

# Satellite Air Quality Proving Ground

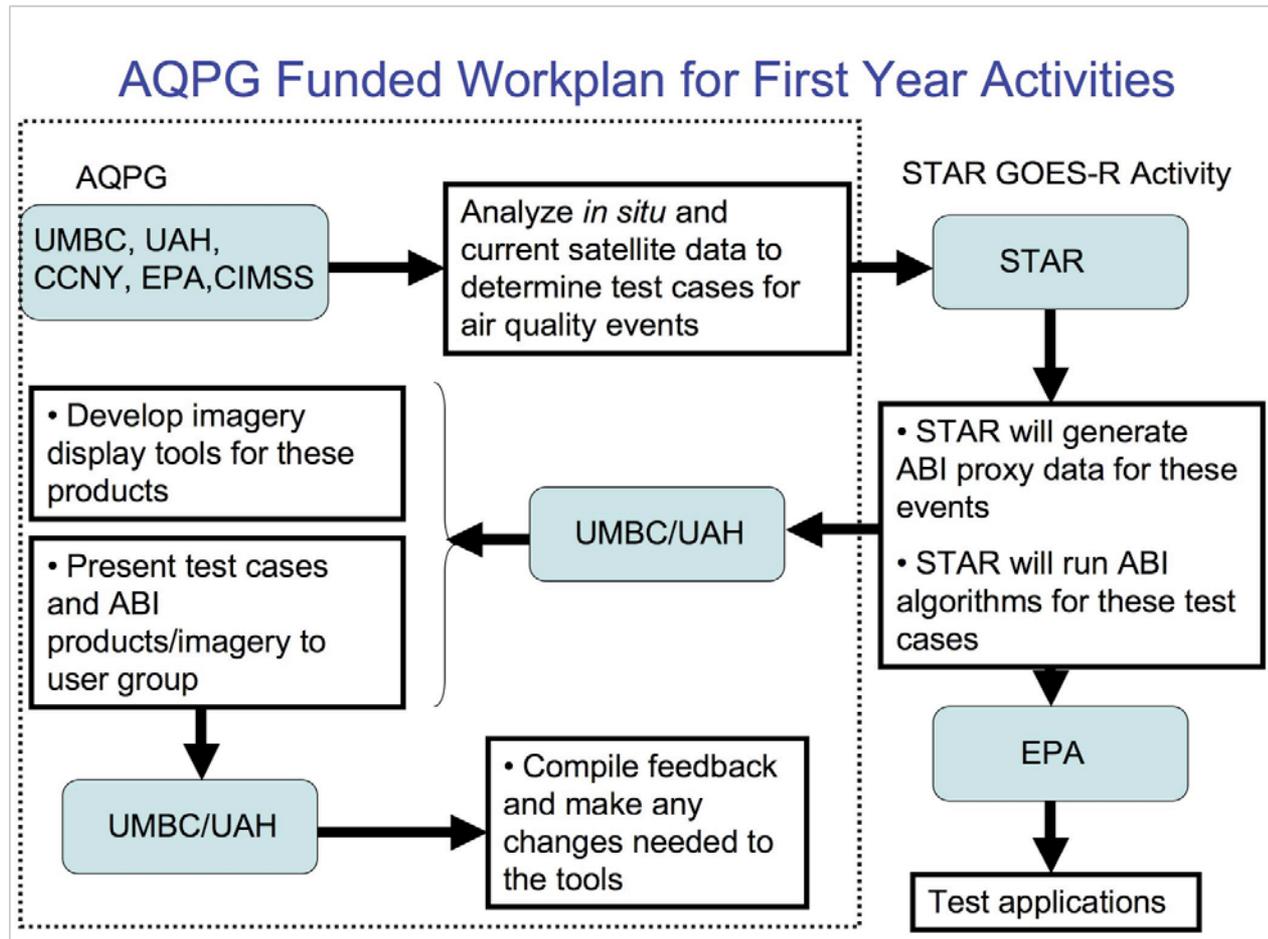
Ray Hoff (UMBC)

Amy Huff (Battelle Memorial Inst.)

