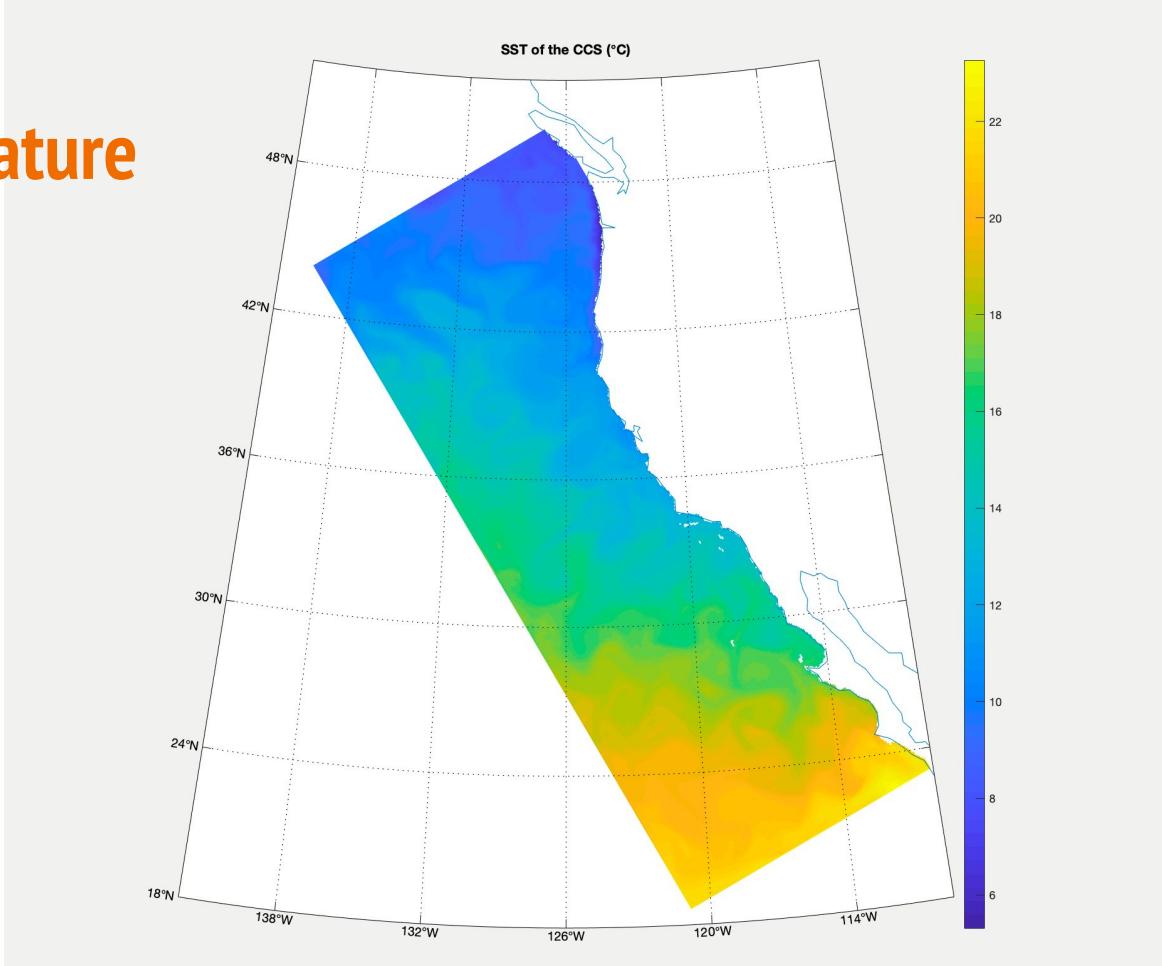


- The California Current System (CCS)
- Spanning from Baja California, Mexico, to Oregon and Washington

