

Welcome to CFSv2 Evaluation Workshop

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Director

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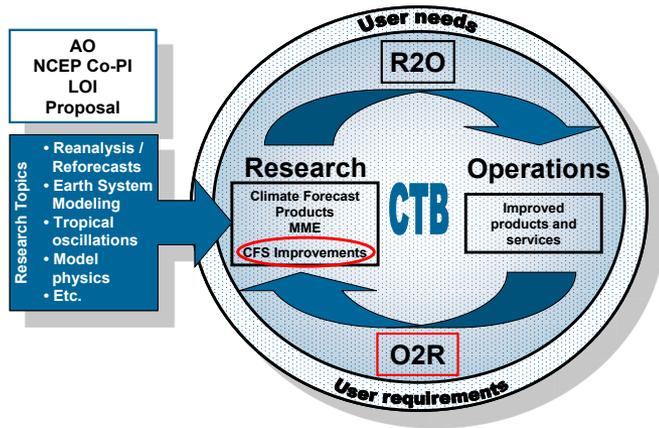
Workshop Organizers

- Jin Huang (NCEP/CTB)
- Jim Kinter (COLA)
- Shrinivas Moorthi (NCEP/EMC)
- Wanqiu Wang (NCEP/CPC)
- Annarita Mariotti (CPO)

Special Thanks

- **Workshop sponsorship** from CPO and NCEP
- **Logistic support**
 - Sky Yang (CPC)
 - Tania Sizer (UCAR)
 - Esther Major (Raytheon)
- **All participants for your interest in NCEP CFS**
- **Great responses to the discussion questions**

NOAA Climate Test Bed (CTB)