Shobha Kondragunta (NESDIS)

# AQPG is in its third year

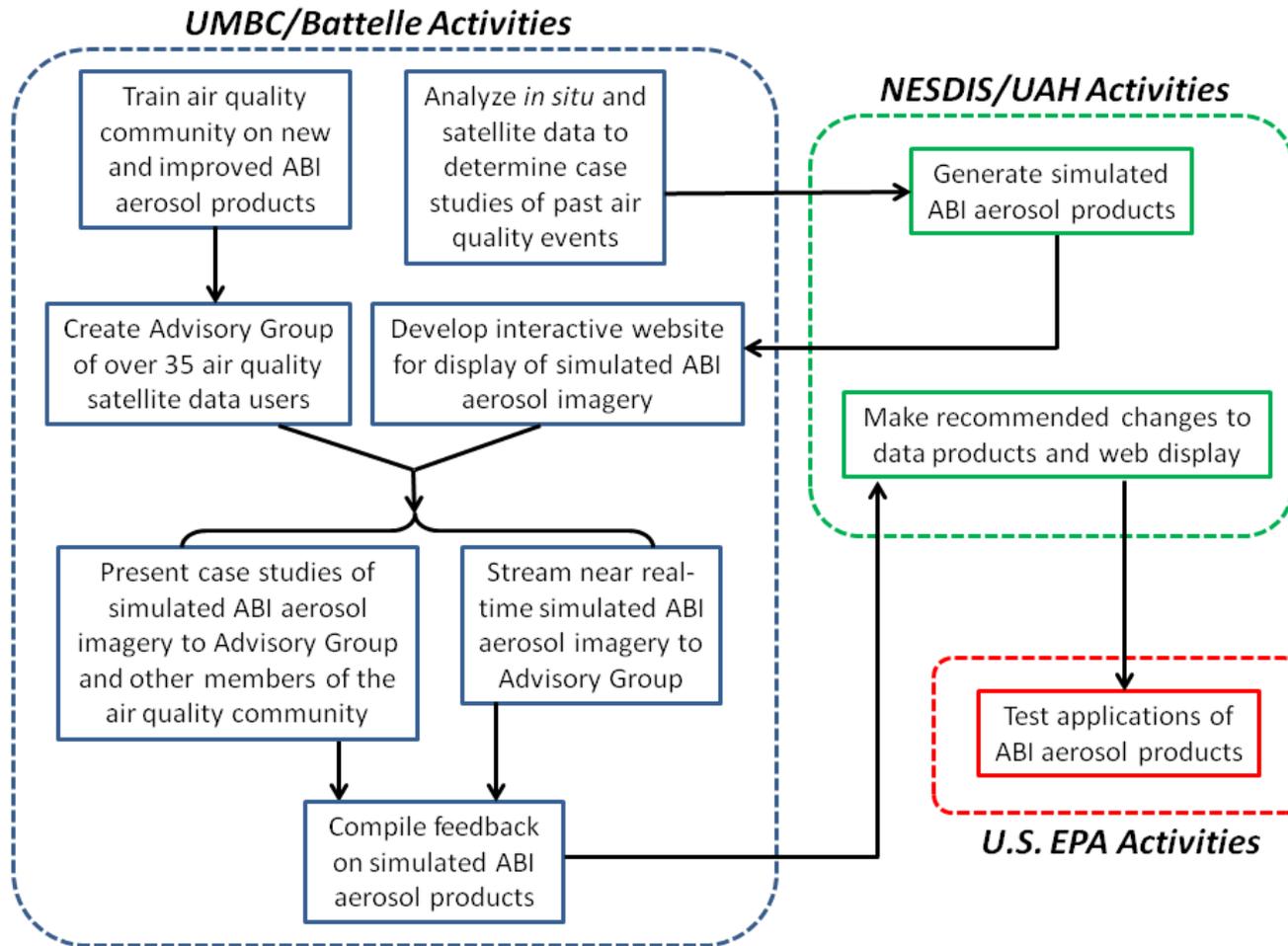
Two Workshops have followed this paradigm:



