# Ocean Data Assimilation and Coupled Ocean-Atmosphere Modeling

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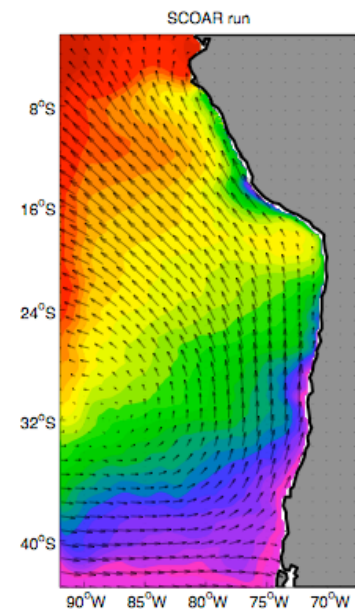## Scripps Institution of Oceanography, UCSD

- **Data Assimilation**:

  - Diagnose the physical balances and sensitivities of the ocean circulation fields using data assimilation experiments with observed mesoscale oceanic surveys of the VOCALS observations and a regional ocean modeling system.

  - This is vital for understanding the ocean biological response, as well as heat transport processes, observed during REx.

  - Generalized Stability Analysis tools
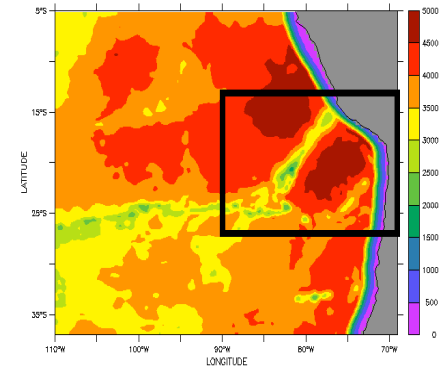
- **Coupled Ocean Atmosphere Modeling**:

  - Assess the effects of *mesoscale* ocean-atmosphere coupling on the distribution of SST, mesoscale eddy statistics and related atmospheric response in the VOCALS domain.

  - Compare coupled versus uncoupled runs of downscaled NCEP RA2 fields to test sensitivities to ocean boundary forcing of the atmosphere and vice versa

SCOAR run

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