



NASA Air Quality Applications Program Team Meeting

June 18-20, 2007

*NASA Science Mission Directorate
Earth Science Division
Applied Sciences Program
Air Quality Applications*

Earth Science Serving Society



Welcome!



AQ Applications Team Meeting

Purpose

A forum to learn about all aspects of the program, identify collaborative opportunities, and support the program leadership in considering potential directions.

The purposes of the meeting are to:

- Present the Air Quality Program's projects and activities
- Provide networking opportunities for Air Quality project teams
- Review interagency air quality collaborations and major international activities
- Discuss programmatic strengths, weaknesses, gaps, and opportunities
- Provide ideas and input on possible future directions for the program



NASA Applied Sciences Program

Air Quality Program Team Meeting

Technical

Solicited Projects
Strategic Projects
Technical Studies
Prototype Projects

Programmatic

Interagency Activities
Strategic Studies
Outreach & Communication
International Associations

Partnerships

US Agencies
National & Regional Associations
Private Sector & NGOs
International Governments,
Organizations, and Committees
University

Research & Technology

Earth Science Research
Visualizations
Satellite Missions



AQ Applications Team Meeting

Schedule

Day 1:

- State of the Program
- Projects: AQ Forecasting
- Interagency and International Activities
- Award Ceremony

Day 2:

- Projects: AQ Planning
- Atmospheric Composition Research & Modeling
- Studies, Workshops, and Reports
- Projects: Emissions Inventories
- Europe & AQ: GMES PROMOTE
- Outreach Initiatives
- Topic: Long-range Transport
- AQ Program Discussion

Day 3:

- EPA AMI Program
- Projects: AQ Compliance
- NASA Flight Program
- NASA Visualization
- Interagency/International Views
- AQ Program Discussion
- *AQ PI/Project Discussion*

Overall:

- Agenda is very dense
- Presentations are introductions (may be briefer than desired)
- Formal & informal discussions
- Networking opportunities
- Working lunches



AQ Applications Team Meeting

Working Lunches

Day 1 Table

- ESIP Federation & Air Quality Cluster

Day 2 Tables

- Emissions Inventories
- Long-range Transport
- European Perspectives
- AQ Interoperability & Web Services

Other topics for tables?

Day 3 Tables

- EPA AMI Program
- Compliance & Accountability
- NASA Flight Program
- NASA Visualization
- NOAA AQ Forecasting

Other topics for tables?

Overall:

- Program management would appreciate any formal and informal feedback on issues identified at the lunch discussions



AQ Applications Team Meeting

Expectations

Expectations for the Team Meeting

The Earth Science, Applications, and Air Quality communities view the NASA AQ program as part of its assets to serve the nation and society

Honest, frank feedback on all aspects of the program

Input & items for the program to consider in its priorities and planning

- Strengths & weaknesses
- Issues and factors
- Suggestions and alternatives
- Key gaps & good practices

Enhancements from the Team Meeting

Collaborations to pioneer innovative approaches

- Applications
- Technical approaches
- Programmatics
- Partnerships

Continue to support research to operations transitions, induce demand for Earth science observations and research, and demonstrate socio-economic value of Earth science



AQ Applications Team Meeting Feedback



NASA Air Quality Applications Program Project Description – Evaluation of a Prototype



The NASA Air Quality Program is developing a brief fact-sheet on each of its competitively-selected projects. A prototype version is attached, and we'd appreciate your feedback on it – content, images, layout, etc. The Program and PIs will use these at conferences, meetings, briefings, etc. The primary audiences are air quality managers, NASA stakeholders, and attendees at air quality or Earth science conferences and exhibits. Thanks for your feedback. *Feel free to continue comments on the back.*

Overall

What are your first impressions of the prototype? Strengths and weaknesses of it?

