

WGNE-THORPEX

Some suggestions

- * THORPEX/WWRP nominate a liaison specifically to the parametrization effort
- * THORPEX/WWRP nominate their areas of priority
- * Physics in high-resolution models - an area in which THORPEX/WWRP could / should take the lead

Tropical convection

Phenomena of interest

Diurnal Cycle QPF Tropical Cyclones MJO Monsoons Cold-tongue bias ...

Tools

LES CRM mesoscale LAM RCM Global AGCM Global AOGCM ESM ...

Observation efforts

Field studies Satellites IR Satellites TRMM Satellites CloudSat ...

Existing coordination

GCSS YOTC WGENE THORPEX ...

Low-level clouds

Phenomena of interest

Fog and Stratus (Aviation) Stratocumulus (Forecasts) Shallow cumulus Trades, MJO Cold-tongue bias Cloud-climate feedback ...

Tools

LES mesoscale LAM RCM Global AGCM Global AOGCM ESM ...

Observation efforts

Field studies Satellites general Satellites CloudSat ...

Existing coordination

GCSS CFMIP WGENE THORPEX ...

Other

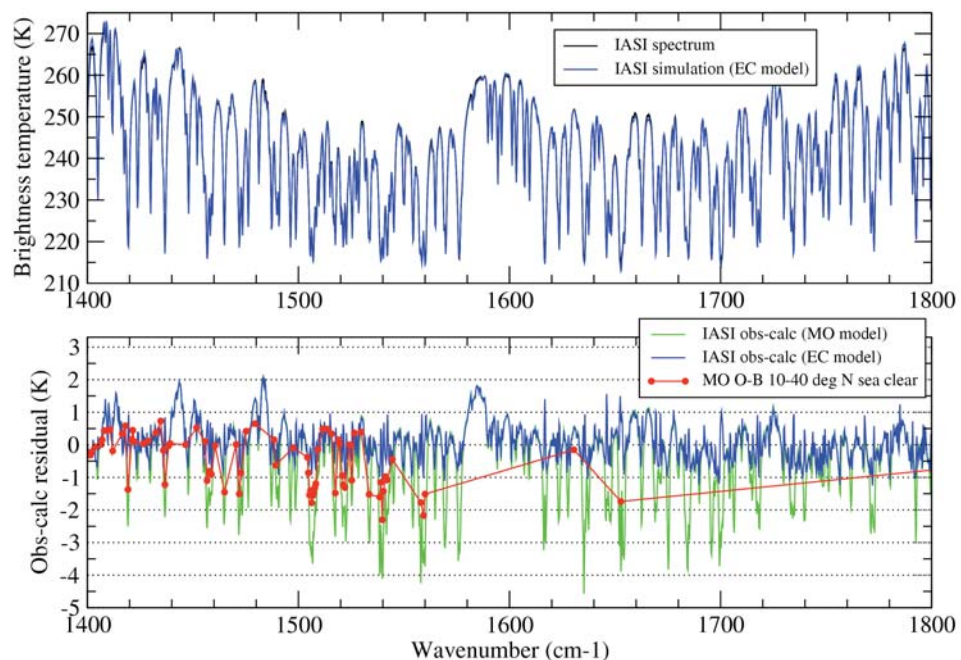
- * Stable PBL
- * Land-atmosphere coupling
- * Clouds and precipitation in extra-tropical cyclones
- * ...

Please provide input to WGNE meeting

- * To help the initial development of the effort please provide answers to the following questions as input to the WGNE meeting:
 1. How important is parametrization (in the broadest sense) to the activities of your group/project?
 2. Is there already a discernible parametrization research effort in your group/project? If so who would be a suitable contact person for this effort?
 3. What would be the most important contribution the parametrization effort organized within WGNE can make to your group/project?
 4. Do you have any other suggestions with respect to developing this new effort?