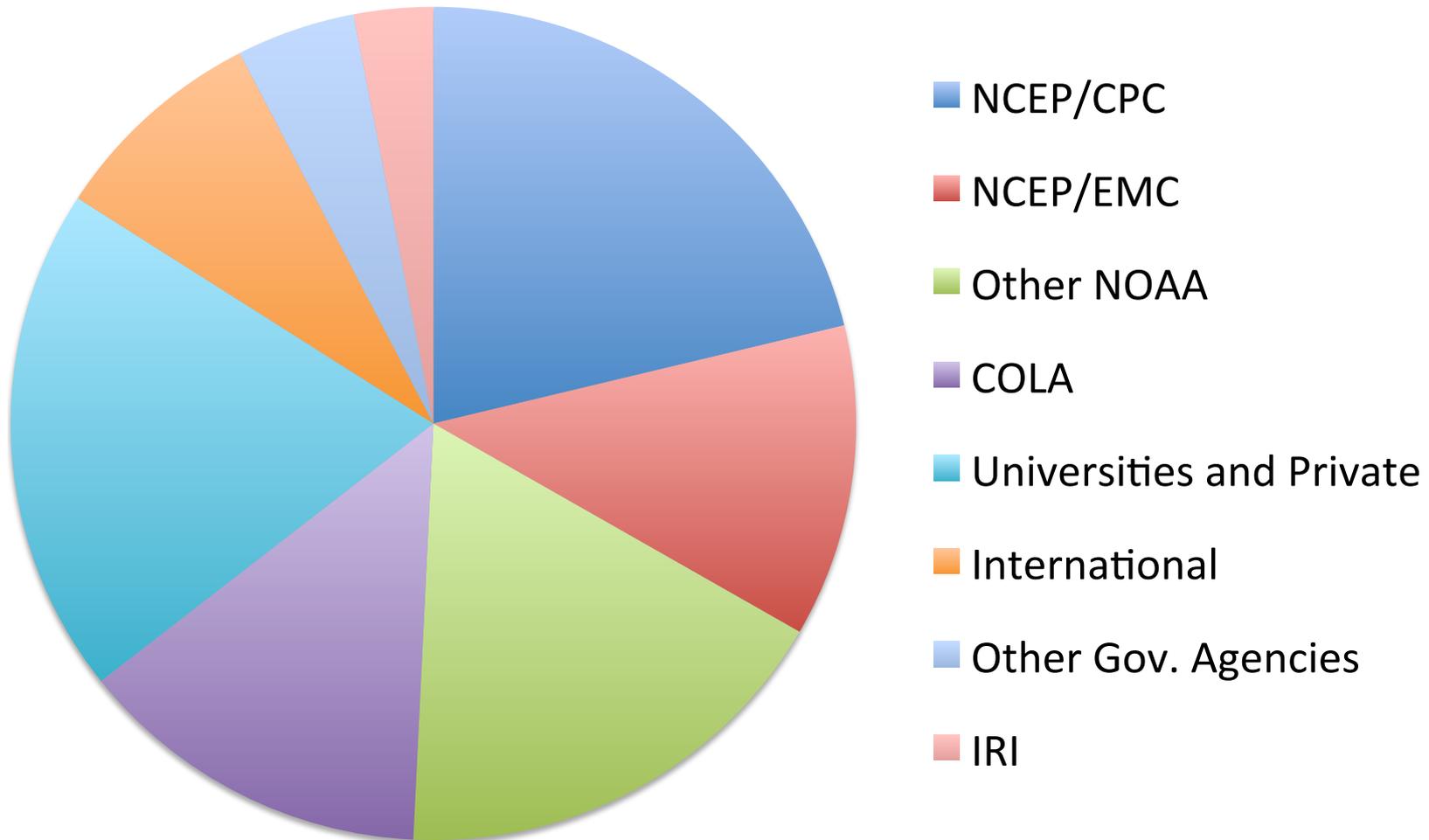


Mission

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

- **CTB supports *R2O and O2R transitions***
 - *CTB grants funded by CPO/MAPP*
 - *CTB Facility (FTE, computer) support by NCEP*
- **Three science priorities**
 - 1) *CFS model improvement*
 - 2) *Multi-model ensembles*
 - 3) *Climate forecast products*
- **CTB provides a platform and mechanisms for NCEP to interact and collaborate with the external climate research community**

133 Registered Participants (and 59 Abstracts)



Logistics

Science Presentations

20 minutes including Q&A

Today:

- Lunch (provided) and Poster Viewing
- Slides show of highlights of CFSv2 Evaluations
(Thanks to Arun Kumar)

Tomorrow:

- Lunch on your own
- Look at outside of the new NCWCP building

Workshop Sessions

1. Programmatic Overview

2. CFSv2 Evaluations

- 1) Assessment of CFSv2 Prediction Skills
- 2) Evaluation over ocean
- 3) Evaluations of climate modes and decadal variability
- 4) Evaluation over land

3. Physical/Climate Processes and Modeling

4. Climate Modeling Strategy

5. Synthesis Reports (Kumar and Moorthi)

6. Discussions (Lead: Kinter)

- Start with a summary of all responses to the questions

Questions to be Discussed

1. CFSv2 Evaluations

- Do the CFSv2 evaluations included in submitted abstracts and done elsewhere **sufficiently document** the model's current status as a climate forecast and research tool and the improvements from CFSv1 to CFSv2?
- What **additional diagnostics and experiments**, especially process-oriented model diagnosis, do you suggest to further understand the model biases in CFSv2?
- Does the **current data archive** support process-oriented diagnosis of CFSv2? Have we sufficiently capitalized on the **data collected from process studies**, field campaigns and satellite measurements for CFSv2 model evaluations and improvements?
- What standard **evaluation metrics** for CFS should be generated routinely by NCEP?

Questions to be Discussed – cont.

2. Model improvements towards CFSv3

- How can the **model evaluation/diagnosis process for CFSv2 be integrated into the CFSv3 development process?**
- In the **CFSv3 Planning Meeting in August 2011**, several recommendations were made for how to improve the model development process, including, among others, that Planning for the next generation of CFS.
- What are the **potential synergies among climate modeling efforts at NCEP, at other NOAA labs/centers, and in the external community?** How can NOAA take best advantage of these synergies?
- What are the **specific requirements for NCEP infrastructure to support for CFSv3 development by NCEP and its external collaborators?**

Workshop Objectives

- **Evaluate CFSv2**
 - Improvements in CFSv2 over CFSv1
 - Biases in CFSv2
- **Plan for model improvement towards CFSv3**
 - Design experiments to understand how to **incrementally improve** upon CFSv2,
 - Test coupling of the latest GFS with state-of-the-art model components.
- or**
- **Bold and far-reaching** vision and strategy for CFSv3
- **Define priorities and mechanisms for NCEP - external collaborations on climate modeling**

Expected Workshop Outcome

A White Paper on CFSv3 development

- Near team priority
- Long-term vision and strategy
- A Core Team will develop a draft after the workshop and circulate among all the participants.