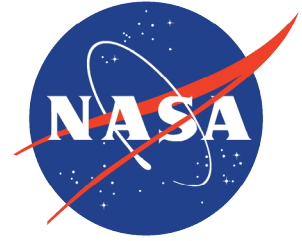




**HAQAST2020  
Webinar Series**  
February 18, 2020 –  
March 10, 2020



**2/18 Tuesday**

**12:00 pm EST — John Haynes, NASA Applied Sciences Program Manager**

*HAQAST and Beyond: The View from NASA Headquarters* — Join HAQAST's Program Manager, John Haynes of NASA as he reflects on HAQAST's major milestones, as well as NASA's current and upcoming missions related to Health and Air Quality. Haynes will also discuss the current ROSES-20 solicitation for the next round of HAQAST funding.

**4:00 pm EST — Tracey Holloway, HAQAST Team Lead, University of Wisconsin–Madison**

*HAQAST Highlights: What Works and What Doesn't in Linking NASA Data with the Health and Air Quality Communities* — Since HAQAST is an applied science team, we have placed a heavy emphasis on outreach to and collaboration with public stakeholders. Join Team Lead Tracey Holloway as she distills the many insights gained from the past four years of HAQAST's active engagement with air quality and public health professionals.

**2/20 Thursday**

**12:00 pm EST — Bryan Duncan, NASA Goddard Space Flight Center**

*Upgrading the Toolbox: NASA Resources to Support Air Quality Management* — Duncan will give an overview of some of the NASA resources publicly available to AQ managers, including satellite data, ready-made graphics, NASA programs, data processing tools and models.

**4:00 pm EST — Arlene Fiore and Xiaomeng Jin, Lamont-Doherty Earth Observatory,  
Columbia University**

*Visualizing Air Quality: How to Use NASA's Giovanni to Plot Satellite Tropospheric NO<sub>2</sub> Columns* — Join us to learn how to create maps and time series of tropospheric column nitrogen dioxide retrieved from satellite instruments. We will be using NASA's free, and widely available online Giovanni web portal. We will also briefly introduce publicly available HAQAST technical guidance documents that involve the application of satellite NO<sub>2</sub> data.

## 2/24 Monday: Special Session with ALA

4:00 pm EST — A Special Session with HAQAST and the American Lung Association

*Tracking to Help You Breathe: Data and Best Practices for Tracing the Health Impacts of Smoke for the Public Health Community* — Join HAQAST and American Lung Association for a session tailored specifically for the public health community as we discuss what satellite products can and can't provide for your health-impact assessments. We'll focus our efforts on data, resources, and best practices for tracking the health impacts of wildfire smoke. This session is co-sponsored by the American Lung Association.

## 2/25 Tuesday

4:00 pm EST — Brad Pierce, Space Science and Engineering Center, UW-Madison

*The Brightest Idea: New Capabilities for Infusing Satellite Data into Environmental Applications—International (IDEA-I)* — This HAQAST2020 webinar will provide an overview of new capabilities that have been developed within Infusing satellite Data into Environmental Applications – International (IDEA-I). These new capabilities include using Suomi NPP and JPSS satellite measurements for:

- 1) Trajectory forecasts initialized with the NOAA Unique Combined Atmospheric Processing System (NUCAPS) carbon monoxide retrievals to predict continental scale pollution transport.
- 2) Trajectory forecasts initialized with the SSEC Dual-Regression infrared sounder retrieval algorithm ozone and water vapor retrievals to predict stratospheric intrusions.
- 3) High-resolution trajectory forecasts using the Visible Infrared Imaging Radiometer Suite (VIIRS) Enterprise Aerosol Optical Depth (AOD) retrievals to predict regional impacts of wild-fire smoke.

The case studies for this workshop will focus on using IDEA-I during the recent NASA/NOAA FIREX-AQ field campaign.

## 2/27 Thursday

12:00 pm EST — Mark Zondlo, Princeton University

*How to Navigate Satellite Ammonia Measurements: Best Practices and Considerations* — Over the past decade, satellite measurements of ammonia have become a widespread and routine data product. This talk will give an overview of data availability, data characteristics, the differences between the various measurements, and their strengths and limitations. Finally, the talk will demonstrate some ways in which satellite ammonia measurements can be used to help air quality managers and other stakeholders.

