

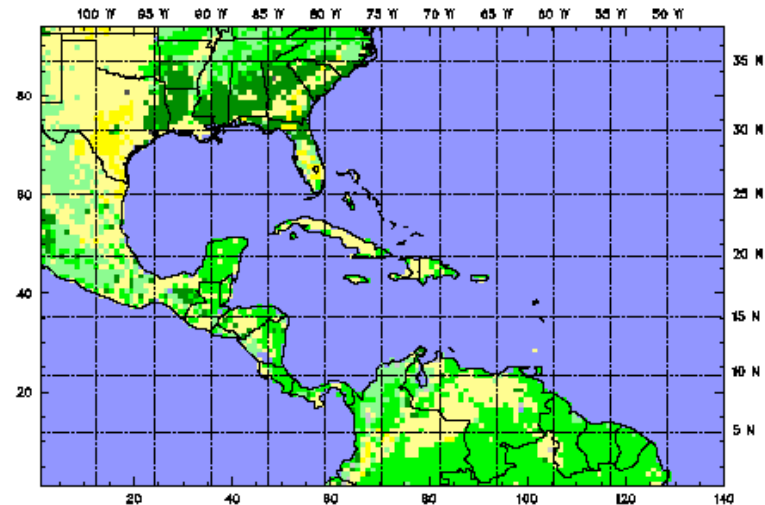
NCAR/AFWA Update for Radiance Assimilation

Zhiquan Liu
NCAR/MMM

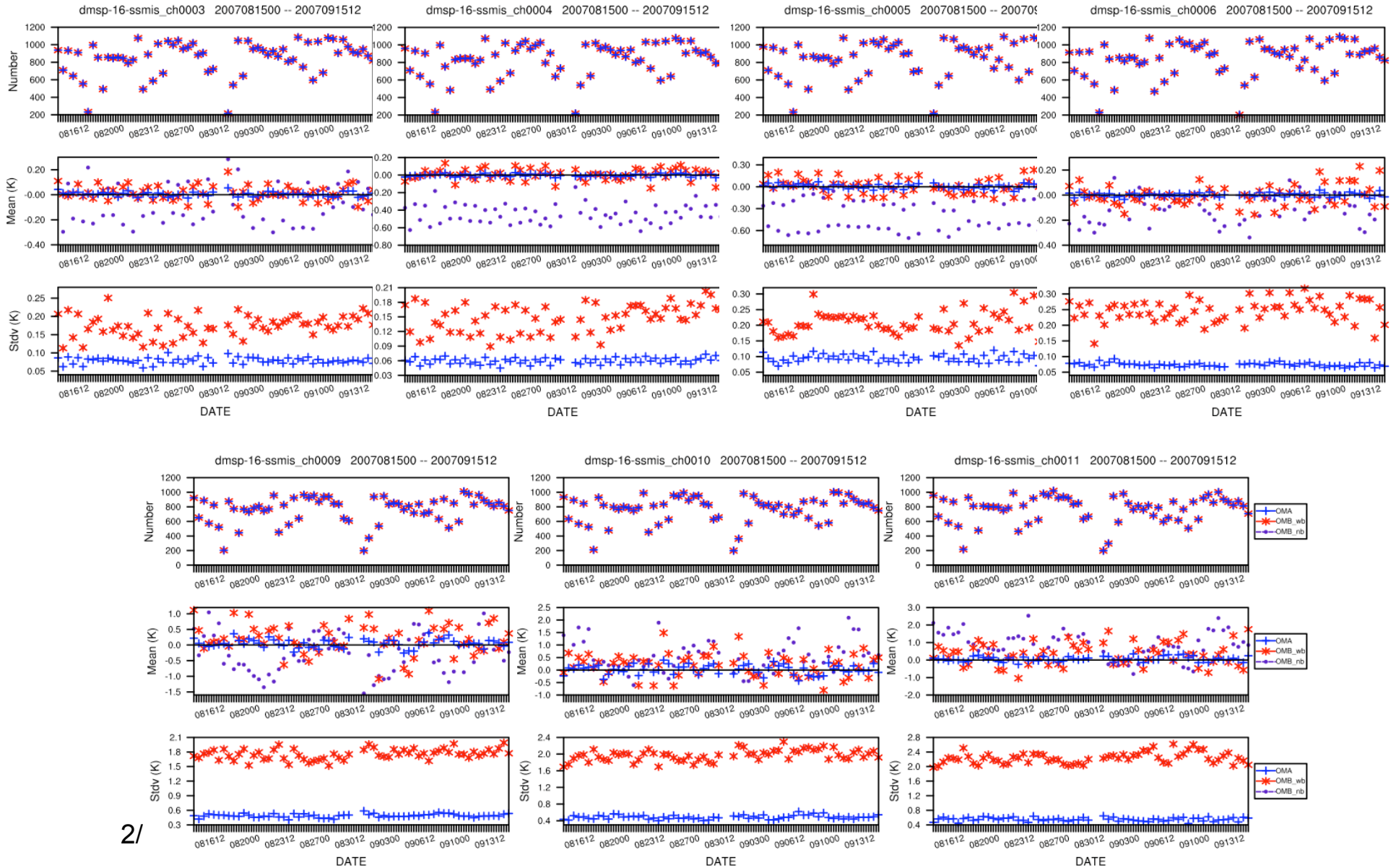
SSMIS radiance impact with ARW/WRF-Var (15 Aug. ~ 15 Sep. 2007)