Background

- Analysis of data from a ecosystem model
- Physical, biological, nutrients

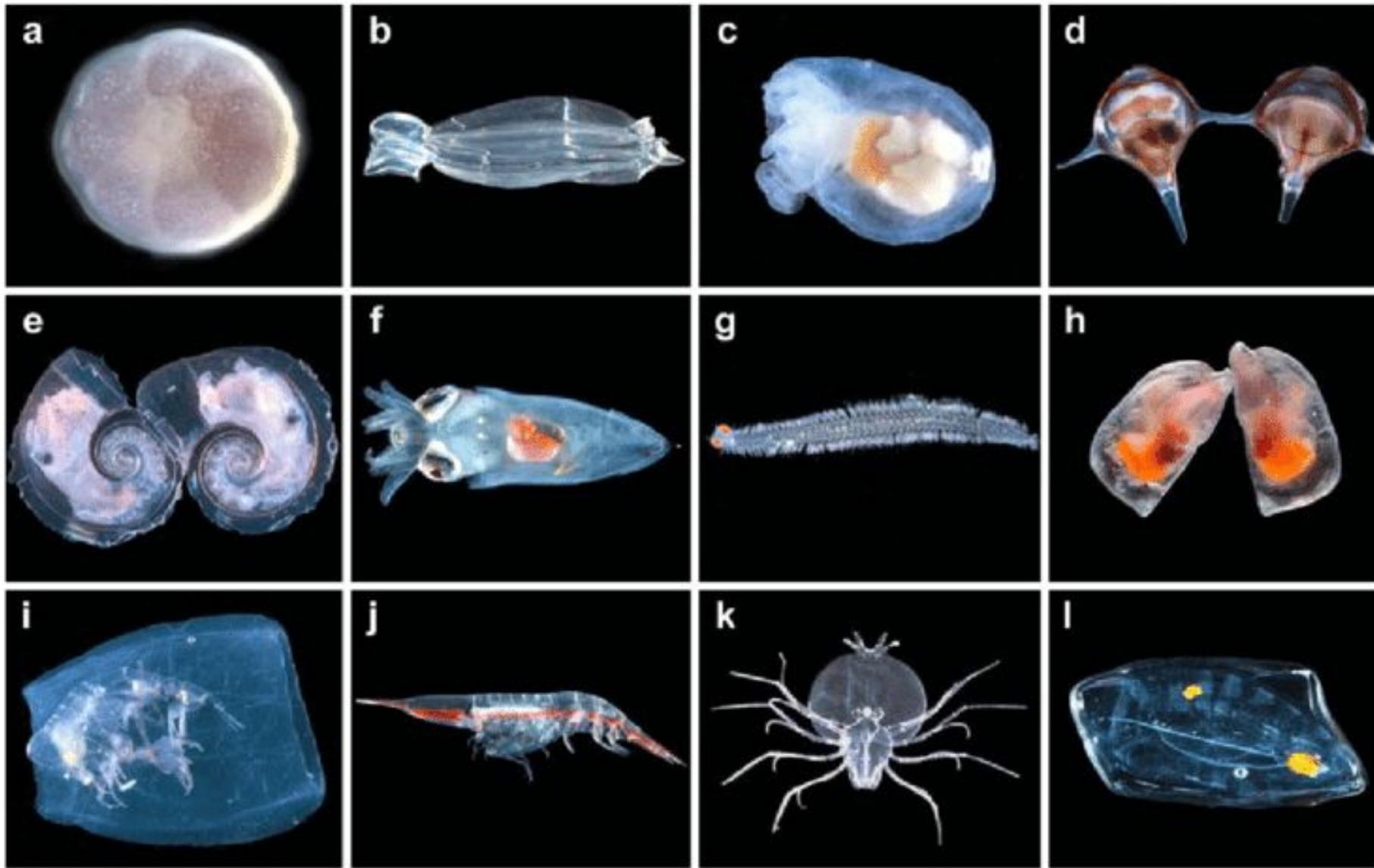
Sea Surface Temperature



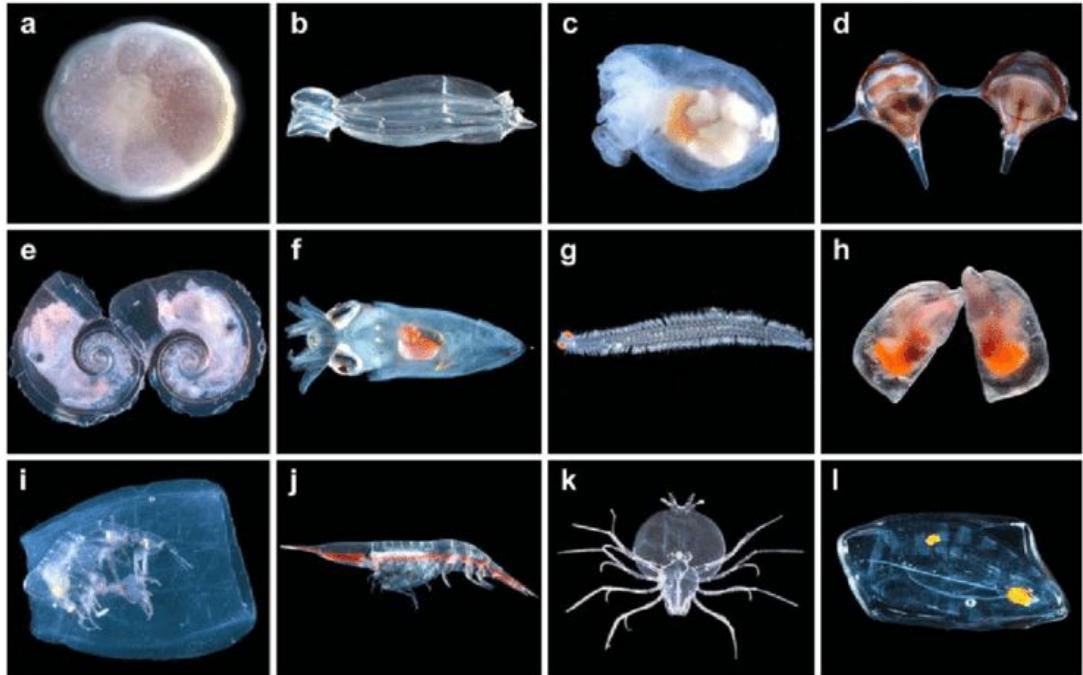
Diatom = microalgae



Zooplankton



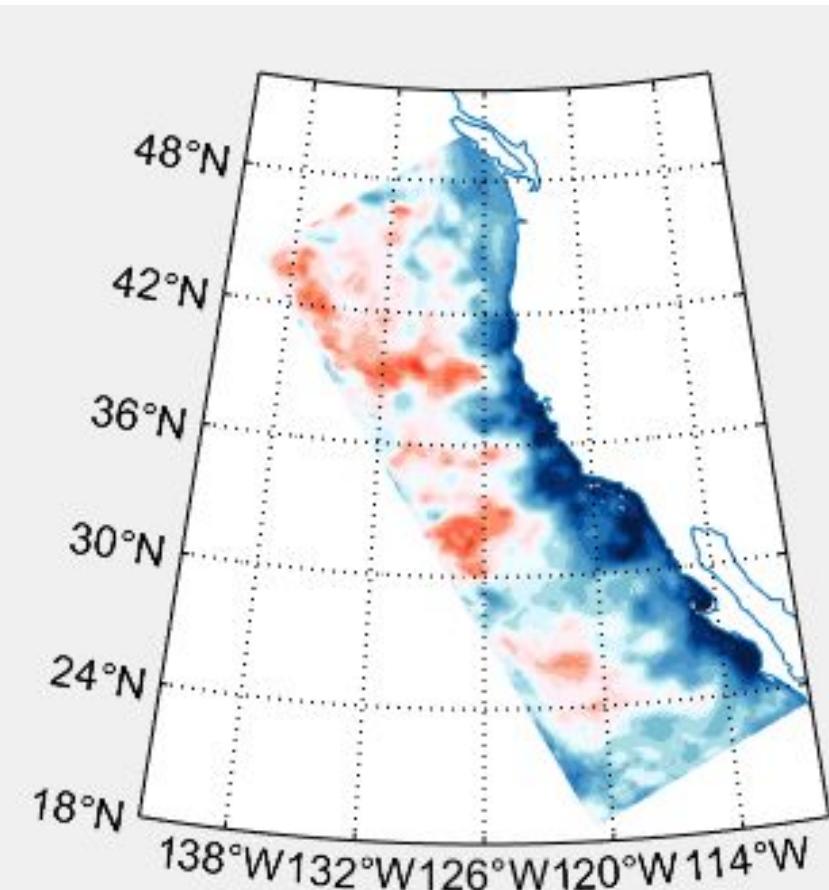
Competition



V.S.

