Air Quality Applied Sciences Team (AQAST)  
Team Meeting – June 2014

John A. Haynes, MS  
Program Manager, Health and Air Quality

Applied Sciences Program  
Earth Science Division  
Science Mission Directorate  
NASA  
Washington, DC USA

jhaynes@nasa.gov
Launch of GPM on February 28, 2014
Major News Items in the ESD/ASP

- GEO Work Plan Symposium, April 28-30, Geneva
- National Climate Assessment released on May 6
- OCO-2 Launch on July 1 (VAFB, CA)

- 68 Proposals received for ROSES 13, Element A.44 (Health/AQ)
  - POP = 3 years
  - Budget: $2.75M; 6-7 awards expected
  - Selections expected in October 2014
  - Next solicitation planned for ROSES 2015

- NASA Health/AQ Sessions at the following conferences:
  - AMS Annual Meeting (February 2014)
  - AMS Washington Forum (April 2014)
  - OCO-2 Applications Workshop (April 2014)
  - American Thoracic Society Annual Meeting (May 2014)
  - AWMA Annual Meeting (June 2014)
NASA Earth Science Division FY15
President's Budget

($ millions)

- FY13: $1,659.2 (actual)
- FY14: $1,826.0 (enacted)
- FY15: $1,770.3
- FY16: $1,815.5*
- FY17: $1,837.6*
- FY18: $1,861.9*
- FY19: $1,886.3*

* FY16-19 budgets are considered “notional.”

Major Items:

- President’s Budget requests $36.3M for ASP in FY15 rising to $39.7M in FY19
- The FY15 budget for Earth Science is consistent with the FY13 and FY14 request – this represents **continued stability**, which is a strong endorsement of NASA in a time of fiscal austerity.
- OCO-3 (onboard ISS) is cancelled
Earth Science

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<th>2015</th>
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<td>Earth Science</td>
<td>$1,770</td>
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- Launches the Soil Moisture Active and Passive mission (SMAP), and the Stratospheric Aerosol and Gas Experiment III (SAGE III) to be mounted on the ISS.
- Formulates and develops ICESat-2, GRACE-Follow On, SWOT, CYGNSS, TEMPO, and a sustained Land Imaging capability.
- Develops and implements plans for measurements of solar irradiance, ozone profiles, and Earth radiation budget.
- Maintains weather and climate change modeling capabilities to enhance forecast accuracy.
- Operates over 21 Earth-observing spacecraft.
- Maintains robust R&A, airborne science (including IceBridge), technology development, and funds the Global Learning and Observations to Benefit the Environment (GLOBE) program.
Communications

• Houston’s Ozone Mystery: Pockets of Pollution Unlike Other Cities
  – Scientists working on NASA’s satellite project met last week at Rice University to update each other on data gathered for air pollution research. Among the presentations, one raised the role played by “background ozone” which is naturally occurring or originates elsewhere from Mexico or other countries but drifts into Houston. Knowing the background level is important because it’s considered by the EPA when setting clean air targets for cities.
  – [Link](http://stateimpact.npr.org/texas/2014/01/22/houstons-ozone-mystery-pockets-of-pollution-unlike-other-cities/)

• NASA Satellite Sees Increase of India's Sulfur Dioxide Emissions
  – A NASA Air Quality Applied Sciences Team (AQAST) project recently published a study in the journal Environmental Science & Technology showing a dramatic increase in India's sulfur dioxide emissions from satellite observations. The analysis of data captured by Aura/OMI found that emissions of sulfur dioxide from Indian power plants have increased by more than 60 percent between 2005 and 2012.
  – [Link](http://www.nasa.gov/content/goddard/nasa-satellite-sees-increase-of-indias-sulfur-dioxide-emissions/#.UrNM9LY_6k0)
• Research Clarifies Health Costs of Air Pollution from Agriculture
  – Ammonia pollution from agricultural sources poses larger health costs than previously estimated, according to NASA-funded research. Harvard University researchers Fabien Paulot and Daniel Jacob used computer models including a NASA model of chemical reactions in the atmosphere to better represent how ammonia interacts in the atmosphere to form harmful particulate matter. The improved simulation helped the scientists narrow in on the estimated health costs from air pollution associated with food produced for export – a growing sector of agriculture and a source of trade surplus.
  – [http://www.nasa.gov/content/goddard/research-clarifies-health-costs-of-air-pollution-from-agriculture/#.U5tWHxA-65I](http://www.nasa.gov/content/goddard/research-clarifies-health-costs-of-air-pollution-from-agriculture/#.U5tWHxA-65I)
**EM and GeoCarto International Special Issues**

- Special issue of *EM* on “Applying Satellite Data to Air Quality Management” was published in February.
  - Publication of the Air and Waste Management Association.
  - Issue includes articles from across AQAST and was extremely well received by HQ and the community.

- Special issue of *GeoCarto International* on “NASA Earth Science Satellite Data for Application to Public Health” has been published.
  - Published online on 29 April as Vol. 29, No. 1 (February 2014). It will eventually be published in print as a double issue (Vol. 29, No. 1-2). The issue can be accessed at [http://www.tandfonline.com/toc/tgei20/29/1#.U2KVXE0U9dg](http://www.tandfonline.com/toc/tgei20/29/1#.U2KVXE0U9dg).
  - The issue includes articles on CDC/NASA collaboration (Luber), meningitis/malaria (Ceccato), influenza (Kiang), AOD (Liu), and heat mortality (Johnson) -- among others.
Upcoming Events

• June 23-27, 2014
  – AWMA Annual Meeting in Long Beach, CA

• August 4-8, 2014
  – PMM Science Team Meeting in Baltimore, MD

• November 2-6, 2014
  – ASTMH Annual Meeting in New Orleans, LA
“Your planet is changing. We’re on it.”

2014-15 outreach campaign for NASA Earth Science

Five New Earth Science Missions in Just Over a Year: An Opportunity NASA Hasn’t Had in Over a Decade!

http://www.nasa.gov/earthrightnow

- GPM
- ISS RapidScat and CATS
- OCO-2
- SMAP
- SAGE-III

February 2014 to March 2015
Questions:
John Haynes, Program Manager
Health & Air Quality Applications
NASA Headquarters / Earth Science
JHaynes@nasa.gov

http://AppliedSciences.NASA.gov