- Experiments.
 - GTS
 - synop, metar, ships, buoy, soundsfc, sound, airep, pilot, geoamv, qscat
 - GTS+ UPP SSMIS with VarBC
 - Only AMSU-like channels (3~6, 9~11) over water used

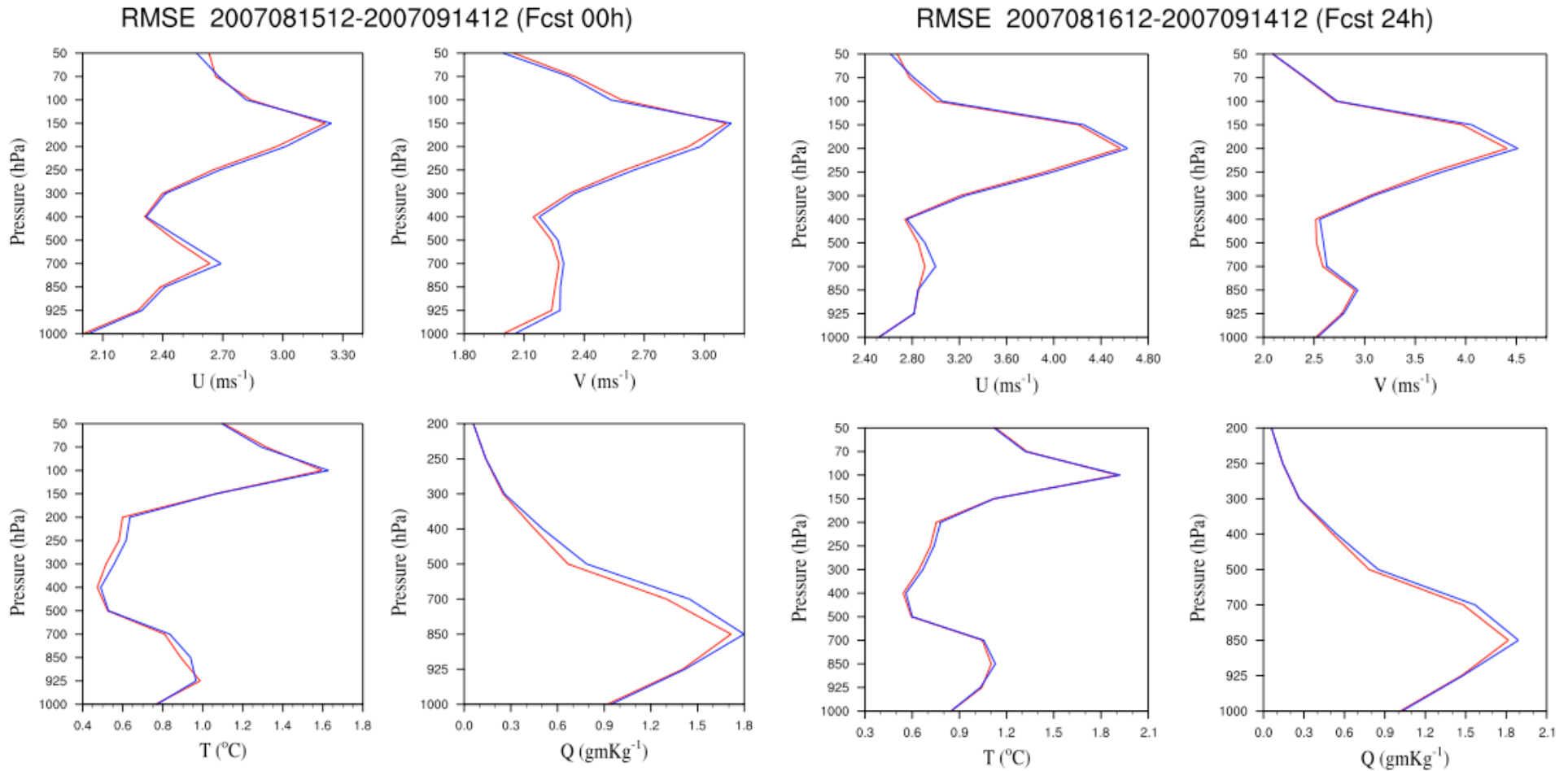
Resolution: 45km
Model Top: 10hPa



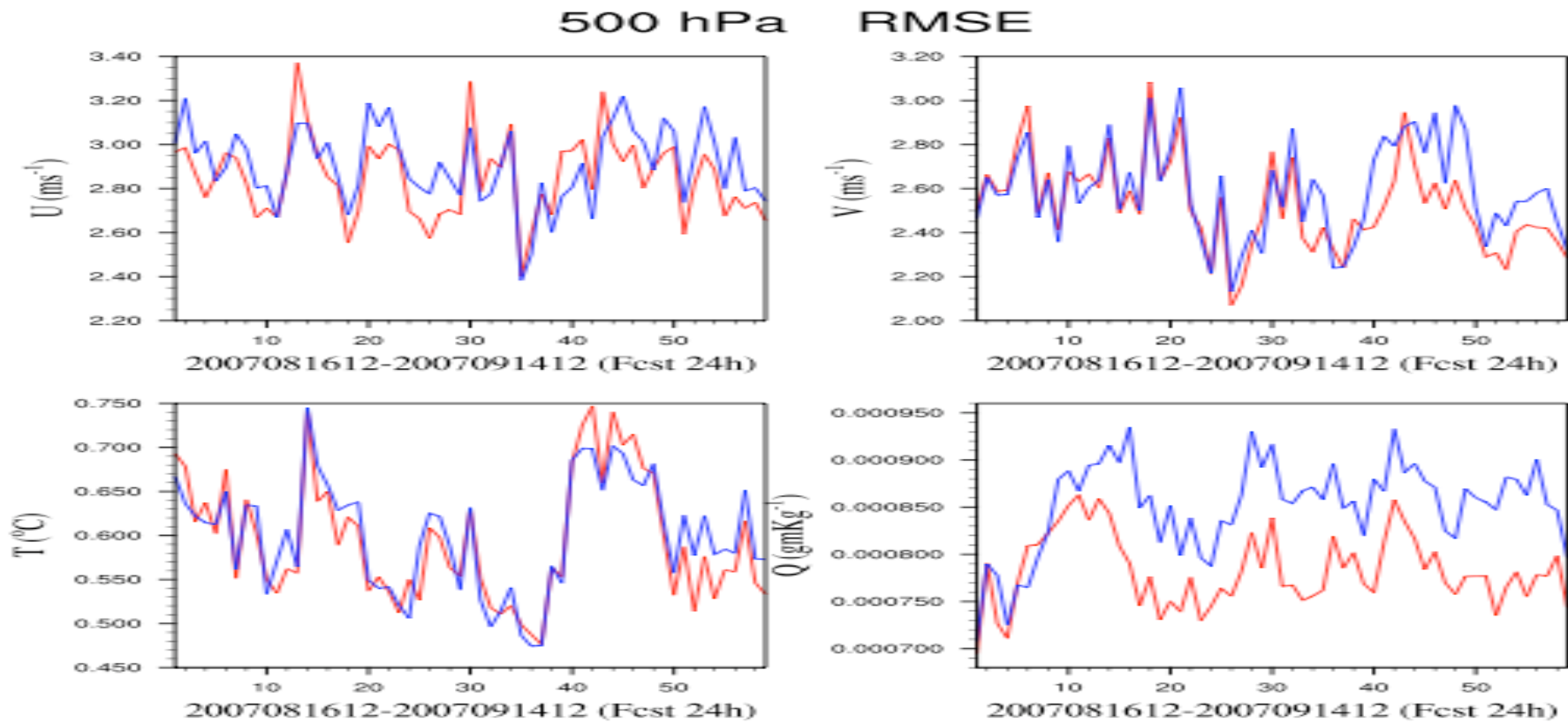
Time Series (OMB/OMA) for SSMIS



Verification vs. ECMWF analysis: RMSE Profiles



Vs ECMWF: 24-h FCST RMSE Time Series



CRTM User Requirements

- Thomas Auligne's mods on CRTM:
 - Overcast radiances (used for AIRS radiance assimilation in WRF-Var) and Gamma correction (one of bias correction)
 - Already sent code to CRTM developer team months ago. We want this to be in the CRTM public release.
- Keep CRTM historical release version in Paul's ftp site? Now only keep one version.
- Put back the function of load a coeff. subset for selected channels.
- Emissivity_Switch: scalar-->array, allow emiss of some channels from users' input.