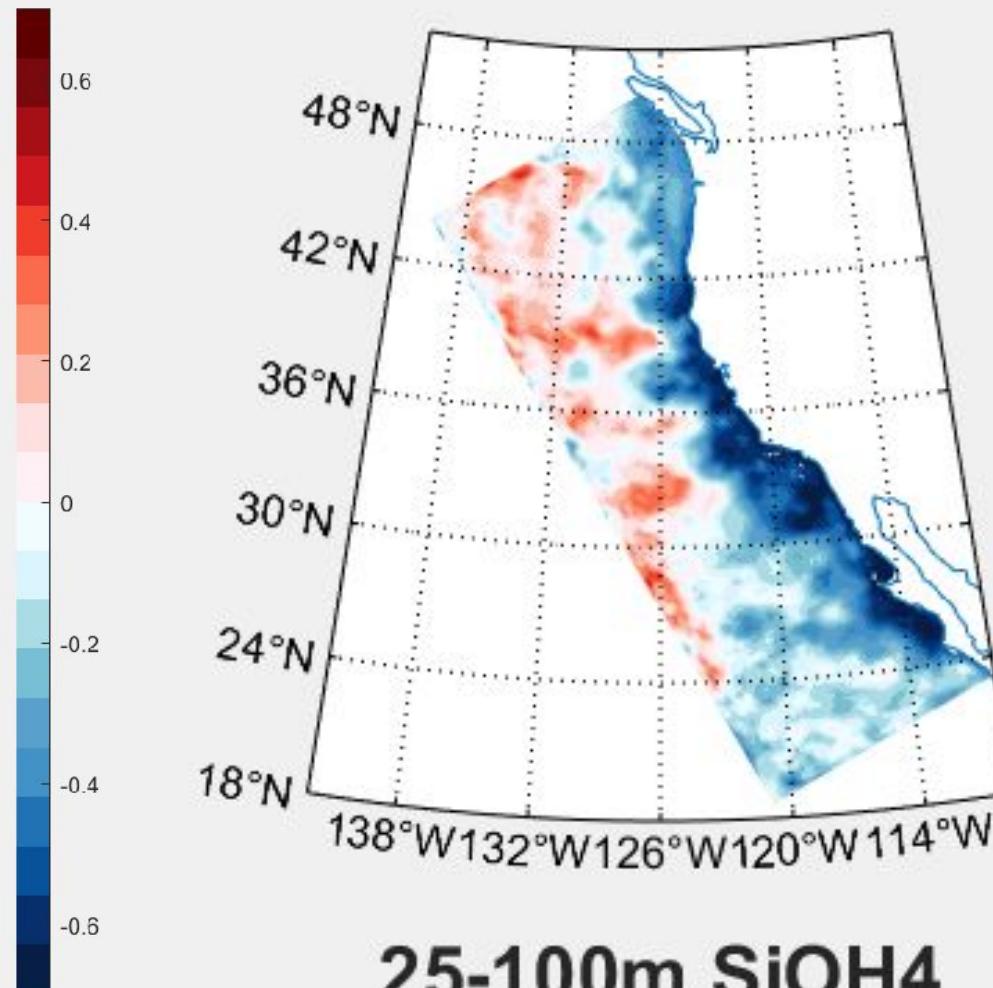


Nutrients Variables



25-100m NO_3

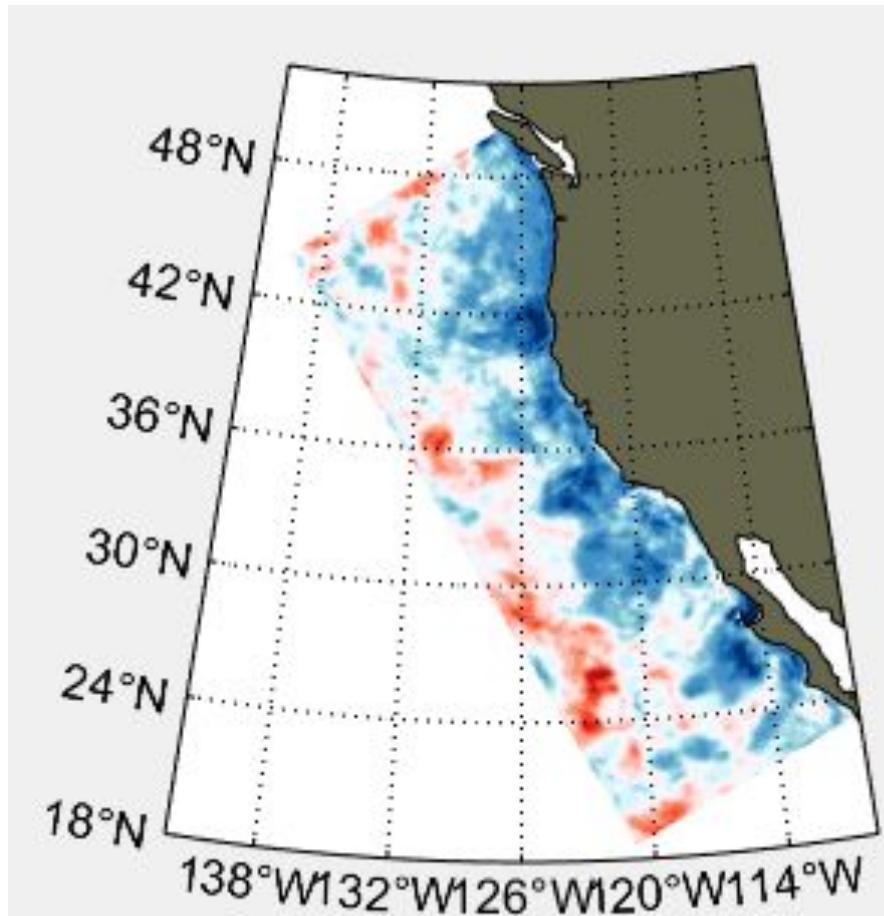
Blue: low concentration



25-100m SiOH_4

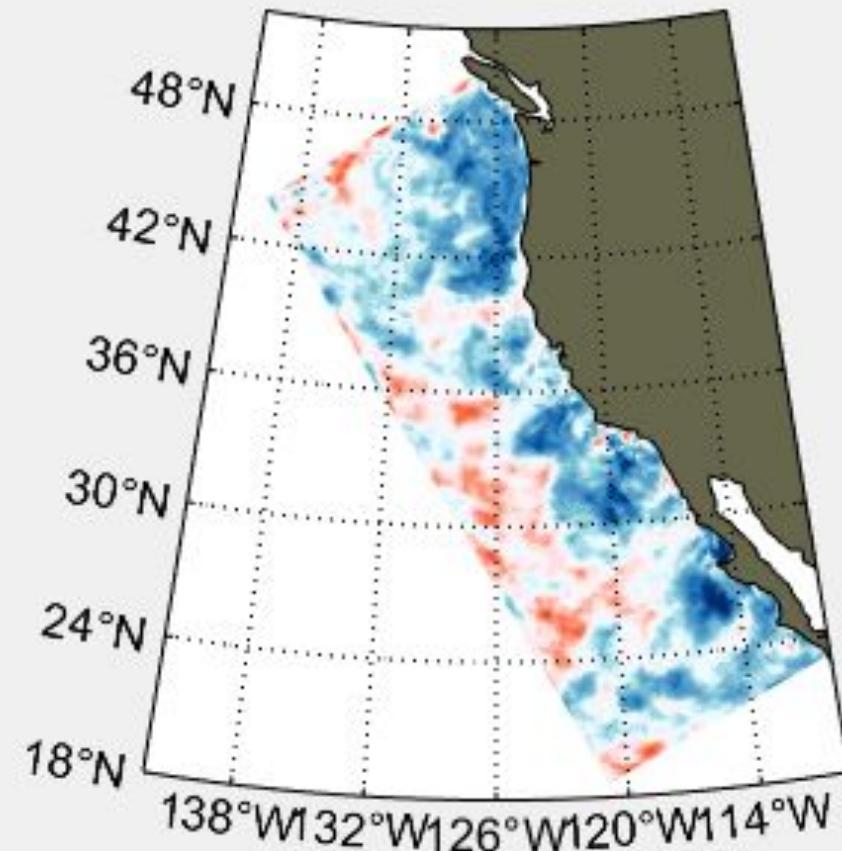