# 3<sup>rd</sup> AQPG Workshop

- Was to be held on November 1, 2012, but defeated by Sandy... now will be held March 14, 2013
- Our Air Quality User Group needed to be exposed to:
  - Feedback on the 2<sup>nd</sup> workshop suggestions
  - New satellites in NOAA's stable (VIIRS)
  - The concept of a combined Proving Ground

# New AQPG paradigm



# 2<sup>nd</sup> Workshop Suggestions

- Enhance visualization options for ABI products (e.g., AOD, AT, NCI):
  - Overlay of fire “hotspots”
  - Overlay of major cities
  - NCI/AOD “slider bar”
  - kml/kmz format for visualization in Google Earth
- Create 3-hr composites of AOD
- Increase threshold for AT (e.g., to 0.3 or 0.4) and replace hourly AT with daily composite to remove noisiness
- Revise AQI-derived-from-AOD product to represent daily average of PM<sub>2.5</sub> concentrations (in  $\mu\text{g}/\text{m}^3$ ), not hourly AQI estimations, and add overlay of AIRNow observed AQI values

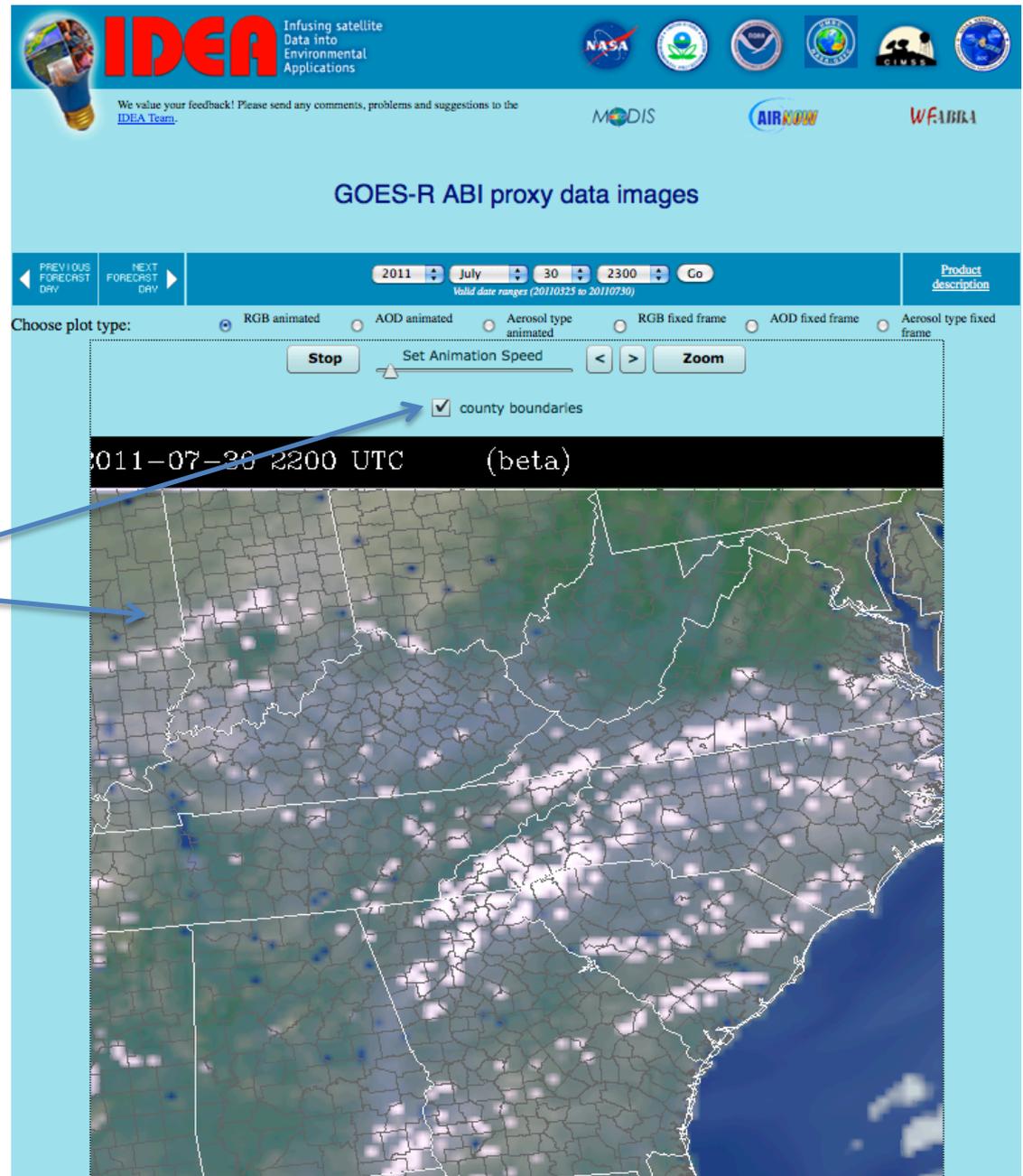
# Enhance Visualization Options

Fire hotspots

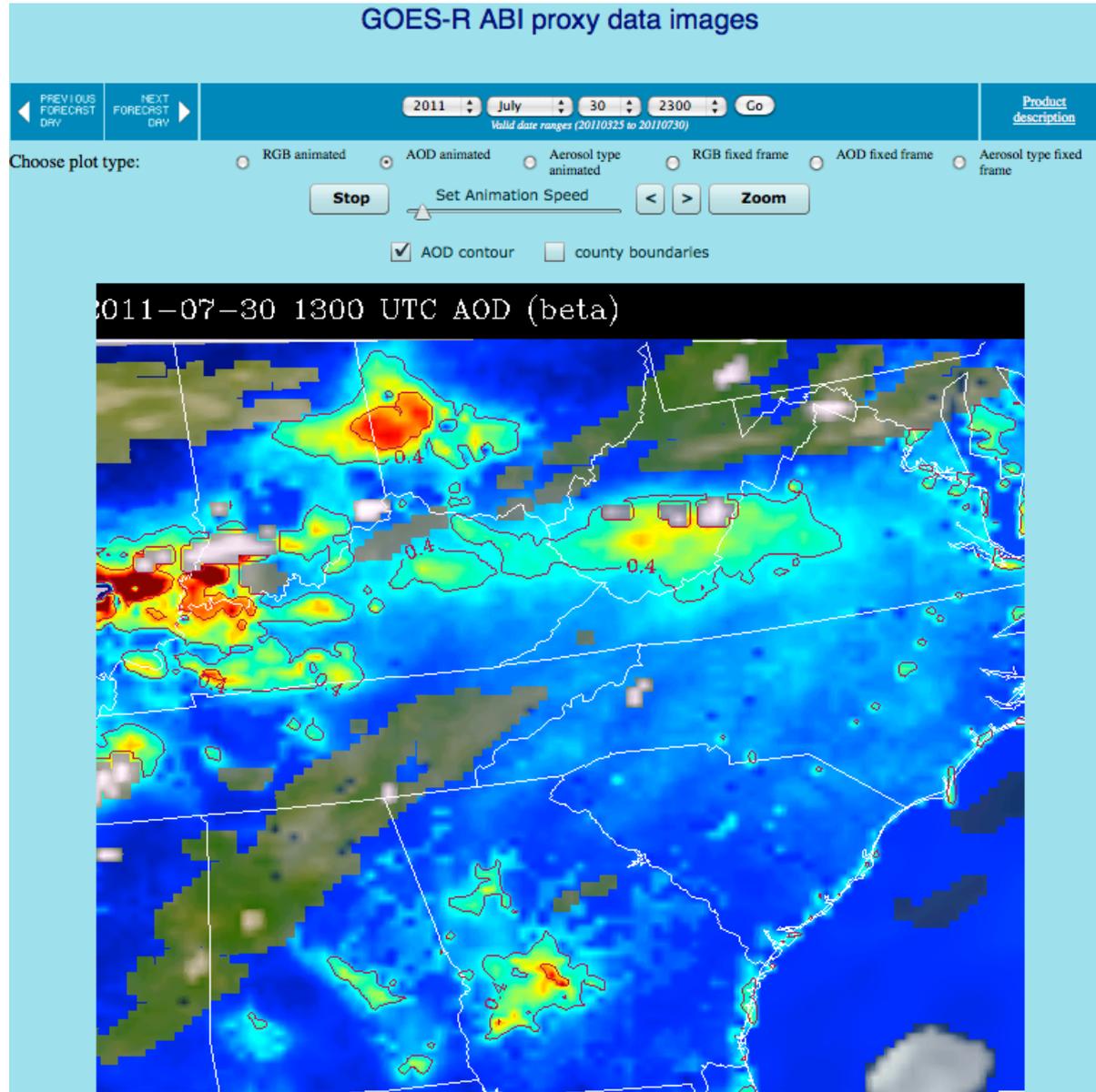
Overlay of counties, major cities

NCI/AOD “slider bar”

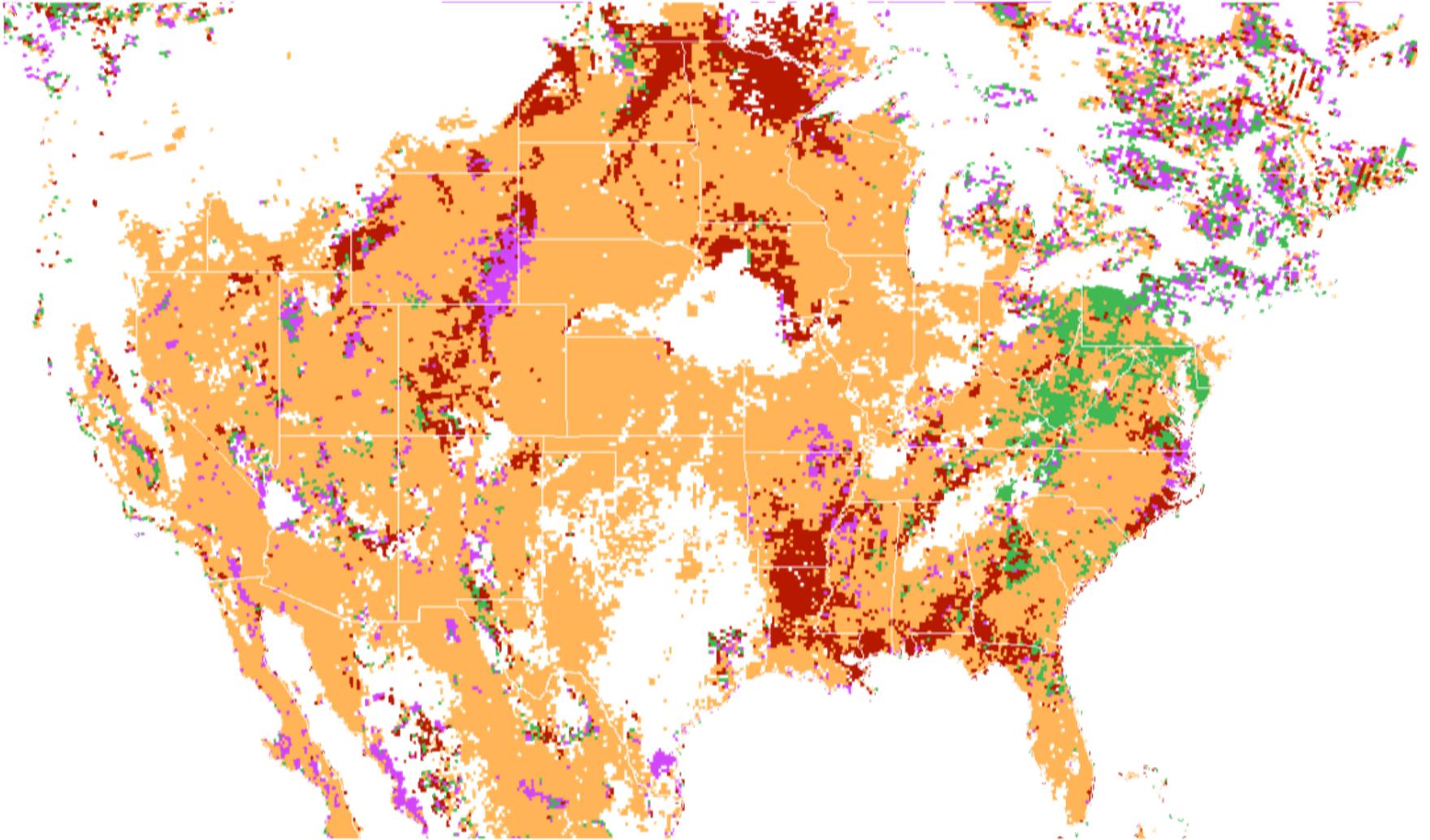
kml/kmz format for visualization in Google Earth



