Coupled system and large-scale modeling

Model Progress: small-scale

- "Lagrangian" cloud drop parameterization (Andrejczuk)
- Downscaling cases with LES & WRF (Andrejczuk, Gadian)
- UCLA WRF-ROMS (Hall)
  - successfully simulate California current, chlorophyl & eddies
- COAMPS (Q. Jiang)
  - Chilean low-level jet correlated to subtropical high, along-coast pressure gradient, topography
- HiGEM and IPCC models (Toniazzo, Shaffrey)
  - simulate ocean contribution to heat budget, in agreement with Colbo and Weller (2007)   large-scale

Persistent inversion height errors.

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- Atlantic/Western Hemisphere warm pool has a cross-equatorial "Hadley" vertical circulation with subsidence in Southeastern Pacific Stratus region in SON. (Mechoso, Lee, Wang, Enfield)
- ENSO and Southeast Pacific stratus ocean heat flux correlated in IPCC models.
- Diurnal composite of the upsidence wave from soundings at Iquique, 75, 85W. (Rahn)
  – Compensation between PBL and free atmosphere results in small impacts on PBL height
  – Integrated diurnal cycle data set
- Southeastern tropical Pacific synoptic variability observed in 3 periods: passage of 2 fronts w/ upper-level jet, 3) calm. (Toniazzo)
- Ready to plan VOCALS modeling cases?