Red: high concentration

Similar Pattern



0-100m Pzoo

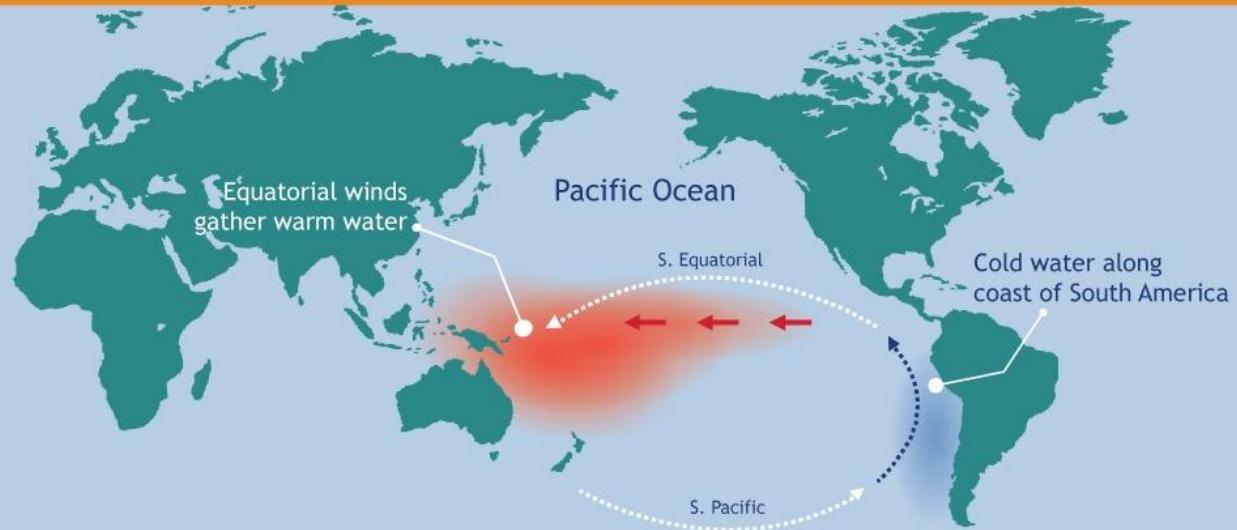
Blue: low concentration



0-100m Diatom

Red: high concentration

NORMAL YEAR

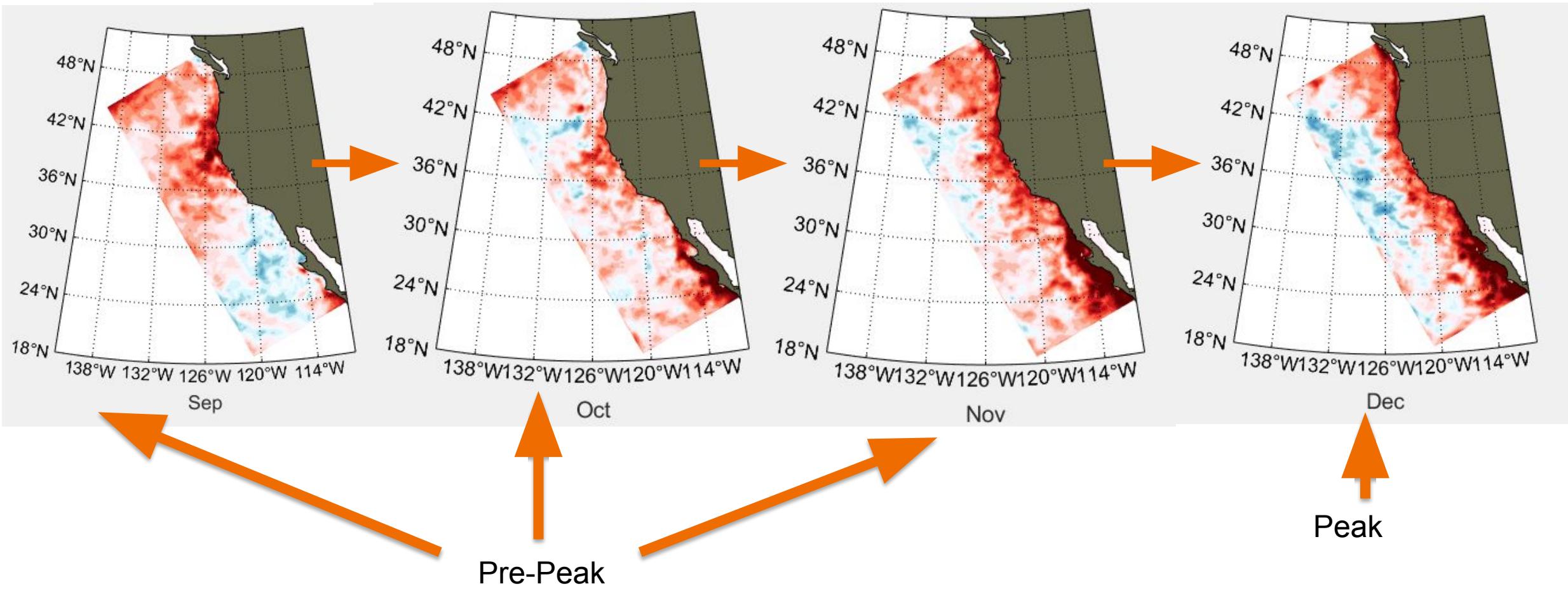


