1. Summary: Work and Results

- A Master’s thesis (Heubel, 2008) for automated skill evaluations, model tuning and parameter estimation with ensemble of simulations. Results: selected “best” tide estimates and mixing parameters
- Heat and Salt Balances, and Term-by-Term Balances, for succession of upwelling and relaxation events
- Other dynamical studies underway

2. Some of the manuscripts in Prep:

- Multi-model comparisons: The importance of ICs and forcing on model fields
- Adaptive Sampling (with Sharan Majumdar)
MB06 - First Upwelling Event
00Z Sea Surface Temperature Re-analysis
Thermal Energy Balances and Term-by-term Balances

\[
\frac{\partial}{\partial t} \int_V T \, dV = \int_{\text{Top}} q \cdot dA + \int_{\text{North}} T \vec{v} \cdot dA + \int_{\text{South}} T \vec{v} \cdot dA + \int_{\text{West}} T \vec{v} \cdot dA
\]

- Time Rate of Change in the volume
- Diffusive flux at the ocean surface
- Horizontal advective flux through each open boundary

LHS: Volume-average Temperature rate of change

2 August

Volume is Cooling on avg

Tides
Thermal Energy Balances (Fluxes integrated over 4 days)

Mean Fluxes (C m/s) over: 31-Jul-2006 00:00:00 -> 04-Aug-2006 00:00:00 GMT

Surface
- Southwest ward Upwelling
- Shoreward Source

North section
- Subsurface Northward

West section

South section

Shows: Source of upwelling + coastal subsurface northward flow