**4:00 pm EST — Daniel Tong, George Mason University**

*Every Breath You Take: Satellite-Aided Analysis of Dust Events* — We will discuss the trend of dust storms and impacts on air quality, human health, and transportation safety. Recent advances in observing and modeling dust storms will be covered, as well as a tutorial on how to use satellite and ground data to identify dust events and analyze their contributions to regional haze and NAAQS exceedances.

## **3/3 Tuesday**

**12:00 pm EST — Susan Anenberg, George Washington University**

*Taking a Wider View of NO<sub>2</sub> Pollution: Estimating NO<sub>2</sub>'s Health Impacts from Local to Global Scales* — Current studies assessing the global burden of disease from air pollution include only premature mortality from PM<sub>2.5</sub> and ozone. Several recent meta-analyses of epidemiological studies around the world show that traffic-related NO<sub>2</sub> pollution is associated with pediatric asthma incidence. We will present approaches for estimating NO<sub>2</sub> exposure in cities worldwide using satellite remote sensing, as well as recent and ongoing research estimating the global burden of NO<sub>2</sub> pollution on pediatric asthma incidence.

**4:00 pm EST — Susan O'Neill, USDA Forest Service, Pacific Northwest Research Station**

*Where There's Smoke: Satellite Data for Smoke and Fire* — Join Susan O'Neill for a webinar exploring some of the cutting edge tools, data sets, and resources that are available for smoke forecasting, data fusions, health impact analysis, and other information for air quality and public health stakeholders interested in tracking or assessing the impact of wildfire smoke. This webinar will use as its case study a retrospective analysis of the Northern California wildfires of 2017 and 2018.

## **3/5 Thursday**

**12:00 pm EST — Jason West, University of North Carolina**

*Pollutant Concentration Mapping to Support Health Impact Assessment: Global Ozone Concentrations, and PM from California Wildfires* — In this webinar, Jason West and colleagues from UNC Chapel Hill will discuss data fusion for air quality and health. We will discuss methods of combining ground measurements, satellite observations, and computer models to best construct maps of air pollutant concentrations. We will also present two applications of this data fusion: one for the global mapping of ozone for the Global Burden of Disease Assessment, and the second, a mapping of PM<sub>2.5</sub> from the October 2017 California wildfires.

**4:00 pm EST — Daven Henze, University of Colorado at Boulder**

*Tracking PM2.5: How Models and Remote Sensing can be Used to Estimate Global Health Impacts of Ambient Fine Particulate Matter (PM2.5)* — Satellite-observations provide a means of measuring atmospheric composition with global spatial coverage vastly greater than current air pollution monitoring networks. Atmospheric models can be used to interpret these remote-sensing observations, along with other measurements and geophysical proxies, to estimate surface-level ambient fine particulate matter concentrations (PM2.5). This talk will review how the science of developing these estimates has evolved, as well as current applications of these techniques to investigate the global health burden associated with exposure to PM2.5.

## **3/10 Tuesday**

**12:00 pm EST — Minghui Diao, San Jose State University**

*The Air in Your Community: Estimating Surface PM2.5 in California with a Fusion of Monitor Data, Satellite Observations and Downscale Modeling* — Join Minghui Diao for this webinar which will introduce the process for estimating community-level PM2.5. Diao will introduce the 4 main methods of generating publicly available PM2.5 data, the methods her team uses for fusing ground monitors data, satellite data, and downscale model simulations, and a demonstration of the dispersion model simulation, which is how to ultimately get a community-scale estimate of surface PM2.5.

**4:00 pm EST — Jeremy Hess, University of Washington**

*Sneeze and Wheeze in a Low Earth Orbit: Forecasting Pollen from Space* — Pollen allergies impose a substantial disease burden, and the pollen season in the US is lengthening due to climate change. Unfortunately, the pollen sensor network is somewhat sparse—but weather data can be used to estimate pollen concentrations in places without sensors. We have developed new, higher performing pollen forecasts for the US that can help protect public health—from space!—and this webinar will detail these new pollen forecasts.

**Visit [haqast.org/haqast2020](https://haqast.org/haqast2020) to register!**