EL NIÑO YEAR

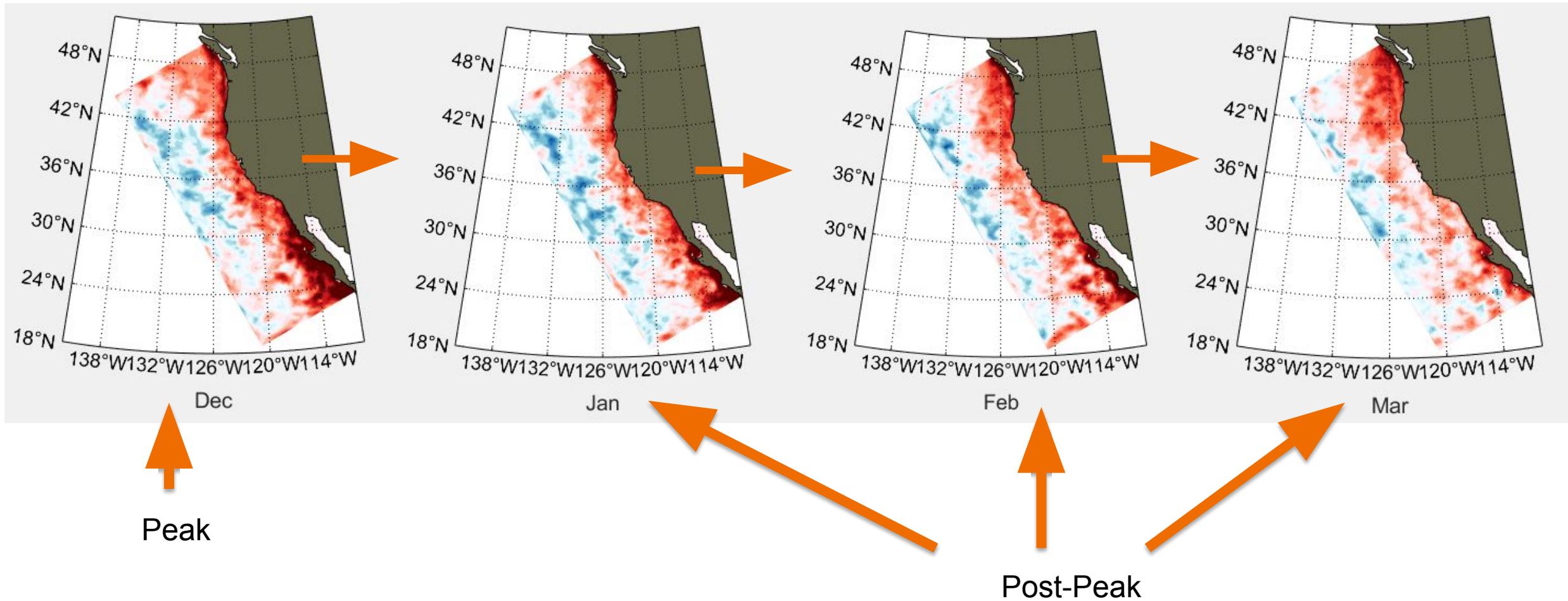


Source: Loomis Sayles depiction based on source data from National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA) and various media reports.

