(Please click on *hyperlinks* for more information)

PREFIRE launched in May/June

The two **Polar Radiant Energy in the Far-InfraRed Experiment (PREFIRE)** CubeSats were successfully launched by Rocket Lab from Mahia, New Zealand on May 25, 2024 (Ready, Aim, PREFIRE) and June 5, 2024 (PREFIRE & Ice). The two PREFIRE 6U CubeSats will measure Far InfraRed radiation over the Arctic to better understand how efficiently polar regions emit radiation into space. The results will be used to inform climate models. The PREFIRE Principal Investigator (Tristan L'Ecuyer) is located at the University of Wisconsin and the Jet Propulsion Laboratory is the implementing institution.

EVS-4 investigations announced

In April, six new investigations were announced as the new Earth Venture Suborbital-4 missions. The competitively-selected studies include fire-induced pyrocumulous clouds (INSPYRE, PI is David Peterson at NRL), coastal change in the Arctic (FORTE, PI is Maria Tzortziou at CCNY/CUNY)), air quality (HAMAQ, PI is Jim Crawford at NASA Langley Research Center), landslides (LACCE, PI is Alexander Handwerger at JPL), glacier retreat (Snow4Flow, PI is Jack Holt at Univ. of Arizona), and emissions from agricultural fields (FarmFlux, PI is Glenn Wolfe at NASA Goddard Space Flight Center). The investigations are expected to deploy at various times from 2026 to 2029.

Recent project and investigation news and highlights

Congratulations to Rob Green (JPL), PI of the EVI-4 Earth Surface Mineral Dust Source Investigation (EMIT)! Dr. Green has been awarded the International Space Station 2024 Compelling Results Award in Earth Science and Remote Sensing for "capturing high-fidelity imaging spectroscopy for a variety of environments as well as greenhouse gases" that are an "exemplary demonstration of how looking back to Earth from space helps us to better understand our world." The award was presented at the International Space Station Research and Development Conference (ISSRDC) in Boston, MA July 30-August 1, 2024.

OCO2 used to study changing impact of La Nina events on CO2 growth rate

An article published in Science Advances by Junjie Liu (JPL) uses OCO2 data to examine the difference in the greenhouse gas growth rate between the La Nina in 2021 to past La Nina events. Unlike previous La Nina events, which typically result in a slow-down of the rise of greenhouse gases, 2021 had little to no impact on the growth rate. The article suggests this is likely due to the drought and warmer weather that occurred in Asia that year. This could have important implications for the future rise of atmospheric CO_2 as droughts and heatwaves become more prevalent. See the PNAS summary of the article here.

Some recent data products published at NASA DAACs

(June 14, 2024) Delta-X Level 4 Modeled Land Accretion Rate
(June 28, 2024) CYGNSS Level 3 Berkeley Watermask Science Data Record Version 3.1
(June 28, 2024) CYGNSS Level 3 Soil Moisture Science Data Record Version 3.2
(June 28, 2024) CYGNSS Level 3 Ocean Microplastic Concentration Science Data Record Version 3.2
(July 22, 2024) GEDI Level 4 Forest Canopy Complexity
(Aug 8, 2024) CYGNSS Level 3 MRG Science Data Record Near Real Time Version 3.2