

Future Modeling & Data Assimilation Activities

Science Advisory Committee Meeting

26 – 28 August, 2014

National Space Science and Technology Center, Huntsville, AL



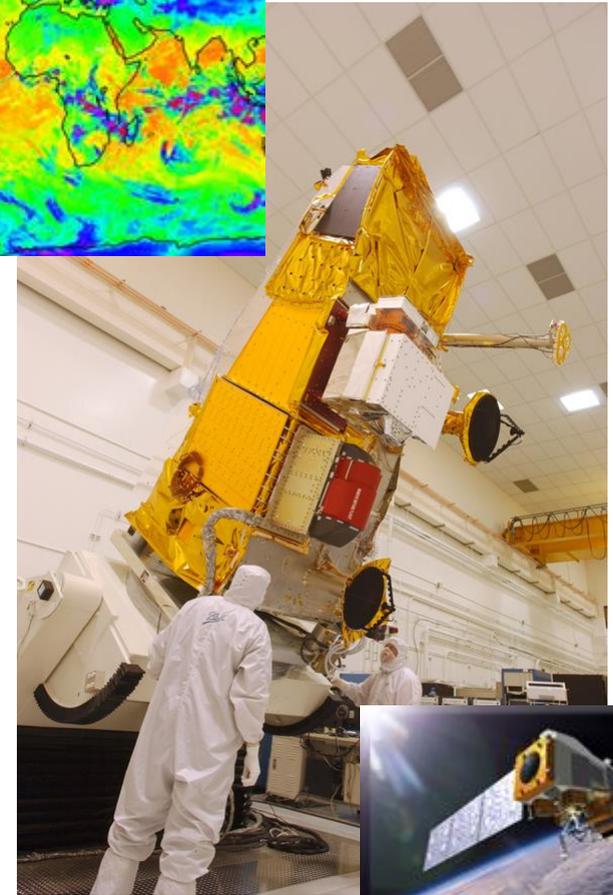
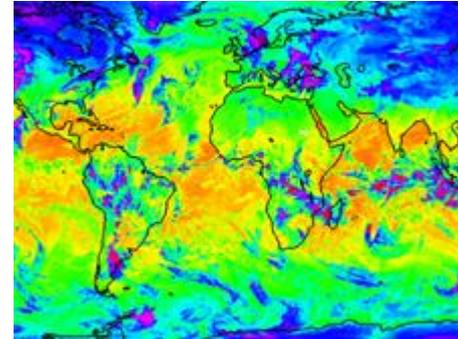
Land surface Modeling & DA

- Assimilation of data from current/future satellites (GPM, VIIRS, SMAP) coming in the next couple of years to real-time LIS
- SPoRT will continue to support/extend collaborations with NWS
 - Use of LIS fields for situational awareness of drought and flood; local NWP of convection and maximum temperature
 - Develop a high-resolution soil moisture anomaly product based on a long-term LIS climatology as requested by NWS
 - New initiatives possible as more high-resolution global datasets (NESDIS VIIRS GVF; IMERG) become available to focus on collaborations with OCONUS NWSFOs
- SPoRT plans to leverage its regional land surface modeling expertise to engage new partners
 - Public Health and Air Quality proposal collaborations with university partners affiliated with CDC, USFS, EPA, and USDA (Co-PI and Co-I on multiple ROSES14 proposals)
 - Water Resources proposal collaborations with USGS (Co-I on ROSES proposal)
 - Extensions of these concepts into regional climate modeling applications



Hyperspectral IR DA

- SPoRT will continue to investigate innovative methods for assimilating retrieved profiles from hyperspectral sounders into GSI to demonstrate their impact on regional and local NWP
- SPoRT will continue to participate in JCSDA activities and collaborate, as appropriate, with JCSDA partners to develop appropriate strategies for better assimilating radiances



Model Microphysics

- Current collaboration with UAHuntsville to assimilate GPM precipitation and radar data into GSI will hopefully lead to new proposals
- Continued research into specific forecast challenges physics configurations lead to best utilization of SPoRT datasets in local models to provide guidance to NWSFO collaborators
- SPoRT is a PI on a ROSES14 Atmospheric Chemistry proposal to collaborate with the Hydrometeorological Testbed (HMT) to investigate the impacts of Asian aerosols on cloud formation

SPoRT AOD composite map on March 12, 2010

