

National Aeronautics and Space Administration

Earth Systems Science Pathfinder Program Office Executive Summary

Spring 2018



Recent project and investigation news and highlights:

(Please click on hyperlinks for more information)

➤ Our portfolio is growing!!

- NASA announced two new projects in February as the selections for the EVI-4 call. **PREFIRE** (Polar Radiant Energy in the Far Infrared Experiment) will fly two cubesats in Low Earth Polar Orbit to measure far infrared energy over polar regions in order to provide new insight into Arctic warming, sea ice loss, ice sheet melt, and sea level rise. Principal Investigator Dr. Tristan L'Ecuyer is at the University of Wisconsin-Madison, and the project will be managed out of JPL.
EMIT (Earth Surface Mineral Dust Source Investigation) will build an imaging spectrometer to fly on the International Space Station to measure the mineral composition of land surfaces that produce dust aerosols globally. Data from EMIT will help determine if these dust aerosols warm or cool the atmosphere. The Principal Investigator for EMIT is Dr. Rob Green at JPL, and the project will also be managed out of JPL.
- The proposal deadline for EVS-3 was April 12.
- A draft of the **Earth Venture Instrument 5 Program Element Appendix** in SALMON-3 is now available. Comments are due by May 9, and a **Prospective Bidders Web Conference** will be April 30.

➤ Earth Venture Suborbitals-2 have been busy with deployments this spring.

- Nicole Estaphan is a freelance reporter with WCVB in Boston, and she joined the **NAAMES** (North Atlantic Aerosols And Marine Ecosystems Study) crew on the RV-Atlantis ship in in North Atlantic this March for their final deployment. This was her second time to be an embedded journalist with NAAMES; her first excursion was during the winter 2016 deployment. Her "**Journalist at Sea**" blog and photographs provide a fascinating perspective on the month spent at sea with the NAAMES science team.
- The **ATom** (Atmospheric Tomography) investigation began their **final global transit** on April 27 on board the DC-8. The team is planning for another excursion over the Antarctic on this deployment, with a sortie out of Punta Arenas, Chile. The flights will span from Antarctica to Thule, Greenland, and from the Atlantic to the Pacific Oceans.
- The **ACT-America** (Atmospheric Carbon and Transport-America) investigation is **back out in the field** for their fourth deployment this spring. The team hopes to sample within springtime frontal conditions to investigate the distribution of the wintertime accumulation of greenhouse gasses over the continental US.
- The **OMG** (Oceans Melting Greenland) investigation completed their third annual deployment to measure high resolution glacial height during March. **Data from OMG** is being utilized to better understand the various mechanisms that contribute to glacial melt over Greenland.