Sea Surface Temperature at Pre-Peak

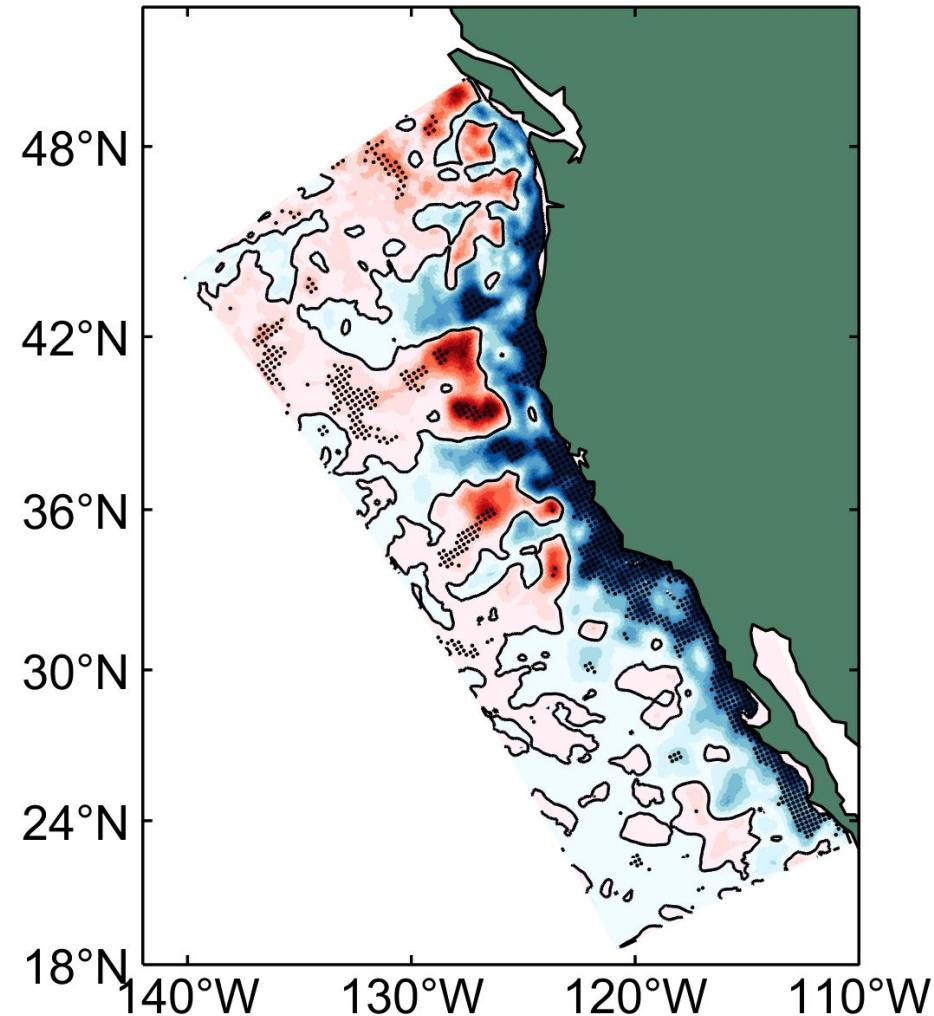


Post-Peak Period

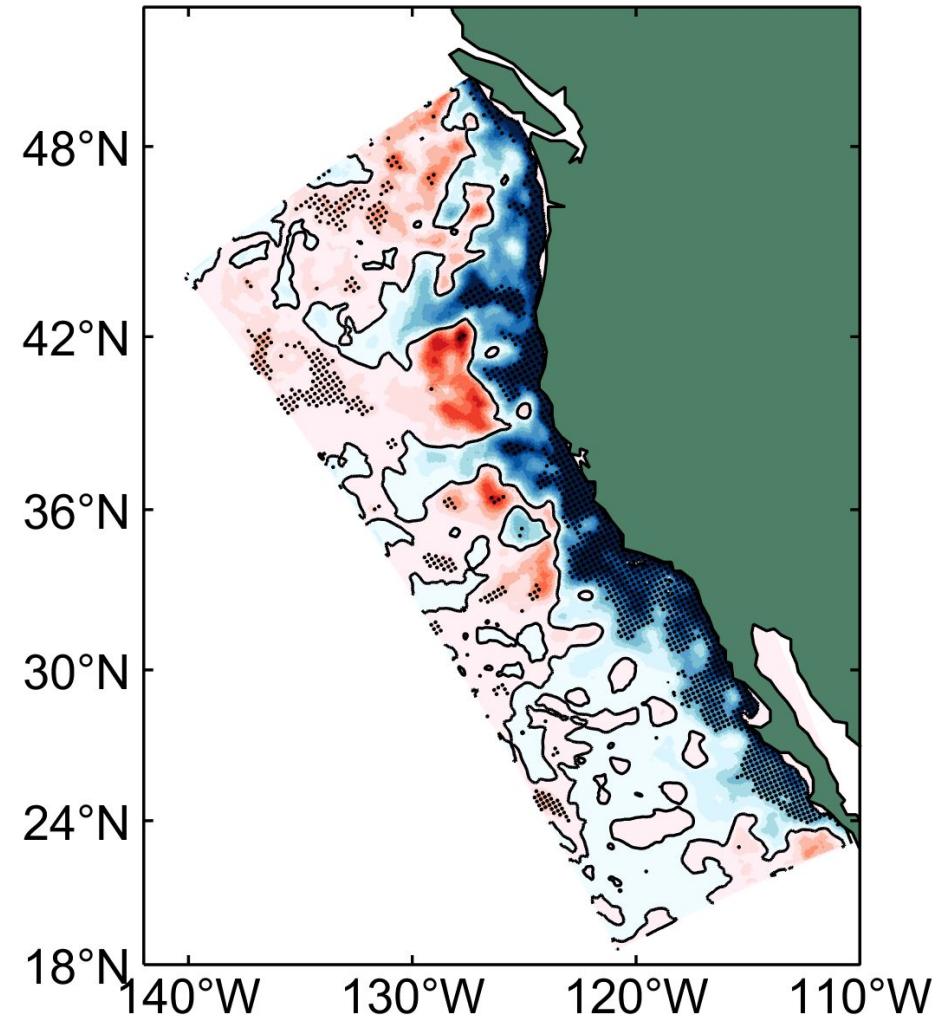


