

**SSEC/CIMSS
Seminar**

ANA PICON

**NOAA Cooperative Remote Sensing Science and
Technology Center (CREST)
City College of City University of New York**

Development of urban surface models for improved aerosol retrieval

A combination of CIMEL radiometer and MODIS measurements are used to correct surface albedo models. In particular, we show through an analysis of hyperspectral high resolution Hyperion data that the correlation coefficient assumption underestimates ground albedo resulting in an overestimate of the VIS optical depth and operational collect 5 surface model shows an incorrect trend between the MVI index and the surface correlations. Preliminary radiative transfer calculations based on the same model show that this mechanism can help explain the observed overestimation and the corrected models have been implemented for NYC and Mexico City with significantly improved AOD. Furthermore, we discuss the implications of collect 5 AOD overestimates on PM2.5 monitoring.

JULIA HE

Optical Remote Sensing Laboratory, City College of New York

Preliminary implementation of GOES aerosol retrieval approach in northeastern region: Assessment and problems

Because of the higher temporal resolution that Geostationary Operational Environmental Satellite (GOES) has, compared with polar orbiting satellites such as MODIS, GOES is useful in assessing the important need in monitoring aerosol transport. Such a product exists, and it is called the GOES Aerosol and Smoke Product (GASP). Several assumptions are made in the operational GOES aerosol retrieval algorithm since it uses a single visible channel. Over the urban region, we have found that these assumptions are not accurate. Also, the radiative transfer model (6S scalar version) used in the operational aerosol retrieval algorithm does not take polarization into account. Therefore, we implemented the GOES aerosol retrieval algorithm. Ultimately, a regional aerosol model will be used and the surface reflectance will be adapted from the MODIS BRDF prediction.

Wednesday, 2 September 2009

11:00 a.m.

Room AOSS 1039