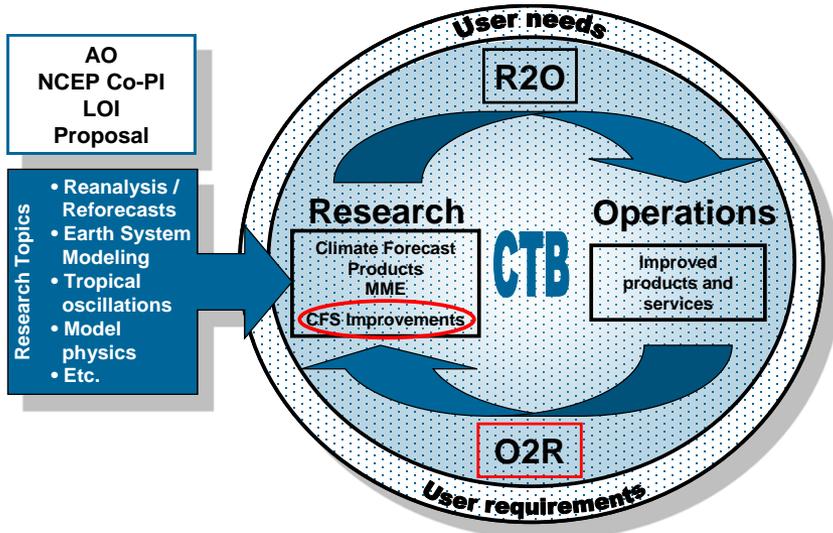


# NCEP Climate Test Bed

Jin Huang, CTB Director

## Mission

To accelerate the transition of scientific advances from the climate research community to improved NOAA climate forecast products and services.



## **NCEP Test Beds:**

EMC	WRF Developmental Test Center; Joint Center for Satellite Data Assimilation
<b>CPC</b>	<b>Climate Test Bed (CTB)</b>
NHC	Joint Hurricane Test Bed
HPC	Hydrometeorological Test Bed
SPC	Hazardous Weather Test Bed
SWPC	Space Weather Prediction Test Bed
AWC	Aviation Weather Test Bed
OPC	IOOS Supported Test Bed

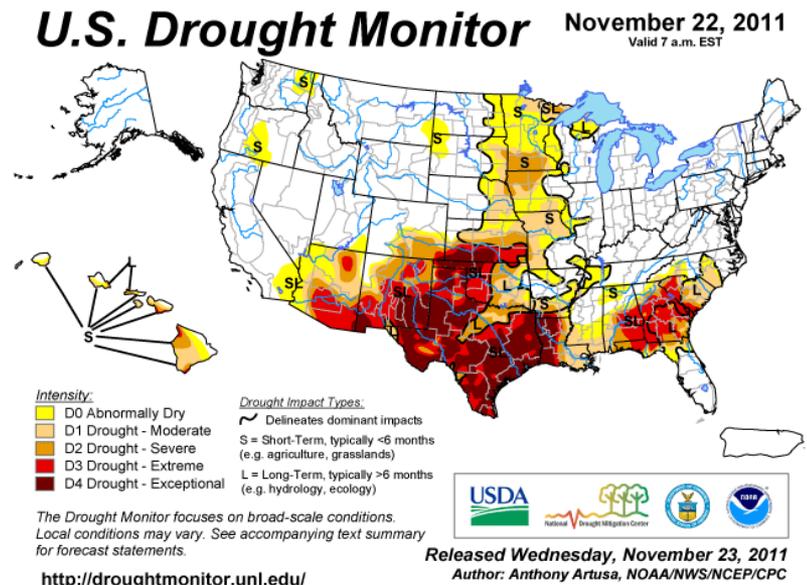
## CTB:

- A grant program sponsored by Climate Program Office/MAPP program
- CTB Science Advisor Board (SAB)
- CTB emphasizes three science priorities
  - 1) *Climate Forecast System (CFS) improvements*
  - 2) *Multi-model ensembles (MMEs)*
  - 3) *Climate forecast tools and products*
- CTB supports both CPC and EMC missions

# Climate Prediction Center (CPC) Mission

**CPC delivers climate *prediction, monitoring, and diagnosis* products for timescales from weeks to years to the Nation and the global community for the protection of life and property and the enhancement of the economy.**

- **Current use of TRMM for CPC operational climate monitoring**
  - Inputs to an integrated high-resolution global precipitation analysis (CMORPH)
  - Real-time climate monitoring (e.g. MJO)
  - Climate model verification and diagnostics
  - **Global hydrological cycle**
- **Climate requirements for GPM:**
  - **Drought monitoring** (precipitation, soil moisture, snow) and **water resources managements**
  - **Climate model evaluations:** e.g., NCEP Climate Forecast System (CFS)
  - **Long-term trend**, especially in extreme events



# Summary

- **CTB is aimed accelerating the transition of scientific advances from external community to improved NCEP climate operations.**
- **Potential roles of CTB in transferring GPM to NOAA operations**
  - To serve as a testing platform by supporting grants projects
    - ✧ to accelerate the transition of mature satellite **climate monitoring** tools and products to NOAA operational institutes in a timely manner
    - ✧ to expand GPM applications to **climate model diagnosis and evaluations, and applications**
    - ✧ to collaborate with other NOAA testbeds (e.g., HMT) on GPM applications  
e.g., joint calls for proposals to test GPM products across weather and climate time scales.
  - To interact with the satellite science community for better collaborations to ensure productions of climate quality products;
- **Potential issue for CTB's engagement in R2O activity for GPM**
  - The CTB current funding is from CPO/MAPP program, focused on modeling and predictions. Improving operational climate monitoring is beyond the MAPP's mission.