Silicate at Peak

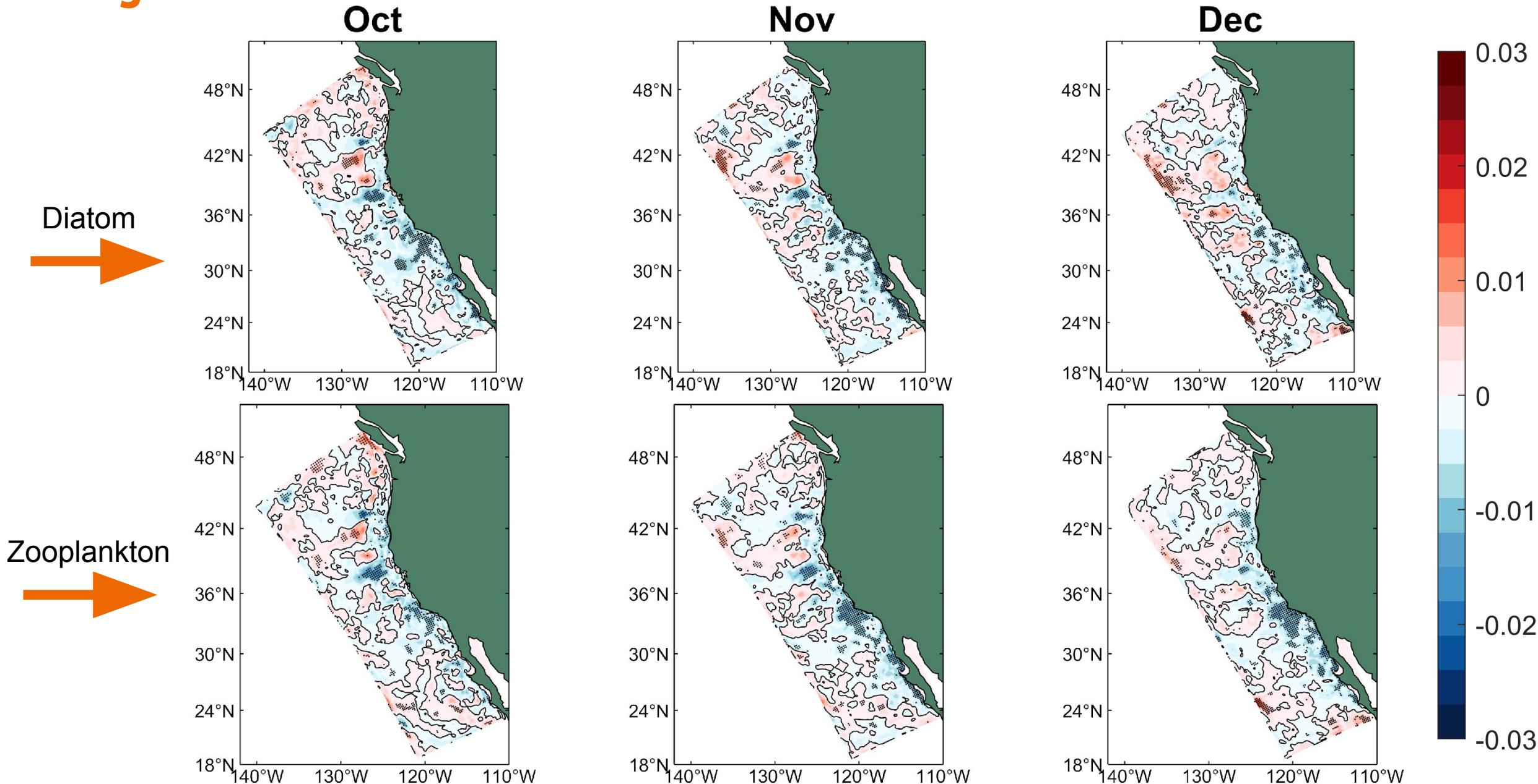
Nov



Dec

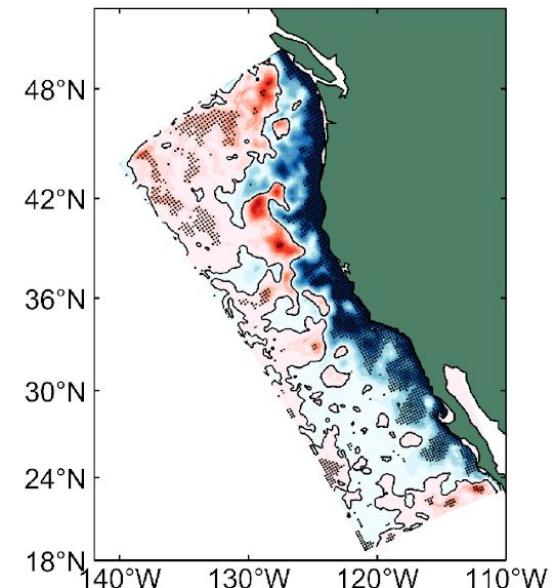


Biological Response?

