



CTB Joint SEMINAR Series



Theme: CFS as a Prediction System and Research Tool
Climate Test Bed (CTB)
Center for Ocean-Land-Atmosphere Studies (COLA)

NCEP's GODAS and Global Oceanic Monitoring Products

Speaker: Yan Xue
Climate Prediction Center, NCEP, NOAA

Date: Wednesday, February 27, 2008
Time: 2:00 pm (refreshments served at 1:30 pm)
Place: COLA Seminar Room (*)

An operational Global Ocean Data Assimilation System (GODAS) has been developed at the National Centers for Environmental Prediction (NCEP). A retrospective global ocean reanalysis for 1979- present is accessible at the GODAS web site (<http://www.cpc.ncep.noaa.gov/products/GODAS/>), which provides the public an easy access to the documentations, model data, model validation and oceanic monitoring products of GODAS.

The operational GODAS assimilates temperature profiles from XBT, Argo profiling floats and TAO moorings and synthetic salinity that are constructed from temperature and a local T-S climatology. The operational GODAS was updated in April 2007 with inclusion of the Altimetry sea surface height, but not the Argo salinity. This is because assimilation of the Argo salinity had large impacts on the quality of the ocean analysis, which would likely influence CFS forecast, initialized with the operational GODAS. Detailed validation of the GODAS ocean analysis against independent observations and analysis of impacts of Argo salinity will be presented.

To maximize the utility of the GODAS ocean analysis for real time global oceanic monitoring, climate attributions and climate nowcasting, NOAA's Climate Prediction Center initiated "Monthly Ocean Briefing" in May 2007. The briefing aims to provide a monthly assessment of how the state of the global ocean evolved recently, what is the interaction with atmosphere, and how recent CFS model predictions verify. The briefing consists of a PPT presentation and conference call, and is becoming a valuable product for both research and operational communities. The first part of the briefing describes the recent evolutions and current conditions of the ocean in each basin. A SST heat budget analysis is used to explain the SST tendencies for the major air-sea coupled modes such as ENSO. The influences of MJO-related winds on oceanic Kelvin waves and ENSO are discussed. The impacts of extra-tropical winds on the ocean and coastal upwelling along the western coast of North America are monitored. The second part of the briefing discusses the biases in GODAS and their potential impacts on the recent performance of the CFS ENSO forecast.

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Directions from the Capital Beltway (I-495): Take Interstate 95 north toward Baltimore. Take the first exit (29B - Route 212 West) to Calverton. Turn left at the first traffic light (intersection of Powder Mill Road and Beltsville Drive) into Centerpark office park. COLA is located on the 3rd floor of bldg. 4041. Parking is free.