

**SSEC/CIMSS
Seminar**

DR. HUI LIU

**Institute for Mathematics Applied to Geosciences
NCAR, Boulder, Colorado**

**Improve hurricane track and intensity
forecast using satellite-base hyperspectral
IR sounding measurements**

Today's satellite-based hyperspectral Infrared (IR) remote sensing provides unprecedented information of wind, water vapor and temperature near hurricanes with high vertical resolution and accuracy. However, only limited success of using these data in hurricane forecast has been demonstrated. In this presentation, we will review the challenge of application of the satellite hyperspectral IR data in hurricane forecast. Then we will evaluate the performance of WRF ensemble data assimilation system and WRF/3DVAR system in using the satellite hyperspectral IR sounding data in hurricane forecast. It is shown that ensemble based data assimilation is better for this purpose.

Using the WRF ensemble data assimilation system, it is found that the CIMSS derive hyper-spectral IR soundings, QuickSCAT surface winds, GPS radio occultation refractivity soundings evidently improve track and intensity forecast of hurricane Ike, Sinlaku, Jangmi of 2008.

Thursday, 18 June 2009

11:00 a.m.

Room AOSS 351