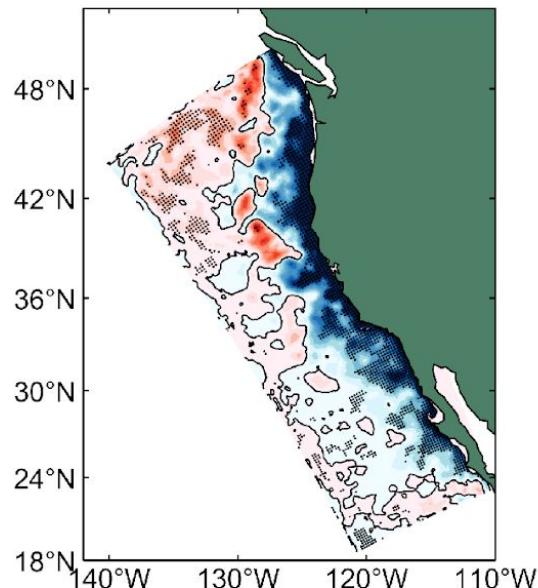


Silicate at Post-Peak

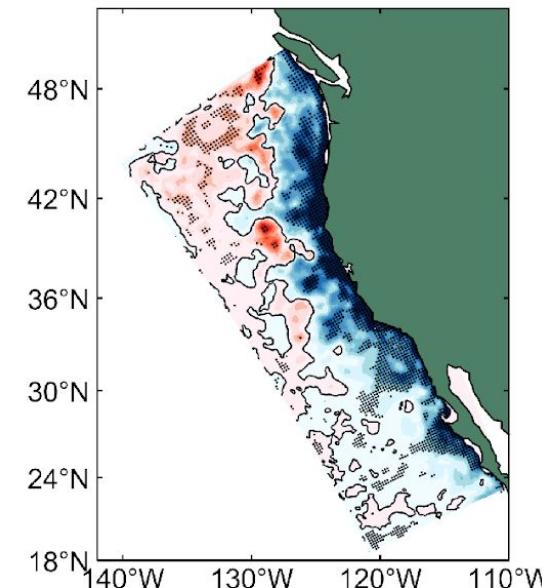
Jan



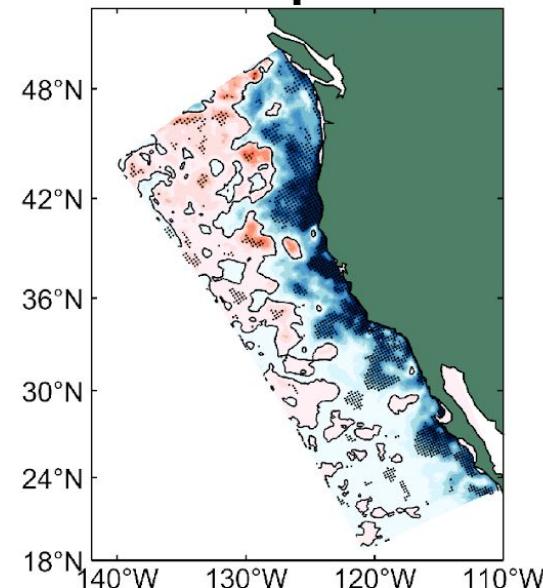
Feb



Mar



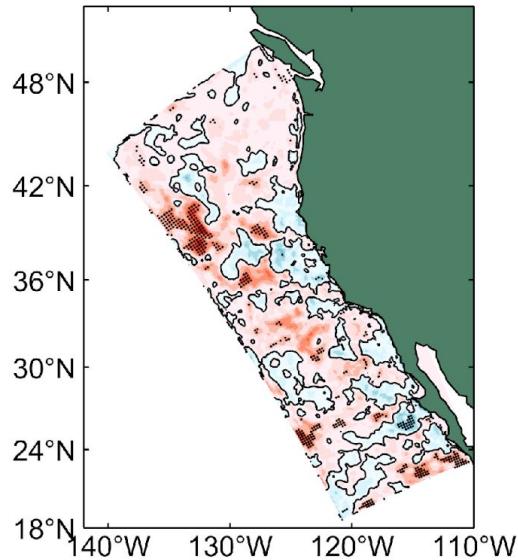
Apr



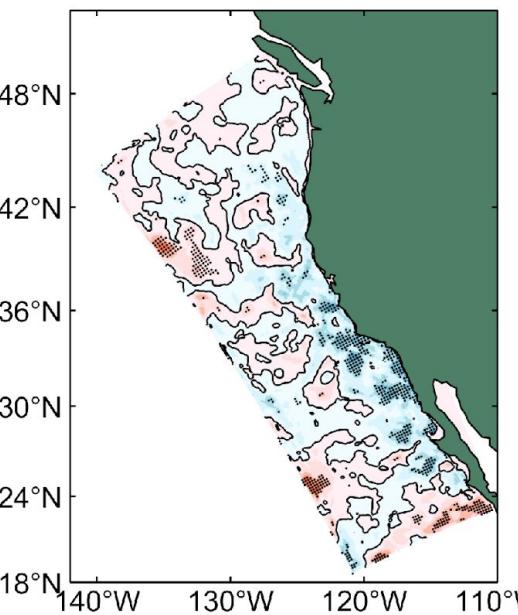
Biological Response?

Jan

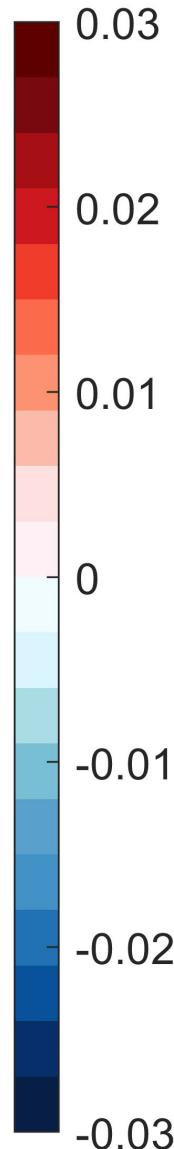
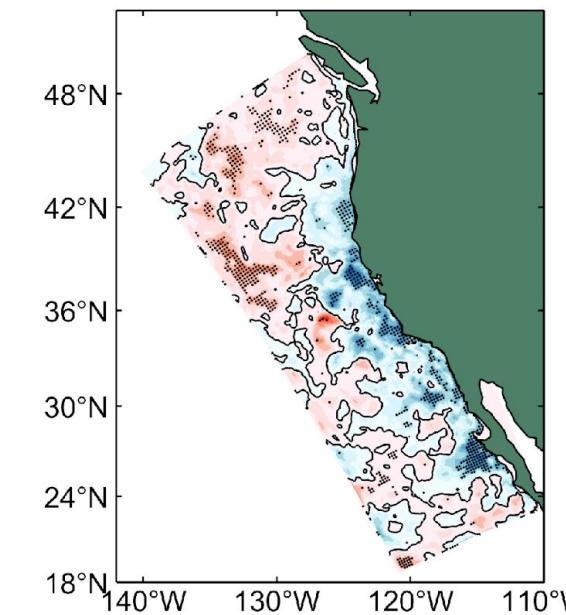
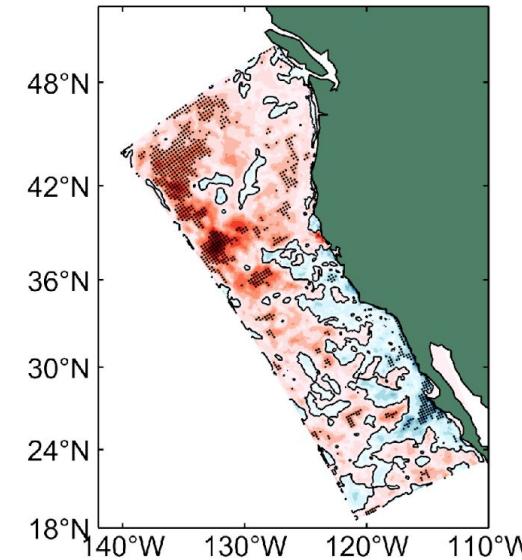
Diatom



Feb

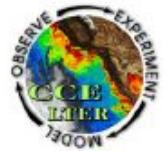


Mar



Results

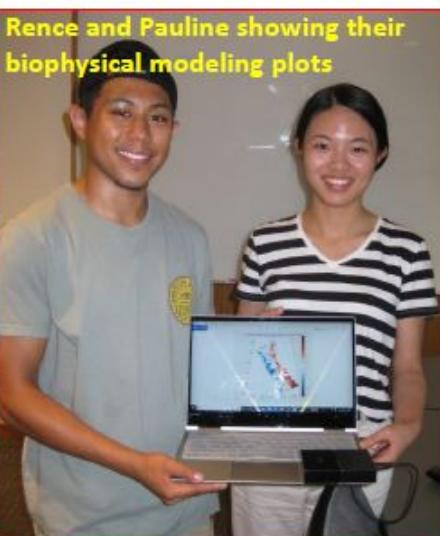
- Strong correlation between biological variables and nutrients
- High water temperature ---> Lower concentration of nutrients
- Discover how physical, biological, and nutrients variables respond to El Nino



~ CCE LTER REUs - Summer 2019 ~



Lab tours



Mentor Art Miller; REUs Natalie Faivre, Pauline Pan, Rence Balitaan, and Tristin Rammel; Mentors Ivan Moreno and Brian Palenik *



* THANKS to all CCE mentors: Art Miller, Nathali Cordero-Quirós, Ivan Moreno, Brian Palenik, Emma Choi, Ron Burton, Phil Bresnahan and Todd Martz