OAFlux: Objectively analyzed Air-sea heat Fluxes

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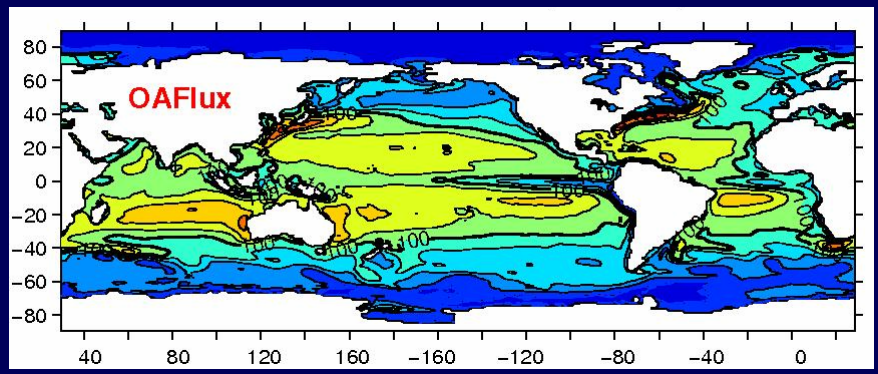
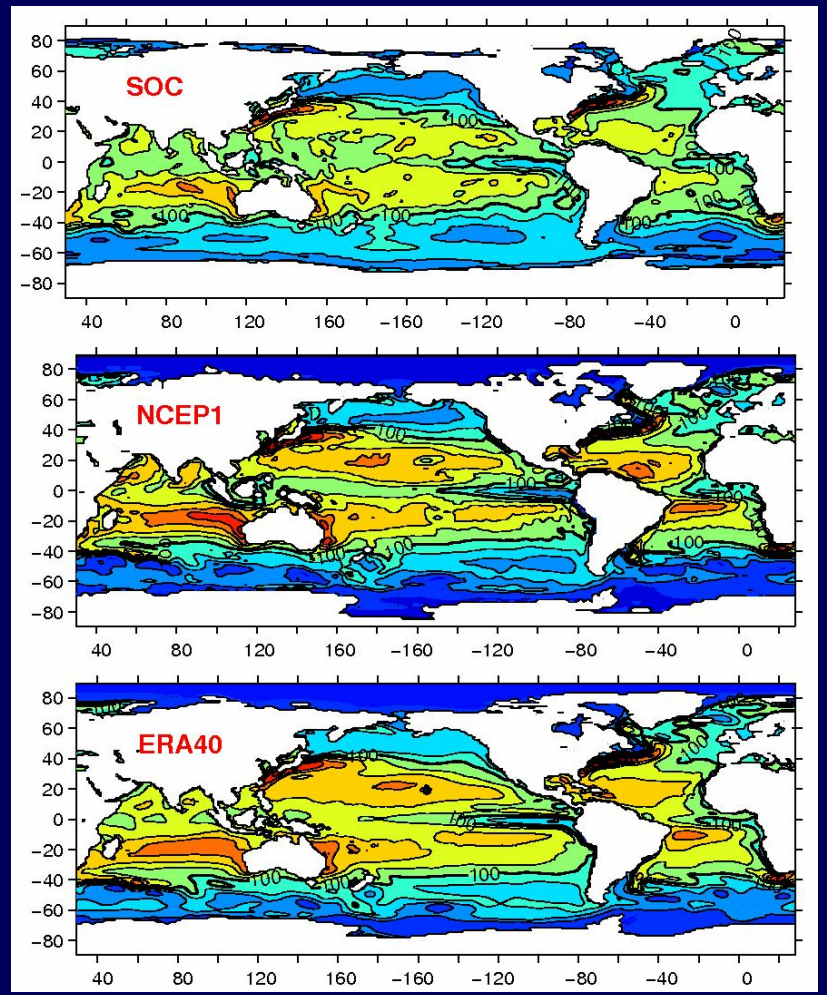
$Q_{LH}+Q_{SH}$ Mean 1988-1997





Development procedure

Input Data Sources

- **NCEP reanalysis and ECMWF operational analysis:**
  Air humidity and temperature at 2m, surface wind at 10m, SST, sea level pressure
- **Satellite retrievals:**
  SSMI wind speed at 10m, SSMI air humidity at 10m, AVHRR SST

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Weighted Objective Analysis:
combining data from various sources and obtain optimal estimate at the solution

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Best estimates of daily flux-related variable fields

↓ **COARE bulk flux algorithm** (Bradley et al. 2000)

Daily latent and sensible heat fluxes

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Validation

References regarding the methodology of the OAFlux analysis and the validation with buoy data :

Yu, L., R. A. Weller, and B. Sun, 2004a: Improving latent and sensible heat flux estimates for the Atlantic Ocean (1988-1999) by a synthesis approach. J. Clim. 17, 373-393.

Yu, L., R. A. Weller, and B. Sun, 2004b: Mean and variability of the WHOI daily latent and sensible heat fluxes at in situ flux measurement sites in the Atlantic Ocean. J. Clim., 17, 2096-2118.