Data assimilation interaction

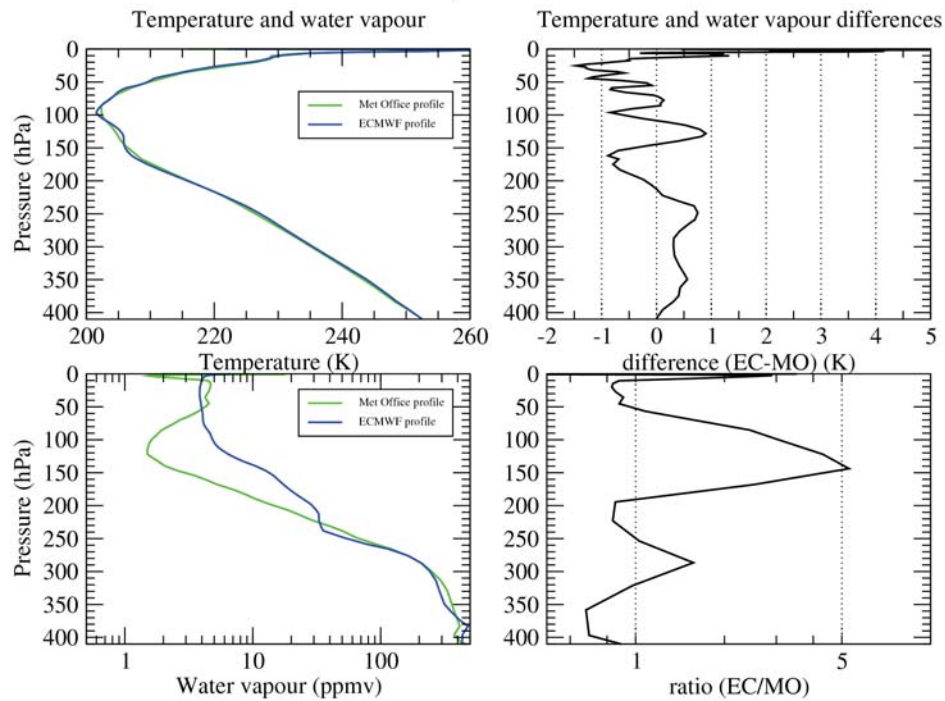
Flight B290 – comparison of observation with LBL simulation and operational O-B statistics for 10-40N



Comparison of Met Office and ECMWF profiles for this observation location



Gulf of Mexico case study



Collaboration between THORPEX-PDP WG and WGNE

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The THORPEX *Predictability and Dynamical
Processes Working Group*

WWRP-THORPEX

WWRP-THORPEX

Reminder: THORPEX Mission

“Accelerating improvements in the accuracy of one-day to two-week high-impact weather forecasts for the benefit of society, the economy and the environment.”

The THORPEX-PDP Working Group

PDP Working Group Meeting, Geneva, 22-26 Sep 2008

- It was realized that model error is likely to be an important factor limiting current predictability.
- To make progress it is crucial to *identify* and *understand* shortcomings in our models.
- To this end it would be useful
 - to engage the dynamic meteorology community in model diagnostic studies, and
 - to establish closer links between people carrying out diagnostic work and model developers.
- First step would be closer collaboration between PDP-WG and WGNE.

Next Steps (Continued)

- WGNE will provide feedback regarding possible collaboration between the two working groups.
- WGNE representative (e.g., M Miller) will give an invited presentation at the THORPEX Science Symposium in Monterey (4-8 May 2009).
- Aim of the presentation will be
 - To learn about WGNE's view on how the THORPEX goal could be achieved.
 - To learn what in WGNE's view is holding us back (in terms of model problems)
 - To learn what kind of information model developers need to improve their models.
 - To get people from the dynamic meteorology community excited about trying to understand the origin of forecast error (requires nicely illustrated, relevant examples).
- Input will be provided by members of the PDP WG.

Next Steps

- **One could encourage submission of presentations to the THORPEX Science Symposium dealing with PDP-WGNE related issues.**
- **If there were enough talks then one could organize a separate session under the PDP umbrella.**
- **In the future (> 2009) it might be useful to organize a joint PDP-WGNE workshop.**