



Our mission is to bring the power of NASA
science down to earth and deliver it into your hands.



HAQAST Updates – Summer 2024

The NASA Health and Air Quality Applied Sciences Team (HAQAST)
Tracey Holloway, Team Lead & Jenny Bratburd, Outreach Coordinator
University of Wisconsin—Madison





200 in-person registrants and 160 online
~ biggest ever! ~

36% registrants first-time HAQAST attendees
~ holding steady across meetings ~

What is “hay-kast”?

- Health and Air Quality Applied Sciences Team
- 4-year initiative through January 2025
- 14 Members and 60+ co-investigators
- Mission: Connect NASA science with air quality and health applications
- Four types of work:
 - Member projects
 - Tiger team projects (collaborative)
 - Rapid Response (emergent/immediate)
 - Outreach, engagement





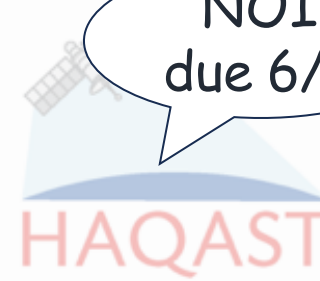
HAQAST1:
2011-2016



HAQAST2:
2016-2020



HAQAST3:
2021-2025



HAQAST4:
2025-2029

The team structure fundamentally changes outcomes.

- Increased visibility of work and resources to end-users
- Culture to support and promote collaborations and synergies
- Growth of two-way dialogue
- Increased collaborations to meet stakeholder needs
- Rapid spin-up of high-value activities



14 NASA Health and Air Quality Applied Sciences Team Members (HAQAST)

Tracey Holloway (Team Lead, UW-Madison)

Susan Anenberg (George Washington University)

Bryan Duncan (NASA GSFC)

Arlene Fiore (Massachusetts Institute of Technology)

Pawan Gupta (NASA GSFC)

Yang Liu (Emory University)

Jingqiu Mao (University of Alaska, Fairbanks)

Randall Martin (Washington University)

Ted Russell (Georgia Tech)

Jeffrey Pierce (Colorado State University)

Amber Soja (National Institute of Aerospace)

Daniel Tong (George Mason University)

Christopher Uejio (Florida State University)

Qian Xiao (University of Texas Health Science Center at Houston)





What are "Tiger Teams"?

March. 2021

2022

2023

2024

2025

14 HAQAST Members'
Proposed Initiatives
with stakeholders & Co-I
collaborators

Year 1 "Tiger Teams"
larger collaborations
Focused, stakeholder-based,
short-term

Year 2 "Tiger Teams"

WE
ARE
HERE

New
solicitation

2023 Tiger Teams



- Analysis to support air quality and health TEMPO applications for surface ozone, *led by Arlene Fiore*



- Mitigating Uncertainties in Lateral Boundary Conditions used for Regional Air Quality Assessment Modeling, *led by Brad Pierce*



- Satellite Observations Supporting Assessment of Unconventional Oil and Gas Emissions and Exposures, *led by Ted Russell*



- Satellite Data for Environmental Justice, *led by Qian Xiao*



- Applications of GOES-R aerosol data in operational air quality management and public health decision support systems, *led by Yang Liu*

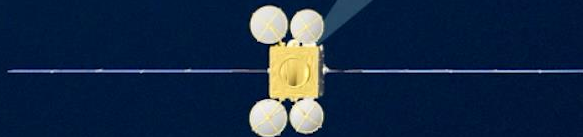


Tropospheric Emissions: Monitoring of Pollution

Hourly Measurement of Pollution



Smithsonian Astrophysical
Observatory





HAQAST Ambassadors



Zach Adelman (Lake Michigan Air Directors Consortium)

Temilayo Adeyeye (New York State Department of Health)

Doug Boyer (Texas Commission on Environmental Air Quality)

Kelly Crawford (US Department of Energy)

Michael Geigert (Connecticut Department of Energy and Environmental Protection)

Barron H. Henderson (US EPA)

Tabassum Z Insaf (New York State Department of Health)

Alex Karambelas (NESCAUM)

Byeong-Uk Kim (Georgia Environmental Protection Division)

