

# Air Quality Breakout Session Report

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May 13, 2009

# Rate JCSDA Activities

- No JCSDA funding for AQ projects to our knowledge. But the projects that were presented (ozone assimilation and AOD assimilation) show that some of the partners are planning for constituent assimilation
  - e.g., NRL and NWS/NCEP aerosol assimilation
- GMAO is also planning for similar activities for NASA mission support – NPP and NPOESS

Assimilation studies show significant positive impact and efforts should be substantially increased with a coordinated approach

# Top Priorities for Air Quality Working Group

- Request all partners to define their systems and requirements in operational context
  - For example: development of forward (global chemistry and transport) model for constituent assimilation. At the organizational level, issues should be fleshed out (e.g., WRF-Chem activities)
- Establish linkages to NASA air quality applications activities
- GSI modifications to accommodate constituent assimilation
- Sharing code and tools between partners
  - E.g., QA/QC code

Partners having different priorities and different systems will remain a challenge

# Subject areas where JCSDA is missing the boat?

- Multiple sensors/datasets are of value to AQ working group activities:
  - MODIS, VIIRS AOD (different algorithms/versions)
  - GOES, GOES-R AOD and fire/emissions products
  - MODIS, VIIRS fire/emissions for global and/or global geostationary satellite (GOES, SEVIRI, MTSAT-1R, INSAT-3D, future geostationary) fire/smoke product
  - OMI aerosol products
  - Ozone (SBUV/2, OMI, GOME-2, MLS, OMPS, CrIS)
  - GOME-2 non-ozone trace gases (e.g., NO<sub>2</sub>) for model evaluation
- JCSDA is currently not funding any air quality assimilation despite requirements
  - NRL visibility forecasts, NWS PM<sub>2.5</sub> forecasts, Air Force aircraft and battlefield needs for accurate aerosol forecasts

# Role of JCSDA Working Group

- Identify and communicate satellite data and assimilation techniques for chemical data assimilation
- Identify priorities and leverage activities.
- Establish procedures to transition proof of concept studies into operations

# Workshop Format

- 1-hr for breakout session is not enough to address our issues
- Like the general workshop format because plenary session provided an opportunity to share results with the general audience and learn activities in other priority areas
- Posters good idea but not enough time to review the posters. A poster overview talk could be useful.

# Closing Remarks

- Where is JCSDA?
  - Organizationally where are we and where are we going?
  - What are the priorities, What were the priorities last year?
  - What was the scientific committee feedback?
- Focus on assimilation/model systems and observations
- Current/advanced instruments – how to blend the activities