Project Description Evaluation of a Prototype

Form 

DRAFT for comment only - Not for Distribution



Science Mission Directorate
Earth Science Division

Applied Sciences Program
Air Quality Applications

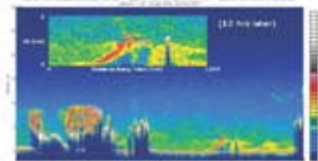
Three-Dimensional Air Quality System

Applying NASA Satellites and Ground LIDAR to Improve Air Quality & Public Health



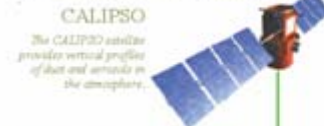
2007 Satellite Image of Fires over U.S.

The MODIS sensors on the Terra and Aqua satellites reveal significant aerosol sources affecting air quality. Here, fires from Georgia affect air quality in Florida.



Assessing air quality above the ground

The LIDAR profiles from the CALIPSO satellite tell us where in the vertical the smoke rises. For the Georgia fires in early May 2007, the first rise quickly (west) above the ground.



Battelle



Summary

U.S. municipalities and states use information from the U.S. Environmental Protection Agency's (EPA) Air Quality System (AQS) and AIRNow monitoring system to assess airborne particulate levels, make air quality forecasts, and implement measures to meet the ambient air quality standards.

This project incorporates a range of remote sensing data (AIRS, MODIS, OMI, GOES, CALIPSO, and others) to expand AQS into a three-dimensional system, providing better assessment of pollutants that are at the surface and those which are aloft.

The project also supports the Centers for Disease Control and Prevention's (CDC) environmental public health tracking network and NOAA's air quality mapping system. The University of Maryland, Baltimore County (UMBC) leads the project with co-investigators at Battelle Memorial Institute, University of Wisconsin-Madison, CDC, EPA, and NOAA.

U.S. Air Quality & Public Health

It has become increasingly apparent that air quality is affected by long-range transport (LRT) of pollutants from other regions, traveling aloft. EPA promulgated the Clean Air Interstate Rule to address transport of pollutants across state borders in the eastern half of the U.S. States must assess the amount of LRT vs. local pollution to address their compliance with EPA regulations and prepare air quality State Implementation Plans. A National Academy assessment of the EPA fine particulate matter (PM) program stressed need for integrated 3D characterization of air quality.

These measurements, coupled with sophisticated PM air quality models, will be used by state and local agencies to determine compliance with regulations. NASA data and original project data is being incorporated into the USEPA AIRQuest decision support tool for use by federal and state officials.

AQ Applications Team Meeting Feedback



NASA Air Quality Applications Program *Comments on Program Direction*

B

The Program's management would appreciate your assessment of the Program and any comments, suggestions, and ideas for future directions the Program management should consider in its long-term planning and priority-setting. *Thanks in advance for your feedback.*

Overall Assessment

What is your sense of the Program's strengths and weaknesses? What it does well & not so well?

Strengths

Comments on
Program Direction

Form **B**

*Feedback on 2007
AQ Apps. Team Meeting*

Form **C**



NASA Air Quality Applications Program *Feedback on 2007 AQ Applications Team Meeting*

C

We're interested in your comments on how well the team meeting served its objectives and met your expectations. We'd appreciate your assessment of the meeting and any suggestions and ideas to improve future team meetings. *Thanks in advance for your feedback.*

Meeting Objectives & Design – *The meeting tried to present both technical and programmatic activities. Please rate and comment on the value of this approach and its general success.*

Meeting's Objectives: Not the right ones Somewhat right Very appropriate



Logistics

The Speakers Room is #134

Any messages will be at Registration

Phone: 301.983.7000

Fax: 301.983.7728

Computer room is just outside The Stained Glass Hall

Wireless internet is available

Lunches in Osgood's Dining Room

- Must have a ticket (see Registration)
- Designated tables for discussions each day

Drinks and light refreshments are available outside in The Break Room.

Restrooms

- To left of The Hall entrance

Please put mobile phones on silent mode



AQ Applications Team Meeting

Primary Points of Contact

Registration & Bolger Center Issues

Robin Alford

Mobile: 240-472-4788

Speaker & Presentation Issues

Sue Estes

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AQ Program Points of Contact

Lawrence Friedl, Program Manager

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Jenny's Page



“Honey, you’re sleepworking again.”