

National Aeronautics and Space Administration

# Earth Systems Science Pathfinder Program Office Executive Summary

Winter 2018/19



## Recent project and investigation news and highlights:

(Please click on [hyperlinks](#) for more information)

### ➤ **CYGNSS** Student Award:

*Congratulations* to **Tianlin Wang**, the winner of the IEEE Miki Takagi student prize at IGARSS 2018 (Best student paper)!!!

**“CHARACTERIZATION OF THE TRANSMIT POWER AND ANTENNA PATTERN OF THE GPS CONSTELLATION FOR THE CYGNSS MISSION”**

– Tianlin Wang, Christopher Ruf, Bruce Block, Darren McKague, University of Michigan

### ➤ NASA GSFC’s **GEDI** instrument successfully *launched* from Cape Canaveral on the SpaceX 16<sup>th</sup> commercial resupply services mission on **December 5, 2018**. It is currently mounted on the JEM-EF of the ISS and will map the world’s forests in high resolution and three dimensions to help scientists understand how much carbon is stored in the world’s forests.

### ➤ The **TEMPO** instrument (Tropospheric Emission: Monitoring or Pollution) *has been completed*. The project is led by PI Kelly Chance from the Smithsonian Astrophysical

Observatory, and the instrument is a UV-visible spectrometer that will make hourly observations of daytime air pollution over the North American continent from a geostationary vantage point. The instrument was built by Ball Aerospace, and is in storage at Ball until a host spacecraft is selected by NASA.

### ➤ **ESSP PO is excited to welcome five NEW Earth Venture Sub-Orbital Investigations to our portfolio (as of September 2018)**

- **ACTIVATE** (Aerosol Cloud meteorology Interactions over the western Atlantic Experiment)  
Armin Sorooshian (U. Arizona) PI, and the investigation is managed from NASA LaRC (Mary Kleb).
- **DCOTSS** (Dynamics and Chemistry Of The Summer Stratosphere)  
Ken Bowman (Texas A&M) PI, and the investigation is managed from ESPO, NASA ARC (Bernie Luna)
- **Delta-X** (Delta-X: Enabling Deltas to Thrive in a Century of Rising Seas)  
Marc Simard (JPL) PI, and the investigation is managed from JPL (Ian McCubbin)
- **IMPACTS** (Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Snowstorms)  
Lynn McMurdie (U. Washington) PI, and the investigation is managed from ESPO, NASA ARC (Vidal Salazar)
- **S-MODE** (Sub-Mesoscale Ocean Dynamics and vertical transport)  
Tom Farrar (WHOI) PI, and the investigation is managed from ESPO, NASA ARC (Erin Czech)

### In the News:

**Recent research** from the EVS-2 Oceans Melting Greenland (OMG) investigation shows that the Jakobshavn Glacier in Greenland has slowed its rate of melting due to a phase shift to colder ocean temperatures from the naturally varying North Atlantic Oscillation. **The article was published March 25 in Nature Geoscience.**