

Group Discussion @ 1:00 p.m.

Nov. 10, '10  
P. 1 of 2

Hypotheses / Approaches  
Need for testing to break the intensity forecasting deadlock.

Ryan Torn:

H1: The currently being assimilated by the prediction models are <sup>or weaker</sup> obs. not projecting onto mechanism that intensifies the vortex properly

H2: Model physics is incorrect?

[Traditional way of swapping out packages is not optimal. Need to examine suite of sensitivities within a particular scheme. M. Bender.]

Kristin

H3: "We have to handle second and tertiary cloud <sup>mesoscale</sup> ~~structures~~ after the vortex initialization. (Need unbalanced structures to be represented qualitatively and quantitatively reasonable.)"

Boren

Torn

Knowing forecasters' assessment of vortex initialization would be useful.

Need precise definition of storm intensity! (Heated Exchange between various individuals on this issue.)

H4:

Initializing imperfect models — need a different approach from perfect models

Isaac Ginis

Q: Can the bulk parameterizations be used at major hurricane intensities? Is the drag coeff. a fun of wind speed? [No.]

✓ H2

H5:

To Address Question:

C. Davis

Proposal: How good is good enough for <sup>model</sup> physics?

✓ Approach

A. Work towards eliminating synthetic data

B. Use initialization <sup>system</sup> to even how good our initial state are? cycling

under H4, H2

Approach

Z. Tosh: Physics development for ensemble use — different goals, metrics from single forecast application; must capture range of uncertainty, partly related to stochastic effect of unresolved scales.

Isaac Giner. Approach: Bring in experts to provide new insight and observational data to help with representation of air-sea intxn, Boundary layer and wind-wave coupling processes. & microphysics.

P. 2 of 2

Question under H1

Torn: Q: Depending on the type of storm, ~~are there~~ <sup>Is the important IC error associated with</sup> ~~IC error~~ <sup>vortex inner-core</sup> or is it in the near-storm environment errors? ( $\geq 500\text{km}$ )

Whittaker: Approach: Add value to large-scale ensemble mean forecasts by systematically adding inner-core observations ~~to assess the~~

[M]<sup>2</sup> ~~What~~ Q: How does a tropical cyclone intensify? Given this answer, what key processes need to be focused on to make improvements to the forecasting problem?

1, 1.5 OR 2.0

Send Morris email summary