Maeve MacMurdo (Cleveland Clinic)

Magdalene McCarty Sanders (Earth Stewards)

Steve Moran (Google)

Amirhosein Mousavi (Waste Management)

Leticia Nogueira (American Cancer Society)

Pallavi Pant (Health Effects Institute)

Allison Patton (Health Effects Institute)

Eric Stevens (National Park Service)

Mary Tran (US Department of State)

Mary Uhl (WESTAR)

Tuesday, June 4th

8:30–9:00 EDT **Coffee and Networking**

9:00–9:30 EDT **Session 1A: Overview of NASA HAQAST (Building 54, Room 100; Webinar A)**

9:30–10:15 EDT **Session 1B: Facilitating the Use of Satellite Data by the Novice User**

10:15–10:45 EDT **Networking Break**

10:45–12:15 EDT **Session 2A and 2B**
Session 2A: Health and Air Quality Applications of TEMPO (Building 54, Room 100; Webinar A)

Session 2B: Adapting to Climate Change: Heat, Air Pollution, and Human Health (Building 55, Room 110; Webinar B)

12:15–1:30 EDT **Lunch Break (on your own)**



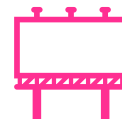
1:30–2:45 EDT **Session 3A and 3B**
Session 3A: Emerging Ground Networks for Satellite Data Integration (Building 54, Room 100; Webinar A)

Session 3B: How Satellite Data Can Inform Fires, Exceptional Events Demonstrations, and New Standards (Building 55, Room 110; Webinar B)

2:45–3:15 EDT **Networking Break**

3:15–4:30 EDT **Session 4A: TROPOMI-OMI Meeting Crossover: 20 Years of NO2 Applications from OMI and TROPOMI (Building 54, Room 100; Webinar A)**

4:30–6:30 EDT **Flash Talk and Poster Session (Building 55, Atrium)**



Wednesday, June 5th

8:30–9:00 EDT **Coffee and Networking**



9:00–10:00 EDT **Session 5A and 5B**

Session 5A: Satellite Data for Climate Change Decision Making: Measuring Greenhouse Gas Emissions and Air Quality Co-Benefits (Building 54, Room 100; Webinar A)



Session 5B: Satellite Data for Global Air Quality and Health (Building 55, Room 110; Webinar B)



End of Public Meeting

10:00-10:10 EDT **Break**



12:30-3:30 EDT HAQAST Team Meeting (Building 55, Room 110)

10:10-11:10 EDT **Session 6A and 6B**

Session 6A: Environmental Justice: Data Needs to Protect Health of At-Risk Populations (Building 54, Room 100; Webinar A)



Session 6B: Calculating Long-Range Pollution Transport and Forecasting Air Pollution (Building 55, Room 110; Webinar B)



11:15-12:15 EDT Session 7A: Closing Remarks and HAQAST Ambassador Perspectives: Using New Satellite Data to Improve Health and Air Quality Monitoring (Building 54, Room 100; Webinar A)





Making the Most of the Meeting

1. **Talk to new people!** Tip: “Is this your first HAQAST meeting?” will be a “Yes” for 1 in 3 people you meet!
2. **Shape the conversation** – Most sessions have 30 minutes for panel-based Q&A – your voice is key
3. **Share with your networks** – Current live-stream + all sessions recorded and posted (all past meetings are online at haqast.org)
4. **Be a Translator** – If you hear terminology you don’t know, please help us build our glossary! <https://haqast.org/glossary/>
5. **Share your ideas** – Our work is driven by information needs from health and air organizations. Chatting now, and sharing in the meeting follow-up survey.

haqast.org



NASA HEALTH AND AIR QUALITY APPLIED SCIENCES TEAM

Connecting NASA Data and Tools with Health and Air Quality Stakeholders

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For Educators

NASA ARSET
Training

Links to Health
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and Policy
Resources

Glossary

to bring the power of NASA
to the people and deliver it into your hands.



HAQAST 2025 Showcase

- January 28-29, 2025 in Washington, DC
- Public, hybrid meeting
- Portfolio of team-wide effort + impact