



NASA Air Quality Applied Sciences Team

Earth Science Serving Air Quality Management Needs



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Scientists Join Forces to Tackle Air Quality Problems

By Ted Porath

After countless hours of work and a lengthy revision process, the NASA Air Quality Applied Sciences Team (AQAST) "Tiger Teams" can now get to work on implementing the proposals they submitted to help solve problems in the air quality management community. The Tiger Team proposals emerged over six months of collaboration, stakeholder input, and peer review. The proposals bring together top AQAST scientists to address priority science needs for air quality management.

"The reason why we do our job is to do science, and this is pretty exciting science. I think one of the things that make Tiger Teams exciting is that they are addressing real world issues and bringing together a team to work on it," said Dr. Tracey Holloway, Deputy Leader of AQAST.

This year represents the third round of NASA funding for AQAST Tiger Teams. These teams are made up of groups of AQAST scientists who work together to address high-priority issues, drawing on feedback from air quality managers across the U.S. Although 15 ideas were initially put forward, feedback from over 60 U.S. air quality managers - across over 30 agencies and regions - helped narrow this down to a few high-priority initiatives. Through a process of revising, condensing, and ultimately peer-review, six proposals were selected for funding.

Now that these six proposals have been approved, NASA AQAST scientists will get to work on implementing them. The Tiger Team scientists will be working on a variety of things, including:

- Designing web-based tools to help make AQAST science and NASA satellite data more accessible to the air quality management community.
- Assessing the role of long-range transport on peak air pollution across the Eastern U.S., working with an advisory committee to ensure analysis supports State Implementation Plan (SIP) development.
- Improving inputs to photochemical modeling, especially biogenic emissions from trees and plants, as well as cloud conditions and inflow of ozone from the stratosphere.
- Characterizing relationship between satellite retrievals and pollution emissions, especially focused on emission trends.
- Using innovative methods of satellite data analysis to assess emissions from oil and natural gas extraction.
- Incorporating chemical data from satellites and models to support SIPs, health research, exceptional event determination, as well as monitor siting and analysis.

All projects will be conducted in close partnership with air quality managers as part of their teams.

"This is about science achieving results", says Daniel Jacob, Leader of AQAST. "We want these Tiger Teams to exploit the unique resources from Earth Science data to address the most pressing issues facing air quality management today."

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NASA Air Quality Applied Sciences Team, a nationwide collaborative research team, serves the needs of air quality managers in the United States by analyzing a variety of NASA satellite data, models and suborbital platforms on the ground. Created in 2011 by NASA's Applied Sciences Program, AQAST is made up of 19 of the top minds in all fields of air quality science and strives to inform air quality managers and provide high-quality resources for the press and public. Contact Dr. Tracey Holloway in her office at (608) 262-5356 or go to www.aqast.org or www.aqast-media.org.