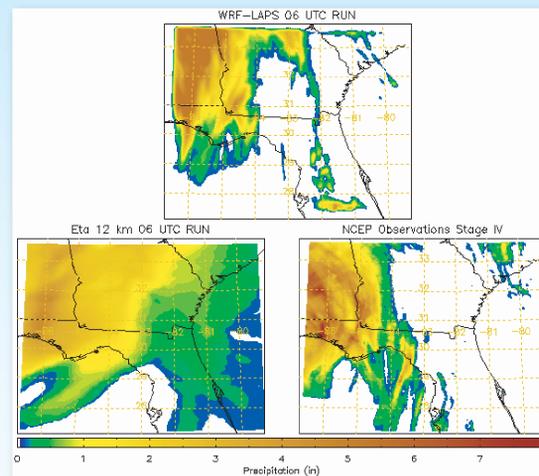


Toward a Modest Improvement in WRF Hurricane Performance

Hurricane 2004 Results

- Limited domain WRF Model covering North and Central Florida, Georgia ... only storms in area
- Can not verify winds ... no NWS sites still working (FL DOT RWIS)
- Used NOAA Rainfall and Model Rainrate ... converting graphic formats to create images
- Model produces pseudo-radar reflectivity as a function of rain rate ... visually appealing ... Looks like Doppler radar

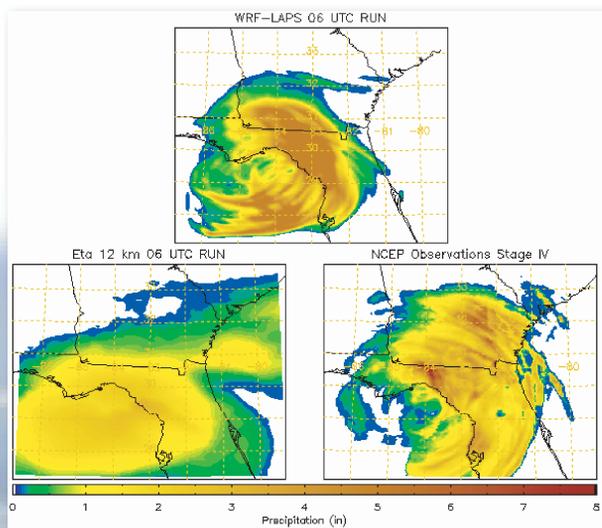
Hurricane Ivan Accumulated Precipitation



WRF Stats:
Bias: 0.87
MAE: 0.45
Skill: 0.52

Eta Stats:
Bias: 2.16
MAE: 0.59
Skill: 0.26

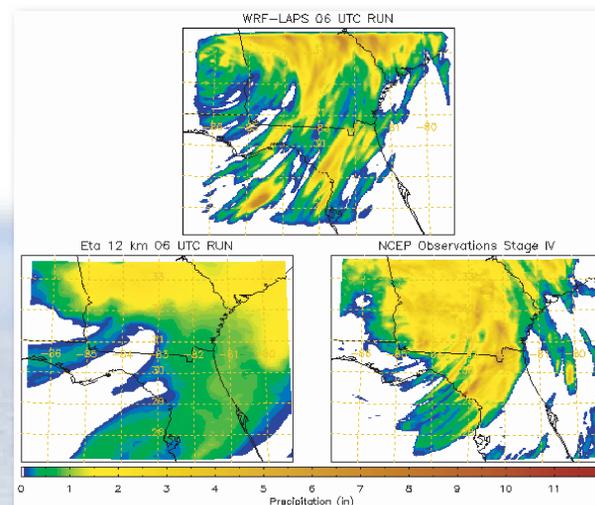
Hurricane Frances Accumulated Precipitation Sep 5, 2004



WRF Stats:
Bias: 0.83
MAE: 0.81
Skill: 0.51

Eta Stats:
Bias: 1.53
MAE: 0.85
Skill: 0.38

Hurricane Frances Accumulated Precipitation Sep 6, 2004



WRF Stats:
Bias: 0.93
MAE: 0.70
Skill: 0.60

Eta Stats:
Bias: 1.20
MAE: 0.80
Skill: 0.42

WRF does much better!

- Model actually carries rainbands as well as good center track ...
- Large domain (Southeast) version... UNF now has the computer resources to do it (will provide output to NOAA)
- Super-ensemble with FSU in the future ... Proposal to Joint Hurricane Testbed.

Proposed fix:

Slow latent heat release in explicit cloud precipitation.

http://www.ofcm.gov/ihc05/linking_file_ihc05.htm

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