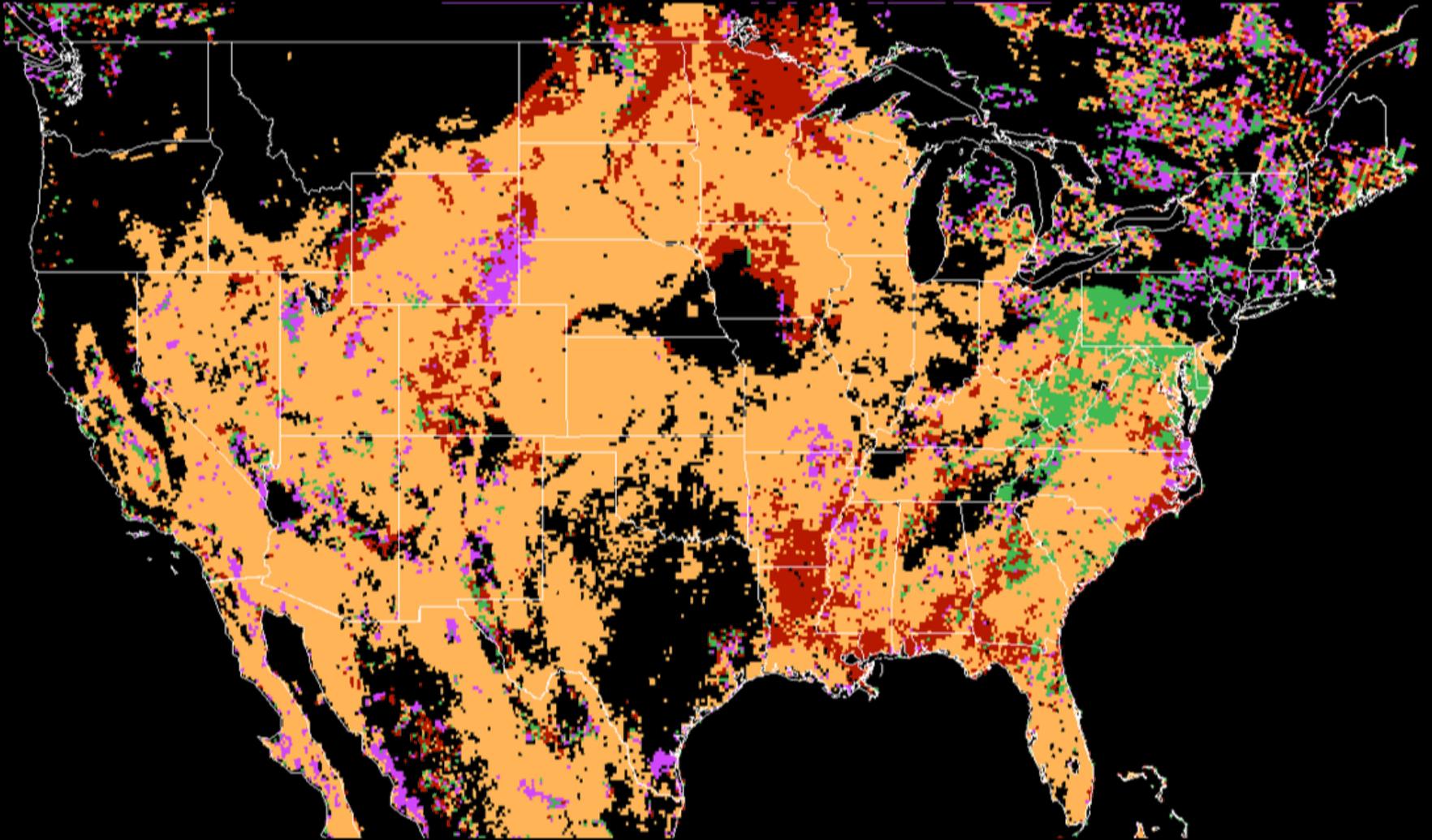
# Create 3-hr composites of AOD



# Change thresholds and coloring for AT



# Less jarring colors for the aerosol type product



# Revise AQI maps to be quantitative

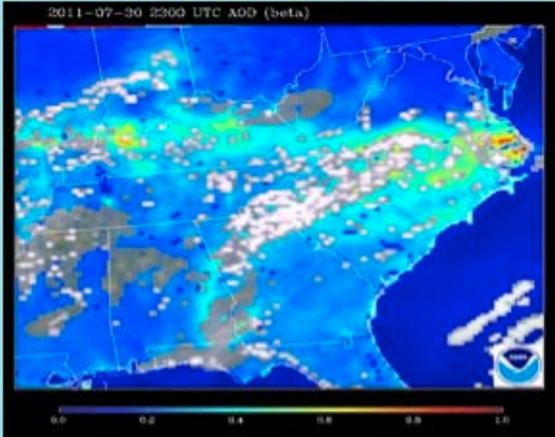
**IDEA** Infusing satellite Data into Environmental Applications

We value your feedback! Please send any comments, problems and suggestions to the [IDEA Team](#).

NASA MODIS AIR NOWWFABRA

## GOES-R Air Quality Proving Ground Demo

**GOES-R proxy natural color and aerosol images**

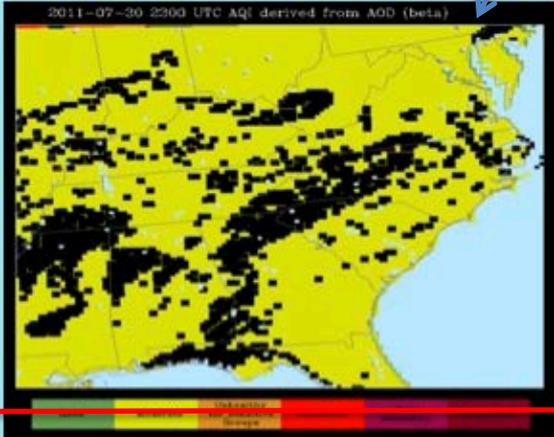


2011-07-30 2300 UTC AOD (beta)

view latest

[Product description](#)

**Air quality index (AQI) derived from AOD**



2011-07-30 2300 UTC AQI derived from AOD (beta)

view latest

[Product description](#)

Last updated: January 10 2012 21:32:07 UTC  
Dept. of Commerce | NOAA | NESDIS | STAR

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# Workshop will also discuss VIIRS

- Overview talk on SNPP VIIRS aerosol products (Lorraine Remer)
- Discussion of the satellite proving ground concept (Goldberg and Kondragunta)
- Discussion of data access by state/local forecasters

# AWIPSII migration of ABI products

- Hoff attended GEMPAK workshop at Boulder
- Pretty clear that Unidata AWIPSII availability to non-NOAA locations (i.e. not WSO's) will not occur in 2013 (probably 2014)
- We have an understanding of the pipeline for AWIPSII Java scripts or .GEM bundles for the ABI products which we can look at in 2013.